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An Investigation of State College to University Transfer Students' Sense of Belonging

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AN INVESTIGATION OF STATE COLLEGE TO UNIVERSITY
TRANSFER STUDENTS' SENSE OF BELONGING

by

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ABSTRACT

The purpose of this study was to examine the sense of belonging of state college transfer students who enroll at a large research-intensive university through structured and unstructured transfer pathways using the Sense of Belonging Instrument (SBI; Hoffman, Richmond, Morrow, & Solomon, 2002). The SBI includes five subscales (Peer Support, Faculty Support, Classroom Comfort, Isolation, and Empathetic Faculty Understanding). To date, no systematic investigation has considered the construct of belonging with this population or transfer pathway.

The findings from this mixed methods study ($n = 54$) found a positive statistically significant correlation between Peer Support and Isolation ($r(52) = .801$, $p = .000$) and a statistically significant difference between the mean values of Empathetic Faculty Understanding between the structured and unstructured pathways ($p = 0.027$). This study showed that structured transfer pathway student sense of belonging was grounded in the classroom experience, empathetic faculty, and faculty support. Unstructured transfer pathway student sense of belonging was grounded in peer relationships, the classroom experience, and empathetic faculty. First generation participants were more likely to perceive isolation than non-first generation participants and structured pathway participants were more likely to perceive faculty empathetic understanding than unstructured pathway participants.

There were also differences in the qualitative data between the two transfer pathway groups, including differing perceptions of faculty care and empathy, peer engagement, and the role of Advisors and online support systems in the transfer experience. The data and findings presented in this study are clear that the academic experience in the classroom and the centrality

of empathetic faculty is central to state college transfer student experience and contributes to transfer student sense of belonging.

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I dedicate this work to all transfer students who are aspiring to a university degree and the

promise of a greater future for them and their families. We see you. We hear you. We will

continue to do better by you.

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CHAPTER ONE: INTRODUCTION

Community colleges enroll almost half of all American undergraduate students or approximately seven million for-credit students (Handel, 2013, p. 10). The National Student Clearinghouse (NSC) reported that 45% of students who completed bachelor's degrees in the 2011–2012 academic year had previously enrolled in a community college. (Handel, 2013). Community colleges attract high proportions of low income, first-generation college students, and students of color (Roman, 2007). As a primary aspect of their institutional missions, community colleges facilitate transfer to baccalaureate degree-granting institutions. As such, community colleges "play a critical role in the pathway to a baccalaureate degree for millions of students, especially among women and ethnic minorities" (Laanan, Starobin, & Eggleston, 2011, p. 175). Community colleges serve as agents for creating social and economic equity in society for diverse populations (Laanan et al., 2011). A challenge for transfer student-receiving institutions is to be prepared to support, engage, and retain transfer students with widely varying characteristics, academic preparedness, and enrollment patterns.

Transfer student populations are complex and diverse with significant numbers of African American, Latino, and first-generation students, as well as students from the lowest-income level and single-parent families (Handel, 2013, p. 11). Transfer students' levels of institutional engagement, including academic and social integration, vary depending on the institution of origin, destination, and timing of transfer relative to the time needed to complete a degree (Laanan et al., 2011, p. 176).

Decades of research report that college persistence and successful degree completion are largely influenced by environmental factors that students experience after matriculation into

four-year institutions (Wang, 2012). Only 15% of US students beginning at a community college in 2006 completed a bachelor's degree within six years (Shapiro, D., Dundar, A., Ziskin, M., Yuan, X., & Harrell, A., 2013). Given the large and growing number of students beginning their postsecondary studies at community colleges, facilitating successful transfer from 2-year to 4-year institutions is crucial to increasing the number of bachelor's degree completers in the United States. Extensive research suggests that baccalaureate-aspiring students suffer disadvantages in realizing their academic degree goals when compared to students who first enroll at a baccalaureate-granting institution (Wang, 2012). Community colleges and transfer-serving institutions would benefit from information regarding preparing students so that they may transfer and successfully complete their degrees. There is a need to study the degree to which community college students integrate and engage in their four-year transfer institutions beyond the concept of transfer shock, a concept that focuses exclusively on the first transfer semester grade point average (GPA; Ishitani & McKitrick, 2010).

Although research frequently references the importance of sense of belonging in student departure decisions, persistence models have "failed to adequately include this important theorized construct" (Hoffman, Richmond, Morrow, & Solomon, 2002, p. 227). Research focused on sense of belonging in higher education settings remains in its infancy; with most research focused on the first year experience or within specific underrepresented populations (Tovar & Simon, 2010).

To facilitate seamless transfer and improve student success, some colleges and universities have developed structured transfer pathway programs that begin at the community college and follow the student as they transition and into the first transfer semester. However, little research is available to determine if these structured pathways positively impact transfer

students and in what way they may contribute to transfer student sense of belonging and persistence (Bers, 2013, p. 23).

The Florida College System (FCS) is a unique model in that traditional Associate degree dominant colleges also offer baccalaureate degrees. These degree programs are predominantly in the applied sciences. The FCS includes twenty-eight state colleges, annually enrolling over four hundred and fifty thousand students in college credit programs at the Associate and Baccalaureate levels (Florida Department of Education, 2016). Once the Florida Legislature allowed community colleges to offer upper division programs, most changed their names to state colleges and in 2012, the system formally changed its name from the Florida Community College System to the Florida State College System (Florida Department of Education, n.d.).

One of the largest transfer-serving institutions in the United States is the University of Central Florida (UCF; Regional Campus, n.d.). UCF's Direct Connect to UCF program guarantees admission to students completing an Associate's degree at six partner state colleges (Regional Campus, n.d.). The partner state colleges coordinate with UCF to offer integrated pre-transfer advising and support. As a result of this partnership and other targeted initiatives, 87% of all 2014 UCF transfer students originated at Florida state colleges and Associate degree transfers made up 48% of Bachelor's degrees awarded by UCF (Florida Action Team Lab. n.d.).

<u>Problem Statement</u>

Community college transfer students exhibit a higher rate of failure and academic probation after their initial semester than native continuing students at the same level (Lockwood, Hunt, Matlack, & Kelley, 2013). Overall, transfer students also represent an at-risk population as they frequently withdraw at higher rates and have lower GPAs when compared to

their native student counterparts (Duggan & Pickering, 2008). The problem to be studied was the impact of sense of belonging within the population of state college transfer students as a means to promote transfer student retention.

<div align="center">Purpose of the Study</div>

The purpose of this study was to examine the sense of belonging of state college transfer students who enroll at a large research-intensive university using the Sense of Belonging Instrument (Hoffman et al., 2002). This study will help institutions of higher education better understand the factors that contribute to state college transfer student sense of belonging. The information collected through the study will inform Associate degree granting colleges engaged in preparing students for successful transfer, and to inform transfer universities as they design services and distribute resources to support transfer student success. This study could be meaningful for institutions when evaluating or designing transfer student programs and services. Specifically, this research could be used to design effective strategies for pre-transfer initiatives, orientation and retention programs, faculty and staff professional training programs, and identifying transfer students at risk of not completing their degree. This study could help to determine the best use of limited resources to maximize what interventions could most positively impact transfer student persistence and degree completion. This study could also be meaningful to state colleges and universities who are seeking to foster seamless transfer partnerships.

<div align="center">Significance of the Study</div>

Given the size and relative complexity of the transfer student population, it is imperative

that transfer institutions have a clear understanding of the factors that contribute to transfer student sense of belonging. This study should then be used to evaluate the effectiveness of structured transfer pathways and foster seamless transfer partnerships. Continuing this research into students' attempts to satisfy and sustain one of the most fundamental psychological needs— the need for belonging—may prove to be an effective way to support successful transfer student transitions, persistence, and degree completion. This research will provide information that will allow higher education leaders to understand the construct of sense of belonging from the perspective of unstructured and structured transfer pathways. This study could also assist higher education leaders to draw specific conclusions regarding academic and social integration among transfer student populations.

Definitions of Terms

For the purpose of this study, the following definitions were used for key terms that pertain directly to the research being conducted.

2 + 2 Program- Formalized articulation agreement between a community/state college and a four-year institution, whereby the Associate degree transfers in its entirety into a Baccalaureate degree program of study into a junior-level program of study (Garcia-Falconetti, 2009, p. 239)

Articulation Agreements- Formal arrangements between two or more colleges and universities that specify how courses, a general education plan, and/or major requirements transfer from one institution of higher education to another (NACAC, n.d.).

Completer- A student who receives a degree, diploma, certificate, or other formal award. To be considered a completer, the degree or award must be conferred (U.S. Department of Education, n.d.).

Completion/Graduation- Refers to the outcome of how many students within a cohort complete and/or graduate from an institution. Completion is typically measured in two or three years for associate level programs and four, five, or six years for a bachelor level programs (Hundrieser, 2008, p. 4).

Community/State College- refers to colleges that are predominantly Associate degree and Technical Certificate granting institutions. The term is used interchangeably in Florida where most community colleges are Baccalaureate/Associate degree-granting colleges and Associate's dominant (Carnegie, n.d.).

Faculty Empathetic Understanding- a subscale of the Sense of Belonging Instrument (Hoffman et al., 2002) that measures perception of the student's ability to approach instructors for guidance regarding personal matters.

First-generation student- refers to students whose parents/guardian' have not completed a Bachelor's degree (U.S. Department of Education, n.d.).

Gender- Gender refers to the attitudes, feelings, and behaviors that a given culture associates with a person's biological sex (APA, n.d.).

Pathway Programs- refers to formalized transfer agreements developed to create a specific path allowing for the mobility of community or state college graduates to university degree completion programs (Percival, Goodman, LeSage, Longo, De La Rocha, Hinch, Samis, Sanchez, Augusto Rodrigues, & Raby, 2014).

Perceived Peer Support- a subscale of the Sense of Belonging Instrument (Hoffman et al., 2002) that measures perception of academic and social support by peers.

Perceived Classroom Comfort- a subscale of the Sense of Belonging Instrument (Hoffman et al., 2002) that measures perception of personal comfort within the classroom setting itself both with faculty and students.

Perceived Faculty Support- a subscale of the Sense of Belonging Instrument (Hoffman et al., 2002) that measures perception of academic and social support by faculty.

Perceived Isolation- a subscale of the Sense of Belonging Instrument (Hoffman et al., 2002) that measures student's ability to establish relationships with peers.

Persistence- Refers to a student's return rate or re-enrollment rate from one semester to another, such as from the fall semester to the spring semester (U.S. Department of Education, n.d.)

Race/Ethnicity- Categories developed in 1997 by the Office of Management and Budget (OMB) that are used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The categories do not denote scientific definitions of anthropological origins. Individuals are asked first to designate ethnicity as either Hispanic or Latino or Not Hispanic or Latino. Second, individuals are asked to indicate all races that apply from the following: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, or White (U.S. Department of Education, n.d.).

Retention- A measure of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelor's (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the current fall (U.S. Department of Education, n.d.).

Sense of belonging- a psychological construct that seeks to measure student's perception of affiliation and/or identification with the postsecondary institution community (Strayhorn, 2012).

Transfer student- a student entering the institution for the first time but known to have previously attended a postsecondary institution at the same level (undergraduate, graduate), transfer students can fall into any grade level (NACAC, n.d.)

Transfer shock- A decline in a student's GPA in the first semester or year, following the transfer from a community/state college to a four-year institution (Ishitani & McKitrick, 2010, p. 578)

Structured transfer pathway- An established 2 + 2 partnership between a community/state college and a university that guarantees admission and provides formal transitional support for student transfer and credit articulation between institutions.

Unstructured transfer pathway- Refers to when students transfer from a community/state or university to another university without the benefit of an established partnership or formal transitional support between institutions.

Veteran- a student who was a member of the US Armed Services and may or may not be using VA benefits to help pay for college.

Research Questions

The following research questions were selected to better understand the construct of sense of belonging with the state college transfer student population, how structured transfer pathways impact sense of belonging, and the relationship to student demographic factors. The research questions start more broadly and then focus in on specific factors that impact the construct:

1. What are the relationships between five factors identified by the Sense of Belonging Instrument: (a) perceived peer support, (b) perceived classroom comfort, (c) perceived

isolation, (d) perceived faculty support, and (e) empathetic faculty understanding? (Hoffman et al., 2002)

2. To what extent does sense of belonging differ between state college students who transfer through structured transfer pathways and those who transfer through unstructured transfer pathways to the same institution?

3. What is the relationship between student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer GPA, transfer pathway, and veteran status) and state college transfer student's sense of belonging?

<center>Conceptual Framework</center>

This analysis focused on understanding the complex nature of transfer students from state colleges using constructs of persistence, barriers to successful transfer, and sense of belonging. The construct of sense of belonging emphasized perceptions related to peer support, the classroom comfort, isolation, faculty empathy, and faculty support. The conceptual framework has three sections. The first section concentrates on student persistence, the second section discusses the barriers to successful transfer, and the last section explores the concept of sense of belonging and its connection to student persistence and successful transfer.

<center>Student Persistence</center>

Higher education has long been concerned with studying the factors and experiences that contribute to student persistence. Tinto's (1993) influential work on retention asserted the importance of social and academic integration on student persistence and retention. Pascarella and Terenzini's (1991) work focused on the impact that student engagement (academic and

social aspects) can have on student retention. Decades of research contends that college persistence and successful degree completion are largely influenced by environmental factors that students experience after matriculation into four-year institutions (Astin, 1993; Astin, 1999; Bean, 1980; Ishitani & McKitrick, 2010; Pascarella & Terenzini, 1991; Strauss & Volkwein, 2004; Tinto, 1993; Townsend & Wilson, 2006). However, there is a great need to study to what degree community college student's transition into their transfer institutions, beyond the concept of transfer shock (Ishitani & McKitrick, 2010) a concept that is focused exclusively on GPA.

<div align="center">Barriers to Successful Transfer</div>

Barriers to successful transfer can be attributed to lack of academic preparation, inaccurate academic advising, unfamiliarity with academic expectations, rigor of the transfer institution, and weak articulation policies (Handel, 2013). These factors can create barriers for transfer students once they enter the transfer institution. Current research into transfer student success focuses on academic achievement comparisons between native and transfer students as measured by GPA (Ishitani & McKitrick, 2010). Many of these studies show that transfer students suffer a certain degree of transfer shock, which occurs when there is a dip in transfer students' grades during their first semester (Ishitani & McKitrick, 2010). However, relying solely on this line of inquiry proves problematic given that "transfer students are complex and the transfer process is multidimensional" (Ishitani & McKitrick, 2010). As such, emerging research must move beyond simply looking at transfer student GPA to more complex questions focused on articulation policies, pre-transfer preparation, post-transfer support, and transfer student engagement. It is likely that what a student "brings to the college environment will have an impact on their academic and social experiences. However, it is what the student does once

they arrives that will determine the extent to which a successful adjustment experience will be achieved" (Laanan, 2007, p. 55).

Sense of Belonging

Although the concept of sense of belonging has been indirectly implied in persistence models, most research conducted to date on the concept of sense of belonging has "focused on the experiences of racial/ethnic minorities in navigating the college culture and to a lesser extent on its link to college student persistence" (Tovar & Simon, 2010, p. 201). The concept of sense of belonging has not been measured as an independent construct" (King, 2008, p. 46). Some research contends that sense of belonging is linked to college student retention and, in some instances, has been described as critical in retaining students, especially students of color (Hurtado & Carter, 1997; Bollen & Hoyle, 1990).

Strayhorn (2012) investigated the construct of sense of belonging in diverse student populations including STEM students, Black male students, graduate students, Latinos, gay students and first-year students of color. This empirical research discovered that sense of belonging leads to feelings that the student's efforts are valued which in turn positively impacts student persistence and success in these specific population groups. However, Strayhorn's (2012) research also observed that the absence of belonging leads to diminished engagement and interest in the university community leading to negative impacts on student persistence and support (Strayhorn, 2012). Specifically, Strayhorn (2012) asserts that "the model of college student sense of belonging still needs rigorous testing on the extent to which social contexts, sense of belonging, and other hierarchies of needs contribute to educational outcomes among various student populations" (p. 9). Unlike studies that propose a unidimensional construct

definition for sense of belonging, more recent literature contends that sense of belonging is multi-dimensional and reflects student-faculty relationships, student-peer relationships, and student-classroom interactions (Hoffman et al., 2002).

The Sense of Belonging Instrument (SBI; Hoffman et al., 2002) has been used in various studies to measure students' sense of belonging in the university environment. The SBI includes five subscales: perceived peer support, perceived classroom comfort, perceived isolation, and perceived faculty support, and empathetic faculty understanding (Hoffman et al., 2002). No evidence was found that the SBI has been used with transfer students in academic research studies.

Methodology

The research study was a mixed methods design with data derived from an established instrument, the Sense of Belonging Instrument (SBI; Hoffman et al., 2002), three demographic items, and one open-ended item included within the online instrument. Additional demographic factors, derived from the student educational record were also included in the analysis.

The 26-item SBI was used to measure students' sense of belonging in the university environment. A description of how the data related to each research question is included in Table 1. The SBI's authors gave permission to use the instrument for this study (Appendix E), including some modifications to item language and formatting for a web-based instrument. Student demographic information was provided by the State College (SC) directly from the student educational record and from the three demographic questions included in the online instrument.

Table 1

Research Questions and Data Sources

Questions	Instrument/Source	Items

1. What are the relationships between five factors identified by Sense of Belonging Instrument (Hoffman et al., 2002) (a) perceived peer support, b) perceived classroom comfort, c) perceived isolation, (d) perceived faculty support), and (e) empathetic faculty understanding.	Sense of Belonging Instrument subscales:
	   Perceived Peer Support
	   Perceived Faculty Support
	   Perceived Classroom Comfort
	   Perceived Isolation items
	   Empathetic Faculty Understanding
		Items 1-8
		Items 9-14
		Items 15-18
		Items 19-22
		Items 23-26

2. To what extent does sense of belonging differ between students who transfer from structured transfer pathways and those who transfer from unstructured transfer pathways to the same institution?	Sense of Belonging Instrument Pre-transfer student educational record	Items 1-26 Transfer pathway designation (structured or unstructured)
3. What is the relationship between transfer student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer grade point average (GPA), transfer pathway, and veteran status), and state college transfer students' sense of belonging?	Sense of Belonging Instrument Pre-transfer student educational record	Items 1-26 Items 27-29 Demographic factors: Age, gender, race/ethnicity, first-generation status, financial aid status, transfer GPA, transfer pathway, and veteran status

Note. Refer to Appendix C for a summary of the Sense of Belonging Instrument's five subscales.

Population and Sample

This study involved two postsecondary institutions: a public state college in the southeast United States (Carnegie category: Baccalaureate/Associate's Colleges: Associate's Dominant; Carnegie, n.d); and a public metropolitan research university in the southeast United States (Carnegie category: Doctoral Universities: Highest Research Activity; Carnegie, n.d.). The MRU and SC included in this study have a longstanding (10+ years) partnership and formal articulation agreement that offers a structured transfer pathway that guarantees admission for SC students who complete an AA or AS degree and transfer to the MRU. SC students must register for this structured transfer pathway program while enrolled at the state college. SC students registered with this program receive support and resources that are not available to students who are not registered in the structured transfer pathway program or who transfer through an unstructured transfer pathway.

The population of interest for this study included individuals who met the following qualifications:

1. State College students who transferred directly from the State College to the Metropolitan Research University through structured or unstructured transfer pathways;

2. who persisted through at least one semester of enrollment (fall 2015 or spring 2016); and

3. who were over the age of 18 at the time of university transfer.

The population was estimated to be approximately 250-325 students. Administering the instrument after one semester of enrollment gave participants the ability to judge their connection to the institution as well as the time to develop their self-concept as a student at the transfer university. The target sample size was 75 participants.

Instrumentation

The instrument included the modified Sense of Belonging Instrument (Hoffman et al., 2002) (items 1-26), three demographic items (items 27-29), and one open-ended item (item 30). The Sense of Belonging Instrument (SBI; Hoffman et al., 2002) was used to measure participants' sense of belonging in the university environment. The SBI included five subscales: Perceived Peer Support, Perceived Faculty Support, Perceived Classroom Comfort, Perceived Isolation, and Empathetic Faculty Understanding (Hoffman et al., 2002). For the purpose of this study, the SBI authors gave permission for some modifications to the SBI (Appendix A) in the form of edits for language consistency and formatting changes for a web-based instrument (Appendix E).

The instrument was designed in a web-based program, Qualtrics, in a format following Dillman, Smyth, and Christian's (2009) tailored design method. The instrument was uncluttered and included clear directions, the Informed Consent (Appendix B), and the contact information for the researcher. The online instrument was tested by doctoral candidates in the Executive Educational Leadership doctoral program at the University of Central Florida for clarity, functionality, and terminology.

Variables

Demographic variables included: age, gender, race/ethnicity, first-generation status, financial aid status, primary campus, transfer GPA, transfer pathway designation (structured or unstructured), and veteran status. The independent variable was transfer pathway designation (structured or unstructured). The dependent variable was the student's sense of belonging as defined by the Sense of Belonging Instrument's five subscales: Perceived Peer Support,

Perceived Faculty Support, Perceived Classroom Comfort, Perceived Isolation, and Empathetic Faculty Understanding (Hoffman et al., 2002).

Procedures

In September 2016, the State College (SC) conducted a student data query for students who met the study's participant characteristics from the National Student Clearinghouse (NSC). Once that list was secured from the NSC, a student data query was conducted to secure student contact and demographic information from the SC student information system (Ellucian Banner). Once the contact and demographic information was secured, an e-mail letter of invitation (Appendix D) was sent by the researcher to participants informing them of the purpose of the study, directions, researcher contact information, and a link to the online modified Sense of Belonging Instrument (Appendix A), informed consent (Appendix B), Metropolitan Research University approval (Appendix F) and State College IRB approval (Appendix G). Each participant was assigned a unique webpage link in Qualtrics to access the instrument. Each participant's webpage link was also connected to a unique identifier which linked to their demographic information from the SC student information system.

Once participants agreed to the Informed Consent, they began the instrument and were asked to answer the 26 items from the modified Sense of Belonging Instrument (SBI). Participants were asked to read each item carefully and to select their level of agreement based on their experience at the Metropolitan Research University (MRU) since they transferred from the State College (SC). Participants rated each item (items 1-26) numerically on the Sense of Belonging Instrument (SBI) using a Likert scale ranging from 1-4 (Hoffman et al., 2002). Participants had five responses available: *Strongly Agree* (4); *Agree* (3); *Disagree* (2); *Strongly*

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Disagree (1); and *Not Applicable*. Participants were then asked to answer three demographic

items (items 27-29). These items were: (a) where they took the majority of their classes in fall

2015 and spring 2016, (b) whether they were using financial aid to help pay for college, and (c)

what is their parent/guardian's educational attainment level. Once the demographic items were

answered, participants moved on to the final item (item 30) on the instrument which was an open-

ended item where participants were asked **"**What else would you like the researcher to know

about your transfer experience?"

       To facilitate a high response rate, two follow-up e-mail messages (Appendix D) were sent

to potential participants using a method focused on personalized and repeated contact to boost

response rates (Dillman et al., 2009). The first follow-up email was scheduled one week after the

initial email invitation and a second follow-up email was scheduled one week later. The initial

email invitation was sent to 282 participants in October 2016, 28 email addresses were not valid,

27 started the instrument, of which 26 submitted the instrument during the first week. The first

reminder email was sent to 256 participants who had not yet completed the instrument, 28 email

addresses were not valid, 25 started the instrument, of which 24 submitted the instrument the

second week. The final reminder email was sent to 232 participants who had not yet completed

the instrument, 28 email addresses were not valid, 8 started the instrument, of which 6 submitted

the instrument during the final week. Participants were withdrawn from the sample if they did

not complete any of the 26 items of the Sense of Belonging Instrument (SBI). In total, after

removing the invalid email addresses, there were 254 eligible participants. Of those, 60

participants started the instrument, and 56 submitted the instrument. Two cases were deleted

prior to the analysis due to not answering any of the 26 instrument items, leaving 54 total

participants for analysis, and a 21.25% response rate.

Analysis

Once the data were collected, the closed-ended responses were tabulated followed by a detailed analysis. Participant demographic variables were cross-tabulated to examine the characteristics of the participants in the sample (age, gender, race/ethnicity, financial aid status, first-generation, primary campus, transfer GPA, transfer pathway designation, and veteran status). Descriptive statistics (means, standard deviations, and ranges) were also calculated for the entire sample and also for two Transfer Pathways groups (structured & unstructured).

Descriptive and inferential statistics were used to test the three research questions. To investigate the first research question, correlations were used to determine the relationships between five factors identified by the SBI (Hoffman et al., 2002): (a) perceived peer support, (b) perceived classroom comfort, (c) perceived isolation, (d) perceived faculty support, and (e) empathetic faculty understanding. To investigate the second research question an Independent sample t-tests and effect size were used to determine the extent to which sense of belonging differed between state college students who transferred through structured transfer pathways and those who transfer through unstructured transfer pathways, to the same institution. To investigate the third research question, stepwise regressions and MANOVA tests were used to determine the relationship between student demographic and incoming variables and the state college transfer student's sense of belonging.

The qualitative method of data collection was a concurrent nested strategy and included open-ended responses to one item nested within the online instrument. Specifically, this item asked the participant, "What else would you like the researcher to know about your transfer experience?" Participant responses were sorted to find those that were completed with responses to the open-ended item. These data were then identified, categorized, and analyzed using

conventional qualitative content analysis. The advantage of conventional qualitative content

analysis is "gaining direct information from study participants without imposing preconceived

categories or theoretical perspectives" (Hsieh-Fang & Shannon, 2005, p. 1280).

Limitations

This study only included one state college and one transfer university, and as such can

only be generalized to this population, and not necessarily to other transfer students at other

institutions. The voluntary nature of this study could have impacted the generalizability of the

results. The voluntary nature of this study could also have impacted whether the sample is

representative in terms of such factors as student demographics, incoming characteristics,

institution of origin, and external factors (enrollment intensity, marital status, parental status).

Limitations are discussed in further detail in Chapter Five.

Delimitations

This research investigated transfer student sense of belonging at one place in time, after

one semester of enrollment and persistence at the transfer institution. The research population did

not include students who failed to persist in their first semester of transfer enrollment. This study

did not evaluate the impact the structured transfer pathways and unstructured transfer pathways.

