5-2020

Community College Advisors' Understandings and Uses of Colorado Statewide Transfer Articulation Policy

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COMMUNITY COLLEGE ADVISORS' UNDERSTANDINGS AND USES OF COLORADO STATEWIDE TRANSFER ARTICULATION POLICY

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the degree of
Doctor of Philosophy

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College of Education and Behavioral Sciences
Department of Leadership, Policy, and Development:
Higher Education and P-12 Education

May 2020

This Dissertation by: Paul Eric Giberson

Entitled: *Community College Advisors' Understandings and Uses of Colorado Statewide Transfer Articulation Policy*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in College of Education and Behavioral Sciences in Department of Leadership, Policy, and Development: Higher Education and P-12 Education, Program of Higher Education and Student Affairs Leadership

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ABSTRACT

Giberson, Paul. *Community college advisors' understandings and uses of Colorado statewide transfer articulation policy.* Published Doctor of Philosophy dissertation, University of Northern Colorado, 2020

This interpretivist descriptive case study examines how community college academic advisors understand and use Colorado statewide transfer articulation policy (STAP) in their work with transfer students. Using systems theory to analyze data collected through 28 semi-structured individual interviews, document review, and field notes, I describe how academic advisors at a selected two-year institution understand and use STAP. The final product includes a rich and thick description of the findings presented through a systems theory framework.

Among this study's primary findings is that academic advisors' understandings of STAP affects the ways they use articulation. Participants understand that STAP can improve advising by creating pathways, providing assurance, protecting credits, standardizing the transfer process, and supporting state goals. Based on these understandings, advisors use STAP to providing guidance and build confidence in their work with transfer students. My analysis of interview data reveals that advisors' understandings emerge through their use of STAP in the daily work of problem-solving with students. Using systems theory analysis allows for a discussion of findings and provide recommendations for future research. Implications of this study include recommendation for policy makers, institutional leaders, faculty, and academic advisors

responsible for creating, updating, and implementing statewide transfer articulation policy.

ACKNOWLEDGMENTS

I am not big on recognition, especially when it is directed at me, but my dissertation would be complete without thanking a few people who made this journey possible. First and foremost is my partner Matt. He was my encourager, supporter, brainstormer, problem solver, and proofreader. He was there from start to finish, all ten years of my process (somehow also completing his own dissertation during this time). He held me up when I was down, pushed me when I wanted to quit, and encouraged me when I wasn't sure. My name is listed above, but he deserves recognition for this accomplishment. He helped me believe in myself and my ability to achieve this goal. I recognize how fortunate I am to have a partner like him. I love you!

I would also like to recognize Pete and Ryan for their support and encouragement. They developed several fun and silly ways to keep me on track and moving towards completion. These two know the difficulties of completing a dissertation and never once did they let me think I couldn't do it. They were the comic relief when I needed it, provided an ear when I was frustrated, and sent hundreds of encouraging text message along the way. They made this whole thing a little more pleasant and enjoyable.

My advisor and committee were amazing. My advisor probably questioned whether I would ever reach this point, but here I am, thanks in large part to him. He was there when I needed. He kept me on track, checked in as needed, and helped me navigate my first independent research experiences. My committee members changed a lot during the process, but the group I ended with were amazing. They were encouraging, but didn't

let me get away with subpar work. I will take away from this experience the importance of being reflexive throughout the entire research process thanks to their critique. Thank you for the amazing research lessons you imparted during my process.

I also need to thank my family who has always provided support. They continually asked me how things were going, what I was studying, and the most dreaded dissertation questions about when was I going to be done. Well, I finally finished up and it was in large part to their consistent and constant ability to check in on my progress. Thank you, Mom and Dad!

As I neared completion, I struggled with motivation and positivity. My friend Pete texted me one day when I was extra low:

> Remember, this is the summit of a long trail – the last part of the climb might be scary, and it's really the last move to the top that's the hardest. Remember to check in and be present at least a couple of times to appreciate the view as you're making the moves. This is a special moment – you're going to crush it. You are the expert after all!

He was right, I was making the last difficult moves in the process. It was at this point that I realized this dissertation belongs to me but is the product of an entire community. Without my partner, family, friends, and colleagues, what I created would never have been possible. From the bottom of my heart, I say thank you!

TABLE OF CONTENTS

CHAPTERS

LIST OF TABLES

CHAPTER I

INTRODUCTION

The transfer process of students and their credits moving from community college to four-year institution has received the attention of policy makers, institutional administrators, and researchers over the last few decades (Anderson, Sun, & Alfonso, 2006; Bailey, Jaggars, & Jenkins, 2015). With just over 40 percent of undergraduates enrolled in a community college (American Association of Community Colleges, 2019), and 80 percent of them desiring to transfer to a four-year institution (Snyder & Dillow, 2012), transfer is an important pathway to a bachelor's degree for many undergraduates in the United States (U.S.). Because less than 30 percent of community college students actually transfer to four-year institutions, and even fewer from underrepresented populations, institutions and state governments have started paying more attention to official transfer pathways; the mechanisms used to bridge students from community colleges to four-year institutions (Shapiro, et al., 2018). Examining the transfer process is quite timely since the higher education system often reproduces inequalities for students from underrepresented populations (Marginson, 2016; Schudde & Goldrick-Rab, 2015; Stanton-Salazar, 2001). The stratification effect, defined as the systematic reproduction of inequities between groups (Stanton-Salazar, 2001), is compelling some students from underrepresented populations to begin their education in the community college system

with hopes of using the transfer pathway as a means to a four-year education and bachelor's degree (Dowd, Pak, & Bensimon, 2013; Schudde & Goldrick-Rab, 2015).

Transfer pathways provide a roadmap for students as they systematically navigate the transfer process (Goldhaber, Gross, & DeBurgomaster, 2008). While the idea of transfer pathways appears simple, the processes often are not. Students' must navigate varying admission standards, financial aid packages, transfer advising, and academic norms between two-year and four-year schools, and they must rely on the transfer of credits between these institutions to fulfill their academic goals (Hagedorn, Lester, Garcia, McLain, & May, 2004; Handel, 2013). Many state governments, often in collaboration with institutions, have developed statewide transfer articulation policy (STAP) to help minimize the complexities by aligning credit practices and course transfer at two-year and four-year intuitions (Bautsch, 2013; Ignash & Townsend, 2000). Transfer articulation refers to the array of policy types that assist students with credit transfer including statewide articulation guides, common core standards, common course numbering, and degrees with distinction to name a few (Ignash & Townsend, 2000). Statewide transfer articulation policy attempt to simplify the transfer process for students and advisors and helps to ensure the seamless transfer of academic credits (Stern, 2016).

Beyond credit transfer, students need to develop the required capital to successfully navigate transfer pathways. Laanan, Starobin, and Eggleston (2010) defined transfer capital as student background characteristics, community college experiences, and university experiences that encourage and help predict transfer. With adequate development of this capital, students have been found to more successfully navigate the barriers and challenges associated with transfer pathways. For example, a middle class,

White, high school graduate, who participates in ongoing academic advising while enrolled in a community college, has a higher likelihood of transferring successfully to a four-year institution. Transfer capital has also been found to encourage a student's decisions to transfer, thus engaging them in the transfer pathways (Laanan et al., 2010).

Community college advisors assist students interpret, navigate, and eventually benefit from resources and services (Moschetti & Hudley, 2014). In addition, advisors play a critical role in a student's development and acquisition of transfer capital (Laanan et al., 2010). Although other key actors including state policy makers, institutional leaders, and students interact with STAP, advisors are tasked with interpreting and implementing policy as they assist students in the transfer process (Moschetti & Hudley, 2014).

Prior to this study, little was known about how advisors understand and use transfer articulation agreements in their work with student. This gap in understanding and awareness created an issue for policy makers and institutional leaders as they update and enhance STAP. While existing research has focused on credit articulation and transfer rates (Bensimon & Dowd, 2009; Ignash & Townsend, 2000; Roksa & Keith, 2008), only one recent study has focused on the experiences of community college advisors and STAP (Venezia & Jez, 2019). This interpretivist case study used interview and other qualitative data to explore advisors' experiences with and understandings of statewide transfer articulation policies.

Current Understanding of Topic

There are a number of broadly related areas of study that support this research and address the stated problem. These topics include community colleges, higher education

stratification, credit loss, limited research, institutional agents and academic advisors, and first-generation students. Although I highlighted these areas further in the literature review, it is important to present them here to provide context for this study.

Community Colleges

Transfer has long been considered a cornerstone of the community college mission and has assisted many students in pursuit of a bachelor's degree (Monaghan & Attewell, 2015; Mullin, 2012). Over time, this mission has changed as community colleges expand their offerings, resulting in decreased student transfer rates (Mullin, 2012; Roksa & Keith, 2008). In addition, the education system has become more stratified as it funnels a large number of students from underrepresented populations into community colleges as their starting point in higher education (Dowd et al., 2013; Stanton-Salazar, 2001). With approximately 30 percent of community college students transferring to a four-year institution, and only 60 percent going on to complete a bachelor's degree, it is vital to explore the transfer process in greater detail (Adelman, 2006; National Center for Education Statistics, 2019; Peter & Cataldi, 2005; Rosenbaum, Deil-Amen, & Person, 2006; Shapiro, et al., 2017). Without adequate and directed pathways, the system of higher education will continue hindering students from obtaining their educational goals, and students will continue to feel lost in the transfer process (Dowd et al., 2013; Rosenbaum et al., 2006).

Institutions of higher education are under pressure to increase the number of graduates in an attempt to make the U.S. more globally competitive (Lumina Foundation, 2016). In the mid and late 1900s, the U.S. produced more college graduates than any other country, but in the first two decades of the 21st century the country has experienced

fewer 18 to 24-year old college students enrolling in higher education and ranks 11th in the world for college completion rates (OECD, 2019). As states work to fulfill educational goals, their focus has shifted to degree completion in addition to basic matters of access and enrollment (Lewin, 2010; OECD, 2019). This focus can create challenges for policy makers, institutional leaders, faculty, and staff who must identify options for increasing completion rates while maintaining affordability, productivity, quality, and accountability. Statewide transfer articulation policy was designed to address some of these issues while working towards the goal of increasing the number of college graduates (Ignash & Townsend, 2000; Roksa & Keith, 2008).

Higher Education Stratification

Simplified transfer pathways are important for all community college students; however, the stratification effect of community colleges has created a greater need to examine transfer processes that support underrepresented students (Dowd et al., 2013). Social stratification and the reproduction of systemic inequalities affects students early in their K-12 educational career and follows them into higher education (Stanton-Salazar, 2001). The highly stratified educational system in the U.S. often directs students from underrepresented populations towards community colleges as the primary path to a higher education degree (Dowd et al., 2013; Schudde & Goldrick-Rab, 2015). Students from underrepresented population often graduate from high school unprepared for higher education and in need of remedial education. In addition, with rising tuition costs, students from low-income families have limited options for continuing their education after high school (Marginson, 2016). Community colleges become the primary option for these students based on their role in providing open access and remedial education;

however, this type of tracking helps to maintain the stratification effect (Dowd, 2007; Marginson, 2016). Thus, the transfer process plays an important role in addressing inequities in the system. Dowd and associates (2013) stated,

> The transfer function is particularly emblematic of social stratification in U.S. higher education and it is also one marked by "structural holes," such as poor curriculum alignment, notably different student financing systems, and near-total separation of faculty members in the two settings. (p. 7)

This further highlights the importance of examining the problems related to the transfer function and policy mechanisms that might close the gaps that support continued stratification.

A study by Gonzalez Canche (2017) found community colleges appear to be reproducing social stratification for students of color in STEM fields: "This sector has been labeled as an unrealistic route toward a 4-year degree that is only marginally better than dropping out of the higher education system altogether" (p. 2). Findings showed that community college STEM students earned less over their lifetime compared to their four-year counterparts. Findings also suggested that perceptions of a two-year education may be impacting admissions at elite four-year institutions. Additionally, stigmas associated with community colleges may influence employers' hiring practices. The authors argued that although the community college system continues to reproduce social stratification, these institutions also have the potential to change this narrative though improved investment in the system.

The stratification problem may be even greater for first-generation students who often lack the support, encouragement, and resources needed to transfer successfully when compared to their non-first-generation peers (Moschetti & Hudley, 2014). First-generation students, defined as students whose parents have no college degree, comprises

nearly 45 percent of public community college enrollments with expected increases in the future (National Center for Education Statistics, 2019). With these large enrollments, only 24 percent of first-generation students attending a community college transition to a four-year institution (Engle, 2007); considerably lower than the national average of 30 percent for all student populations. If we ignore issues related to stratification and transfer pathways, these problems will continue affecting first-generation and underrepresented community college students.

Credit Loss

The loss of credit is also a problem for students in the transfer process. **S**tudents reported feeling "lost in a maze" (Bailey et al., 2015, p. 26) as they navigate an unclear transfer pathway; often earning more credits than required for their degree, taking credits that do not transfer to the receiving institution or that do not count toward their program of study, and many times spend a longer time completing their degree. This is particularly concerning considering the costs of higher education (Bailey et al., 2015). Losing credits during the transfer process can disrupt progress towards a bachelor's degree (Monaghan & Attewell, 2015). A recent study, by Monaghan and Attewell, found that students' who transfer most or all of their credits were more likely to complete a bachelor's degree compared to students' who were able to transfer fewer than half their credits. The study found that less than 60 percent of students were able to transfer most of their credits, with 15 percent transferring few or none of their credits. The authors concluded that the largest barrier to successfully completing a bachelor's degree was associated with the number of credits a student transferred to the receiving institution (Monaghan & Attewell, 2015). Difficulties with transferring credit often arise when there is poor alignment between

two- and four-year institutions (Bailey et al., 2015). This is a problem because STAP are designed to align the credit transfer process; however, even with these policies in place, students are still losing credits. A primary reason for credit loss in a state with transfer articulation is the lack of knowledge and understanding by students and advisors of policy mechanisms, thus the disconnect between policy and practice (Monaghan & Attewell, 2015).

Limited Research

Further complicating this problem is the limited research related to understandings and uses of STAP. Existing scholarship on transfer articulation policy primarily uses quantitative data to examine outcomes and effectiveness (Bensimon & Dowd, 2009; Ignash & Townsend, 2000), thus it has provided relatively narrow insight into the experiences and perspectives of the advisors who work directly with students to administer and interpret the policies. This is a problem when attempting to understand how advisors use STAP in their work with transfer students.

A recent study by Venezia and Jez (2019) explored how California two- and four-year institutions are supporting transfer students, how students experience transfer policies and practices, and if the associate degree for transfer (AD-T) implemented in 2012 was affecting campus practices or student experiences. They conducted 26 individual interviews with staff and administrators at six California community colleges and focus groups with 64 students who had transferred to one of four California State University institutions. Venezia and Jez (2019) found transfer policies and practices are still complex and often confusing, posing barriers in the transfer process. These complexities make it difficult for staff and students to adequately create transfer plans.

Issues related to curriculum alignment, course sequencing, GE requirements, and online technologies were confusing to students. This confusion stemmed in part from a second finding, namely that community colleges were not able to provide enough support for students in the transfer process. Inconsistencies in advising serveries, lack of availability, and overburdened staff created a shortage of one-on-one attention many students needed to successfully plan for a navigate the transfer process. In addition, limited communication, and lack of formal communication mechanisms between two- and four-year institutions, created additional confusion for staff adding to the complexities experienced.

Venezia and Jez (2019) also found that the AD-T can help the transfer process, but in limited ways. Findings indicated that the AD-T is advancing communication and organization of curriculum at institutions providing basic consistency around the transfer process. Venezia and Jez stated, “the most important outcome of the transfer degree legislation is that it gave community colleges a basis upon which to organize their transfer curriculum—to look at their processes, courses, majors, and systems to stream-line student transfer” (p. 14). Unfortunately, students in the study indicated a lack of awareness and understanding of the AD-T as a pathway. Many did not know the AD-T existed nor did they understand the difference between that and a basic associates degree limiting their ability to take advantage of policy benefits. Finally, staff feel the AD-T guarantee is limited to a small subset of students. Students who enter the community college, know what they want to study, and know where they want to transfer tend to benefit more from the policy. Students who were unsure or changed their major, or were geographically limited, did not benefit from the guarantee available through the AD-T.

The complexities of the transfer process and understanding its shortcomings requires listening to individuals share their experiences. Therefore, this study using qualitative data allows new opportunities to understand behaviors related to the use of STAP. According to Creswell (2007), the benefits of using qualitative data include understanding complex phenomena, empowering a different way to understand and represent data related to STAP, and offering a richer understanding of the phenomenon being studied (Eisner, 2017).

Institutional Agents and Academic Advisors

Institutional agents, defined as individuals, typically in a higher-status position compared to the student, who act on behalf of the student to access highly valuable resources (Stanton-Salazar, 2001), have become an important piece of the transfer process. Institutional agents assist students as they navigate the system and, as Bensimon and Dowd (2009) argued, are important in increasing the aspirations of community college students to pursue a transfer path and a bachelor's degree. Dowd and associates (2013) found that students tend to attribute their success in the transfer process to institutional agents at the community college based on the types of support they provide. Stanton-Salazar (2001) identified six types of support institutional agents provide students as they navigate the transfer process. These include providing information about resources and opportunities, acting as a bridge for students as they explore opportunities, advocating on the behalf of students, being a role model, providing emotional and moral support during the process, and providing personalized attention, advice, and guidance (Stanton-Salazar, 2001). The author argued these types of guidance and support are important to move all students through the process; however, these become more

important for students from underrepresented populations. The authors' suggestions helped highlight the need for institutional agents in the transfer process.

Academic advisors (a type of institutional agent) have become an important piece of the transfer process for community college students (Chen & Starobin, 2019; Packard & Jeffers, 2013). Advisors assist students in selecting transferable classes, interpreting programs of study, deciphering articulation agreements, identifying admissions requirements, and supporting the overall wellbeing of the student (Packard & Jeffers, 2013). At community colleges, advising is provided by many individuals including faculty members, professional academic advisors, transfer centers, and other support personnel (Packard & Jeffers, 2013). For community college students interested in transferring to a four-year institution, advisors assist with the development and accumulation of transfer capital (Laanan et al., 2010). Advisors can play a significant role in preparing students for the transfer process while they accumulate the necessary capital to transition successfully (Packard & Jeffers, 2013).

With limited research using qualitative data to understand STAP, opportunities are limited to understand the meanings advisors assign to STAP and the ways they use policy in their daily work. Bensimon (2007) and Bensimon and Dowd (2009) explored the value of transfer agents (advisors, faculty, and other administrators) in the transfer process finding transfer agents are critical in supporting students in the transfer path, especially students from underrepresented populations. They stated, "Information systems are insufficient policy interventions in the absence of individuals who can act as transfer agents to facilitate students' experiences of transfer" (Bensimon & Dowd, 2009, p. 653). Bensimon and Dowd called for qualitative research to improve the understanding

of how transfer agents understand and use policy and how their interpretation and perspectives might affect their work with students. Based on the differences in quantitative and qualitative data, qualitative methodologies and individual interview methods shed light on advisors' experiences and understandings in relation to STAP, expanding our current understanding of this phenomenon (Jones, Torres, & Arminio, 2006).

First Generation

Defined as a student whose parents have no college experience, first-generation status continues to be associated with degree completion (Moschetti & Hudley, 2014). Although community colleges enroll students from many underrepresented populations, first-generation students make up nearly half of the community college population (National Center for Education Statistics, 2019). With a large portion of community college students identifying as first-generation, this demographic may influence the findings in this study.

The first-generation community college population is predominantly female, non-traditional aged, ethnically and racially diverse, employed more than part-time, and generally is characterized by lower socioeconomic status and greater family obligations (Nomi, 2005). Additionally, first-generation students enroll in fewer credit hours, study less, have lower grade point averages (GPA), are less likely to be involved on campus, and are more likely to pursue technical and pre-professional tracks (Pascarella, Wolniak, Pierson, & Terenzini, 2003). Many of these background characteristics and collegiate experiences comprise "risk factors" associated with retention and transfer of community college students (Dougherty & Kienzl, 2006; Mourad & Hong, 2011). First-generation

students are also less likely to ask for assistance, instead relying on personal responsibility and initiative (Moschetti & Hudley, 2014). This tendency comes from a lack of parental understanding and support about the resources and services available to community college students (Moschetti & Hudley, 2014).

Underrepresented students, including first-generation students, often lack the guidance and support needed to transfer successfully (Bensimon & Dowd, 2009). Bensimon and Dowd argued transfer agents are necessary to decrease the transfer gap among underrepresented students. They stated,

> The usefulness of articulation policies (e.g., curriculum alignment and common course numbering); highly sophisticated Web-based transfer information systems; and guaranteed transfer policies is diminished in the absence of institutional professionals who have the specialized funds of knowledge to perform the roles of bridging, advocacy and role modeling. (Bensimon & Dowd, 2009, p. 653)

This argument suggests transfer agents provide the human dimension to articulation often lacking in the policies and can assist students for underrepresented population, as they navigate the transfer process.

Although, each of these areas is critical to understand the transfer process, I focused on community colleges advisors understand and use of STAP. Through the creation of new scholarship related to academic advising and STAP, policy makers and institutional leaders will be able to continue addressing issues related to the transfer process. As states and institutions continue to devote resources for creating and implementing transfer articulation policies, and as institutional leaders and state policy makers' work to enhance the effectiveness of STAP, it is worthwhile to deepen our understanding of STAP and its impacts by asking how advisors use and understand the policies in order to simplify and strengthen transfer pathways.

Statement of the Problem

Statewide transfer articulation policy was designed to assist students in the transfer process with the goal of increasing the number of college graduates; however, transfer rates have remained stagnant (Ignash & Townsend, 2000; Roksa & Keith, 2008; Shapiro, et al., 2018). Statewide transfer articulation policy has been found to protect credit, create better curriculum coherence, simplify the administrative overhead at both sending and receiving institutions, and provide basic guidance in course taking patterns (Gross & Goldhaber, 2009). However, STAP has not created an academically seamless transfer pathway and little evidence exists to suggest these policies are simplifying the process (Gross & Goldhaber, 2009; Roksa & Keith, 2008; Shapiro, et al., 2018). Additionally, STAP was created to simplify the advising process for staff; however, as mentioned, there is limited research to support the effectiveness of policy on advising outcomes (Roksa & Keith, 2008). It is therefore a problem that we do not know how key actors, specifically community college advisors, understand and use STAP when working with transfer students leaving state policy makers and institutional leaders to make uninformed decisions about the types of training and support advisors might need, or ways to modify existing STAP to address areas of ineffectiveness. The problem specifically is that policy makers and institutional leaders lack a clear understanding of the uses of STAP in the advising process making it difficult to create more effective policies in the future.

Purpose of the Study

The purpose of this study was to better understand community college advisors' understandings and use of Colorado STAP as it pertains to their work advising transfer

students. I explored the perspectives of community college advisors in relation to Colorado STAP using methodologies and methods that evoke transfer advisors' understandings, providing new ways to interpret and make meaning of data. Through interviewing and analyzing community college advisors' understandings and uses of STAP I provide suggestions and recommendations to inform future use. I also provide suggestions to potentially enhance articulation at both a state and institutional level. This new analysis should prove helpful to policy makers, administrators, and advisors tasked with creating, updating, and implementing STAP.

By better understanding college advisors use of STAP, I propose recommendations and suggestions related to future iterations of Colorado's transfer policies. Owen (2014) found individual interview data were a beneficial method for analyzing and interpreting higher education policy to make recommendations. According to Patton (2002), the use of qualitative data is important in policy evaluation for making future decisions and outlining new directions.

This interpretivist study provides a new understanding related to current Colorado STAP. By listening to and interpreting the perspectives of community college advisors and analyzing their insight related to the current policies, I provide new insights, understandings, and suggestions to inform future use. The goal of an interpretivist study was to seek new understanding, and I believe the research design outlined below allowed for this result.

As institutions look to tackle issues of stratification, increase degree completion, maximize students' time/cost efficiencies, and as states work to increase the number of educated workers and satisfy increasing workforce demands, community college students

will increasingly be a focal population. This narrative highlights the importance of the study, which is three-fold:

- Add to the scope of understanding higher education policy while filling the gaps in current research related to STAP.
- Develop scholarship about transfer articulation agreements including a detailed description of advisors' understandings and use of STAP.
- Explore the influences of STAP on the academic advisors' system.
- Provide recommendations to improve Colorado STAP initiatives.

Theoretical Framework

The theoretical framework for this study is systems theory. Arising out of engineering and cybernetics, systems theory tries to understand the big picture of a systemic problem (Hutchins, 1996). The traditional scientific approach typically used in the U.S. attempts to break bigger systemic problems down, isolating the pieces and parts to be studied, analyzed, and solved (Hutchins, 1996). For example, policy makers may create low-income housing to address the problem of homelessness; however, this does little to address the larger systemic problem leading individuals to become homeless. Systems theory challenges this narrow approach and asks questions about the bigger systemic issues influencing many of our current social problems (Hutchins, 1996). Although much can be learned by examining the individual parts of a system, a true understanding can only come when all parts are taken into consideration with one another (Hutchins, 1996). Ontologically, systems theory answers the question "what is real?" by addressing the processes that make up our world, not the things that are believed to make

up reality (Banathy & Jenlink, 2004). Systems theory is grounded in the assumptions that processes are real and can be studied (Banathy & Jenlink, 2004).

This approach examines systems from the perspective of wholeness as a means for understanding a phenomenon (Hutchins, 1996). Complex systems, such as higher education, comprise many different layers and subsystems and can be unwieldy in the research process. Hutchins' suggested definition of the system is based on the purpose of that system and what is being researched. Hutchins stated, "Systemic thinking requires that you [the researcher] be clear about what you are trying to study and for what purpose" (p. 30). When applied to higher education, a researcher could consider the entire system of higher education in the U.S., a single institution as a whole including all of its subsystems (i.e. academics, student affairs, financial aid, admissions, etc.), or individual systems at the institution (i.e. housing, advising, faculty, etc.). Hutchins argued that the purpose of the study, the resources available, and the expertise of the research could help define the scope of a study and the system being examined.

This concept helps position this study in the system theory framework as I explored how advisors understand and use STAP as part of the larger system of advising. Academic advisors are key players in the advising system; however, these individuals also comprise their own system, consisting of unique purposes and functions. Although advisors constitute their own system, they are part of the overall advising process and they interact with many other subsystems that define academic advising. This presents a unique opportunity to study how advisors working in an advising system make meaning of STAP processes, purposes, and functions from a systems theory perspective.

Research Questions

These research questions guided the collection and analysis of data from interviews, documents, and field notes.

Q1 How do advisors understand Colorado statewide transfer articulation policy purposes and functions within a community college advising system?

Q2 How do academic advisors describe the espoused objectives, policies, procedures, and processes of statewide transfer articulation policy and advisors' understandings and uses?

Q3 How do these understanding influence their advising practices?

Q4 How do academic advisors' understandings and uses of statewide transfer articulation policy contribute to or take away from system coherence among a multi campus system?

General Research Design

This interpretivist descriptive case study used data collected through individual interviews, document review, and field notes with purposefully selected participants working at a multi-campus community college in the state of Colorado. An interpretivist epistemology aims to understand and take seriously an individual's experiences related to a social phenomenon (Merriam & Tisdell, 2016). This perspective allowed me to make meaning surrounding advisors' understandings and use of STAP as a social phenomenon. Case study allowed for in-depth exploration of a bounded system made up of complex questions, with many components, in a real-life setting (Merriam, 2001). Additionally, descriptive case study allowed for the use of thick description to provide readers with detailed information about the social phenomenon being studied. Case study permitted an in-depth exploration of advisors' understandings and uses of STAP in their professional lives while providing readers new knowledge of the phenomenon (Merriam, 2001).

Site Selection

The selected site assisted in defining the system and case for this study as suggested by Hutchins (1996). To explore this phenomenon from a systems theory perspective, a community college with multiple campuses in the state of Colorado served as the research site, referred to here as Large Community College (LCC). Made up of four campuses, Campus One, Campus Two, Campus Three, and Campus Four, LCC presented a unique opportunity to study academic advisors' understandings and uses of STAP within an identified system in the state of Colorado. I solicited participants from all four campuses which allowed for an exploration of advisors' understandings and uses of STAP at multiple campuses within a larger system. The use of LCC as the research site also provided an opportunity to analyze the data using system theory concepts while providing boundaries for this study (Hutchins, 1996). A Site Permission Letter (Appendix A) was sent to each campus advising department requesting permission to conduct interviews with academic advisors. Once approval was received, participant selection began following the criteria outlined below.

The state of Colorado was selected for this study as I wanted to understand community college advisors' understandings and use of Colorado STAP. Colorado was selected based on my past and current work with transfer students in the state and my pre-established connections providing for convenience in participant identification. Additionally, Colorado policy requires continual review and modification providing opportunities for new research to influence future directions. Colorado STAP was developed in the mid-1980s and has seen a number of revisions, enhancements, and additions with a goal of improving transfer in the state. Statue also specifically addresses

building effective transfer advising structures as part of STAP requirements providing opportunities for research about the community college advising system. Finally, based on the variations in STAP design and implementation from state to state, meaningful cross-state comparisons would be extremely difficult if not impossible. By focusing on Colorado community college advisors' uses and understandings of STAP, I was able to make recommendations for state policy makers and institutional leaders specifically related to Colorado policies.

Participant Selection

Professional advisors employed at LCC made up this case study, as I wanted to describe advisors' understandings and use of Colorado STAP using concepts of systems theory. I used criterion sampling to identify information-rich participants whose perspectives allowed for in-depth review of the case (Mertens, 1998). Criteria included individuals who were currently employed at LCC, had advisory responsibilities relevant to the transfer process, and had at least some awareness of STAP. All participants were required to be 18 years of age or older to participate in the study. LCC currently employees approximately 38 professional advisors and I interviewed 28 who meet the selection criteria and who were willing to participate. I used introductory emails and phone calls to locate qualified participants (Appendix B and C). This selection allowed for an in-depth exploration of the system.

Data Collection and Analysis

I collected data through semi-structured interviews, document review, and field notes. Interviews allowed for collection of data from individuals with unique perspectives and understandings on the phenomenon being studied (Rubin & Rubin, 2011). Individual

interviews were recorded and transcribed verbatim. Documents, including department materials, institutional websites, and state documents were collected to further define and contextualize the phenomenon (Bowen, 2009). Field notes taken before, during, and after each interview provided additional data about the subtleties of the research process including participant interactions, environmental observations, social context, and my own reflections (Merriam & Tisdell, 2016).

Analysis of the interview transcripts, with line-by-line open and axial coding, allowed for the discovery of relationships between codes and generated categories and themes (Creswell, 2013). Open coding is about seeking similarities and differences, and axial coding allows for making connections between categories and sub-categories (Creswell, 2013). Documents and field notes were coded using the same process and analyzed for relevant themes and content (Creswell, 2013). The analysis of these methods further enhanced the production of a thick description of the phenomenon under study while providing context about the environments in which the research participants work and interact (Creswell, 2013).

Trustworthiness

Trustworthiness refers to the soundness and rigor of the research process ensuring quality in the study (Jones et al., 2006). According to Lincoln, Guba, and Pilotta (1985) trustworthiness includes elements of *transferability*, *dependability, credibility,* and *confirmability*. Transferability allows the reader to determine the level of generalizability in the findings (Morrow, 2005). Transferability was established by providing thick and detailed description of the research process so the reader may judge the extent to which they can generalize or transfer the findings (Morrow, 2005). Dependability focuses on

transparency in methods used in the process; the audience should know where the data comes from, how it was gathered, and how it was used (Morrow, 2005). I used data collection triangulation, reflexivity, and thick description to carefully track and document data gathering and analysis activities (Hays, Wood, Dahl, & Kirk-Jenkins, 2016). Credibility refers to the believability of the study; the findings make sense in the context of the research process. This is accomplished by producing data through authentic interactions with participants (Lincoln et al., 1985). I used member checking to confirm participant experiences about the phenomenon and to ensure the findings accurately described the perceptions of my participants (Creswell, 2007). Finally, confirmability refers to establishing that the findings represent the experiences of the participants and not my beliefs as a researcher (Shenton, 2004). Reflexivity allowed me to monitor my assumptions, beliefs, and biases throughout the research process placing emphasis on the participants voice (Hays et al., 2016). My reflexivity statement is provided in Chapter 3 in depth. When these four elements are present, Shank (2006) argued that trustworthiness is established.

Chapter Summary

This chapter highlighted scholarly knowledge of the transfer process and established the current study's purpose, namely to explore community college advisors' understandings and uses of Colorado STAP as these pertain to their work in advising transfer students. While there is a substantial body of scholarship related to the transfer process, very few studies examined community college advisors' understandings and uses of STAP. Through a brief discussion of research design, I outlined how this study

adds to the literature on transfer articulation and may inform future initiatives related to STAP.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to better understand community college advisors' understandings and use of Colorado STAP pertaining to their work advising transfer students. This requires framing the topic as it relates to existing scholarship, almost none of which focuses specifically on community college advisors' understandings and use of policy. Despite this shortcoming, it helps to start with a broad view toward the literature, thus this chapter examines relevant literature related to community colleges, transfer articulation, Colorado STAP, transfer policy research, policy implementation, institutional agents, academic advising, first-generation students, and an overview of systems theory.

A review of literature related to this broad range of topics is needed to provide context for the study. An overview of community colleges offers the reader a general understanding of community college enrollments and challenges students encounter at these intuitions. The review of transfer articulation literature provides a historical understanding and current state of these policies in the U.S. and the Colorado STAP overview describes the current policies of the state. The transfer policy section highlights the past and current state of research related to STAP and the transfer process. Literature related to policy implementation provides context about the ways design and dissemination affect policy. The section on institutional agents provides a review of

literature highlighting the importance of faculty and staff in the transfer process. This becomes more specific as the review looks at literature directly related to the academic advising process and the role of staff in supporting transfer students. Literature related to first-generation students is provided to give context to this population's unique needs and challenges at community colleges and in the transfer process. Finally, an overview of systems theory is reviewed as the theoretical framework for the study.

Community College Overview

In the current higher education environment, states are relying heavily on community colleges and transfer pathways for bachelor's degree completion (Shapiro et al., 2012). Community college students want to transfer and earn a bachelor's degree with nearly 80 percent of students starting their education at a community college indicating a desire to transfer (Handel, 2013). The community colleges' share of the undergraduate population is large with nearly half of all undergraduates in higher education enrolled in a community college (Handel, 2013). With current high school graduation rates stalled or decreasing in many states, the community colleges will continue to serve an increasingly changing demographic (Handel, 2013). Community colleges are also attracting students from underrepresented groups at a higher rate and are predicted to increase their enrollments from these populations (Handel, 2013). In addition, community colleges are a less expensive higher education option and thus are more financially viable for many students and their families (Bailey et al., 2015).

