Colaborativo Advising for Transfer Success:

An Appreciative Assessment

by

Sarah Wieland

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Graduate Supervisory Committee:

Audrey Beardsley, Chair
Stephanie Smith
Kasandra Urquídez

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ABSTRACT

With increasing costs of higher education, community college pathways to baccalaureate transfer degrees are attractive student alternatives to starting at a traditional four-year institution. However, disparate student outcomes, particularly for underserved student populations, continue to be a concern when considering equitable four-year degree completion rates. Previous literature demonstrates that student satisfaction and student informational capital play key roles in the success of community college transfer students to persist to four-year institutions and attain their educational and career goals. The role of academic advising in the transfer context provides a uniquely collaborative opportunity to address factors of success and student outcomes.

Via this mixed methods action research study, I utilized archival student enrollment data, a student survey, and student and advisor interviews to examine an academic advising model that I created in partnership between Cochise Community College and the University of Arizona (i.e., the Colaborativo Advising for Transfer Success Model, or CATS Advising Model), whereby I assigned a singular academic advisor (i.e., a CATS advisor) a student caseload across the two institutions in a deliberate effort to facilitate successful transfer. I used a combined framework of the Model of Student Departure, Transfer Student Capital, and Appreciative Inquiry to inform the advising intervention. I found that students who received the advising intervention were significantly more likely to a) be satisfied with their transfer advising experience, b) perceive increased transfer knowledge (capital), and c) retain through transfer and university enrollment, in comparison to their peers who received advising via a more traditional transfer advising model. Importantly, the students experiencing the

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advising intervention were also able to articulate their appreciation and recognition of the

impact of their relationship with the CATS advisors on their transfer success.

DEDICATION

This work is dedicated to the Cochise Cats students who inspired us to be better, in

partnership.

ACKNOWLEDGMENTS

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INTRODUCTION

Community colleges serve a vital purpose in postsecondary education throughout the United States (U.S.). Enrolling more than 40% of undergraduate students across the nation, including relatively larger proportions of low-income, first-generation, and racial ethnic minority students (Cohen et al., 2013), university programs accepting community college transfer students are often underprepared to support, as well as retain such unique populations, especially through to baccalaureate completion (Fink & Jenkins, 2017; Jain et al., 2016; Wyner et al., 2016). Bachelor's degree attainment for transfer students (i.e., those who transfer in from community colleges) and the mechanisms used to support such transfer students (e.g., student assistance programs and systems) must be developed and examined in order to better determine what works, and what does not work, in terms of supporting the needs of such student populations.

For example, even though 80% of first-year community college students report that they plan to transfer to a four-year institution (Cejda, 1997; Holm & Skomsvold, 2011), recent National Student Clearinghouse data show that only 13% of students who start at a community college complete a bachelor's degree within six years (Shapiro et al., 2017). In the state of Arizona, the state of interest in this study, baccalaureate degree completion is less than half the national rate (Arizona Board of Regents, 2021). And, of Arizona students who enroll in two and four-year institutions, only 27% graduate with a two- or four-year degree of any kind. Of those, only 25% graduate with two-year college degrees (Achieve60AZ, 2019), despite the evidence that students who complete two-year transfer degrees are more likely than their transfer peers to complete a bachelor's degree post-transfer (Kopko & Crosta, 2016). These data indicate students experience

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persistence problems for both two-year degrees and when transferring to four-year degree institutions.

Additionally, for underrepresented students, attending a community college is often the only accessible path to a bachelor's degree (Cohen et al., 2013; Wang, 2016). Related, the Hispanic Association of Colleges and Universities (HACU, 2019) reported baccalaureate attainment for Hispanic populations throughout the U.S. (17.2%) as lower than Asians (54%), Non-Hispanic Whites (38%), and African Americans (24%). Likewise, in Arizona in 2011, 27% of two- and four-year degree completers were Hispanic, compared to 60% of Non-Hispanic White students (Achieve60AZ, 2019). However, it is also important to note that the attendance gap is shrinking. In 2017, 67% of recent Hispanic high school graduates were enrolled in postsecondary education, compared to 69% of Non-Hispanic Whites (HACU, 2019). While such compression might be promising, trends still indicate significant racial gaps in attainment, again, at the two- and four-year levels.

To address racial attainment gaps, correspondingly, various community-college transfer student support systems have been implemented by higher education institutions nationwide. These include but are not limited to mentoring programs, defined as programs meant to facilitate learning relationships or connections between more experienced and less experienced student participants (Blaylock & Bresciani, 2011; Hodges, 2019; Tinto, 1993); articulated transfer pathways, defined as mapped course sequences and prerequisites needed to help students successfully transfer their courses into four-year institutions (Wyner et al., 2016); bridge programs, defined as transitional academic programs designed to provide additional supports to community college

transfer students in the summer between their last term at college and first term at the university (Blaylock & Bresciani, 2011; Jain et al., 2016); and joint advising programs, which embed university advisors into community college advising centers in order to provide direct university transfer advising (Koproske, n.d.; Wyner et al., 2016). Indeed, on this latter system of support, academic advising is known to be one of the most important factors affecting student retention, and ultimately degree completion (Cuseo, n.d.; Drake, 2011; Hossler & Bean, 1990; Metzner, 1989). "As institutions seek to increase and diversify enrollments, academic advisors are *vital* [emphasis added] to ensuring appropriate matriculation and transfer leading to degree completion for all students" (Council for the Advancement of Standards in Higher Education, 2018, p. 3). Given the accepted importance of the role of academic advising in transfer degree completion, it is the role of advising, with emphases on joint transfer advising, that is of direct interest in this study.

THE UNIVERSITY OF ARIZONA

The University of Arizona (UArizona) is a public, four-year, Hispanic Serving Institution (HSI) which, as defined by the Higher Education Act (United States Department of Education, 2016) must meet undergraduate enrollment population rates of at least 25% Hispanic, in addition to other criteria. Related, UArizona houses a distance education department operating ten learning centers across the southern half of the state, all of which serve large numbers of Hispanic students. All ten learning centers also serve transfer students coming from local community colleges into UArizona, all of whom are offered access to a curated list of baccalaureate degrees offered by the university. Degrees are specified by the local associate's pathways offered by the college and given the economic and industrial needs of each regional community.

More specifically, after students complete their first two years at a local community college, those who work in or via these ten learning centers provide students their second two years of their baccalaureate degree training in their communities. Again, all of these learning centers are physically located in rural locations, co-located with or nearby the locations in which these students attended community college. The curricular model followed is a two-plus-two transfer design, defined when students complete their first two years of lower division coursework at a community college and their second two years of upper division coursework at a university (Palmer et al., 1994). Two-plus-two transfer designs are generally recognized, well beyond the confines of Arizona, as key mechanisms by which to reduce educational barriers and attainment gaps, as well as increase access to higher education for such (e.g., rural) students (see, for example, Florida College Access Network, 2018).

At UArizona, though, the primary purpose of its two-plus-two transfer design at its learning centers is to provide affordable, accessible, and regionally relevant (i.e., appropriate to these rural communities in terms of their economic and industrial bearings) four-year degrees to students (UArizona, n.d.). Given I worked as the Assistant Vice Provost for Distance Education overseeing the statewide UArizona learning centers, the longest established of which are located in Southeastern Arizona along the U.S./Mexico border, and each of which has transfer relationships with Cochise Community College (in Cochise County, AZ; see, for example, Cochise College, 2020), it is one of these learning centers that was the focus of my intervention, as well as research on my intervention for this study.

PROBLEM OF PRACTICE

By the very nature of UArizona's distance education model which is, again, utilizing a two-plus-two transfer design, barriers to successful transfer and student persistence are built-in, or rather, inborn problems of practice. Specifically, a variety of complex transfer and student persistence barriers are experienced by students transferring between institutions, including loss of transfer credit and slower progress to degree (Wyner et al., 2016), informational and cultural barriers (Bensimon & Dowd, 2009; Rendón & Valadez, 1993), increased costs (Jackson & Laanan, 2015), and issues with social and/or academic integration (Eggleston & Laanan, 2001; Jackson & Laanan). Transfer shock, defined by Hills (1965; see more forthcoming) as declines in academic performance for transfer students in their first semester post-transfer to a new institution, then, often results. Accordingly, the barriers experienced by transfer students put at risk their likelihood of successfully transferring to a four-year institution, being academically successful after transferring, persisting after transfer and, ultimately, completing their four-year degrees. While the many transfer student support mechanisms mentioned above have been studied for their ability to reduce such barriers, outcomes of joint advising initiatives have not been examined in-depth, and not in the specific context of UArizona, Cochise Community College, and given this unique transfer student population in Southern Arizona.