This research did not measure long-term transfer student persistence and degree completion.

Assumptions

It was assumed that participants answered the instrument honestly and to the best of their ability. Participant anonymity was strictly preserved. Participants were volunteers who could have withdrawn from the study at any time and with no ramifications.

Organization of the Study

The study was organized into a five-chapter dissertation. Chapter one described the problem statement, the purpose statement, significance, terminology, and the methodology used for this study. Chapter two focused on the literature review and conceptual framework that informed this study. Chapter three detailed the methodology and procedures. Chapter four discussed the findings of the study. Chapter five discussed implications of the results of this study and suggestions for future areas of study given these findings.

Summary

The aim of this study was to investigate state college transfer student sense of belonging as a means to to promote transfer student retention and how structured transfer pathways impact sense of belonging. This research may help to determine if these structured pathways contribute to transfer student sense of belonging and persistence and to help institutions of higher education better understand the transfer student experience and factors that contribute to transfer student sense of belonging.

CHAPTER TWO: LITERATURE REVIEW

In this literature review, the researcher examined writings focused on student persistence in higher education, college transfer, and sense of belonging. A significant depth of literature exists on student retention and persistence focused mostly on traditional students. However, much less research exists concerning college transfer students and sense of belonging's impact on student persistence.

Within this body of research, the researcher focused on peer-reviewed literature regarding persistence, barriers to successful transfer, and transfer-receptive practices. In addition to literature on the transfer process, the researcher examined readings about belonging, especially as it related to student success in higher education. The author's research consisted primarily of searches on the EBSCO Academic Search Premier Database and collections of previous theses and dissertations from various institutions. Some of the key terms that were searched included "transfer students," "transfer student success," "transfer student persistence," "student adjustment," "community college," "state college", "academic persistence," "transfer policy," "transfer barrier," "transfer pathway," "2+2," "mattering in college," and "sense of belonging."

This literature review has three sections. The first section concentrates on student persistence, the second section discusses the barriers to successful transfer, and the last section explains the concept of sense of belonging and its connection to student persistence and successful transfer. This literature review will focus on understanding the complex nature of transfer students from state colleges using constructs of pre-transfer and post-transfer persistence, barriers to successful transfer, and sense of belonging. The construct of sense of

belonging will emphasize perceptions related to peer support, faculty support, classroom comfort, isolation, and faculty empathy.

<u>Student Persistence</u>

Earning a bachelor's degree is "linked to long-term cognitive, social, and economic benefits that are passed onto future generations, enhancing the quality of life of the families of college-educated persons, the communities in which they live, and the larger society" (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008, p. 540). The United States has one of the world's highest rates of higher education participation; however, other developed nations continue to outperform the United States in higher education degree completion (NSC, 2012a). Within the United States there remain staggering disparities in educational attainment between ethnic groups and across state educational systems (NSC, 2012a). American 6-year graduation rates suggest that persistence and degree attainment remain a significant national concern (NSC, 2012a; Allen, Robbins, Casillas, & Oh, 2007). Kuh (2011) stated this concern in simple terms "The American educational pipeline is leaking badly" (p. 2). In 2009, President Barack Obama introduced the American Graduation Initiative with the goal of increasing the number of postsecondary certificates and degrees awarded in the United States by five million by 2020 (Kotamraju & Blackman, 2011). To reach this goal, postsecondary institutions would need to confer an average of 16% more degrees annually and community colleges would be expected to contribute 50% of these additional degrees (Kotamraju & Blackman, 2011; Handel, 2013).

Today's students complex enrollment patterns make monitoring college completion difficult (NSC, 2012a; Crosta, 2014). One-third of all first-time-in-college students "transferred to a different institution at least once within a five-year study period, one-quarter of all transfers

did so more than once, and over one-quarter of all transfers crossed a state line" in the process (NSC, 2012a, p. 13). Students who enroll in college full-time, immediately after high school, no longer represent the majority among postsecondary students (NSC, 2012a). Research that tests theories of long-term retention behavior are "limited by both the difficulty in tracking students into and out of institutions and by the absence of comprehensive prediction models" (Allen et al., 2007, p. 648). As a result of these complexities, conventional measures such as institution-based graduation rates and full-time degree seeking cohorts, will not suffice to understand 21st century persistence and degree completion questions (NSC, 2012a; Crosta, 2014).

Theoretical Foundation: Social and Academic Integration, and Student Engagement

Higher education has long been concerned with studying what factors and experiences contribute to student persistence. Higher-education scholarship has produced "an array of theories and models that explain the relationship between students and their colleges" (Strauss & Volkwein, 2004, p. 205). This collection of theories and models fall into four primary perspectives—pre-college characteristics, student-institution fit, campus climate, and organizational characteristics (Strauss & Volkwein, 2004). Despite a large number of studies "designed to test one persistence model or another, the findings are inconsistent and the causal linkages remain obscure" (Allen et al., 2007, p. 649).

The first model and most traditional perspective is that of pre-college characteristics, including student background, academic preparedness for college, and clear academic goals. Specific pre-college characteristics contributing to persistence and attrition include High school grade point average (GPA), socio-economic status (SES), placement test scores, ethnicity, and parental education (ASHE, 2005). Wang's (2009) model included a set of pre-college

motivational attributes, including perceived locus of control, self-concept, and baccalaureate aspiration (p. 572). These models asserted that "the main factors accounting for differences in academic performance, persistence behavior, and other educational outcomes" (Strauss & Volkwein, 2004, p. 205). Extensive empirical research "confirmed the pronounced impact of pre-college characteristics on the educational outcomes of the general student population" (Wang, 2009, p. 572).

The second model included a group of perspectives focused on student-institution fit models. Decades of research reported that college persistence and successful degree completion were largely influenced by environmental factors that students experience after matriculation. Research indicated that "students' experiences in college may be just as important for their persistence to degree goals as their pre-college characteristics" (Wang, 2009, p. 573). These theories contended that student involvement, engagement, and integration were integral to persistence to degree completion (Astin, 1993; Bean, 1980; Tinto, 1993). Bean's (1980) psychological student attrition model asserted that background variables influenced the way a student interacted with the institution and identified both environmental variables and student intention as predictive factors to student retention (Fike & Fike, 2008). Astin's (1999) The Theory of Involvement focuses on the degree to which the student engages or becomes involved at the institution. Astin defined engagement as "the amount of physical and psychological energy that the student devotes to the academic experience" (1999, p. 518). Tinto's (1993) Interactionalist Theory asserted the importance of social and academic integration on student persistence. Pascarella and Terenzini's (1991) foundational work focused on the impact that student engagement, both academic and social aspects, can have on student persistence. These models asserted that student "persistence and growth depends on the degree of successful

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integration into the academic and social structures of the institution" (Strauss & Volkwein, 2004, p. 205).

A third model emphasized the importance of campus climate in student adjustment. Perceptions of prejudice and discrimination have gained increased attention as factors accounting for the differences in persistence rates between minorities and non-minorities (Strauss & Volkwein, 2004). Students exposed to a climate of "prejudice and discrimination in the classroom and on campus has gained attention as the main factor accounting for differences in withdrawal behavior between minorities and non-minorities" (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999, p. 135). Minority student withdrawal theories can be organized into two general categories: student-institutional models where prejudice and discrimination faced on campus weakens the students' academic and social integration (Bean, 1980; Tinto, 1993); and transactional models where experiences of racism and prejudice were psychological and sociocultural stressors heightening the feeling of not belonging (Cabrera et al., 1999).

The fourth model included structural or functional perspectives. This model was still nascent and drew from the literature on organizations and the variables that reflected the influence of organizational characteristics (Strauss & Volkwein, 2004; Pascarella & Terenzini 1991). These variables included institutional mission, size, wealth, complexity, productivity, and selectivity that may "exert significant influences on a variety of internal transactions and outcomes including student values, aspirations, and educational and career attainment" (Strauss & Volkwein, 2004, p. 206). Students were at the highest risk of dropout in the first year of college and their departure decision was impacted when the student discovered that their expectations about the institution were unrealistic (Monroe, 2006). As such, there was much to be gained from looking at how colleges market and promote themselves to students. It is

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important for institutions to more "accurately and realistically present themselves to incoming students so that expectations of students and institutions are more aligned" (Monroe, 2006, p. 35).

<div align="center">Community/State College Student Persistence</div>

Community colleges exert a great deal of influence on the national higher education stage as they "play a critical role in the pathway to a baccalaureate degree for millions of students, especially among women and ethnic minorities" (Laanan, Starobin, & Eggleston, 2011, p. 175). Community colleges currently "sit at a very important juncture within the U.S. educational and workforce development landscape" as their enrollments and influence continues to grow (Kotamraju & Blackman, 2011, p. 203). Many states rely significantly on community colleges to boost their number of degree completions (Handel, 2013). Of the five states producing more than 100,000 bachelor degree graduates per year (Arizona, California, Florida, Illinois, & Texas), 50% of their graduates began at community colleges (Handel, 2013).

Students may attend community college in pursuit of a degree, a technical certificate, training, job advancement, or they may "see the community college as a cost-conscious alternative to completing the first 2 years of a 4-year degree following a transfer" (Wells, 2008, p. 26). Three quarters of first-time community college students aspire to complete a bachelor's degree (Wells, 2008). Public, 2-year colleges enroll one third of all U.S. college students, account for one quarter of all U.S. postsecondary educational institutions, and enroll a disproportionate number of non-traditional, part time, and low socioeconomic status students (Wells, 2008). National Student Clearinghouse (NSC) data showed that many students attend a community college for a significant period of time (NSC, 2012b). Four out of ten students who

earned a bachelor's degree attended a community college for five terms or more, and six out of ten attended for at least three terms (Handel, 2013, p. 8). Clearly, the "extent to which students are relying on community colleges to fuel their progress toward the bachelor's degree is substantial" (Handel, 2013, p. 8).

Since their early beginnings, "community colleges have offered open admission, geographic proximity, and financial affordability" for students (Craig & Ward, 2007, p. 506). Community college students display a wide variety of demographic characteristics, academic abilities, and goals (Craig & Ward, 2007). In contrast to public and private universities, community colleges offer an open-door admissions policy with less selective admission standards (Fike & Fike, 2008). As a result, community colleges tend to enroll more underprepared students than universities (Fike & Fike, 2008). Community college students often delay enrollment after high school and are more likely to be non-traditional students, non-white, and of lower socioeconomic status (Craig & Ward, 2007). First-generation students tend to be more concentrated in two-year colleges, as are students from low-income families. However, both first generation and low-income students are less likely to earn a bachelor's degree (Handel, 2012; Fike & Fike, 2008).

Community colleges also attract "large numbers of nontraditional students, adults who pursues an education on either a full or part-time basis while maintaining their responsibilities of family, employment, and other life roles" (Ishitani & McKitrick, 2010, p. 578). Graduation rates at community colleges are historically low and are much lower for minorities and first-time postsecondary entrants (Kotamraju & Blackman, 2011). Students who "delay entry for several years are more apt to have poor study habits and to have lost content knowledge, especially in technical fields such as mathematics and science" (Craig & Ward, 2007, p. 507). Research has

indicated that gender, socio-economic status (SES), and race/ethnicity are strong predictors of educational attainment (Wang, 2009). The ability to retain women, minorities, and part-time students at community colleges is a key element to increasing national graduation rates (Kotamraju & Blackman, 2011).

Institution-specific retention and completion rates vary and are dependent on the many cumulative influences community college students may have had prior to enrolling, such as their high school curriculum or prior workforce experiences (Kotamraju & Blackman, 2011). Community colleges often lose students to the competing personal and job-related challenges common to commuting students (Craig & Ward, 2007). Community college student characteristics offer many risk factors to completing programs and graduating from college. These risk factors include: delayed enrollment between high school graduation and postsecondary entry, attended part-time at first institution, completed high school by certificate or GED®, worked full time when first enrolled, single parent before or while enrolled, and being an adult student 25 years or older (Kotamraju & Blackman, 2011).

Few students who enroll in community colleges go on to complete a degree or certificate within 2 years (Crosta, 2014). A key reason for community college student's extended time to degree is that these student "pathways and enrollment patterns are anything but traditional; students routinely switch into and out of full- and part-time statuses, and they frequently skip terms" (Crosta, 2014, p. 119). Persistence research asserts that continuity of enrollment and full-time study are critical for student success (Crosta, 2014). However, very few (1.2%) community college students follow a traditional fall–spring–fall–spring pattern with full-time enrollment in all semesters and less than 4% of community college students earn an associate's degree within 2 years (Crosta, 2014). Although most research studies differentiate between part-time and full-

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time enrollment, nationally 17% of community college students attend full-time, 22% attend part-time, and notably 61% attend a mix of part and full time (Crosta, 2014). Research suggests that taking breaks in enrollment (discontinuous enrollment) may be "particularly harmful for students who desire to earn a credential and that part-time enrollment may be particularly harmful for students who desire to transfer" (Crosta, 2014, p. 136).

Much of the research focused on student retention has been conducted in postsecondary institutions of higher education that "typically enroll white, residential, and traditional-age students" (Chaves, 2006, p. 140). More recent studies that focused on community college student retention offer valuable insights into promising practices that may guide future action on the part of US community colleges. Using data from two cohorts at five community colleges in a single state, a study revealed the diversity of enrollment patterns in terms of intensity and continuity that are generated by community college students along their educational pathways (Crosta, 2014). Crosta (2014) found a positive association between enrollment continuity and earning a community college credential and also a positive association between enrollment intensity and likelihood of transfer.

Craig and Ward's (2007) study examined student persistence and success at a large public multi-campus community college in New England. Characteristics found to be related to persistence included maintaining an above average GPA, having few unearned credits by not dropping courses once enrolled, and enrolling in the community college immediately after high school graduation (Craig & Ward, 2007). The only student demographic characteristic found to be significantly related to student persistence was the length of the interval between high school graduation and college enrollment (Craig & Ward, 2007).

Fike and Fike's (2008) study analyzed predictors of fall-to-spring and fall-to-fall retention for 9,200 first-time-in-college students who enrolled in a Texas public urban community college over a four-year period (p. 68). This retrospective study assessed predictors of student persistence for FTIC students in community college. Findings highlighted the impact of developmental education programs and internet-based courses on student persistence (Fike & Fike, 2008, p. 68). Additional persistence predictors included financial aid, parents' educational attainment, the number of semester hours enrolled in and dropped, and participation in the Student Support Services program (Fike & Fike, 2008, p. 68).

Transfer Student Persistence

It is widely acknowledged that many students who pursue postsecondary education "no longer follow a traditional path from college entry to degree at a single institution" (NSC, 2012a, p. 5). Commonly, many students attend multiple institutions, often transferring at least once before earning a degree (NSC, 2012b; Duggan & Pickering, 2007-2008). Transfer students, unlike their 4-year native counterparts, are a "distinct population who are often older, who are more likely to work full-time, who come from lower socioeconomic households, and who often have significant family responsibilities" (Lester, Brown, & Mathias, p. 203). In addition, many transfer students maintain residency with their families and commute to their transfer institutions (Ishitani & McKitrick, 2010). Transfer students frequently bring with them an "assortment of barriers to academic success and retention, often finding themselves in situations that require skills they neither possess nor are even aware that they lack" (Duggan & Pickering, 2007, p. 438).

The profile of the transfer student is a heterogeneous one:

> Some transfer students attend a two-year college prior to transferring while others attend another four-year institution. Students also differ in the number of credits they transfer, with some only transferring a few credits and others (transferring) an associate's degree. Transfer students can be married with children, single parents/displaced homemakers, or single with no children. They work full-time and part-time and attend school both full- and part-time. Transfer students also vary in age from the traditional transfer student to the adult or nontraditional student. (Duggan & Pickering, 2007, p. 438)

The National Student Clearinghouse (NSC) analyzed student-level enrollment data over five years, of virtually all students who began postsecondary education in the U.S. in fall 2006, encompassing nearly 2.8 million students (NSC, 2012b). NSC found that of those who transfer, 37% transfer in their second year, 22% transfer as late as their fourth or fifth years, 25% transfer more than once, 27% transfer across state lines, and 43% transfer into a public two-year college (NSC, 2012b). Contrary to common thinking, the most prevalent transfer destination was public two-year institutions and not four-year universities (NSC, 2012, p. 7). Regardless of the direction of transfer, "whether it be vertical, lateral or reverse, the highest rate of transfer was in the second year" (NSC, 2012b, p. 8). The study found no significant differences between transfer rates for part-time and full-time students. Notably, the study found that over one quarter of all transfers crossed state lines (NSC, 2012b).

When analyzing transfer student persistence data, the information reflects the complexity of postsecondary student enrollment, transfer, and persistence. The results "suggest that the linear view of college access and success that focuses on the initial institution attended often fails to address the realities on the ground" (NSC, 2012b, p. 6). Much of what is known about transfer enrollment patterns is "informed by institutional reports of the number of students who enter as transfers, as opposed to first-time freshmen" (NSC, 2012b, p. 11). Students who leave are often

counted as lost and as a result, we "lack the complete story of where students came from, and what happens when they leave" (NSC, 2012b, p. 11). Despite increases in the number of non-traditional students, "for the most part we continue to use models that were designed to explain attrition for the traditional student" (Monroe, 2006, p. 34) and not the modern transfer student.

Recent studies show that transfer students are retained and graduate at a rate nine percentage points lower than native students (Ishitani & McKitrick, 2010). Eight decades of research has focused on patterns of transfer student attrition asserting that students transfer from one institution due to finances, personal growth, not feeling challenged, completing a baccalaureate degree, and fulfilling career aspirations (Duggan & Pickering, 2007). Research has also identified the factors associated with students who successfully transfer. Successful transfer students are more likely to be younger and more "likely to demonstrate academic readiness based on the completion of more course modules and more rigorous courses, spending less time at the community college, and maintaining continuous enrollment" (D'Amico, Dika, & Elling, 2014, p. 372). Overall, an advantage to transfer is greater academic preparation upon entering the community college and while enrolled at the community college (D'Amico et al., 2014).

An urban community college study showed that African American students were less likely to demonstrate transfer readiness than Hispanic students, and Hispanic students were more likely to become transfer-ready than Asian or Caucasian students (D'Amico et al., 2014, p. 372). Townsend and Wilson's (2006) qualitative study of community college transfers at a large university, found that transfers "struggled to make connections with faculty and many expressed challenges in making friends in the university setting" (D'Amico et al., 2014, p. 375). Ishitani and McKitrick (2010) compared native and community college transfer student engagement. They found that, overall, community college transfer students were "less engaged than native

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students; however, community college transfers who enrolled full-time and/or transferred earlier in their academic careers were more likely to engage than part-time students and/or those who transferred after their sophomore year" (D'Amico et al., 2014, p. 375). This study also found that living off campus had a negative effect on student–faculty interaction but did not impact other forms of student engagement.

A qualitative study of transfer students conducted by Lester et al. (2011) found that transfers primarily found on-campus engagement through academic means and experienced social engagement outside of the transfer institution. Laanan et al. (2011) found that transfer students' academic adjustment was enhanced by the academic skills developed at the community college. Transfer students also felt a certain degree of transfer student stigma, which negatively impacted their social adjustment (Laanan et al., 2011). Transfer student social adjustment was "positively influenced by interaction and experiences with faculty, yet another example of how community college transfers find social belonging through academic means" (D'Amico et al., 2014, p. 375). This research asserted that the classroom is a place where "community college transfers were likely to engage both socially and academically, due to their experience in commuter 2-year college settings" (D'Amico et al., 2014, p. 375).

Barriers to Transfer Student Success

The transfer function is paramount to maintaining access to higher education (Laanan, 2007). Much of the research on transfer student persistence focused on a quantitative attempt to measure the phenomenon known as transfer shock, defined as the difference in GPA achievement between native and transfer students (Monroe, 2006, p. 37). Many of these studies showed that transfer students suffer a degree of transfer shock resulting in a temporary dip in

their grades during the first semesters after they transfer to an institution (Ishitani & McKitrick, 2010). Research into transfer student persistence is slowly evolving from the concept of transfer shock to a better understanding of the transfer process and the identification and mitigation of barriers to transfer student success (Laanan et al., 2011). Barriers to transfer student success can best be understood by examining the academic achievement comparisons between transfer and native students, pre-transfer experiences, post-transfer experiences, and transfer pathways and partnerships. These multiple dimensions reflect the "complex adjustment process faced by transfer students and are designed to capture not simply academic changes, but also the cultural changes experienced by students" (Young & Litzler, 2013, p. 879).

<div align="center">Academic Achievement Comparisons: Transfer Students & Native Students</div>

A study conducted by Melguizo, Kienzl, & Alfonso (2011) asserted that "community colleges have the potential to provide the academic preparation necessary for students to succeed at a four-year college" (p. 282). Overall, regardless of pre-transfer institution type, researchers asserted that transfer students frequently drop out at higher rates and have lower GPAs when compared to their native student counterparts (Hoyt & Winn, 2004). However, this difference in student achievement occurs most commonly at the beginning of the transfer experience as "following a slight dip in performance after initial transfer, transfer students performed at equivalent levels to native students" (D'Amico et al., 2014, p. 373). This slight dip in GPA may be the root of related research findings that transfer students exhibited a higher rate of individual course failure and academic probation after their initial semester when compared with native students at the same level; this is especially true for students who transferred from community colleges (Lockwood et al., 2013, p. 615). However, once the initial transfer shock period passes,

transfer students earn equivalent numbers of non-remedial credits and attain baccalaureate

degrees at similar rates than four-year rising juniors (Melguizo et al., 2011). The baccalaureate

attainment rates of transfer students "are approximately 60%, compared to 73% for rising

juniors, both around or above the national average for all college students of 60%" (Melguizo et

al., 2011, p. 270).

Not all student populations perform uniformly in comparison to native students. The

"probability of earning a bachelor's degree among community college transfers is a function of

demographic, high school, and college experience" (Wang, 2009, p. 581). Female transfer

students are more likely to attain a bachelor's degree than male students (Wang, 2009). Transfer

students from in-state institutions are less likely to attain a bachelor's degree and those who

transfer from universities, rather than 2-year colleges, are also more likely attain a bachelor's

degree (D'Amico et al., 2014). Student academic performance represented by community college

GPA is "strongly and significantly associated with the probability of continuous enrollment for

transfer students", which is a key factor to degree completion (Wang, 2009, p. 583). Many

potential contributors to transfer student success have been identified in the literature. Among the

most prevalent are "higher college grade point average (GPA) upon transfer, higher degree

aspirations, transferring with more credit hours, not majoring in technical fields, being female,

and of a higher socioeconomic status" (D'Amico et al., 2014, p. 372).

Ishitani and McKitrick (2011) investigated how educational experiences between

community college transfer students and native students differed at a four-year institution.

Benchmarks from the National Survey of Student Engagement (NSSE) were used to assess the

levels of students' collegiate experiences. Enrollment status (full-time and part-time) presented

the largest effects on the levels of students' educational involvement regardless of student type.

Melguizo et al. (2011) compared the educational outcomes of students who successfully transferred from a community college and achieved junior status with those who successfully completed two years at a four-year college. The study used the National Education Longitudinal Study (NELS: 88) with a sample of 3,160 students. These results suggested that even though community college transfers may experience transfer shock, as they adjust to the demands of four-year institutions, the probability of attaining a credential does not differ from native students (Melguizo et al., 2011). These results suggested that as long as four-year institutions "provide the academic and social supports necessary to ease the transition, there is no reason why community college transfers should graduate at lower rates than their junior-level colleagues" (Melguizo et al., 2011, p. 270).

Laanan's (2007) quantitative study explored the impact of social integration on community college transfer student persistence. The study found that those students with lower GPAs, lower intellectual self-confidence, and greater perceptions of a competitive environment will have more struggle with social integration, a necessary aspect of persistence theories. When examining the concept of social adjustment, no background characteristics were found to be significant (e.g., age and gender), but organized social involvement, including participating in clubs and organizations or attendance at events organized by cultural groups were significant factors that positively impacted social adjustment (Laanan, 2007; D'Amico et al., 2014).

Using a cross-sectional research design, Strauss and Volkein (2004) explored what factors influence student commitment and what are the similarities and differences at two-year and four-year institutions. This study drew upon a multi-campus database aggregated from 51 public institutions and including 8,217 student responses. This study found that although "classroom experiences and social integration both significantly predict institutional commitment

scores at two-year and four-year institutions, there are differential impacts (Strauss & Volkwein, 2004, p. 218). Specifically, the study found that the classroom experience was a more influential predictor at two-year institutions, while social integration has more impact on institutional-commitment scores for students at four year institutions. (Strauss & Volkwein, 2004).

Pre-Transfer Experiences

A great deal of research has focused on what specific pre-transfer factors and experiences can positively or negatively impact transfer student persistence. This body of research has focused primarily on cognitive variables, demographics, and non-cognitive factors. Identifying what pre-transfer factors may impact student persistence has predominately been accomplished through examining cognitive variables such as transfer GPA and standardized test scores (Duggan & Pickering, 2007). However, research shows that "these variables have only accounted for up to 25% of the variance in persistence" (Duggan & Pickering, 2007, p. 439). Demographic variables such as age, gender, ethnicity, and socio-economic status have also been examined as predictors of transfer student persistence (Duggan & Pickering, 2007). However, in predicting students' persistence, no background characteristics (age, honors participation, racial/ethnic background) were found to be significant determinants of students' social adjustment process at the 4-year university. (Laanan, 2007, p. 54).

Non-cognitive factors, such as student behaviors and attitudes, have also been studied as predictors of transfer student academic success and persistence (Wang, 2009). Common contributing factors to transfer student attrition include "lack of academic preparation, inaccurate transfer advising, unfamiliarity of academic expectations and rigor of the senior institution, and weak transfer and articulation policies" (Laanan et al., 2011, p. 176). Combining non-cognitive

variables with cognitive and demographic variables has been "accurate in predicting academic success and persistence for student athletes, as well as for traditional freshmen" (Duggan & Pickering, 2007, p. 439).

A variety of institutional factors influence transfer student persistence, including issues of institutional support, finances, and student goal alignment. Importantly, "personal/friend/familial support and balancing the multiple roles of parent, worker, and student have been connected to transfer student persistence in both the two- and four-year institution" (Duggan & Pickering, 2007, p. 439). Institutional commitment as measured by academic and social integration, was another important influencer. Experiences in the "classroom, social activities and friendships are especially strong predictors of institutional commitment" (Strauss & Volkwein, 2004, p. 218). Financial aid variables and the pre-college characteristics of age, ethnicity, and marital status also impacted transfer student institutional commitment" (Strauss & Volkwein, 2004).