The increase in costs is causing community colleges and the transfer pathway to become more important, and in many cases, the only option for students from underrepresented populations (Dowd et al., 2013). Dowd and associates suggested that

even if a student wanted to start at a four-year institution, the economics of the decision might be more important than their institutional preference. Although many students from underrepresented populations desire a bachelor's degree, few can afford starting at a four-year institution, instead, relying on the transfer process (Dowd et al., 2013). Anderson, Alfonso, and Sun (2006) looked at community college enrollments and found many low income, first generation, and underrepresented students initially identified a certificate or vocational degree as their primary goal based on perceived lack of preparation and/or rising costs of higher education. These findings suggested underrepresented students are beginning their post-secondary careers at a disadvantage in terms of their perceived ability to transfer (Anderson, Alfonso, & Sun, 2006). The researchers also found the development of STAP might be more beneficial for middle class and non-first-generation students based on decreased state funding for higher education. These students, who may have traditionally started at a four-year institution, are looking at transfer pathways as important options to save money while they pursue a bachelor's degree (Anderson, Alfonso, & Sun, 2006). These findings suggest more students, both underrepresented and non-underrepresented, are placing cost ahead of preference in relation to their educational goals. The growing number of students enrolling in community colleges and rising costs of higher education, coupled with the need to produce more degrees, means that community colleges and transfer pathways are becoming more critical in the overall higher education attainment process (Anderson, Alfonso, & Sun, 2006).

Transfer Articulation Overview

The earliest form of articulation is credited to the University of Chicago in 1896 at which time the President of the University divided the undergraduate students into

junior and senior divisions (Kintzer, 1996). The students in the junior division were placed on a version of a 2 + 2 program and encouraged to transfer into the senior division once basic coursework was completed. A 2 + 2 program outlines coursework to be completed at the community college in the first two years of study and the coursework to be completed at the four-year institution in the following two years. This configuration prompted the development of the first community college in the U.S. located in Illinois, Joliet Junior College, established in 1902 (Kintzer, 1996). In the 1940s, as community college enrollments increased, colleges and universities began paying more attention to student transfer (Kintzer, 1996). In the 1960s, research pointed to a need for articulation agreements designed to assist students with the transfer of community college credit to four-year institutions and soon thereafter, in the 1970s, the first state-level articulation agreements were developed in Florida, with a focus on providing transfer students similar treatment as those who began at four-year institutions (Ignash & Townsend, 2000). By the end of the 1980s, eight states had implemented state-level articulation policies with 22 additional states using system-level policies (Ignash & Townsend, 2000), and the trend continues; today, 36 states have implemented STAP, and all others use some form of institutional agreements (Smith, 2010).

There are several kinds of articulation agreements used in the U.S. to assist with credit transfer and the four most prominent include statewide articulation guides, common core standards, common course numbering, and transfer degrees (Bers, 2013). Statewide articulation guides, commonly known as a 2+2, list an agreed-upon series of courses that are completed at the two-year institutions. Common core standards typically consist of a set of courses transferable to any institution in the state that fulfill general

education requirements and count towards graduation requirements. Common course numbering requires that a similar course be listed with the same course number and name regardless of the granting institution with the primary goal of assuring that credits will transfer regardless of receiving institution (Bers, 2013). Finally, transfer degrees, or degrees with distinction, allow students to pursue an associate of arts (A.A.) or an associate of science (A.S) in a specific major and transfer into the exact or similar degree program at a four-year institution. Other policies include dual admission, reverse awarding of degrees, and web-based information systems.

Additionally, STAP contains a number of common elements including scope of participating institutions, direction of transfer, faculty input and involvement, and ability for states to monitor agreements as outlined by Gross and Goldhaber (2009). *Scope of participating institution* takes into account the types of institutions included in a given agreement. Typically, policies only cover public institutions, but several states include provisions for private and for-profit institutions wishing to participate in transfer articulation. *Direction* refers to how students transfer between institutions with agreements typically addressing a vertical transfer (two-year to four-year institutions); however, many states are using agreements for additional types of transfer including reserve (four-year to two-year) and horizontal (two-year to two-year or four-year to four-year) (Gross & Goldhaber, 2009). *Faculty input* concerns the breadth and depth to which faculty members are involved in developing and implementing articulation agreements. Faculty are responsible for developing common learning outcomes, aligning content, and creating shared experiences between intuitions. Finally, articulation agreements include mechanisms for monitoring *development and maintenance* by identifying the parties

responsible for establishing agreements, determining who participates in development, outlining the processes for agreement maintenance, and suggesting data reporting requirements.

A recent study by Spencer (2019) examined the effects of transfer associate degree on the attainment of two-year credentials. Using institutional level data (IPEDS), findings suggest statewide transfer articulation policy effectiveness varied across the six states studied. Although positive estimates were found in all states, Maine, New Jersey, and Mississippi produced statistically significant results. Findings for New Jersey and Mississippi showed an increase in associate degree completion increases of 21.9 percent and 26.7 percent respectively. The results suggested state policy may influence associate degree completion.

In a qualitative study, Fann (2013) interviewed participants at two- and four-year institutions in the state of Texas providing several insights and recommendations for institutions related to STAP implementation. Sixty-seven participants from 13 institutions, seven four-year and six two-year, representing the functional areas of admissions, financial aid, academic advising, registrar, and senior level administration participated in individual interviews. In addition, two focus groups were conducted at each of the institutions with students who planned to transfer at the two-year institutions and students who did transfer to the four-year institutions. Fann was interested in exploring how administrators perceive and enact transfer policy, learning about the student experiences related to the transfer process, and exploring if there were differences in the transfer process for underrepresented students. Findings indicated that state policy

often produced unintended consequences, were limited in terms of measures of accountability, and created challenges during implementation at the institutional level.

Fann (2013) suggested states address the current funding and accountability formulas to recognize institutions for transfer graduation rates by finding opportunities to financially incentivize institutional commitment to STAP, the transfer process, and bachelor's degree completion. This includes policy requirements for both two- and four-year institutions concerning data collection about the transfer process for accountability purposes. In a supporting study, Handel (2008) argued four-year institutions should track transfer students' enrollment, retention, and graduation rates similar to first-year students. Tracking transfer students will allow for both two- and four-year institutions to identify challenges and gaps in the transfer process. Fann (2013) recommended reexamining current STAP to identify unintended barriers created by policy. Often, policies are created to save money, time, and effort for students and institutions; however, these savings can create other problems such as excess credit accumulation, limited major exploration based on restricted pathways, and confusion about when and where to transfer (Bailey et al., 2015).

A major frustration identified in Fann's (2013) study was the lack of alignment between community colleges' and four-year institutions' implementation of STAP. Students and community college advisors worried that when four-year institutions deviated from the policy in the awarding of transfer credit, complication arose in the ability to anticipate how courses are going to transfer.

Finally, Fann (2013) recommends that community colleges need to operate from a dynamic and comprehensive advising model to support STAP initiatives. Participants in

Fann's study described challenges in accessing advising, obtaining information about STAP, and the consequences of inaccurate information on the transfer process. Additionally, transfer students wanted a holistic view of the transfer process early including information on understanding and using STAP. Fann suggested working with community college students early to identify their intended transfer institution and design specific advising opportunities to support these students.

Colorado Transfer Articulation Policy

There are some commonalities in the intent and construction of STAP around the U.S.; however, each state is responsible for creating policies that support their educational system (Gross & Goldhaber, 2009). I looked specifically at Colorado as I conducted my research and provided insight regarding the policies in that state. In the mid-1980s, Colorado began adopting STAP to assist students with credit transfer in an attempt to simplify the transfer process. These agreements include guarantee transfer of an associate's degree, common core standards referred to as GT Pathways, degrees with designation, and cooperative agreements between individual institutions (Colorado Department of Higher Education, General Education (GE) Council, 2018a). As with other states' efforts along these lines, the main purpose of these agreements is to assist with the transfer of credit between institutions (Colorado Department of Higher Education, General Education (GE) Council, 2018a). Additionally, Colorado's legislature outlined several policy goals: equal treatment to both native and transfer students, assuring transfer of qualified college credit between institutions, a guaranteed common core, and providing institutions the ability to resolve transfer credit discrepancies (Colorado Department of Higher Education, General Education (GE) Council, 2018a).

The scope of STAP in Colorado covers only public two-year and four-year institutions, as they acknowledge the state's limited authority over private and for-profit institutions (Colorado Department of Higher Education, General Education (GE) Council, 2018a). Many of the agreements within Colorado's STAP focus on the vertical transfer pathway; however, Colorado's GT Pathways allow students to transfer credit between any public post-secondary institutions. In addition, Colorado recently began allowing students to transfer credits from a four-year to a two-year institution to complete the requirements for an associates degree (reverse transfer) (Colorado Department of Higher Education, 2018b). Colorado uses a faculty input structure in the development and maintenance of statewide articulation agreements (Colorado Department of Higher Education, 2018a). At faculty-to-faculty conferences, held twice a year, faculty from majors and disciplines designated "for development or review" meet to identify the courses considered appropriate for the statewide articulation agreement. Statewide articulation agreements currently exist for 35 majors/programs of study. The General Education Council is responsible for development, maintenance, data collection, and making recommendations to the Colorado Commission of Higher Education (CCHE) (Colorado Department of Higher Education, 2018a).

The primary purpose of Colorado's STAP is to ensure the successful transfer of credit between institutions once a student has decided to transfer (Colorado Department of Higher Education, 2018a). The policy mechanisms outlined above do not aim to enhance the *probability* of transfer, but institutions are encouraged to orient their marketing and advising to assist students in becoming aware of the articulation agreements (Colorado Department of Higher Education, 2018a). This provides

opportunity for my study to enhance our understanding of how community college advisors conceive of and use Colorado's STAP as part of the transfer process for students.

Little research addressing Colorado STAP is available and what does exist is dated. I include available research only to provide context for the study. In their review of statewide transfer articulation policy, Ignash and Townsend (2000) ranked Colorado moderate on many of their dimensions including inclusiveness of transfer direction, types of institutions covered, number of components addressed, and faculty involvement. A reexamination of these dimensions twenty years later may produce a very different ranking of Colorado STAP. In a more recent report, Bautsch (2013) found Colorado provides all five common articulation policies including general education core, common course numbering, 2+2 transfer degrees, a transfer articulation website, and reverse transfer which is the movement of credits from a four-year to a two-year institution for the awarding of an associate's degree. My study adds to the current understanding of Colorado STAP for future research opportunities.

Transfer Policy Research

There are four broad areas of statewide transfer articulation research. The first examines STAP and its influence on student transfer from two-year to four-year institutions (Anderson, Sun, & Alfonso, 2006; Goldhaber et al., 2008; Gross & Goldhaber, 2009). The second looks at STAP purpose as a means of preventing loss of credit, time, and money once a student has decided to transfer (Gross & Goldhaber, 2009; Roksa & Keith, 2008). The third area of research examines the experiences of first-generation and underrepresented students and STAP impact on these populations (Crisp

& Nunez, 2014; Miller, 2013). The fourth area looks beyond STAP and investigates the role of transfer capital and how students' backgrounds and institutional experiences may influence the transfer process (Dougherty & Kienzl, 2006; Laanan & Jain, 2016; Laanan et al., 2010; Mourad & Hong, 2011). All four areas help frame the topic and are important as I explore the academic advisors' perceptions of STAP. My primary interests are in the first two areas, STAP influences and intentions, and I focused my research agendas in section four around these lines of inquiry. Below, I briefly highlight the most relevant research in each area.

Transfer Rates

The first area of STAP research examines policy elements and their effect on transfer rates. Goldhaber and associates (2008) examined three national data sets and found evidence of an increase in community college enrollments in states that had transfer articulation policy. Goldhaber et al. (2008) found evidence that states with moderate and moderately strong transfer articulation policy saw a higher percentage of students successfully navigating transfer pathways. The researchers also found that the highest community college enrollments were in states with no formal STAP and states with the strongest policies recorded lower rates of student transfer (Goldhaber et al., 2008) suggesting other dynamics influence the transfer process. These initial findings provide some guidance for future studies that examine the complex relationships between education and student success (Goldhaber et al., 2008).

In a follow up study, Gross and Goldhaber (2009) analyzed the same three national student data sets and asked whether the strength of a given policy influences transfer rates. Policy strength (weak to strong) is about the scope of institutions and

number of students covered by an agreement, the level of faculty involvement in policy development, curriculum alignment for specific courses, and efforts to monitor the effects. The researchers' found that a policy's strength does not significantly affect transfer rates. Gross and Goldhaber also pointed to the fact that increased communication, awareness, and discussion concerning transfer pathways may be beneficial. Anderson, Sun, and Alfonso (2006) examined the strength of state policy on transfer rates using data from the BPS_{89} survey conducted by the National Center for Education Statistics and found that students in states with strong STAP were no more likely to transfer compared to students whose state had no formal policy. Instead, individual-level factors such as student background (education, SES, and enrollment patterns) were better predictors of transfer than the presence of STAP (Anderson, Sun, & Alfonso, 2006).

Policy Purpose

It is crucial to bear in mind that boosting the transfer rate may not even be the main purpose for states that adopt STAP. This invokes a second line of research that examines the intended purpose of STAP. Roksa and Keith (2008) reviewed states with formal articulation policy and found that STAP generally intends to assist with credit transfer to reduce duplication, repetition, and loss. "[A]rticulation policies are designed to preserve credits as students move from two-year to four-year institutions. Their stated intention is not to induce students to transfer but to assist the transition of students who have *already* decided to transfer" (Roksa & Keith, 2008, p. 239). Additionally, Gross and Goldhaber (2009) found that even if the policies aid in credit transfer, they do not

necessarily influence graduation rates; both authors concluded that transfer agreements could assist with the former but are not intended to affect the latter.

First-generation and Underrepresented Students

A third area of research focuses on first-generation and underrepresented students, who comprise a growing proportion of community college students. Crisp and Nunez (2014), using the Beginning Postsecondary Students Longitudinal Study (BPS: 04/09) and the Integrated Postsecondary Education Data Systems (IPEDS), compared transfer rates of White and underrepresented students (low income, first-generation, and/or racial/ethnic minorities). They found a "transfer gap" with only 31 percent of underrepresented students transferring compared to 45 percent of White students (Crisp & Nunez, 2014). Underrepresented students who enrolled in a degree or transfer program were five times more likely to transfer compared to those students enrolling in a vocational or technical program, but enrollment in a vocational or technical program did not seem to affect White students' odds of transfer. Crisp and Nunez highlighted the divide between educational attainment and completion for White students and underrepresented students and urged STAP researchers to look more deeply into the specifics of how policies influence the transfer process for these populations.

Miller (2013), using a mixed methods approach, examined institutional practices that facilitate transfer and bachelor's degree completion of first-generation community college students specifically and found three common practices provided at community colleges with higher than expected transfer rates for this population. These include structured academic pathways (articulation policy, dual enrollment program, developmental coursework, and active learning), student-centered culture (customer

focused, specialized advising, flexible scheduling, and learning communities), and culturally sensitive leadership (staff/faculty role modeling, data driven planning, and outreach). In addition, Miller found these institutions created a culture of transfer for first-generation students supporting both the academic and social needs required for transfer.

Transfer Capital

A final line of research is about transfer student capital, or student characteristics and experiences that may predict transfer from a two-year to a four-year institution (Laanan & Jain, 2016). The transfer student capital model identifies four areas of influence; individual background characteristics, community college environments, university environments, and outcomes. Individual background characteristics are the variables and factors a student brings with them into the community college and include high school preparation, demographic variables, work and life experiences, parental education level, etc. Community college environments refer to the academic performance and experiences of the student and the support structures and resources available. Academic performance includes factors such as GPA, accumulated credits, and degrees/certificates earned. Academic experiences include classroom interactions, course learning, and overall experience with curriculum. Finally, community college support structures and resources include academic advising, faculty and staff interactions and validation, financial resources, mentoring, self-efficacy, and learning and study skills.

Laanan and Jain (2016) suggested these pre-transfer experiences and accumulation of capital affect how students experience the institutional environment and ultimately affect the outcomes related to transfer (successful transfer, GAP, retention,

graduation, etc.). The researchers also found that transfer student capital has the possibility of helping support community college advisors as they work with students to accumulate the needed transfer capital to navigate a very complex and confusing system of higher education. In a separate study, Laanan and associates (2010) found limited or poor academic advising could produce a significant negative impact on transfer student capital. The researchers hypothesized that poor or limited information from academic advisors and inadequate advisor training negatively affects the transfer process and a student's development of transfer capital (Laanan et al., 2010).

Additional research on transfer capital which examined social background (socioeconomic status, race, gender, age) on transfer rates found that these variables operate in conjunction with the mediating variables of precollege experiences, external demands, and college experiences (Dougherty & Kienzl, 2006; Mourad & Hong, 2011). Findings in these studies showed student characteristic such as race-ethnicity (White or Caucasian), age (traditional), socioeconomic status (middle and high), and gender (female), and community college experiences including appropriate course taking patterns, meeting with an academic advising, and development of student learning/study skills can positively affect transfer student capital.

Based on these broadly categorized areas of current research related to STAP and the transfer process, a few conclusions can be drawn. First, STAP does not appear to affect the transfer rates in isolation (Goldhaber et al., 2008; Gross & Goldhaber, 2009). Instead, STAP, in conjunction with transfer student capital development, may be a better predictor of future transfer (Laanan & Jain, 2016). Second, STAP appears to have a narrowly defined application focused primarily on credit protection during the transfer

process (Roksa & Keith, 2008). Third, current policy may not support underrepresented and first-generation students in ways that are meaningful and important to their ability to transfer (Crisp & Nunez, 2014). Finally, there is a gap in research related to the understanding and use of STAP in the academic advising and transfer processes (Miller, 2013). This study adds additional understand for future research.

Impacts of Policy Implementation

In addition to current STAP research, an understanding of policy implementation literature is important to frame potential impact and effectiveness. It is important to recognize how policy construction and implementation might frame advisors' perspectives toward STAP. As with any state-level policy, intention and implementation can differ, and this can lead to variations in their impact (Gornitzka, Kyvik, & Stensaker, 2002). Much of the original higher education policy implementation research (Cerych & Sabatier, 1986; Pressman & Wildavsky, 1984) describes simple top-down or bottom-up approaches, but in reality policy implementation can be multifaceted due to competing agendas and regulations from federal and state governments, educational structure differences, governance structures variations between institutions, and financial support differences between states and within states (Shaw & Heller, 2007). According to Smith (1973) "There is an implicit assumption that once a policy has been 'made' by a government, the policy will be implemented and the desired results of the policy will be near those expected by the policymakers" (p. 198). In reality, many policies are implemented with intended goals and outcomes but are restrained by tensions that develop during the process (Smith, 1973).

Gornitzka and associates (2002) suggested a number of variables affecting policy implementation including policy objectives, resource allocation, organizational communication and characteristics, economic, social, and political conditions, and individual disposition. The researchers advocated that clear policy objectives and guidelines are important for comprehensive implementation suggesting the more ambiguity in objectives and guidelines present in the policy, the more opportunity for interpretation during implementation. The level of resource allocation during implementation can also change how the policy is implemented. Lack of funding may cause part, or all, of a policy to be implemented incorrectly or inadequately in relation to desired outcomes (Gornitzka et al., 2002). The researchers also suggested that inter-organizational communication including technical assistance and supervisor oversight, the characteristics of the implementing organization, including formal and informal structures and personnel, and the economic, social, and political conditions of the organization, community, or state will all affect how policy implementation occurs. Finally, Gornitzka and associates (2002) suggested the disposition of the implementers (an individual's position and perceived level of power) could create tensions that cause individual discrepancies in implementation efforts. Turmoil in any one of these areas will change the degree of success of the implementation process.

McLaughlin (1987) reviewed two generations of policy implementation literature and noted implementation has become more individual and less institutional. As the author argued, higher education has moved away from the "rational man" approach, one in which implementation simply happened because of policy outcomes, to one in which the relationship between policy and implementer is valued and important (McLaughlin,

1987, p. 172). She shared a number of "lessons learned" about second-generation policy implementation. Individual will was found to be an important factor and the attitudes, beliefs, and motivations of the implementer could change how a policy is interpreted and implemented. Social-political factors, affecting the implementer during the implementation phase, could change how or why a policy is enacted. Internal policy levers including incentives or supports and consequences or pressures could influence motivation and desire concerning policy implementation. Policies also can be transformed at every step of the implementation process based on individual decisions and interpretations; even policies with strong guidelines and outcomes are open for interpretation by the individual actors responsible for implementation. How a state policy is implemented in one community may look very different from how the same policy looks in the neighboring community. Taken together, McLaughlin (1987) states, "This perspective on the implementation process highlights individuals rather than institutions and frames central implementation issues in terms of individual actors' incentives, beliefs, and capacity" (p. 175).

In the community college environment, many people implement and maintain articulation agreements including administrators, presidents, department heads, frontline staff, and faculty, and all can play a considerable role in designing and developing articulation agreements (Chase, 2016). With a highly diversified group of individual players, policy implementation can vary greatly across institutions. Chase suggested five factors that may influence these individuals during the implementation process: the community college's identity and history, perceptions of the target population(s), national narratives around transfer, fear of power loss, and equity concerns. Transfer policy

implementation could be affected by each based on how the individual implementers understand and relate to these factors. For example, if a given community college has a weak tie to the transfer mission, its president may not see the importance of spending time and resources on implementing policies designed to help students transfer. Faculty advisors who work in primarily technical degree programs may think their students (the target population) are not interested in transferring and may not mention the existence of the articulation agreements (Chase, 2016). Academic advisors who work with primarily low income, first-generation, and minority populations may not see their students reflected in the policy and may choose to point individuals in different directions. With these factors influencing implementation and maintenance, and academic advisors working closely with implementation and interpretation, further research needs to explore the reality of what is currently happening at community colleges.

Institutional Agents

An institutional agent is any institutional employee in a position to provide access to knowledge, resources, and experiences for students, thus institutional agents are important players in policy implementation and use (Stanton-Salazar, 2001). In a community college environment, these people may be administrators, faculty, and staff members who help students explore resources and develop the needed capital for success (Museus & Meville, 2012). Several studies have found institutional agents to have a positive effect on students who enter the transfer process (Bensimon, 2007; Dowd et al., 2013; Museus & Meville, 2012; Stanton-Salazar, 2001).

Dowd and associates (2013), using a life story case study methodology, interviewed 10 students who transfer from a community college to a highly selective

four-year institution and found institutional agents are critical to the transfer process for underrepresented populations. The researchers' findings suggested that underrepresented students typically lacked early role models and guidance needed to access higher education. Typically, these students were not viewed as "college material" and thus the emphasis during high school was placed on graduation or general education diploma (GED) completion, not preparing for college (Dowd et al., 2013, p. 13). The students in the study discovered their academic abilities later in life and only then thought of themselves as college ready. Students also identified the importance of finding an institutional agent that convinced the students that they had the potential to transfer and complete a bachelor's degree. The authors' stated,

> Receiving support and validation from a key figure(s) within the educational institution, someone with the power to guide students through the system, seems to play a significant role in shaping students' collegiate aspirations, particularly for first-generation college students who do not have a role model in their own families. (Dowd et al., 2013, p. 17)

The students in the study also indicated the importance of special programs (transfer centers, mentoring programs, TRIO programs, etc.) as critical support in the transfer process with many of these programs directly connecting students to important institutional agents who helped them explore the transfer path.

Institutional agents, according to Dowd and associates (2013), can support transfer students in a number of ways. First, they can provide students an opportunity to explore and take on the identity of a college student and this type of validation is critical as students become college ready and begin exploring the transfer path. Second, institutional agents can provide a sort of base camp as students develop the capital needed for transferring. Third, institutional agents can validate students' experiences in ways that

parents, family members, and peers cannot and this support can aid in the development of capital needed to pursue a successful transfer. Finally, the authors suggest institutional agents can act as change agents using their personal/positional powers and experiences to improve the overall experience.

As the research suggested, institutional agents, including academic advisors, appear to be an important part of the transfer process providing the needed support, guidance, and encouragement to students as they explore the various transfer pathways (Dowd et al., 2013). This appears to be even more important for students who come from underrepresented population who are often overlooked in the large process. Dowd and associates stated,

> As the United States aims to boost the number of college graduates and turns to community colleges to democratize education providing a gateway for low-status populations, it is clear that practitioners must be kept in mind as essential resources for student success. While this may seem obvious, often attention is invested in creating articulation, guaranteed transfer, or financial aid incentives to transfer without a complementary focus on the practitioner's role in helping to realize policy goals. (p. 22)

The exploration of academic advisors as institutional agents was key to this study providing new understandings about how these individuals use STAP to support students in the transfer process.

Finally, a study by Chen and Starobin (2019) used exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to examine data from the STEM (Science, Technology, Engineering, and Mathematics) Student Success Literacy (SSL) and found institutional agents can influence community college students' social capital. Family social capital enhanced this effect because students with strong family support are more likely to access and interact with institutional agents. The authors recommended that

community colleges create opportunities to promote interaction with institutional agents to enhance social capital.

Academic Advising

Academic advising is an important component of the transfer process and can benefit community college students as they select coursework, work through articulation agreements, and plan to transfer (Fink & Jenkins, 2017). The advising process can support students beyond simple class selection, including assistance with admissions requirements at four-year institutions, finding and understanding statewide and institutional articulation policies and agreements, and supporting a student's overall wellbeing as they navigate the complexities of higher education (Packard & Jeffers, 2013). Additionally, community college advisors can assist students in developing the needed transfer capital to transition successfully to another institution (Laanan et al., 2010).

Using event history analysis, Bahr (2008) studied the effects advisors have on the "cooling out" process of community college students (p. 705). The cooling out effect is defined as the process of dissuading students who appear to be underprepared from pursuing overambitious goals and point these students towards opportunities better aligned with their skills and abilities. Bahr wanted to see if advisors at community colleges were acting as cooling out agents in this process; however, the results showed no evidence that this was occurring. Instead, Bahr found that underprepared students usually benefitted from advising services as they prepared for transfer. The author concluded that advising is beneficial to all students as they move into and through the community college and as they prepare to transfer out (Bahr, 2008).

Using a phenomenological methodology, Packard and Jeffers (2013) examined how advising influences community college students and the transfer process. Building off the findings of McArthur (2005) and Smith (2007), the authors wanted to understand the link between student persistence, transfer, and the advising practices at community colleges (Packard & Jeffers, 2013). Analyzing data collected from 82 interviews, the authors found that advising supports the transfer process by providing accurate information about college navigation, academic requirements, and financial assistance. With the help of an advisor, students were better able to plan their transfer as they selected classes and participated in various articulation agreements. Additionally, advisors were helpful in the transfer process by providing referrals to resources, offering emotional support, providing new opportunities, and coaching students to maintain progress. Students in the study suggested that lack of knowledge, misinformation, lack of resourcefulness, and unavailable and disconnected advisors were negative influences on the transfer process (Packard & Jeffers, 2013). The authors conclude that students can benefit from advising services to avoid missteps as they navigate the transfer process.

Johnson (2010) surveyed 113 advisors at both two- and four-year institutions to understand their perspectives on what helps and hinders the transfer process. The author found that 81 percent of advisors at both types of institutions believed that advising can make a difference in the transfer process stating, “good advising equals good transfer” (Johnson, 2010, p. 32). In addition, 67 percent of participants believed that improved communication between advisors at the different institutions positively influences the transfer process and 47 percent believed that transfer success increases when students connect with advisors early in the process. Finally, 46 percent of advisors believed that

students on a transfer path complete unneeded coursework for associates degree more often than is beneficial and 42 percent believed universities need to improve the acceptance of transfer credits. Findings support the idea that advising is a combined effort of community colleges and universities and advisors at both institutions are vital for a successful transfer.

Allen, Smith, and Muehleck (2014), using a concurrent nested research design to collect both quantitative and qualitative data, examined the advising experiences of pre- and post-transfer students finding students overall had greater satisfaction with their advising experience pre-transfer. At the community college, students felt like they had numerous avenues to access advising and transfer information using advising offices, faculty, and other support programs and reported developing significant relationships with their advisor at the community college. Post-transfer, students experienced more complex advising systems at the university, expected advising experiences to be equal to or better than at their community college, and more strongly felt the consequences of advising errors and omissions in information as they moved into upper division coursework. Pre- and post-transfer students shared similar concerns about the advising process including inaccurate and inconsistent information from advisors, inaccessible advisors, and lack of individual attention. Overall, the findings suggested transfer students were significantly more satisfied with their pre-transfer advising experience and found value in the overall advising process, the information provided, and the relationship developed. Allen and associates suggested advising is the responsibility of both the sending and receiving institution, collaborative efforts are needed to support

students during this transition, and advising is one area that has potential to improve the transfer process.

Fink and Jenkins (2017) and Wyner, Deane, Jenkins, and Fink (2016) also found collaboration between advisors at two- and four-year institutions beneficial to the transfer process and suggested providing tailored advising to transfer students that includes clearly articulated options, early exploration, continued monitoring, frequent feedback, and financial resource exploration. As Allen and associates (2014) urge,

> It behooves us to devise practices that will enhance the success of students who begin their education at community colleges. Improving advising at both community colleges and 4-year institutions may be a key ingredient in the successful attainment of a baccalaureate degree for students who begin at community colleges. (p. 366)

In addition Allen and associates suggested four-year institutions need to provide transition assistance for transfer students. This should include providing dedicated transfer advising staff, communicating essential information to students, encouraging early major selection, providing orientation and transition opportunities, and providing financial aid (Fink & Jenkins, 2017; Wyner et al., 2016).

In *Redesigning America's Community Colleges* (Bailey et al., 2015), the authors suggested a significant shift in how community colleges work with students advocating a move from what they call a "cafeteria college" approach to a "guided pathways" approach to working with students (p. 12). Cafeteria college is defined as a decentralized structure where students are left to navigate the complex and often confusing process on their own. A guided pathway approach instead creates a structure where the numerous options available to students are integrated in a guided approach based on the students learning objectives. This includes intake and support services with a heavy emphasis on

advising, program structures, and curriculum paths that are clear, instruction that defines the learning outcomes of a particular course, and developmental education that is conceptualized as part of a student's larger program and learning objectives. These guided pathways, the authors argued, not only support community college students at their home institution, but also support the transfer path that is vital to moving a student on to a four-year institution.

Bailey and associates (2015) also suggested academic advising is one of the most important aspects of creating a guided pathway approach to the transfer path. Advisors can assist students as they define their learning objectives, help discover or create a clear path towards fulfilling their objectives, and assist students as they navigate the many services and resources required to successfully transfer. The authors suggested community college advisors can assist students in the development of needed capital which includes helping students select classes and define a curricular path, teaching students about the various services that can support students on their path, and assist students in goal-setting and problem-solving as they navigate their guided pathway.

A guided pathway may also include statewide and institutional transfer policies, often referred to as major-related pathways (Bailey et al., 2015). Policies of this nature outline a guided curricular path for students wishing to transfer within a particular area of study. As mentioned previously, simply putting this type of policy in place does not mean it will create change. Correct implementation and dedicated resources are needed to fulfill any policy's potential impact, and advisors are key players, especially regarding the success of guided pathways.

As the literature highlights, academic advising is critical to creating a successful transfer path for many students (Bailey et al., 2015). Too often, students are not required to meet with academic advisors' during intake process or throughout their time at the community college, leaving many students confused and lost (Packard & Jeffers, 2013). Students end up taking too many credits, taking credits that do not count towards their degree, taking credits that are not transferable to another institution, or they lose their way and stop out altogether (Monaghan & Attewell, 2015). When students do meet with an advisor, they report feeling rushed and confused and may still lack information needed to make decisions (Bailey et al., 2015). All of these concerns stem from lack of resources and commitment from the institution in supporting the advising process; however, when done correctly, advising may be the key to a successful transfer for many students.

First-generation Students

Current literature suggests that one of the greatest influences on whether or not a student will go on to attend college is the parents' levels of education (Perna & Titus, 2005). Generational status continues to influence a student's chances of successful degree completion. First-generation students enroll at high rates, making up nearly half of all students enrolled in the community college system (National Center for Education Statistics, 2019). First-generation community college students are more likely to be female, non-traditional age, more ethnically and racially diverse, come from lower socioeconomic backgrounds, employed more than part-time, and have greater family obligations (Nomi, 2005). Additionally, first-generation students tend to enroll in fewer credit hours, study less, have lower GPAs, are less likely to be involved on campus, and more likely to pursue technical/pre-professional tracks (Pascarella et al., 2003). Many of

these background characteristics and collegiate experiences comprise risk factors associated with retention and transfer of community college students (Dougherty & Kienzl, 2006; Mourad & Hong, 2011). First-generation students are also less likely to ask for assistance, instead relying on personal responsibility and initiative (Moschetti & Hudley, 2014). This tendency comes from a lack of parental understanding and support about the resources and services available to community college students (Moschetti & Hudley, 2014).

Community colleges are encouraged to find ways to ease the transition for students from varying generational statuses while supporting the unique backgrounds and experiences students bring with them to campus (Engle, 2007). Engle suggested a number of initiatives community colleges could take to increase the likelihood of first-generation students enrolling and achieving success in higher education. First, high schools and community colleges could focus on pre-collegiate experiences aimed at narrowing the gap in higher education attendance for first-generation students. This includes more support, information, and counseling during high school and the transition into community college for students and parents. In addition, Engle argued for preparatory courses for first-generation students geared toward creating a path to higher education success. Second, community colleges could help students create college plans early in their transition ensuring students and parents receive the necessary information about pathways into and through the educational system. Third, Engle suggested increasing access to financial aid. With a large percentage of first-generation students also identifying as low income, it is important that community colleges find ways to assist students as they navigate the financial aid process and provide targeted financial

assistance to these students. Fourth, community colleges could assist with the transition into and through the institution both academically and socially. Institutions could provide support programs including pre-enrollment programming, early support and bridge programs, orientation opportunities, advising, tutoring, mentoring assistance, and faculty connections all with the intention of easing the transition into the community college environment. Finally, Engle suggested increasing engagement within the community college environment by providing opportunities for first-generation students to make connections to the institution. This might include eliminating financial barriers, creating unique involvement opportunities, encouraging on campus work-study, and highlighting the benefits of academic engagement and participation. The author suggested these types of early and continuous intervention strategies may improve the likelihood first-generation students will achieve their academic goals.

Moschetti and Hudley (2014), using a grounded theory approach, acknowledged the challenges first-generation students have when entering higher education including a lack of support from parents, limited awareness of resources, and limited awareness of the importance of social capital. In this context, capital refers to the relationships that provide support and assistance in various social situations (Stanton-Salazar, 2001); community colleges need to find avenues to assist students with the development of capital as a way to enhance the community college experience and the success of first-generation students (Moschetti & Hudley, 2014). Moschetti and Hudley found that nearly 80 percent of first-generation students in their study perceived a lack of institutional support suggesting a lack of needed capital to navigate the various social and academic environments. The researchers also found that personal responsibility outweighed the

desire to gain social capital. Nearly 40 percent of first-generation students reported personal responsibility to succeed was more important than parental or institutional support and 70 percent of first-generation students said personal responsibility was more important than social support. Additionally, 86 percent of students said self-motivation and discipline were the most important factors to their success. Moschetti and Hudley also found family support was minimal and was not seen by first-generation students as important to their success with 90 percent of first-generation students reporting family support was limited to financial contributions and verbal encouragement. Finally, nearly 70 percent of students in the study reported working off campus, which could limit their ability to create social networks and relationships on campus. First-generation students reported prioritizing financial responsibility over developing social capital. The authors suggest this research supports other findings that parental education levels can constrain a first-generation student's ability to form social capital, thus limiting the potential for their success (Moschetti & Hudley, 2014). Community college practitioners are encouraged to find ways to engage first-generation students in the construction of social capital, and academic advising has been identified as a way to achieve this goal.