PURPOSE OF THE INTERVENTION

As mentioned previously, UArizona's learning centers are serving increasing numbers of students taking community college paths towards degree attainment, including relatively high numbers of Hispanic students who are at higher risk of not completing a degree. Therefore, providing a seamless transition between institutions through a support system that maintains trusted relationships, ensures accurate transfer course advising, and builds informational capital for transfer students, is even more vital for UArizona's two-plus-two distance education transfer model.

In effect, I implemented the Colaborativo Advising for Transfer Success (CATS, noting the Wildcat is the UArizona mascot) program in 2013 at the first of these two Southern Arizona learning centers; it was expanded to a second learning center in 2019. The goal of this program is to mitigate the barriers of transfer with a singular point of academic advising, which means a singular academic advisor is assigned to the declared transfer student, from the first year at the two-year college through graduation from the four-year university, with no transitions in the advising relationship or process between institutions. More specifically, the CATS program aims to (1) improve transfer student satisfaction with their advising integration and support and (2) impart transfer student capital in order to (3) increase transfer student success, defined as (3a) transferring to the university and retaining enrollment after students' first year at the university and (3b) successfully maintaining their academic performance (e.g., grade point average [GPA]) in coursework.

PURPOSE OF THE STUDY

Accordingly, the purpose of this study was to examine the extent to which this particular transfer advising innovation, the CATS program, works. This mixed methods study, with qualitative and quantitative data components, also has comparative components via which I compared different sites with different advising models. As aligned with the goals and objectives noted above, though, the more specific purpose of this study was to answer the following three research questions regarding the effectiveness of the CATS program: (1) Did differences exist in transfer advising support satisfaction level between Douglas where students receive the CATS program, and Yuma where students do not receive the CATS program? (2) How did students perceive the CATS Advising intervention impacted their transfer student capital? And, ultimately, (3) Did differences exist between transfer student success in Douglas where students received the CATS program, and in Yuma, where students did not receive the CATS program? I defined success in this study as (3a) retention through the transfer process, first semester, and second semester at the university and (3b) academic performance (e.g., GPAs) at the time of transfer, first semester, and second semester at the university.

Evaluating and assessing the design and results of the CATS program in these areas was important to determine the value of the program to both the institution and the student. As a unique, one-of-a-kind transfer support model, understanding the impact of the CATS program also has implications for statewide expansion at the UArizona learning centers but also to improve transfer success and completion, potentially, nationwide.

LITERATURE REVIEW

Although a student's background and motivations when they enter college are important for persistence, the experiences they have after they begin college are more impactful than anything else on their decision to leave before graduation (Tinto, 1993). Likewise, academic advisors are often the only staff at institutions of higher education with whom students have the opportunity to develop strong, ongoing personal relationships (Drake, 2011). Therefore, and again, via this study I aimed to determine the effectiveness of the CATS program in three key areas, improving transfer student: (1) satisfaction with academic advising support, (2) perceptions of transfer student capital and (3) success metrics such as retention through transfer and first-year enrollment at the university and GPA.

Correspondingly, in this next section I summarize two major areas of the literature foundational to this study and my research questions. First, I review literature related to academic advising satisfaction and student success. Second, I specify literature in the transfer student context demonstrating the importance of transitional supports for transfer success.

Academic Advising Satisfaction

The relationship between students' satisfaction with their higher education institution and retention has been well established over time (Bean, 1980; Noel & Levitz, 1995; Pascarella et al., 1986). Additionally, student satisfaction with institutional advising is shown to be predictive of institutional satisfaction (DeLaRosby, 2017), positively connected to the retention of students (DeLaRosby, 2017; Metzner, 1989; Pascarella & Terenzini, 2005), and correlated with graduation rates (Blose, 1999). More

specifically, lower levels of advising satisfaction are correlated with attrition and relatively lower rates of degree completion (Bean, 1980; Blose, 1999; Roberts & Styron, 2010). Metzner (1989), for example, found when students who perceived their advising experience to be of "good" or "high quality" withdrew from universities at a rate 25% lower than those who perceived their advising as "poor quality." Hence, effective academic advising seemingly provides students opportunities to have relatively more satisfying experiences and this, in turn, can promote students' retention and graduation from any higher education institution.

Advising Support and Integration

Feeling known, acknowledged, and supported by students' advisors, and also experiencing positive relationships with them are key factors to satisfaction with the advising experience (Mottarella et al., 2004). Students who are more integrated at the institution, and who report meeting more often with faculty or advisors, feeling connected, or having built relationships with advisors or faculty members, are more likely to be satisfied with their transfer and academic advising experiences and make more positive adjustments into their institutions (Crisp & Nora, 2010; DeLaRosby, 2017; Jackson & Laanan, 2015). The more meetings students have with advisors and faculty, the higher the students' retention at the institution, and likelihood of academic success (Crisp & Nora, 2010; Kirk-Kuwaye & Nishida, 2001; Swecker et al., 2013). Of particular note, Swecker et al. (2013) showed increases in individual retention odds of 13% for every meeting with an advisor. However, beyond just frequency, the quality of and support received from advising relationships are also important factors to transfer student

success and satisfaction (Berger & Malaney, 2003; Dawson & Dell, 1997; DeLaRosby, 2017; Jackson & Laanan, 2015; Raciti, 2012; Townsend & Wilson, 2006).

Dawson and Dell (1997) found that building rapport with advisors prior to student transfer contributed to students feeling more comfortable asking for assistance with processes and helped them ensure more seamless transfer experiences. Subsequently, this comfort level with advising provides an opportunity for students to build relationships with supportive staff, as well as integrate with the institutional community, which leads to more meaningful college experiences (Schreiner & Anderson, 2005). Raciti (2012), for example, found that strong relationships between staff and instructors led to increased perceived support and persistence at their institutions, also indicating that such relationships impact retention. Students' perceptions of support encourage them to stay at the institution, in other words (see also Suarez, 2003).

Cultural Context of Satisfaction

For Hispanic students specifically, perceived validation from faculty and staff, and identification with a counselor or other staff member who had similar experiences, are important in increasing self-confidence to persist (Suarez, 2003). Related, and of direct interest to the rural Arizona context of my research, there is growing evidence that students of color experience differential levels of satisfaction with higher education and academic advising (Berger & Malaney, 2003; Einarson & Matier, 2005; Pascarella et al., 1996; Smith, 2002). Berger and Malaney (2003), for example, reported that white students are more likely to be satisfied with their college experiences, underscoring the need for more "supportive environment for students of color who transfer" (p. 18). Smith (2002) also found that students of color may have lower levels of advising satisfaction if

their advisors do not take developmental approaches in their interpersonal communications. Likewise, lower levels of higher education satisfaction among students of color are often attributed to differences in academic and social integration, or relationships built at higher education institutions (Einarson & Matier, 2005; Pascarella et al., 1996). Consequently, given students of color have historically had lower rates of transfer, retention, and completion than white students, particular attention to supportive and integrative environments and relationships is of distinct importance for these student populations (Crisp & Nora, 2010; Suarez, 2003; Wang, 2016), inclusive of the Hispanic students of interest to this study. Summarized by Wyckoff (1999), "[t]he importance of the interpersonal relationship for students should not be underestimated" (p. 3) in the potential to increase student satisfaction and, thus, influence the retention of transfer students through their cross-institutional journeys.

Transitional Support

Academic advisors positively contribute during transitional experiences by helping students build self-efficacy and realistic expectations. As "institutional agents" (Hayes et al., 2020, p. 51), academic advisors have the commitment and capacity to provide direct support, develop relationships with, and provide resources to transfer students (see also Allen et al., 2014; Bensimon & Dowd, 2009; Flaga, 2006; Rendón & Valadez, 1993). Students who gain more information about the transfer process and perceive themselves as prepared for transfer are also more satisfied and successful in their transfer (Berger & Malaney, 2003). Students also indicate that they appreciate an extra "hand hold" (Townsend & Wilson, 2006, p. 446) in the transfer process in order to feel better supported (see also Jain et al., 2011; Vaala, 1991). Likewise, additional student

supports, including more active or intrusive advising techniques, have yielded progress in reducing persistence barriers for first-generation students and increasing student perceptions of support (Kirk-Kuwaye & Nishida, 2001; Townsend & Wilson, 2006; Swecker et al., 2013).

In providing transfer student support, informational capital is of primary importance as students navigate policies and procedures of two institutions (Lukszo & Hayes, 2020). Importantly, student perceptions and, therefore, trust of an advisor's capability to provide informational value, a key knowledge-based advising component first noted by Habley (1986), is influenced by the advisor's relational ability; another key advising component exemplified by accessibility, individual attention, and the like (see Walker et al., 2017). Again, as discussed above, advisor supportiveness (a relational ability), is identified as one of the most valued advising competencies by students (Berger & Malaney, 2003; Packard & Jeffers, 2013; Townsend & Wilson, 2006). The more students perceive they are *not* supported or do *not* fit in, the less likely they are to have a successful academic adjustment to the university after transfer and through to completion of their degree program (Lopez & Jones, 2017). Self-efficacy for transfer is also reduced without the supportiveness of an institutional agent (Lukszo & Hayes, 2020). Thus, the supportiveness of the advisor *and* the informational capital they provide are both of importance in transitional experiences.