Post-Transfer Experiences

A "more complete understanding of the complexity of the transfer adjustment process is essential" (Laanan, 2007, p. 39). It is widely acknowledged that what a student brings to the college environment will have an impact on their academic and social experiences. However, it is "what the student does once they arrive that will determine the extent to which a successful adjustment experience will be achieved" (Laanan, 2007, p. 55). Research has noted with some consistency the challenges transfer students face when transferring between institutions including "transfer shock (drop in grades), transitional trauma (social adjustment to a new campus) academic trauma (academic adjustment to the more rigorous four-year campus), and, in some cases, transfer ecstasy (an increase in GPA)" (Tobolowsky & Cox, 2012, p. 390).

Persistence theories promote academic and social adjustment and engagement as necessary elements to student persistence, including transfer students (Astin, 1993; Bean, 1980; Tinto, 1993). Despite the strong focus on academic adjustment on persistence research and theories, attention has more recently focused on social and psychological adjustments that occur during this transitional period and beyond (Laanan, 2007). Possessing the "coping mechanisms to deal with the stress, and the extent to which they have the skills to fit in and become involved highly impacts their successful cross-cultural relocation" (Laanan, 2007, p. 41). Transfer students can be both over confident and under confident depending on their unique circumstances. Their under-confidence can manifest itself in two ways: the invisibility of the peer group and the lack of transfer student engagement (Grites, 2013). Students who think that they are somehow inferior academically to native students will "manifest their thoughts in the way in which they approach course learning" (Laanan, 2007, p. 53). If a transfer student has high self-confidence, they are more likely to have positive experiences and will seek out opportunities to participate in student groups or cultural organizations (Laanan, 2007). Research asserts that "students who are involved in clubs and organizations will experience less difficulty adjusting socially and students who spend more time socializing with friends will also experience a positive social adjustment" (Laanan, 2007, p. 55).

Most research focused on student engagement as a key indicator of persistence is largely based on research conducted with traditional freshmen at a four-year university (Wang, 2009). There is little research focused on transfer student engagement when compared to the breadth and depth of first year student experience research (Lester et al., 2013). Most of the literature that does exist focuses on the factors that lead students to transfer, not their experiences once attending the transfer institution (Lester et al., 2013). However, "transfer students may

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demonstrate different patterns of engagement than native students" (Wang, 2009, p. 574).

Understanding transfer student engagement begins with an exploration of the degree to which transfer students integrate into their receiving institution, including "interacting with faculty, engaging in active and collaborative learning, engaging in educational activities, and activities that indicate engagement in one's institutional environment" (Ishitani & McKitrick, 2010, p. 577).

Laanan's (2007) study sought to "establish new methods, concepts, and frameworks to better understand and characterize the complex transfer process" (p. 39). This cross-sectional study included 2,369 students who transferred from California Community Colleges to an urban multicultural public university in Southern California (Laanan, 2007). This research found that GPA and intellectual self-confidence were negative predictors of academic adjustment (Laanan, 2007). In addition, students who strongly agreed that there was a competitive nature among students likely experienced difficulty (Laanan, 2007, p. 53). This study also found that students who attend university-sponsored academic workshops will likely experience academic difficulty (Laanan, 2007). Another important finding was the "notion that students' insecure feelings about the university environment are positively related to academic adjustment" (Laanan, 2007, p. 54). As such, the researcher cautioned that reducing students' insecurities and "alleviating feelings of anxiety about the 4-year institution appear to be important to facilitating students' academic adjustment" (Laanan, 2007, p. 54).

From the perspective of social adjustment, the Laanan (2007) study found that students who spend more time socializing with friends will experience positive social adjustment. If students have a high self-rating on social self-confidence, they were likely to have positive experiences (Laanan, 2007). For students to be successful in their social adjustment at the

transfer institution, it was important that they engaged with their peers by spending time with other students and working on projects to foster a sense of belonging to the institution (Laanan, 2007, p. 55).

Transfer students, many of whom continue to commute once they transfer, often fail to engage with peers, in clubs and organizations, and in campus events once they transfer (Ishitani & McKitrick, 2010). Operating from the assumption that everyone else is a native student and who may be more knowledgeable, transfer students often "fail to ask questions, seek help from other students, or find helpful resources" (Grites, 2013, p. 62). As a result of this sense of isolation within their peer group, transfer students may not feel a sense of belonging and easily succumb to the classic "car to class to car" behavior (Grites, 2013, p. 62).

Transfer receiving institutions can also greatly impact the transfer student experience, beginning with supporting the transition between institutions. Evidence "indicates that transferring from one institution to another can have lasting negative consequences for many other students, suggesting that institutions may not be providing the supports and programs necessary to assist this population" (Tobolowsky & Cox, 2012, p. 389). Both transfer students and their receiving institutions "often fail to recognize the importance, need, and value of a positive and sustained transitional experience" (Grites, 2013, p. 61).

The "magnitude and complexity of the issues related to providing a successful transition to a four-year institution cannot be addressed in a single program, on a single day, for a few hours" (Grites, 2013, p. 66). The pre-transfer institution should begin the transition process for its students well before they actually transfer and the receiving institution should extend the transition support over a substantial time period (Grites, 2013). A well-developed transition experience will also contribute to student satisfaction with the institution. Berger and Malaney

(2003) found that the "most prevalent indicator of transfer student satisfaction at the university and their academic performance is transfer preparedness" (p. 15), which includes advising, access to faculty and staff, and having an understanding of academic requirements.

Faculty and staff often lack understanding of their transfer student populations and overestimate the college readiness of transfer students as they enter their new institution (Grites, 2013). As such, they will often approach transfer students with a one-size-fits-all expectation that ignores the diversity of institutions, curricula, academic rigor, skills, and goals that transfer students have experienced (Grites, 2013). Generally, faculty and staff expect transfer students to be prepared for their new environment with little thought give to their influence on how well students adjust to university life, unlike how they might approach working with a traditional first year freshmen (Grites, 2013). If transfer students perceive that faculty are approachable they will also experience a smoother academic adjustment and will be more likely take advantage of office hours and seek assistance on class assignments and projects (Laanan, 2007). This is especially true for faculty as the classroom is the "only regular venue that most commuting and part-time students have for interacting with other students and with faculty" (Kuh et al., 2008, p. 556). The more information transfer students have about their faculty member's class expectations, the greater the chance that students will successfully meet those expectations (Laanan, 2007).

Tobolowsky and Cox (2012) conducted a qualitative study at a public university to examine how institutional agents shape the transfer student experience and to identify structures, programs, policies, people, and practices that have contributed to the neglect of transfer students. Notably, faculty and staff members identified two characteristics of transfer students that make impacted their ability to serve them: the overall diversity of the population and their frequent false assumptions about the institution (Tobolowsky & Cox, 2012, p. 396). In addition, their

findings suggested that the "transfer student experience may be shaped by a variety of subtle, often hidden, institutional influences" (Tobolowsky & Cox, 2012, p. 408).

Transfer student success cannot be left to chance or assumptions; as the stakes are very high. Grites (2013) asserts that "systematic, strategic, and timely interventions must be developed, implemented, and assessed as a means to establish a positive culture of transfer that enables these students to meet their goals, as well as those of legislatures, accrediting bodies, and employers" (p. 67). In doing so, the institution will develop a transfer-receptive culture, which is defined as a commitment to "provide the support needed for students to transfer successfully—that is, to navigate the community college, take the appropriate coursework, apply, enroll, and successfully earn a baccalaureate degree in a timely manner" (Herrera & Jain, 2013, p. 52). Instrumental to creating and understanding a transfer-receptive culture is the "realization that efforts toward the inclusion of transfer students must begin prior to when the student arrives" (Herrera & Jain, 2013, p. 52).

Transfer Pathways Programs

Kisker (2005) asserts that to increase baccalaureate attainment, community colleges and universities must collaborate to "create and sustain effective transfer practices" (Kisker, 2005, p. 2). In an effort to respond to low transfer and completion rates, many states have enacted state-wide articulation agreements and transfer programs that serve as "incentives to transfer common general education requirements or common course numbering; or complete transfer degree programs" between community colleges and universities (Gross & Goldhaber, 2009, p. 18). The goal of such programs is to increase the fluidity between institutions and offer increasingly

seamless transfer experiences as a means to lessen transfer barriers and increase the likelihood of transfer student success (Bers, 2013, p. 23).

Current literature on transfer partnerships has focused mostly on the "most basic form of inter-institutional collaboration—articulation agreements—rather than active, collaborative partnerships between institutions" (Kisker, 2005, p. 3). Transfer partnerships in the form of a transfer pathway program, are a strong example of such active and collaborative partnerships. Transfer pathway programs are formal collaborations between one or more community or state colleges and a university. The purpose these programs is to "increase transfer and baccalaureate attainment for all, or for a particular subset of students" (Kisker, 2005, p. 2).

One such transfer pathway program is DirectConnect to UCF. This ten year old 2 + 2 transfer pathway program guarantees admission to UCF for all students who earn an associate degree from one of five partner state colleges in the Central Florida region (UCF, 2016). UCF describes the benefits of this program as,

1. guaranteed admission to UCF with an earned associate's degree from one our partners,

2. shorter time to degree completion with personalized pre-enrollment advising,

3. smooth pathway for engagement, advisement, admissions, orientation and registration,

4. access to UCF campuses, student services, activities and events (UCF, 2016).

State college transfers now encompass 48% of bachelor's degrees awarded by UCF, the highest share of any Florida university and 20% of UCF graduates are students who participated in the DirectConnect program (Quinton, 2014).

There is little research however focused on the impact of articulation agreements, or empirical studies of the impact of transfer policies or transfer pathway programs (Bers, 2013; Kisker, 2005). Gross and Goldhaber (2009) assert that there is a great need for longitudinal data,

"from before and after transfer policies are enacted, on outcomes such as transfer rates, number of degrees and course taking is needed to persuasively assess the effect of transfer policies" (p. 6). A study of Canadian transfer pathways programs found that 39% of participants felt that transition services were adequate and 82% of participants felt that the university could have done more to help with the transition (Percival et al., 2014, p. 30). Specific areas of concern were the articulation of transfer credits between institutions and academic programs and barriers to effective course registration (Percival et al., 2014, p. 30). This study also found that participants struggled with assimilation into the class culture, especially during the first few weeks of classes (Percival et al., 2014).

<u>Sense of Belonging</u>

The concept of belonging is fundamental to the human experience in that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (Baumeister & Leary, 1995, p. 497). Evidence attests that the need to belong shapes emotion and cognition, and is essential to psychological and physical well-being (Baumeister & Leary, 1995; Mallett et al., 2011). Belonging helps to form social attachments, create social bonds, and produce positive emotions (Baumeister & Leary, 1995). One of the "most important questions that people ask themselves in deciding to enter, continue, or abandon a pursuit is, do I belong?" (Walton & Cohen, 2007, p. 94).

Baumeister and Leary (1995) propose that humans need "frequent, positive interactions with the same individuals, and they need these interactions to occur in a framework of long-term, stable caring and concern" (Baumeister & Leary, 1995, p. 520). A lack of belongingness on the other hand can cause ill effects, including loneliness and lack of social integration (Baumeister &

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Leary, 1995). Lack of belonging is also negatively related to academic achievement and retention (Mallett et al., 2011). A sense of social connectedness may predict favorable outcomes, including those related to mental and physical health (Walton & Cohen, 2007, p. 82). The concept of sense of belonging has been more thoroughly considered in other fields, such as psychology, psychiatry, and nursing (Hoffman et al., 2002, p. 229). Measuring sense of belonging has mostly used a unidimensional scale or, as in the case of Hoffman et al. (2002), through a multidimensional instrument. Recently studies have focused on developing a validation method using confirmatory factor analysis (Tovar & Simon, 2010).

Sense of Belonging in Higher Education

Sense of belonging was first introduced to the higher education literature by Hurtado and Carter (1997), however the concept is grounded in the work of Bollen and Hoyle (1990). Bollen & Hoyle (1990) describe sense of belonging as a construct of social cohesion and as a measure of the extent that students feel part of the overall campus community. Hoffman et al. (2002) assert that the defining attributes of sense of belonging are fit and valued involvement. Fit is described as the "perception that one's values or characteristics are congruent with others, and valued involvement refers to the perception that one is valued, needed, or important to others" (Hoffman et al., 2002, p. 229). Sense of belonging, in the context of higher education, can therefore best be defined as a "subjective sense of affiliation and identification with the university community" (Hoffman et al., 2002, p. 229). The construct of sense of belonging has been studied minimally in higher education and predominantly with select college student populations (Tovar & Simon, 2010, p. 200).

The higher education ecosystem is comprised of many social and academic systems. A student's ability to integrate into these distinct systems will reflect their overall sense of affiliation and identification and their perception of overall belonging at the university (Hoffman et al., 2002; Morrow & Ackermann, 2012). As a result, the construct of belonging or how well the student integrates into the institutional system is important to consider when considering whether a student will persist or not (Morrow & Ackermann, 2012). Hoffman et al. (2002) assert that "All things considered, the greater a student's sense of belonging to the university, the greater is his or her commitment to that institution and the more likely it is that he or she will remain in college" (p. 228).

Within higher education settings, belonging can be encouraged by faculty, staff, and peers (Masika & Jones, 2016). Social cognitive theories of adolescent development assert that students of all ages do benefit from supportive interactions with a non-parental adult (Freeman, Anderman, & Jensen, 2007, p. 206). No research yet exists to determine whether students' sense of belonging is "generated primarily through academic activity or through interpersonal interactions and acceptance" (Freeman et al., 2007, p. 203). Research does support that failing to "form satisfactory interpersonal relationships in college is associated with outcomes such as depression, anxiety, and suicide, criminality, and college freshmen attrition" (Freeman et al., 2007, p. 204). Tinto's research found that when students "perceive that their relationships with faculty are insignificant, their motivation is likely to decline and they will tend to withdraw socially" (Freeman et al., 2007, p. 206).

Morrow and Ackermann (2012) found that sense of belonging was strengthened by interactions with faculty and peers, and was positively related to intention to persist. Baumeister and Leary (1995) asserted that interpersonal interactions may have an "additive effect and that,

when people perceive an environment as caring, their need to belong is fulfilled" (Freeman et al., 2007, p. 206). Strauss and Volkwein (2004) found that the strongest influence on belonging was from student-level variables and student campus experiences and not from organizational characteristics or student demographic characteristics. Sense of belonging in the first year of college is influenced by successful management of the college transition, student perceptions of campus racial climate, and peer interactions (Hurtado et al., 2007, p. 845). Lester et al (2013) asserted that transfer students view engagement with their university within the context of their academic work, thus supporting the centrality of academic engagement for this population's overall sense of belonging (Lester et al., 2013, p. 218).

<div align="center">Sense of Belonging Studies Focused on Specific Populations</div>

Sense of belonging in an academic context is a "critical determinant of academic achievement and persistence, particularly for students of color" (Mallett et al., 2011, p. 432). Most sense of belonging research conducted since the concept was first introduced into higher education, has focused on racial and ethnic minority populations. Specifically, how these student populations navigate the institutional culture with many studies making direct connections to college persistence and attrition (Tovar & Simon, 2010, p. 201). In particular, these studies focused on the impact the institution's racial climate had on student sense of belonging, with the majority of studies focusing on the experience of Latino students (Tovar & Simon, 2010). Sense of belonging as conceptualized as the integration of the academic and social realms is crucial to students' transition in college (Hoffman et al., 2002; Hurtado & Carter, 1997; Hurtado et al., 2007). Belonging uncertainty may send negative cues to students implying that "people like me do not belong here" (Walton & Cohen, 2007, p. 83).

Fundamentally, student identity development is greatly impacted by sense of belonging, mattering, validation, and the effects of one's cultural background (Chaves, 2006). These factors "ultimately coalesce to influence, positively or negatively, an adult student's ability to persist in college and reach his or her educational goals" (Chaves, 2006, p. 140). Hurtado and Carter (1997) found that perceptions of a hostile racial climate directly and negatively affected Latino/a student sense of belonging and that "Latino students are less likely to feel part of the campus community if they perceive racial tension or have experienced discrimination" (p. 337). However, they also assert that positive transitional experiences, especially those that happen early in the student experience can enhance sense of belonging in later academic years (Hurtado & Carter, 1997).

Hurtado et al. (2007) found that perceptions of a negative racial climate "had a negative impact on adjustment to college that included academic, social, and personal–emotional domains, as well as sense of attachment to the institution" (p. 846). If sense of belonging is important to intellectual achievement, members of historically excluded racial and ethnic groups may suffer a disadvantage in higher education (Walton & Cohen, 2007, p. 82). A study conducted by Mallett et al. (2011) of over 500 undergraduates at a Midwestern university found that the pervasiveness of negative academic achievement stereotypes and the awareness of underrepresentation of one's racial/ethnic group served to negatively impact sense of belonging for students of color (p. 436).

Hurtado et al. (2007) found that students' social self-concept at time of college matriculation serves as a positive predictor of sense of belonging (p. 873). This same study found that Latinas/os tend to have a slightly lower sense of belonging than other first year underrepresented students in the sciences. However, they also found that underrepresented

students with high SAT/ACT scores and those with a higher social self-concept showed a greater sense of belonging (p. 873).

Maestas, Vaquera, and Zehr (2007) found that the socializing with students different from themselves, being involved in a fraternity or sorority, taking on a leadership role in a student club, and living on campus were all predictors of sense of belonging for students at a Hispanic-Serving institution (p. 249). In addition, this study found that faculty expressing interest in students' development also positively impacted student sense of belonging (p. 249). Lester et al. (2013) found that sense of belonging was fostered by the overall campus climate and by the "convergence of academic purpose, focus, and rigor" (p. 217).

Dimensions of Sense of Belonging:
Student–Faculty Relationships, Student–peer Relationships, and Student–classroom Experiences

Sense of belonging can be promoted through purposeful student/faculty interactions, peer interactions, and student/advisor relationships, benefiting students socially and intellectually (Tovar & Simon, 2010).The results of nearly two decades of research focused on sense of belonging suggest that it can best be fostered in settings "characterized by effective instruction, including an emphasis on mastery of meaningful content; warm, respectful interactions between instructor and students; cooperative interactions among students; and smooth organization" (Freeman et al., 2007, p. 205).

Quality interactions do not consist of simply developing a connection with others, rather, "students need to feel connected and they need to feel welcomed not threatened" (O'Keeffe, 2013, p. 608). Freeman et al. (2007) assert that sense of belonging can be positively impacted by perceptions of pedagogical caring from faculty instructors (p. 207). However, it is not yet clear whether "experiencing a sense of belonging in at least one individual class would make a

significant contribution to the overall sense of belonging at the campus level" (Freeman et al., 2007, p. 206). Conversely, a negative relationship with a faculty member can have a negative impact upon student motivation and sense of belonging (O'Keeffe, 2013, p. 608).

Peer interactions are also important to sense of belonging according to research conducted by Hurtado et al. (2007). This study found that underrepresented students' sense of belonging was positive impacted by "interacting with a graduate student or teaching assistant (b = .05), receiving advice from a junior or senior (b = .12), receiving academic advice from a freshman (b = .06) and interacting with peers of diverse racial backgrounds" (Hurtado et al., 2007, p. 873). Cross-racial interactions (b = .11) significantly influence sense of belonging by reaffirming the benefits of a diverse university community (Hurtado et al., 2007, p. 874). Importantly, hostile racial climate (b = .16) or peer interactions will negatively impact sense of belonging (Hurtado et al., 2007, p. 874).

Inside the classroom, it is "essential to affirm and validate adult students' experiences, highlighting the social and academic connection between students, their teachers, and the college in general" (Chaves, 2006, p. 150). Hurtado et al. (2007) found that the following variables were statistically significant positive predictors of students' sense of belonging: relevance of coursework to life (b = .15), self-rated change in ability to conduct research (b = .09), and ability to manage the academic environment (b = .09; p. 874).

Summary

The literature reviewed in this chapter focused broadly on existing literature related to student persistence in higher education, college transfer, and sense of belonging. This review focused on examining persistence at the community/state college setting and the transfer university

setting, detailing research and literature from the past four decades. The review then analyzed barriers to transfer success during both the pre-transfer and post-transfer timeframe, including the impact of transfer pathway programs. Finally, the review examined the concept of sense of belonging in the higher education, with an emphasis on literature and research involving specific student populations and the dimensions of faculty support, peer support, and the classroom environment.

CHAPTER THREE: METHODOLOGY

This chapter describes the methodological approach to the research question being studied and includes a description of the study design, selection of participants, instrumentation, procedures, data collection, data analysis, and a summary. The purpose of this study was to examine the sense of belonging of state college transfer students who enroll at a large research intensive university through structured transfer pathways and unstructured transfer pathways. Structured transfer pathway programs are formal collaborations between one or more community or state college and a university. The purpose these programs is to "increase transfer and baccalaureate attainment for all, or for a particular subset of students" (Kisker, 2005, p. 2). This researcher explored state college transfer student sense of belonging at a large research-intensive university using the Sense of Belonging Instrument (Hoffman et al., 2002). Specifically, this study sought to explore differences in sense of belonging in state college students who transfer to a university through structured and unstructured pathways, from diverse populations, with varying enrollment patterns, and demographic variables.

Study Design

This study employed a mixed methods design wherein quantitative and qualitative data were collected simultaneously during a single data collection phase. The data were collected using a concurrent nesting strategy using an electronic instrument (Creswell, 2003, p. 218). The data used in this study included the participants' responses to the Sense of Belonging Instrument (Hoffman et al., 2002), an analysis of the participants' enrollment and demographic items, and the participants' responses to one open-ended item. The quantitative data were analyzed using

descriptive and inferential statistics. The qualitative data were analyzed using conventional qualitative content analysis. The integration of quantitative and qualitative data occurred at several stages in the process of research, including the data collection, the data analysis, and the data interpretation (Creswell, 2003, p. 212).

Research Questions

This research was conducted with the following questions as the focus:

1. What are the relationships between five factors identified by Sense of Belonging Instrument: (a) perceived peer support, (b) perceived classroom comfort, (c) perceived isolation, (d) perceived faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002)?

2. To what extent does sense of belonging differ between state college students who transfer through structured transfer pathways and those who transfer through unstructured transfer pathways to the same institution?

3. What is the relationship between transfer student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer grade point average (GPA), transfer pathway, and veteran status), and state college transfer students' sense of belonging?

Selection of Participants

Participants were selected based on previous enrollment at the public State College (SC) and subsequent transfer to the public Metropolitan Research University (MRU) in either August

2015 or January 2016, who persisted through their first semester of enrollment, and who were over the age of 18. In August 2016, the SC conducted an enrollment data query from the National Student Clearinghouse (NSC). The NSC request included all students who had attended the SC and transferred to the MRU in fall 2015 or spring 2016 and persisted at least one semester. The original NSC list included 328 students. However, the SC removed students who had attended other colleges or universities between SC and the MRU and students who were not 18 years of age at the time of transfer. The final population included a list of 283 students who met the study's required participant characteristics. The SC then made an internal query for the email contact and demographic information for each of the 283 students who met the study's participant characteristic from the NSC using the SC's student information system (Ellucian Banner).

Once the email contact and demographic information were secured, an e-mail invitation (Appendix D) was sent by the researcher to eligible participants informing them of the purpose of the study, The SC & MRU Institutional Research Board (IRB) approvals, researcher and IRB contact information, and a link to the online instrument (Appendix A).

Instrumentation

The SBI was constructed to assess sense of belonging to the postsecondary institution and to develop an instrument that could be used to understand why students persist in, or withdraw from, college (Hoffman et al., 2002). The initial measure contained 50 items concerned with student/peer relationships and 35 items investigating student and faculty relationships, for a total of 85 items. These items were generated from a review of the literature, focus groups with first-year students at a four-year institution, and evaluation of the items for relevancy, clarity, and conciseness (Hoffman et al., 2002).

Five underlying factors or subscales of the Sense of Belonging Instrument were identified by the original author's analysis, including perceived classroom comfort, perceived isolation, perceived academic support, perceived social support, and empathetic faculty understanding. The Peer Support subscale focuses on the perception of academic and social support by peers. The Faculty Support subscale focuses on the perception of academic and social support by faculty. The Classroom Comfort subscale focuses on the perception of personal comfort within the classroom setting itself both with faculty and students. The Isolation subscale focuses on the Perception of the student's ability to establish relationships with peers. Finally, the Empathetic Faculty Understanding subscale focuses on the perception of the student's ability to approach instructors for guidance regarding personal matters (Hoffman et al., 2002).

These five factors explained a total of 68.5% of the variance among the original set of 50 items (Hoffman et al., 2002). Coefficient alphas were computed to determine the internal consistencies for the entire scale and for each of the subscales (Hoffman et al., 2002). Coefficient alphas for the five factors were 0.87 for Peer Support, 0.87 for Faculty Support, 0.90 for Classroom Comfort, 0.82 for Isolation, and 0.85 for Empathetic Faculty Understanding (Hoffman et al., 2002, p. 249). In order to judge construct validity, the researchers examined the relationship between the scale and other variables on the instrument by analyzing the relationship between the SBI, institutional commitment, satisfaction, and intent to persist (Hoffman et al., 2002, p. 253).

A subsequent study by Morrow and Ackermann (2012) determined the Cronbach's alphas for the subscales ranged from .89 to .92 (p. 85). Faculty support (β =. 19, srj^ = .03) was significantly positively related to intending to receive a degree from the university; and those participants who reported more support from faculty were more likely to intend to persist at the

university (Morrow & Ackermann, 2012, p. 486). Peer support was significant *(p < .05)* and the more perceived peer support (odd ratio = 2.06) the more likely participants were to persist into the sophomore year (Morrow & Ackermann, 2012, p. 486). As calculated in this research study and further detailed in Chapter 4, the Cronbach's alpha, as calculated in SPSS, ranged from 0.82 to.0887, and the overall Cronbach's alpha was 0.926.