As referenced earlier, Laanan (1996) and Laanan and Jain (2016) proposed a concept of capital accumulations specifically for students looking to transfer to a four-year institution. The idea of transfer student capital is salient for first-generation students who often start at the community college with less knowledge, fewer resources, and limited support structures in place to help them navigate the transfer process (Moschetti & Hudley, 2014). Transfer student capital suggests first-generation students must accumulate specific capital to successfully negotiate the transfer process (Laanan & Jain,

2016). In an earlier study, Laanan (2007) claimed that the more capital a first-generation student accumulates during their community college experience, the more likely the student would successfully navigate the transfer process. With the correct institutional interventions, first generation students can gain the needed transfer student capital to make the move successfully to a four-year institution (Laanan & Jain, 2016).

Systems Theory Framework

The theoretical framework proposed for this study is systems theory, which aims to explore and understand scientific and social problems from the perspective of wholeness (Hutchins, 1996). Traditional Western science has increasingly become interested in breaking down problems into parts and studying these components in isolation. Systems theory instead looks at problems holistically as a way to understand the "wholeness of the human experience" (Banathy & Jenlink, 2004). Scientific and social researchers began exploring systems theory in the 1950s when the general theory was put forth as an attempt to unify different disciplines.

Basic systems theory maintains that all problems in the scientific and social world are systemic in nature and can be explored from the perspective of wholeness (Banathy & Jenlink, 2004; Hutchins, 1996). Banathy and Jenlink (2004) argued that research has become so specialized that we are losing the ability to examine the larger picture. Traditional science has spent years breaking problems into smaller pieces, isolating and manipulating variables, and controlling environmental factors in an attempt to explain our scientific and social problems (Banathy & Jenlink, 2004). Systems theory attempts to broaden this process and look at our world holistically through a process lens, not a parts lens (Banathy & Jenlink, 2004).

Early writings about systems theory define it by the human components that make up these systems and many of these definitions look at the importance of the individual in the system (Hutchins, 1996). Checkland (1990) understood systems as the composition of different activities that produced the structure of things such as planning, performing, and information processing. Ackoff and Emery (1972) defined systems in relation to social organization and how the impact of change in one area is felt throughout the system. Argyris and Schon (1978) focused on the ability of individuals to make decisions for the system, thus moving from a collection of people to the creation of an organization. Hutchins (1996) suggested that by understanding systems, researchers could explore the various dynamics of complex phenomena while finding new ways to achieve system goals. All of these definitions acknowledge that systems can not only be studied by examining their parts, but also that a complete description and understanding is only possible when the whole system is considered.

Hutchins Systems Theory Concepts

Hutchins (1996) discussed the idea of wholeness and suggested systems are defined by purpose. In other words, a system is defined by the researcher and is based on the purpose of what is being studied. Hutchins stated, “The point is that the purpose of applying a systems perspective to a particular phenomenon sets the context for how you define the system” (p. 30). Hutchins suggested wholeness, when applied to very large and complex systems, may cause the study to become unwieldy if appropriate resources and research expertise is not present. He instead proposed the idea of “bounded rationality” which requires establishing “temporary limits” on the system being studied (Hutchins,

1996, p. 31). This allows for an in-depth examination of a system while limiting the scope of the study.

Hutchins (1996) also suggested systems theory was a new way to view the world. Instead of looking at systems from a reductionist perspective, systems theory examines the world from the perspective of wholeness where the parts of a system operate in relation to one another. Hutchins further suggested this interconnectedness of the parts was important to the goals and outcomes of a system. He stated, "Because everything is connected to everything else, no single action can be isolated as the single cause of something else" (p. 14). This new worldview allowed Hutchins to describe systems theory using ten concepts to frame its main ideas.

System wholeness. First, according to Hutchins (1996), *a system must be considered as a whole, not in terms of its parts*. Western science has primarily relied on reductionist thinking, or the idea that to study a problem, we must break it down into its parts. Each part is then individually examined in order to understand or fix the bigger system. This reductionist philosophy is an accepted worldview and is explained by looking at a system's smallest parts through mathematical and scientific calculations. In order to think at a systems level, we must look at the entire system. This means looking at what the parts of the system do for the whole, not what they do in isolation.

Take for example the human body, which is a very complex system and can be broken down into parts such as arms, eyes, brain, etc. Even these components can be broken down into smaller parts such as molecules, tissues, and elements. Each piece is important to the overall operation of the body with unique functions and purposes. However, to understand and describe the human body systemically, we must consider all

the parts as a whole and how they function together (Hutchins, 1996). This wholeness is what ultimately constitutes the human body and provides for life.

Social systems such as organizations and governments are made up of many individual pieces and parts but are only understood when examined as a whole (Hutchins, 1996). Educational institutions are a perfect example of a complex organization consisting of many different functional areas (parts) that all must work together to produce what we understand as a community college, college, or university. The systems are made of faculty, staff, students, classes, activities, dorm rooms, emails, etc. If one were to describe only dorm rooms to someone when trying to tell them what higher education is, there would be little to no understanding of the actual system or its purpose. All parts of an institution must be included to understand the complex system that is education.

System interconnectedness. Hutchins' (1996) second concept is the idea of *interconnectedness among all systems within a system.* All complex systems are made up of subsystems and these multiple subsystems are all interconnected within the larger system. Using higher education as an example, each institution is made up of many different departments, or subsystems, including admissions, financial aid, housing, academic departments, etc. Each of these subsystems can be further broken down into faculty/staff, students, processes, etc. To understand an institution completely, one would need to understand how all subsystems function and interact with each other to create the larger system. In order to adequately research and study systems, we must create boundaries to define what Musser (2006) calls the "system-of-interest," or the scope of the proposed area of study. While concept one and two appear similar, concept one asks

us to consider the wholeness of systems while concept two asks us to consider the interactions of subsystems. These interactions are important when considering wholeness because a minor change in how subsystems interact with each other can eventually change the whole system (Hutchins, 1996).

System parts. Concept three is the idea that *a system is more than the sum of its parts* (Hutchins, 1996). According to Hutchins, a system "only has identity or meaning in the context of the system around it" (p. 39). In other words, a system's identity can only be examined and understood within the context of the subsystems and suprasystems that make up the whole. This "hierarchy of systems" (Hutchins, 1996, p. 40) helps explain and give meaning to a system's functions and identities. In a higher education setting, an academic advising department is a subsystem within a division of student affairs or academic affairs, which are subsystems of the larger university. Academic advisors within that advising system are a smaller subsystem of the entire advising system. The definition or parameters of a subsystem or suprasystem are arbitrary but help define the boundaries of the system in the research process.

System purpose. Hutchins' (1996) fourth concept suggested that *it is not possible to assign a single purpose to a complex social system*. Each person within the system will understand and view a system's purpose from their own perspective. Hutchins argued that it is misleading to assign purpose to a system because one person's understanding of a system's purpose could differ from another person's view. In an academic department, faculty may understand the system's purpose to be about critical thinking and learning, whereas a student may understand the system's purpose as skill development and career

preparation. Hutchins also suggest that systems typically have more than one purpose and these multiple purposes define the larger system.

One common purpose among all systems is the idea of survival (Hutchins, 1996). According to Musser (2006), "The only purpose assigned to any system…is its desire to self-perpetuate or 'live'" (p. 18). She suggested this overriding purpose explains why complex systems are slow to change. Changes will occur only when the perceived benefits of the proposed change outweigh the benefits of maintaining the current system structures and processes (Hutchins, 1996).

System functions. The fifth concept is that *a system cannot be understood until one understands its multiple functions* (Hutchins, 1996). Each system has subfunctions consisting of inputs, transformations, and outputs. The input function is the flow of information into a system from external sources. The transformations function is how a system deals with inputs and makes meaning of the new information. The output function is the system's response to these processes. In an institution, information flows into the system from policy makers, students, parents, faculty, and staff, just to name a few. The institutional leaders, department heads, and decision makers take this information, transform it into something useful and meaningful for the system, decide if they are going to respond, and if a response is necessary, determine the response. In order to understand a system, one must identify all the functions of that system.

Once information is received into a system through the input function, the transformation function analyzes this information for understanding and meaning making (Hutchins, 1996). Hutchins refers to this as "input conversion" (p. 67). If the information challenges the ways a system operates, the information may be reinterpreted to fit the

current environment and understanding. If this occurs, the system will not respond, and no change will occur. If the information supports the system, the system will respond. In an organizational setting, these responses, or outputs, typically come from high-level administrators; however, ideally all employees would understand the purposes of the system to make appropriate decisions. In many cases, lower level employees will make decisions based on new information, and these individuals must understand how their decisions affect the larger system.

System structure. The sixth concept proposed by Hutchins (1996) states that *a system's structure determines how it functions*. The parts of the system, and their relation to each other, determine the overall function of the system. According to Hutchins, "The function is created by the structure, and so long as the function is preserved, the organization and the parts can vary" (p. 82). Institutions are organized in many difference ways and changing the structure causes changes to the system's parts, ultimately changing the overall function. For example, academic advising can be structured in a number of ways to produce desired outcomes. This can include centralized or decentralized, faculty/department driven or professional advisor centered, and prescriptive or mentor approaches. Changing one of these structures, such as moving from faculty advising to professional advising, will significantly change other parts of the system. If all parts and their relationships to one another are not considered during this change, the function could collapse, and the system would experience significant problems.

System boundaries. Hutchins (1996) seventh concept stated *the boundaries of any system-of-interest must be defined*. This concept relates to the traditional systems

theory view about how open and closed a system is, which in turn, defines that system's boundary. The boundaries in open social systems are more difficult to define and often are dynamic in nature. For example, in a faculty advising structure, the type of advising, prescriptive vs. development, may define the boundaries. Based on time, resources, and leadership, faculty advising may be prescriptive in one department and developmental in another. These boundaries may change as personnel and leadership shift and different resources become available. According to Musser (2006), "When one understands the boundaries of a system and how open or closed the system is, it is easier to understand how the system functions and maintains itself" (p. 19). In the end, Hutchins (1996) suggested the boundaries of a system are what one defines them to be at that moment in time.

System of interest. Concept eight suggested that *understanding how a system achieves its purpose(s) is essential to understanding the system of interest* (Hutchins, 1996). Bridgen (2014) reminds us, "…that purposes are generally subjective, defined by the observer. So too, the underlying purpose of any living system, including social systems, is survival (p. 38). According to Hutchins (1996) this concept relates to self-regulation and the functions of adaptation and reproduction in the systems survival. Survival thus requires feedback loops which are the primary mechanisms used in systems to achieve their purpose (Bridgen, 2014). These feedback loops, according to Bridgen, can be balancing or reinforcing where the former provides stability in a system, while the latter, changes the effect of new information coming into the system. Balancing feedback tries to keep or return the system to its predefined purpose while reinforcing feedback has positive and negative effects on the system's purpose (Bridgen, 2014). Both balancing

and reinforcing feedback loops may not have an immediate effect on a system (Bridgen, 2014). Social systems, such as higher education, often experience significant delays in feedback, and in some instances, change may take decades to develop or "take effect."

One important insight into systems theory as it pertains to higher education is that cause and effect are not immediate and inputs into a process may not have an instantaneous effect on the system (Banathy & Jenlink, 2004). The basic assumption of if X then Y does not hold for systems theory. Instead, Y may come days, weeks, months, or years after the introduction of X, or Z may happen when X is introduced instead (Banathy & Jenlink, 2004). For example, if policy makers decide to outlaw a particular drug, eventually, over time, a black market may form in the system. This black market will present its own unique system; often counter to the original intentions of the policy makers.

In addition, changes based on feedback may appear to be counterintuitive (Hutchins, 1996). Take for example, an institution that wants to grow its overall enrollment to keep up with state demands. In order to achieve this growth, admissions begin admitting more students at a lower index score, which in the short term increases the size of the student body. Unfortunately, additional resources are not allocated to academic departments or support services to adequately meet the needs of these less prepared students. Over time, the institution's retention rates drop, and the size of the student body remains the same or shrinks. This focus on a quick short-term fix produced an initial increase; however, the underlying problem associated with retention was not addressed and the system did not adapt its purpose.

System adaptation. The ninth concept Hutchins (1996) proposed is that *all systems must adapt to their environments if they are to survive*. In other terms, systems need to continue learning in order to restructure and adapt to changing environments. Hutchins outlines seven ways systems learn from new information:

1. Learning is driven by a search to explain a discrepancy between past knowledge and present or anticipated experience in order to predict the future and increase the probability of survival.
2. Learning is the active reconstruction of past knowledge and skill in order to integrate new information or behavior at a higher level of complexity.
3. Learning is socially mediated and contextual.
4. Learning requires feedback against an internalized standard or an accepted standard.
5. Learning requires integration, which requires motivation and persistence.
6. Learning is both cognitive and metacognitive.
7. Learning is both a product and a process (p. 138).

These seven ideas of systems learning demonstrate the complexity by which new information is processed and used within the system (Hutchins, 1996). Social systems, and the members that make up organizations, take in these information inputs, transform the information to make meaning, and decide how to use the new information in the form of outputs. In other words, new meaning is socially constructed by the system, and through this learning process, new ideas and responses are generated. Learning is vital to system survival. In systems where learning does not take place, dysfunction will occur and the system will inevitably fail.

System change. Hutchins (1996) proposed a final concept, namely that *systems are inevitably and always changing*. This is so central to Hutchins concepts that he suggested that when a system stops changing, it will die. Simply avoiding or ignoring change will not alter the outcome. A system must pay attention to, and embrace, change for survival. Additionally, systems must always manage change. The management of

small changes allows the system to maintain equilibrium. Managing large changes are vital to preventing system collapse or shut down. Ignoring either small or large changes, over time, will end with system failure. Understanding the mechanisms a system uses to deal with and manage change is important to understanding the system and how it survives.

In her interpretivist case study, Musser (2006) used systems theory as a framework to explore the advising system of a large research institution in the eastern U.S. Using Hutchins (1996) ten concepts to analyze interview, observation, and document data, Musser (2006) presented an overall systems perspective of the advising unit as new changes were implemented. Through her analysis, Musser was able to draw conclusions between the historical context related to institutional advising policies, environments, and structures and the difficulties the institution was experiencing around change. Musser states:

> As I studied the advising system at ESU and compared it to my knowledge about my own experiences with academic advising, it was striking to me how much my study of systems theory really illuminated how and why two systems at two similar institutions can be so different from each other. The culture, history and local traditions that influence how a system is formed and how it maintains itself determines how a system will function, change, improve, and develop. (p. 86)

Musser concluded that the proposed changes came from outside of the system and thus had a limited effect on the advising system as a whole. Although individual actors did make changes to their daily work, little about the advising system processes, purpose, and culture changed. In the end, Musser concluded that systems theory was an effective and important framework to research academic advising in higher education and she calls for additional research in this realm to understand further academic advising as a system.

Bridgen (2014) also used a systems theory framework to explore the perceptions of students, faculty, and staff in relation to the purpose, function, and identity of academic advising units at a main and satellite campus. Using a constructivist paradigm, Bridgen collected data via document, interview, and focus group methods, and used Hutchins (1996) ten concepts of systems theory to frame the analysis and interpretation. Bridgen (2014) found discrepancies between how the advising system was designed to work and how it was currently functioning. From a systems perspective, administrators at both the main and satellite campus understood the purpose of advising but agreed that it was not functioning in that capacity. Bridgen concluded these problems were systemic in nature and systems theory was an important frame to understand future changes to the advising process.

As these studies by Musser (2006) and Bridgen (2014) highlight, systems theory appears to be a useful framework to study academic advising in higher education and the use of Hutchins (1996) ten concepts provides a structured approach to data analysis and interpretation. Both Musser (2006) and Bridgen (2014) suggest additional research about academic advising using systems theory could add understanding and clarity to the purpose of advising in higher education. Bridgen (2014) concludes, "Since it is the behavior of a system that determines its identity, understanding the behavior of advising systems at multiple institutions would significantly improve the efforts of the field [of] academic advising to establish a unique identity" (p. 116). My study allowed for the continued exploration of advising systems while looking at the unique attributes related to community college academic advisors and Colorado STAP.

Chapter Summary

This chapter frames this study through existing scholarship related to community colleges, transfer articulation, Colorado STAP, transfer policy research, policy implementation, institutional agents, academic advising, first-generation students, and an overview of systems theory. Although none of this research focuses specifically on community college advisors' understandings and use of policy, it provides the needed context to explore the research questions. This literature review also highlights the gap in our current understanding of the phenomenon providing additional rational for the study.

CHAPTER III

RESEARCH DESIGN

This interpretivist descriptive case study provides new understands about how community college advisors understand and use STAP in their work advising transfer students. Chapter 3 outlines the research epistemology, methodology, and methods I used to address my 1) research questions, 2) research paradigm including ontology, epistemology, and methodology, 3) data collection methods, 4) study setting and selection of participants, 5) data analysis, and 6) issues of trustworthiness. The following research questions guided this study:

Q1 How do advisors understand Colorado statewide transfer articulation policy purposes and functions within a community college advising system?

Q2 How do academic advisors describe the espoused objectives, policies, procedures, and processes of statewide transfer articulation policy and advisors' understandings and uses?

Q3 How do these understandings influence their advising practices?

Q4 How do academic advisors' understandings and uses of statewide transfer articulation policy contribute to or take away from system coherence among a multi campus system?

Research Paradigm

There are many ways to conduct quality research within many types of research paradigms. It is important for each study to identify the research paradigm as a way of providing a framework to the study and clearly defining the researchers understanding of

the nature of the world (Lincoln, Lynham, & Guba, Paradigmatic controversies, contradictions, and emerging confluences, revisited, 2018). Failure to identify a paradigm may cause readers to interweave competing views, understandings, and ways of knowing that can diminish understanding and the overall study's coherence.

A research paradigm is a set of basic beliefs about the world, an individual's place in that world, and the various relationships that are possible between the individual and the world (Lincoln et al., 2018). According to Lincoln and associates, answering three questions help to establish this worldview: What is the nature of reality? What can be known about it? And how can we inquire about it? The answers to these questions relate to the concepts of ontology, epistemology, and methodology, respectively. Each question addresses the paradigm from a unique perspective and indicates a distinct understanding of knowledge, the world, and research. My study employs a constructionist ontology, an interpretivist epistemology, and a case study methodology as the overall research paradigm in my attempt to understand perspectives of community college advisors toward STAP. The following sections define these terms and offer my answers to these questions.

Ontology

A constructionist ontology aligns with my beliefs about the nature of reality as a social construct; knowledge is not "out there" to be discovered; instead, individuals in relation with others create knowledge and meaning. For this study, I define a constructionist ontology as the social construction of knowledge in order to develop new understanding (Crotty, 1998). I used a constructionist ontology as I was interested in hearing how participants create meaning with others in relation to their understanding and

use of STAP. I believe this perspective allows for a naturalistic and subjective approach to answering the research questions and provided the participants' and myself an opportunity to make meaning of their experiences (Creswell, 2007).

Ontology is defined as the worldviews and assumptions in which a researcher operates (Schwandt, 2007), what a researcher believes about the basis of reality (Merriam & Tisdell, 2016), and attempts to answers the question, "What is the nature of reality" (Creswell, 2007). A constructionist ontology is based in relativism and the idea that humans socially construct meaning (Creswell, 2007). Crotty (1998) defined constructionism as, "The view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (p. 42). It is important to understand that within a constructionist ontology, meaning is not objective; human beings instead construct meaning as they interact and relate to the world. Lincoln and associates (2018) stated,

> We construct knowledge through our lived experiences and through our interactions with other members of society. As such, as researchers, we must participate in the research process with our subjects to ensure we are producing knowledge that is reflective of their reality. (p. 115)

A constructionist ontology is concerned with the lenses people use to view and understand their world and the meanings they assign to situations and experiences. Meaning is constructed via these lenses and through interactions with other individuals and groups.

Epistemology

I used an interpretivist epistemology as a way to explore advisors' understandings and use of STAP. An epistemological frame provides assumptions that guide knowledge

acquisition and offers the reader a basic understanding of the researcher and their relation to the research (Lincoln et al., 2018). For this study, I define an interpretivist epistemology as the exploration of knowledge, in real life settings, as a way to interpret the experiences of my participants (Hay, 2011). An interpretivist approach allowed me to create knowledge and understanding with my participants while exploring their experiences in real life settings (Creswell, 2007). I believe an interpretivist epistemology allowed me to explore advisors' understandings and uses of STAP through their subjective experiences while allowing for a new interpretation of the phenomenon.

Epistemology investigates the nature of knowledge and what we hope to know about that knowledge (Lincoln et al., 2018). Jones and associates (2006) defined epistemology as the "Assumptions about the acquisition of knowledge" (p. 15). According to Hay (2011), epistemology addresses the question "What can we hope to know about it [knowledge]" (p. 169). Hay furthers suggested, "knowledge is perspectival and provisional" (p. 169) and that how we look at the world, the lenses we use, cause that world to appear in different ways. Creswell (2007), suggested epistemology is defined by the relationship between the researcher and that which is being researched.

An interpretivist epistemology is concerned with the dynamic relationships and interactions between researcher and research participants as their experiences are captured and explored (Ponterotto, 2005). An interpretivist perspective seeks to understand individuals' experiences under the assumption that knowledge is socially constructed and arises in the context of the different systems that shape the contexts of people's lives (Hudson & Ozanne, 1988). Unlike positivists, interpretivists gather data about participants' perspectives in order to develop an understanding of their behaviors

and other social phenomena relevant to their lives (Hudson & Ozanne, 1988). A major aim is to empathetically understand people's worlds by taking seriously their subjective experiences. Researchers do not try to predict outcomes as others might with statistical analysis and formal causal models; instead, they work to understand a phenomenon situated in time and place, looking for motivations, meanings, and reasons. Geertz (1973) juxtaposed interpretivism and positivism: "Conceptualization is directed toward the task of generating interpretations of matter already in hand, not toward projecting outcomes of experimental manipulation or deducting future states of a determined system" (p. 26). A key claim is that knowledge is subjective and based on the experiences, understandings, and expectations of the researcher and participants (Geertz, 1973). Interpretivists believe the lens though which one views a given phenomenon will influence how one interprets data (Rubin & Rubin, 2011). Based on these epistemological assumptions, interpretivism offered a powerful approach for understanding community college advisors' perspectives toward STAP in real world settings.

An extensive collection of research exists that draws on interpretivist epistemology to make meaning of participants lived experiences using naturalistic methods including interviewing, observation, and document review (Gaus, 2017). Gaus stated, "In interpretivism, the researcher adopts an exploratory orientation in an attempt to learn what is going on in particular situations to arrive at an understanding of the distinctive orientations of the people concerned" (p. 8). Gaus used an interpretivist epistemology to explore new meanings and understandings of community college administrators and students in relation to retention policies and initiatives. Using semi-

structured interviews, Gaus developed new descriptions and understandings of various student services important to retention at community colleges.

Bassot (2017) also used an interpretivist epistemology to develop a new understanding of career guidance and counseling practices with students transitioning into higher education. The use of an interpretivist epistemology was significant in Bassot's study as it provided a fuller description of how careers and our exploration of them are socially constructed phenomena. In a previous study related to career exploration and development, Collin and Young (1992) pointed to the usefulness of interpretivist epistemology by suggesting that people make sense of career decisions in a social context and interpret their decisions in relation to other people. Although career counseling and academic advising are different functional areas in higher education, they share similar goals and outcomes, thus, these findings support the use of an interpretivist epistemology for the study.

An interpretivist epistemology has also been used with a systems theory framework to study academic advising in higher education (Bridgen, 2014; Musser, 2006). Using a constructivist/interpretivist epistemology, Bridgen (2014) argued systems theory is subjective and this individual interpretation and understand creates meaning. Bridgen stated, "When attempting to make sense of systems, it is important to understand that systemic problems are embedded in uncertainty and require subjective interpretation" (p. 26). Musser (2006) used systems theory to conduct an in-depth case study of a university advising department and found an interpretivist epistemology allowed for new understandings. Musser stated, "The interpretivist paradigm, versus a positivist or scientific paradigm, allows me to study, in depth, how a system organizes and maintains

itself and how the members of the system and its related systems function to accomplish their goals" (p. 46). These studies supported the use of an interpretivist epistemology with a systems theory framework for this research.

Methodology

I used a descriptive case study methodology to research how advisors understand and use STAP. Methodologies provide guidance on how research is carried out and knowledge is gained (Denzin & Lincoln, 2011). For this study, I defined descriptive case study as the frame for gathering and describing knowledge related to the phenomenon in ways that elicit the real-life experiences of my participants (Denzin & Lincoln, 2011). I believe a descriptive case study methodology provided the appropriate framework for exploring the real-life experiences of my participants while providing readers a new description of the phenomenon (Merriam, 1998). Additionally, descriptive case study methodology permitted me to use methods that generated qualitative data allowing for the description of the phenomenon from a subjective perspective.

Research methodologies includes the systematic use of various techniques including describing how individuals ascribe meaning to phenomena in their lives (Denzin & Lincoln, 2011). Methodologies aligning with interpretivism can include narrative, phenomenological, grounded theory, ethnographic, and case study research. The common denominator in all of the approaches is the idea that the researcher is the main research instrument tasked with exploring the lived experiences of research participants in relation to a social phenomenon (Denzin & Lincoln, 2011). The researcher focuses on individual experiences and the point of view of the research participants, also referred to as the emic perspective.

Case Study

Merriam (1998) suggested three areas that need to be considered when deciding on a research methodology, the types of questions that will be asked, the control needed to answer the research questions, and the end product. For case study research, Merriam suggested that research questions should address the how and why of the phenomenon, require limited or no control of the setting and participants, and the end product produces a thorough description of the phenomenon. This study answers how and why questions related to community college advisors' understandings and uses of STAP, which aligns with case study recommendations (Merriam, 1998; Yin, 2017). In this study I interviewed participants in a natural setting and did not attempt to manipulate variables as is common in more experimental research approaches (Merriam, 1998). Case study is an appropriate methodology when the researcher requires no control over the participants or the setting to answer the research questions (Merriam, 1998). Finally, the end product produced provides a rich and thick description of the case which aligns with Merriam's final recommendation.

A case study provides a unique opportunity to explore understandings because it allows for in-depth exploration of the phenomenon using established methods discussed in the next section. Jones and associates (2006) defined case study as "…the intensive focus on a bounded system, which can be an individual, a specific program, a process, an institution, or a relationship" (p. 53). Merriam (2001) defined case study as a means for exploring complex social units, typically made of multiple variables and in real-life situations, allowing for holistic description while expanding readers' knowledge of the particular experience or case under review. Yin (2017) suggested case study is an

appropriate methodology to answer "why" and "how" questions. Although Yin uses a post-positivist epistemology, he is heavily cited and referenced in case study methodology. Case study methodology aligns with an interpretivist perspective assuming reality is constructed in relationship with others, is subjective in nature, and what we know and understand about reality is based on these representations (Denzin & Lincoln, 2011).

This research agenda examined community college advisors' understandings and uses of STAP as a means to explore the human dimensions of a specific bounded system, namely community college academic advisors, and developed an interpretive understanding of the research questions. Further, the ways advisors reckon with STAP occurs naturally, outside of my control or manipulation as a researcher, thus case study was appropriate as I was interested in insights, discovery, and interpretation rather than hypothesis testing (Merriam, 2001).

Subcategories of case study methodology include particularistic, descriptive, and heuristic (Jones et al., 2006; Merriam, 2001). Particularistic case study focuses on a specific phenomenon and explores it in greater depth (Merriam, 2001). Heuristic case study explores a phenomenon while offering new kinds of meaning and understanding. Descriptive case study uses thick description to understand a phenomenon. I focused on a descriptive case study in order to develop a new description for community college advisors' understandings and uses of STAP.

Descriptive case study. Olson, in Hoaglin (1982) developed a list of characteristics and aspects that make up descriptive case study design, some of which include highlighting the complexities of a phenomenon, using hindsight to illuminate the

present, and demonstrating the influence of personalities and the passage of time on the phenomenon. Additional characteristics include the ability to obtain information from multiple sources while highlighting how differences in perspective influence the findings. Finally, descriptive case study allows findings to be presented in different ways and from different perspectives.

The goal of descriptive case study is to detail and develop an extensive description of a phenomenon (Schwandt & Gates, Case study methodology, 2018). Odell (2001) claimed descriptive case study is helpful "…to get the story down for the possible benefit of policy makers, scholars, and other citizens" (p. 162) and can be used to give voice to marginalized and underrepresented populations (Schwandt & Gates, Case study methodology, 2018). Descriptive case studies can be used to present new information where little research exists (Merriam, 2001). In addition, descriptive case studies can "Seek to reveal patterns and connections in relation to theoretical constructs, in order to advance theory development" (Tobin, 2010, p. 288). My study fits the requirements of descriptive case study because it provides a description of a phenomenon, where little research exists, using systems theory to explore the research questions.

Senie (2016) used descriptive case study to examine the perspectives of faculty, administrators, and staff from community colleges and universities in relation to the development and implementation of Transfer Mobility Policy. Case study allowed Senie to gather rich and descriptive information from the participants through a number of qualitative methods including interviews, focus groups, and document analysis. Case study further allowed for emergent analysis and thick description for interpretation. Senie's research proposed case study an ideal methodology for interpreting and

understanding participant perspectives. Gaus (2017) used descriptive case study methodology to examine retention of community college students in an allied health program and found case study was useful in obtaining the perceptions and understandings of community college administrators and students in relation to institutional policies. Bridgen (2014) also used descriptive case study to look at a university advising system at a large multi-campus university through a systems theory frame and found case study is an ideal methodology for examining a phenomenon as a whole.

The case. In order to bound the study, a researcher must define the boundaries of the case and the unit of analysis (Mertens, 1998). Merriam (1998) stated, the "single most defining characteristic of case study research lies in delimiting the object of the study, the case" (p. 27). Merriam also suggested that the goal of case study research is to analyze and describe a bounded system, which requires "fencing in" what is being researched (p. 27). The bounded system helps researcher and audience to understand who was included and who was not included, providing context to the study (Yin, 2017). Hutchins (1996) suggested purpose could help define the boundaries of what is being studied providing the researcher with guidelines for making decisions. According to Yin, (2017), boundaries provide the frame to distinguish what data describes the "phenomenon" and what data describes the "context" of the study.

This case study focused on one group, professional academic advisors employed at LCC. The professional advisor was the unit of analysis for this case study. To further bound this case, participants needed to have some awareness of STAP and work with students in the transfer process. Case study also requires a timeframe to bound the study (Yin, 2017). Although Colorado STAP generally was developed in the mid-1980s,

significant enhancements and updates were made in the mid-2000s (Colorado Department of Higher Education, General Education (GE) Council, 2018a). Additionally, much of the principal research on STAP started in the early 2000s and has carried through today. I bounded the timeframe for this study with an 18-year window beginning in 2000. Finally, I used a multisite case study that is bounded on one group, academic advisors. LCC has four campus which allowed for multiple site examination using a systems theory perspective. These boundaries provided a reasonable scope and historical reach for data collection.

Setting and Population

Systems theory provided a unique perspective to identify the setting and population for this study. According to Hutchins (1996) there are many different ways to define complex systems. This is due in part to the subjective nature of systems thinking and the role of the observer in understanding the phenomenon. This subjectivity has produced a number of ways to understand, view, and study the purposes of complex systems. A few examples suggested by Hutchins (1996) include:

- Natural verses constructed – Systems that exist in nature verses systems that are manufactured by human effort.
- Concreate vs abstract – Physical systems are considered concreate whereas intellectually created systems (i.e. economic systems) are referred to as abstract.
- Living vs. non-living – Living system are self-regulatory whereas non-living systems are not.
- Simple vs. complex – Systems with relatively few parts compared to systems with many different elements.

- Stable vs. unstable – Relating to behavior, a systems' search for equilibrium or homeostasis.
- Open vs. closed – The follow of energy or information into and out of systems.
- Controlled vs. purpose seeking – Controlled systems tend to also be closed and interact very little with their environment whereas purpose seeking systems define their own goals, ideals, and visions.
- Unitary vs. pluralist vs. coercive – Unitary systems share similar interests and have similar outcomes, pluralist systems have similar interests but may not share similar outcomes, and coercive systems do not share similar interests or outcomes.

Although there are many ways to define complex systems, Hutchins (1996) proposed one of the most effective ways is to determine what the purpose of the research is and align that with what the researcher wants to study. Hutchins suggested that understanding the purpose behind the research helps define what is being researched and the system being studied. This purpose would allow the research to decide how broad or narrow the study must be to understand the system. Hutchins provided some guidance on determining the system under study and the purpose of the proposed research,

> You must examine the tradeoffs between making your study so broad and so complex that is impossible to deal with all of the critical variables – or, the reverse, making it so narrow that you fail to take into account something critical to your purpose. (p. 30)

Hutchins (1996) further suggested that the definition of the system based on the researchers' purpose allows for "bounded rationality", or the setting of temporary boundaries on what to study at a given moment (p. 31). This allows a researcher to start

with a narrower focus and expand the scope of the system as their understanding of the system broadens and expertise is accumulated.

This guidance provided a way to define the system I researched, placing boundaries on the scope of the case. Although STAP may have an effect on the entire higher education system, and the subsystem known as the transfer process, I was interested in understanding STAP impacts on the smaller system of academic advising. Further, I proposed looking at a subsystem of academic advising by studying community college academic advisors and the purpose of STAP in their work with transfer students. In addition, I examined community college advisors at a multi-campus community college system in the state of Colorado allowing me to define the case and setting for this study further. Academic advisors and their use of STAP within a multi-campus system presented a unique perspective and by further researching this phenomenon, I believe I created new understandings related to the academic advisors' system. Further, by focusing on the system of community college academic advisors at a multi-campus institution, and not higher education as a whole, I was able to use my resources and current expertise to begin a discussion that could lead to future research about STAP and its purposes on other systems within higher education.

The Site

As stated above, the site assisted in the definition of the system for this study as suggested by Hutchins (1996). To explore this phenomenon from a systems theory perspective, a community college with multiple campuses in the state of Colorado served as the research site for this study, refereed to here as Large Community College (LCC). Made up of four campuses; Campus One, Campus Two, Campus Three, and Campus

Four, LCC presented a unique opportunity to study academic advisors' understandings and uses or STAP within an identified system in the state of Colorado. I solicited participants from all four campuses allowing for an exploration of advisors' understandings and uses of STAP at multiple campuses within a larger system. The use of LCC as the research site also provided an opportunity to analyze the data using system theory concepts while providing boundaries for this study (Hutchins, 1996). A Site Permission Letter (Appendix A) was sent to each campus advising department requesting permission to conduct interviews with academic advisors. Once approved, participant selection began following the criteria outlined below.