Transfer Retention

Particularly at extended learning centers where students do not have access to full suites of services or engagement experiences of those at larger campus locations, the academic advisor may be the only regular contact, or institutional agent, the student has

with the university outside of the classroom. In this context, Bird (2014) acknowledges that "academic advising is the single most important retention tool" (p. 99) of the institution. This is true both of pre- and post-transfer advising experiences; pre-transfer advising increases persistence to graduation for transfer students (Dawson & Dell, 1997) and these effects continue post-transfer, where researchers continue to find academic advising to be one of the most positively associated factors with transfer progress and student retention (Lee & Schneider, 2018; Packard & Jeffers, 2013; Pascarella & Terenzini, 2005; Roy, 2016).

Inversely, a specific concern for transfer student retention is the loss of support systems (such as the advisor) that the student has built at the community college as (s)he transfers to a university (Pascarella et al., 1986). Given that transfer students experience a break-in integration period and have to transition to new social and academic systems, including academic advising at new institutions (Harbin, 1997; Jackson & Laanan, 2015; Laanan, 2001; Lopez & Jones, 2017; Pascarella et al., 1986; Townsend & Wilson, 2006), these findings have implications for the impact of transferring institutions on a student's likelihood of persistence. Generally, improvements in GPA and retention rates as a result of intrusive advising outreach have been found to be small or not statistically significant; however, intrusive advising outreach can show significant impacts on retention of high-risk populations (Abelman & Molina, 2001; Kirk-Kuwaye & Nashida, 2001; Schwebel et al., 2012). While little research is available on intrusive advising practices pre-and post-transfer, the transfer population is high-risk in relation to underrepresented demographics, potential for transfer shock, and loss of support systems.

Transfer Shock

Post-transfer, researchers have found that four-year institutions need to support transfer students specifically in their first semester after transfer and in their major area(s) of study, as they are at risk of lower cumulative and major GPAs in their first term than their native student counterparts, defined as students who entered the four-year institution as freshman (Cejda, 1997; Dawson & Dell, 1997; Glass & Harrington, 2002; Keeley & House, 1993). Transfer shock, defined earlier as the decline in grade point averages after transferring to a new institution (Hills, 1965), can be indicative of the need for early guidance at the two-year college in order to successfully transfer and adjust to four-year institutions (Laanan, 2001), particularly for underrepresented students who realize more pronounced negative impacts on academic performance post-transfer than other students (Keeley & House, 1993).

While some researchers conclude that the implementation of additional counseling, tutoring, and faculty mentoring efforts are needed to assist in student adjustment (Laanan, 2001; Pascarella et al., 1986), others propose partnership programs between institutions to be a primary mechanism by which to reduce transfer shock experiences (Allen et al., 2014; Dawson & Dell, 1997; Fink & Jenkins, 2017; Jackson & Laanan, 2015; Jain et al., 2011; Lopez & Jones, 2017; Wang, 2016). Jain et al. (2011) encourage two- and four-year institutions to work collaboratively to create transfer sending and transfer receptive cultures, and provide support, validation, and capital before, during, and after critical transition periods, particularly for underrepresented students. Wang (2016), thus, proposes that genuine partnerships and collaboration between players in the K-20 educational pipeline help students and institutions develop

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social and organizational capital that influence long-term success of transfer students. Jackson and Laanan (2015) also conclude that institutional partnerships such as collaborative advising are important in setting academic and social expectations for transfer students and building transfer information capital (see also Degus, 1987; Ford, 1986; Handel & Williams, 2011). Early expectation setting and capital building are important factors in reducing transfer shock and increasing overall transfer student academic success, as is also indicated in the satisfaction and relationship literature (Allen et al., 2014; Berger & Malaney, 2003; Dawson & Dell, 1997; Fink & Jenkins, 2017; Wyckoff, 1999).

Given the demonstrated impact of academic advising on transfer student satisfaction and academic success, providing effective advising programs is of importance when improving the transfer student experience and increasing the overall likelihood of transfer student success (Allen et al., 2014; Carlsen & Gangeness, 2020; Lukszo & Hayes, 2020; Hayes et al., 2020; Packard & Jeffers, 2013; Townsend & Wilson, 2006). Academic advising impacts the transfer student experience by contributing to student satisfaction and perceptions of support, particularly during periods of transition, which indicates the opportunity for academic advisors to improve transfer student persistence through advising interactions, relationships, and capital building. However, as noted above, ineffective interactions with the institution can have the opposite effect and encourage departure from the institution or higher education in general. Therefore, an effective advising approach for the CATS program is built on theoretical frameworks informing positive interactions and support to increase transfer student persistence during periods of adjustment.

THEORETICAL FRAMEWORKS

Many bodies of theoretical work inform academic advising models and program design, primarily to help us understand and influence the interactions between the advising relationship and student satisfaction and success. In this section, I use Tinto's (1993) longitudinal model of student departure to highlight the importance of social and academic interactions and integration and student goals/commitments as key elements influencing a student's decision to persist at an institution. For transfer students, more specifically, I also draw upon Laanan et al.'s (2010) model of transfer student capital wherein the authors identify advising experiences, student perceptions of transfer, and skills acquired prior to transfer as factors predictive of social and academic integration. From an advising perspective, I also refer to Cooperrider and Srivastva's (1987) mode of appreciative inquiry and Bloom et al.'s (2008) subsequent model of appreciative advising that expand social and academic integration to deeper personal advising relationships with students, in aiding them to identify and reach their goals.

Model of Student Departure

Within Tinto's (1993) longitudinal model of student departure, he identifies six components influencing students' decisions to depart from a higher education institution, which are students': (1) pre-entry attributes, (2) goals/commitments, (3) social and academic experiences at the institution, (4) social and academic integration at the institution, (5) re-evaluated goals/commitments, and, subsequent, (6) departure decision.

Focusing more on (2), (3), and (4) in this study, it is important to note that by nature of their roles, academic advisors work with students' goals/commitments and provide social and academic experiences, as well as integration at the institution. These

three features of Tinto's (1993) model are key when academic advisors initiate institutional interactions as both informational experts and enforcers of academic expectations and requirements, and also as relational mentors, advocates, and supporters of students.

More specifically, the (2) goals/commitments component of Tinto's (1993) model refers to both students' educational and career goals (i.e., reasons for attending college) as well as students' commitments to those goals, the institution in particular, and external commitments such as work and family. Other researchers support the inclusion of this component by finding that students' personal motivation towards their goals is important for retention, but that persistence is influenced by conflicting commitments to family and work, particularly for first-generation and underrepresented students (Côté & Levine, 1970; Dennis et al., 2005; Phinney et al., 2006)

Institutional experiences (3) can be both formal and informal, and include students' interactions with faculty, staff, peers, activities, and academics. These experiences lead to the development of students' integration at the institution and their "perceptions of academic fit and feelings of academic connectedness to their institution" (Bahr et al., 2013, p. 10), enforcing their decision on whether to withdraw from the institution. In support of Tinto's findings, other researchers report that students' positive experiences with the institution, faculty, and staff are important in developing social and academic integration at the institution by increasing students' satisfaction with, and commitment to, the institution itself (Astin, 1993; Levin & Levin, 1991; Liu & Liu, 2000).

Tinto (1993) thus includes (4) social and academic integration in the model, as integration is consistently identified as one of the most important components for student retention (Astin, 1984; Berger & Malaney, 2003; Laanan, 2007; Pascarella, 1980; Pascarella & Terenzini, 2005; Roberts & Styron, 2010; Spady, 1970; Tinto, 1993). Students' successful integration into institutions increases the commitment of students to their institutions over time, reducing the likelihood of a departure decision (Tinto, 1993).

Pascarella et al. (1986) expand on Tinto's theoretical work to specifically address community college transfer student success, confirming that Tinto's model showing "the greater the individual student's levels of integration into the social and academic systems of the college, the greater his or her subsequent commitment to the college and to the goal of college graduation" (p. 49) could still hold true for transfer populations. However, developing integration can be particularly challenging for transfer students who can experience more difficulty adjusting to a second institution, such as from a community college into a university, such as is the case here (Davies & Kratky, 2000; Laanan, 2007; Townsend & Wilson, 2006)

Transfer Student Capital

Laanan et al. (2010) propose a predictive model for social transfer adjustment dependent on a Transfer Student Capital (TSC) component. TSC is the cumulative knowledge gained by community college students transferring into four-year institutions -- the more of which a student possesses, the greater the likelihood of successful transfer. TSC is conceptualized to include various factors including advising experiences, perceptions of transfer processes, experiences with faculty, and academic skills learned at the community college (Laanan et al., 2010). Other researchers have defined the term

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institutional agents as those who occupy relatively high positions who provide specific informational capital to students, helping them develop personal and academic skills to include TSC (Allen et al., 2014; Bensimon & Dowd, 2009; Flaga; 2006; Stanton-Salazar, 2011). Students acquire TSC from high school, family, peers, advisors, and faculty, and reinforce Laanan et al.'s (2010) conceptual definition, noting these agents can additionally increase student self-efficacy and empowerment and impart positive perceptions of transfer (see also Lukszo & Hayes, 2019; Stanton-Salazar, 2011).