The SBI includes five subscales: Peer Support, Faculty Support, Classroom Comfort, Isolation, and Empathetic Faculty Understanding (Hoffman et al., 2002). Each of the five SBI subscales included a specific number of assigned items: Peer Support includes eight items and is the perception of academic and social support by peers. Faculty Support includes six items and is the perception of academic and social support by faculty. Classroom Comfort includes four items and is the perception of personal comfort within the classroom setting itself both with faculty and students. Isolation includes four items and is the perception of the student's ability to establish relationships with peers. Empathetic Faculty Understanding includes four items and is the perception of the student's ability to approach instructors for guidance regarding personal matters. Table 2 includes the specific items from the instrument that are associated with each SBI subscale.

Table 2

Modified Sense of Belonging Instrument Subscales and Associated Items

Subscale	Number	Items
Peer Support	1	I could contact another student from class if I had a question about an assignment.
	2	I have met with other students outside of class to study for a test or exam.
	3	Other students are helpful in reminding me when assignments are due or when tests are approaching.
	4	I have discussed personal matters with students who I met in class.
	5	I have developed personal relationships with other students who I met in class.
	6	I discuss events that happen outside of class with other students.
	7	If I miss class, I know students who could share class notes with me.
	8	I invite other students I know from class to do things socially.
Faculty Support	9	I am comfortable asking an instructor for help if I do not understand course-related material.
	10	I am comfortable seeking help from an instructor outside of class time (i.e. during office hours).
	11	I am comfortable seeking help from an instructor before or after class.
	12	I am comfortable socializing with an instructor outside of class.
	13	I am comfortable asking an instructor for help with a personal problem.
	14	I am comfortable talking to an instructor about a problem I'm having.
Classroom Comfort	15	I am comfortable asking a question in class.
	16	I am comfortable volunteering ideas or opinions in class.
	17	Speaking in class is easy because I feel comfortable.
	18	I am comfortable contributing to class discussions.
	19	I rarely talk to other students in my classes.
	20	I know very few people in my classes.
	21	Other students in class know personal information about me.
Isolation	22	It is difficult to meet other students in class.
Empathetic Faculty Understanding	23	I believe that an instructor would take the time to talk to me if I needed help.
	24	I believe that an instructor would try to understand my problem if I talked to them about it.
	25	I believe that an instructor would be sensitive to my difficulties if I shared them.
	26	I believe that an instructor would be empathetic if I was upset.

(Hoffman et al., 2002)

The online instrument included the 26-items from the modified from the Sense of Belonging Instrument (Items 1-26; Hoffman et al., 2002), three demographic items (Items 27-29), and one open-ended item (Item 30). The three demographics items were: (a) where participants took the majority of their classes in fall 2015 and spring 2016, (b) whether participants were using financial aid to help pay for college, and (c) the participant's parent/guardian's educational attainment level. The open-ended item asked the participants, "What else would you like the researcher to know about your transfer experience?"

<center>Procedures</center>

The Sense of Belonging Instrument (SBI; Hoffman et al., 2002) was used to measure participant's sense of belonging in the university environment. For the purpose of this study, the SBI authors gave permission for some modifications to the SBI in the form of edits for language consistency and formatting changes for a web-based instrument (Appendix E). The instrument (Appendix A) was designed in a web-based program, Qualtrics, in a format following Dillman, Smyth, and Christian's (2009) tailored design method. The instrument was uncluttered and included clear directions, the informed consent information (Appendix B), and the contact information for the researcher. In September 2016, the online instrument was tested by doctoral candidates in the Executive Educational Leadership doctoral program at the University of Central Florida for clarity, functionality, and terminology.

University and College Protocols

Prior to administering the instrument, an application for "Human Research Protocol" was submitted to the Metropolitan Research University's (MRU) Institutional Review Board in April 2016 and submitted to State College's (SC) Institutional Review Board in August 2016. These applications included Chapter One of this research and additional documentation detailing the informed consent, participant solicitation communications, author permissions, and the modified Sense of Belonging Instrument (SBI; Hoffman et al., 2002). Some changes to the research study required the submission of an IRB Addendum/Modification request form and resubmission of supporting documentation to MRU IRB in September 2016.

The MRU IRB also required the successful completion of several online courses within the Collaborative Institutional Training Initiative (CITI). These required courses were completed in fall 2015 and spring 2016. The SC's IRB process required an in-person interview with the Executive Director of Planning and Institutional Effectiveness and a review of supporting documentation. Final SC Institutional Review Board approval was received on August 1st, 2016 (Appendix F) and MRU Institutional Review Board approval was received on April 27, 2016, and modifications were approved on October 4, 2016 (Appendix G).

Data Collection

Data collection took place after securing approval from two institutions' research review boards: a public state college in the southeast United States (Carnegie category: Baccalaureate/Associate's Colleges: Associate's Dominant; Carnegie, n.d.) and a public metropolitan research university in the southeast United States (Carnegie category: Doctoral

Universities: Highest Research Activity); Carnegie, n.d.). Once the State College (SC) approval was secured, they conducted a data query to the National Student Clearinghouse (NSC) seeking the names and enrollment information of students who met the participant characteristics. Once this query was secured and verified, the SC performed a student information system query for email contact and demographic information for students on the final NSC list.

The SC participant contact information was used to solicit participants for the study using e-mail invitations (Appendix D). An online instrument constructed in Qualtrics (Appendix A) was used to gather responses to the modified Sense of Belonging Instrument (Items 1-26; Hoffman et al., 2002), three demographic items (items 27-29), and an open-ended item (item 30). Each participant was assigned a unique link to access the instrument. Once the participants opened the instrument, they were asked to read the informed consent and decide whether they consented to participate in the study. The Qualtrics instrument was designed using survey logic and as a result, the instrument would end automatically if the participant indicated that he did not consent to participate. The Qualtrics instrument was also designed to move directly to the instructions for the first item once the participant consented to participate.

Once participants began the instrument, they were first asked to answer the 26 items from the modified Sense of Belonging Instrument (SBI). Participants were asked to read each item carefully and to select their level of agreement based on their experience at the university since they transferred from the state college. Participants rated each item numerically on the Sense of Belonging Instrument (SBI) using a Likert scale ranging from 1-4 (Hoffman et al., 2002). Participants had five responses available: *Strongly Agree* (4); *Agree* (3); *Disagree* (2); *Strongly Disagree* (1); and *Not Applicable*. Participants were then asked to answer three demographic items (items 27-29). These items were: (a) where they took the majority of their classes in fall

2015 and spring 2016, (b) whether they were using financial aid to help pay for college, and (c) what is their parent/guardian's educational attainment level. Following the demographic items, participants moved on to the final item (item 30) on the instrument which was an open-ended item where participants were asked **"What else would you like the researcher to know about your transfer experience?"**

To facilitate a high response rate, two follow-up e-mail messages (Appendix D) were sent to potential participants using a method focused on personalized and repeated contact to boost response rates (Dillman et al., 2009). The first follow-up email was scheduled in Qualtrics one week after the initial email invitation and a second follow-up email was scheduled in Qualtrics one week later. The instrument was available for a total of three weeks. Reminders were sent only to those potential participants who had not yet completed the instrument. Data from the instrument were collected in Excel worksheets directly downloaded from Qualtrics. Data were then formatted in an SPSS file (IBM SPSS Data Collection).

Data Analysis

This study utilized a quantitative and qualitative methodology of data collection and analysis, known as mixed methods research. Mixed methods research where both quantitative and qualitative methods is collected and analyzed in a single study can, some researchers argue, provide a more "complete understanding of a research problems, then does the use of either approach alone" (Fraenkel, Wallen, & Hyun, 2015, p. 555). This form of research design can serve to explain relationships between variables and can "help to confirm or cross-validate relationships discovered between variables, as when quantitative and qualitative methods are

compared to see if they converge on a single interpretation of a phenomenon" (Fraenkel et al., 2015, p. 556).

This section provides an overview of the data analysis conducted. These two forms of analysis will be explained separately. The findings from the analysis of the data are presented in detail in Chapter 4.

<div align="center">Quantitative Data Analysis</div>

Quantitative research is that which "the investigator attempts to clarify phenomena through carefully designed and controlled data collection and analysis" (Fraenkel et al., 2015, p. G-7). In this study, the quantitative data analysis included descriptive statistics (mean, standard deviation, and ranges) and inferential statistics as a means to test the research questions and generate findings.

Once the data were collected from the online instrument and the student educational file, the closed-ended responses were tabulated. The descriptive statistics were first cross-tabulated and analyzed providing information about demographic variables including age, gender, race/ethnicity, first generation status, financial aid status, primary campus, transfer GPA, transfer pathway designation, and veteran status. Participant data were compared to overall sample demographic information and transfer student demographic information made available by MRU.

Next, the three established research questions were presented and descriptive and inferential statistics used to generate the findings. Research question one "What are the relationships between five factors identified by the Sense of Belonging Instrument: (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty

understanding" used descriptive statistics to compare subscale and items total scores, coefficient alphas to determine internal consistencies for the entire scale and each of the five subscales, and correlations between all subscales.

Research question two "To what extent does sense of belonging differ between state college students who transfer through structured transfer pathways and those who transfer through unstructured transfer pathways to the same institution?" used descriptive statistics and an Independent Samples t-Test to identify items that distinguished between transfer pathways. Cohen's *d* was used to determine effect size.

Research question three "What is the relationship between student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer GPA, and veteran status) and state college transfer student's sense of belonging?" used a stepwise regressions procedure and seven-way MANOVA tests (multivariate analysis of variance) to identify if demographic factors influenced sense of belonging within each of the five subscales. Table 3 describes the data sources, variables, and methods of data analysis for each of the three research questions.

Table 3

Research Questions and Data Sources

Research Question	Data Source	Variable	Method of Analysis
1. What are the relationships between five factors of perceived: (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty understanding?	Sense of Belonging Instrument: Items 1-8 Items 9-14 Items 15-18 Items 19-22 Items 23-26	Subscales: Peer Support Faculty Support Classroom Comfort Isolation Empathetic faculty understanding	Coefficient Alphas for the entire scale and each of five subscales Pearson Correlation Coefficients between subscales
2. To what extent does sense of belonging differ between state college students who transfer through structured transfer pathways and those who transfer through unstructured transfer pathways to the same institution?	Sense of Belonging Instrument: Items 1-8 Items 9-14 Items 15-18 Items 19-22 Items 23-26 State College Educational Record	Subscale scores (mean, range) Peer Support Faculty Support Classroom Comfort Isolation Empathetic faculty understanding Pathway designation: Structured Unstructured	Independent Samples t-Test (alpha set at .05) Cohen's *d* to determine Effect Size
3. What is the relationship between student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer GPA, transfer pathway, and veteran status) and state college transfer student's sense of belonging?	State College Educational Record Items 27-29 Sense of Belonging Instrument: Items 1-8 Items 9-14 Items 15-18 Items 19-22 Items 23-26	Demographic Factors: Age Gender Race/ethnicity First-generation status Financial aid status Transfer GPA Transfer Pathway Veteran status Subscales: Peer Support Faculty Support Classroom Comfort Isolation Empathetic faculty understanding	Stepwise Regressions 7-way MANOVA tests

Qualitative Data Analysis

Qualitative research is that which the "investigator attempts to study naturally occurring phenomena in all their complexity" (Fraenkel et al., 2015, p. G-7). This research design used a concurrent nested strategy to collect qualitative data (Creswell, 2003). A nesting strategy allows for collecting data that "enriches the description of the sample participants and describes aspects of a quantitative study that cannot always be quantified" (Creswell, 2003, p. 218). The qualitative method of data collection included open-ended responses from the online instrument. Specifically, this item asked the participant **"**What else would you like the researcher to know about your transfer experience?"

Participant responses were first sorted to find those that were completed with responses to the item. Data were then analyzed using conventional qualitative content analysis. This method is defined as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh-Fang & Shannon, 2005, p. 1278). The goal of conventional qualitative content analysis is "to provide understanding of the phenomenon under study that goes beyond merely counting words and focuses on intensely examining language (Hsieh-Fang & Shannon, 2005, p. 1280). The advantage of this type of analysis is to gain "direct information from study participants without imposing preconceived categories or theoretical perspectives" (Hsieh-Fang & Shannon, 2005, p. 1280).

Conventional qualitative content analysis uses an eight step inductive category development model to analyze text data (Hsieh-Fang & Shannon, 2005). Using this method, the researcher (a) prepared the data, (b) defined the unit of analysis, (c) developed categories and a

coding scheme from the raw data, (d) tested the coding scheme on a sample of text, (e) coded all text, (f) assessed coding consistency, (g) drew conclusions from coded data, and (h) reported methods and findings (Hsieh-Fang & Shannon, 2005).

Using this eight step method of analysis, the data were prepared for analysis and the unit of analysis was defined (one word themes and subthemes). A sample of the raw data and general categories were developed with six doctoral candidates and one faculty member, who tested and verified the coding scheme on a sample of text responses. The raw data were reviewed over the course of several readings to identify general concepts and to develop a list of initial categories.

Once the coding scheme was tested, the analysis began. Using a color coding process, the researcher color coded key words and phrases into broad categories from the entire qualitative dataset. Sample key words included: "teacher," "faculty," "professor," "respect," "care," "approachable," "shellshock," "homesick," "classmate," "people in my classes," "online," "encourage," "help," "smooth," "hard," "easy," "help," and "advisors." Similar themes color-coded quotes were then clustered together (Creswell, 2003). For instance "faculty," "teacher," and "professor" were clustered together under the "Faculty" theme. These initial categories included: faculty, peers, support/assistance, classroom, social, resources, transfer process, academic, online, care, and shock.

Three readings of the clustered color-coded quotes were then conducted. Categories were then reviewed and primary themes were then developed reducing the total number of categories by grouping topics that related to one other. Quotes that contained multiple themes were separated into their parts. The primary themes included: "Faculty," "Peers," "Transfer," and "Support."

The four themes & their associated quotes were then clustered together. Three subsequent readings of these primary themes and their color-coded quotes were then conducted. Themes were then reviewed and initial subthemes were then developed reducing the total number of themes by grouping topics that related to one other. Under the Faculty theme were the subthemes of "Care," "Online," and "Knowledge." Under the Peers theme were the subthemes of "Social" and "Academic". Under the Transfer theme were the subthemes of "Time" and "Shock". Under the Support theme were the subthemes of "Online" and "Advising". Themes had a minimum of ten related quotes and subthemes had a minimum of three related quotes. A total of five unique quotes were not coded.

The proposed themes and subthemes were reviewed by both the researcher and an objective reviewer qualified in qualitative review and analysis. Both reviewers conferred over the categories, themes, subthemes, and unique items. Through this review process, two additional subthemes emerged; Transition under the Transfer theme and Resources under the Support theme. The final subthemes were then confirmed. Under the Faculty theme were the subthemes of Care, Online, and Knowledge. Under the Peers theme were the subthemes of Social and Academic. Under the Transfer theme were the subthemes of Time, Shock, and Transition. Under the Support theme were the subthemes of Online, Advising, and Resources.

Frequencies were then noted for themes, subthemes, and unique items. The subthemes were then reordered by frequency within themes and all data material belonging to each was assembled to perform a preliminary analysis and verify for coding consistency. Transfer pathway (structured and unstructured) was also delineated for individual quotes by mapping the respondent unique identifier to the student educational record.

Summary

This chapter restated the purpose of this mixed methods research, presented the research items, a description of the study design, selection of participants, instrumentation, data collection, and analysis. Data were collected to examine the sense of belonging of state college transfer students who recently enrolled at a large research intensive university through structured transfer pathways and unstructured transfer pathways. This study used a quantitative approach to address each of the research questions and a qualitative approach to better illustrate the transfer student experience. The quantitative data analysis sections described what statistical analyses were employed to analyze the quantitative data. The qualitative data analysis section described the use of conventional qualitative content analysis employed to analyze the qualitative data. The following chapter contains a presentation and analysis of data.

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

This chapter reports the findings of the research as they relate to the overall purpose and specific research questions of this study. Findings for both the quantitative data and the qualitative data are reported within this chapter. This study investigated the impact of sense of belonging, specifically within the population of state college to a large university transfer students, so that findings can promote transfer student retention. The purpose of this study was achieved by examining the sense of belonging of state college transfer students who enrolled at a large research-intensive university through structured and unstructured transfer pathways using the Sense of Belonging Instrument (Hoffman et al., 2002).

The following research questions guided the study and served as a framework for reporting the findings in this chapter.

1. What are the relationships between five factors identified by Sense of Belonging Instrument: (a) perceived peer support, (b) perceived classroom comfort, (c) perceived isolation, (d) perceived faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002).

2. To what extent does sense of belonging differ between students who transfer from structured transfer pathways and those who transfer from unstructured transfer pathways to the same institution?

3. What is the relationship between transfer student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer grade point average (GPA), transfer pathway, and veteran status), and state college transfer students' sense of belonging?

This chapter presents the results of the data analysis for the three established research questions and is divided into six sections that include the demographic items, the data analysis for each of the three research questions, the qualitative analysis, and a summary.

Analysis of Results

This study utilized a mixed methods research design involving both quantitative and qualitative methodology of data collection and analysis and using a concurrent nested strategy to collect qualitative data within a quantitative instrument. The demographic items were either provided by the State College's (SC) student educational record transfer or as self-reported by the participants in three items that were nested within the online instrument (items 27-29). These nested items included: first generation status, financial aid status, and primary campus. The quantitative data analysis included descriptive statistics (means, standard deviations, and ranges) and inferential statistics (Pearson Correlation Coefficient, Cronbach's alpha, Independent Samples t Test, Cohen's d, regressions, and MANOVA tests) as a means to test the research questions and generate findings. The qualitative data were analyzed using conventional qualitative content analysis.

Demographic Items

The demographic items include: age, gender, race/ethnicity, first generation status, financial aid status, primary campus, transfer GPA, transfer pathway designation, and veteran status (US Armed Services). The pre-transfer institution's student educational record provided the data for the following demographic items: age, gender, race/ethnicity, transfer GPA, transfer

pathway designation, and veteran status (US Armed Services). Whenever possible, the population data, ($N = 254$), the 2015-16 SC/MRU Transfer Cohort data, and the 2010-2015 SC/MRU Transfer Cohort data (5-year mean) are presented for further context. In 2015-16, SC students made up 3.92% of the MRU transfer student cohort (Regional Campus, 2016). Of the approximate 13,000 undergraduate degrees awarded in 2015-2016, SC transfer students made up 3.91% of undergraduate degrees awarded (Regional Campus, 2016).

<div align="center">Age</div>

Age data were provided by the pre-transfer SC's student educational record. Participants were required to be at least 18 years of age to participate in the study. The age of the participants ranged from 19 to 54 years. The mean age of the participants was 24.83 years with a standard deviation of 7.79. Approximately 75% ($n = 41$) of participants were traditional-aged student (24 years old and younger) and approximately 25% ($n = 13$) of participants were non-traditional students (25 years old and older). As evidenced in Table 4 the participant group is slightly younger than the population, where 72% ($n = 183$) were traditional-age students, and 28% ($n = 71$) were non-traditional students. This information is not available for the 2015-2016 SC/MRU Transfer Cohort or from the 2010-2015 SC/MRU Transfer Cohort data.

Table 4

Age Group Comparisons

Age Groups	Sample ($N = 254$)	Sample Percent	Participants ($n = 54$)	Participant Percent
Traditional 18-24 years	71	28.00	13	25.00
Non-traditional 25 years +	183	72.00	41	75.00

Gender

Gender refers to the attitudes, feelings, and behaviors that a given culture associates with

a person's biological sex (APA, n.d.). Gender data were provided by the pre-transfer state

college's student educational record. The participants included 74.07% ($n = 40$) female students

and 25.93% ($n = 14$) male students, whereas the population was comprised of 59.45% ($n = 151$)

female students and 40.05% ($n = 103$) male students. In 2015-16, the SC transfer cohort to MRU

was comprised of 59.5% female students and 41.5% male students. The five-year mean for the

SC transfer cohort to MRU was 61.82% female students and 39.18% male students (Regional

Campus, 2016). Participants included a higher proportion of female students than the sample, the

2015-16 SC/MRU Transfer Cohort, and the 2010-2015 SC/MRU Transfer Cohort data as

evidenced in Table 5 (Regional Campus, 2016).

Table 5

Gender Comparisons

Gender	Sample Percentage ($N = 254$)	Participant Percentage ($n = 54$)	2015-16 Cohort Mean Percentage	2010-2015 Cohort Mean Percentage
Male	40.55	25.93	41.5	39.18
Female	59.45	74.07	59.5	61.82

Race/Ethnicity

Race and ethnicity data were provided by the pre-transfer state college's student

educational record. Race and ethnicity were collected at time of college admission and were self-

reported by the student. Specific terminology for racial ethnic groups was provided to the

researcher from the state college. From Table 7 it can be observed that 59.26% ($n =32$) of the

participants identified as white, 16.67% ($n =9$) identified as Hispanic, 7.41% ($n =4$) identified as

Black (not of Hispanic origin), 7.41% (n =4) did not report, 5.56% (n =3) identified as Asian (not of Hispanic origin), 1.85% (n =1) identified as multi-racial, and 1.85% (n =1) identified as Native Hawaiian/Pacific Islander. In total, 33.33% (n = 18) of participants were students of color. For the purpose of this study, the students of color group included students who identified as Asian (not of Hispanic origin), Black (not of Hispanic origin), Hispanic, Multi-Racial, and Native Hawaiian/Pacific Islander. This data is in alignment with the 2015-16 SC/MRU Transfer Cohort, where 33.90% identified as students of color, and the 2010-2015 SC/MRU Transfer Cohort, where 30.90% identified as students of color (Regional Campus, 2016).

As shown in Table 6, comparing this data to the sample, the participant group included more Hispanic students (+3.67%), more Black students (+1.50%), more multi-racial students (+1.06%) and fewer white students (-2.29%), fewer Asian students (-0.74%) and fewer Native Hawaiian/Pacific Islander students (-0.51%). In addition, 7.41% (n = 4) of participants did not report race/ethnicity whereas 5.12% (n = 13) of the sample did not report race/ethnicity. This information is not available for comparison with the 2015-16 SC/MRU Transfer Cohort or the 2010-2015 SC/MRU Transfer Cohort data.

Table 6

Race/Ethnicity Comparisons

Race/Ethnicity	Population Frequency (*N* = 254)	Sample Percent	Sample Frequency (*n* = 54)	Participant Percent	Difference Percent
American Indian or Alaska Native	0	0.00	0	0.00	0.00
Asian (not of Hispanic origin)	16	6.30	3	5.56	-0.74
Black (not of Hispanic origin)	15	5.91	4	7.41	1.50
Hispanic/Latino	33	12.99	9	16.67	3.68
Multi-racial	2	0.79	1	1.85	1.06
Native Hawaiian/Pacific Islander	6	2.36	1	1.85	-0.51
Not reported	13	5.12	4	7.41	2.29
White	169	65.54	32	59.26	-6.28
Students of color*	72	28.34	18	33.33	4.99

Note. Students of color: includes Asian (not of Hispanic origin), Black (not of Hispanic origin), Hispanic, Multi-Racial, and Native Hawaiian/Pacific Islander students.

First-Generation College Status

First generation college status was determined by asking participants "Will you be the first person in your immediate family to complete a bachelor degree?" Over half of participants, 51.9% (*n* = 28) expressed that they were first generation college students by answering "yes" to this item, whereas 48.15% (*n* = 26) of participants expressed that they were not first generation students by answering "no" to the item. This information is not available for comparison with the sample, the 2015-16 SC/MRU Transfer Cohort, nor the 2010-2015 SC/MRU Transfer Cohort data.

Financial Aid Status

Financial aid status was determined by asking participants if they were using federal financial aid (Pell grants, subsidized and unsubsidized loans, and grants) to help them pay for college. A majority of participants, 77.80% ($n = 42$), indicated that they were using federal financial aid to help them pay for college. Whereas, 20.37% ($n = 11$), indicated that they were not using federal financial aid to help them pay for college. The US Department of Veteran's Affairs (VA) administers benefits and services that provide financial assistance to Service members, Veterans, their dependents, and survivors who are pursuing postsecondary education. Although not specifically mentioned in the item prompt, participants may have taken VA benefits into account when responding to this item. Financial Aid status information is not available for comparison to the sample, the 2015-16 SC/MRU Transfer Cohort, or the 2010-2015 SC/MRU Transfer Cohort data.

Primary Campus Designation

Primary campus designation was determined by asking participants to identify the campus where they were taking the majority of their classes in a particular semester. Participants were asked to identify their primary campus both for spring 2016 and fall 2016 semesters. Their choices included: the flagship campus, a regional campus, the MRU's College of Hospitality Management, online, or not enrolled. For spring 2016, 57.41% ($n = 31$) of participants identified the flagship campus, 29.63% ($n = 16$) identified that they were online students, and 12.96% identified a regional campus as their primary campus. No participants identified the MRU's College of Hospitality or that they were not enrolled. For fall 2016, 53.70% identified the flagship campus, 22.22% identified that they were online students, 12.96% ($n = 12$) identified a

regional campus, 7.41% ($n = 4$) were not enrolled, and 3.70% ($n = 2$) identified the MRU's College of Hospitality Management as their primary campus. This information is not available for the sample, the 2015-16 SC/ MRU Transfer Cohort, or the 2010-2015 SC/MRU Transfer Cohort data.

Transfer Grade Point Average

Transfer Grade Point Average (GPA) is designated as the student's cumulative GPA at time of transfer between the state college and the university. Transfer GPA data were provided by the pre-transfer state college's student educational record. Transfer GPAs ranged from 2.61 to 4.00. The mean transfer GPA was 3.35 with a standard deviation of 0.42 ($n = 54$). When grouped, 42.59% ($n = 13$) of participants had a transfer GPA between 3.40 - 4.00, 33.33% ($n = 18$) had a transfer GPA between 3.00 - 3.49, 24.07% ($n = 13$) had a transfer GPA between 2.50-2.99, no participants had a transfer GPA between 2.00-2.49, and no participants had a transfer GPA under 2.0. Participants had higher transfer GPA than the sample, where only 26.77% ($n = 68$) had a transfer GPA between 3.50 - 4.00. This information is not available for the 2015-16 SC/MRU Transfer Cohort or the 2010-2015 SC/MRU Transfer Cohort data.

Transfer Pathway

Structured Transfer Pathways are articulation programs with formalized agreements between two institutions developed to create a specific path allowing for the mobility of community college graduates to university degree completion programs (Percival et al., 2014). The MRU and SC included in this study have a longstanding partnership and formal articulation agreement that offers a structured transfer pathway that guarantees admission for SC students

who complete an AA or AS degree and transfer to the MRU. SC students must register for this structured transfer pathway program while enrolled at the state college. SC students registered with this program receive support and resources that are not available to students who are not registered in the structured transfer pathway program or who transfer through an unstructured transfer pathway.