Although many states have well established and robust STAP, Colorado was selected for this study based on a number of conditions. First, Colorado specifically requires the continual review and modification of policy as outlined in state policy (Colorado Department of Higher Education, General Education (GE) Council, 2018a). This ensures policy is constantly being updated to meet the needs of the state, institutions, and students. This also provides an opportunity for new research to influence future iterations of STAP. Second, Colorado policy specifically addresses the advising process requiring institutions to establish and maintain effective structures for advising transfer students (Colorado Department of Higher Education, General Education (GE) Council, 2018a). This requirement lends itself to additional research on academic advisors' responsibility for creating effective advising opportunities. Third, my personal work with the transfer process in the state, both past and present has provided a number of pre-established connections that were valuable when identifying and selecting participants for the case. Additionally, my familiarity with Colorado STAP allowed me to better

contextualize the participant responses. Finally, based on the variations in STAP design and implementation from state to state, multi state comparisons of advisors' perceptions would prove difficult (Anderson, Sun, & Alfonso, 2006).

Recent structural changes. In 2017, LCC substantially overhauled its advising system, which resulted in the hiring of 13 new professional academic advisors, a shift in advising theory and structure, and the creation of My Academic Plans (MAPs) for all majors and programs. This new approach, the Pathways model, blends academic advising with an emphasis on career outcomes and personal wellbeing. Advisors in the new Pathways module fulfilled traditional duties of academic advising including academic planning, class selection, and program sequencing. They are also tasked with additional duties related to personal wellbeing and career outcomes. These additional duties included helping students identify their personal and professional goals, developing transfer plans if appropriate, and referring students to campus resources including financial aid, counseling, and career services to name a few. This comprehensive approach to advising has shifted advisors' understandings of their work from a prescriptive to a wholistic approach.

One of the major changes to the advising structure was a shift from generalist advising to academic and career clusters. Advisors are now responsible for a specific area and predefined majors. (In the old model, advisors were generalists and advised for all majors.) Pathways advising at LCC is divided into six areas including:

- Business and technology,
- Health and wellness,
- Liberal arts and communication,

- Manufacturing, automotive and construction design,
- Math and science, and
- Social science and education.

Students are advised for certificate programs, applied associate of science degrees (AAS), and associate of arts (AA) and associate of science (AS) degrees. (Based on the lack of transfer degrees in manufacturing, automotive and construction design, advisors from this area were not recruited for the study.) The Pathways approach allows advisors to be experts in a limited number of majors, connect with faculty on their campus in those major areas, create connections with a limited number of people in related majors at four-year institutions, and assist students with career exploration.

In the previous model, students did not schedule appointments but instead participated in drop-in advising. Students ended up meeting with different academic advisors each time they accessed advising services. For advisors in this model, finding continuity with students was difficult, often meeting with a student once for a maximum of 15 minutes, resulting in a prescriptive type of advising when it came to course selection and scheduling. Although this model was friendly on a student's schedule and time, it lacked the wholistic approach newer academic advising models are moving towards. By contrast, the Pathways model requires students schedule appointments in advance and always with the same advisor in their specialized content area. Appointments are schedule for 30 minutes or more, which allows advisors time to explore the student's goals and recommend appropriate majors/programs in addition to course scheduling. This change in student interactions has allowed advisors to work towards a wholistic understanding of the student. A final note; in both models, students

are required to meet with an advisor for their first semester registration but after that meeting, there was no requirement to meet for future registrations. This requirement has remained the same in both models.

As part of the Pathways model, extensive time and resources were allocated to create a new tool called My Academic Plan (MAP). MAPs outline a plan for students wishing to complete a certificate, AAS, AA, or AS degree. For certificate programs this may be one semester to one year. For the AAS, AA, and AS, the MAP outlines the ideal course sequencing to complete the degree in four semesters. MAPs were created by faculty and outline the quickest path to finishing a certificate or a degree; however, many students at LCC are not attending full time so the MAP acts as a guide throughout their time in the program. Although MAPs are not articulation agreements, they are built on STAP where appropriate. For example, certificate and AAS degrees include language and course selections related to GT Pathways. For AA and AS degrees with a state DWD (degree with designation), the courses and sequencing are based on articulation agreements. A primary goal of MAPs is to help students and advisors with the prescriptive work of academic advising and allow more time to discuss personal and professional goals. Although the Pathways model attempts to address personal and professional goal development, advisors still primarily work with students around the basic advising functions.

Finally, each campus now employees a director of advising responsible for operations and oversight of services. These directors report centrally to a vice president who coordinates services among all campuses. This centralization is prominent in many of the structural components that make up advising at LCC. All four campus have

adapted the Pathways model approach to advising resulting in new hires, new program advising areas, and online advising tools. While conducting interviews all four campuses were moving to a new advising software platform for additional centralization. It is also important to note that LCC is part of the state community college system which provides additional centralization and coordination. LCC is one of 13 institutions that make up the public community college system and is bound by system and state policies and regulations. Academic offerings at each campus provide an opportunity for individualization and contribution to the local economic community. Although other institutions in the system have moved towards a Pathways model of advising, each is still unique in its implementation based on unique institution purposes. This highly centralized coordination has resulted in a cohesive approach when providing advising services.

Participants

Professional advisors employed in at LCC made up this case study, as I hoped to describe advisors' understandings and uses of Colorado STAP using concepts of systems theory. I used criterion sampling to identify information-rich participants whose perspectives allowed for in-depth review of the case (Mertens, 1998). In criterion sampling, the researcher sets up pre-defined eligibility criteria that participants must meet in order to be included in the sample. I established four criteria for selecting participants for this case study. First, participants had to be currently employed at LCC. This allowed me to examine academic advisors employed in the state of Colorado at one of the campuses identified for this study. Second, participants had to have advisory responsibilities relevant to the transfer process. Not all academic advisors advise students

in the transfer process and these individuals would not produce the type of data needed to answer the proposed research questions. Third, participants needed to have some awareness of Colorado STAP. Advisors who lack this awareness would not produce relevant data for this study. Fourth, all participants had to be 18 years of age or older to participate in this study. This aligned with the Institutional Review Board (IRB) approved requirements for this study.

Prior to recruiting participants, I worked to gain entrance to the site. Creswell (2007) emphasized the importance of building rapport with gatekeepers prior to conducting case study research. First, I researched the structure of advising at LCC to identify gate keepers. I determined the directors of advising at each campus might grant access to possible participants and should be my first contracts. I sent the Site Permission Letter (Appendix A) to each director and followed up with personal phone calls. These calls were important in developing a level of interpersonal relationship needed to gain entrance to the site. Although the email provided an initial contact and context for the study, the phone calls provided an opportunity to share my personal interests in the research while hearing about the interests and concerns of the directors. While talking to the director of advising at Campus One I was informed that all directors met on a regular basis and she could help me with access to the other campus. In addition, she informed me that the directors reported to a dean that would need to approve participation in the study. Ultimately, she was able to get approval and also help solicit the director at Campus Two to participate. Following my on-campus interview with Campus One and Two I was contacted by the directors at Campus Three and Four with a commitment to participate. I was informed that they had heard about my pervious interviews and wanted

their campuses included in the study. The director at Campus One proved to be a key informant in this study which allowed me to gain entrance to participants at all four campuses.

Once entranced was gained, the directors of each campus provided lists of the professional advisors and encouraged me to solicit participants. LCC employees approximately 38 professional advisors over four campuses which constituted the initial population to solicit participants (number retrieved from institutional website). Once site permission was secured, I used introductory emails and phone calls to locate participants to determine who met the outlined criteria and were willing to participate in the study (see Appendix B and C). Through this process, 28 advisors signed up for an interview. Once identified, 60-90 minute individual interviews were scheduled with each participant. All participants signed a consent form prior to participating (see Appendix F).

I recruited participants from the four LCC campuses who met predefined criteria. To provide additional context for the findings, I included a full description of the participants in Appendix E. I assigned a pseudonym to each participant to protect confidentiality. Although not directly requested, the table indicates visible gender and race/ethnicity demographics. This information was not specifically collected as it was not relevant to the study or answering the research questions. Although identity and intersectionality are important when examining social phenomena, this concept was beyond the scope of this study. Table 1 displays the visible gender and race/ethnicity of each participant. Of the 28 participants, 71 percent appeared female and 25 percent appeared to be racial or ethnic minorities (non-White).

Table 1

Participant Visible Gender and Race/Ethnicity

Anonym	Visible Gender	Visible Race/Ethnicity
Andrew	Male	No
Ann	Female	Yes
Christine	Female	No
Deborah	Female	No
Derek	Male	No
Diane	Female	No
Fiona	Female	No
Frank	Male	No
Gary	Male	Yes
Hank	Male	No
Hannah	Female	No
Harry	Male	No
Hazel	Female	No
Helen	Female	No
Karen	Female	No
Lisa	Female	Yes
Luke	Male	Yes
Margaret	Female	Yes
Maria	Female	Yes
Mary	Female	No
Michelle	Female	Yes
Oliver	Male	No
Olivia	Female	No
Pamela	Female	No
Patricia	Female	No
Pauline	Female	No
Rita	Female	No
Tracey	Female	No

Advisors at LCC advise in a “pathways area” as indicated in Table 2. These areas include business & information technology, health sciences and wellness, liberal arts, communication and design, math and science, social science, education and public service, and undecided. Most advisors are assigned one Pathways area; however, Ann, Helen, and Mary from Campus Three advise in two Pathways areas.

Table 2

Participant Pathway Areas

Anonym	Pathway Area
Ann, Hannah, Olivia, Deborah, Pauline,	Business & Information Technology
Ann, Hank, Tracey, Christine, Pamela	Health Sciences & Wellness
Karen, Fiona, Margaret, Gary, Helen, Mary	Liberal Arts, Communication & Design
Andrew, Frank, Harry, Hazel, Maria, Luke, Michelle,	Math and Science
Derek, Helen, Mary, Patricia, Oliver, Rita	Social Science, Education & Public Service
Diane, Lisa	Undecided

Finally, the Pathways model that was recently implemented at LCC included several new hires, thus pathways hire status is indicated. Advising experience varied, with 43 percent indicating two years or less, 25 percent three to five years, 25 percent six to 10 years, and seven percent 11 or more years. Table 3 indicates years of advising experience for each participant and if they were hired as part of the new Pathways model.

Table 3

Participant Years of Advising and Pathway Hire Status

Anonym	Years Advising	Pathway Hire
Ann	1	Yes
Helen	1	Yes
Andrew	2	Yes
Deborah	2	Yes
Fiona	2	Yes
Harry	2	Yes
Hazel	2	Yes
Luke	2	Yes
Mary	2	Yes
Olivia	2	Yes
Pauline	2	Yes
Tracey	2	Yes
Lisa	3	No
Derek	4	No
Diane	4	No
Patricia	4	No
Hannah	5	No
Margaret	5	No
Rita	5	No
Christine	6	No
Frank	6	No
Michelle	6	No
Pamela	6	No
Karen	7	No
Oliver	7	No
Gary	9	No
Hank	12	No
Maria	25	No

In systems theory, the researcher identifies the system of interest and attempts to interview all qualified participants (Hutchins, 1996). Of the 38 professional academic advisors in the predefined system, 36 met the interview criteria, and of these, 28 (78 percent) participated in an interview. Eligible participants who were not interviewed

either did not follow up to the interview request, were not interested in participating, or did not feel they met the qualification for the study.

The system of interest as defined in this study was professional community college advisors at LCC, a factor which limited the demographic diversity of the participant pool. Following multiple outreach efforts as described previously, eligible participants self-selected into the interview process. The shift to the Pathways model resulted in several new hires, accounting for 46 percent of the participants in the study. Although not directly requested, four participants mentioned during interview that they were first-generation college graduates.

I attempted to interview all eligible participants in the system, and directors at each campus assisted with participant outreach which may have boosted the variation in advisor participation. Two campus directors were enthusiastic about the research and strongly encouraged their advisors to sign up for an interview. The other two campus directors were interested in the research but did not heavily emphasize signing up to participate. This resulted in participation rates of 67 percent at campus one, 82 percent at campus two, 63 percent at campus three, and 100 percent at campus four. Table 4 includes the participation by campus.

Table 4

Campus Participation

Anonym	Campus	Percent
Derek, Hank, Hannah, Harry, Karen, Maria, Patricia, Tracey	1	67
Andrew, Christine, Fiona, Luke, Margaret, Michelle, Olivia, Pamela, Rita	2	82
Ann, Diane, Frank, Helen, Mary	3	63
Deborah, Gary, Hazel, Lisa, Oliver, Pauline	4	100

Although not a requirement in system theory research, saturation of data did occur within this sample. Saturation occurs when same or similar responses arise during interviews and no new thoughts or ideas are being generated. During the 28 interviews, new concepts, ideas, and themes stopped emerging. Merriam and Tisdell (2016) suggested the number of participants needed for a study should allow for research questions to be answered, appropriate data to be gathered, and must fall within the parameters of the resources available for the study. A point of saturation or redundancy is reached when the researcher begins hearing the same or similar responses during interviews and no new thoughts or ideas are being generated.

In their study of saturation in interviews, Guest, Bunce, and Johnson (2006) examined six different case studies and found data saturation occurred in the first 12 interviews. In a study of university and community college administrators' perceptions of transfer articulation policy, Slotnick (2010) used semi-structured interviews to collect data from 12 participants, six university and six community college administrators. She

determined saturation for this study occurred at this point and was confident the findings answered the proposed research questions. Although saturation is the primary measure for research using qualitative data, systems theory addresses wholeness, and thus is concerned with understanding many components of the system (Hutchins, 1996).

Data Collection

Creswell (2013) suggested case study requires using materials from multiple sources to provide an in-depth understanding of the case. Through multi-source data collection, an in-depth description of the case emerges through analysis of themes and issues pertaining to the phenomenon. The final analysis and interpretation require reporting lessons learned about the case. According to Stake (1994),

> The methods for casework actually used are not to learn enough about the case to encapsulate complex meanings into a finite report but to describe the case in sufficient descriptive narrative so that readers can vicariously experience these happenings, and draw their own conclusions. (p. 242)

For this study, I collected data through semi-structured individual interviews, document review, and field notes.

Rubin and Rubin (2011) explored data gathering and analysis as an "iterative research design" (p. 16) where the researcher both collects and analyzes data in an ongoing process and where this process may lead to the alteration or addition of research questions. Collecting data and the continuous analysis of previously collected data requires flexibility and can compel further questions that could reveal new topics. In this study, the semi-structured interview questions evolved slightly as interviews were conducted, data were collected and analyzed, and findings were discussed.

Semi-Structured Individual Interviews

According to Rubin and Rubin (2011), interviewing helped researchers' to understand a problem or phenomenon from the perspective of an individual: "…researchers explore in detail the experiences, motives, and opinions of others and learn to see the world from perspectives other than their own" (p. 3). Weiss (1994) claimed that "We can learn, through interviewing, about people's interior experiences. We can learn what people perceived and how they interpreted their perceptions" (p. 1). Interviewing allows the researcher to find out what is in participants minds in relation to a phenomenon. As Patton (2002) explained:

> We interview people to find out from them those things we cannot directly observe. We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of the observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective. (p. 278)

Individual interviewing aligns with an interpretivist paradigm as it allows the researcher to understand the experiences of others in relation to a phenomenon and is central to data collection for case study methodology (Rubin & Rubin, 2011). To maintain focus on community college advisors' understandings, I used semi-structured interviews with a predetermined list of questions, including probes and follow-up questions.

Interviewing is a primary method used in interpretivist case study research because it allows the researcher and the participant to explore and create meaning while producing an in-depth description of the phenomenon (Rubin & Rubin, 2011). Slotnick (2010) found semi-structured interviews allowed for significant data collection from institution administrators, advisors, and support staff required to produce a rich and think

description of the research questions. Lee (2001) used semi-structured interviews to better understand the experiences of students who moved from community colleges to four-year institutions. Through her interviews, Lee found that state articulation policy was a major impediment to the transfer process for many students. Bridgen (2014) and Musser (2006) used semi-structured interviews to examine advising departments through the lens of systems theory. Musser (2006) used semi-structured interviews to understand the purpose and meaning participants used to describe the advising system at their institution. Bridgen (2014) used semi-structured interviews to better understand how participants perceive and interact with various advising systems at the institution.

These studies support the use of semi-structured interviews as a primary means of collecting data about an individual's experience related to the phenomenon. The purpose of this study was to better understand how community college advisors understand and use STAP and semi-structured interviews provided adequate data for analysis and interpretation of the findings. Without hearing participants' individual voices, it would be difficult to understand advisors' feelings and thoughts related to STAP and how they make meaning of their use of policy when working with transfer students. Semi-structured interviews allowed me to explore advisors' experiences and perspectives, a primary component of conducting interpretivist research.

In addition, semi-structured interviews provided robust qualitative data allowing for a rich and in-depth description of the phenomenon (Rubin & Rubin, 2011). Data collected through interview methods provided me a greater understanding of the participants' experiences and understandings of phenomena, and their words and thoughts were used in the final representations to give readers some insight into their

worlds. Interview data is a primary method for hearing how participants make meaning of their experiences, allowing readers access to new ways of understanding the phenomenon (Rubin & Rubin, 2011).

The semi-structured interview questions were developed using Hutchins (1996) systems theory concepts as a guide (see Appendix D). The interviews were recorded on a handheld digital device, downloaded to a secure computer, and stored in a password-protected digital file accessible only to me. The audio files were transcribed verbatim and the transcriptions were also stored on the secure server. Participant names and identities are not be revealed, and records will remain confidential. Pseudonyms are used to identify participants in the study. Any hard copy materials related to the interview process were locked in a secure file cabinet in my office.

Document Review

The second data collection method I used is document analysis, which consists of reviewing public and private documents to better understand the phenomenon (Bowen, 2009). Atkinson and Coffey (1997) called documents "social artifacts" produced in a social context characterized by a shared social understanding (p. 47). Yin (1994) suggested document analysis is applicable to case study research because, in combination with other methods, it allows the researcher to produce detailed and thick descriptions. Bowen (2009) suggested document analysis can provide context about the environment in which research participants' work and interact; it also can inform the development of interview questions and provide supplementary data to deepen one's understanding of the issue. Bowen cautions against relying solely on document review for data collection as documents can lack sufficient detail, are difficult to retrieve, and can contain selectivity

bias. Merriam and Tisdell (2016) stated, “Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem” (p. 189)

Slotnick (2010) used interviews and document analysis in order to create a more robust understanding of the perceptions of administrators on transfer policy. Document analysis was helpful to fill in the gaps; however; she recommended using multiple data collection methods to obtain the richness of data needed to answer the research questions. Slotnick also used initial document analysis to help develop the questions included in the semi-structured interviews. Gechter (2014) used document analysis to understand middle school teachers’ experiences with bullying. She found documents were helpful in identifying school district policy related to bullying and the expectations verse the realities in policy implementation. Finally, Bridgen (2014) used document analysis to look at the university mission, goals, values, polices, and procedures of the academic advising department in the study. He found document analysis was important when using systems theory to gain the larger perspective of how systems and subsystems interact within the institution. These studies supported the use of document analysis in this study to better understand policy use.

With advances in technology, documents are being digitally transformed. Documents that were once flyers, brochures, and posters are now presented in online formats. This was very apparent during document gathering and review. Every “document” I accessed was in web form or available as a portable document format (PDF). I analyzed PDFs in a traditional manner following the process outlined below, and the same is true for the website analysis. The documents I used included departmental

materials available on LCC's advising site, Colorado Department of Higher Education documents, four-year institution transfer guides, and transfer admission sites.

I worked with department directors and advisors to identify relevant documents produced in the past five years. Although, Colorado STAP has been in effect for many years, I was interested in more recent iterations and current use. During the interview phase, I also requested any documents individual advisors used in relation to STAP.

Field Notes

I also composed field notes about the semi-structured interviews and document analysis as part of data collection. Clandinin and Connelly (2000) suggested that field notes are among the most useful field texts for recording subtleties in the inquiry process. Field notes include details about life before, during, and after the interviews occur, and they helped as I reflect on what the participants are sharing. My notes accounted for my own actions and statements as well as the interactions I had with participants, what was going on in and around the interview space, what I felt during the process, and what was going on in broader social context (locally, nationally, etc., as relevant). Morrow (2005) suggested field notes taken before, during, and after the interview are an important data source for exploring a study's context. As well, my field notes recorded the bits of information not collected via recording device during the interview process, which enhanced my interpretations.

Field notes allowed me to record both descriptive and reflective information regarding my experiences during the research process (Creswell, 2007; Merriam & Tisdell, 2016). Although field notes can be produced at any time, a bulk of the notes were

made in relation to the semi-structured interviews. These notes provided additional data about the interview process and provided greater context about the data.

Descriptive field notes about the semi-structured interviews include information about my general perceptions, information about the space and setting where the interviews were conducted, timeframes related to the process, observations about the participant and their demeanor, and other notes that cannot be captured on a recording device (Creswell, 2007). Descriptive notes related to document review include general perceptions of the process, information relevant to specific documents and their collection, any information about the document I discussed with another person during collection, and any relevant contextual information (Creswell, 2007).

Reflective field notes allowed me to record my own thoughts and perspectives related to the production of descriptive notes and the overall research experience (Creswell, 2007). I used reflective field notes to document my thoughts, initial interpretations, contextual observations, and additional questions that arose based on the descriptive notes. Reflective notes allowed for preliminary data analysis and provided additional context for data interpretation (Merriam & Tisdell, 2016).

Finally, I used field notes to explore and reflect on my own internal experiences including the thoughts, feelings, and reflections of my internal experience (Clandinin & Connelly, 2000). Clandinin and Connelley suggested field notes of this type allow researchers to "reflect on themselves as part of the field experience being studied, and…on themselves experiencing that experience, that is, reflection upon it" (p. 88). Janesick (2004) suggested reflectivity can strengthen a study by helping the researcher focus on the research question and study, set the foundation for analysis and

interpretation, act as a means for revisiting interview data, awaken the researcher's imagination, and become the written record of thoughts and feelings related to the study (Janesick, 2004, p. 149).

Slotnick's (2010) use of field notes to document observations before, during, and after each interview provided additional detail for analysis and interpretation. Items such as insights, concerns, and thoughts related to each interview were recorded. In addition, Slotnick made field notes about the physical descriptions of settings, participants, and correspondence records related to each interview. Slotnick revisited the field notes during interview transcription and data analysis.

Data Collection Phases

Data were collected in two phases. Phase one consisted of contacting campuses and gaining entry to conduct interviews, identifying eligible participants who met the criteria, and gathering initial documents to inform the semi-structured interview questions. Phase two consisted of data collection and initial data analysis. Additional documents were collected during this phase and field notes were recorded. The following section explains the procedures in each phase. Prior to data collection, all documents were approved by the IRB at University of Northern Colorado. These documents included a site solicitation letter (see Appendix A), participant solicitation emails (see Appendix B and C), interview protocol (see appendix E), and a participant consent form (see appendix E).

Phase One

In April 2019 I reached out to directors of advising at LCC and requested permission to conduct research at their campus. Initially, only directors from Campuses

One and Two followed up with me and eventually granted permission to interview their academic advisors. In mid-May, I contacted the directors at Campuses Three and Four again and was granted permission to conduct interviews with their advisors as well. I then worked with each director to identify eligible participants. The directors provided lists of professional academic advisors who met my criteria. Once eligible participants were identified, I emailed the participant solicitation email requesting participation. This email was sent two times to participants who did not respond to the initial request. Directors also sent internal emails and talked about the study at a weekly staff meeting. When advisors agreed to participate, they were sent more information about the interview, instructions to sign up, and a blank consent form. Prior to each interview, I sent a reminder email confirming time and location.

During phase one I also collected initial documents for analysis. These documents included information available on LCCs website about academic advising and Colorado Department of Higher Education documents including the revised state statute and articulation information. (I also requested documents from the directors related to onboarding and training for advisors; however, I never received a response and no documents were provided.) I used these initial documents to refine the semi-structured interview questions, add additional prompts, and created a list of documents to request during my interviews. These documents also aided in developing an early list of potential themes for initial data analysis.

During phase one I identify that LCC had recently shifted to the new Pathways module of advising. This awareness allowed me to add additional prompts to the interview protocol and to determine during the interviews if an advisor was hired as part

of the new module. This awareness allowed me to have a better understanding of the advising system and structure at LCC prior to conducting data collection and analysis.

Phase Two

Phase Two consisted of data collection using semi-structured interviews, document review, and recording field notes. Due to scheduling and resources, interviews at Campus One and Two were conducted in person and at Campus Three and Four interviews were conducted by phone. At the start of each interview, I reviewed the consent form, asked if the participant had any questions, and obtained a signature. Interviews were digitally recorded and additional field notes were taken. Interviews last between 45 and 90 minutes. Following the interviews, verbatim transcripts were produced.

During the interview phase, I listened closely for themes and patterns and adjusted interview prompts as needed. This allowed me to dive further into areas of relevance related to the study's purpose and research questions. This phase of data collection allowed me to begin understanding my participants' experiences. I began hearing how they make meaning of their work and how they understanding and use STAP.

During phase two I asked all participants to provide any documents they felt were relevant to this study. I was pointed to online resources including the Colorado Department of Higher Education website, four-year institution websites, and the LCC website. On the Colorado Department of Higher Education website, advisors said they use GT Pathways and DWD information regularly. Four-year institution websites provided information about specific bachelor's degrees and general transfer information,

and the LCC website housed their degree requirements and other policy information. Advisors indicated that printed documents are almost never used due to the difficulty of keeping information updated and relevant. It became apparent that most of the document review for this study would be online.

I also recorded field notes during this phase as part of data collection and to assist with analysis. Field notes were made prior, during, and after each interview. I recorded information related to the physical environment during my interviews at Campus One and Two. I also recorded information about how I felt before, during, and after each interview. This allowed me to assess my emotional state in the interview process. Finally, field notes focused on the participant comments I found interesting. This helped with ongoing theme development and identifying moments of interest. All field notes were transcribed for data analysis.

Data Analysis

Analysis in case study methodology looks for patterns, themes, and consistency among data to provide an in-depth description of the phenomenon under study (Patton, 2002). This research design allowed for appropriate data collection that contributed to thorough analysis and interpretation of the research questions. First, based on the inductive reasoning process, thoughts and ideas related to the topic were explored from a bottom up approach allowing me to add new insights and understandings about the phenomenon (Esterberg, 2002). Second, data collection and analysis in case study research can be flexible allowing me to change and adapt as the project evolves (Guest, Namey, & Mitchell, 2013). Third, case study research requires thick description to provide enough information and description so readers can decide how to make meaning

of the phenomenon and the findings (Creswell, 2013). Finally, case study research is a non-linear approach allowing data collection, analysis, and interpretation to occur throughout the research process concluding with a detailed narrative or account of the phenomenon. These qualities allowed me to study community college advisors' understandings and uses of STAP in terms of their thoughts and ideas, all while being flexible in data collection, analysis, interpretation, and presentation.

Yin (2017) further suggested the analysis of case study data requires the development of a detailed case description whereby the researcher describes the findings within the specified theoretical framework. Yin suggested the use of a detailed case description as part of the analysis process is important in a descriptive study because the intent of this type of methodology is to provide a new description and understanding of the phenomenon. The discussion in this study includes a detailed description of the case using the concepts of systems theory as outlined by Hutchins (1996).

Case study methodology allows for codes and themes to be discovered during data collection and analysis; however, the research questions can provide some direction for code development. Based on my research questions, I used codes related to academic advising functions and purposes, functions and purposes of Colorado STAP, influences of Colorado STAP on advising, discrepancies, challenges and opportunities, and coherence within the system. In addition, codes related to systems theory were also used.

Transcript Analysis

I used the steps as outlined by Creswell (2013) for data analysis, interpretation, and representation. First, Creswell recommended organizing and preparing the data for analysis. This involved transcribing interview data, typing field notes, and uploading

documents for review. Second, Creswell suggested reading through all collected data to get a general sense of the information and to create an overall general impression of the study. Next, he suggested coding and parsing the data to identify themes and categories and to create an in-depth case description. The use of systems theory as a theoretical framework assisted in defining the codes (Hutchins, 1996). Finally, Creswell (2013) suggested creating an in-depth case description starting with an account of the people, places, and events that make up the case then providing a detailed overview of emergent themes. During this meaning making process, Creswell suggested asking questions about lessons learned, connections to theory, differences/similarities, and what additional questions have developed based on the interpretation.

I analyzed the interview transcripts with line-by-line open and axial coding, allowing for the discovery of relationships between codes and the generation of categories and themes. Open coding allowed me to examine the data for similarities and differences, and axial coding produced connections between categories and sub-categories. I continuously analyzed the data looking for common themes, patterns, and connections allowing for the triangulation of data which helped corroborate the findings. Triangulation here means comparting data gathered through different methods to determine areas of agreement and divergence.

Document Analysis

Creswell's (2013) process outlined above also applies to documents and field notes. Document analysis was used both to triangulate and corroborate data and provide additional understanding and description related to the case. Document analysis can be approached in a number of different ways; however, O'Leary (2014) suggested using

documents to answer both the research questions and broader questions related to the phenomenon. By asking larger questions of the documents, areas of relevant information can be identified and analyzed.

For this study, document analysis was similar to transcript analysis whereby I coded the data, explored themes, and identified texts to use in the final interpretation. Documents were initially coded based on source, date created, type, and overall theme for easy identification and use during the analysis phase (Bowen, 2009). I also authenticated all documents used in the study for credibility, accuracy, completeness, and purpose. Bowen stated, "Researchers should not simply 'lift' words and passages from available documents to be thrown into their research report. Rather, they should establish the meaning of the document and its contribution to the issues being explored" (p. 33).

All documents were then read, coded, and analyzed for content and themes that were evident. Bowen (2009) suggested documents should first be read to "identify meaningful and relevant passages of text" (p. 32). Bowen then suggested re-reading the documents to identify themes and categories related to the research questions. During this phase, I looked at selected codes, categories, and texts to identify themes related to the phenomenon. These codes, categories, and themes were continuously compared to other data looking for similarities, differences, and patterns.

Field Notes

Field notes were also analyzed using Creswell's (2013) process. Field notes were first recorded by hand in the field and they transcribed via electronic means on a password-protected computer. Merriam and Tisdell (2016) suggested creating documents with two columns, one column to record descriptive notes, and another to record

reflective notes. All documents were stored in a password protected file that only I can access. Participant names were changed to protect their identity. Any hard copy materials related to the study were locked in a secure file cabinet in my office.

Once transcribed, field notes were coded, categorized, and relevant text segments were identified. Next, the codes and categories were reviewed, re-read, and categorized to develop relevant themes (Merriam & Tisdell, 2016). Field notes acted as a supplemental method and codes identified during the analysis of interview and document review data were used. As with document review, the themes identified during this analysis were constantly compared to other findings.

My field notes were less relevant to the analysis process than anticipated. Although they helped during the interviews and aided in initial theme development, they provided little support for the overall analysis. This may be a result of using systems theory to analyze the date and findings. Systems theory is interested in wholeness and interconnectedness, not individual parts. If examined another way, as the researcher, I was a separate system from the academic advisors', which was the system of focus. I analyzed the data from a systems theory perspective with a focus on one system of interest, academic advisors. The interconnectedness of the researcher system, me, with the academic advisors' system provided helpful from a reflexive standpoint as I navigated issues of trustworthiness.

Using Systems Theory Framework for Data Analysis

Systems theory framework guided data coding, analysis, interpretation, and representation of the findings. Using Hutchins (1996) ten concepts of systems theory as outlined in chapter two, I examined academic advisors as a system, how the various

components of the system interact to support STAP functions and purposes, areas of strength and weakness, and how advisors use STAP within the system. Both Bridgen (2014) and Musser (2006) used the systems theory framework provided by Hutchins (1996) to code, analyze, and interpret the data in their studies on academic advising. Bridgen (2014) used a descriptive case study methodology and found that Hutchins' (1996) framework was helpful in describing the overall case and providing a detailed description of the findings. Both Bridgen (2014) and Musser (2006) systematically presented their findings using each of the ten concepts outlined by Hutchins (1996) creating a very robust and descriptive discussion of the case. Based on the successful use of systems theory framework by Bridgen (2014) and Musser (2006), I used Hutchins' (1996) ten concepts to analyze the data and present and discuss the findings.

Hutchins' (1996) ten concepts provided additional codes and themes that were used for data analysis and interpretation. These codes included system wholeness, interconnectedness, parts, purpose, functions, structure, boundaries, purpose, adaptability, and change. Each of these codes aligns with the concepts outlined by Hutchins. Using these concepts allowed for an in-depth analysis of systems theory in relation to the research questions and provides readers a deeper understanding of the functions and purpose of STAP in an academic advising system.

Steps for Data Analysis

Creswell's (2013) steps for data analysis and representation guided my data analysis. His framework laid the groundwork I need to get my data from recorded files to a detailed and descriptive representation. Here are the steps I used for data analysis:

1. All interviews were transcribed verbatim and transcripts were read and re-read to create a broader perspective and overall impression of the data.
2. Codes were developed based on research questions and on Hutchins' ten concepts of systems theory (Hutchins, 1996). Pre-developed research question codes included: purposes, functions, uses, objectives, procedures, process, and cohesion. Pre-developed systems theory codes included: wholeness, interconnectedness, parts, purpose, functions, structure, boundaries, interest, adaptation, and change.
3. I then re-read and chunked the data into the pre-developed codes. Data, including interviews, documents, and field notes, and was coded using an online software (Quirkos) that assisted with category and theme development.
4. Data were reviewed and initial themes were analyzed to develop the findings. Systems theory provided guidance during this step as a way to stay centered on the concept of system wholeness. Themes related to system interconnectedness and function appeared early and aided in the development of the findings. System adaptation and change also became important as findings related to STAP uses influenced the academic advisors' system.
5. Once the findings were identified, I produced a detailed and descriptive representation which included an in-depth discussion of the findings in relation to systems theory.

Trustworthiness

According to Hays and associates (2016) research rigor is established through a detailed approach to the overall research design including data analysis, interpretation, and presentation. This type or rigor, also known as trustworthiness, assures quality in research studies, primarily where qualitative data are used. Where post-positivists deal with validity and reliability to demonstrate rigor, researchers using methods that are more naturalistic must establish trustworthiness to ensure the quality of a study (Jones et al., 2006). According to Lincoln and associates (1985) trustworthiness includes elements of *transferability*, *dependability, credibility,* and *confirmability*.

Transferability

Transferability refers to the extent the research findings can be generalized by the reader (Morrow, 2005). A researcher establishes transferability by providing the audience with a detailed description of the research process so the reader can determine the extent to which they can generalize or transfer the findings to new situations (Morrow, 2005). Transferability, similar to external validity in post-positivist research, allows the reader to generalize participants, settings, and timeframes to other situations (Hays et al., 2016).

Dependability

Dependability addresses the consistency in the findings over time and between similar studies (Hays et al., 2016) focusing on data and data collection methods with an emphasis on transparency in the process with the reader understanding where the data comes from, how it was gathered, and how it was used (Morrow, 2005). Interpretivists use dependability to demonstrate that findings are consistent with the proposed process. Hays et al. (2016) stated, “Dependability…refers to the consistency of findings across

time and researchers. Thus, similar findings would be expected among researchers within and across studies" (p. 174).