Appreciative Advising

Cooperrider and Srivastva (1987) propose appreciative inquiry (AI), rooted in positive psychology, as an organizational development theory and mode of action-research. The focus is on listening for, and building upon, existing strengths and improving performance through making sense and meaning of identified strengths. Similarly, as founded in AI, the appreciative advising model places "an emphasis on the intrinsic, ontological value of each student encountered" (Bloom et al., 2008, p. 7), by appreciating the experiences, existing capital, and strengths students possess, and promoting the use of such for students to reach their goals. As applied in appreciative advising, a mode of AI involves advisors asking questions that can improve the positive potential of students by appreciating their unique stories of success and strengths to develop a plan to address new or future challenges (Bloom et al., 2008). Academic advisors should, thus, engage in appreciative advising in their role as institutional agents, serving to assist students in developing TSC and staying committed to their goals.

Whitney and Trosten-Bloom (2003) developed a 4-D model of AI defining four stages of the inquiry process: Discover (appreciate), Dream (imagine), Design

(determine), and Destiny (create). Bloom et al. (2008) expanded their 4-D model to six stages to inform the appreciative advising framework: Disarm, Discover, Dream, Design, Deliver, and Don't Settle. To Disarm, advisors create a safe and welcoming environment for their first impression. In the Discover stage, advisors ask questions to get to know their students and their strengths. In the Dream stage, advisors draw out their students' visions of the future and their goals through additional questioning. In the Design stage, advisors work with their students to co-create plans to accomplish their goals. To Deliver, students have to implement their co-created plans, while the advisors remain available for support and encouragement. Finally, in the Don't Settle stage, advisors continue to push their students towards greatness and to Dream further (Bloom et al., 2008). Bloom et al.'s (2008) appreciative advising model, therefore, provides the framework by which advisors can treat students as individuals and assist to increase their commitment to goals (see also Allen et al., 2014; Carlsen & Gangeness, 2020).

In sum, the above theoretical frameworks inform the importance of social and academic integration, information capital (TSC specifically), and an appreciative mode of advising inquiry, on transfer student success. The common thread to apply these concepts to a transfer success problem of practice is the necessity of an agent to develop social and academic integration with the student, build TSC, and help students stay on course to achieving their academic goals. An intentional actor employing appreciative advising techniques can subsequently encourage integration in a reciprocal student-advisor relationship that builds TSC and, therefore, supports persistence and commitment to individual goals for academic achievement. These are the goals of the CATS advisor as informed by the theoretical frameworks, and also illustrated in Figure 1.

Figure 1

Theoretical Framework of CATS Advising Model
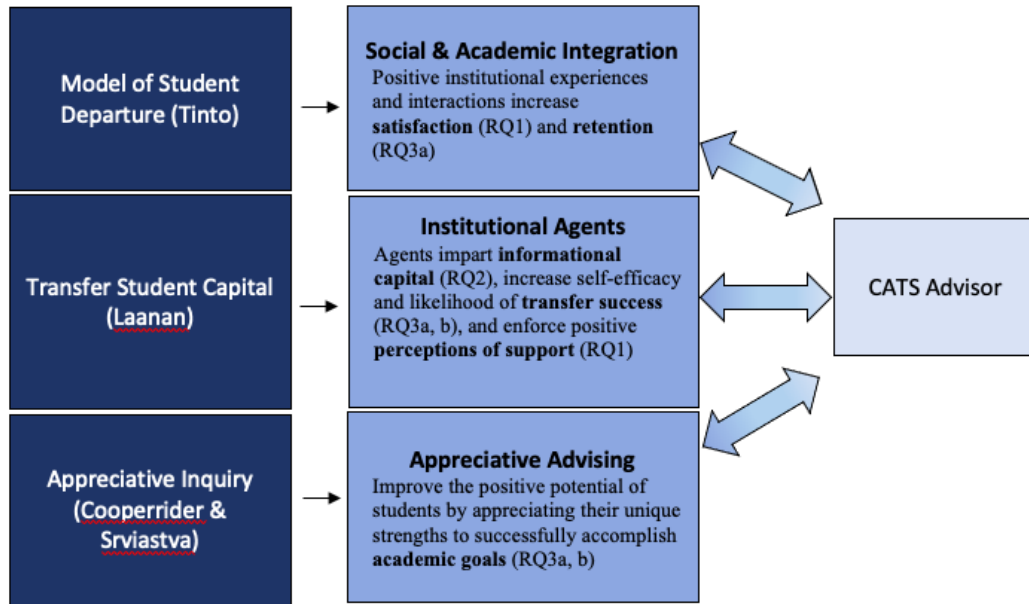
Illustrated in Figure 1 is the convergence of the theoretical models (student departure, transfer student capital, and appreciative inquiry) on three concepts of importance in informing the CATS intervention: (1) social and academic integration of the student with the institution, (2) institutional agents to build transfer student capital, and (3) appreciative advising techniques to build student self-efficacy towards achieving their academic goals. These three concepts inform the design of the CATS advising model, specifying the advisor as an institutional agent to integrate the student with the institution, build TSC, and develop and retain commitment to educational goals.

In order to act as a cross-institutional agent, via this intervention CATS advisors are provided with institutional access, supervision, and assigned student caseloads at both institutions and are trained to employ appreciative advising techniques to reduce the potential negative impacts of transferring to a university. The community college student

caseloads are assigned using a combination of students' locations and their self-reported intent to transfer data wherein students have identified transferring to UArizona as their goal. The University caseload is assigned at the point of transfer and is also based on students' chosen locations at which they intend to complete their studies, in order to maintain assignment to the local CATS advisor, thus ensuring the continuous advising relationship during and post-transfer into the UArizona. Again, the CATS transfer advising model is unique to UArizona, although similar partnerships exist for advising transfer pathways between institutions. Indeed, only two other such co-employed advising partnerships are identified in the literature, whereby advising caseloads are cross assigned between the partnered institutions, but transfer student outcomes have not been comparatively published to date (Carlsen & Gangeness, 2020; Wetzstein, 2018).

To assess the CATS intervention as described above, on areas described earlier to be of importance to transfer student success, it was important for me in this study, accordingly, to determine whether the CATS advising intervention had an impact on student-advisor integration, development of students' information capital, and progress towards students' transfer goals. Accordingly, I employed the following methods to address these areas of interest.

METHODS

As an action researcher, I approached this dissertation as an opportunity to improve transfer student advising practice and promote positive change in student advising outcomes (Mertler, 2017). Mertler defines action research as systematic inquiry performed by practitioners that is dynamic and cyclical in nature, and accomplished through iterative stages of planning, acting, developing, and reflecting. Related to my problem of practice, I conducted three previous cycles of research before beginning this current study, the results of which I used to inform the design of this study, as well as underscore the importance of a mixed methods approach for examining advising and transfer student success phenomena. I did this also given action research also calls for ongoing and iterative processes of inquiry (Creamer & Scott, 2000).

For this iteration of my action research dissertation, though, I employed mixed methods to examine and assess the effects of the CATS program. A mixed methods action research approach (MMAR) provides a more complete picture of, in this case, the advising phenomena of interest because both quantitative trends and qualitative experiences were both desired and available for analysis and interpretation (Plano Clark & Creswell, 2015). Ivankova (2015) notes a multistrand MMAR design also allows the researcher flexibility to time qualitative and quantitative methods of the study to both inform sequential steps in collection and analysis, and concurrently triangulate collected data. This design is ideal for program impact evaluations because both concurrent and sequential collections of qualitative and quantitative data can occur and be used to build on each other throughout the study (Plano Clark & Creswell, 2015). Additionally, because academic advising pertains not only to academic performance but also student

development, studying quantitative student outcomes or qualitative student perceptions alone would not adequately or holistically capture the extent to which the goals of the CATS program were being met.

By collecting and analyzing satisfaction survey data, post-transfer performance data, and qualitative interview data (with students and advisors), more specifically, I was able to form a more robust understanding of the impact of the CATS program on transfer students' advising experience and their academic performance. Collecting and analyzing these quantitative and qualitative data also allowed for the triangulation (see more forthcoming) of my student success markers of interest, which ultimately helped me produce more breadth and depth in my findings than might otherwise have been obtained via a singular methodological approach (Ivankova, 2015).