Transfer pathway data were provided by the pre-transfer state college's student educational record. Over half of participants (51.9%; $n = 28$) were registered in the MRU's structured transfer pathway program and were therefore coded in this analysis as "Structured Transfer Pathway." Less than half of participants (48.1%; $n = 26$) were not registered in the MRU's structured transfer pathway program and were therefore coded as "Unstructured Transfer Pathway" in this analysis. For comparison, 49.21% ($n = 125$) of the sample were registered in the MRU's structured transfer pathway program and 50.79% ($n = 129$) were not registered in the MRU's structured transfer pathway program. This information is not available for the 2015-16 SC/MRU Transfer Cohort or the 2010-2015 SC/MRU Transfer Cohort data.

<div align="center">Veteran Status</div>

Veteran of the US Armed Services status data were provided by the pre-transfer state college's student educational record. A small number of participants identified as Veterans (3.70%; $n = 2$) and 96.30% ($n = 52$) indicated that they were not Veterans. This is slightly lower than the sample that had 4.65% ($n = 12$) Veteran representation. This information is not available for the 2015-16 SC/MRU Transfer Cohort or the 2010-2015 SC/MRU Transfer Cohort data.

Testing the Research Questions

Descriptive and inferential statistics were used to investigate the study's three research questions. To investigate the first research question, correlations and descriptive statistics (item means, subscale means, and standard deviations) were used to determine the relationships between five factors identified by Sense of Belonging Instrument: (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002). To investigate the second research question, Independent Samples t-Test, Cohen's d, and descriptive statistics (item means, subscale means, and standard deviations) were used to determine to what extent sense of belonging differ between state college students who transfer through structured transfer pathways and those who transfer through unstructured transfer pathways to the same university. To investigate the third research question, regressions in the form of stepwise procedures and seven-way MANOVA tests were used to determine the relationship between student demographic and incoming variables and the state college transfer student's sense of belonging.

Research Question 1

Question 1: What are the relationships between five factors identified by Sense of Belonging Instrument (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002).

The first research question examined the results of the Sense of Belonging Instrument (SBI). On each of the 26 items, participants rated their agreement with each statement based on their experience at the university since they transferred from the state college. Participants rated each item numerically on the Sense of Belonging Instrument (SBI) using a Likert scale ranging

from 1-4 (Hoffman et al., 2002). Participants had five responses available: *Strongly Agree* (4); *Agree* (3); *Disagree* (2); *Strongly Disagree* (1); and *Not Applicable*. All 26 items were analyzed and descriptive statistics were conducted to determine means and standard deviations for the five subscales. Finally, Coefficient Alphas were conducted in SPSS to determine internal consistencies for the entire scale and for each of the five subscales. In addition, Pearson Correlation Coefficients between the subscales were conducted in SPSS to explore the relationships between the five subscales. No participants selected N/A for any of the SBI's 26 items. Table 7 presents the frequency of responses and mean scores for all twenty-six items from the modified SBI (Hoffman et al., 2002).

Table 7

Frequency of Responses and Mean Scores to the Modified SBI Items ($N = 54$)

No.	Item	f	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)	N/A	Mean
1	If I miss class, I know students who could share class notes with me.	54	22	13	12	7	0	2.94
2	I could contact another student from class if I had a question about an assignment.	54	20	10	14	10	0	2.93
3	Other students are helpful in reminding me when assignments are due or when tests are approaching.	54	14	24	13	3	0	2.91
4	I have met with other students outside of class to study for a test or exam.	54	7	22	14	11	0	2.74
5	I have developed personal relationships with other students who I met in class.	54	12	19	9	14	0	2.54
6	I discuss events that happen outside of class with other students.	52	9	19	16	10	0	2.50
7	I invite other students I know from class to do things socially.	54	21	15	14	2	0	2.50
8	I have discussed personal matters with students who I met in class.	54	8	21	15	10	0	2.46
9	I am comfortable asking an instructor for help if I do not understand course-related material.	54	28	20	5	1	0	3.39
10	I am comfortable seeking help from an instructor before or after class.	54	22	21	9	2	0	3.33
11	I am comfortable seeking help from an instructor outside of class time (i.e. during office hours).	54	28	17	8	1	0	3.17
12	I am comfortable talking to an instructor about a problem I'm having.	54	14	22	12	6	0	2.81
13	I am comfortable socializing with an instructor outside of class.	54	5	10	23	16	0	2.07

No.	Item	f	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)	N/A	Mean
14	I am comfortable asking an instructor for help with a personal problem.	54	14	29	10	1	0	3.07
15	I am comfortable contributing to class discussions.	52	25	22	3	2	0	3.24
16	I am comfortable asking a question in class.	53	20	28	4	1	0	3.22
17	I am comfortable volunteering ideas or opinions in class.	52	20	22	6	4	0	3.20
18	Speaking in class is easy because I feel comfortable.	53	23	25	3	2	0	3.00
19	I rarely talk to other students in my classes.	54	21	7	14	12	0	2.69
20	It is difficult to meet other students in class.	54	8	12	14	20	0	2.15
21	Other students in class know personal information about me.	54	8	20	7	19	0	2.31
22	I know very few people in my classes.	53	11	17	17	8	0	2.54
23	I believe that an instructor would take the time to talk to me if I needed help.	54	31	18	3	2	0	3.44
24	I believe that an instructor would try to understand my problem if I talked to them about it.	54	14	30	9	1	0	3.06
25	I believe that an instructor would be sensitive to my difficulties if I shared them.	54	15	29	8	2	0	3.06
26	I believe that an instructor would be empathetic if I was upset.	52	11	27	12	2	0	2.80

Descriptive Statistics

Table 8 describes the number of items, total scores, mean ranges (low and high), and the mean for each of the five SBI subscales. Total scores ranged from 523 points to 1162 points, however each scale had a different number of associated items (between 4-8 items). The highest mean score was the Faculty Empathetic Understanding subscale ($M = 3.44$) and the lowest mean score was the Faculty Support subscale ($M = 2.07$). The highest subscale mean was Classroom Comfort ($M = 3.17$), followed by the Faculty Empathetic Understanding ($M = 3.09$), Faculty Support ($M = 2.97$), and Peer Support ($M = 2.67$). The lowest subscale mean was Isolation ($M = 2.42$).

Table 8

Subscale Mean Ranges and Subscale Mean in Rank Order by Subscale Mean ($N = 54$)

Subscale Name	Number of Items	Total Score	Mean (Low)	Mean (High)	Mean
Classroom Comfort	4	684	3.00	3.24	3.17
Faculty Empathetic Understanding	4	667	2.80	3.44	3.09
Faculty Support	6	686	2.07	3.39	2.97
Peer Support	8	1162	2.46	2.94	2.67
Isolation	4	523	2.15	2.69	2.42

The Classroom Comfort subscale included four items. The range of means was 3.00-3.24 as shown in Table 9. The standard deviations ranged from 0.81-1.06. The highest item mean under the Classroom Comfort subscale was "I am comfortable contributing to class discussions"

($M = 3.24$) and the lowest was "Speaking in class is easy because I feel comfortable" ($M = 3.00$).

Overall, participants expressed comfort contributing to class discussions, asking questions, and volunteering ideas and opinions. The lowest total points item "I am comfortable volunteering ideas or opinions in class" (162 total points) was thirteen total points below the highest total points item "Speaking in class is easy because I feel comfortable" (175 total points). "Speaking in class is easy because I feel comfortable" was also the lowest mean score within this subscale ($M = 3.00$).

Table 9

Descriptive Statistics: Perceived Classroom Comfort Subscale ($N = 54$)

Item I am comfortable…	n	Total Score	Range*	Mean	Std Dev
15. contributing to class discussions.	53	174	0.00-4.00	3.24	0.87
16. asking a question in class.	52	173	0.00-4.00	3.22	0.98
17. volunteering ideas or opinions in class.	53	162	0.00-4.00	3.20	0.81
18. Speaking in class is easy because I feel comfortable.	52	175	0.00-4.00	3.00	1.06

Note. *SBI Likert scale range 1-4, N/A

The Empathetic Faculty Understanding subscale included four items. The range of means for this subscale was 2.79-3.44 and the standard deviations ranged from 0.71-0.94. As evidenced in Table 10, the highest item mean in the Faculty Empathetic Understanding subscale was "I believe that an instructor would take the time to talk to me if I needed help" ($M = 3.44$) and the lowest was "I believe that an instructor would be empathetic if I was upset" ($M = 2.80$). The lowest total points item "I believe that an instructor would be empathetic if I was upset" (151

total points) was thirty-five total points below the highest scoring item "I believe an instructor would take the time to talk to me if I needed help" (186 total points). Participants believed that an instructor would take the time to talk to them if they needed help, but less confident that they would try to understand the problem or be empathetic if they were upset.

Table 10

Descriptive Statistics: Empathetic Faculty Understanding Subscale ($N = 54$)

Item I believe that an instructor would…	n	Total Score	Range*	Mean	Std Dev
23. take the time to talk to me if I needed help.	54	186	1.00-4.00	3.44	0.77
24. try to understand my problem if I talked to them about it.	54	165	1.00-4.00	3.06	0.71
25. be sensitive to my difficulties if I shared them.	54	165	1.00-4.00	3.06	0.76
26. be empathetic if I was upset.	52	151	0.00-4.00	2.80	0.94

Note. *SBI Likert scale range 1-4, N/A

The Faculty Support subscale included six items. The range of means within this subscale was 2.07-3.39 and the standard deviations ranged from 0.73-0.95. As shown in Table 13, the highest scoring mean under the Faculty Support subscale was "I am comfortable asking an instructor for help if I do not understand course-related material" ($M = 3.39$) and the lowest scoring mean was "I am comfortable asking an instructor for help with a personal problem" ($M = 2.07$). As shown in Table 11, the three highest item means within Faculty Support subscale were related to comfort seeking help from instructors with course-related material ($M = 3.39$), within the confines of the classroom ($M = 3.33$), or within the instructor office setting ($M = 3.17$).

However, the three lowest item means were related to seeking help from instructors with personal issues (*M* = 3.04; *M* = 2.07) and comfort socializing outside of class with instructors (*M* = 2.07). The lowest total points item "I am comfortable socializing with an instructor outside of class." (112 total points) was seventy-two total points below the highest scoring item "I am comfortable asking an instructor for help if I do not understand course-related material" (186 total points).

Table 11

Descriptive Statistics: Faculty Support Subscale (*N* = 54)

Item	*n*	Total Score	Range*	Mean	Std Dev
9. asking an instructor for help if I do not understand course-related material.	54	183	1.00-4.00	3.39	0.74
10. seeking help from an instructor before or after class.	54	171	1.00-4.00	3.33	0.80
11. seeking help from an instructor outside of class time (i.e. during office hours).	54	180	1.00-4.00	3.17	0.84
12. talking to an instructor about a problem I'm having.	54	152	1.00-4.00	3.04	0.73
13. socializing with an instructor outside of class.	54	112	1.00-4.00	2.81	0.95
14. asking an instructor for help with a personal problem.	54	164	1.00-4.00	2.07	0.93

Note. *SBI Likert scale range 1-4, N/A

The Peer Support subscale includes eight items. As shown in Table 12, the range of means was 2.46-2.94 and the standard deviations ranged from 0.85-1.15. The highest item mean

within the Peer Support subscale was "If I miss class, I know students who could share class notes with me" ($M = 2.94$) and the lowest item mean was "I have discussed personal matters with students who I met in class" ($M = 2.46$). The three highest means within this subscale related to items focused on relying on peers to share or assist with academic notes ($M = 2.94$), assignments ($M = 2.93$), and deadlines ($M = 2.91$). The lowest means were items related to student peer relationships outside of the classroom ($M = 2.50$) and discussing personal matters with peers ($M = 2.26$). The lowest total points item "I have met with other students outside of class to study for a test or exam" (133 total points) was twenty-six total points below the highest total points item "I invite other students I know from class to do things socially" (159 total points).

Table 12

Descriptive Statistics: Peer Support Subscale (*N* = 54)

Item	*n*	Total Score	Range*	Mean	Std Dev
1. If I miss class, I know students who could share class notes with me.	52	158	0.00-4.00	2.94	1.07
2. I could contact another student from class if I had a question about an assignment.	54	148	1.00-4.00	2.93	1.08
3. Other students are helpful in reminding me when assignments are due or when tests are approaching.	54	157	1.00-4.00	2.91	0.85
4. I have met with other students outside of class to study for a test or exam.	54	133	1.00-4.00	2.74	1.15
5. I have developed personal relationships with other students who I met in class.	54	137	1.00-4.00	2.54	1.11
6. I discuss events that happen outside of class with other students.	54	135	1.00-4.00	2.50	0.99
7. I invite other students I know from class to do things socially.	54	159	1.00-4.00	2.50	0.97
8. I have discussed personal matters with students who I met in class.	54	135	1.00-4.00	2.46	0.97

Note. *SBI Likert scale range 1-4, N/A

The Isolation subscale includes four items that are all negatively worded as detailed in

Table 13. The mean scores ranged from 2.15-2.69. The standard deviations ranged from 1.04-

1.21. The highest item mean under the Isolation subscale was "I rarely talk to other students in

my classes" (*M* = 2.69) and the lowest was "I know very few people in my classes" (*M* = 2.15).

Overall, these were the lowest means of the five subscales. Participants did not generally agree

that they rarely talk to other students (*M* = 2.69), find it difficult to meet students in class (*M* =

2.54), peers don't know them personally (*M* = 2.31), and know few peers in their classes (*M* =

2.15). The lowest total points item "It is difficult to meet other students in class" (117 total

points) was twenty-eight total points below the highest total points item "I rarely talk to other students in my classes" (145 total points).

Table 13

Descriptive Statistics: Isolation Subscale (*N* = 54)

Item	*n*	Total Score	Range*	Mean	Std Dev
19. I rarely talk to other students in my classes.	54	145	1.00-4.00	2.69	1.21
20. It is difficult to meet other students in class.	53	117	0.00-4.00	2.54	1.04
21. Other students in class know personal information about me.	54	125	1.00-4.00	2.31	1.11
22. I know very few people in my classes.	54	137	1.00-4.00	2.15	1.09

Note. *SBI Likert scale range 1-4, N/A

Coefficient Alphas

Reliability and validity are essential elements in the evaluation of a measurement instrument and Cronbach's alpha is the most common measure of internal consistency or reliability (Tavakol & Dennick, 2011). Internal consistency describes the extent to which all the items in a test measure the same construct and the inter-relatedness of the items within the test; it should be determined before use for research purposes to ensure validity (Tavakol & Dennick, 2011, para. 3).

As evidenced in Table 14, the Cronbach's alpha, as calculated in SPSS, ranged from 0.82 to.0887 and the overall Cronbach's alpha was 0.926, indicating that 92.6% of the responses indicate internally consistent reliable variance indicating a high level of internal consistency for

this scale with this specific participant group. The alpha score for the Peer Support subscale was 0.887, indicating that 88.7% of the responses indicate internally consistent reliable variance. For the Faculty Support subscale, the alpha score was 0.820, indicating that 82.0% of the responses indicate internally consistent reliable variance. For the Classroom Comfort subscale, the alpha score was 0.841, indicating that 84.1% of the responses indicate internally consistent reliable variance. For the Isolation subscale, the alpha score was 0.862, indicating that 86.2% of the responses indicate internally consistent reliable variance. For the Empathetic Faculty Understanding subscale, the alpha score was 0.825, indicating that 82.5% of the responses indicate internally consistent reliable. All five subscales had a Cronbach's alpha exceeding 0.80 indicating a high reliability (Tavakol & Dennick, 2011) and indicating that further analysis should be conducted.

Table 14

Reliability Statistics Cronbach's alpha in Rank Order (α; $N = 54$)

Items	α
Overall	0.926
Peer Support	0.887
Isolation	0.862
Classroom Comfort	0.841
Empathetic Faculty Understanding	0.825
Faculty Support	0.820

Correlation Coefficients

A Pearson Correlation Coefficient is a measure of the strength of a linear association within and between variables (Fraenkel et al., 2015). The magnitude of the Pearson correlation coefficient determines the strength of the correlation (Fraenkel, et al., 2015, p. 341). A Pearson correlation coefficient was computed in SPSS to assess the relationship between the five

subscales (Peer Support, Faculty Support, Classroom Comfort, Isolation, and Empathetic Faculty Understanding) of the Sense of Belonging Instrument (SBI). Correlations between under 0.30 are considered weak, correlations between 0.30 and 0.70 are considered moderate, and correlations over 0.70 are considered strong (Fraenkel et al., 2015, p. 341).

As evidenced in Table 15, a Pearson's *r* data analysis revealed a positive and strong correlation between Peer Support and Isolation, $r(52) = .801$, $p = .000$. In addition, a Pearson's *r* data analysis revealed a positive and moderate correlation between Peer Support and Faculty support, $r(52) = .454$, $p = .001$, Faculty support and Classroom Comfort, $r(52) = .514$, $p = .000$, Faculty Support and Empathetic Faculty Understanding, $r(52) = .649$, $p = .000$, Faculty Support and Isolation, $r(52) = .417$, $p = .002$ and Classroom Comfort and Isolation, $r(52) = .413$, $p = .002$.

Table 15

Pearson's Correlation (*r*) Test of SBI Subscales (*N* = 54)

		Peer Support	Faculty Support	Classroom Comfort	Isolation	Empathetic Faculty Understanding
Peer Support	*r*	1	.454**	.378**	.801**	.291*
	Sig.		.001	.005	.000	.033
Faculty Support	*r*	.454**	1	.514**	.417**	.649**
	Sig.	.001		.000	.002	.000
Classroom Comfort	*r*	.378**	.514**	1	.413**	.296*
	Sig.	.005	.000		.002	.030
Isolation	*r*	.801**	.417**	.413**	1	.246
	Sig.	.000	.002	.002		.073
Empathetic Faculty Understanding	*r*	.291*	.649**	.296*	.246	1
	Sig.	.033	.000	.030	.073	

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

Research Question 2

Question 2: *To what extent does sense of belonging differ between students who transfer from structured transfer pathways and those who transfer from unstructured transfer pathways to the same institution?*

To investigate the second research question, an Independent Samples t-Test was conducted in SPSS to determine whether there was a statistically significant difference between the means of the two transfer pathway groups. These groups included participants who were registered in the MRU's structured transfer pathway program (structured group) and students who were not registered in in the MRU's structured transfer pathway program (unstructured group). Out of 54 total participants, the structured group included 28 participants (51%) and the unstructured group included 26 participants (49%). Finally, a Cohen's *d* was conducted in SPSS

to determine effect size. The dependent variable for this analysis were the five Sense of Belonging Instrument (SBI) subscales. The two transfer pathways (structured and unstructured) were used as the grouping variable or the independent variable.

Independent Samples t-Test

Using the independent samples t-Test function in SPSS, a comparison of means was conducted to explore the relationship between the five Sense of Belonging Instrument (SBI) subscales (Peer Support, Faculty Support, Classroom Comfort, Isolation, and Empathetic Faculty Understanding) for the participants who transferred through a structured transfer pathway and those who transferred through an unstructured transfer pathway.

As shown in Table 16, the t value corresponding to the mean difference between the structured and unstructured pathway groups for Peer Support was 0.594 and its corresponding p-value is 0.555 (> 0.05), the mean difference for Faculty Support was 1.11 and its p-value is 0.183 (> 0.05), the mean difference for Classroom Comfort was 0.674 and its p-value is 0.504 (> 0.05), the mean difference for Isolation was 0.301 and its p-value is 0.764 (> 0.05), and the mean difference for Sense of Belonging was 0.706 and its corresponding p-value was 0.484 (> 0.05). Since the p-value was more than 0.05, it can be concluded that there is no significant difference between the mean values of Peer Support, Faculty Support, Classroom Comfort, Isolation, and Sense of Belonging between the structured group and unstructured group.

However, the t-value corresponding to the mean difference between the two pathways for Empathetic Faculty Understanding was 2.27 and its corresponding p-value was 0.027 (< 0.05). The p-value was less than 0.05, as a result, it can be concluded that there was a significant difference between the mean values of Empathetic Faculty Understanding of the structured and

unstructured pathways. Since the mean for the structured group was greater than the mean for the unstructured group, we can conclude that structured participants perceive faculty empathetic understanding more favorably than the unstructured group.

Table 16

Independent Samples *t*-Test Structured Pathway and Unstructured Pathway (*N* = 54)

| | Levene's Test for Equality of Variances | | *t*-Test for Equality of Means | | | | | 95% Confidence | |
| | | | | | | | | | |
	F	Sig	*t*	*df*	Sig.	Mean Diff	Std. Error Diff	Lower	Upper
Peer Support	1.472	.230	-.594	52	.555	-.125	.210	-.546	.296
Faculty Support	.002	.969	1.111	52	.272	.183	.164	-.147	.513
Classroom Comfort	.091	.765	.674	52	.504	.142	.211	-.281	.565
Isolation	.185	.669	.301	52	.764	.077	.256	-.437	.593
Empathetic Faculty Understanding	3.684	.060	2.27	52	.027	.386	.169	.045	.727
Sense of Belonging	.495	.485	.706	51.814	.481	.107	.151	-.196	.411

To determine if an observed difference between the transfer pathway groups is statistically significant and to determine if that difference is meaningful, it was necessary to calculate the effect size. Effect size is valuable for quantifying the difference between structured and unstructured transfer pathways. Cohen's *d* was used to measure effect size. The effect size for this analysis ($d = 0.316$) was considered a low effect size (Hattie, 2009, p. 24).

Descriptive Statistics by Transfer Pathway

To investigate if participants from the Structured Transfer Pathway group differed from the Unstructured Transfer Pathway group, the two groups' responses were separated and descriptive statistics applied using SPSS. The differences between subscale means between the two pathways ranged from -0.66 to 0.40. As evidenced in Table 17, the structured group reported higher subscale mean scores than the unstructured group in four of the five SBI subscales (Faculty Support, Classroom Comfort, Isolation, and Empathetic Faculty Understanding). The unstructured group scored a higher subscale mean than the structured group on the Peer Support subscale (> 0.66). The most pronounced difference in total score was the Peer Support subscale at 70 points higher for the unstructured group (total score = 616) than the structured group (total score = 546).

Table 17

Differences in Total Score and SBI Subscales Means by Transfer Pathway ($N = 54$)

Subscale	Number of Items	Structured Pathway Total Score ($n = 28$)	Structured Pathway Mean ($n = 28$)	Unstructured Pathway Total Score ($n = 26$)	Unstructured Pathway Mean ($n = 26$)	Difference Total Score	Difference Means
Faculty Support	6	478	3.06	484	2.66	-6.0	0.40
Faculty Empathetic Understanding	4	342	3.29	325	2.95	-17.0	0.34
Classroom Comfort	4	337	3.40	347	3.13	-10.0	0.27
Isolation	4	256	2.49	267	2.38	-11.0	0.10
Peer Support	8	546	2.64	616	3.29	-70.0	-0.66

Peer Support Subscale

The mean scores for seven of the eight items included in the Peer Support subscale were higher for the unstructured group than the structured group as evidenced in Table 18. The unstructured group's mean score for "I have met with other students outside of class to study for a test or exam" ($M = 3.29$) and "I have developed personal relationships with other students who I met in class" ($M = 2.93$) were approximately 0.35 points higher than the structured group's mean scores ($M = 2.81$ and $M = 2.46$). The difference was 0.64 points higher for "I discuss events that happen outside of class with other students" ($M = 3.18$) and 0.62 points higher for "I invite other students I know from class to do things socially" ($M = 3.00$). The only item mean score that was higher for the structured group was "I have discussed personal matters with students who I met in class" ($M = 2.50$) at 0.54 points higher than the unstructured group ($M = 1.96$). The largest difference in mean scores for particular items in this subscale related to

meeting with peers to study (-0.48 difference), discussing personal matters with classmates (-0.54 difference), discussing events that happen outside of class with peers (-0.64 difference), and inviting other students to engage socially outside of class (-0.62 difference). In each of these items, the structured group had higher mean scores than the unstructured group.

Table 18

Descriptive Statistics: Peer Support Subscale by Transfer Pathway ($N = 54$)

Item	Structured Transfer Pathway ($n = 28$)		Unstructured Transfer Pathway ($n = 26$)		Difference	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
1. I could contact another student from class if I had a question about an assignment.	75	2.88	83	3.04	-8.0	-0.16
2. I have met with other students outside of class to study for a test or exam.	73	2.81	75	3.29	-2.0	-0.48
3. Other students are helpful in reminding me when assignments are due or when tests are approaching.	70	2.69	87	2.89	-17.0	-0.20
4. I have discussed personal matters with students who I met in class.	65	2.50	68	1.96	-3.0	-0.54
5. I have developed personal relationships with other students who I met in class.	64	2.46	73	2.93	-9.0	-0.47
6. I discuss events that happen outside of class with other students.	66	2.54	69	3.18	-3.0	-0.64
7. If I miss class, I know students who could share class notes with me.	71	2.84	88	3.14	-16.0	-0.30
8. I invite other students I know from class to do things socially.	62	2.38	73	3.00	-9.0	-0.62

<u>Faculty Support Subscale</u>

As shown in Table 19, of the six items included in the Faculty Support subscale, four items had a higher mean score for the structured group than the unstructured group. One item "I am comfortable seeking help from an instructor before or after class" ($M = 3.38$) had a mean score 1.27 points higher than the unstructured group ($M = 2.11$). "I am comfortable seeking help from an instructor outside of class time (i.e. during office hours)" ($M = 3.31$) scored 0.70 points higher for the structured group than the unstructured group ($M = 2.61$). Based on mean scores, participants from the structured group are more comfortable seeking help from an instructor before or after class (+1.27) and outside of class (+0.70) than the structured group participants. However, the unstructured group scored higher than the structured group on the items related with comfort asking for help (+0.31) and comfort talking about a problem with an instructor (+0.10).