Credibility

Credibility refers to the believability of the study and the idea that the findings make sense in relation to the research process used (Hays et al., 2016). Credibility is about producing data based on honest and trusting interactions with research participants through prolonged interactions (Gasson, 2004). According to Gasson (2004), credibility is similar to internal validity in positivism with the primary purpose of demonstrating "how we ensure rigor in the research process and how we communicate to others that we have done so" (p. 95). According to Hays et al. (2016), credibility also refers to the overall believability of a study or the extent the findings appear accurate based on the research process presented. According to Mertens (2014), paying critical attention to credibility ensures that research findings align with participants' perceptions.

Confirmability

Finally, confirmabilty relates to the ability of the researcher to present the finding while controlling for researcher bias (Hays et al., 2016). Confirmability requires establishing for readers that the findings represent what is being researched rather than the beliefs and biases of the researcher. According to Shenton (2004) "…steps must be taken to help ensure as far as possible that the work's findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher" (p. 72).

All four strategies were used in this study which helped to produce confirmability by controlling for researcher bias in the findings (Hays et al., 2016). Additionally, my

beliefs about why I selected the proposed research design, including epistemology, methodology, and methods, are well articulated in this chapter and I believe provide a solid rationale for using the techniques selected (Shenton, 2004). This interpretivist case study using semi-structured interviews, document analysis, and field notes for data collection and analysis provided multiple opportunities to adhere to the tenets of confirmability and helped control for researcher bias.

Strategies to Establish Trustworthiness

Hays et al. (2016) examined studies using qualitative approaches in counseling research and found 11 approaches commonly used to establish trustworthiness. These include prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, reflexivity, thick description, member checking, external audit, complexity of analysis, and referential adequacy (Hays et al., 2016). Gringeri, Barusch, and Cambron (2013) looked at rigor in social work dissertations finding audits, member checking, triangulation, peer debriefing, and thick description were the most commonly used strategies to establish trustworthiness. Additionally, Gringeri et al., (2013) found that on average 3.6 strategies (a range of one to seven) were used in dissertation research. In this study, I used reflexivity, thick description, member checking, and triangulation of data methods to establish trustworthiness in the elements of transferability, dependability, credibility, and confirmability.

Reflexivity. Interpretivist researchers are personally involved in data collection and can themselves be understood as research instruments (Creswell, 2007). Unlike positivist researchers who attempt to maintain an objective perspective and distance from their participants, interpretivist researchers seek to understand meaning and experience

from a reflexively subjective stance and to engage in sustained (and often intensive) experiences with participants (Creswell, 2007). Hays et al. (2016) defined reflexivity as "The monitoring throughout the process of the assumptions, and relationships the researcher has with the topic, the sample, and site" (p. 176). Reflexivity also allows the researcher to be a listener, observer, and participant in the process (Rubin & Rubin, 2011). This approach places more emphasis on the researcher's voice in the research process (Eisner, 2017). The use of "I" or "we" brings the researcher to a study's center and reminds readers of the researcher's subjectivity (Eisner, 2017). Additionally, reflexivity allows the researcher to interpret what is being heard, which may mean explaining why something is happening or interpreting what the experience means to participants (Eisner, 2017). I used reflective field notes to examining my reflexivity and monitor and control for my biases (Hays et al., 2016). Reflexivity can be useful in establishing the elements of credibility, dependability, and confirmability (Hays et al., 2016).

Reflexivity Statement. I have been employed in the field of student affairs at institutions of higher education for more than 15 years. During this time, I have had opportunities to examine my social identities as a White, forty-something, highly educated, able bodied male from a middle-class background. I have also been able explored my professional identities having worked in several functional areas at multiple institutions. These social and professional identities define my relation to society and my work and help me make meaning of my world. It is also important to examine these identities in relation to my research. As stated by Jones et al. (2006), "Without this understanding, the researcher's bias dominates the interpretation and analysis of the

research process" (p. 104). Through exploration of these identities, I am better able to understand my positionality and how my identities impact the dynamics of the research process.

As I neared the end of my research I began questioning how my identities affected my research questions and what participants were willing to share. I know my identities of White and male produced a blind spot during data collection, specifically during the individual interviews. I decided not to collect demographic information on each participant, and instead I allowed each participant to decide what was important to share from their perspective. Based on limited pervious research in this area, I wanted to explore the phenomenon without leading participants. The research questions were designed to allow broad responses and perspectives. Unfortunately, this approach did not acknowledge the power and privilege my identities of White and male may have brought to the interview setting, and it likely influenced what certain participants shared. By not asking for demographic information, or asking questions specific to race, ethnicity, or gender, I did not create an environment that invited discussion in these areas. My ability to ignore these identities (while others are not necessarily afforded this privilege in their daily lives) affected what was shared and thus influenced the findings in ways of which I am unaware. I discuss this further as a limitation to this study in Chapter 5 and advocate for future research that includes recognition of researcher identities.

I brought to the interviews certain identities that established or generally reflected a power relationship between myself and my participants. Jones et al. (2006) argued that researchers must understand their social status as it relates to power and privilege and the impact this can have on research participants. This power differential influenced not only

the outcomes of a study, but it also could have negatively affected research participants. I attempted to maintain an awareness and understanding of the power and privilege associated with each of my identities, and tried to position myself in a way to minimize that influence on data collection and analysis. Regardless of my efforts to control for negative impacts experienced by participants, my research design and data collection methods did not allow this to happen. Although I tried to approached both phases of data collection with an awareness of my power and privilege by being conscious of my voice in emails, my physical presence in the interview space, and my interactions with participants, I failed to create a fully "comfortable" space for all participants during the interviews. Daley (2010) referred to this awareness as *reflection in action* and *reflection on action*, where the former addresses events in the moment and the latter addresses critical understandings based on reflecting on past experiences. Through reflection on this experience, I further understand the impact ignoring my identities had on my participants, the findings, and my research in general. Milner (2007) stated "In the process of conducting research, dangers can emerge when and if researchers do not engage in processes that can circumvent misinterpretations, misinformation, and misrepresentation of individuals, communities, institutions, and systems" (p. 388). By not being mindful of the role identity plays in my life and the lives of my participants, it is possible that imperiled this research and some aspects of my participants' well-being. By reflecting on this experience, at this point what I can do is hold my self-accountable regarding the effects this research may have had for individuals from underrepresented communities.

In addition to my primary social identities, I also identify as a student affair professional with more than 15 years of work in higher education. I have worked in

several functional areas in academia including orientation, student activities, recruitment, and housing. I have also worked at serval different institutional types including a small regional liberal arts college, a large research-intensive university, a private science, engineering, and aeronautics institution, and a community college. Although I have never worked as an academic advisor, I have worked in systems that are interconnected with the field which has provided me awareness of advising's purposes and functions.

Banks (1998) discussed the concept of insider/outsider identities in relation to the researcher and participant relationship. He identified four ways in which the research is related to the participants. First, indigenous-insider is a researcher familiar with, and who comes from, the community being researched. Second, indigenous-outsider is a researcher from the community but is no longer familiar with the culture being researched. Third, external-insider is a researcher from another community but has become familiar with the community being researched and has accepted the values and customs of the culture. Fourth, external outsider is a researcher who is neither from nor familiar with the community being researched. This is an important distinction to make when examining social and professional identities and the relationship between the researcher and participants.

Many of my professional identities aligned with the participants in my research casting me as an indigenous-insider. Banks (1998) further defined indigenous-insider as "This individual endorses the unique values, perspectives, behaviors, beliefs, and knowledge of his or her indigenous community and culture and is perceived by people within the community as a legitimate community member who can speak with authority about it" (p. 8). My professional identities cast me as an insider who understands the

socially defined cultures, values, behaviors, and beliefs associated with the participants. Based on these similar professional identities, participants might have seen me as an insider who has knowledge and understanding of what it means to be a member of these higher education communities and may have approached me as such. In addition, my identification as a higher education professional placed me in a position to misinterpret participant experiences based on my preconceived notion of what it means to hold a particular position. Jones et al. (2006) stated,

> Understanding one's standpoint and position before entering into a research project is imperative so as to guard against hearing, seeing, reading, and presenting results that conform to the researcher's experiences and assumption about self and other, rather that honoring the participants' voice in the study. (p. 102)

By acknowledging my common professional identities, I can approach this research from a reflexive stance and be aware of my biases from an insider perspective.

According to Hawkins (2010), researchers must be aware of how their identity shapes the research they pursue. He argued both our interests and our social identities influence the type of studies we conduct and the participants we engage with in the field. This is true for me as my professional identities align with my interests in the research topic. My interest was motivated based on similar identities to my participants and a desire to better understand additional components of the profession. It was imperative to approach this study using the suggestions made by Jones et al. (2006), which included being reflexive on how my identities interact with those of the participants and the research study, creating a research design that allowed for reflexivity, and acknowledging my perspective. Finally, I allowed the voices of the participants to paint their experience and constitute the findings.

Thick description. Another strategy used is the idea of thick description for analysis, interpretations, and presentation (Geertz, 1973). The concept of thick descriptions is more than gathering large quantities of data and detail (Schwandt, 2007). It is about sharing the larger meaning and interpreting the behaviors and actions in detail (Schwandt, 2007). Schwandt (2007) stated,

> To thickly describe social action is actually to begin to interpret it by recoding the circumstances, meanings, intentions, strategies, motivations, and so on that characterize a particular episode. It is this interpretive characteristic of description rather than the detail per se that makes it thick. (p. 255)

Hays et al. (2016) defined thick description as purposefully describing the overall processes and research outcomes so the reader can apply the findings or attempt to replicate the study. Thick description includes presenting in-depth details about the research process, participants and setting, findings, and conclusions (Schwandt, 2007). Lincoln and associates (1985) suggested that thick description, which provides readers rich and descriptive information about research participants, setting, processes, and findings, is essential for establishing trustworthiness in qualitative research. Polit and Beck (2010) stated, "Thick description means more than reporting sample characteristics. In qualitative research in particular, thick description requires rich description of the study context and of the phenomenon itself" (p. 1454). Case study methodology requires that the researcher provide detailed information about the study's context, the processes used, the participants interviewed, and thick description of the findings (Merriam, 2001). This description can be used to establish all four elements of trustworthiness (Hays et al., 2016). I used thick description to present the case description, findings, discussion, and conclusions.

Member checking. Member checking boosts a study's trustworthiness by giving research participants an opportunity to review the findings for accuracy (Creswell, 2007). Member checking can ensure accuracy of the findings, allow for additional or revised interpretations, and help to authenticate the findings (Jones et al., 2006). Member checking, in essence, provides a level of quality control to data collection, analysis, and interpretation (Mertens, 2014). This strategy allows the researcher continual interaction with the research participants to ensure their perspectives, meanings, and words are portrayed accurately (Hays et al., 2016).

I presented my findings and analysis to all 28 research participants to align their intentions and my interpretations. Participants were sent the initial manuscript in January 2020 and asked to review the findings and provide feedback. I received comments from four participants, Andrew, Lisa, Maria, and Patricia. Comments were mainly encouraging and participants agreed with the findings presented. Patricia asked for clarification and provided additional thoughts related to economic mobility, which help me expand on that finding. I looked back at the data and reworked this section based on her questions and comments. I sent the manuscript to her a second time in February and confirmed that the perspective was correct. Member checking helped me establish the elements of credibility and confirmability (Hays et al., 2016).

Data method triangulation. Data method triangulation requires the use of multiple data gathering techniques to justify the themes that emerge (Creswell, 2007; Mertens, 2014). Triangulation can refer to use of multiple methods, theories, researchers, or methodologies (Creswell, 2007). I used multiple methods of data collection to establish triangulation. Methods include individual interviews, document analysis, and

field notes to triangulate the data to corroborate theme development and findings. This strategy helped establish credibility (Hays et al., 2016).

When these four elements are addressed, Lincoln et al. (1985) argued that trustworthiness is established. When transferability, dependability, credibility, and confirmability are present, a more convincing case is made a study's soundness and rigor (Shenton, 2004). The challenge for researchers is to ensure the study adheres to these elements and every effort is made to address their presence as part of the overall process. I made every attempt to address the elements of trustworthiness in the proposed study as outlined above.

Chapter Summary

The purpose of this study was to understand how community college advisors understand and use Colorado STAP in their work with transfer students. This chapter describes the value of using qualitative data to examine the proposed research questions as a way of exploring the lived experiences of academic advisors in relation to the phenomenon. A methodological framework outlines the use of a constructionist ontology, interpretivist epistemology, and descriptive case study methodology to examine the emergent themes produced using semi-structured interviews, document review, and field notes. This chapter also outlines the sites and participant selection and provides an argument for placing the study in the state of Colorado. Finally, data were analyzed using a systems theory framework to identify patters and themes used to interpret and represent the findings and discussion. Additionally, elements of trustworthiness were employed to assure rigor in the study.

CHAPTER IV

FINDINGS

This study's purpose was to understand how community college advisors understand and use Colorado STAP in their work advising transfer students. My research questions included:

Q1 How do advisors understand Colorado statewide transfer articulation policy purposes and functions within a community college advising system?

Q2 How do academic advisors describe the espoused objectives, policies, procedures, and processes of statewide transfer articulation policy and advisors' understandings and uses?

Q3 How do these understandings influence their advising practices?

Q4 How do academic advisors' understandings and uses of statewide transfer articulation policy contribute to or take away from system coherence among a multi campus system?

Addressing these questions offers a new perspective on STAP and further fills research gaps in this area. By including academic advisors' voices, this study provides new data about Colorado STAP which contributes to a new understanding of articulation. The most important contribution this research makes is to provide new perspectives about how academic advisors understandings of STAP impact use. The following analysis and discussion provide information about STAP that may assist policy makers and institutional leaders as they explore ways to modify and enhance articulation. Ultimately, these new understandings could help state policy makers and public institutions as they

tackle issues of stratification, degree completion, higher education efficiencies, and workforce demands.

The themes identified by participants are not all expressly stated in Colorado STAP, but the general idea of each is represented in the official statute. Through the ways advisors solve problems using STAP, advisors have created understandings of purpose and function that align with policy intentions. Although there are differences and unique interpretations, what advisors understand supports the policy goals. The official policy language is a directive to create programs that facilitate credit transfer and provide basic protections for students moving between institutions. However, there is no specific language that guides advisors on how STAP should be implemented or how these policies might be used in advising. This lack of directive means that advisors are in charge of constructing their own understandings of and uses for STAP based on how they use articulation in their work.

Several main themes comprise the findings presented in this chapter. This chapter starts with an overview of a recent change in advising structure at LCC which provides some necessary context for understanding the findings. The next three sections explore the findings related to RQ1 by discussing the purpose and functions of advising and articulation as identified by my data. In this section, I present my findings related to advisors' views toward advising's purposes and functions and then delve into how they define articulation's purposes and functions. The next section includes a discussion associated with RQ2 concerning how advisors describe STAP's objectives, policies, procedures, and processes. In the next section, I present findings related to RQ3 about how advisors' understandings of STAP influence their uses. The final section offers a

discussion of system functions and explores how advisors understand and use STAP across multiple campuses. This section addresses the RQ4 about system coherence.

Throughout the data collection, participants referred to students as a homogenous group. Many of the findings presented here are based on this group view and are analyzed through this group lens. One exception to this view is presented in the Advisor Understandings and Uses of STAP under the Perceived Limitations Influence Use section. Here participants discussed sub-populations of students that may be affected differently by STAP. Otherwise, comments were about the student population as a whole.

Changes to the LCC Advising Structure

As discussed in Chapter 3, LCC adopted a new Pathways model of advising which has influenced how advisors understand their work. This new model employees a different structure and approach from the previous structure and the differences are important in providing context for the findings presented in this chapter. I provide this context for readers to understand how advisors currently approach their work which I believe influences how they understand the purposes and functions of advising and articulation which are presented in the next section.

The shift to Pathways advising significantly increased how advisors fulfill their duties and responsibilities and how they understand their roles. Advisors who transitioned from the old model into the Pathways model suggested a broadening of understandings. Maria, who has been at the institution for more than 20 years, commented on her shifting perspective over time. When she was hired, advising was all about the "nuts and bolts," whereas, today she has the opportunity to develop extended relationship with her students and helps them plan both their academic pursuits and their life goals. For Maria, this

signifies a shift in how she views her work in relation to the students she serves. Before, her work was related to helping students select courses and fulfill requirements. Today, she helps students explore educational opportunities, connects career goals to academic pursuits, and prepares students to achieve their personal and professional goals as they move on from the community college. Hannah shared that here conversations and relationships have change under the new model.

> I think the new structure was a natural transition for me. There is a lot more interpersonal connection with students. We discuss things from financial, to academic, to personal. Our discussions have evolved. I also get to see students more frequently and I think that has a huge bearing on our work. I can call them on their stuff now and provide more help. So, I think that has been the biggest change; the interactions and relationships I develop with the students.

Although, advisors still spend their time completing "advising" related duties, this now encompassed more than just academic pursuits. This comprehensive approach to advising has shifted advisors' understandings of their work from a prescriptive to a wholistic approach. This change in perspective demonstrates how the new model influenced the academic advisors which ultimately influences this research.

Purposes and Functions of Advising

Discussion in this section begins with a broad exploration of how participants described the purposes and functions of advising which is needed to answer RQ1 related to advisors' understandings of purposes and functions of STAP. Advisors at LCC view themselves as serving on the frontline assisting students with a myriad of services related to academic planning, transfer, and graduation. Based on this position in the institution, they believed much of their work is student-focused requiring both a big picture understanding of the issues while providing a more granular approach to help students navigate higher education. Andrew shared that transactional advising was important, but

that advisors also provided additional services for students during an advising session. For example, Andrew expressed the magnitude of the role by saying, “I think it's a bigger role than we probably give ourselves credit for, in all honesty, because I do recognize we help students with a lot. A lot of it is transactional but that’s not all we do.” Andrew, like other participants, discussed several additional purposes related to advising and articulation. To make meaning of large amounts of interview data, I first discus purposes of advising prior to discussing more specific understandings of STAP.

Six Most Prominent Advising Purposes and Functions

Hutchins (1996) proposed that a system’s purposes are defined by how it functions. This was evident in advisors’ responses to my questions. Daily advisors are required to complete duties and fulfill responsibilies that make up their work lives. These duties and responsibilities become ingrained in their work and create a cycle of understanding. What they do helps them make meaning of their work and how they make meaning of their work directs their actions. Analysis in the following sections demonstrates what advisors do drives what they believe, which is how they define the puropses of academic advising. In order to delve into RQ1, I felt it was impotant to understand the functions and purposes of advising as a way to frame their current work.

Participants identified several purposes and functions of advising related to loftier goals of state-level progress, and also emphasized that students are primarily looking for assistance with the basics of major/program selection, choosing courses, and sequencing. The variety in responses suggests that advisors see their work as both fulfilling state goals while also supporting individual student needs. When asked about their work, participants identified six areas that constitute their daily responsibilities. These purposes

and functions included providing transactional services, establishing connections, creating pathways, assisting with transfer planning, influencing economic mobility, and providing support.

Transactional services. Most participants defined transactional services as a primary function of advising and they reiterated the importance of transactional work in the institution's retention, graduation, and transfer efforts. Transactional services included providing basic course selection and sequencing, assisting with major exploration and selection, providing accurate and timely information, connecting students to campus resources, interpreting educational policies, and explaining the intricacies of higher education (i.e., what a credit is and what the requirements are for certificate or degree programs). Nearly all of the advisors discussed the transactional components of advising when asked about what they do, and this fact highlights the importance of transactional services in their work. For instance, Deborah stated:

> I've always kind of believed that my job requires providing some of those transactional pieces that really tie into academics and student support. As far as academic advising goes I try to let my students know that I'm here to support them as they select classes and make academic decisions. We tackle those transactional pieces and college details that they might not be familiar with.

Deborah focused on providing transaction services as a way to support here students. In considering the hierarchy of needs, transactional services provided the base on which advisors could build to higher levels of purpose in their work. Without completing the transactional components, it would be difficult to work with students around personal and professional goal attainment.

For nearly 25 percent of participants, the transactional function also defined the larger purpose of advising. These advisors saw the purpose of advising as the ability to

provide transactional services as their sole duties and responsibilities. The transactional components not only demonstrated their ability to do the work, but these functions defined how they saw themselves in relation to the bigger picture. Gary shared that most of his student interaction consisted of providing transactional services stating "I know we have become more holistic under the Pathways model, but I still spend a majority of my time working with students on course selection and degree planning. More of the transactional parts of advising." Helen was hired as part of the new Pathways model and found that most of her day was taken up with the transactional function of advising. She acknowledged that the focus should be on an integrated approach but found that her days were filled with course selection and scheduling. Helen believed the purpose needs to match what students need from advising.

> I start most of my advising interactions trying to figure out what kind of support it is that the student needs. Many students really do just want a second pair of eyes on a schedule and those advising sessions are about schedule confirmation. If this is what the student needs, I believe that is the purpose.

For Helen, assisting with the transactional components was important because that was the service many of her students were seeking. Paying attention to students' basic needs first provided Helen an opportunity to discuss personal and professional goals in future advising sessions.

Establishing connections. Beyond the transactional components, the advisors also discussed the importance of establishing connections with students as an important function of academic advising signifying the transactional components would not be possible without students connecting with advisors or other resources. Rita viewed connection building as essential in performing the duties of her job and believed that

connections provided a base on which she could work to fulfill the larger purpose of academic advising. Maria shared this thought about connections:

> I think there is a transactional piece of sharing information but there's a relational piece as well about making sure students have some connection on campus with a meaningful person that's guiding and helping them through their time and their process here.

She believed the connections allowed to her to support and guide her students while focusing on the transactional components of the job. Rita and Maria worried that their ability to support students would be limited if they did not establish a connection. Hank, who worked at LCC prior to the new Pathways model, reflected on the lack of connection building in the old model based on limited time with students. He shared:

> Previously, we didn't have the time to develop relationships and make connections with our students. They came in for 15 minutes and that was it. Now, I have time to get to know the student and usually see them more than once. I feel like these connections help me as an advisor.

In his view, the new Pathways model provides longer and more frequent contact with each student, allowing for the connection function of advising to happen.

Advisors also defined connection as the purpose of academic advising. Advisors who believe making connections is a primary purpose shared that their role was to help students connect to personal and professional goals, desired outcomes, and economic mobility. These ideas were much loftier and discussed from the perspective of working with "the whole student." They saw the functions of connection contributing to the larger purpose of advising. Pauline articulated her role as helping students make connections to this larger outcome of college and saw this as her purpose. Pauline shared how connection supported her advising practice:

> I think a little bit more in depth about what their education means to them and their personal value system. I think a lot of the conversations I have focus on

> getting students to think a little bit more critically about their own personal value system and how that's going to translate into an academic pursuit and then also a career long outcome. I would say that the biggest purpose for me is kind of helping them connect to their outcomes.

For Pauline, connection was about the larger role higher education played in a student's life. The ability to facilitate connections to personal and professional goals drove Pauline's purpose in work.

Connection, as both function and purpose, highlights the multiple ways advisors approach their practice and what they believe is important. Connection is something advisors do in their work with students and it is something they believed is their purpose in the bigger picture. These insights are important in understanding what advisors believe is their role in the advising and transfer processes.

Creating pathways. Creating pathways was acknowledged by nearly all participants as a key function of academic advising and identified as a primary role. Creating pathways for students meant helping them explore and navigate the options to achieve their personal and professional goals, having conversations about the reality of these goals, helping them set realistic expectations, and motivating them to achieve desired outcomes. Creating pathways also included providing accurate and timely information, answering questions, and referring students as they navigate the higher education system. Advisors have a unique opportunity to help create pathways based on their comprehensive understanding of the different processes' students go through while in higher education. Advisors can effectively create pathways for students because they have knowledge of the many processes that affect students. Karen shared her approach:

> I try to get them [students] to think about what it is that they really want to achieve and then use all my residual knowledge from different student affairs departments to figure out the potential roadblocks they might run into. I consider

> the things they're not thinking about and try to figure out what little kernel of information I could give to them. I think sometimes it's clarifying what they want to do based on my knowledge. I think sometimes people in general have this idea of what something is going to look like but then don't necessarily grasp everything that comes along with that decision.

For Karen, her ability to see both the big picture and understand the small details allowed her to create the pathways her students needed to successfully achieve their goals. This idea of pathways creation came up for just over 50 percent of the participants with many sharing similar stories related to their knowledge acquisition and how this repository of information serves them well in helping create pathways for students.

When participants defined "creating pathways," it became apparent that they also saw this concept as a purpose of advising. Advisors' took a big picture view of why the profession existed and discussed several ways creating pathways is a purpose, including providing multiple options to get from point A to point B, finding efficiencies in these paths, helping students create realistic expectations based on the path they select, and having conversations with students about the reality of their desired path. Additionally, advisors saw their purpose as helping students navigate higher education, creating a pathway with students that connect options with outcomes, and creating pathways that allow students to successfully achieve their goals. Maria shared how her purpose connects directly to creating pathways for students:

> The way I see my job is to create the most efficient plan possible for the student to get from point A to point B and nine times out of 10 that is not the degree with designation [DWD]. Usually it's the regular associate of science, making sure that they're meeting specific requirements for the four-year degree as a part of that degree. So, in practice, it's looking at that big picture and then bringing it back to what does that mean here and then creating a semester plan for what requirements are needed to get them to that end goal. To find them the most efficient plan possible. And at the end of the day my first and foremost energy wants to go to the student, helping define where they're going and how to get them their most efficiently. If that's articulation great, if it's not, I'm going to guide them in the

most efficient way that I can find.

Maria looked at all the options available for getting a student to their goal and used the information to develop the most efficient pathway. For her, creating the best path for students was her purpose for advising. This idea of pathway creation came up often during interviews and this purpose was shared by nearly 70 percent of participants.

Transfer planning. A function related to pathway creation is the work advisors do in the transfer planning process. Although, similar to pathway creation, transfer planning was defined by participants as the process of helping students in discovering various bachelor's degrees, interpreting and using articulation, navigating admissions requirements, transcripts, etc., exploring four-year institution options, and encouraging students to make connections with faculty and staff resources at their destination institution. These functions were unique and more narrowly focused on the concept of transfer. Maria predicted that 80 percent of students she meets with are interested in transferring to a four-year institution to complete a bachelor's degree. For her, that figure indicated the extent that transfer planning figures in her work. I did not ask all of the advisors for this quantitative figure as this study focused on the use of qualitative data to answer the research questions. Even without this quantitative figure, advisors identified components of transfer planning process as important to their work with students. Transfer planning varied within the pathway areas, with advisors in health and wellness discussing transfer planning far less than advisors in other areas due to a large majority of students pursuing nursing degrees which have heavily prescribed curriculum and designated transfer paths.

The participants identified the importance of connecting students with their destination institution early as an important piece in the transfer planning process. This concept came up in nearly every interview, which demonstrates the value advisors place on this function. From an advising perspective, contacting with the transfer institution early provided students with the information they need to guarantee the correct transfer path. Pauline stated:

> We always send students to their transfer institution as the primary authority on everything. What's actually going to transfer, what specific electives they're looking for, if there have been any recent updates to what they're looking at. It's a general guideline that we all use and I believe it is very valuable.

Pauline believed in her ability to assist with transfer planning; however, she did not want to take complete ownership of the process. She saw her role as providing part of what students need in transfer planning while relying on four-year institutions to provide other pieces. This sentiment was reiterated by other advisors and supported by language on the DWDs I reviewed. In fact, advisors did not see themselves as the authority on transfer, and they believed connecting students to their transfer institution is an important function of their work and vital to the transfer planning process.

Influencing economic mobility. Facilitating economic mobility was discussed by two advisors as a primary purpose of advising; they believed that connecting students to appropriate resources, people, and ideas, can help students achieve economic mobility. Thinking about economic mobility in this way allowed these advisors to work broadly in relation to the functions of advising. As Karen commented:

> Certainly, you have folks with a different slant, but I think that if you boiled it all down, I think everyone would say some version of, helping students towards economic mobility. I think mine is a little more specific in terms of the economic

> mobility piece just because I'm so passionate about students who leave without a credential. I also think that other advisors are passionate about that.

Karen did not think other advisors would use language specific to economic mobility but believed they had this larger concept in mind in their work. For her, she understood the value of a degree and this drove her work.

Patricia also commented on economic mobility as a means of helping students achieve their personal and professional goals:

> The overall purpose of advising is to, in my opinion, should be to help students connect their desire for economic mobility to their academic goals. I think that is purpose; helping students connect their desire for economic mobility with their academic purpose, academic goals, and academic course work.

Patricia begins her advising sessions exploring the students personal and professional goals, so she understands what the student needs. These goals are greater than a degree and she felt that her work supports ideas of economic mobility for her students.

Providing support. Finally, providing support was identified as another purpose by the participants. Support meant many different things to the advisors including being an advocate, coach, and/or guide, being an interpreter and educator, creating a system of support, and being a normalizer. The idea of advocating, coaching, or guiding came up in nearly every interview with advisors sharing that this is their main purpose when working with students. Advisors had unique understandings of the complexities of higher education including transitioning into college, program and degree requirements, the requirements for graduating, and the paths available for transferring. For most students these complex structures were confusing and often intimidating. Advisors can provide support through advocating, coaching, and guiding students in each phase, helping keep

them on track as they work towards their goals. Michelle shared her perspective on guiding students:

> I would say that I'm an academic advisor who not only helps a student to pick classes but also helps them to strategize and think deeply about their end goal. To strategize with students from the beginning of their degree plan all the way to the bachelor's degree. I think that we do a lot of coaching with that end goal in mind. I think on a deeper level a lot of what I do with students is self-exploration and coaching. Trying to get them to think a little more broadly at times or a little longer term about their academic and career interests.

Michelle saw herself primarily as a guide responsible for supporting students in achieving their desired goals. Everything she did in her work was about guiding students to the next step in their process. This idea came up often during the interviews and connects directly to the new Pathways model which emphasizes the coaching role advisors play.

Educating was also mentioned as a primary purpose by advisors. Again, with the complexities of higher education, students often look for someone who can assist in the learning process. Hannah talked about "making every credit count" and often this requires educating students about institutional policies, state articulation, transfer process, and four-year requirements. Rita commented on the purpose of being an educator:

> I think that higher education kind of has its own language and especially at the community college we have a lot of first-gen students who find this kind of stuff very confusing. So, I feel like my job is to kind of interpret what the Colorado Department of Higher Education means with articulation agreements.

Her ability to interpret complex processes and policies was important to her role and how she supported students through the process.

Finally, Karen discussed her purpose as "normalizing" the whole experience for students. From enrollment to graduation or transfer, she was there to help demystify the process and help students see a clear path forward. Karen shared:

> I don't have a great answer as far as what advising is except that I feel like what I do is bring all the things that I know about school, about transfer credit, about graduation, about making weird career choices, about stopping out, about starting again, about feeling like I'm not here with my peers, and making sure that it's ok, that its normal. I tell students, "It's ok to have those weird little things and feel like it isn't right for you." I'm a logically oriented person and I am thinking about all the different ways that things can potentially trip students up that they're not considering right now and finding ways to make it ok.

Karen tried to address the feelings a student had about their ability to achieve their goals making sure they understood that they are not alone. Normalizing the experience allowed Karen to support students as they navigate the complexities of higher education.

These identified functions and purposes played important roles in academic advising at LCC. Advisors who bridged from the old model to the new Pathways approach commented on the change in their understanding and use of these roles to define the purpose of their work. Although the Pathways model supports these concepts, it appears many advisors have adapted how they see their role and what they believe their purpose is in their work.

Research Questions

Research Question One

Q1 How do advisors understand Colorado statewide transfer articulation policy purposes and functions within a community college advising system?

Research question one asks about advisors understanding of Colorado STAP purposes and functions. In this section, I use the data to address this question through a discussion of the themes generated. Finally, I provide a discussion about how advisors understandings developed from daily use and how these uses have informed policy meanings.

Five most prominent articulation purposes and functions. Participants were asked to describe understanding of the purposes and functions of STAP for use with transfer students. Although advisors varied in their responses about articulation's purposes and functions, nearly all found value in STAP as it related to their duties and responsibilities. Most participants (75 percent) suggested that STAP was mostly beneficial to their work, while six indicated that STAP had moderate usefulness, and only one advisor found very little value in STAP as it related to their work.

Nearly all advisors agreed that STAP was important and should exist at the state level. In addition, these advisors believed that the state and institutions should continue to work on developing policies that support the transfer process. Patricia and Karen were less enthusiastic about state involvement in transfer articulation, as they believed individual agreements between two- and four-year institutions would be more valuable to the transfer process. Although they identified valuable pieces of statewide articulation, they believed the limitations outweighed the benefits. These two advisors also had experience working with institutional specific agreements in past employment roles and were able to discuss the ease of use with this type of articulation.

Based on my analysis, I identified five themes related to how advisors understand the purposes of STAP. These include providing clear pathways, providing assurance, credit protection, standardizing the transfer process, and supporting state goals. The following discussion addresses RQ1 and demonstrates how advisors understand Colorado STAP.

Before discussing the functions and purposes identified during interviews, it is important to note that all advisors who participated were able to describe the basic

functions and structures of articulation. When discussing GT Pathways, advisors generally described the ability for a student to select from a list of general education courses guaranteed to transfer to any public institution in the state. They noted all public institutions are required to accept GT Pathways credits and, depending on the institution and program the student is pursuing, GT Pathways credits may apply towards elective or degree requirements. Advisors overwhelmingly supported the GT Pathways agreement and found almost no issues with its design or the implementation.

When describing degrees with designations, advisors were also able to address the basic structural and functional components. Advisors shared that degrees with designations are a contract between the student and two- and four-year institutions that included a prescribed lower division sequence of 60 credits. Once transferred to a Colorado public four-year institution, the student starts with junior standing and only has 60 credits remaining for a bachelor's degree in the selected program. Advisors liked the idea that four-year institutions must transfer the DWDs exactly as listed in the agreement, thus decreasing uncertainty in the credit transfer process. Even with this guarantee, advisors were more hesitant to recommend or use a DWD. Reasons for this hesitance are discussed in further detail below.

Providing clear pathways. The first purpose identified by participants was STAP's role in creating clear pathways. Produced in collaboration between two- and four-year institutions, STAP outlines the requirements and limitations required to move through higher education and into a bachelor's degree. About 35 percent of participants appreciated GT Pathways and the DWDs because they provided a detailed path students could follow for course selection and degree planning. Advisors also thought STAP

provided a level of transparency for students as they made decisions related to transfer. This detailed path and transparency allowed students to take the guess work out of course selection, a process that can be overwhelming and confusing when planning a transfer.

Helen, Patricia, and Rita thought that pathway creation was even more relevant for first-generation students who often lack knowledge and support in navigating higher education. According to these advisors, STAP provided a substantial sense of relief to students overwhelmed by the idea of college and the transfer process. Rita made this comment about first-generation student, "I think the students who benefit most are probably first-generation, because it [STAP] allows them a little bit more support as they're going through their education. They have a path they can follow that makes sense to them." Rita believed that articulation created easy to follow pathways and this is what first-generation students are looking for. Helen also commented on articulation sharing that first-generation students are often looking for the connections between the various parts of higher education. She believed that STAP acts as this connection through the pathways they offer students.