Likewise, I used four data collection methods to answer the aforementioned research questions, reinserted again here: (1) Did differences exist in transfer advising support satisfaction levels between Douglas where students received the CATS program, and Yuma where students did not receive the CATS program? (2) How did students perceive the CATS Advising intervention impacted their transfer student capital? And (3) Did differences exist between transfer student success, again, in Douglas where students received the CATS program, and in Yuma, where students did not receive the CATS program. I defined success in this study as (3a) retention through the transfer process, first semester, and second semester at the university and (3b) academic performance (e.g., GPAs) at the time of transfer, first semester, and second semester at the university. To answer these questions, I collected archival student record data (RQ3a, b), administered a student survey instrument (RQ1, RQ2), and conducted student (RQ1,

RQ2) and advisor interviews (RQ1, RQ2, RQ3a, b) (also for triangulation and validation of results). The following sections detail the data collection and data analysis techniques I used.

Data Collection

Archival Data

   Purpose. As defined by the model of student departure and related concepts such as transfer shock, to ascertain transfer student success, including transfer to the institution and first-year retention (RQ3a) and academic performance GPA (RQ3b), I obtained student records data, with ASU and UArizona's Institutional Review Board (IRB) approval (see Appendix A and Appendix B respectively), through the UArizona institutional data warehouse.

   Administration. I already had access to the archival data I needed for this part of the study given my role at UArizona. Accordingly, via our data warehouse I obtained data regarding Fall 2020 application status, and Spring 2021 and Fall 2021 enrollment status (RQ3a), in addition to incoming transfer GPA, Fall 2020, and Spring 2021 semester GPAs (RQ3b). Considering data privacy and confidentiality are primary ethical concerns in all types of research, and also action research (Mertler, 2017), after exporting the archival data from the warehouse to SPSS and/or Excel file(s), I created a master list with a coding scheme for student identification numbers (IDs) to randomly generate IDs from one to 56. Similar to other data of this kind obtained for my work duties, these data remained stored in a private folder on a UArizona server, protected in my institutional single-sign-on (SSO) account as only obtainable on the UArizona network or virtual private network (VPN).

Sample. I performed this part of my study retroactively on the Fall 2020 cohort in order to capture not just current impressions of the advising model but to also allow for analyses of any potential mid- to long-term differences in the student success metrics of interest herein. In light of staffing challenges during the COVID-19 pandemic, studying the Fall 2020 cohort also helped me ensure that the Douglas students received the CATS advising intervention from August of 2018-December of 2020, inclusive of their transfer to UArizona between May-August of 2020.

The assignment of the advising condition was based on the geographic location in which the students selected to attend classes; therefore, random assignment of students to either advising option was not possible, prompting the need for me to employ a quasi-experimental design, defined briefly as testing an intervention by assigning preexisting groups to treatment conditions (Plano Clark & Creswell, 2015). I used a comprehensive sampling approach by including all potential participants at both of the sites where the CATS intervention or non-intervention (i.e., my control site) was implemented. Participants who experienced the CATS intervention included all 23 students in the Fall 2020 incoming transfer cohort in Douglas who transferred from Cochise College. The comparison group included 33 incoming students in Yuma who transferred from Arizona Western College and did not experience the CATS intervention. I held both transfer populations constant by including only those who transferred from local Arizona community colleges and with transfer services on-site in order to help alleviate potential threats to validity (e.g., *history* whereby different students might receive differential support services during the time of interest in the study, and *nonequivalence* of groups

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which would be of concern if the groups were unequal in terms of key student variables and characteristics [Smith & Glass, 1987]).

Related, in order to determine that the two groups (Douglas and Yuma) were similar enough, so as to more effectively compare student outcomes, I examined whether members of both groups were similar, or inversely put, not statistically significantly different from each other on key factors and variables. I did this by performing chi square comparative analyses of the two groups, examining four student characteristics: Pell grant eligibility (as a measure of socioeconomic status [SES]), transfer GPA, gender, and ethnicity. Per Bahr et al. (2013), SES, community college GPA, and gender are most commonly found as student characteristics associated with successful baccalaureate degree completion for transfer students. Given Berger and Malaney's (2003) and Smith's (2002) findings that students of color can also experience differential advising satisfaction, I also included ethnicity in these analyses.

Chi square analysis tables for each of these factors are in Appendix C but, in short, I found transfer GPA, gender, and ethnicity did not yield statistically significant differences between the two groups at the p < 0.05 level (see Table C2, C4, and C5 respectively). However, the transfer GPA chi square value, $\chi^2(3, N = 56) = 7.39$, $p = 0.07$, was very close to the $p < 0.05$ level and should be noted, indicating the Douglas group had close to significantly higher incoming transfer GPAs ($M = 3.36$) than Yuma ($M = 3.08$) (see Table C3). Additionally, there was a significant difference between groups in terms of SES (Pell grant eligibility), $\chi^2(1, N = 56) = 5.70$, $p = .02$, wherein the Douglas group was significantly more likely to be Pell eligible or of lower comparative SES (see Table C1). Interestingly, the Douglas group had a risk factor of low SES, but a protective

factor of higher transfer GPA, whereas the Yuma group had a risk factor of lower transfer GPA, but a protective factor of higher SES. Although opposite each other, since each group had both a risk and a protective factor, for balance, I deemed them as adequate comparison groups for the purposes of this study, with due considerations noted.

Archival Analysis. In order to examine the differences between groups on successful retention through transfer to the institution, first-term retention, and first-year retention (RQ3a), transfer GPA, first-term GPA, and second-term GPA (RQ3b), I conducted descriptive analyses. I also conducted chi square analyses, using loglinear logistic regression and analyses of variance (ANOVA) tests as appropriate given the type of data obtained and that some dependent variables were nominal/categorical and others were ratio (Mertler & Vannatta Reinhart, 2017).

Because examining whether students were retained yielded nominal dependent variable results (yes/no), I calculated chi squares to determine whether there were significant differences in retention between the Douglas (treatment) and Yuma (control) groups at each point in time of interest to my study (enrollment in the first-term, enrollment after the first-term, and enrollment after the first-year). For chi square analysis of the nominal retention data, I weighted the cases by a frequency variable to accommodate the type of data obtained and performed a nominal-by-nominal test of association.

Then, to dig deeper into any effects observed as a result of time, I used a time-series approach, defined by Salkind (2010) as a method of analysis that takes subject measurements on the dependent variable over regular intervals of time. Specifically, I conducted a loglinear analysis to examine whether there was any effect taking into

consideration three dimensions, the combination of the variables of time, advising location (treatment), and the retention of students within the groups.

Next, with respect to GPA and again using a time series design, I conducted a mixed ANOVA to test the significance of any differences in GPA measured at the time of transfer (incoming), after the first term at the university, and after the second term at the university, between the CATS advising treatment group and the Yuma control group. Specifically, I used a mixed two-way repeated measures ANOVA to determine whether any changes in student GPAs (the dependent variable) were the result of the interaction between the type of advising condition (the between-subjects factor) and time (the within-subjects factor, measured at the three time points).

To ensure minimal bias in the ANOVA test results, I ensured my sample data met the assumption of homogeneity of variance via Levene's test, and sphericity via Mauchly's test of Sphericity which I used to evaluate the assumption that the variances for the two groups were equal (Mertler & Vannatta Reinhart, 2017). Then, although I did not have equal sample sizes in all cells, I verified that the ratio of sample sizes across conditions and times was below the 1.5 ratio recommended (Blanca et al., 2018). I did not replace missing values with imputed values because so many variables impact an individual student's observed GPA value, so much so that making a quality estimate without a population value may introduce error. Accordingly, I decided the unobserved values were missing at random (Kaiser, 2014). Therefore, those students with missing values were not included in this analysis, and the N for each group was lower than the total sample used in other measures in the study.

Student Survey

Purpose. Cross-sectional survey instruments are a popular research tool to learn more about the attitudes, opinions, and perceptions of a population at one point in time (Creswell & Guetterman, 2019). In this case, I used a cross-sectional survey design to retroactively examine student experiences of their recent past transfer experiences to UArizona, including students' retroactively expressed levels of satisfaction with the advising support they received (RQ1) and the informational capital they were imparted (RQ2).

Instrument. Utilizing Qualtrics software, I created a transfer student survey instrument that I distributed to student email accounts near the end of the Spring 2021 term, noted in the study timeline in Appendix D. I first piloted the survey instrument with student workers from outside of the sample in Spring 2021, prior to my official Spring 2021 distribution. I delivered the survey to participants via their university email addresses and provided them the option of completing the survey instrument in English or Spanish. I engaged the CATS advisors to assist in translation of the survey instrument itself, as well as any open-ended responses received. It is also important to note that because I conducted the student interviews (see more forthcoming) in English, open-ended survey questions answered in Spanish could yield results not obtained via my other data collection methods. However, no students elected to complete the survey instrument in Spanish.