Table 19

Descriptive Statistics: Faculty Support Subscale by Transfer Pathway ($N = 54$)

Item I am comfortable…	Structured Transfer Pathway ($n = 28$)		Unstructured Transfer Pathway ($n = 26$)		Difference	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
9. asking an instructor for help if I do not understand course-related material.	94	3.62	89	3.19	5.0	0.43
10. seeking help from an instructor outside of class time (i.e. during office hours).	86	3.31	85	2.61	1.0	0.70
11. seeking help from an instructor before or after class.	88	3.38	92	2.11	-4.0	1.27
12. socializing with an instructor outside of class.	71	2.73	81	2.32	-10.0	0.41
13. asking an instructor for help with a personal problem.	57	2.19	55	2.50	2.0	-0.31
14. talking to an instructor about a problem I'm having.	82	3.15	82	3.25	0.0	-0.10

Classroom Comfort Subscale

All four items included in the Classroom Comfort subscale had a higher mean score for the structured group than the unstructured group as shown in Table 20. The mean scores varied between 0.23-0.36 points between the two groups. Based on mean scores, the structured group were more comfortable asking questions in class (+0.36), volunteering ideas or opinions (+0.26) speaking in class (+0.25), and contributing to class discussions (+0.23) than the unstructured group. However, given the relative strength of these mean scores, both groups appear comfortable asking questions in class, volunteering opinions and ideas, speaking in class, and contributing to class discussions with means equal or in excess of 3.0.

Table 20

Descriptive Statistics: Classroom Comfort Subscale by Transfer Pathway ($N = 54$)

Item	Structured Transfer Pathway ($n = 28$)		Unstructured Transfer Pathway ($n = 26$)		Difference	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
15. I am comfortable asking a question in class.	85	3.54	89	3.18	-4.0	0.36
16. I am comfortable volunteering ideas or opinions in class.	85	3.40	88	3.14	-3.0	0.26
17. Speaking in class is easy because I feel comfortable.	78	3.25	84	3.00	-6.0	0.25
18. I am comfortable contributing to class discussions.	89	3.42	86	3.19	3.0	0.23

Isolation Subscale

All four items included in the Isolation subscale scored closely between the two transfer pathway groups as shown in Table 21. Mean scores were relatively low for this subscale in comparison to the other four subscales. The unstructured group mean scores were higher than the structured group in three of the four items. Differences in mean scores ranged from 0.01-0.18 points and differences in total scores ranged from 1.0-5.0 points.

Table 21

Descriptive Statistics: Isolation Subscale by Transfer Pathway ($N = 54$)

Item	Structured Transfer Pathway ($n = 28$)		Unstructured Transfer Pathway ($n = 26$)		Difference	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
19. I rarely talk to other students in my classes.	72	2.77	73	2.61	-1.0	0.16
20. I know very few people in my classes.	57	2.19	59	2.11	-2.0	0.08
21. Other students in class know personal information about me.	60	2.31	65	2.32	-5.0	-0.01
22. It is difficult to meet other students in class.	67	2.68	70	2.50	-3.0	0.18

Empathetic Faculty Understanding Subscale

Of the four items included in the Empathetic Faculty Understanding subscale, the structured group's mean scores were higher for all four items than the unstructured group. As shown in Table 22, the difference in mean scores ranged between 0.19-0.43 points and differences in total scores ranged from 1.0-11.0 points. Based on the mean scores, the structured group appears more confident that a faculty member would take the time to help them ($M = 3.65$), take the time to talk to them if they needed help ($M = 3.25$), and show empathy if they were upset ($M = 3.12$). The largest difference in total score was for "I believe that an instructor would try to understand my problem if I talked to them about it", with a difference of 11 points for the structured pathway group.

Table 22

Descriptive Statistics: Empathetic Faculty Understanding Subscale by Transfer Pathway (*N* = 54)

Item I believe that an instructor would…	Structured Transfer Pathway (*n* = 28)		Unstructured Transfer Pathway (*n* = 26)		Difference	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
23. be empathetic if I was upset.	95	3.12	91	2.69	4.0	0.43
24. take the time to talk to me if I needed help.	82	3.65	83	3.25	-1.0	0.40
25. be sensitive to my difficulties if I shared them.	84	3.23	81	2.89	3.0	0.34
26. try to understand my problem if I talked to them about it.	81	3.15	70	2.96	11.0	0.19

As evidenced in Table 23, the overall group and the structured group had identical ranked subscales- Classroom Comfort, followed by Empathetic Faculty Understanding, Faculty Support, Peer Support, and Isolation. However, Peer Support (*M* = 3.29) was the highest scoring subscale for the unstructured group, followed by Classroom Comfort (*M* = 3.13), Empathetic Faculty Understanding (*M* = 2.95), Faculty Support (*M* = 2.66), and Isolation (*M* = 2.38). Peer Support ranked fourth and fifth for both the overall group and the structured group respectively. Isolation was the common lowest ranked mean score for the overall group (*M* = 2.42), the structured group (*M* = 2.49), and the unstructured group (*M* = 2.38).

Table 23

Subscale Mean Scores by Transfer Pathway Group in Rank Order (*N* = 54)

All Participants (*n* = 54)	Structured Transfer Pathway (*n* = 28)	Unstructured Transfer Pathway (*n* = 26)
Classroom Comfort (*M* = 3.17)	Classroom Comfort (*M* = 3.40)	Peer Support (*M* = 3.29)
Empathetic Faculty Understanding (*M* = 3.09)	Empathetic Faculty Understanding (*M* = 3.29)	Classroom Comfort (*M* = 3.13)
Faculty Support (*M* = 2.97)	Faculty Support (*M* = 3.06)	Empathetic Faculty Understanding (*M* = 2.95)
Peer Support (*M* = 2.69)	Peer Support (*M* = 2.64)	Faculty Support (*M* = 2.66)
Isolation (*M* = 2.42)	Isolation (*M* = 2.49)	Isolation (*M* = 2.38)

Research Question 3

Question 3: What is the relationship between student demographic variables (age, gender, race/ethnicity, first-generation status, financial aid status, transfer GPA, transfer pathway, and Veteran status) and state college transfer student's sense of belonging?

To investigate the third research question, stepwise regressions was conducted in SPSS. Stepwise regression is an automated tool used to identify a useful subset of predictors and is a process "that systematically adds the most significant variable or removes the least significant variable during each step" (Minitab, n.d.). In addition multivariate analysis of variance (MANOVA) tests were also conducted in SPSS. MANOVA tests are used to compare differences in mean scores between groups. MANOVA tests incorporate "two or more dependent

variables in the same analysis, thus permitting a more powerful test of differences among means"

(Fraenkel et al., 2015, p. 237).

Regressions

A stepwise regression analysis was applied, using each of the five SBI subscales (Peer

Support, Faculty Support, Classroom Comfort, Isolation, and Empathetic Faculty Understanding)

as the dependent variables and the seven demographic variables (age, gender, race/ethnicity, first-

generation status, financial aid status, transfer pathway, and transfer GPA) as the independent

variables. The results of the stepwise procedures identified what relationships existed between

student demographic variables and state college transfer student's sense of belonging as delineated

by the five subscales. All demographic variables were coded as categorical variables for this

procedure: age (traditional or non-traditional), gender (male or female), race/ethnicity (white or

people of color), first generation (yes or no), financial aid status (yes or no), transfer pathway

(unstructured or structured), and transfer GPA (GPA groupings: 2.0-2.49, 2.5-2.99, 3.0-3.49, 3.5-

4.0). However, veteran status could not be used for this analysis given the size of the sample.

The results of this procedure are in the form of a standardized beta coefficient and statistical

significance. A beta coefficient compares the strength of the effect of each individual independent

variable to the dependent variable. The "higher the absolute value of the beta coefficient, the

stronger the effect" (Statistic Solutions, n.d.). The beta coefficients can be negative or positive,

and have a *t*-value and significance of that *t*-value associated with each (Statistic Solutions, n.d.).

The beta coefficients corresponding to the Peer Support, Faculty Support, and Classroom

Comfort subscales showed no relationship to any of the seven demographic factors. As a result,

age, gender, race/ethnicity, first generation status, financial aid status, transfer pathway, and

transfer GPA were excluded. However, the beta coefficients corresponding to the Isolation and Empathetic Faculty Understanding subscales did show a relationship to at least one of the seven demographic factors.

Isolation

To find the association between the demographic variables and Isolation items, a stepwise regression analysis was applied using SPSS. As evidenced in Table 24, the beta coefficients corresponding to First Generation status (β = -.541) showed a negative and statistically significant association to the Isolation subscale (p = 0.033; < 0.05). However, age, gender, race/ethnicity, financial aid status, transfer pathway, and transfer GPA were not found to be statistically significant and were therefore excluded as demonstrated in Table 25. This analysis showed that first generation status participants showed a negative and strong association (p = 0.033; < 0.05) with the Isolation subscale and this subscale's related items. First generation participants were therefore more likely to perceive isolation than non-first generation participants.

Table 24

Coefficients: Isolation (N = 54)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
1 (Constant)	2.702	.178		15.212	.000
First Generation	-.541	.247	-.291	-2.194	.033

Note. Dependent Variable: Isolation. Isolation = 2.702– 0.541 (First Generation Status)

Table 25

Excluded Variables: Isolation (*N* = 54)

Demographic Factor	Beta In	*t*	Sig.	Partial Correlation	Collinearity Statistics	
					Tolerance	VIF
Transfer GPA	.053[b]	.386	.701	.054	.962	1.040
Race/Ethnicity	-.086[b]	-.646	.521	-.090	1.000	1.000
Gender	-.195[b]	-1.488	.143	-.204	1.000	1.000
Fin Aid Status	.139[b]	1.052	.298	.146	1.000	1.000
Age	-.126[b]	-.918	.363	-.127	.932	1.073
First Generation Status	-.112[b]	-.820	.416	-.114	.946	1.057

Empathetic Faculty Understanding

To find the association between the demographic variables and Empathetic Faculty Understanding items, a stepwise regression analysis was applied using SPSS. As evidenced in Table 26, the beta coefficients corresponding to Transfer Pathway status (β = -0.387) showed a negative and significant association (p = 0.027; < 0.05) to the Empathetic Faculty Understanding subscale. However, age, gender, race/ethnicity, financial aid status, first generation status, and transfer GPA were not found to be statistically significant and were therefore excluded as shown in Table 27. This analysis showed that participants from the unstructured group showed a negative and significant association (p = 0.027; < 0.05) with the Empathetic Faculty Understanding subscale and this subscale's related items. Structured pathway participants were more likely to perceive faculty empathetic understanding than unstructured pathway participants.

Table 26

Coefficients: Empathetic Faculty Understanding ($N = 54$)

Model	Unstandardized Coefficients		Standardized Coefficients		
	Beta	Std. Error	Beta	t	Sig.
1 (Constant)	3.675	.272		13.525	.000
Transfer Pathway	-.387	.170	-.301	-2.275	.027

Note. Dependent Variable: Empathetic Faculty Understanding. Empathetic Faculty Understanding = 3.675–0.387 (Transfer Pathway)

Table 27

Excluded Variables: Empathetic Faculty Understanding ($N = 54$)

Demographic Factor	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics	
					Tolerance	VIF
Transfer GPA	.238[b]	1.826	.074	.248	.983	1.018
Race/Ethnicity	.062[b]	.465	.644	.065	.994	1.006
Gender	-.128[b]	-.969	.337	-.134	.996	1.004
Fin Aid Status	-.092[b]	-.674	.504	-.094	.946	1.057
Age	-.052[b]	-.388	.700	-.054	.989	1.011
First Generation Status	.119[b]	.869	.389	.121	.932	1.073

Multivariate Analysis of Variance

In addition, 7-way MANOVA tests were conducted in SPSS in order to compare

differences in mean scores with two or more dependent variables. Veteran status could not be

used for this analysis given the size of the sample. The dependent variables were the SBI

subscales (Peer Support, Faculty Support, Classroom Comfort, Isolation, or Faculty Empathetic

Understanding). The independent variables were the seven demographic factors (age, gender,

race/ethnicity, first-generation status, financial aid status, transfer pathway, and transfer GPA).

All demographic variables were coded as categorical variables for this procedure: age (traditional

or non-traditional), gender (male or female), race/ethnicity (white or people of color), first

generation (yes or no), financial aid status (yes or no), transfer pathway (unstructured or structured) and transfer GPA (GPA groupings; 2.0-2.49, 2.5-2.99, 3.0-3.49, 3.5-4.0).

Given that the probabilities are greater than the threshold, the 7-way MANOVA tests showed no statistically significant relationships (Wilk's lambda; $p > 0.05$) between the five SBI subscales (Peer Support, Faculty Support, Classroom Comfort, Isolation, and Faculty Empathetic Understanding) and the seven demographic factors (age, gender, race/ethnicity, first-generation, financial aid eligible, transfer pathway, and transfer GPA).

Qualitative Analysis

The analysis of this study applied a qualitative approach to understanding the data collected from the open-ended responses (item 30) included on the online instrument. Specifically, this item asked the participant **"What else would you like the researcher to know about your transfer experience?"** Of the 54 participants who completed the instrument, 34 (63%) participants participated in the open-ended item.

Qualitative data were then analyzed using conventional qualitative content analysis. This method was selected as a means to focus on intensely examining language without imposing preconceived categories or theoretical perspectives (Hsieh-Fang & Shannon, 2005). For the purposes of this study, to be considered, themes had to have a minimum of ten quotes and subthemes had to have a minimum of three quotes. Frequencies were noted for themes and subthemes. The themes were then reordered by frequency and all data material belonging to each theme and subtheme were assembled and placed into tables. Transfer pathway (structured and unstructured) was also delineated for individual quotes by mapping the respondent unique identifier to the student educational record. Under the Faculty theme were the subthemes of Care,

Online, and Knowledge. Under the Peers theme were the subthemes of Social and Academic. Under the Transfer theme were the subthemes of Time, Shock, and Transition. Under the Support theme were the subthemes of Online, Advising, and Resources.

<div align="center">Faculty Theme</div>

The Faculty theme focused on perception of faculty roles in the participant's transfer experience. The Faculty theme had three subthemes (Care, Online, and Knowledge). The frequencies for the subthemes were Care ($f = 10$), Online ($f = 4$), and Knowledge ($f = 3$).

Care Subtheme

The Care subtheme ($f = 10$) was the highest frequency subtheme in this study along with Transition under the Transfer theme. Table 28 highlights the quotes and the number of times the participants discussed the different concepts under this subtheme. Of the ten quotes within this subtheme, three were from the structured transfer pathway participants and seven were from the unstructured transfer pathway participants.

Views of the concept of faculty care differed between the two pathway groups. The structured group participants offered varying viewpoints. A structured pathway participant expressed that faculty had been "willing to guide, assist and share stories of encouragement and strength," while another stated that "…teachers vary in how much they are interested in helping students", and finally "one teacher was consistently late to class, and did not seem to care about the students."

Two participants from the unstructured pathway expressed that they experienced a lack of empathy from faculty. Four participants shared that they had a negative perception of faculty

care, especially in regard to their individual situations or backgrounds, such as a death in the family or prior military service. One participant stated "…a professor told the class our opinions didn't matter because we were nothing but children with AA degrees." One unstructured group participant noted that they had mixed experiences with faculty care "I have 3 professors that I have spoken with outside of class. I have talked to 5 about personal matters. Only 2 tried to talk to me and help me on these matters." While one unstructured group participant discussed how faculty had shown care "…two teachers that I was able to approach and help me with school material and life/career questions."

Table 28

Theme: Faculty, Subtheme: Care ($N = 10$)

Quote	Transfer Pathway
…teachers vary in how much they are interested in helping students.	Structured
one teacher was consistently late to class, and did not seem to care about the students.	Structured
…many professors are always willing to guide, assist and share stories of encouragement and strength.	Structured
…some professors are lacking empathy and even respect for their students.	Unstructured
I had one professor tell me that she didn't care that I was out for a death in the family.	Unstructured
…one teacher tell me that she didn't care that I was in the military that this is the big world and I needed to get over the past.	Unstructured
…two teachers that I was able to approach and help me with school material and life/career questions.	Unstructured
I have 3 professors that I have spoken with outside of class. I have talked to 5 about personal matters. Only 2 tried to talk to me and help me on these matters.	Unstructured
…many of these professors think that are God's greatest gift to earth because they habe (sic) doctorate degrees and that because of that they can treat other people like trash.	Unstructured
…a professor told the class our opinions didn't matter because we were nothing but children with AA degrees.	Unstructured

Online Subtheme

The Online subtheme ($f = 4$) focused on the participant experience with faculty in the online environment. The quotes under this subtheme focused on online faculty approachability and involvement. Table 29 highlights the quotes and the number of times the participants discussed the different concepts under this subtheme. Of the four quotes under this subtheme, two were from structured pathway participants and two came from the unstructured pathway participants. Both pathway groups shared a common viewpoint within this theme, focused on online faculty approachability and involvement. One structured pathway participant noted that "I find online faculty to be distant and not easily approached." While an unstructured pathway participant stated "…not to imply they are not a good instructor, but there is an unapproachable distance between faculty and student."

Table 29

Theme: Faculty, Subtheme: Online ($N = 4$)

Quote	Transfer Pathway
I find Online faculty to be distant and not easily approached.	Structured
…not to imply they are not a good instructor, but there is an unapproachable distance between faculty and student.	Structured
…on average, the level of effort and involvement by professors in the online setting is very low.	Unstructured
…out of the 8 (online) classes that I've completed at UCF, half of the professors had little to no involvement.	Unstructured

<u>Knowledge Subtheme</u>

The Knowledge ($f = 3$) subtheme focused on participant's perception of faculty professional knowledge and what the value that participants perceived that they received from this knowledge. Table 30 highlights the quotes and the number of times the participants discussed the different concepts under this subtheme. Of the three quotes under this subtheme, two were from the structured transfer pathway group and one came from the unstructured transfer pathway group. One structured pathway participant expressed "…the professors bring their field experience to the classroom and are very knowledgeable" while another stated "the majority of my professors have my respect and know their stuff." The only unstructured pathway participant in this subtheme stated "…the faculty I've learned from thus far is beyond amazing."

Table 30

Theme: Faculty, Subtheme: Knowledge ($N = 3$)

Quote	Transfer Pathway
…the professors bring their field experience to the classroom and are very knowledgeable.	Structured
…the majority of my professors have my respect and know their stuff.	Structured
…the faculty I've learned from thus far is beyond amazing.	Unstructured

Peers Theme

The Peers theme focused on relationships with peers in academic and social settings. The Peer theme had two subthemes: Academic ($f = 8$) and Social ($f = 6$). Table 31 highlights the quotes and the number of times the participants discussed the different concepts under the "Academic" subtheme.

Academic Subtheme

The Academic subtheme ($f = 8$) focused on participant engagement within an academic setting or academic context such as in the classroom, academic assignments, and within class groups on Facebook. Of the eight comments under this subtheme, two were from the structured transfer pathway group and six were from the unstructured transfer pathway group. One structured pathway participant expressed that "I have gotten to know my classmates pretty well. However, I only connect on an academic level" while another expressed "I think that there needs to be emphasis, on transition and connecting students with students that are in their major."

The unstructured pathway participant's perceptions of peers within academic settings was positive and focused on class-related engagement, one participant stating "…we can share opinions, we help each other in questions related to assignments or concerns." Connecting online was cited as a positive engagement tool in the absence of peer engagement "I get notes from a facebook [sic] group but I don't really talk to anyone" and another expressed "…having group discussions on Facebook has helped me communicate with other classmates."

Table 31

Theme: Peers, Subtheme: Academic (*N* = 8)

Quote	Transfer Pathway
I think that there needs to be emphasis, on transition and connecting students with students that are in their major.	Structured
I have gotten to know my classmates pretty well. However, I only connect on an academic level.	Structured
…we can share opinions, we help each other in questions related to assignments or concerns.	Unstructured
I felt a lot more comfortable in my community college classes because it feels more personal and everybody introduced themselves.	Unstructured
…having group discussions on Facebook has helped me communicate with other classmates.	Unstructured
I felt more involved and able to ask questions by posting on Facebook.	Unstructured
Facebook was a great tool for me to use to stay in touch with the rest of the class and where the classmates always responded.	Unstructured
I get notes from a facebook (sic) group but I don't really talk to anyone.	Unstructured

Social Subtheme

The Social subtheme (*f* = 6) focused on the participant engagement within an academic setting or academic context such as in the classroom, with assignments, and within class groups on Facebook. Table 32 highlights the quotes and the number of times the participants discussed concepts under the Social subtheme. Of the six comments under this subtheme, two were from the structured transfer pathway group and four were from the unstructured transfer pathway group.

Two participants expressed that other demands negatively impacted their ability to connect with peers on a social basis "I am a commuter student so socializing before or after class is hard for me." Another participant cited social peer relationships as a positive contributor to

their experience "…after getting involved and getting to know people, my experience changed for the better." One participant expressed "…it just feels as though no one knows I'm here but me. I don't have friends."

Table 32

Theme: Peers, Subtheme: Social ($N = 6$)

Quote	Transfer Pathway
I do not interact (with classmates) on a social level.	Structured
…after getting involved and getting to know people, my experience changed for the better.	Structured
I am a commuter student so socializing before or after class is hard for me.	Unstructured
I usually leave not long after class ends because of the almost two hours drive home.	Unstructured
…it just feels as though no one knows I'm here but me. I don't have friends.	Unstructured
…in all my classes not many people talk to me unless they are in GREEK LIFE together or have been previous friends.	Unstructured

Support Theme

The Support theme centered on concepts related to college and university advisors, support for online learners, and transfer student resources. The Support theme had three subthemes: Advisor ($f = 6$), Online ($f = 6$), and Resources ($f = 5$).

Advisor Subtheme

Table 33 highlights the quotes and the number of times the participants discussed the different concepts under the Advisor subtheme ($f = 6$). This subtheme focused on the role that Advisors at both the State College and University had in the participant's transfer experience. Of

the six comments under this subtheme, four were from the structured transfer pathway group and two were from the unstructured transfer pathway group. Two structured pathway participants attributed their successful transition to their advising "…my transfer was very smooth and I believe this is due to the great advisers I meet with at both colleges" and another expressed "they helped me plan my classes as well as prepare in other ways such as with financial aid."

Two unstructured participants attributed challenges they faced due to a perception of inadequate preparation by advisors "I was thrown off because I had to retake classes and have requirements that I was not aware until I found out through other people not from the advisors." Another unstructured pathway participant stated "I've received little to no assistance with navigating the tumultuous labyrinth that is UCF's major structure." However, one structured pathway participant also noted that they struggled to secure advising once they had matriculated "I really had trouble finding an advisor to assist me when I had serious questions pertaining to my major and degree audit."

Table 33

Theme: Support Subtheme: Advisors ($N = 6$)

Quote	Transfer Pathway
I really had trouble finding an advisor to assist me when I had serious questions pertaining to my major and degree audit.	Structured
…my transfer was very smooth and I believe this is due to the great advisers I meet with at both colleges.	Structured
…they helped me plan my classes as well as prepare in other ways such as with financial aid.	Structured
I have enjoyed working with faculty and staff from both colleges on the regional campus I attend.	Structured
I was thrown off because I had to retake classes and have requirements that I was not aware until I found out through other people not from the advisors.	Unstructured
I've received little to no assistance with navigating the tumultuous labyrinth that is UCF's major structure.	Unstructured

Online Subtheme

Table 34 highlights the quotes and the number of times the participants discussed the different concepts under the Online subtheme ($f = 6$). Of the six comments under this subtheme, three were from the structured transfer pathway group and three were from the unstructured transfer pathway group. This subtheme focused on issues related to various aspects of the online experience, from online classes, to the university website, to support for online students or students taking some classes online.

Two structured pathway participants expressed a desire for help as university personnel to offer support for them as online students "…as an online student there is no "Go To" person to ask questions" and "would like to have a dept [sic] to contact for advice, support and coaching for online students." Also expressing that the university website is "hard to navigate." Whereas

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two unstructured pathway participants focused their comments on the systems in place stating that they would like "a better support system in place for transfer students that take online courses" and that "online courses are very different than on campus. Transfer students need preparation."

Table 34

Theme: Support, Subtheme: Online ($N = 6$)

Quote	Transfer Pathway
…the UCF website is extremely hard to navigate.	Structured
…as an online student there is no "Go To" person to ask questions.	Structured
…would like to have a dept [sic] to contact for advice, support and coaching for online students.	Structured
I wish there was a better support system in place for transfer students that take online courses.	Unstructured
…online courses are very different than on campus. Transfer students need preparation.	Unstructured
I wish that UCF had a different system other than an all or nothing approach to online courses.	Unstructured

Resources Subtheme

Table 35 highlights the quotes and the number of times the participants discussed the concepts under the Resources subtheme ($f = 5$). Of the five comments under this subtheme, two were from the structured transfer pathway group and three were from the unstructured transfer pathway group. This subtheme focused on the resources that participants found helpful to their transfer experience, including the structured transfer pathway program, tutoring, and help sessions. One participant from each of the pathways expressed a desire for resources they wished

had been available such as research projects, scholarships, honor societies, Greek life

organizations, tailored communication, and more class availability at their regional campus.

Table 35

Theme: Support, Subtheme: Resources ($N = 5$)

Quote	Transfer Pathway
…as a part time transfer student there are no opportunities for formal research projects (Honors In Major), very few scholarships, disqualified from admittance to Tau Sigma or other Greek organizations.	Structured
It's been a very smooth transition. Direct Connect=Great program.	Structured
95% of correspondence and programs that I receive are completely irrelevant due to being a distance learner.	Unstructured
I wish that there were more UCF classes offered at the Regional LSSC Campus.	Unstructured
I really appreciate that there are a lot of resources available to students (tutoring, help sessions, etc).	Unstructured

Transfer Theme

The Transfer theme centered on concepts related to the transition between institutions,

the impact of time on the experience, and shock experienced in the process. The Transfer

Support theme focused had three subthemes: Transition ($f = 10$), Time ($f = 5$), and Shock ($f = 3$).

Transition Subtheme

Table 36 highlights the quotes and the number of times the participants discussed the

concepts under the Transition subtheme ($f = 10$). This subtheme was tied with Care for highest

frequency of quotes for all subthemes. This subtheme focused on participants reflecting on the

experience of transitioning from the State College to the University. Of the ten quotes under this

subtheme, four were from the structured transfer pathway group and six were from the unstructured transfer pathway group.

All four structured pathway participants expressed satisfaction with their transition between institutions. All four of the structured pathway participants expressed satisfaction and appreciation, one stating "…this has been a truly amazing experience." Two others in this group specifically mentioned an academic department of academic college that positively impacted their experience "I really feel that I am a part of the 'college experience' and am accustomed to the culture of (Academic College)" or a specific campus "…this semester I take all of my classes at the (Name) campus and I absolutely love it!"