Gary mentioned that pathways created by STAP can ease the burden associated with transfer. He commented about difficulties students experience when it comes to understanding requirements and credit transfer, and STAP provided a mechanism to eliminate that burden. The following comment from Gary illustrates this appreciation:

> The purpose of it [STAP], is to basically make it as seamless as possible for the student to transfer from a two-year to four-year. Having a map, a plan of the courses a student can take. When the student transfers over after completing two years here they only have two years left and can jump right into their major. I like the idea behind it. I think it creates a seamless path.

Gary's comments were shared by other participants who believed STAP created pathways that helped students navigate the transfer process. Gary was quick to add that not all DWDs provide this seamless experience, and in some cases, they can create more issues for students depending on the transfer destination. This hesitation was not unique to Gary and demonstrated how multiple systems can influence each other and the intended purposes. Advisors in the math and sciences shared similar views concerning a less than seamless experienced created by the DWDs in their program areas. Pathways are not created solely by STAP and include other systems to function. These other systems each have their own function and purposes, and if these do not align it could cause difficulties between systems, which may account for some of Gary's concern that not all DWD create pathways that benefit the transfer process. This is discussed in depth in Chapter 5, but the general interview-based interpretation is that STAP can create pathways.

Finally, two advisors believed that pathways created by STAP could expand access to higher education for underprepared students looking to access higher education and earn a degree. Derek shared this sentiment, "I think having the articulation agreements enhances the opportunity for so many students, especially underrepresented students, to start at a community college and learn and grow before moving to a four-year school." This pathway is important for students who lack preparation or resources needed to start at a four-year institution. The pathways created by STAP allow many different types of students the opportunity to start at a community college with detailed pathways for achieving a bachelor's degree. Olivia shared a similar view related to pathways:

> I think articulation is making education available to more people by creating this pathway that they can do at a more affordable price, smaller classes, more

> convenient campuses than just going straight to a four-year institution. Mostly it's to make it more affordable and accessible to everybody. I think is what the idea of it is and it's really nice.

These comments highlighted ways STAP creates a pathway from the community college to a four-year institution.

This pathway provides expanded options for students to access higher education via two- and four-year institutions. Through STAP, the state has created a path that provides additional guarantees and assurances that support the students who want or need to start their education at a community college. This pathway, in essence, expands access to higher education. The state reported that 42 percent of students who follow a DWD and transfer to a four-year institution earned a bachelor's degree in three years compared to 29 percent who do not use these agreements (Colorado Department of Higher Education, 2019). The pathway created by STAP appears to be important as a way of expanding access and attainment in the state.

Statewide transfer articulation policy's creation of transfer pathways was overwhelmingly supported by the advisors I interviewed, and a pathway is understood as a primary purpose of these policies. The idea of pathways was a common theme for many participants and aligns with the written intent in state policy to create programs that assist with credit transfer (Colorado Department of Higher Education, 2018). Advisors broadened this purpose in their understanding from just credit protection to pathway creation. In addition, the concept of pathways creation was both a purpose of advising and of articulation, which highlights the unique role this understanding play's in the larger transfer process.

Providing assurances. A second purpose of STAP identified by participants was to provide assurance for advisors and students as they navigate the transfer process. Over 80 percent of advisors in the study recognized STAP as a legally binding agreement providing a guarantee for students who participate. This guarantee offers comfort to advisors and students as they navigate the transfer process. On the topic of assurance, Fiona had this to say:

> Obviously, it's not perfect. Some institutions follow the agreements better than others, and some articulation agreements are more clear than others, but I use them often and I think that students really like having that legally binding guarantee that the classes that they're taking here are not for nothing. You know, they are working towards that end goal and I think that gives them a comfort knowing that there is a guarantee that these classes are going to transfer and apply.

Fiona believed the guarantee STAP provided was important in assuring students that they were on the right path and the classes they were taking at LCC were correct. This assurance provided students a sense of relief that their efforts would result in their ability to work towards their goals.

Assurance also comes from the formality of agreements. Advisors suggested STAP enables formal contracts between the state and public institutions. Specifically related to DWDs, institutions sign on to the agreement and officially commit to upholding the requirements. Additionally, advisors knew that the state has a formal policy for students to follow if an institution does not uphold the agreements. A number of advisors were aware of recent changes to state policy that penalize institutions that do not adhere to the agreements. This change provided encouragement to advisors who expressed doubt that four-year institutions were upholding their sides of the contract. Ann shared this about assurance:

> It's an official agreement between the junior college and the university to be on the same page and it's an agreement that assures something will happen. The student knows that these agreements are in place and it gives them a lot of assurance because they know everything they need to do. They know their credits will transfer.

These feeling of assurance based on the agreements allowed students to focus on their academic goals as they pursued transfer. In Ann's view, it was one less thing for students to worry about in the process.

This assurance also helped students who heard stories about difficult transfer experiences from other students. Diane shared this experience:

> DWDs really help students ensure that they're not losing a lot of credit and I think it adds a lot of assurance to their degree. They are well informed going in about the expectations. They have all heard stories about people transferring to a four-year school and then realizing that their credits are not being accepted. I've heard of that from a lot of people that they've done all this work at a community college and then they transfer and none of their credits are accepted. So I think it really protects the student in that sense and give them assurance about what they need to be doing to go forward.

For Diane, challenging transfer stories are prevalent among students and she believed STAP could help calm the fears students have around transferring. She shared that talking with students about the agreements and their guarantees provides the assurance that they are on the right track and their classes will transfer.

Protecting credits. A third purpose of STAP, as identified by the participants, was enhancing students' ability to save time and money through the credit protection properties of STAP. For the most part, advisors were aware that STAP protects credit and thus time for students pursuing different transfer paths. For advisors who share this perspective, STAP ensured that credits will transfer, and students will avoid excess time and costs for their bachelor's degree. Frank shared, "When students are paying for credits, every class absolutely matters. We want to make sure that students are

completing as few credits as possible and those articulation agreements are our lifeblood." This was also important for advisors who saw the community college as an alternative to the traditional higher education path. Frank shared a story about working with low-income students who had no choice but to pursue a degree by starting at community college, and these students wanted to make sure every credit they completed would transfer. For Frank, the articulation agreements were vital in making this happen efficiently and effectively for the student.

Olivia was aware that several of her students started at the community college as a means of saving money and she believed STAP can aid in this aspect. Olivia shared this about credit protection and saving money:

> New students come in, and if they want to transfer, I try to guide them down that path [DWD] because I don't want them to waste their time or money. I come from a community college background and usually when students are coming to start a community college, there's a very specific reason why they're doing that, and I don't want to waste their time or money and create more hardships for them, because a lot of times they're navigating extra stuff. Knowing that students have that guarantee that all 60 credits they completed will count is really important.

Olivia was focused on higher education costs and the role community colleges play in providing a lower cost alternative. She believed one of her roles was to help students save money and liked the credit protection properties STAP provided. She was aware misadvising students could unintentionally cost students additional time and money and found STAP can help her provide accurate information about credit transfer.

Standardizing the transfer process. A fourth purpose identified by the participants was STAP's ability to standardize the transfer process. Half of the advisors described the transfer process as cumbersome, clunky, overwhelming, and difficult and

thought that standardizing components of the transfer progress through these agreements has helped ease the burden of transfer. Oliver's comment reflected this perspective:

> I can imagine that the system would be a lot more of a mess in terms of trying to get students from their community college education to the four-year school if there was less uniformity between the various Colorado four-year institutions in terms of what they'll take and what they'll except. That's kind of the point, at least one of the points, of the agreements is to standardize things as much as possible.

He continued by sharing a specific example:

> So a student who wants to study psychology doesn't have to study a completely different curriculum for each different four-year school that they might transfer to. They [STAP] make it a little more uniform and a little more smooth to move from a community college to a four-year school. That's kind of the goal even if it doesn't always work out quite that way. That's the point.

Oliver believed that certain majors could be standardized across the state providing additional options for transfer. By developing GT Pathways courses and creating DWD options, the state and the participating institutions have standardized credit transfer and removed some of the barriers associated with the transfer process.

Supporting state goals. A final purpose identified by the participants was that STAP can support state goals particularly around attainment and workforce development. Through the creation of new pathways for associates and bachelor's degrees, the state has expanded access and educational opportunities. Three advisors saw this expansion as a commitment by the state to create an educated populace and increasing people's employability. Derek commented, "I think having the articulation agreement enhances the opportunity for so many students to start at a community college and learn, grow, and move to a four-year school." Hazel believed that the state is interested in educating students beyond a high school degree and is committed to making the articulation process work for students. She felt that articulation policy was one of the few mechanisms that

encourages students to use the community college system while providing a guarantee that their time and effort will be rewarded. Patricia commented on articulations connection to attainment goals for the state. In her words:

> I think ultimately, it's just a big attainment push for the state. I think numbers look good, but I do also think there's probably some workforce things and some stuff they [the state] can really help with. I think from the state, like policy-wise, I think that the purpose at large is about being able to educate our students. I very genuinely believe that there is something about that. We have all these Colorado students who aren't attaining bachelor's degrees and this is a way that we can help make that process happen. I think that there's something valuable about trying to get our attainment up because we're a very college educated state, but it's not the people who grew up here that are the college educated ones, it's people moving in. And so I think that there is something about clarifying that path that's going to help make that happen for Colorado students.

Patricia's comments suggested STAP is one piece in the system of education at play in the state. The purpose she identified, although not stated specifically in statute, connects the system of articulation to other systems impacting both educational attainment and larger state goals. These views revealed a perception among some advisors about the purpose of articulation (from the 30,000-foot view) and that STAP enhances their role in making substantial changes to education in Colorado while also focusing on state goals.

Research Question Two

> Q2 How do academic advisors describe the espoused objectives, policies, procedures, and processes of statewide transfer articulation policy and advisors' understandings and uses?

Research question two considers how advisors describe the objectives, policies, procedures, and processes of STAP. Although not specifically addressed in the interview questions, participants described how these concepts influence their understandings and uses of STAP. Additionally, systems theory provides a way to analyze this research question related to system functions, structure, and interconnectedness.

Influences on policy understandings. Understandings of STAP's objectives, policies, procedures, and processes are varied and appear to be related to training, administrative expectations, undefined purpose, and policy updates. Data suggested there is limited information provided to advisors, which causes some confusion in how they understand articulation. This confusion produced concerns which appears to impact how advisors use STAP in their work.

Limited training. Participants identified limited training as an area that influenced how they understood the objectives, policies, procedures, and processes related to STAP. Advisors hired as part of the Pathways model (any hire in the past two years) were provided comprehensive training which included a review of STAP. If hired prior to the Pathways model, their training varied. Even for Pathways hires, advisors remembered the level and depth of training differently, which may have been influenced by prior experiences with advising, the importance they placed on STAP at that time, or the level of awareness about the role state policy would play in their work. Training consisted of online modules (which introduced ideas and concepts related to STAP), reading the Colorado Department of Higher Education website, shadowing seasoned advisors, and receiving feedback following early advising sessions. Advisors hired as part of Pathways remember discussing articulation but said it was not a central theme during training. One participant, Deborah, commented that there was a feeling of "these exist and here's where to find them" but very little discussion was included during training. This training approach may account for some of the perceptions advisors had concerning the objectives, policies, procedures, and processes of STAP.

I hoped a review of advisor onboarding and training materials would provide additional data; unfortunately, document review was limited and did not provide additional relevant data. I tried to obtain access or information about the online training modules; however, I was unable to gain access. Without the ability to review the online training modules, I had only the participants descriptions. Participants shared that most of their training came from accessing and reading the Colorado Department of Higher Education website which almost all advisors indicated they had bookmarked the site on their computer for easy and quick access. Review of this website did not turn up information related to STAP training or use; instead, it merely revealed various points of access to state policy and the articulation agreements. This lack of training information about STAP may also contribute to advisors' understandings of objectives, policies, procedures, and processes.

Administrative expectations. Participants identified the ways administrative expectations influence their understandings of STAP objectives, policies, procedures, and processes. I asked advisors if there were expectation or if they received guidance from their director or upper-administration about how they should use STAP. Overwhelmingly, advisors said there was no expectation or guidance about the use of STAP; instead use was left up to the discretion of the advisors and determined by student needs. For example, Luke remembered receiving a question related to articulation agreements during his interview which caused him to reflect on the importance of statewide transfer articulation policy at that time; however, he has not received specific direction from administration since onboarding. He believed that upper administration expects advisors to use STAP, but this expectation is not formally stated. During

document review, no written policies or expectations were identified, which seems to support Luke's understanding of administrative expectations.

Undefined purpose. Participants also identified a lack of a defined purpose (one that could be provided by the state or upper-administration) concerning why STAP exist, a shortcoming which has created some confusion related to advisors' understandings and uses of STAP. Although advisors were able to identify their own purposes, there was no evidence that the administration or state identified a specific purpose related to STAP. This came through in a comment from Andrew:

> One thing that was lacking in training is the "why" behind it [STAP], of the context, about here is how we got to them. Most of it was about how they function, how the process works. But I don't think we ever really got that bigger picture.

This lack of purpose during onboarding and training caused Andrew to question his use of STAP in his advising process. Without a defined purpose from the administration or state, advisors are left to determine their own purposes, which may affect the way STAP figures in their work.

Policy updates. Participants also identified policy changes and updates as factors that affect their understandings of STAP objectives, policies, procedures, and processes. Advisors felt updates about STAP were not communicated in an organized or timely fashion; instead, information came from multiple channels in an unorganized process. Maria shared her experience with changes to state policy:

> We always find out things either through students or through the informal grapevine. We tend to find things out not always in the most efficient ways. I'll be working with a student and something will come up which is a very a roundabout way to learn. We don't have the most direct communication about change in policy.

This lack of communication caused concern for Maria because she who worried she might misadvise a student because she was unaware of changes to policy. Maria, like many of the advisors, reviewed the Colorado Department of Higher Education website regularly; however, a more formal update process would help. Updates are currently shared via sporadic emails when advisors discover new information about policy changes or updates. This lack of a formal update process may contribute to the difference in STAP understandings and uses among advisors.

How advisors understand the objectives, policies, procedures, and process appears limited, which surely influences their use of STAP. This limited understanding comes from the training process, lack of administrative expectation, an undefined purpose, and informal policy updates.

Research Question Three

Q3 How do these understanding influence their advising practices?

In this section, I explore findings related to advisors' understandings of STAP and how these understandings influence use. Discussion in this section addresses RQ3 about how advisor understandings influences their work. Participants identified three primary uses including Statewide transfer articulation policy's ability to provide guidance and confidence in the advising and transfer process and how STAP can be used as a general advising tool. Through a discussion of limitations, additional uses of STAP were identified by participants.

Understandings develop from use. Participants identified a range of purposes related to STAP including the creation of pathways, providing assurance, protecting credits, standardizing the transfer process, and supporting state goals. Although asked

directly what they believe about the purpose of STAP, nearly all shared that they were unaware of the official policy language; however, all were able to articulate what they believed are STAP's purposes. These advisors did not participate in policy development or in the construction of formal agreements. Instead, they are in a position to implement STAP based on their professional perspectives, which may or may not align with all of STAP's officially stated goals and purposes. It is worthwhile to gain insight about advisors' understanding and how they make meaning of STAP in their daily work with students.

Many of the advisors' understandings come not from policy language but from their pragmatic use of STAP in the daily work of problem-solving with advisees. Basic training was provided and the agreements are regularly reviewed for changes and updates, but very few participants indicated ever having read the statute or its formally-defined purposes and functions. This leaves advisors with room to develop their own understandings, which emerge from how they work with STAP as an advising tool and as a component of transfer. Based on the requirements of their work lives, advisors have developed their own understandings that orient them toward how STAP can best be used.

Advisor uses of statewide transfer articulation policy. While state statute does discuss the creation of credit protection programs, advisors identified several ways they use STAP to extend the policy's meaning. How advisors use STAP can be inferred directly from their voice and indirectly through how they describe their understandings of the agreements. Advisors shared their perceived purposes and functions of STAP; however, there were additional ways they understand these agreements, which highlight additional uses in their work. As discussed, advisors understand that STAP can improve

advising by creating pathways, providing assurance, protecting credits, standardizing the transfer process, and supporting state goals; however, their discussions shed additional light on how they understand STAP and how this influences their use of the agreements. The uses they identified included STAP's ability to provide guidance and confidence in the advising and transfer process and how STAP can be used as a general advising tool. Additionally, advisors' views on STAP limitations illustrate additional ways advisors have developed unique understandings and uses of articulation.

Advisors overwhelmingly understand that STAP can improve the advising process for themselves and their students (nearly 80 percent of participants made this observation). Even among participants who described a limited use or awareness of articulation, they still discussed ways STAP influenced their advising practice. Advisors shared several examples of how STAP benefits their advising practice including providing guidance and confidence while also working as a general advising tool.

Guidance. As identified by participants, a primary use for STAP is in how it helps guide advising, especially in the transactional functions of advising. Advisors discussed how GT Pathways and DWDs simplified their work, and that STAP provides concrete information to aid in course selection and sequencing, exploring degree requirements, and designing transfer pathways. For example, Karen shared how she uses STAP, "I like using them [STAP] as guides. If I know there's an articulation agreement for that I do tend to refer to it to help me better understand what could be the classes that would help this student." Michelle also discussed how articulation guided her in enhancing students' decisions about majors and transfer institutions.

> It's a good way to guide a student who knows they want to be a chemistry major, but they don't know exactly what college they want to transfer to. It gives me

> some general content information and I feel that it's a safe basket to put your eggs in if a student doesn't know where they want to go. They provide a general outline to start selecting courses and making a plan.

Michelle was not concerned in the student decided to follow the DWD but instead found it helpful to guide the student towards their goal. The DWD provided the guidance the student needed to explore options and make decisions related to their major and where they wanted to transfer. In short, it appears advisors are using STAP to guide various components of their work even if they are not following the agreements exactly as intended.

Confidence. Advisors also used STAP to increase their confidence levels. The confidence advisors experienced seems to be a byproduct of using STAP to guide their work around course selection and sequencing, academic planning, and developing transfer pathways. Confidence levels also increased based on knowing how STAP was developed. This confidence came from background knowledge about the articulation process and the level of support and guidance provided by the state. Advisors understood that the state mandated public institutions collaborate in developing GT Pathways and DWDs, eventually resulting in a binding contract. Although exact understanding about the process differed somewhat across participants, advisors' confidence (based on their knowledge of STAP) did not seem to be affected. Hank discussed the way STAP bolsters the confidence he experienced in daily work-life.

> For me, it gave me confidence that I'm giving the student the right information, you know, because that's one of the things that didn't happen for me as a college student and I don't want that to happen for a student I'm working with. I know I'm human and I know there's times that I'm going to provide incorrect information. That's one of the things I don't want students to have to worry about and so the articulation agreements give me a confidence boost and I trust that this is the right

> information. I think I feel more confident in advising a student and saying, "This is what you should take and you're going to be okay."

For Hank, the agreements provided specific information that he could confidently share with students. Confidence also manifested in advisors' abilities to provide detailed pathways for students who wish to transfer and complete a bachelor's degree.

Lisa discussed her experience sharing the degrees with designations and being confident that if a student followed the agreement exactly as outlined, they would be able to transfer to a four-year school as a junior and only have 60 credits left to complete. If the DWD was the correct path for the students, she never hesitated and was confident in that decision. The idea of having the state's backing, for Lisa, also provided an additional level of confidence.

> I really like them [STAP]. I like structure and I like written documentation of expectations and I like to be able to have a sort of institutional higher power to fall back on when I'm advising students. When they say, "but why do I have to take this?" and I say, "because it's in the contract, and if you want them [the four-year institution] to honor the contract, you have to honor the contract.

Lisa did not have to do additional leg work to develop a clear and accurate path for the student because she was confident in the DWD. Instead of looking up every credit and where it would transfer, she was able to focus on the other needs' students bring with them to their advising session.

General advising tool. Advisors shared experiences of using STAP as a general tool for multiple advising purposes. Based on what they know about the role of the state and two- and four-year institutions in creating STAP, advisors found they can reliability use the agreements to understand how classes will transfer, and as a quick guide for students to select classes. Advisors believed the rigor of creating GT Pathways and

DWDs provides valuable information even if the student does not follow the agreement as intended. Gary provided this perspective on using STAP as a tool:

> If these [STAP] weren't out there I think it would be that much more of a challenge for us to get through all the transactional advising stuff and course selection. I can hand a student the list of GT Pathways courses and ask them to select a few that they are interested in and don't have to worry about how they will transfer. This is a great way to see what the student is interested in and start making a plan. So, I think they are positive in that aspect, as a tool.

Gary used STAP to provide students with lists of courses that he knew would transfer to start the exploration process.

Several advisors shared experiences related to using the DWDs as road maps to customize students' educational paths. Even if a student does not follow a DWD exactly as written, the structure and outline provide a path that can be tailored to meet their needs as they complete a basic AA or AS degree. Andrew echoed this idea, sharing that STAP has a more basic role of supporting general advising practices in the transfer process. He shared this experience he had in working with a student who wished to pursue the sciences:

> I was working with a student and said, "Listen, it sounds like you are interested in a lot of different types of sciences, and that's great. Let's use a few different DWDs to look at classes and start exploring your options. If you don't make a decision fast enough, we will use a standard associate of science, but use the DWDs as a roadmap for taking the classes that you should be taking. If you decide earlier, and we can still fit you into a DWD, we will go that route." So that's the big advantage to me even if a student doesn't ultimately get that specific DWD.

For Andrew, the degrees with designations served multiple purposes related to his advising practice depending on the needs of the student. He shared that he always thinks about the DWDs when he first sits down with a student but does not always envision the

student following the agreement perfectly. For him, articulation was a tool that can provide direction in his advising sessions.

Using STAP as a general advising tool allowed advisors to customize their work in creating pathways that support student goals, but STAP was often not the first tool considered or used in the advising process. Advisors in this study saw STAP as a one size fits all approach if used as intended, limiting their ability when working with various student goals and outcomes. Statewide transfer articulation policy's prescriptive nature provided a level of guidance and confidence, yet it may limit the options available to students. Drawing on their stock of knowledge and experience, advisors "dissected" STAP and used various parts of it to support student interests. Advisors were keenly aware of STAP's limitations and often looked to improvise and use other tools including AA and AS degrees to support their work. Advisors knew that each student is unique, so they consider different options to identify and support students' goals.

Advisors' use of STAP to build confidence, provide guidance, and as general advising tool is an important finding in this study, as it provides some insight into the nuances of how advisors understand and use policy in their work. These uses come from advisors' abilities to look at the various components of STAP and integrate them into their work. Academic advisors are making meaning of STAP in unique ways that serves their needs and the needs of their students.

Perceived limitations influence use. Advisors also understand the limitations of STAP and this affected how they use articulation. This discussion of limitations demonstrated several ways advisors use policy in their work. These are perceived limitations based on their understandings of STAP which may or may not be accurate but

do inform their decision to use STAP. The limitations participants identified include type of students who benefit, curriculum changes, prescriptive nature, four-year institutions, lack of a seamless experience, lack of communication, and website and technology issues.

Students who benefit. Participants believed that STAP benefits some students more than others, and this affected how they use policy. A distinction is needed here between GT Pathways and degrees with designations. Advisors overwhelmingly believed that most students benefit from taking GT Pathways courses. They understand these credits are guaranteed to transfer and will apply at any public institution in the state. By contrast, advisors believed DWDs benefit only a select demographic and they recognized that not all students who want to earn a bachelor's degree will benefit from these agreements. This understanding is important because it limits the number of students who are encouraged to use DWDs in the transfer process. Hazel shared this thought about the DWDs, "I'm always having that conversation with students to understand what the DWDs really means within the transfer policies. degrees with designation is a prescribed transfer path with many limitations depending on your major and the transfer institution." For her, the limitations of a particular DWD influenced her use of the agreement.

Although DWDs have the potential to benefit the transfer process, advisors felt that few students fit into the narrow parameters required to fulfill the agreement. My participants were acutely aware of these limitations and hesitated to recommend this path, often defaulting to an AA or AS. Through trial and error, advisors have come to understand that certain DWDs support certain students looking for certain transfer experiences. Pauline stated, "There's a lot of variation in how the statewide articulation

agreements play out in reality as opposed to what they are on paper." She often defaulted to the AA or AS first while using a DWD as a guide to construct the appropriate pathway. That DWDs seem more tenuous may aid in understanding why advisors generally express a lower level of support for these agreements.

The limitations of DWDs also influenced how and when advisors use these agreements in their work with various student populations. Advisors shared that DWDs work best when a student does not need remediation. Degrees with designations start with college algebra or English composition and, for students who need to work up to the required math or English class, these credits are not included in the DWD. In many cases, students lose credit if they follow the DWD; however, often the AA and AS can accommodate some of these additional credits.

Advisors also thought that degrees with designations worked better for students who have no previously earned credit. Credits from another institution or from an earlier enrollment are difficult to apply to the prescriptive nature of a DWD, whereas an AA or AS has more flexibility to accommodate these credits. Even dual enrollment credits can be difficult depending on the degree a student is pursuing. For example, if a student took a psychology course as dual enrollment and wants to pursue the DWD in business, the psychology credit is not applicable to the DWD. Finally, advisors commented on the need for students to identify their transfer institution early and the selected institution needs to be known for upholding the agreement. Advisors criticized several four-year institutions as difficult transfer destinations, largely based on their reluctance to participate in the agreement as outlined. If a student does not fit within these parameters,

advisors were hesitant to recommend a DWD. This caused uncertainty for advisors and influenced their recommendation of a DWD rather than a standard AA or AS degree.

Curriculum changes. Another limitation identified was the impact of curriculum changes on the DWD process. According to participants, curriculum changes at two- or four-year institutions seemed slow to make it through the Colorado Department of Higher Education process and there was insufficient communication to advisors about when these changes are eventually made. Diane felt this affected the accuracy of DWDs and her ability to trust in the agreements.

> Curriculum changes at the four-year school are difficult because they are thinking about their incoming first-year class that's going to be starting this year and how to communicate that curriculum to them. The four-year schools aren't thinking about how to communicate a curriculum that may exist in two years to transfer students. And that is confusing when a student is trying to decide on what type of degree or articulation agreement to use. So, there's a gamble that they can have to go off of what the curriculum looks like right now and if that changes they're out of luck. I do think that's a problem and a challenge and creates doubt.

For Diane, curriculum changes impacted her ability to feel confident helping student develop a pathway. In addition, advisors were often unaware of recent changes, and sometimes this meant they might unintentionally misadvise a student. Advisors shared that they rely heavily on the revised date listed on the Colorado Department of Higher Education website when making decisions on how to use a specific DWD. Again, these understandings influenced how an advisor used articulation in advising. For Hazel, the revised date on the DWDs was the first thing she looked at stating, "Anytime I pull one up I'll notice the little revised thing at the bottom and then look to see if that date is familiar to me or does it seem not familiar or very current." The revised date has become an important gauge for determining how new the information is and whether changes have been made to each agreement.

Prescriptive nature. Participants understood that some DWDs have limitations that influence their decision to use the agreement at all with students. Advisors shared experiences where they recommended that students avoid a DWD if they perceived it as limiting or difficult to follow. The advisors expressed great concern about degrees with designations that have too many exceptions, are too rigid in course prescription, or do not meet the desired requirements of the four-year institution. Degrees with designations in the sciences, biology, chemistry, physics, and business were identified as difficult to use from an advising perspective. Luke, who works with math and science programs, stated, "The DWDs can be difficult for students who want to explore, have extra credits, or need remediation. There isn't a lot of flexibility so they end up taking more credits than they need." Degrees with designations in other areas could be viewed as positive or negative depending on the transfer institution. For example, the DWD may work very well at a small regional four-year intuition but not well at all at a larger research institution. In these instances, advisors often found the AA or AS provided a more effective and efficient path. From the advisor's perspective, these limitations diminished the agreements' effectiveness.

Four-year institutions. Participants also identified four-year institutions' participation in STAP as a limitation. If a student follows a prescribed path at the community college, four-year institutions must guarantee several benefits to the student once they transfer, including transfer of credit, junior standing, and a maximum credit requirement to fulfill a bachelor's degree. However, some advisors believed that four-year institutions were not upholding this contract, thereby putting transfer students at a disadvantage, which prompted the state to intervene and find ways to enforce the value of

a two-year degree. This understanding of statewide transfer articulation policy as an accountability measure has positively and negatively influenced how advisors use STAP. Several advisors do not believe four-year institutions have changed, and they worry that the accountability component is not functioning correctly. Lisa shared:

> I'm disheartened being at the community college and what I've learned. I've pieced together my own experience and realized that the four-years need to adhere to the articulation agreements or we need to create something new that they will adhere to. I think it's unfair to students that we have these agreements and that they're up for interpretation. At the community college, articulation agreements are very clear and they really do help us guide students. As much as we can guarantee it, we don't always know what's really happening on the other end.

This understanding caused concern for Lisa which influenced her desire to recommend or use STAP with students. Advisors understood that if four-year institutions uphold their end of the process, articulation could be helpful to students, but their doubt about this compelled them to reconsider how and when they use STAP with students. Nearly 60 percent of participants shared some concern about the process that four-year institutions are using around articulation. They argued that four-year schools need to implement STAP as intended if the state, institutions, and students are going to experience the full efficiency and effectiveness of the agreements. Without a uniform understanding and use, a common statewide policy loses much of its effectiveness and adds undue complexity to the transfer process.

Advisors also highlighted an exception in STAP which allows four-year institutions to sign onto a degree with designation while also providing a separate transfer guide. The states intent is to allow four-year institutions the ability to customize transfer pathways for their programs while still aligning with curriculum at a two-year institution. According to advisors, these additional agreements are difficult to navigate and have

created uncertainty in advising. This has caused confusion for advisors and students as they then must navigate multiple options. Fiona was frustrated with four-year institutions not participating fully in some of the DWDs.

> Four-year institutions are coming up with new transfer guides on top of articulation agreements based on what they prefer to see come in or what might transfer more easily. For us at the community college level, just trying to keep on top of all that, all these universities are doing different things and they're all separate entities and it's overwhelming. I mean, if these agreements are supposed to be a thing, I don't want to see these alternative guides. It's just confusing to even know what to do with a student sometimes when they're getting different information from every single person they talk to. Four-years really need to stick to what they signed on to.

If advisors recommend a DWD, the student is guaranteed all benefits as supported by the agreement, but the coursework prescribed by the DWD may not be what the transfer institution prefers. On another hand, if advisors recommend the institution-specific transfer guide, the student then forfeits the guarantee provided by the DWD. Andrew commented about advisors at his institution using the institution specific transfer guides if they exist because they know that is what that specific school prefers. This worried him because the student may not be protected in the same way as using the DWD. This is an example where confusion exists between the two options limiting how advisors decided to use DWDs.

Seamless experience. Participants understood that the policies in Colorado are limited in scope and may not support an improved transfer process. Advisors understood the basic concept that STAP protects credit, but they shared a desire for the agreements to support a more seamless transfer process between institutions. Their experiences often confirmed that STAP did little to make this happen, and students still experience cumbersome and complex transfer processes even with STAP. Lisa shared her

experiences working in other states where STAP seemed more effective both in their work and for students navigating the transfer process.

> I've worked in California and Arizona and in California, they had the IGETC [Intersegmental General Education Transfer Curriculum] and if you if you got the IGETC you can count on that. You knew you had the IGETC and so there wasn't a course by course evaluation needed. Your gen ed's were done. And in Arizona, they had the AGEC [Arizona General Education Curriculum] and if you got the AGEC stamp from your community college, wherever you transferred in Arizona your gen eds were completely done. And I feel like Colorado does not have that same understanding and it limits my use of these agreements.

Lisa experienced the benefits of articulation in California and Arizona and felt that Colorado STAP did not provide the same type of seamless experience. She urged Colorado to look at the agreements in California and Arizona to identify ways to create a more seamless transfer process for the state.

Lack of communication. Participants also saw a lack of communication in the transfer process as limiting their use of STAP. They highlighted four problems in the communication channels that support articulation. The first was a lack of feedback advisors can provide in developing and updating GT Pathways and DWDs. They understood that faculty at two- and four-year institutions were responsible for creating agreements; however, these individuals often did not participate in the implementation of the policy. Advisors are tasked with interpreting and using articulation as they work with students to create transfer plans. Patricia shared this perspective:

> Advisors have a lot to say about the GT Pathways and DWDs because we are the ones that have to work with them. We see the good and the bad and know what is working for students. If we had the opportunity to share our experiences or provide feedback, that would be beneficial. I think a lot of us have thoughts, we just don’t have a way to share them.

Patricia felt that the advisors could contribute to the discussion and help with future development of STAP. Advisors believed the perspectives and understandings they have developed through these uses could be beneficial to the development process.

A second communication channel that concerned advisors is about personnel at four-year institutions. Even with STAP in place, students are encouraged to contact advisors at four-year institutions to make sure the plan fulfills requirements for transfer and their program of study. Advisors did not have concerns about encouraging students to make contact, but they commented about students' frequent difficulties in accessing advisors at four-year institutions prior to being accepted. Patricia stated this concern, "Students are often told to work with admission counselors who aren't as knowledgeable about the agreements. I wish they had access to an advisor but those people are usually off limits until the student is admitted." Mary also experienced issues when connecting students with four-year institutions.

> I think probably the biggest barrier that I hear from students is when they have a question for us that we can't answer because it's really a four year school answer and we tell them that they should talk to the four-year school, either that program or the transfer folks, and then if they talk with the program people, because it might be a program specific question, they're told that they can't have those questions answered unless they've actually applied and are part of the program. Some of the more difficult challenges come from the four-year schools in that it's hard for students to figure out who they're supposed to talk to and they kind of get shifted back and forth and then they come back to us super confused.

Mary was concerned about the difficulties students' experience when trying to connect with four-year institutions as they worked towards transfer. Advisors fully supported the idea of students working directly with a four-year institution, but they worried about the difficulties students' experience in finding the most appropriate personnel.

Participants also expressed concern about a lack of communication from four-year institutions about what happens to students once they transfer. Communication about how credits transferred, the applicability of DWDs, and complications students experienced were rarely shared by four-year institutions. Instead, information concerning the transfer process and experience came from disgruntled students who shared their experiences with the advisors. Pauline shared this perspective: “I don't think the four-year schools always adhere to them [STAP] and that is sort of frustrating to me as an academic advisor. I don’t hear from the four-years and so I don’t know what is really going on once a student transfers.” Pauline was concerned by the lack of information flowing back to advisors about the transfer experience and how four-year institutions were treating the articulation agreements.

Finally, participants shared concerns about the complainant process and a lack of awareness. Communication from the state appeared to be limited in this area leaving students and advisors unaware that a process existed. Advisors who understood the complainant process believed it was confusing, cumbersome, and often difficult for the students to navigate. Helen shared her concerns about the complaint process stating, “I don't really understand what kind of recourse of action a student could have if the four-year institution was not to honor them [STAP]. I know I saw something on the Colorado Department of Higher Education website, but I’m not sure how it all works”. Advisors also believed students are unaware a complaint process exists and suggesting there is a lack of communication in this area.