When developing the survey instrument, I adapted survey questions from four sources (Harbin, 1997; Lynch, 2004; Schreiner & Juillerat, 2006; Teasley & Buchanan, 2013) in order to include questions previously analyzed for construct validity. The survey

instrument contained 30 items that followed a six-point Likert-scale: Strongly Agree (6), Agree (5), Somewhat Agree (4), Somewhat Disagree (3), Disagree (2), Strongly Disagree (1). I did not include an, "*I don't know*" option on the Likert-scale because the questions were directly related to the students' recent experience for which an opinion should have been available (Fowler, 2014). I also excluded a neutral response option to ensure an opinion was selected for each statement related to the student experience given that this approach has been shown to lead to the expression of more valid responses (Fowler, 2014). I also included five open-ended questions to allow participants to respond to items in their own words, which helped me uncover unanticipated answers not obtained through my closed-ended, Likert-type questions (Fowler, 2014). Appendix E contains the transfer student survey instrument and is accompanied by a survey alignment key in Appendix F, in which I aligned each survey question to my theoretical frameworks, constructs, and research questions.

Moreover, I used the survey instrument to examine three constructs from the literature (see bolded text in Figure 1): academic advising satisfaction (RQ1), perception of support (RQ1), and informational capital (RQ2). When piloting the survey with student workers, and when I used the survey instrument for all other study purposes, I calculated and evaluated Cronbach's alpha for internal reliability, again, on items grouped together by construct (again, see Appendix F). Cronbach's alpha measures internal consistency of test items to help determine if they are measuring the same construct with a standard level of consistency (Salkind & Frey, 2020). I reviewed all Cronbach alpha coefficients derived, paying specific attention to all items that yielded alpha levels below 0.70 (Lavrakas, 2008; also see Lopez & Jones, 2017). In order to

measure whether scores from multiple questions were consistent with each other along the three constructs, I calculated Cronbach's alpha scores on the pilot and then the final survey results as reported in Table 1. According to Plano Clark and Creswell (2015), a Cronbach's alpha score between 0.70-1.00 indicates that scores highly relate to each other in a positive direction. For the pilot and the final survey results, all alpha scores on the survey questions grouped by construct and overall were greater than 0.70, so I retained all questions in the study.

Table 1

Reliability of Survey Instrument Constructs

Construct	N of items	Cronbach's Alpha (Pilot)	Cronbach's Alpha (Final)
Satisfaction (RQ1)	8	0.92	0.88
Perception of Support (RQ1)	10	0.97	0.85
Informational Capital (RQ2)	12	0.83	0.75
All Survey Items	30	0.97	0.93

Sample. Using the same sample approach as for the archival data, I distributed the survey instrument to the same 56 students in both the Douglas and Yuma groups who transferred to UArizona in Fall 2020, resulting in a comparative survey design. I invited the students to participate in the survey (with their informed consent collected in the survey process), anticipating that I would also need students' advisors to assist in survey distribution and reminders in order to increase or maximize response rates. In the informed consent statements and communications inviting student participation, I made explicit my dual role as both an administrator at UArizona and a doctoral researcher at

ASU, to help reduce potential concerns regarding my power and authority, and to clarify

my role as the researcher given the nature of this study (i.e., to assess to what extent

CATS advising may or may not help students; see also Brinkmann & Kvale, 2015).

I initially provided an incentive of a $5 Amazon Gift Card for survey completion

for each student to further encourage students' participation. When my response rate was

only 10% following the Summer 2021 term, I increased the incentive to $10 after which

the response rate increased to 27% (15 students) by mid-November. The increase in

response rate after raising the incentive prompted me (and should prompt others) to be

more cautious when interpreting the findings because of the risk of self-selection

response bias, whereby the students who chose to complete the survey may have been in

some non-random way different than those who did not, especially given the incentives

provided, which presents a potential limitation to external validity (Creswell &

Guetterman, 2019; Smith & Glass, 1987).

Likewise, in order to test that my survey respondent sample (1) was similar to the

Fall 2020 incoming cohort population from which it was sampled and (2) did not

introduce significant differences between the Douglas and Yuma groups, I employed chi

square analyses, again, using the same key demographics as for the earlier comparison of

the archival Fall 2020 incoming cohorts (again see Appendix C). Between the survey

respondents from Douglas and survey respondents from Yuma, I found no significant

differences on SES (Table C6), transfer GPA (Table C7), gender (Table C8), nor

ethnicity (Table C9) between the survey response groups (i.e., between the Yuma and

Douglas respondents). Likewise, I found no significant differences between the survey

respondent sample and the Fall 2020 incoming cohort population for Douglas (see Tables

C10, C11, C12, and C13) nor Yuma (see Tables C14, C15, C16, and C17) on the same key demographics. This means that, despite the potential introduction of self-selection response bias when I increased participation incentives, the groups remained similar enough to each other and to the larger Fall 2020 cohort to compare their results forthcoming.

Student Survey Analysis. To examine differences in the groups for the constructs of academic advising satisfaction (RQ1), perception of support (RQ1), and informational capital (RQ2), I used independent samples t test analyses. While there is debate over the use of such parametric tests for Likert survey data because of the parametric assumptions of both a normal distribution and equal intervals between response options (Vigderhous, 1977), Clason and Dormody (1994) explain the appropriateness of using, for example, an independent t test whereby means can be calculated on summated groupings of items built to measure single constructs. Because my survey data were normalized by calculating means on several items combined, to reflect underlying continuous measures of individual constructs (see, again, Appendix F), and assumptions of normality could subsequently be met, this is generally considered an acceptable approach (see also Clason & Dormody, 1994; Dawis, 1987).

To understand the effect sizes of survey results, I used Cohen's (1988) effect size measurement, Cohen's d, on which a d result from 0 to 0.2 indicates no effect, between 0.2 and 0.3 indicates a small effect, from 0.5 to 0.8 indicates a medium effect, and $d > 0.8$ indicates a large effect. Effect sizes of 1.0 (or higher) indicate the differences between group means are greater than one (or many) standard deviation(s) (Cohen, 1988). In

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measuring effect sizes, I used pooled standard deviations to account for unequal sample sizes between survey response groups.

To analyze the qualitative student survey data obtained via the open-ended survey items, I used a grounded theory approach that I also replicated for the student and advisor interviews. I first engaged in data reduction by grouping or selecting codes into smaller and then larger categories to identify, solidify, and substantiate emergent themes (Strauss & Corbin, 1990; see Allen et al., 2014; Rendon & Valdez, 1993; Walker et al., 2017). More expressly, I began open coding the data line-by-line (Strauss & Corbin, 1990) using an In Vivo coding method to reduce the responses in which the words of the students guided my identification and labeling of codes (Saldaña, 2016). Then, I grouped the codes into larger themes that directly reflected students' voiced experiences (see also Townsend & Wilson, 2006), using a second round of Dramaturgical Coding, a literary and language method in which the researcher perceives the narrative as a social drama (Saldaña, 2016). I grouped the In Vivo codes using the six-character elements of Dramaturgical Coding: (1) participant *objectives*, motives, or goals; (2) *conflicts* or obstacles; (3) *tactics* or strategies to achieve goals; (4) *attitudes* or opinions; (5) *emotions* or feelings conveyed, and (6) *subtexts* or unspoken thoughts (Saldaña, 2016). These methods helped me honor the language of the students and the cultural backgrounds and interactions that seemingly influenced their word choices. By framing students' words around these categories of character analysis and storytelling, I was also able to identify new codes and deeper meanings than during the first round of In Vivo coding. These approaches also aligned with my aforementioned AI framework by helping me to recognize the strengths of the participants, as well as their ability to identify and

accomplish their goals. The coding method described above is also used in the following qualitative data analyses for student and advisor interviews.

Student Interviews

Purpose. Brinkmann and Kvale (2015) define the purpose of a semi-structured interview as an attempt to understand the meaning of a phenomena from an interviewees' perspective. In the context of this study, capturing the transfer experiences of students in their own words allowed me to better understand how students place meaning or value on the CATS advising model, hopefully in support of their academic journeys. More specifically, these interview data helped me examine students' levels of satisfaction with the support they received from (RQ1), and information capital developed by (RQ2), the CATS advisor.

Protocol. I developed a semi-structured interview protocol informed by AI and appreciative advising. Utilizing AI-related frameworks promotes further integration with the institution and is positively goal-oriented towards improving the transfer student experience, while not providing a strict, step-by-step methodology. Likewise, AI-related frameworks contribute a set of general principles by which to build relationships with students in individual interactions, such as via one-on-one interviews (Bloom et al., 2013; Michael, 2005).