The unstructured pathway participant's offered more diverse viewpoints within this subtheme. From one participating expressing "…my transfer experience went relatively smooth" and "I have adored my transfer experience" to another stating "…honestly it has just been a big let down." One unstructured pathway participant noted that the administrative aspect of their transfer experience had not gone well "(State College) needs more connections administratively. I have a mess to clean up (with transcripts) and no one is trying to help me."

Table 36

Theme: Transfer Subtheme: Transition ($N = 10$)

Quote	Transfer Pathway
…this semester I take all of my classes at the Rosen campus and I absolutely love it!	Structured
I really feel that I am a part of the "college experience" and am accustomed to the culture of Rosen.	Structured
…the school of Social Work staff, including professors, and students are some of the most encouraging, caring and empathetic people I have met.	Structured
…this has been a truly amazing experience.	Structured
…honestly it has just been a big let down	Unstructured
…my transfer experience went relatively smooth.	Unstructured
UCF is amazing in every way and I really enjoy going to this University!	Unstructured
I have adored my transfer experience.	Unstructured
I believe that my experiences at LSSC have helped me to have a broader understanding and perspective on issues addressed within my university classes	Unstructured
LSSC needs more connections administratively. I have a mess to clean up (with transcripts) and no one is trying to help me.	Unstructured

Time subtheme

Table 37 highlights the quotes and the number of times the participants discussed the different concepts under the Time subtheme ($f = 5$). This subtheme focused on the concept of time; either in the initial stages of the transfer experience or how long it takes to adjust. Of the five comments under this subtheme, two were from the structured transfer pathway group and three were from the unstructured transfer pathway group.

One structured pathway participant noted the challenges faced in the first year "I think that as a transfer it's more difficult to feel at home your first year." The unstructured pathway

participants also offered varying viewpoints under this subtheme. One unstructured pathway participant stated "It's overwhelming at first. Then it gets easier as the weeks go by" and another expressed "I am still getting used to life." One participant expressed that after two semesters, they were planning to leave the university.

Table 37

Theme: Transfer Subtheme: Time ($N = 5$)

Quote	Transfer Pathway
I think that as a transfer it's more difficult to feel at home your first year.	Structured
…the culture of (regional campus) did not feel any different…I felt as if it was a continuation of my state college rather than a university experience.	Structured
I am still getting used to life.	Unstructured
It's overwhelming at first. Then it gets easier as the weeks go by.	Unstructured
I have been here for two semesters now and I absolutely hate it. Needless to say I am leaving this university.	Unstructured

Shock Subtheme

Table 38 highlights the quotes and the number of times the participants discussed the different concepts under the Shock subtheme ($f = 3$). This subtheme focused on the experience of shock during the transfer experience. Of the three comments under this subtheme, two were from the structured transfer pathway group and one was from the unstructured transfer pathway group.

One structured pathway participant noted "…there is definitely some shellshock after the transfer" and another stated "when I first transferred, I suffered from transfer shock and became extremely homesick." One unstructured pathway participant specifically highlighted that it was a shock to go into much larger classes at the university.

Table 38

Theme: Transfer Subtheme: Shock (*N* = 3)

Quote	Transfer Pathway
…there is definitely some shellshock after the transfer.	Structured
when I first transferred, I suffered from transfer shock and became extremely homesick.	Structured
…it was a bit of a shock going from smaller classes to classes of over 300 students.	Unstructured

Unique Items

       While conducting the qualitative analysis, five quotes were not coded under any of the established themes or subthemes. These five quotes are provided in Table 39. Of the five quotes in this grouping, four came from the structured transfer pathway group and one came from the unstructured transfer pathway group. These quotes did not have any specific demographic variables in common.

Table 39

Theme: Not coded (N = 5)

Quote	Transfer Pathway
I feel disenfranchised from that aspect of (University).	Structured
It's a long drive. The food is too expensive. They don't take coupons.	Structured
…it's a lot of money to get a 3rd rate education	Structured
I am so happy with my decision to apply to the School of Social Work.	Structured
I have a very low sense of belonging to the university. Especially if I compared myself in value, in the university's eyes, to a traditional age in-person student.	Unstructured

Summary

The chapter began with an introduction containing a reminder of the problem and the purpose of the study. The descriptive statistics were then presented, followed by the findings of the three research questions, and finally the qualitative analysis was presented.

The descriptive statistics offered several themes, specifically to the contribution of items related to classroom experiences and faculty-student interactions. When comparing the mean scores for each subscale between the two transfer pathway groups, the Structured Transfer Pathway group had higher mean scores related to their classroom experiences, seeking academic help from faculty in all settings, and faculty empathy. The Unstructured Transfer Pathway group however, scored lower in items related to faculty empathy and seeking help from faculty outside of the classroom. The unstructured group had only one subscale, Peer Support, where their mean scores were higher than the structured group.

To answer research question one and determine the relationships between the five factors identified by the Sense of Belonging Instrument; (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002), Coefficient Alpha's and correlations were conducted. The Cronbach's alpha of more than 0.8 indicated a high reliability score. A Pearson's r data analysis revealed a positive and statistically strong correlation between Peer Support and Isolation, $r(52) = .801$, $p = .000$. In addition, a Pearson's r data analysis revealed a positive and statistically moderate correlation between Peer Support and Faculty support, $r(52) = .454$, $p = .001$; Faculty support and Classroom Comfort, $r(52) = .514$, $p = .000$; Faculty Support and Empathetic Faculty Understanding, $r(52) = .649$, $p =$

.000; Faculty Support and Isolation, $r(52) = .417$, $p = .002$; and Classroom Comfort and Isolation, $r(52) = .413$, $p = .002$.

To answer research question two and determine the extent to which sense of belonging differs between state college students who transfer through Structured Transfer Pathways and those who transfer through unstructured transfer pathways to the same institution, an Independent Samples t-Test, Cohen's d, and Effect Size were calculated. The results of the Independent Samples t-Test found a statistically significant difference ($0.027 < 0.05$) between the mean values of the Empathetic Faculty Understanding subscale of the structured and unstructured pathways. However, overall Sense of Belonging and the other four subscales showed no statistically significant difference between the mean values of the structured and unstructured pathway groups. The Cohen's d was 0.316, which is a low effect size (Hattie, 2009, p. 24). Further confirming no statistically significant difference between the two groups from a quantitative perspective, with the exception of Empathetic Faculty Understanding.

To answer research question three and determine the relationship between seven demographic variables and state college transfer student's sense of belonging, stepwise regression procedures and Multivariate Analysis of Variance (MANOVA) tests were conducted. The regressions concluded that the beta coefficient for Transfer Pathway ($\beta = -0.541$) showed a negative and statistically significant association with Isolation ($p = 0.033$, < 0.05) and the beta coefficient for First Generation Status ($\beta = -0.387$) showed a negative and statistically significant association ($p = 0.027$, < 0.05) with Empathetic Faculty Understanding. First generation participants were therefore more likely to perceive isolation than non-first generation participants and structured pathway participants were more likely to perceive faculty empathetic understanding than unstructured pathway participants. In addition, seven-way MANOVA tests

showed no statistically significant relationships ($p < 0.05$) between the five SBI subscales and the seven demographic factors.

Finally, qualitative data collected from one open-ended item were analyzed using conventional qualitative content analysis. The primary themes identified by the conventional qualitative content analysis included Faculty, Peers, Support, and Transfer. In the Faculty theme, Care was the top ranked subtheme. In peers theme, Academic was the top ranked subtheme. In the Support theme, Online and Advising were the top ranked subthemes. In the Transfer theme, Transition was the top ranked subtheme. There were notable differences in the qualitative data between the two transfer pathway groups, including differing perceptions of faculty care and empathy, peer engagement, and the role of Advisors and online support systems in the transfer experience.

CHAPTER FIVE: SUMMARY, DISCUSSION AND CONCLUSIONS

In Chapter 4, quantitative and qualitative data related to the research items were presented and analyzed. This chapter presents a discussion of the findings of this study, limitations, implications for practice, and recommendations for future research. The conceptual framework in Chapter 1 and the Literature Review in Chapter 2 are used to explore concepts of student persistence, transfer student success, and sense of belonging in relation to these findings.

Community college transfer students exhibit a higher rate of failure and academic probation after their initial semester than native students (Lockwood et al., 2013). The need for belonging, one of the most fundamental psychological needs, may prove to be an effective way to support successful transfer student transitions, persistence, and degree completion. To facilitate seamless transfer and improve student success, some institutions have developed structured transfer pathway programs that begin at the state college and follow the student as they transition and into the university. However, little research is available to determine if these structured transfer pathways contribute to transfer student sense of belonging or persistence (Bers, 2013, p. 23).

To facilitate seamless transfer and improve student success, some colleges and universities have developed structured transfer pathway programs that begin at the community college and follow the student as they transition and into the first transfer semester. However, little research is available to determine if these structured pathways positively impact transfer students and in what way they may contribute to transfer student sense of belonging and persistence (Bers, 2013, p. 23).

The Florida College System (FCS) is a unique model in that traditional Associate degree dominant colleges also offer baccalaureate degrees. These degree programs are predominantly in the applied sciences. The FCS includes twenty-eight state colleges, annually enrolling over four hundred and fifty thousand students in college credit programs at the Associate and Baccalaureate levels (Florida Department of Education, 2016). However, these twenty-eight institutions are predominantly enrolling students at the Associate degree level. Although most have changed their names to "State Colleges", they are in effect, community colleges who offer 2+2 baccalaureate programs and none offer a four-year academic degree.

The purpose of this study was to examine the sense of belonging of state college transfer students who enrolled at a large research-intensive university, by using the Sense of Belonging Instrument (Hoffman et al., 2002). This study intended to investigate the impact of sense of belonging, specifically within the population of state college transfer students, as a means to promote transfer student persistence. State College transfer student participation in structured and unstructured transfer pathways was also examined.

Three research questions were used to guide the study. The first question focused on identifying the relationships between the five factors identified by the Sense of Belonging Instrument (SBI): (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002). The second research question focused on analyzing the extent to which sense of belonging differed between students who transfer from structured transfer pathways and those who transfer from unstructured transfer pathways to the same institution. The third research question examined the relationship between student demographic variables (age, gender, race/ethnicity, first-generation, financial aid eligible,

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transfer grade point average (GPA), and veteran status), and state college transfer students' sense of belonging.

The study included a sample of 54 participants from a population of 254 eligible participants. Eligible participants were (a) state college students who transferred directly from the State College (SC) to the Metropolitan Research University (MRU) through structured or unstructured transfer pathways, (b) who persisted through at least one semester of enrollment (fall 2015 or spring 2016), and (c) who were over the age of 18 at the time of university transfer. Demographic items were obtained from the student's pre-transfer institution's educational record. Additional demographic items were obtained from three demographic items included in the online instrument.

To investigate the first research question coefficient alpha's determined internal consistencies for the entire scale and for each of the five subscales and correlations explored the relationships between the five subscales identified by the Sense of Belonging Instrument (Hoffman et al., 2002). Descriptive statistics were also used. To investigate the second research question, Independent Samples *t*-Test, Cohen's *d* effect size, and descriptive statistics were used to determine the extent to which sense of belonging differed between state college students who transfer through structured transfer pathways and those who transfer through unstructured transfer pathways to the same institution. To investigate the third research question, Multivariate Analysis of Variance (MANOVA) and regressions in the form of a stepwise procedure were used to determine the relationships between student demographic variables and the state college transfer student's sense of belonging. In addition, the qualitative data obtained from the open-ended item were also analyzed using conventional qualitative content analysis and sorted by transfer pathway.

The purpose of this study was to examine the sense of belonging of state college transfer students who enrolled at a large research-intensive university, by using the Sense of Belonging Instrument (Hoffman et al., 2002). This study intended to investigate the impact of sense of belonging, specifically within the population of state college transfer students, to promote student persistence. State college transfer student participation in structured and unstructured transfer pathways was also examined.

Research Question One

To determine the relationships between five factors identified by the Sense of Belonging Instrument: (a) peer support, (b) classroom comfort, (c) isolation, (d) faculty support, and (e) empathetic faculty understanding (Hoffman et al., 2002), Coefficient Alphas were conducted in SPSS to determine internal consistencies for the entire scale and each of five subscales. In addition, correlations between the subscales were conducted in SPSS. The findings resulting from research question one, particularly the alpha coefficients for the entire scale (0.926) and each of the five subscales (ranged from .82 to.887) indicated that items all had relatively high internal consistency.

The findings indicated a positive and statistically strong correlation between Isolation and Peer Support ($r(52) = .801$, $p = .000$). The findings also indicated statistically moderate positive correlations between Peer Support and Faculty Support ($r(52) =.454$, $p = .001$), Faculty Support and Classroom Comfort ($r(52) = .514$, $p = .000$), Faculty Support and Empathetic Faculty Understanding ($r(52) = .649$, $p = .000$), Faculty Support and Isolation ($r(52) = .417$, $p = .002$), and Classroom Comfort and Isolation ($r(52) = .413$, $p = .002$). These relationships focused on the

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perception of academic and social support by peers, personal comfort within the classroom setting itself both with faculty and students, and the perception of academic and social support by faculty.

These findings are consistent with previous student persistence research that indicated the strong impact that student engagement, both academic and social, can have on student persistence (Pascarella & Terenzini, 1991). Consistent with foundational persistence theories, these findings align with the student-institution fit models that contend that student engagement, and integration are integral to persistence to degree (Astin, 1993; Bean, 1980; Tinto, 1993). These models assert that student "persistence and growth depends on the degree of successful integration into the academic and social structures of the institution" (Strauss & Volkwein, 2004, p. 205). Baumeister and Leary (1995) asserted that interpersonal interactions may have an "additive effect and that, when people perceive an environment as caring, their need to belong is fulfilled" (Freeman et al., 2007, p. 206).

As evidenced in the literature review, existing research found that sense of belonging was strengthened by interactions with faculty and peers, benefiting students socially and intellectually (Morrow & Ackermann, 2012; Tovar & Simon, 2010; Hoffman et al., 2002). Students who do not develop peer relationships, especially within the academic setting, will be at greater risk for isolation, and research shows that failing to "form satisfactory interpersonal relationships in college is associated with outcomes such as depression, anxiety, and suicide, criminality, and college freshmen attrition" (Freeman et al., 2007, p. 204).

Descriptive statistics were also conducted to analyze total scores for individual items, means, and mean ranges (low and high) for each of the five SBI subscales. The highest subscale mean was Classroom Comfort ($M = 3.17$), followed by the Faculty Empathetic Understanding

($M = 3.09$), Faculty Support ($M = 2.97$), Peer Support ($M = 2.69$), and finally, Isolation ($M = 2.42$).

Based on subscale means, the highest scoring subscale was Classroom Comfort ($M = 3.17$). Overall, participants felt comfortable contributing to classroom discussions, asking questions in class, and volunteering ideas. The second highest scoring subscale was Empathetic Faculty Understanding ($M = 3.09$). Participants perceived that an instructor would take time to talk to them, but were less confident that the instructor would be empathetic. Under the Faculty Support subscale ($M = 2.97$) participants were comfortable asking for help regarding course content and were comfortable seeking help before or after class.

Peer Support ($M = 2.69$) measures the likelihood that a student will seek out social engagement outside of the classroom. Overall, Peer Support was the second lowest scoring subscale. Participants indicated that they were not likely to discuss personal matters with peers in their classes, not likely to develop personal relationships with peers in classes, not likely to discuss events that happen out of class with other students, and were not likely to invite peers from class to socialize. Isolation ($M = 2.42$) was the lowest scoring subscale. Participants did not generally agree that they rarely talk to other students in class, knew few people in classes, and that it is difficult to meet other students in class.

These findings are consistent with research that shows that community college transfer students find social belonging through academic means and not social means (Lester et al., 2013). These findings also confirm the centrality of academic engagement for state college transfer students. Lester et al. (2013) asserted that transfer students viewed engagement with their university within the context of their academic work, thus supporting the centrality of academic engagement for this population's overall sense of belonging (Lester et al., 2013, p.

218). These findings further confirm that community college transfers find social belonging predominantly through academic means (D'Amico et al., 2014; Lester et al., 2013). Classroom dynamics, mainly driven by the faculty, influence how students perceive themselves within the post-secondary education system.

Social integration is a strong predictor of institutional commitment (Strauss & Volkwein, 2004); however, social integration may take different forms for transfer students than for traditional first year students. A qualitative study of transfer students conducted by Lester et al. (2013) found that transfers primarily found on-campus engagement through academic means and experienced social engagement predominantly outside of the transfer institution (Lester et al., 2013). To facilitate their social adjustment at the transfer institution, it is important that students engage with their peers by spending time with them working on class projects that will, in turn, foster a sense of belonging to the institution (Laanan, 2007). The findings from this study further support and confirm this existing research.

Research Question Two

To determine the extent to which sense of belonging differed between state college students who transfer through Structured Transfer Pathways and those who transfer through Unstructured Transfer Pathways to the same institution, several statistical tests were conducted, including an Independent Samples *t*-Test and Cohen's *d* for Effect Size. The findings indicated there was little difference between the two transfer pathway groups from a quantitative perspective, with the exception of the Empathetic Faculty subscale.

The results of the Independent Samples *t*-Test found a statistically significant difference between the mean values of the Empathetic Faculty Understanding subscale ($0.027 < 0.05$) of the

structured and unstructured pathways. Overall Sense of Belonging and the other four subscales (Peer Support, Faculty Support, Classroom Comfort, and Isolation) showed no statistically significant difference between the mean values of the structured and unstructured pathway groups. The effect size for this analysis ($d = 0.316$) was considered a low effect size (Hattie, 2009, p. 24).

The findings indicated there was little difference between the two transfer pathway groups from a quantitative perspective, other than within the Empathetic Faculty subscale. Although group differences did not emerge in the quantitative analysis, the validity of the inferences obtained through the analysis may have been affected by the small sample size. However, the descriptive statistics and the qualitative analysis did show differences between the two transfer pathway groups in other factors.

Descriptive statistics were conducted to measure the item means, standard deviations, ranges, and subscale means for the quantitative data. In addition, descriptive statistics were also conducted to differentiate between the two Transfer Pathways groups (structured & unstructured). The structured group mean scores were higher for the structured group than the unstructured group on four of the five SBI subscales. Isolation was the lowest scoring mean score for both groups ($M = 2.49$, $M = 2.38$).

Peer Support had the highest mean score for the unstructured group ($M = 3.29$), scoring 0.65 points higher than the structured group ($M = 2.64$). In particular, the unstructured group had higher mean scores (> 0.50) in the individual items related discussing events from out of class with peers (> 0.64), inviting peers to engage socially (> 0.62), and discussing personal matters with peers (< 0.54). The Faculty support subscale mean scored 0.40 points higher for the structured group ($M = 3.06$) than the unstructured group ($M = 2.66$). The structured group scored

higher (> 0.50) in Faculty Support subscale items related to seeking help from faculty before and after class (> 1.27) and outside of class time (> 0.70). Structured group participants appear to engage more with faculty, show greater classroom comfort, and perceive faculty to be empathetic more than the unstructured group. Conversely, the unstructured group appears to engage more with peers than the structured group.

There is little research focused on the impact of structured transfer pathway programs on transfer student persistence or state college transfer student sense of belonging. However, identifying what pre-transfer factors may impact student persistence has predominately been accomplished through examining cognitive variables such as transfer GPA and standardized test scores (Duggan & Pickering, 2007) and not by transfer pathway or structured transfer mechanism. Non-cognitive factors, such as student behaviors and attitudes, have also been studied as predictors of transfer student academic success and persistence (Wang, 2009). Common contributing factors to transfer student attrition include "lack of academic preparation, inaccurate transfer advising, unfamiliarity of academic expectations and rigor of the senior institution, and weak transfer and articulation policies" (Laanan et al., 2011, p. 176).

As the unstructured group adjusts to the university and finds social integration through enhanced relationships with peers, the need for academic integration remains a necessary component of student persistence (Tinto, 1993). These findings align with current research that asserts if transfer students perceive that faculty are approachable they will also experience a smoother academic adjustment and will be more likely take advantage of office hours and seek assistance on class assignments and projects (Laanan, 2007). However, transfer students may find social engagement away from the university Lester et al. (2013) found that transfers

primarily found on-campus engagement through academic means and experienced social engagement outside of the transfer institution.

From the descriptive statistics, the key difference between the two pathways appears to be focused on the role of student-faculty relationships and student-student peer relationships on state college transfer student sense of belonging. The structured group appears to engage more with faculty in academic setting and perceive faculty to be more empathetic and the unstructured group appears to engage more with peers than the structured group. Given that there is little research available focused on transfer pathways, it is not possible to link these findings to existing research. However, this difference between pathway groups may yield results with further study.

Research Question Three

To determine the relationship between student demographic factors and state college transfer student's sense of belonging, a stepwise regression procedure and seven-way MANOVA tests were conducted. The regressions concluded that the beta coefficient for Transfer Pathway ($\beta = -0.541$) showed a negative and statistically significant association with Isolation ($p = 0.033, < 0.05$) and the beta coefficient for First Generation Status ($\beta = -0.387$) showed a negative and statistically significant association ($p = 0.027, < 0.05$) with Empathetic Faculty Understanding. First generation participants were therefore more likely to perceive isolation than non-first generation participants and structured pathway participants were more likely to perceive faculty empathetic understanding than unstructured pathway participants. Given that the probabilities are greater than the threshold, the 7-way MANOVA tests showed no statistically significant relationships ($p > 0.05$) between the five SBI subscales and the demographic factors.

Parents' educational attainment has been identified as a persistence predictor (Fike &

Fike, 2008) and in this study, first generation student status was found to have a negative and

significant relationship with the Isolation subscale. First generation students may lack familial

support mechanisms to manage the transfer process. Possessing the "coping mechanisms to deal

with the stress, and the extent to which they have the skills to fit in and become involved highly

impacts their successful cross-cultural relocation" (Laanan, 2007, p. 41). As a result, transfer

students, in particular first generation students, may become isolated and easily succumb to the

classic "car to class to car" behavior (Grites, 2013, p. 62). Faculty have identified transfer

student's false assumptions about the institution as a major impediment to serving this

population (Tobolowsky & Cox, 2012). This may be especially problematic for first generation

students who do not have the support systems to manage the "variety of subtle, often hidden,

institutional influences" at play within their transition experience (Tobolowsky & Cox, 2012, p.

408).

Transfer students, unlike their four year native counterparts, are often older, more likely

to work full-time, come from lower socioeconomic backgrounds, and have significant family

responsibilities" (Lester et al., 2013, p. 203). These findings indicated that there are no

significant associations between age, gender, race/ethnicity, transfer GPA, and pathway. These

findings are contrary to existing research that examined the impact of specific background

characteristics on persistence and sense of belonging. D'Amico et al. (2014) found that

successful transfer students are more likely to be younger and more "likely to demonstrate

academic readiness based on the completion of more course modules and more rigorous courses,

spending less time at the community college, and maintaining continuous enrollment" (p. 372).

These findings are also contrary with research that suggests that some pre-college characteristics,

including age, can impact student persistence and transfer student institutional commitment (Wang, 2009; Strauss & Volkwein, 2004). However, these findings are consistent with existing quantitative studies that found that no background characteristics were significant (e.g., age, gender; Laanan, 2007; D'Amico et al., 2014).

Qualitative Analysis Discussion

Finally, qualitative data collected from one open-ended item were analyzed. Participants were asked to answer the item "What else would you like the researcher to know about your transfer experience?" 34 participants responded to this item and 24% ($n = 13$) of qualitative data participants were in the structured transfer pathway group, whereas 76% ($n = 41$) were in the unstructured group. Qualitative data were analyzed, coded, and sorted by transfer pathway. Contrary to the quantitative findings that found little difference between the two transfer pathway groups, with the exception of Empathetic Faculty Understanding, the qualitative analysis did show some differences between the two transfer pathway groups. These divergent findings reflect the "complex adjustment process faced by transfer students and are designed to capture not simply academic changes, but also the cultural changes experienced by students" (Young & Litzler, 2013, p. 879).

The qualitative analysis process developed four themes and eleven subthemes, including: Faculty (Care, Online, Knowledge), Peers (Academic & Social), Support (Advisors, Online, Resources), and Transfer (Transition, Time, & Shock). The two subthemes that had the highest frequency in the qualitative data were Faculty/Care ($f = 10$) and Transfer/Transition ($f = 10$). The most prominent differences between structured and unstructured transfer pathway participant

responses fell into Faculty/Care, Transfer/Transition, Peers/Academic, Support/Advisors, and Support/Online themes and subthemes.

Structured transfer pathway participants had varying experiences related to Faculty/Care ($f = 10$) that appeared to be dependent on their individual faculty. Whereas, the unstructured pathway participants were aligned in their perceived faculty empathy and less positive perception of faculty care. Both transfer pathways expressed a desire for Faculty in online environment to be more approachable and involved. These findings are consistent with existing research that suggests that the way students perceive the classroom and the actions of the instructor may influence how transfer students' perceive themselves within the institution and whether students develop a sense of belonging (Freeman et al., 2007). Finding faculty to be unapproachable or lacking empathy may be especially detrimental for transfer students who often bring with them an "assortment of barriers to academic success and retention, often finding themselves in situations that require skills they neither possess nor are even aware that they lack" (Duggan & Pickering, 2007, p. 438). These barriers may deeply impact student persistence given that research suggests that students who discover that their expectations about the institution were unrealistic are at the highest risk of dropout (Monroe, 2006).

The most frequently discussed concepts related to Transfer/Transition ($f = 10$) were descriptions of the transition between from the State College to the MRU, satisfaction and appreciation for a positive transition, and recognition of the positive impact of specific academic programs, academic colleges and campuses at the MRU on their transfer process. This is important given that transfer student engagement centers on "interacting with faculty, engaging in active and collaborative learning, engaging in educational activities, and activities that indicate engagement in one's institutional environment" (Ishitani & McKitrick, 2010, p. 577). Some

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transitional insecurity though may not necessarily negatively impact students. Laanan (2007) found that the "students' insecure feelings about the university environment are positively related to academic adjustment" (Laanan, 2007, p. 54). As such, the researcher cautioned that reducing students' insecurities and "alleviating feelings of anxiety about the 4-year institution appear to be important to facilitating students' academic adjustment" (Laanan, 2007, p. 54).