These communication challenges caused substantial doubt among some advisors about four-year institutions’ commitment to following STAP guidelines. With this lack of

transparency, some advisors believed four-year institutions were not upholding their commitment to STAP, which causes undue stress in the transfer process. Advisors believed transparency in communication around STAP would further improve confidence in articulation and help improve the transfer process for students.

Website and technology issues. A final limitation identified by participants was the website and technology used by the Colorado Department of Higher Education to provide information about STAP. Several concerns were shared about the Colorado Department of Higher Education website including difficulty in navigating, high use of PDF documents to present information, and a lack of real-time information and continuous updates. Advisors indicated that they visit the website on a regular basis for information; however, it was difficult to find new or updated information. Hazel commented that the website "feels out of date" because most of the information is presented in a static form via PDF documents. This perception created concern for her and influenced her confidence and how she used the agreements.

In addition, advisors believed the website is not student-friendly with information presented for administrators and policy makers. Andrew believed a student-friendly website could encourage more students to use STAP as part of their transfer. He shared:

> Part of me wishes that the statewide site [Colorado Department of Higher Education website] was more student or public-facing. I think educating students about how it works would be helpful. Right now, it is silly for me to send a student to the site because it isn't meant for them. I do genuinely think that there are students who would benefit from information tailored to them.

Andrew's comments suggested that the Colorado Department of Higher Education website does not currently serve student needs well. A new and improved website could alleviate some of these concerns and could increase information flow.

These perceived limitations provided a unique glimpse into advisors' understandings of STAP. Even more interesting was the way these understandings impacted advisors use of STAP in the advising process. The limitations discussed demonstrate advisors' hesitance in their work with STAP and specifically the DWDs, a hesitance which seems to limit how and when advisors recommend these agreements to students.

Exploring uses has allowed me to identify differences between policy construction and implementation. Although advisors work daily with STAP, they had limited awareness of the process for developing these agreements. An important reminder from Smith (1973) is that policies designed with one set of intentions can develop new meanings and understandings during implementation. This is apparent in this study based on the numerous ways that advisors used STAP beyond the written intent of the policies. Statewide transfer articulation policy is about creating programs that protect credit once a student initiates the transfer process. Advisors have created additional uses based on their implementation. I do not believe any of the advisors' uses are misaligned with policy intention; instead, these uses have broadened how advisors understand STAP and what they believe is beneficial in their work.

Research Question Four

> Q4 How do academic advisors' understandings and uses of statewide transfer articulation policy contribute to or take away from system coherence among a multi campus system?

This section explores RQ4 and how advisors' understandings and uses of STAP influenced coherence in a multi-campus institution. Two primary findings highlight the differences related to advisors' understandings and uses among the four campuses. First,

participants identified different ways they used DWDs based on advisors' perceptions of four-year institutions. Second, advisors shared experiences with STAP and online four-year institutions. These two findings are related to the perceptions and experiences advisors have with the four-year institutions as they work with students in the transfer process.

As discussed in Chapter 3, LCC is made up of four unique campuses (three brick and mortar, one online), providing opportunities to examine the influences a multi-campus system has on policy understandings and uses. Large Community College campuses, while highly centralized, provide unique academic offerings based on their geographic location and economic opportunities of their area. These differences allow each campus to take on a unique role in the state. The online campus is restricted in their academic program offerings because of their platform which limits facility and lab spaces required for several programs. These variations impact academic offerings but did little to influence the understandings and uses advisors shared concerning STAP.

Influence of receiving four-year institution. One of the most notable differences between the four campuses in relation to STAP use was the four-year institution where students transferred. Based on proximity and collaborations, Campus 1 and Campus 3 identified one primary transfer institution for their students. Campus 2, which is more centrally located in the state, identified three transfer institutions and Campus 4, the online campus, identified two online institutions where many students transferred. As mentioned previously, advisors' perceptions of the four-year institutions' commitment to and participation in STAP impacted how and when they use the agreements. Campus 3 identified a disconnect between the business DWD and how the local four-year institution

participated in the agreement. The difficulty arose because of the four-year institution's desire to provide a unique curricular experience while also attempting to participate in the prescriptive nature of the DWD. This led to a discrepancy in credit transfer which impacted students directly and caused confusion and concern for advisors. Margaret shared her concern about the local four-year institution:

> [Four-year institution] is on the DWD but they really don't follow it and that's a problem. They'll accept a lot of the classes as electives but only a core group of classes count towards the major which means transfer students have to retake a lot of the content that they had already taken here. I feel like they should not be on that articulation agreement. I have conversations with students on a regular basis about that school. I don't know if that is beyond my purview but it's my job to tell students that if they want to go there, they are going to have to pay a little bit more and do a little bit extra.

Margaret's concerns were shared by others on her campus, which demonstrated a unique use of articulation. Advisors on Campuses 1, 2, and 4 found value in the business DWD and used it more readily with their students. Advisors at other campuses shared similar stories about individual DWDs and the four-year institutions they work most closely with; however, the problematic or difficult DWD varied between campuses. Participants shared their experiences with other degrees with designations and four-year institutions and suggested a slight difference in DWD use based on which campus an advisor worked at in the system.

Another difference in understandings and uses of STAP in the LCC system was with Campus 4 and an online four-year transfer institution. Although Campus 4 sends students to several online and brick and mortar institutions, they have found a unique opportunity with one online institution. This four-year institution advertises a commitment to transferring all 60 credits as part of an AA or AS applying them to one of their bachelor's degrees. Although limited in the number and variety of programs

available, advisors have found value in directing students to consider this option. Advisors shared that the flexibility of credit transfer allowed students to explore multiple academic options prior to transferring without fear of wasting time and money on unused credits. All four campuses could encourage students to look at this institution; however, Campus 4 was more apt to use this option because many of their students are looking to complete their bachelor's degree online.

Beyond these subtilties, no notable differences where identified regarding advisors' understandings and uses of STAP. Instead, advisors often discussed their counterparts at other campuses and how they used each other to understand STAP. Advisors shared that they would reach out to colleagues at other campuses to discuss issues they were experiencing with STAP and how best to navigate specific four-year institutions' processes. They also discussed sharing resources and information about STAP as individual advisors learned something new about the agreements. Advisors felt this was an important piece in understanding the complexities that make up STAP and the transfer process.

Chapter Summary

The findings discussed in this chapter provide new insight into the research questions while addressing the purpose of the study which was to explore community college advisors' understandings and uses of Colorado statewide transfer articulation policy. The chapter started with a discussion of advising purpose and functions as identified by the participants. Next, participants understandings of articulation purposes and functions were presented which included providing clear pathways, providing assurance, credit protection, standardizing the transfer process, and supporting state

goals. Findings related to how advisors describe the espoused objectives, procedures, and processes of STAP were discussed. These comprised limited training, lack of administrative expectations, undefined policy purposes, and limited policy updates. These findings provided the context to answer RQ3 about advisors uses of STAP which included providing guidance and confidence in their work and a general advising tool. Participants also discussed STAP and how the limitations drive their use. Finally, findings related to STAP and system coherence were presented and highlighted the influences four-year institutions have on policy use.

CHAPTER V

DISCUSSION

The purpose of this study was to understand how community college advisors understand and use Colorado STAP as part of the transfer process. Chapter 4 presented these findings in detail and examined the ways in which advisors use STAP in their work. As noted, advisors' understandings of STAP influences how they use the agreements. These findings provide new understandings about the role STAP plays in their work and how they have adapted the agreements to fit their needs. To further discuss the findings, I examined advisors' understandings and uses of STAP from a systems theory perspective as developed by Hutchins (1996). Suggestions, recommendations, and the relevance of this research concludes the chapter.

Hutchins (1996) was interested in examining the world through the concept of wholeness where everything is connected to everything thing else. Assuming that the parts operate in relation to each other, systems theory argues it is only possible to understand the system under review when the whole system is considered. Hutchins provided 10 principles that allow researchers to explore complex phenomena related to a predefined system. This section uses system theory to analyze the finding presented in Chapter 4.

System Wholeness

Principle one states that a system must be considered in its wholeness, not its parts (Hutchins, 1996). The system in this study was defined as the LCC community college advisors, not the entire advising department, campus, or LCC system. At times, it was difficult to focus on the academic advisors as the defined system when there were several other systems at play. This is not surprising, as higher education comprises several systems that work together in complex ways.

Advising at LCC is coordinated between the four campuses providing a cohesive approach. Although each campus provides unique academic offerings, all four use the same advising structure and tools to provide services. The recently adapted Pathways model provides a structure that supports the idea of system wholeness by creating a common approach to advising. Regardless of campus, all advisors' have the same job description, carry out similar duties and responsibilities, and share similar understandings about their role in the system. Advisors also share comparable ideas about the purpose of advising which is to help students achieve their academic and professional goals. These similarities highlight a system that is diverse in geography and personnel, yet which seems to function with a certain wholeness across the multiple campuses.

Advisors also demonstrated wholeness through their shared use of STAP as an advising tool. As discussed in Chapter 4, advisors overwhelmingly use components of STAP to support their advising practices beyond the described purposes. These uses varied between advisors; however, they all describe ways that STAP supports their work. This was shared between all campuses and demonstrates the role STAP plays within the system of academic advisors at LCC.

System Interconnectedness

Hutchins (1996) suggested that there is an interconnectedness among all systems within a system. This principle focuses on interactions between systems. Where principle one suggests all parts of a system must be considered to understand wholeness, the interconnectedness principle focuses on interactions of other systems on the system of study. Several systems interact with the system defined in this study, including four-year institutions, the Colorado Department of Higher Education, and the process of transfer as a system, just to name a few. Each influences the academic advisor system in unique ways.

While community college advisors have direct influence on their understanding and use of STAP, they are unable to control the role other systems play. This is important when considering how advisors understand and use STAP in their work. The Colorado Department of Higher Education is a complex system responsible for enacting state policy that directs the creation of STAP. This system interacts with the two- and four-year institutions in the development of STAP. Administrators at two- and four-year institutions are then responsible for implementing STAP as part of the transfer process. These multiple systems must all interact to successfully design, develop, and implement STAP in a manner that will impact students.

Four-year institutions as a system play a significant role in both the development and implementation of the articulation agreements and, as noted in Chapter 4, participants' perceptions of their role are mixed. Several participants shared concerns about how four-year institutions were implementing STAP and whether they were

following through on the agreements. This lack of system interconnectedness may be diminishing the effectiveness of STAP in the transfer process.

A lack of communication between systems was also identified by participants as a concern. Advisors felt they had little to no voice in the development of STAP and feedback about the process was nonexistent. These disconnects caused a lack of confidence about the STAP process creating concern for the advisors. This breakdown in communication impacted system interconnectedness thus affecting how advisors use the agreements in their work.

System Parts

Principle three suggests that a system is more than the sum of its parts (Hutchins, 1996). Systems theory proposes that a system cannot be understood by looking at the parts separately and instead only has meaning when considering all parts together (Hutchins, 1996). That is, the community college advisor system can only be understood within the context of subsystems and suprasystems that make up the whole. According to Hutchins (1996), this system hierarchy helps explain a system's functions. Without acknowledging the other systems that make up higher education, articulation, and transfer, one cannot make meaning of academic advisors as a system.

Academic advisors at LCC are a subsystem of the advising system which is a subsystem of the transfer system. Without academic advisors, advising does not function at LCC and without advising, transfer as a process becomes more complex. In addition, without academic advisors to implement policy, STAP becomes a complex tool in the transfer process. Academic advisors, as a subsystem, function with multiple subsystems and suprasystems to create the system of transfer.

Advisors are aware of other systems at play and identified the transactional function of academic advising as a central component of their role in the transfer process. Without this function, the academic advisor system would not be able to support the other systems required for transfer. In addition, the use of STAP as an advising tool also supports the academic advisors' system which in turn impacts the transfer system. These multiple functions of academic advisors' support the subsystems and suprasystems that make up the whole.

System Purpose

The fourth principle suggests that it is not possible to assign a single purpose to a complex social system and that these purposes are defined by interpretations of individuals who make up the system (Hutchins, 1996). As discussed in Chapter 4, participants identified several purposes of advising and STAP that contribute to the understanding of the academic advisors' system. Advising purposes included providing transactional services, assisting with transfer planning, helping students create education pathways, and establishing connections with students. Purposes related to articulation included providing clear pathways, providing assurance to advisors and students navigating the transfer process, offering credit protections, and supporting larger state goals. This variety highlights the complexity of assigning a single-system purpose and supports the concept that the range of individual interpretations define system purposes.

Of the purposes identified, a common theme was the concept of helping students reach their academic and professional goals. Each purpose identified contributes to this larger goal of helping students. For participants, this purpose was greater than the idea of providing basic helping skills, instead focusing specifically on academic and professional

goal attainment. Although a common theme emerged related to purpose of advising and articulation, it is the multiple purposes identified by the participants that help define the system under review and its role in the larger system of higher education.

Hutchins (1996) suggested that a common purpose among all systems is the idea of survival. Systems have a desire to arrange themselves in ways that support and promote survival. One could argue the move to a Pathways model at LCC was a survival mechanism for the profession of academic advising. As higher education continues to become outcomes driven, advisors must provide more than course scheduling services. A wholistic approach to personal and professional goal achievement with a focus on career development is pushing advising services to shift its purpose. Participants employed at LCC prior to adapting the new Pathways model identified changes in what they saw were the purpose of advising. Several identified with the larger purpose of helping students achieve their goals as the driver behind why they do the work. This change supports the idea that survival is an overarching purpose present in all systems.

Taking this idea of survival one step further, all systems want to survive at the highest level possible (Hutchins, 1996). Large Community College's move to a Pathways model is evidence that the academic advisors' system not only wants to survive but also wants to thrive. This was apparent in many of my interactions with advisors on all four campuses. Advisors related to the larger purpose of helping students achieve their academic and professional goals and were willing to use their knowledge and skills to achieve this outcome. This was evident in how they discussed their understandings and uses of STAP. Even with the limitations they identified concerning articulation, all advisors have found ways to incorporate STAP into their work. They are willing to work

through the challenges to find the best way to help students achieve their goals. The academic advisors' system is changing to survive and continues developing ways to survive at the highest level possible.

System Functions

The fifth principle of systems theory suggests that a system cannot be understood until one understands its multiple functions (Hutchins, 1996). Hutchins (1996) argued that to understand the functions of the system, the researcher needs to look at the input, transformation, and output of information in relation to the system. Systems continuously take in new information, which is transformed into something useful, eventually producing a response. Information flows into the academic advisors' system in several ways, requiring advisors to make meaning of this information and use these new understanding to act. This is particularly relevant in relation to information about STAP and its function within the academic advisors' system.

As discussed in Chapter 4, information regarding STAP come into the system from a myriad of sources such as training, updates from the Colorado Department of Higher Education, communications from the Colorado Community College System office and LCC administrators, other advisors, four-year institution representatives, and students. When information comes into the system, advisors must decide how to interpret it, which may be an individual or collective process depending on the complexity of the information. Individual advisors affected by small updates make meaning of the new information on their own, while the entire system may discuss larger changes. This transformation of information or meaning-making process happens consistently as new

information about STAP enters the system. Once an individual or group has made meaning, an output or response is created and new action is taken or no change is made.

Systems take in information constantly to function and a well-organized system will have a formalized manner for processing this information (Hutchins, 1996). Systems that lack appropriate means for gathering, transforming, and disseminating information can experience difficulties (Hutchins, 1996). Large Community College appears to be lacking a formal process for dealing with information about STAP. Advisors indicated that they received information from many sources including training process, administration and state actors, other four-year institution officials, and students navigating the transfer process. There does not appear to be a centralized manner for taking in the information, processing it, and disseminating updates to the academic advisors' system. According to participants, new information related to STAP comes from the Colorado Department of Higher Education and the Colorado Community College System via websites, emails, and updates in their staff meetings. A shared Word document also exists for advisors to record new information they come across during their work. There is no requirement for reviewing this information, instead, it is available on a need-to-know basis. Advisors are left to interpret and make meaning of this information and decide if they are going to make changes to their advising practices. Lacking a formal method may cause some members of the academic advising system to be unaware when new information related to STAP enters the system diminishing the system's ability to make meaning of this new information and produce any needed changes.

Additionally, participants indicated an expectation from administration to use STAP in the advising process, however, no formal policy exists directing advisors on this function. This is another area where the input, transformation, and output function related to STAP may be impacting the system's ability to function effectively. Without a common understanding, advisors are left to interpret the importance of STAP in their work, which creates several different uses (outputs) within the system, and these differences may be producing unintentional outcomes. If information flow produces individual understandings and uses of STAP, this can impact not only the academic advisors' system, but also other systems related to the transfers process.

Finally, a lack of information about STAP may be creating problems in maintain the system of articulation. Participants identified a lack of information and communication from the state, their administration, and four-year institutions as affecting their ability to effectively understand and use STAP to its full capacity. They also indicated that information from the academic advisors' subsystem may not be flowing into other systems related to the transfer process, which may stifle their ability to provide feedback about the process. The function of information and communication flow between systems is impacting advisors' understanding and uses of STAP which may be impacting the larger articulation system.

System Structure

Hutchins' (1996) sixth principle states that a system's structure determines how it functions, and that structure is ultimately determined by the relationship of various parts of the system. The shift to the Pathways model of advising was a significant shift to the advising structure at LCC and this new structure has influenced how advisors understand

and use STAP. As discussed in Chapter 3, the Pathways model was a complete overhaul of advising at LCC resulting in the hiring of several new academic advisors, a shift in advising philosophy, an increase in student interactions, and the creation of major and program MAPs. The changes shifted advising from a generalist approach to an academic and career clusters model centered around academic program areas. These changes permitted advisors to focus on a limited number of academic programs, which allowed for a greater depth of knowledge and encouraged them to create connections with faculty in their assigned discipline areas. This shift also limited the number of articulation agreements advisors needed to understand and stay relevant on as part of their work. By limiting the breadth of knowledge required to successfully fulfill their duties and responsibilities, advisors can focus more on nuances of their specific academic and career areas, which allows them to provide students with additional support. This shift in the academic advisors' system drastically changed the structure of advising at LCC.

This shift in structure, according to Hutchins (1996), not only affects the academic advisors' system, but also all systems that make up the transfer process. By changing the advising structure, LCC changed the relationship of the parts (advisors) to the larger system of advising, and this new relationship affects the system of articulation which then affects the system of transfer. With a new focus on academic and career, advisors have become "experts" in their areas and have identified the most efficient and effective paths for transfer students. In some areas, STAP is the most productive option and advisors understand how to use these agreements for the benefit of their students. In other academic and career areas, advisors understand the limitation of STAP and have

found other options. These differences in understandings and uses are a product of the academic and career areas in the new Pathways structure.

A recent addition to state policy created a structural shift to the system of articulation which has impacted the academic advisors' system. The state has added three provisions to the statute, compelling four-year institutions to adhere to the requirements of credit transfer outlined by STAP. These included a requirement to waive general education requirements for a student who completes an associate's degree, limits lower division requirements for students following a DWD, and limits the total credits hours a transfer student is required to complete (Colorado Department of Higher Education, Transfer degrees, 2018). These additions provide leverage for students in the transfer process and enhance the guarantee created as part of STAP. These changes to the articulation system have increased advisor's confidence and, in turn, influenced their understandings and uses of STAP. By influencing the structure of the articulation system, the state has affected the academic advisors' system and thus changed how STAP is used.

System Boundaries

The seventh principle outlined by Hutchins (1996) stated the boundaries of any system-of-interest must be defined. A systems boundary, according to Hutchins, is defined by how open and closed a system is, which influences the system's functions. The more open a system is, the more difficult it is to define its boundaries. This was evident in the academic advisors' system which is an open system with permeable boundaries (information moves in and out easily).

One way to define the boundaries associated with the academic advisors' system is to examine its functions. As discussed in Chapter 4, participants identified functions

related to their system; providing transactional services, assisting with transfer planning, helping students create educational pathways, and establishing connections with students. These functions require the existence of the academic advisors' system to complete and rely heavily on several other systems at LCC and in higher education. Without advisors providing transactional services, assisting with planning, and helping student establish needed connections, other systems would have to fulfill these roles related to student transfer. The functions identified define the boundaries of the system and provide guidance to academic advisors.

The boundaries of the system under study are highly permeable and allow for exchange of information. The more difficult information exchange becomes, the more closed a system becomes (Hutchins, 1996). The academic advisors' system appears to be an open system with continuous exchange of information and ideas. Participants discussed opportunities to learn and grow while influencing other systems around campus. By contrast, the system of articulation is a rigid system with limited information flow. Statewide transfer articulation policy is dictated by state statute, created by faculty, and implemented by advisors. Once STAP is in the academic advisors' system, there is little advisors can do to influence or change that system affecting how they understand and use these agreements. As identified in Chapter 4, participants shared several limitations related to the articulation system which influence how and when they use STAP. These limitations are a good example of a relatively *closed* system influencing a more *open* system.

System of Interest

Principle eight suggested that understanding how a system achieves its purpose(s) is essential to understanding the system of interest (Hutchins, 1996). Feedback loops, which provide information to the system, can be positive and cause a system to continue in the same direction, or they can be negative and induce a change in direction. Feedback can also be balancing, which provides stability, or they can be reinforcing, which encourages change. The change in advising at LCC to a Pathways model is an example of change based on feedback loops. Although the advising system was not broken, influences outside the system were suggesting a shift from a more transactional approach to academic and career advising. This information reinforced the idea that change in the system was needed for it to survive in the higher education arena. In turn, the academic advisors' system received reinforcing feedback which caused a change in its purposes related to the new model. The positive feedback advisors received from students reinforced the new model and caused the system to continue moving in a new direction. Advisors also overwhelmingly believe the new structure is positive, a perspective which lends stability in the system.

Hutchins (1996) also believed that systems self-regulate themselves to achieve the purpose of survival. Systems take in new information, process it, and use feedback loops to make meaning, often constructing an understanding that is meaningful to individuals. This self-regulation of information determines how a system will function, the subsystems of interest, and the involvement of individuals in the system. Hutchins refers to this concept as *equifinality*, or the idea that members of a system are involved in the regulation of their work. The use of STAP as a general advising tool is an example of this

self-regulation. Limited influence from administration concerning the use of STAP is present in the advising process, thus advisors develop their own uses for STAP that support students' needs and their advising practices. This self-regulated meaning-making process is an example of using feedback loops to create new meaning related to STAP while fulfilling the survival function of the academic advisors' system. If implemented as intended, the advisors felt STAP may prevent them from achieving the other system purposes they identified.

A final interpretation of *systems of interest* relates to the feedback loop advisors create. The academic advisors' system is responsible for implementing components of STAP with students in the transfer process. How they self-regulate around the meanings they have constructed influences their use of the agreements. This creates positive and negative feedback loops which influence other subsystem of the transfer process. These feedback loops provide information to the articulation system and based on the type of feedback provided, can affect the articulation system. If the information is balancing, the articulation system will continue as designed. If the feedback is reinforcing, the system could experience change. This feedback loop demonstrates the flow of information through a system as that system attempts to survive.

System Adaptation

The ninth principle states that all systems must adapt to their environment if they are to survive (Hutchins, 1996). Adaptation or learning is important for a complex system to survive. Without learning, a system will eventually fall into dysfunction and ultimately fail. The learning function allows the system to adapt to changing environments, process new information, and develop new responses. In human systems, learning causes

dissonance which creates an environment for adaptation. If dissonance is rooted in experience and acknowledge, adaptation in the form of change will take place. However, ignoring dissonance is a resistance to adaptation and change.

A constructionist ontology is a belief that the nature of reality is socially constructed, and that knowledge and meaning are constructed as people interact with each other (Crotty, 1998). In human systems, information creates new meanings which are constructed in relation to others in the system. How academic advisors attribute meaning to STAP gets constructed through interactions or learning with others. As new information comes into the academic advisors' system and learning occurs, new understandings are developed that need to be processed by the system. Once processed, these new understandings may or may not elicit an adaptation in the system, depending on the new meaning developed. Participants shared examples of changes to STAP which generated new information in the academic advisors' system and through interactions with other advisors and students, new understandings or meanings were developed. The most prominent was the addition of policy that holds four-year institutions accountable. This change produced new information, causing advisors to develop new confidence in using STAP, a confidence which changed advisors' understandings and ultimately changed how they use STAP.

As discussed in Chapter 4, lack of continued discussion and training related to STAP limits learning and adaptation in the academic advisors' system. Advisors indicated that they received minimal information during onboarding and that on-going trainings or discussions about STAP are rare. Without information exchange, new meanings will be less likely to get created and adaptation may not occur. Advisors shared

that most new information related to STAP comes into the system informally and is rarely processed by the entire system. A few participants shared that they rarely think about STAP, which minimizes how they use articulation in their work.

The academic advisors' system has adapted to the shift to the Pathways model which was a result of new information concerning advising in higher education. The system has learned how to use new information related to academic and career development and working holistically with students around personal and professional goals. The creation of MAPs also provided new information to the system which created an adaptation for advisors. Overwhelmingly, participants felt that the new Pathways model was a positive adaptation to shifts in higher education.

System Change

The final principle proposed by Hutchins (1996) is that systems inevitably and ongoingly change, which is central to system survival. Without change, systems decline. Hutchins argued that how a system embraces and manages change is crucial to understanding. Balance allows reaction and adjustment to environmental changes and lack of balance precludes a meaningful response.

The academic advising system recently underwent considerable change as it moved to the new Pathways model. This type of chance has the potential to cause the system to wither or move to the next or higher level of organization. A system that is balanced and able to adapt to significant change will typically move to this new level. Large Community College's advising system seemed to demonstrate balance which may enable it to move toward more complex structure and purpose. The academic advisors' system also adjusted to significant changes including the addition of many new advisors,

broadening the purpose of advising, and implementing new structures to support advising. The academic advisors' system adapted to this new information, was able to change as needed, and continues to move to new levels of organization.

Changes and updates to the articulation system happen frequently, but this new information often does not flow uniformly into the academic advisors' system and thus creates difficulties around system change. Several advisors are hesitant to use STAP, primarily the DWDs, based on their understandings of policy challenges and limitations. This has created an unequal use of STAP and an imbalance in the system. Advisors in certain academic areas find that STAP aligns well with transfer, and they promote its continued use and development. By contrast, advisors in other areas have found the opposite, and they discourage the future development of state-wide transfer agreements. These differences reflect unequal understandings and uses of STAP and they indicate an imbalance in the system. Currently, the academic advisors' system is making positive adjustments, but this division could potentially destabilize the system.

Using Systems Theory to Analyze the Research Questions

This section provides a brief crosswalk for the study findings presented in Chapter 4 examined through the lens of systems theory. Unlike the pervious section which looked at each component of systems theory, this section will apply the appropriate system theory perspective to each finding. This examination provides an additional way to discuss systems theory.

Research Question One

The purposes and functions identified by participants in relation to RQ1 included providing clear pathways, providing assurance, credit protection, standardizing the

transfer process, and supporting state goals. When examining these findings through the lens of system wholeness, it becomes apparent that advisors have a broad understanding of the articulation process. Advisors were able to identify purposes and functions that support the loftier goals of advising including creating pathways and influencing student economic mobility, while also acknowledging the purposes and functions of credit protection that support the transactional nature of their work. System wholeness requires that a system examine itself as a whole and not just the parts. These findings demonstrate a complex system that is responsible for fulfilling several purposes and functions to support system wholeness.

Additionally, findings from RQ1 related to pathway creation, providing assurance, standardization of the transfer process, and connection to state goals suggest that advisors are aware that STAP plays multiple purposes in the higher education system. These demonstrate the multiple purposes that individual assign to a complex system. In addition, the academic advisors' system understands that STAP must fulfill these multiple purposes in order to function. They are also are aware that these purposes and functions are influenced by the ways they make meaning of the information. Systems theory suggests that advisors' understandings are shaped through information flow and feedback loops. As advisors work with articulation, gain information, and receive feedback, new meaning is created and understandings are adjusted. Every day, the principles of system theory as outlined by Hutchins (1996) are in effect, which means the academic advisors' system is constantly adapting and changing to influences and information. These changes will continue affecting how advisors understand both their role and the purposes and functions of STAP.

Research Question Two

In RQ2, advisors identified limited training, lack of administrative expectations, undefined purposes, and lack of official policy updates as the objectives, procedures, and process that contribute to their understandings and uses of STAP. I used systems theory to examine these findings from the perspective of information flow. As discussed, information enters the system, is transformed, and a response is created. The findings to RQ2 are examples of different channels for information flow into and through the academic advisors' system. In a healthy system, initial training would provide a base for advisors to construct their understandings related to STAP while administrative expectations, defined purpose, and policy updates would provide opportunities for new information to enter and be processed by the system. This flow thus informs the output and understandings advisors assign to STAP.

As discussed in Chapter 4, these areas lack uniformity, which may stifle how information enters the system and how advisors' process and use this information. Limited training during onboarding, a lack of clear administrative expectations, no defined purpose for STAP use, and limited information about policy updates affects the follow of new information into and through the system, which then can affect output. This stifling effect ultimately influences advisors' understandings and uses of articulation. Using systems theory to examine information flow demonstrates how advisors understand and use are shaped causing unique adaptation and change.

In addition, the findings to RQ2 also demonstrated the intricacies of system interconnectedness. Limited training, lack of administrative expectations, undefined purposes, and lack of uniform policy updates relay on system interactions. If the

academic advisors' system is not adequately connected to systems that influence information flow, the system will not function at its full potential. Findings from Chapter 4 suggest that the academic advisors' system is aware connected to other systems required for information flow; however, these connections are not organized, which impacts information flow between systems. Without appropriate connections, the academic advisors' system must interpret the information without much direction for these other systems. This interconnectedness, or lack thereof, affects the meaning-making process on how advisors understand and use articulation.

Research Question Three

Interviewees identified ways they use STAP including as a means to provide guidance, to increase their confidence, and as a general advising tool in the advising process which provides the findings to RQ3. These uses are a response to the information processing function of systems theory which produces system adaptation and change. As advisors learn and process new information about STAP, they create adaptation that support the purposes and function of the academic advisors' system. The uses identified, guidance, confidence, and general advising tool, developed as advisors learned about STAP, used STAP in their work, and made adaptations to support future experiences. Hutchins (1996), stated "Learning is driven by a search to explain a discrepancy between past knowledge and present or anticipated experience in order to predict the future and increase the probability of survival" (p. 138). By examining the findings to RQ3, it becomes apparent that advisors are using the learning they experience through information flow and their daily work to inform new and more appropriate uses of STAP.

By adapting STAP to fit current needs, the academic advisor system is continuing the learning function which is essential for system survival.

Through a discussion of STAP limitations in Chapter 4, it became apparent that the academic advisors' system has adapted STAP purposes and functions to meet the needs of both advisors and students. The participants identified several limitations including students who benefit, difficulties with curriculum changes, the prescriptive nature of articulation, inconsistences among four-year institution participation, lack of a seamless experience, lack of communication, and website and technology issues. By acknowledging and understanding these laminations, advisors have been able to adapt STAP to fulfill the required functions of the academic advisors' system. Systems will adapt based on how information is processed to survive. Advisors are aware that statewide transfer articulation policies are important and have found ways to use them to provide guidance and increase their confidence. They have also found new and innovative ways to use STAP as a general advising tool to fill in the gaps. Through their understandings of STAP limitations, advisors have adapted their use of articulation to meet the needs of the academic advisors' system. This adaptation is inevitable for system survival.

Research Question Four

Finally, I analyzed the findings to RQ4, which include influences of receiving intuitions and online options, through a systems theory lens. As discussed in Chapter 3, LCC is a highly centralized institution. Each campus operates under a shared structure allowing for cohesiveness in approach. This shared structure has produced similar understandings and uses of STAP across all campuses. This centralized structure allows

information to flow in a similar pattern at all campuses, creating shared understandings and uses. In addition, the structure has allowed for similar understandings related to STAP purposes and functions.

The unique findings related to RQ4 is the influence that four-year intuitions have on this coherence. When viewed through the lens of a "system of interest" it becomes evident that feedback loops are creating variation in the system. How the academic advisors' system processes information received through the feedback loops from four-year institutions influences how STAP is used by each campus. These feedback loops affected which DWDs were used and how advisors understood articulation in relation to specific four-year institutions. The feedback loops provided unique and individualized information to each campus influencing how and when advisors used STAP.

One positive feedback loop related to the finding in RQ4 was the identification of a unique opportunity for Campus 4 and an online institution. As noted in Chapter 4, this online four-year institution advertises a commitment to transferring all 60 credits as part of an AA or AS applying them to one of their bachelor's degrees. The feedback provided by the four-year institution and students who use this option has created an adaptation used by Campus 4 in relation to articulation. By examining this finding through a system of interest lens, it becomes apparent that advisors use feedback to create adaptations that inform their use of STAP.

As Hutchins (1996) suggested, systems theory focuses on social problems from a perspective of wholeness to understand the human experience. Instead of breaking systems down into their smaller parts to explain social problems, systems theory looks at the world holistically through a process lens. This view allowed me to analyze the

research questions from a "process, not parts" perspective and to explore complex phenomena more fruitfully. Hutchins (1996) believed that to understand wholeness, one must examine system interconnectedness and information flow, two concepts that proved important in this study because they compelled me to examine how the academic advisors' system connects and interacts with other systems that make up transfer.

Recommendations

Through the discussion and analysis of the findings presented in Chapter 4, several recommendations for adapting and changing STAP were identified. My recommendations are founded in part on participant suggestions based on their current understandings and uses and my analysis of the finding from the theoretical framework. These recommendations are presented in three sections and may be useful for community college academic advisors, faculty, institutional administrators and staff, and state policy makers.

Advisor Recommendations to Improve their Work

Nearly every participant shared a recommendation about current STAP and ways they would change the articulation system. These suggestions ranged from minor changes to full policy overhaul. For many advisors, this study was the first time they were asked about their thoughts and what they would like to see to improve STAP. The ability to share their understandings and uses of STAP appeared valuable, generating several ideas. Changes participants identified that could influence their work included participation in the feedback process, additional training and updates, improvements in technology, and more flexibility.

Feedback. A common theme was the lack of feedback opportunities. As noted in Chapter 4, policy is created at the state-level with input from two- and four-year faculty and advisors are required to implement what comes down from above. Unfortunately, advisors are not included in policy development nor are they asked for feedback about STAP. Deborah and Lisa commented that advisors are seldomly asked for feedback on policy even though they are responsible for implementation. Lisa shared this comment:

> I don't know if there's a summit or some kind of way they can bring the two-years and four-year together to make these [STAP] better. And I would even include the advisors in this. Start with advisors and then work your way up because advisors know more about articulation than anybody else … on a college campus. What's working? What's not? They interact with it all the time. Every day they're hearing from students when things don't pan out. Some kind of meeting for advisors to have the ability to discuss their experiences and make recommendations.