To address student perceptions of transfer student capital and their satisfaction with transfer advising support, via the adoption of an AI approach to the interview, I imparted the following: 1) recognition of the power differentials of the interview/interviewee relationship and creation of a safe environment where all voices could be heard (Disarm); 2) positive, open-ended questioning focused on students'

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perceptions and self-reflection of their and the institutions' strengths in the transfer process (Discover); and 3) examination of the vision of the institution with relation to the student experience (Dream; Bloom et al., 2013). While I acknowledged concerns about "cast[ing] a rosy glow" (Michael, 2005, p. 225) on the advising experience with this approach, interviewees are also often more open to telling their stories and offering more authentic responses when AI is employed (Bloom et al., 2013; Michael, 2005).

The student interview protocol I developed ultimately included seven questions, and spanned Bloom et al.'s (2013) appreciative advising stages from Disarm through Don't Settle per the above. The protocol, with items keyed to the appreciative advising stages, is available in Appendix G.

Sample. From the Fall 2020 Douglas cohort, I randomly selected 10 students using an online number generator for my student interviews. When students were unresponsive to invitations to interview, I randomly selected additional students from this same group until I had at least 10 participants. Because of students' lack of responsiveness to invitations to participate, this sampling approach eventually became one more of convenience, in that I ultimately interviewed only students who were available, accessible, and agreed to participate (Plano Clark & Creswell, 2015). After several months of non-response, I began, again, offering a $10 incentive for interviews and had two additional students respond. Once again, I introduced the possibility of self-selection bias (as discussed earlier) through the use of an incentive and by increasing the value of the incentive during the study. After another month passed, I enlisted the assistance of local student support staff to encourage student interview participation at which point I was able to schedule five more interviews. I did not interview any

participants from the Yuma group as they did not experience the CATS advising intervention. Student interviews took place in Fall 2021, after survey distribution. While I had a preference to perform in-person interviews with the students, I conducted the one-on-one interviews via Zoom, because of COVID-19 conditions, institutional mitigation protocols, and travel limitations. I recorded all interviews via Zoom in order to secure audio transcripts per interview.

Student Interview Analysis. To analyze the student interview data, as per what I did above for the open-ended student survey data, I used a similar grounded theory approach. For the interviews, I started with Zoom-generated transcripts and reviewed and edited the transcriptions by listening to the audio recordings repeatedly, as the accuracy of the transcriptions yielded via Zoom varied (Gibbs, 2007). This process also helped me become more deeply familiar with the interview content in preparation for coding, to also help ensure my ease of returning to specific details later (Gibbs, 2007). As Charmaz (2014) recommended, I employed the tactic of "listen, listen, and listen some more" (p. 71), and then reflected upon what I heard from interview participants to generate the codes and themes I used.

After employing the same In Vivo and Dramaturgical coding process also described earlier, I added a step of axial coding to identify and understand relationships between the emerging codes and themes (Strauss & Corbin, 1990). With respect to the student interviews, this helped inform me with regards to if and how students were constructing connections between their advising experiences and their success. By examining the relationships between my emerging themes, I simultaneously began the

process of triangulation with the other qualitative data from the student survey and advisor interviews, and archival quantitative data.

Advisor Interviews

Purpose. During earlier cycles of my research, I found advisor interviews to be valuable in providing further context and understanding of the perspectives of students and administrators, as the advisors are the ones who are responsible for carrying out the day-to-day tasks of the CATS advising intervention. During those previous cycles of research, advisors also provided insight into student outcomes at an interpersonal level. They were able to share their own interpretations of the phenomena of the CATS advising model and identify barriers to persistence and transfer student success that the students themselves did not fully articulate. Accordingly, in this study I engaged CATS advisors in a round of semi-structured interviews during which I gathered their thoughts and insights about the CATS intervention, but additionally presented my working results to them in order to promote dialogue about, as well as help to refine and validate my findings. Put differently, advisor interviews served as an additional data source to help me better triangulate the accuracy and ensure credibility of my results for and across all four research questions and sub-questions (Creswell & Guetterman, 2019). This approach aligns with what is often done with follow-up focus groups which bring participants back together to discuss research findings (Frisina, 2006; Lincoln & Guba, 1985). But I chose to conduct individual interviews, also, to satisfy the dual purposes defined prior (e.g., both to collect information and refine and validate findings by examining and having space to reflect critically on my interpretations).

Protocol. I employed a similar AI interview approach with the advisors as used with the students. However, as an additional step in the CATS advisor interviews, I employed a member checking method by sharing my initial findings with the advisors during their interviews (see Ivankova, 2019; Lincoln & Guba, 1985; Owens, 2010). As I neared the end of my data collection, these member checking sessions had the added effect of prompting me to reflect on the process and my initial findings. Particularly for an action research project using grounded theory methods, this reflection was an important process for me to undertake before engaging in analysis and documenting results (Charmaz, 2014; Mertler, 2017).

The advisor interview protocol I developed included five questions, again ensuring that features of Bloom et al.'s (2013) six appreciative advising stages were met throughout. The advisor interview protocol, with items keyed to the appreciative advising stages, is in Appendix H.

Participants. I interviewed the two current CATS advisors in Fall 2021 after I collected all other data. My third interview was with the original and former CATS advisor who had vacated the position in December 2020. Whereas the two current advisors were newer to the role and limited to their experience with recent cohorts in this study, the former advisor had experience across many cohorts and was included to help identify whether the Fall 2020 cohort and their perceived experiences and archival data were representative or outliers in comparison to the larger population of students transferring from Cochise College to UArizona.

Advisor Interview Analysis. Again, I had a preference to perform in-person interviews with the CATS advisors, but to schedule efficiently and around COVID-19

protocols, I was only able to perform one-on-one interviews using Zoom which I, again, used to record the audio and assist with transcripts. I used the same coding process for the advisor interviews described above for the student interviews. Because I collected multiple sources of qualitative data (open-ended, student interviews, and advisor interviews), to enhance the rigor of my qualitative analyses, I wrote concurrent research memos throughout the analysis process to also describe, interpret, and expand on the data early on and engage in regular reflexivity and critical thought about my data (Charmaz, 2014; Saldaña, 2016; Strauss & Corbin, 1990). After engaging in In Vivo and Dramaturgical coding, again, but this time with respect to the advisor responses, I performed further axial coding to inform whether and how advisors made connections between, or attributions of, their advising approaches to student success.

Triangulation

After independently performing the above analyses on my quantitative and qualitative data, during the last stage of analysis I converged the findings to comprehensively examine results and look for contradictions, unexplained results, areas of synergy in the data, anomalies, and the like. By integrating my qualitative and quantitative data during this final stage, I hoped to improve my inquiry into the CATS advising phenomena, as well as improve the validity and credibility of my findings and results (Creswell & Guetterman, 2019). Ivankova (2019) notes that triangulation is a key underlying benefit of performing mixed methods research and helps action researchers increase credibility and confidence in the findings, particularly when small samples are used, as was the case here. As recommended by Ivankova (2019), and as represented in

Appendix I, I also created a triangulation matrix or summary table to help me combine, connect, and merge qualitative and quantitative findings to explore meta-inferences.

Role of the Researcher

In this action research study, given its very nature was participatory, collaborative, and reflective (Ivankova, 2019), I tried to be cognizant of and diligently examine my dual role as a practitioner-researcher and the Assistant Vice Provost for Distance Education while performing my research. As the administrator overseeing the implementation and operations of the CATS program for the past seven years, I have been invested and intimately involved in all aspects of the CATS advising role. Throughout this study, because I continued to maintain oversight of the program and those with advising positions, I did my best to balance my practitioner relationship with the program and my role as a researcher, as I observed and measured student outcomes related to the program, ultimately to evaluate its effects and overall impact. My action research approach also required me to deeply explore this problem of practice and be open and humbly vulnerable to the improvement of my practice as informed by reflection on my iterative research cycles and findings (Mertler, 2017; Saldaña, 2018).

Also, important to note as a practitioner-researcher in this study was my outsider status to the Douglas community. As a researcher, I have representational responsibility for telling the experiential stories of our students and advisors (Saldaña, 2018). Therefore, I attempted to engage in an inclusive and collaborative approach, especially to avoid being a colonial, outsider researcher, where typically white administrators attempt to tell historically oppressed students and advisors what is best, and best for them (Patel, 2016). Patel notes oft-white educational administrators and leaders "include some things

and leave others out and encapsulate specific [white, colonial] knowledge traditions" (p. 116). Since the cultural context of our students and the CATS program had also been considered repeatedly in previous cycle interviews with students, advisors, and advising administrators, I paid particular attention to confirmability and credibility of the findings with the CATS advisors, all the while in recognition of the culturally relevant and sustaining practices they understand and employ in their positions.