Within the Peers/Academic subtheme ($f = 8$), structured pathway participants expressed that their primary way of connecting with peers was less engaged and took place exclusively in academic settings and for academic reasons (classes, discussing assignments, class Facebook groups). Whereas, the unstructured pathway participants expressed stronger satisfaction with the quality of peer relationships, especially those developed online and in Facebook groups in particular.

Within the Support/Advisors theme ($f = 6$), structured participants noted the role that Advisors had played in supporting them before and after transfer and attributed their successful transition to these agents at both the State College and the University. Unstructured pathway participants noted the advising they wished they had received prior to transfer and attributed challenges they had faced to inappropriate preparation by Advisors. Berger and Malaney (2003) found that the "most prevalent indicator of transfer student satisfaction at the university and their academic performance is transfer preparedness", which includes advising, access to faculty and staff, and having an understanding of academic requirements (Berger & Malaney, 2003). Pre-transfer advising is a prominent feature of transfer preparedness and is often mandatory component to many structured transfer pathway programs.

Within the Support/Online subtheme ($f = 6$), participants from the structured pathway group expressed a desire for additional support personnel for online activities. In contrast,

participants from the unstructured pathway expressed a desire to have improved systems to support online learning and access to information online. Quality interactions do not consist of simply developing a connection with others, rather, "students need to feel connected and they need to feel welcomed not threatened" (O'Keeffe, 2013, p. 608). Structured pathway participants may have become accustomed to utilizing state college and university personnel through involvement in the structured pathway program, whereas unstructured pathway participants may be more accustomed to finding information on their own, and mainly online. This difference in how participants seek out information and support may yield results with further study.

Limitations

Although the findings in this study expand on transfer student sense of belonging and the impact of transfer pathways, this study has several limitations that should be noted.

1. This study only included one state college and one transfer university, and as such can only be generalized to this population, and not necessarily to other transfer students at other institutions.

2. Based on the research design, this study can only indicate associations between variables and not causal or directional relationships.

3. The sample size was small and limited to students who self-selected to participate. Future studies should consider larger sample size to improve generalizability of the study.

4. This study depended on state college student educational record for email contact information, which was provided to the institution at time of admission. Over 10% of the email addresses bounced and there is no way to know what percentage of eligible participant's received the invitation emails. Not having access to their transfer university

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email address was a limitation to the researcher's ability to communicate with the eligible population.

5. The primary mode of data collection was reliable but had limitations given the use of an existing instrument with little room for modification. Future studies should consider additional methods of data triangulation.

6. The study was conducted at a single point in time and included students who were either in their first semester or second transfer semester.

7. This study explored student experiences and not student development. Future research should consider a longitudinal approach to investigate how students are experiencing and developing sense of belonging.

8. This study did not take into account level of engagement in the structured transfer pathway program. For the sake of this study, a student who registered with the transfer pathway program was considered a member of the structured pathway group, regardless of level of engagement with the program itself. This study did not differentiate between the variety of unstructured pathways that a student could pursue to transfer.

9. Participants were asked to rate interactions with faculty as a whole, and not with individual faculty. As such, their responses represent their aggregate experience and not their individual experiences, which could vary greatly from class to class and semester to semester.

10. Within the participant solicitation emails, participants were made aware that this study focused on transfer student belonging. This awareness may have impacted how participants chose to answer the individual items within the instrument and specifically the qualitative item.

Implications for Practice

The findings from this study do indicate several implications for practice. This study identified tangible opportunities that support the development of a stronger sense of belonging for state college transfer students. A challenge for transfer student-receiving institutions is to be prepared to support, engage, and retain transfer students with widely varying characteristics, academic preparedness, and enrollment patterns. Higher education administrators and scholar practitioners can focus their efforts in three areas: (a) raise faculty awareness concerning transfer student sense of belonging, (b) develop a sustained transfer experience, and (c) foster an institutional transfer-receptive culture, to further improve state college transfer student's sense of belonging.

Raise Faculty Awareness about Sense of Belonging

The findings from this study promote the important that individual faculty members can play in the state college transfer student experience. The results of nearly two decades of research focused on sense of belonging suggest that it can best be fostered in settings "characterized by effective instruction, including an emphasis on mastery of meaningful content; warm, respectful interactions between instructor and students; cooperative interactions among students; and smooth organization" (Freeman et al., 2007, p. 205). Inside the classroom, it is "essential to affirm and validate adult students' experiences, highlighting the social and academic connection between students, their teachers, and the college in general" (Chaves, 2006, p. 150). Faculty need to know this research and be encouraged to embed this knowledge into their teaching practice.

Most qualitative responses related to student relationships with faculty had little to do with the instruction itself, but rather, focused on the perception of faculty caring and empathy. Freeman et al. (2007) assert that sense of belonging can be positively impacted by perceptions of pedagogical caring from faculty instructors (Freeman et al., 2007, p. 207). This is also supported by this study's qualitative findings related to online learners. Previous research confirms that it is important that transfer students engage with their peers by spending time with them and working on class projects that will foster a sense of belonging to the institution (Laanan, 2007, p. 55). Faculty can encourage this engagement in their classes regardless of academic discipline, campus location, or course modality. Faculty could also be offered professional learning centered on the unique needs of transfer students.

By raising faculty awareness about the factors impacting transfer students' sense of belonging, especially those related to factors within their locus of control, such as faculty support and empathetic faculty understanding, could greatly improve perceptions of faculty and in turn, positively impact state college transfer student sense of belonging. In addition, those faculty who excel at working with transfer students could in turn, mentor other faculty.

<center>Develop a Sustained Transfer Experience</center>

Evidence "indicates that transferring from one institution to another can have lasting negative consequences for many other students, suggesting that institutions may not be providing the supports and programs necessary to assist this population" (Tobolowsky & Cox, 2012, p. 389). It is widely acknowledged that what a student brings to the college environment will have an impact on their academic and social experiences. However, it is "what the student does once they arrive that will determine the extent to which a successful adjustment experience will be

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achieved" (Laanan, 2007, p. 55). Most qualitative responses related to the transition between the SC and the MRU focused on either what aspects helped them to transition and what aspects were missing from their transition.

A well-developed transition experience will also contribute to student satisfaction with the institution. Berger and Malaney (2003) found that the most prevalent indicator of transfer student satisfaction and academic performance is transfer preparedness. Transfer preparedness includes quality advising, access to faculty and staff, and having an understanding of academic requirements (Berger & Malaney, 2003). The pre-transfer institution should begin the transition process for its students well before they actually transfer and the receiving institution should extend the transition support over a substantial time period (Grites, 2013). Much of this transitional support could come from a structured transfer pathway program or an extended transfer orientation program. Specifically students can be taught how to effectively communicate with faculty and build relationships with peers in and out of the classroom.

This study's findings indicated that students who were registered with the MRU's structured transfer pathway program identified most strongly with personal comfort within the classroom setting itself and academic and social support by faculty. Whereas, the unstructured group identified most strongly with academic and social support by peers and personal comfort within the classroom setting itself. It is evident that the classroom learning environment is not the concern for these students as it relates to sense of belonging. Rather participants from the structured group struggled more so with developing peer social relationships outside of classes and participants from the unstructured group struggled more so with faculty relationships and perceptions of faculty empathy. Both types of relationships could be enriched through improved pre-transfer preparation and a sustained post-transfer program offered by the transfer-receiving

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institution through required transitional programs or a transfer student success course. This could

be especially important for First Generation students who may be more isolated than non-first-

generation students as found in this study.

In addition, structured transfer pathway programs could provide the means for much of

this type of sustained pre-transfer and post-transfer transition experience. Structured transfer

pathway program administrators could use the results of this study to design pre-transfer and

post-transfer elements of their transfer pathway program to improve overall sense of belonging

for participants.

<p style="text-align:center">Foster a Transfer-Receptive Institutional Culture</p>

Transfer student success cannot be left to chance or assumptions; as the stakes are very

high. University faculty and staff often lack understanding of their transfer student populations

and overestimate the college readiness of transfer students (Grites, 2013). Grites (2013) asserts

that "systematic, strategic, and timely interventions must be developed, implemented, and

assessed to establish a positive culture of transfer that enables these students to meet their goals,

as well as those of legislatures, accrediting bodies, and employers" (p. 67). A transfer receptive

institutional culture is one where there is a deep commitment to "provide the support needed for

students to transfer successfully—that is, to navigate the community college, take the appropriate

coursework, apply, enroll, and successfully earn a baccalaureate degree in a timely manner"

(Herrera & Jain, 2013, p. 52).

A transfer-receptive culture would include providing resources that meet the specific

needs of transfer students, not simply offering modified versions of the services provided to

traditional-age freshmen or transfer students who are exclusively taking classes on the primary

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campus. Transfer student-focused student organizations could provide opportunities for social engagement, peer support, and avenues for institutional involvement and engagement. Transfer student mentoring programs could also promote institutional value and fit while supporting academic and social integration. Developing meaningful engagement for online transfer students will also be important. In addition, raising institutional consciousness by finding successful transfer students whom administrators can showcase could also help to foster a transfer-receptive culture. Furthermore, faculty and staff who were once transfer students themselves can be effective proponents of transfer-friendly policies and initiatives.

Directions for Future Research

This study revealed several areas for future academic research and warrant additional investigation into transfer students and sense of belonging. This research could focus on five specific areas for future inquiry into transfer student sense of belonging. These five areas are: (a) expand this study to additional State College/University transfer pathway partnerships; (b) pursue a longitudinal approach to this research; (c) examine other related factors impacting persistence; (d) explore transfer student engagement with the structured transfer pathway; and, (e) expand broad-based research into state college transfer students.

Expand this Research to Additional State colleges and University Transfer Pathway Partnerships

As discussed previously, this study had 254 eligible participants and 54 completed responses for a 21.25% response rate. The State College included in this study contributes a relatively small proportion of transfer students to the MRU transfer pathway partnership. The small sample was compounded by the reliance on older email addresses from the pre-transfer

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institution's student educational records to solicit participation, which may have impacted these responses rates. Future studies should consider larger sample size to improve generalizability of the study. One way to secure a larger sample size would be to include one or more colleges from the partnership in future research. In addition, this research should attempt to use of the transfer-receiving institutional email address or MRU student portal as a way to solicit broader participation.

Pursue a Longitudinal Approach

Future research should consider a longitudinal approach to investigate how students are experiencing and developing sense of belonging at the various points of the transfer experience. This longitudinal approach could include the use of pre-testing and post-testing and follow participants for a longer period of time to measure and track transfer and completion data. This would provide for a broader scope to the study and allow for a more direct measure of transfer student persistence; which is a weakness in the existing literature. Future studies should also consider additional methods of data triangulation. There are few mixed methods research studies focused on transfer student persistence or sense of belonging in higher education settings.

Expand Research to Include Additional Factors Impacting Persistence

Future research could expand this study to include additional factors that were not included in this research design. These could include: engagement with other institutional agents, comparison between starting semesters (fall, spring, & summer), and exploring deeper into individual classes, faculty, or disciplines. The Sense of Belonging Instrument (SBI) focuses exclusively on interactions and engagement with faculty and peers. Future research could expand

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and include interactions with other institutional agents, such as academic advisors, student services personnel, and other staff with whom the transfer student may also interact both pre and post transfer.

This study included participants who transferred both in the fall and spring semesters; however due to the sample size, no comparisons were made between the two groups. An area for future research could include comparing the experience of fall starters versus spring starters or summer starters. Future research could also expand into comparisons of sense of belonging between students who enroll in seated, hybrid, and online courses. In addition, future research could also examine sense of belonging within students from urban, rural, and suburban areas.

The Sense of Belonging Instrument (SBI) required participants to respond to items about faculty, classes, and peers in general sense and not specific faculty or classes. Future research could identify specific classes, cohorts, or academic programs to include in the study. This approach would allow participants to focus their responses on a particular class or instructor instead of responding to the entirety of their experiences.

<div align="center">Expand Understanding of the Impact of the Transfer Pathway</div>

This study explored the impact of the transfer pathway designation from a binary perspective. Either participants were either registered with the structured transfer pathway program or they were not. This study did not seek to explore the level of involvement or engagement with the elements of the program itself. Future research could explore more deeply how engaged students were with the program and how that engagement may have impacted sense of belonging and overall persistence. This research could also explore whether

involvement with the transfer pathway program contributed to student sense of belonging as described by the five factors developed within the Sense of Belonging Instrument (SBI).

Expand Overall Research into Transfer Student Persistence and Sense of Belonging

Most research focused on student engagement as a key indicator of persistence is largely based on research conducted with traditional freshmen at a four-year university (Wang, 2009). There is little research focused on transfer student engagement (Lester et al., 2013) or state college transfer student engagement. Most of the literature that does exist focuses on the factors that lead students to transfer, not their experiences once attending the transfer institution and examine the differences in academic achievement between native and transfer students, typically measured by GPA (Lester et al., 2013). Future research could seek to fill this void by focusing on the impact of articulation agreements, transfer policies, and transfer pathway programs (Bers, 2013; Kisker, 2005). Based on the findings of this study, the impact of perceived faculty empathy, isolation, and first generation status could also be the focus of future research into transfer student belonging and persistence.

Conclusion

The findings of this study both confirm and build upon previous research (Astin, 1993; Bean, 1980; Bollen & Hoyle, 1990; Chaves, 2006; D'Amico et al., 2014; Duggan & Pickering, 2007; Freeman et al., 2007; Hoffman et al., 2002; Hurtado & Carter, 1997; Ishitani & McKitrick, 2010; Kuh et al., 2008; Laanan, 2007; Lester et al., 2013; Strauss & Volkwein, 2004; Tinto, 1993; and Tovar & Simon, 2010). The findings from this research contribute to the body of

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knowledge on student persistence, community/state college transfer students, and sense of belonging.

These findings also bring attention to the need to continue to explore the complex questions related to articulation policies, pre-transfer preparation, post-transfer support, and transfer student engagement as they contribute to transfer student success and persistence. These findings confirm the need to further expand positive and sustained transition experiences beyond the concept of orientation and transfer shock, as established in current research (Berger & Malaney, 2003; Bers, 2013; Grites, 2013; Herrera & Jain, 2013; Kisker, 2005; and Tobolowsky & Cox, 2012).

The data and findings presented in this study are clear that the academic experience in the classroom is central to state college transfer student experience and contributes to sense of belonging. Although these findings do not support a causal relationship or indicate directionality of relationships, they do suggest that sense of belonging is perceptible to students in classrooms experiences and from interactions with peers and faculty. The results of this study offer a clear demonstration of the positive relationship between engaged and empathetic faculty, peer academic and social support, classroom comfort, and the impact of isolation on the construct of sense of belonging.

APPENDIX A
SENSE OF BELONGING INSTRUMENT (MODIFIED)

Table 40

Modified Sense of Belonging Instrument (Hoffman et al., 2002)

Reflecting on your experiences since transferring to UCF, please select the statement that best represents you.	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)	N/A (0)
1. I could contact another student from class if I had a question about an assignment					
2. I have met with other students outside of class to study for a test or exam					
3. Other students are helpful in reminding me when assignments are due or when tests are approaching					
4. I have discussed personal matters with students who I met in class					
5. I have developed personal relationships with other students who I met in class					
6. I discuss events that happen outside of class with other students					
7. If I miss class, I know students who could share class notes with me					
8. I invite other students I know from class to do things socially					
9. I am comfortable asking an instructor for help if I do not understand course-related material					
10. I am comfortable seeking help from an instructor outside of class time (i.e. during office hours)					
11. I am comfortable seeking help from an instructor before or after class					
12. I am comfortable socializing with an instructor outside of class					
13. I am comfortable asking an instructor for help with a personal problem					
14. I am comfortable talking to an instructor about a problem I'm having					
15. I am comfortable asking a question in class					
16. I am comfortable volunteering ideas or opinions in class					
17. Speaking in class is easy because I feel comfortable					
18. I am comfortable contributing to class discussions					
19. I rarely talk to other students in my classes					
20. I know very few people in my classes					

Reflecting on your experiences since transferring to UCF, please select the statement that best represents you.	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)	N/A (0)
21. Other students in class know personal information about me					
22. It is difficult to meet other students in class					
23. I believe that an instructor would take the time to talk to me if I needed help					
24. I believe that an instructor would try to understand my problem if I talked to them about it					
25. I believe that an instructor would be sensitive to my difficulties if I shared them					
26. I believe that an instructor would be empathetic if I was upset					

Note. Adapted from "Investigating "sense of belonging" in First-Year college students," by M. B. Hoffman, J. R. Richmond, J. A. Morrow, and K. Salomone, 2002, *Journal of College Student Retention*, *4*(3), pp. 227-256. Copyright 2002. Adapted with permission.

APPENDIX B
RESEARCH STUDY INFORMED CONSENT

Participant Informed Consent
You are being asked to take part in a research study that will help us better understand transfer students' sense of belonging and the transfer student experience at UCF.

This instrument is estimated to take approximately 15 minutes to complete. There are no perceived benefits or anticipated risks for participating in this study as your identity and responses will be confidential. You must be 18 years of age to participate.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any item for any reason. If you decide to take part, you are free to withdraw at any time.

Data and results will be analyzed in aggregate and not by individual participant responses. Your privacy will be protected and your research records will be confidential.

If you have questions or concerns about this study, please contact Claire Brady, clairebrady@knights.ucf.edu. This study is guided by Dr. Rosemarye Taylor, faculty in the College of Education and Human Performance (rosemarye.taylor@ucf.edu).

This research has been approved by the UCF Institutional Review Board (IRB) and the Lake-Sumter State College Institutional Review Board (IRB). Questions and concerns about research participants' rights may be directed to the UCF IRB Office, 12201 Research Parkway, Suite 501, Orlando, FL 32826. The phone of the IRB is 407-823-2901.

Thank you in advance for your participation in this study. Your responses will be valuable in the understanding of the transfer student experiences.

APPENDIX C
SUMMARY OF THE FIVE SUBSCALES FOR THE
SENSE OF BELONGING INSTRUMENT

Perceived Peer Support
Item 1- I could contact another student from class if I had a question about an assignment.
Item 2- I have met with other students outside of class to study for a test or exam.
Item 3- Other students are helpful in reminding me when assignments are due or when tests are approaching.
Item 4- I have discussed personal matters with students who I met in class.
Item 5- I have developed personal relationships with other students who I met in class.
Item 6-I discuss events that happen outside of class with other students.
Item 7- If I miss class, I know students who could share class notes with me.
Item 8- I invite other students I know from class to do things socially.

Perceived Faculty Support/Comfort
Item 9- I am comfortable asking an instructor for help if I do not understand course-related material.
Item 10- I am comfortable seeking help from an instructor outside of class time (i.e. during office hours)
Item 11-I am comfortable seeking help from an instructor before or after class.
Item 12- I am comfortable socializing with an instructor outside of class.
Item 13-I am comfortable asking an instructor for help with a personal problem.
Item 14-I am comfortable talking to an instructor about a problem I'm having.

Perceived Classroom Comfort
Item 15-I am comfortable asking a question in class.
Item 16-I am comfortable volunteering ideas or opinions in class.
Item 17-Speaking in class is easy because I feel comfortable.
Item 18-I am comfortable contributing to class discussions.

Perceived Isolation
Item 19-I rarely talk to other students in my classes.
Item 20-I know very few people in my classes.
Item 21-Other students in class know personal information about me.
Item 22-It is difficult to meet other students in class.

Empathetic Faculty Understanding
Item 23- I believe that an instructor would take the time to talk to me if I needed help
Item 24-I believe that an instructor would try to understand my problem if I talked to them about it.
Item 25-I believe that an instructor would be sensitive to my difficulties if I shared them.
Item 26-I believe that an instructor would be empathetic if I was upset.

APPENDIX D
PARTICIPANT SOLICITATION EMAILS

Dear <u>INSERT NAME</u>,

My name is Claire Brady and I am a doctoral student in Educational Leadership at UCF and the Vice President for Enrollment and Student Affairs at SC. I am conducting research into transfer student sense of belonging.

As a recent transfer student to UCF, your experience would be valuable to this research study. You must be 18 years of age to participate. If you agree to participate in this study, you will be asked to complete an online survey. The survey will take about 15 minutes to complete.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any item for any reason. If you decide to take part, you are free to withdraw at any time.

Your answers to this survey will be confidential. I will not include any information that would identify you when I publish the results of this study.

This research has been approved by the UCF Institutional Review Board (IRB) and the SC Institutional Review Board (IRB). If you have any questions concerning the UCF IRB policies or procedures or your rights as a human subject, please contact UCF IRB Office at 407-823-2901. If you have any questions concerning the SC IRB policies or procedures or your rights as a human subject, please contact the SC Office of Planning & Institutional Effectiveness at 352-323-3637.

If you are willing to participate in this study, please click the link below to review the Informed Consent form and complete the online survey.

<u>INSERT LINK</u>

If you have questions about this research study, you may contact me via email <u>clairebrady@knights.ucf.edu</u>

Thank you. Claire Brady

FOLLOW UP EMAIL SOLICITATION EMAIL

Dear <u>INSERT NAME</u>,

My name is Claire Brady and I am a doctoral student in Educational Leadership at UCF and the Vice President for Enrollment and Student Affairs at LSSC. I am conducting research into transfer student sense of belonging.

As a recent transfer student to UCF, your experience would be valuable to this research study. Two weeks ago I emailed you to request your participation in a research study. The study will end in one week, so this email serves as a reminder for you. You must be 18 years of age to

participate. If you agree to participate in this study, you will be asked to complete an online survey. The survey will take about 15 minutes to complete.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any survey question for any reason. If you decide to take part, you are free to withdraw at any time.

Your answers to this survey will be confidential. I will not include any information that would identify you when I publish the results of this study.

This research has been approved by the UCF Institutional Review Board (IRB) and the SC Institutional Review Board (IRB). If you have any questions concerning the UCF IRB policies or procedures or your rights as a human subject, please contact UCF IRB Office at 407-823-2901. If you have any questions concerning the SC IRB policies or procedures or your rights as a human subject, please contact the SC Office of Planning & Institutional Effectiveness at 352-323-3637.

If you are willing to participate in this study, please click the link below to review the Informed Consent form and complete the online survey.

LINK

If you have questions about this research study, you may contact me via email clairebrady@knights.ucf.edu

Thank you. Claire Brady

APPENDIX E
AUTHOR'S APPROVAL TO USE AND MODIFY THE
SENSE OF BELONGING INSTRUMENT

From: Jayne Richmond [mailto:jrichmond@uri.edu]
Sent: Wednesday, October 14, 2015 5:48 PM
To: Brady, Claire
Cc: richmond@uri.edu; salomone@syr.edu
Subject: Re: Request permission to use the Sense of Belonging instrument

You are most welcome to use the materials as found in the article you cite. Unfortunately no further work was done on this topic so our assistance is pretty limited, but please do use all that you need. Good luck. Jayne Richmond

On Tuesday, October 13, 2015, Brady, Claire < > wrote:

Good evening Dr. Richmond & Dr. Salomone,

My name is Claire Brady and I am a doctoral student at the University of Central Florida in the Executive EdD program in Educational Leadership. I am writing to ask permission to use your "Sense of Belonging" instrument in my dissertation study "An Investigation of structured and unstructured transfer pathways' influence on transfer student sense of belonging". I am interested in studying sense of belonging in students who start at community/state colleges and transfer on to universities through structured programs vs unstructured transfer pathways. I was first introduced to your work in the article "Investigating Sense of Belonging in First Year College Students" in the Journal of College Student Retention. This served to promote my interest in the concept of sense of belonging and eventually in the selection of my research topic. I would like to formally request the use of the instrument in my study.as indicated in your published materials. Thank you very much, Claire Brady.

From: Jayne Richmond [mailto:jrichmond@uri.edu]
Sent: Sunday, March 27, 2016 4:03 PM
To: Brady, Claire < >
Cc: richmond@uri.edu; salomone@syr.edu
Subject: Re: Process to request permission to use the Sense of Belonging instrument
Yes of course and congratulations. Best of luck

On Sunday, March 27, 2016, Brady, Claire < > wrote:
Dr. Richmond,
Thank you again for allowing me to use the Sense of Belonging Instrument for my dissertation study. I defended my proposal last week and am glad to tell you that I passed that first hurdle. My committee would like to make some small edits to the instrument so that it can be reformatted for a web survey and a few small language and content changes with updated language and terminology (please see attached). I wanted to make sure that you would still permit the use of the survey given these edits. Thank you so very much. Claire Brady

APPENDIX F
UCF INSTITUTIONAL REVIEW BOARD APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: UCF Institutional Review Board #1
         FWA00000351, IRB00001138

To: Claire Brady

Date: April 25, 2016

Dear Researcher:

On 04/25/2016, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	An investigation of structured and unstructured university transfer pathways' influence on community college transfer student sense of belonging.
Investigator:	Claire Brady
IRB Number:	SBE-16-12209
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Joanne Muratori

Signature applied by Joanne Muratori on 04/25/2016 09:08:15 AM EDT

IRB Manager

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APPENDIX G
SC INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Lake Sumter State College

LEESBURG • SUMTER • SOUTH LAKE

Office of Planning and Effectiveness • Dave Weber Executive Director

August 1, 2016

Ms. Claire Brady
Vice President of Enrollment and Student Affairs
Lake-Sumter State College
9501 US Highway 441
Leesburg, FL 34788

According to Lake-Sumter State College Policy and Procedures, I have the authority to approve the use of human subjects or administer an exemption to a project.

This letter is to certify that the research project titled, "An Investigation of Structured and Unstructured University Transfer Pathways' Influence on Community College Transfer Student Sense of Belonging," being conducted by you is Exempt and is approved by Lake-Sumter State College.

The project has no risk for the participants; information collected will be guarded for confidentiality of the data; participation is voluntary and participants can quit at any time; all of the activities fall into an exemption category. As reported in the project application, findings will be reported at an aggregate level with no personal identifying information.

The College will support the project by making a data request from the National Clearinghouse for students who transferred from LSSC to UCF in the fall of 2015 and the spring of 2016 and who are over the age of 18.

Please contact me if you need any additional information at (352) 323-3630.

Sincerely,

David N. Weber, Chair of IRB Board
Executive Director, Planning and Effectiveness Lake-Sumter State College
9501 U.S. Highway 441 Leesburg, FL34788

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