Lisa believed her voice could aid in the process because she understands the importance academic advisors play in implementing policy. Having an avenue to provide her perspectives or feedback would allow her to feel like she is part of the solution. Deborah felt similarly and believed advisors feedback would be beneficial in improving articulation. She felt that she had valuable information that could improve articulation development and implementation.

Training and updates. As discussed in Chapter 4, limited training and lack of formal policy updates affected how advisors understand and use STAP. Advisors felt training for new and current hires should be improved and focused on purposes and functions of STAP. As Andrew suggested, training should include more information and discussion on why STAP exists as part of the academic advising and transfer processes and how STAP can support the student experience in higher education. Additional

training could help with information flow into and through the system if all advisors have the same initial understandings of STAP.

Participants also recommended implementing a more formal process for processing new STAP information. Updates about STAP are shared haphazardly and without frequency causing concern for advisors. They would like to see formal update processes developed at the state-level and between two- and four-year institutions. Advisors feel this would help keep everyone on the same page and increase information exchange in the system. As suggested, advisors are concerned that they might miss an important update and inadvertently misadvise a student. Frequent and continuous updates could help minimize this risk.

Improved technology. The website and the technology currently used to display and interact with STAP was identified in Chapter 4 as a concern to participants. Large Community College has implemented several new online tools to improve the advising experience for students and advisors aimed at increasing efficiencies in advising and access to information. These technologies are outpacing the technology used at the state-level creating concerns about the Colorado Department of Higher Education website. These concerns include difficulties in navigating the articulation website, over-reliance on PDF documents, and a lack of real-time information. The document review process for data collection aligns with these very same concerns.

Participants recommended the Colorado Department of Higher Education needs to invest in new technologies that could improve the articulation system. Advisors believed that creating a centralized database with real-time information could increase information flow and accuracy. Pauline envisioned an interactive tool that shows

articulation information in searchable format with if/then algorithms that could help advisors and students explore how articulation aligns with four-year institution requirement. Advisors also feel new technologies would improve their confidence in the information they were using. Hazel shared her distrust in using PDFs:

> There are PDFs that you can download from the website but they're not anything that you can interact with and so it already seems outdated. That's the problem with PDFs, they are static and required regular updates. A live website would make me feel more comfortable. I think it'd be easy to update, but I think that it would feel a little bit more reliable and modern.

Hazel felt this type of change would improve her confidence in the information presented and improve her ability to access what was important. Although advisors have grand ideas for new technologies, they understand this takes time, resources, and personnel to implement and manage. This would need to be a priority of the Colorado Department of Higher Education to implement these recommendations.

Flexibility. The final recommendation identified by the participants was the idea of flexibility within the articulation system, specifically with the degrees with designations. As discussed in Chapter 4, advisors believe one of their purposes is to help create pathways that allow students to fulfill their personal and professional goals. Often, this is an individual process which can be difficult to align with strictly defined agreements. Advisors suggested building in more flexibility for students to explore options and transfer institutions during their first 15 to 30 credits. This would provide transfer students opportunities similar to those of students who start at four-year institutions for exploring and finding the right academic program(s). Advisors believe there are options to build in this type of flexibility; however, that would require the support of faculty at two- and four-year institutions responsible for creating DWDs.

Advisors also recommended that the state should find ways to support the production of institutional specific transfer guides that contain many of the same guarantees as the degrees with designations. They understand this would be an even larger undertaking but would help with flexibility. They are currently experiencing the tensions the DWDs are creating with some of the four-year institutions and see value in developing something more individual based on the transfer institution. Gary shared his thoughts on institutional transfer guides:

> I would say that would be my dream scenario is just for every subject area, business English, biology to have a guide. If you want to be a teacher, follow this for this four-year school, if you want to be a writer follow this for this. I think that would be so helpful for me. I know that would be an awful lot of work and time but I think if you want to provide the best service to students, I think that's the way to go.

Gary's views suggest advisors are looking for ways to guarantee a transfer path while also being flexible. The idea of institutional transfer guides would provide flexibility and guidance for advisors but may not allow students the ability to explore various degree options and transfer institutions. Although this flexibility could improve the advisors experience, the concept behind the DWD may still provide more flexibility for the student. The current process allows students to select from multiple transfer intuitions, all while following the same articulation agree.

Advisors Recommendations for Improving The Student Experience

Participants also made several recommendations that could support students experiences with STAP. These suggestions are based on feedback advisors received from students and their use of STAP. Changes advisors identified that could influence the student experience include educating student about the complaint process, creating a

student-friendly Colorado Department of Higher Education website, and, creating alignment that shows the full path to a bachelor's degree. These recommendations are based on the discussion presented in Chapter 4.

Complaint process. Participants suggested that the Colorado Department of Higher Education could provide additional information relevant to the complaint process. As noted in Chapter 4, students, and many advisors, are unaware of the process to file a complaint against an institution for not adhering to statewide transfer articulation policy. Luke said he was unaware of the complaint policy and would not know how to direct students who need to use this option. As an advisor, he was concerned that he does not understand the process and reported that he did not receive training in this area.

Document review revealed a simple process for filing a complaint with the state; however, in Colorado, the initial complaints must be filled with the institution at the center of the dispute. Advisors had reservations that students knew to access the complaint process via the Colorado Department of Higher Education website and even then, the language is not student friendly. Christine shared that she learned how to file a complaint by assisting one of her former students through the process. Even with her experience in higher education, she found the experience difficult. Participants believed that a more transparent process would benefit students who experienced an issue.

Student friendly website. Participants suggested that improvements to the Colorado Department of Higher Education website with a student focus could improve STAP. As discussed in Chapter 4, the website is divided into several sections including one designed for students and parents where articulation is presented. Information in this section appears in a formal manner and is written for administrators and policy makers.

Advisors feel that this presentation is confusing to students, even with advisor assistance. Advisors believe creating a site that presents information in a student friendly manner could assist students who are looking for additional information or who are trying to self-advise.

Full bachelor's degree pathway. As discussed in Chapter 4, participants believe that STAP has the ability to provide clear pathways for students. These pathways outline the expectations and limitations required to move through the community college and into a bachelor's degree. As noted, the degrees with designations outline the course requirements needed to move into a specific bachelor's degree. Participants shared that the pathway creation aspect of the degrees with designations was important in how they understood and used STAP. The advisors also commented that the DWDs only outline the expectations and limitations for the associate's degree and do not address the requirements following transfer and bachelor's degree completion. Participants recommended creating a full pathway for students showing how the DWD aligns with completion at all public four-year institutions in Colorado. This type of curricular presentation would provide additional information for students as they select classes to fulfil the DWD while also preparing appropriately for their desired four-year institution. Advisors felt this would allow for more transparency in the transfer process and help students make informed decision about their destination institution. Rita shared that she often works with students who want to know the full picture from the start. She felt that students want to know what the entire program of study will look like so they can plan not only their academic life but also their personal lives outside school. Rita shared this:

> I think having a layout of after transfer would be helpful. Students take all of these classes at the community college and want to know what the rest of the

> MAP [bachelor's degree] looks like. What classes would they take first semester, second, third, fourth, and would they need during their fifth, sixth, seventh, or eighth semester to finish out that degree program. That way students are fully aware of what this mean for their long-term plan.

Rita acknowledged that she can sift through other advising tools, look at four-year institution's website, and pull from her previous knowledge to help create this full path; however, she does not have the capacity to do this with all students. If the Colorado Department Higher Education could maintain the full degree paths like they do the DWDs, she felt this would be a positive change for transfer students.

My Recommendations

In addition to the recommendations from participants based on the findings in Chapter 4, I developed suggestions based on my use of systems theory to analyze the findings. By considering systems theory, I was able to develop new perspectives related to community college advisors' understanding and uses of STAP. These recommendations include policy implementation, information flow, and feedback.

Policy implementation. The academic advisors' understanding and uses are important in understanding policy impact. The academic advisors' system, as mentioned, takes in information, develops meaning, and creates a response necessary to understand and use policy. This transformation of policy information in the academic advisors' system is crucial in making meaning of Colorado statewide transfer articulation policy as part of the whole system of transfer. The understandings advisors developed has influenced how they use articulation in their work. These uses have impacted how they implement policy which has influenced policy outcomes. As Smith (1973) suggested, a policy may be developed at the state-level with certain goals and objectives; however, the way a policy is understood and implemented ultimately defines the outcomes. Advisors at

LCC have developed their own unique understanding and uses of policy that have the potential to influence the outcomes thus impacting the whole transfer system. As discussed in Chapter 4, the way advisors understand STAP purposes and functions has impacted how they use articulation in their advising practice. These uses are unique to their understanding which impact the system.

Through my examination of the academic advisors' system, it became apparent that implementation of STAP is an individual process. McLaughlin (1987) claimed higher education policy implementation moved to a relational approach; one in which the understandings of the implementor influences how the policy is implemented. This is evident in the findings that suggest the academic advisors' system makes meaning of information in an individual manner. As participants shared in Chapter 4, limited training, lack of administrative expectations, undefined purposes, and limited updates creates an environment where individual advisors become responsible for developing their own understandings to implement and use policy. This individual approach was evident in my interviews and suggests STAP implementation at LCC is an individual process.

As discussed in Chapter 2, Chase (2016) suggested several factors that influence policy implementation at the community college level. Institutional identity, perceptions of the target population(s), and national narratives were present in this study. Depending on how actors within the academic advisors' system interpret these areas can influence how individual decide to implement policy.

As part of the shift to the Pathways model, LCC placed emphasis on institutional identity and its role in educating and preparing for their careers. Advisors are responsible

for helping students explore personal and professional goals and this is important in how advisors understand their role related to creating pathways. They understand statewide transfer articulation policy can help fulfill this function which has influenced how they implement STAP in their practice. Advisors are aware of their institutional identity which impacts policy implementation.

As discussed in Chapter 4, limitations of STAP influences the academic advisors' system and how advisors decide to use articulation. Based on perceived limitations around prior credit, academic program, and transfer destination, advisors implement STAP differently with certain student populations. Although STAP is designed to work for all students attempting to transfer to a public four-year institution, advisors have determined it works for a much narrower subsection of the population. These understandings influence how advisors implement policy with students in different populations.

Information around trends to improve the transfer process in higher education is also flowing into the academic advisors' system and seems to affect how policy is implemented (Colorado Department of Higher Education, 2018). As discussed in Chapter 1, nearly half of all undergraduates are currently enrolled in a community college (American Association of Community Colleges, 2019), and 80 percent of them have a desire to transfer. This means transfer is an important pathway to a bachelor's degree for many undergraduates. Advisors understand articulation has the potential to assist students with their transfer goals and have found ways to use STAP as a general advising tool. This use signifies a unique way information around national trends has influenced how

the academic advisors' system understands STAP and has influenced implementation of articulation policy.

Information flow. Information flow into and through the academic advisors' system is influencing advisors' understandings and use of STAP. These understandings and uses are influencing how policy are implemented in the system. As noted previously, a formal process for dealing with information flow in the academic advisors' system does not exist which further influences understandings, uses, and implementation. A formal process for information flow in the system could improve the input, transformation, and output functions of the system, thus improving information use. A formal process might also encourage further sharing of information that could influence system use. I recommend that the academic advisors' system consider brainstorming a process for information flow as part of future improvements.

Feedback. A final suggestion relates to the interconnectedness of systems and policy development and implementation. As discussed, advisors are responsible for policy implementation; however, there is no formal process for them to provide feedback based on their experiences with STAP. This feedback loop would allow for the academic advisors' system to interact more closely with the state system responsible for creating policy, and the two- and four-year faculty systems who develop policy. Increased interaction in the form of a feedback loop would allow advisors an opportunity to share their understandings and uses with these other systems which could influence the future creation and development of STAP. I recommend that advising unit directors at each campus brainstorm ways to create feedback loops for further connecting the academic

advisors' system to other systems responsible for creating, developing, and implementing STAP.

Future Research

This study was an exploration into community college advisors' understanding and uses of Colorado statewide transfer articulation policy providing initial findings and suggestions. This new information could prove useful to STAP policy makers, institution administrators, faculty involved in STAP creation, and academic advisors as they continue to work with articulation policy. Further research in this area could shed light on this discussion in new ways allowing for further discussion and analysis. Systems theory would suggest that future research should include analyzing qualitative data in other systems connected to the system of articulation and transfer (this would enable an enhanced understanding of system wholeness). This includes the Colorado Department of Higher Education, faculty at two- and four-year institutions, advisors at other community colleges in Colorado, advisors at four-year institutions, and students. Exploring understandings and uses in these systems will provide additional data useful for understanding Colorado STAP.

Use Systems Theory

Additional research about Colorado STAP using systems theory would provide useful information about how articulation is understood and used as part of the larger transfer and higher education systems. These understandings could provide information necessary to make future changes and enhancements to improve advisor use. These changes could also positively influence students who rely on articulation as part of their transfer. Since articulation is impacted by and influences several systems in the transfer

process, understanding how and why could improve the efforts of future interactions of STAP.

Examine Identity and Intersectionality

Future research should also explore this phenomenon by examining how identity and intersectionality influences understandings. As discussed in Chapter 2, academic advisors act as institutional agents aiding students as they navigate higher education (Bensimon & Dowd, 2009). Advisors assist students with the transactional components of higher education, deciphering articulation agreements, identifying admissions requirements, and supporting the overall wellbeing of the student (Packard & Jeffers, 2013). In addition, this study found that academic advisors assist students with personal and professional goal attainment. All of the functions and purposes are performed by individuals in relation to one another. These socially constructed concepts are potentially influenced by individual people and requires further research to understand how identity and intersectionality influences advisors' understandings and uses of statewide transfer articulation policy. As interesting and important as identity is in research, I was interested in a different level of analysis and chose to focus on the system of academic advisors.

Engage Reflexivity Early and Often

As I shared in my reflexivity statement in Chapter 3, through this experience I became aware that my identities shaped the research process and outcomes. My identities influenced the kind of questions that I asked, how my participants responded, and the findings in this study. By not including identity in this research, I failed to pay attention to communities that are typically misrepresented, silenced, and taken for granted (Dillard, 2000). I thought that not asking for this information would allow perspectives to arise

naturally and without prompting. Reflecting back on this approach, I did not address the power dynamics required to create an environment conducive for participants to share perspectives related to their identities. Milner (2007) stated:

> …researchers [need] to reflect about themselves in relation to others—in this case, the communities and people involved in their research studies—and to acknowledge the multiple roles, identities, and positions that researchers and research participants bring to the research process (p. 395).

Through reflection, I have become aware that my identities of White and male brought a power dynamic to the interview setting that failed to acknowledge participants who identify differently. Milner (2007) stated "How education research is conducted may be just as important as what is actually discovered in a study" (p. 397). This became abundantly clear as I reflected on this study and the choices I made.

My awareness may serve to encourage future researchers to consider issues of identity in their research. Valandra (2012) examined reflexivity in ethnographic research and believed the practice should to be engaged early in the process. Valandra suggested:

> The pre-research phase is a way researchers can train their mental and emotional muscles to think and feel reflexively. This phase is an effort for researchers to start seeing themselves as active players, and thus an influencing factor in the research they want to implement (p. 216).

For researchers who hold similar identities to me, engaging in reflexivity early in the research process might allow for a deeper level of examination related to privileged identities. As a novice doctoral researcher, I failed to engage in reflexive practices while exploring topics, reviewing literature, and designing the methodology. Had I engaged in reflexivity throughout, I would have made different methodological decisions that could allow me to more thoughtfully address issues of power and privilege.

I encourage future researches to learn from my experience and find ways to engage reflexively early in the research process. Future researchers could consider reflecting on questions that probe topics of identity, power, privilege, etc. Valandra (2012) provided questions to promote early reflexivity. Here are a few examples:

- How does my worldview influence the way I experience and/or construct this topic/idea/population?
- How are my life experiences shaping the design of this study?
- How do my life experiences shape the implementation of this study?
- How do I experience myself in relation to the community from which I would like to invite members to participate in my study?
- What potential power dynamics are relevant to reflect upon and/or to address?
- In what ways can what I disclose about myself potentially influence what study participants share or not share about themselves?
- How do my social demographics shape my interpretation of the data collected?
- In what ways did my presence influence the participants' responses? (pp. 216-218)

These questions provide an opportunity to engage reflexivity throughout the research process and could help future researchers work with issues of power and privilege. Although I believe in the findings of this study, I hope readers of this research can learn from my experience as they pursue their research goals.

Examine First-generation Status

Finally, first-generation students make up nearly 50 percent of the community college population (National Center for Education Statistics, 2019) which may have

influenced the findings of this study. Participants were asked about a student population that may or may not benefit from the existence of STAP; however, no significant findings developed from these responses in relation to first-generation status. It may prove fruitful to refine the methods and data collection procedures to focus on underrepresented students including first-generation.

Conclusion

When I first began my participant outreach for this study, I was met with eagerness from the advisors. There was this sense of excitement about being asked to talk about their experiences using statewide transfer articulation policy. For many, it seemed this was the first time anyone had asked about their perspectives, even though they are the primary implementors of these types of policies. As I began interviews, I realized advisors' voices would be crucial to further understanding STAP. I believe the findings presented are important to furthering STAP discussions. This view was supported by participant comments made during data collection. Several advisors commented about various avenues wherein these findings could be shared and asked if I had plans for disseminating this information including presenting to the Colorado Department of Higher Education and Colorado Community Colleges. Advisors were encouraged by my research and were thankful to provide their perspectives and experiences to this research.

Advisors are concerned with the future of articulation policy and want to have a voice in the process. Their perspectives provided new understandings that go beyond what quantitative data can provide. Together, these data can paint a broader picture of STAP, one that policy makers and institutional leaders can leverage to make articulation

work better for advisors, students, and the state. Lisa believes articulation can improve the transfer process and shared this:

> My concluding thought is that I think articulation can work. I think we just all have to get on the same page and approach it from a different mindset than it's been approached from in the past. I don't know what that mindset has been but I think that if we can develop or strengthen the relationships with four-year and the state, I do think that it will allow community colleges to do better work with students as we move them closer to transfer.

Lisa sees the relationships and understands systems must work together to make articulation work for students. Her view supports approaching this issue from a systems perspective to make positive change to STAP.

Systems theory was valuable for organizing the findings in this study and provided a unique opportunity to look at STAP in the larger higher education picture. Using systems theory to define the system of interest allowed me to ask academic advisors for their perspectives while adding to the research in this area. Systems theory also highlighted the interconnectedness of systems and the need for future research. I believe there are unique understandings that arise from interviewing individuals and these perspectives are important in understanding our world view. This interpretivist view has allowed me to answer questions related to advisors' understandings and uses of STAP while adding to our collective understanding of advising, articulation, and transfer.

It would have been ideal for this study to encompass additional systems that interact with articulation to understand system wholeness; however, time and resources limited the scope of this study. Continued research in this area would allow for a greater understanding and broader discussion, which highlights the need for using systems theory to further research articulation. I believe systems theory provided a wholistic view and understanding of STAP and provides future policy makers and institutional leaders the

understandings and perspectives needed to create policy that will contribute to improved transfer pathways.

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APPENDIX A – SITE PERMISSION LETTER

Dear XXXX,

I am a doctoral candidate in the Higher Education and Student Affairs Leadership program at the University of Northern Colorado (UNC) under the supervision of Dr. Matt Birnbaum. I have received permission from the institutional review board (IRB) at UNC to conduct research with staff who are associated with academic advising, and I am writing to seek permission to collect data at your campus. The following information is meant to inform so you can decide whether this is acceptable.

The study's purpose is to better understand community college advisors' understandings and use of Colorado transfer articulation agreements as they pertain to advising transfer students. This study aims to contribute to the theoretical base of academic advising and to develop deeper understanding of how articulation policy operates within an advising system. *It is not an evaluation, assessment, or critique of the advising program at your institution.*

I would like to conduct my research at your institution because of the four separate campuses making up the system. These four campuses will allow me to explore advising and articulation policy from a systems theory perspective, which is central to this study.

Individuals who decide to participate in this study will participate in one-on-one interviews lasting a maximum of 60-90 minutes. Participants may be contacted after the interview to clarify and confirm that I correctly understand their answers to interview questions. Pseudonyms will be used to protect confidentiality. Should any participant decide to exit the study, they may do so by notifying me at the contact information listed in this letter or simply ask to conclude the interview.

In order to recruit staff participants, I am requesting a listing of all professional academic advisors in your department.

I am currently an employee at Western Colorado University. Whether or not you decide to participate in this study, our professional relationship will not be damaged, nor will your standing be adversely affected in any way.

I will take every precaution to ensure the confidentiality of the information provided, the names of individuals, and the institution itself. In addition, I will securely store the data in a locked file cabinet in my office. All data collected will be destroyed three years after the study is completed. All information will be confidential, and findings will be reported

using pseudonyms or as aggregate data. Data collected may be used for scholarly endeavors beyond this dissertation such as for publication in scholarly journals or conference presentations.

If anyone has any questions or concerns, they may contact me or the faculty sponsor of this study using the information below.

Sincerely,

Principal Investigator	**Faculty Sponsor**
Paul Giberson, M.A.	Dr. Matt Birnbaum
Doctor of Philosophy Candidate	Associate Professor
Higher Education and Student Affairs Leadership	Higher Education and Student Affairs Leadership
University of Northern Colorado	University of Northern Colorado
gibe8662@bears.unco.edu	matthew.birnbaum@unco.edu

Please read the statement below. If you agree to grant permission for this data to be collected in your department, please print your name, sign your name, date the form, and provide your contact information.

I have read and understand the above description of this research study. I have been informed of the risks and benefits involved, and all my questions have been answered to my satisfaction. I grant the principal investigator permission to conduct this study in my department. I understand I will receive a copy of this consent form.

Participant Signature: _____ Date: _____

Participant Printed Name: _____

Telephone Number: _____ Email Address: _____

I certify that I have explained to the above individual the nature and purpose, the potential benefits and possible risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Signature of Principal Investigator: Date:

THIS PROJECT HAS BEEN APPROVED BY THE UNIVERSITY OF NORTHERN COLORADO INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS (PHONE 970-351-2161).

APPENDIX B – SCRIPT FOR RECRUITMENT CALL OR E-MAIL

Dear_____,
I am contacting you to enlist your help in a research project I am doing for my doctoral dissertation in Higher Education and Student Affairs Leadership under the supervision of Dr. Matt Birnbaum at the University of Northern Colorado. Your name was given to me by _____, biased on your advising work with transfer students.

The purpose of the study is to better understand community college advisors' understandings and use of Colorado transfer articulation agreements as they pertain to your work advising transfer students.

I will be conducting my interviews during spring 2019. Participating in this portion of the study will take approximately 60 to 90 minutes of your time. The questions will center on your work with transfer students and your use of Colorado statewide transfer articulation agreements. The interviews, with your permission, will be digitally recorded and transcribed. To uphold privacy, your comments will not be identified by name and the interview will take place in a private location. Sample questions will include:

- Tell me about the work you do with transfer students.
- What is the purpose of advising?
- What do you know about Colorado statewide transfer articulation agreements?
- What is the role of Colorado statewide transfer articulation agreements in your work?

Additionally, I will ask participants to review the findings of the study for accuracy. You will periodically be presented with my analysis and assumptions to make sure the findings align with your intent. This process should take approximately 60 minutes total.

The University of Northern Colorado Institutional Review Board has approved the project and all appropriate measures will be taken to insure confidentiality.

If you are interested in participating in my dissertation study, I would like to schedule an interview time. I would be willing to talk more about this project and any questions prior to your commitment. Please feel free to contact me at this email or at 970-396-3100 or paul.giberson@colostate.edu. I look forward to hearing back from you soon.

Thank you for your thoughtful consideration of my request.

Sincerely,
Paul Giberson

APPENDIX C - E-MAIL OR SOLICITING CALL FOR PARTICIPATION

Dear_____,
I am contacting you to enlist your help in a research project I am doing for my doctoral dissertation in Higher Education and Student Affairs Leadership under the supervision of Dr. Matt Birnbaum in the University of Northern Colorado.

The purpose of the study is to better understand community college advisors' understandings and use of Colorado transfer articulation agreements as they pertain to your work advising transfer students.

I will be conducting my interviews during spring 2019. Participating in the study will take approximately 60 to 90 minutes. The questions will center on advisors' work with transfer students and how they use Colorado statewide transfer articulation agreements. The interviews will be digitally recorded and transcribed.

The University of Northern Colorado Institutional Review Board has approved the project and all appropriate measures will be taken to insure confidentiality.

If you can recommend an academic advisor(s) at your institution that can participate in my study, I would appreciate hearing from you. If you have any other questions about this project, please feel free to contact me at 970-396-3100 or paul.giberson@colostate.edu. I look forward to hearing from you soon.

Thank you for your thoughtful consideration and have a wonderful day.

Sincerely,
Paul Giberson

APPENDIX D - INTERVIEW PROTOCOL

Thank you again for agreeing to meet with me today to share your insights on transfer students and the Colorado statewide transfer articulation agreements. The purpose of the study is to better understand community college advisors' understandings and use of Colorado transfer articulation agreements as they pertain to your work advising transfer students.

I will be conducting my interviews during spring 2019. Participating in the study will take approximately 60 to 90 minutes of your time. The interviews, with your permission, will be digitally recorded and transcribed. To uphold privacy, your comments will not be identified by name and the interview is being conducted in a private location. At any time during the interview, you may turn off the digital recorder. Do you have any further questions before we get started?

Interview Questions
All participants selected for this study will be questioned using this semi structured interview guide:

1. Let's start off in general terms: Can you tell me about the work you do with transfer students?
   (Probe) When I ask you about the work you do with transfer students, what are some of the main things that come to your mind?
   (Probe) What are your job responsibilities?
   (Probe) What's the scope of your work?
   (Probe) How would you describe it to someone who doesn't work in this area?
   (Probe) What do you see as your role in the transfer process?

2. You mentioned a number of ways you work with transfer students in your work. Thinking about some of these, what do you see as the purpose(s) of advising?
   (Probe) What is your history with advising?
   (Probe) Do you think others in the office share a similar understand? Why?

3. As you know, Colorado has statewide transfer articulation agreements – can you tell me what you know about these?
   (Probe) In a minute I'd like to ask about how you actually use articulation agreements, but for now I'll ask that you think in pretty broad terms – Do you think articulation agreements have been mostly a good thing for first-gen students who wish to transfer? Mostly a bad thing? Or something else?

(Probe) What would you say are the biggest (dis)advantages about articulation agreements?
(Probe) Who do think benefits most from Colorado transfer articulation agreements?

4. Some advisors don't really keep articulation agreements in their minds during the advising process, while others have it very much on their minds – Can you tell me about the role of articulation agreements in your work?
(Probe) Overall and/or with students specifically

5. Who calls the shots around here? Are there any requirements or guidelines about how you should bring articulation agreements into your advising?
(Probe) How were you trained and how do you keep current?

6. Please share with me any thoughts you may have on changes to Colorado transfer articulation agreements that could facilitate the transfer process.
(Probe) In terms of articulation agreements, are there any changes that would make your advising more effective?
(Probe) What about changes at the institutional level that could enhance the use of Colorado transfer articulation agreements in your advising process?

7. Thinking about all the aspects of articulation agreements and your work as an advisor – policy, the particulars of your workplace, and so forth – can you think of any other barriers to the transfer process?

8. Are there any concluding thoughts you would like to share?

APPENDIX E – PARTICIPANT DEMOGRAPHICS

Anonym	Visible Gender	Visible Race/Ethnicity	Campus	Years Advising	Pathway Hire	Pathway Area
Andrew	Male	No	2	2	Yes	M&S
Ann	Female	Yes	3	1	Yes	B&I; HS&W
Christine	Female	No	2	6	No	HS&W
Deborah	Female	No	4	2	Yes	B&IT
Derek	Male	No	1	4	No	SS,E,PS
Diane	Female	No	3	4	No	UN
Fiona	Female	No	2	2	Yes	LA,C,&D
Frank	Male	No	3	6	No	M&S
Gary	Male	Yes	4	9	No	LA,C,&D
Hank	Male	No	1	12	No	HS&W
Hannah	Female	No	1	5	No	B&IT
Harry	Male	No	1	2	Yes	M&S
Hazel	Female	No	4	2	Yes	M&S
Helen	Female	No	3	1	Yes	LA,C,&D; SS,E,&P
Karen	Female	No	1	7	No	LA,C,&D
Lisa	Female	Yes	4	3	No	UN
Luke	Male	Yes	2	2	Yes	M&S
Margaret	Female	Yes	2	5	No	LA,C,&D
Maria	Female	Yes	1	25	No	M&S
Mary	Female	No	3	2	Yes	LA,C,&D; SS,E,&P
Michelle	Female	Yes	2	6	No	M&S
Oliver	Male	No	4	7	No	SS,E,&PS
Olivia	Female	No	2	2	Yes	B&IT
Pamela	Female	No	2	6	No	HS&W
Patricia	Female	No	1	4	No	SS,E,&PS
Pauline	Female	No	4	2	Yes	B&IT
Rita	Female	No	2	5	No	SS,E,&PS
Tracey	Female	No	1	2	Yes	HS&W

Note. Pathway Area abbreviations: B & IT = Business & Information Technology, HS & W = Health Sciences & Wellness, LA, C, & D = Liberal Arts, Communication & Design, M & S = Math and Science, SS, E, & PS = Social Science, Education & Public Service, UN = Undecided

APPENDIX F – CONSENT FORM

UNIVERSITY OF
NORTHERN COLORADO

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: COMMUNITY COLLEGE ADVISORS' UNDERSTANDINGS AND USES OF COLORADO STATEWIDE TRANSFER ARTICULATION POLICY

Researcher: Paul Giberson
Phone: 970-396-3100
E-mail: gibe8662@bears.unco.edu
Research Advisor: Matt Birnbaum, HESAL Associate Director, 970-351-2861

Purpose and Description:
The title of this study is Community College Advisors' Understandings and Uses of Colorado Statewide Transfer Articulation Policy. The purpose of the study is to develop new perspectives about how community college advisors' understandings and uses of Colorado transfer articulation agreements as they pertain to their work advising transfer students.

This consent document may contain words that you do not understand. Please ask the researchers to explain anything that you do not understand.

1. WHAT AM I BEING ASKED TO DO?

Screening Procedures
The researcher is using a sampling process to identify "information-rich" participants from the selected community colleges whose perspectives will allow for an in-depth review of the problem being studied. Participants must be currently employed at the selected public two-year institution, have advisory responsibilities relevant to the transfer process, and have some awareness of Colorado statewide transfer articulation agreements.

Interviews: Participating in the study will consist of one individual interview with the possibility of a follow up or clarification interview. The interviews will be digitally recorded and transcribed. To uphold privacy, comments will not be identified by name. Sample questions will include:

- Tell me about the work you do with transfer students.
- What is the purpose of advising?
- Do your responsibilities and the purposes of advising differ depending of generational status?
- What do you know about Colorado statewide transfer articulation agreements?
- What is the role of Colorado statewide transfer articulation agreements in your work?

Member Checking: Participating in this study will be asked to review the findings for accuracy. You will periodically be presented with the researcher's analysis and assumptions to make sure the findings align with your intent.

2. HOW LONG WILL I BE IN THE RESEARCH STUDY?

The interview will last approximately 90 minutes. Members checking will take approximately 60 minutes. Total commitment should not exceed 150 minutes.

3. WHAT ARE THE RISKS?

The only foreseen risks of participation are listed below.

Breach of Confidentiality
Although there is always the possibility of a breach of confidentiality, every effort will be made to protect your research data. The risk will be kept low by coding all of the information that is collected on each participant with numbers and the code list will be kept on an electronic spreadsheet that can be accessed by a password only. Hardcopy material will be locked in the researcher's department office in a locked file cabinet. After all study data are collected, the master list used to link codes with participant identifiers will be shredded. Any computer containing participant data will be password protected to protect your confidentiality.

Some questions in the interview may make you feel uncomfortable. You may choose not to answer any question with which you feel uncomfortable.

The researcher is willing to discuss any questions you might have about these risks and discomforts.

4. ARE THERE BENEFITS TO BEING IN THIS RESEARCH STUDY?

You will not benefit directly from this research study. Even though you will not receive any benefit, policy makers, institutional leaders, and student affairs professionals may benefit in the future because of what the researchers learn from this research study.

5. WHAT OTHER OPTIONS ARE THERE?

At any point you may choose not to be in this research study.

6. WILL MY INFORMATION BE KEPT PRIVATE?

The results of the research study may be published but your name or identity will not be revealed, and your record will remain private. In order to protect your information, the researcher will label your information with a confidentiality code. This code list will be kept on an electronic spreadsheet that can be accessed by a password only. Hardcopy material will be locked in the researcher's office in a locked file cabinet. The University of Northern Colorado Institutional Review Board (the Board that is responsible for protecting the welfare of persons who take part in research) may review your research study records. Audio recordings will be destroyed three years following the conclusion of the study.

7. WHAT ARE THE COSTS AND PAYMENTS?

There will be no costs to you for taking part in this research study. You will not receive any payments for being in the study.

8. WHO CAN I CALL IF I HAVE QUESTIONS?

If you have any questions or concerns about this research study, or if you have any problems that occur from taking part in this research study, you may contact the Research Advisor, Matt Birnbaum, HESAL Program Coordinator, 970-351-2861 or the Office of Research, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

9. WHAT ARE MY RIGHTS AND WHAT ELSE SHOULD I KNOW AS A RESEARCH STUDY VOLUNTEER?

By participating, your information will be kept confidential. The researcher is required to report to the IRB chair if information provided warrants harm to the research study volunteer, harm to others, or is illegal. Your participation in this research is voluntary. You may choose not to be a part of this research. There will be no penalty to you if you choose not to take part. You may leave the research study at any time.

10. AM I SURE THAT I UNDERSTAND?

I have read this consent document and have been able to ask questions and state any concerns. The research team has responded to my questions and concerns. I believe I understand the research study and the potential benefits and risks that are involved.

Statement of Consent

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Research, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

_____ _____

Consent Signature of Research Participant Date

_____

Print Name of Participant

I certify that I have explained to the above individual(s) the nature and purpose of the research study and the possible benefit and risks associated with participation. I have answered any questions that have been raised and the subject/patient has received a copy of this signed consent document.

_____ _____

Signature of Researcher Date

_____

Print Name of Researcher

APPENDIX G – IRB APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

DATE: February 5, 2019

TO: Paul Giberson
FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1352730-1] Community College Advisors' Understanding and Use of Colorado Statewide Transfer Articulation Policy
SUBMISSION TYPE: New Project

ACTION: APPROVAL/VERIFICATION OF EXEMPT STATUS
DECISION DATE: February 4, 2019
EXPIRATION DATE: February 4, 2023

Thank you for your submission of New Project materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Thanks for such a well-written request.

I have several points of clarification.

1. You do not need to destroy data. Destroy identifiable data such as voice recordings.

2. UNC does not allow voice recordings to be stored in Dropbox. They need to be stored on an encrypted device. IT does not approve Dropbox. Please work with Forest Swick directly if this is confusing in any way.

3. I saw a small typo in the consent.

"The only foreseen risk of participation are listed below".

Best,

Maria

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Nicole Morse at 970-351-1910 or nicole.morse@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.