RESULTS

Before interpreting any results of the study, I note that as an action research study in the context of my sphere of professional influence, my study was limited by small sample sizes of intact transfer student cohorts in the rural communities studied. The quasi-experimental design I employed accordingly comes with limitations in the comparison of the two non-randomly assigned groups because I could not account for all potential variables leading to non-equivalence of groups that could have affected the results (Plano Clark & Creswell, 2015; Smith & Glass, 1987), despite demonstrating similarities on the key demographics that are known to influence transfer student success. These study results can at most lead to moderate claims of effect (Plano Clark & Creswell, 2015) and all findings of this study should be interpreted with such in mind.

Again, given this was a multistrand MMAR study, I gave equal weight to both the qualitative and quantitative data, using a convergent approach (Creswell & Guetterman, 2019). Data collection occurred both concurrently and in a sequential manner over the course of the study, for the sake of time and efficiency, and because the voices, experiences, and perceptions of the students were of equal priority throughout analyses. Correspondingly, I analyzed, merged, and compared the quantitative and qualitative data concurrently in order to also triangulate the quantitative archival student success and satisfaction survey data with qualitative survey and interview data, so as to also ultimately provide context and deeper understanding of the advising phenomena and student perceptions. After performing the methods of analysis detailed above, I found the following results.

Archival Data

Retention Results

     I used a descriptive approach (described prior) to measure retention at the institution (RQ3a) by how many of the applicants for Fall 2020 from each group were successful in admission and first term enrollment at the institution. Then, I measured enrollment retention after the first term and the first year at the university. Figure 2 shows the differences in treatment groups on enrollment retention from the point of university transfer application to the university through the first year at the university where, again, Douglas was the group receiving the CATS advising program intervention.

Figure 2

Time Series Graph for Retention by Group
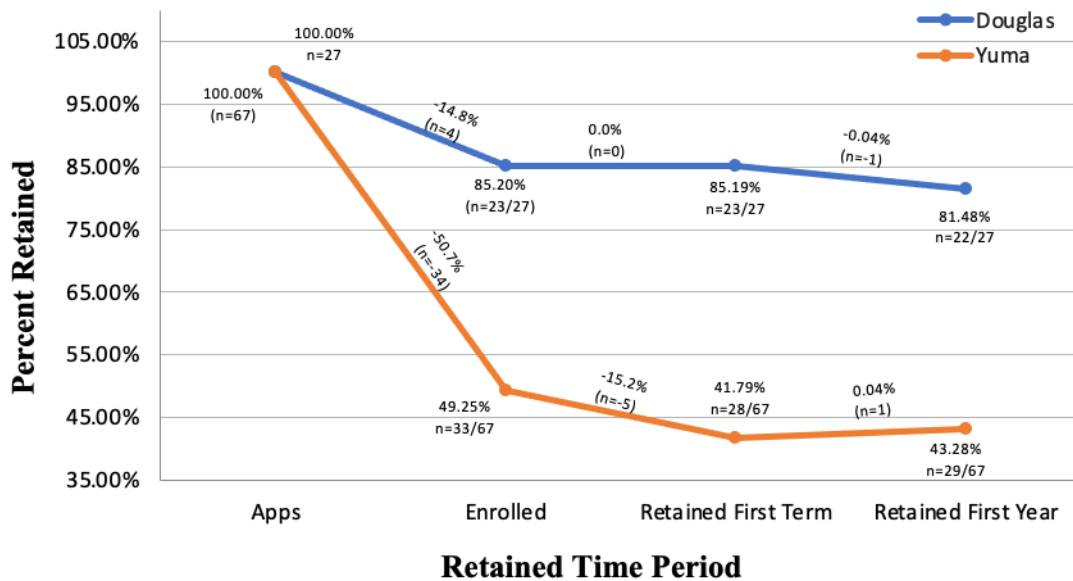
     Illustrated in Figure 2 is that the group without the CATS Advising intervention demonstrated overall lower retention (43.28% retained after the first-year in the control

group, Yuma, compared to 81.48% retained after the first-year in the treatment group, Douglas), with the most dramatic loss from application to initial enrollment in the first-term (49.25% retained after the first-term in the control group, Yuma, compared to 85.19% retained after the first term in the treatment group, Douglas) As also illustrated, I found an overall higher retention rate (81.48%) from application through the first year of enrollment for the Douglas group who received the CATS Advising intervention than for the Yuma group who did not (43.28%).

As described earlier and documented in Appendix J, I conducted chi square analyses at each point in time and found a significant difference at the $p < 0.05$ level at all three points in time between the treatment location (Douglas) and the control location (Yuma), enrolled in the first-term, $\chi^2(1, N = 94) = 10.32$, $p < 0.01$, retained after the first-term, $\chi^2(1, N = 94) = 14.60$, $p < 0.01$, and retained after the first-year, $\chi^2(1, N = 94) = 11.31$, $p < 0.01$ (see Tables J1, J2, and J3 respectively). In other words, location (treatment) had an impact on the probability of whether a student was retained at each point in time in the study.

To determine any interactions of time on the resulting differences between groups, next, I conducted a loglinear analysis combining the effects of independent variables of location (treatment) and time on retention (see Appendix K). Like the chi square analyses that I conducted independently at each point in time, the loglinear analysis I conducted also confirmed a significant partial association between location (treatment) and retention ($\chi^2(1, N = 282) = 39.12$, $p < 0.01$) (see Table K1). However, the loglinear analysis did not reveal any partial association between time and retention ($\chi^2(2, N = 282) = 0.83$, $p = 0.66$) nor on the three-way association of time on location and

retention ($\chi^2(1, N = 282) = 0.00$, $p = 1.00$) (see Tables K2 and K3 respectively). Hence, while location group impacted students' retention likelihood, that impact was not influenced within groups over the points of time in the study. In other words, time did not have any significant impact on the results; the important association was that of location (treatment) on retention, regardless of the point in time at which retention was captured. Because time did not emerge as an important association, I did not analyze the retention data over time any further.

GPA Results

I also collected academic success data as measured by GPA (RQ3b) upon admission (incoming GPA), after the first term, and after the second term at the university. Figure 3 is a visual representation of each group's GPA and changes over each of the time periods of interest in this study.

Figure 3

Time Series Graph for Mean GPA by Group
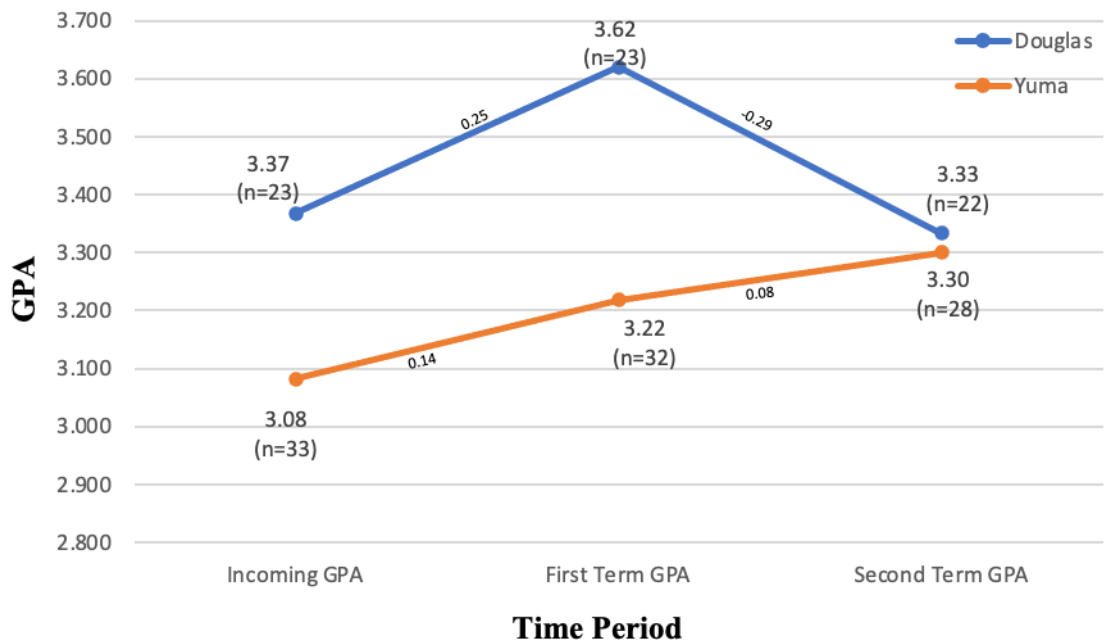
As noted prior and illustrated in Figure 3, the Douglas group ($M_1 = 3.37$) had higher incoming GPAs than the Yuma group ($M_1 = 3.08$). This trend maintained through the first term, with a greater increase in GPA continuing for Douglas students (to $M_2 = 3.62$) than Yuma students (to $M_2 = 3.22$). But by the end of the second term, any differential effects of group or treatment were no longer evident as term GPAs for the groups became more similar between Douglas ($M_3 = 3.33$) and Yuma ($M_3 = 3.30$).

As noted earlier, to test the significance of any differences in GPA measured at the, between the CATS advising treatment group and Yuma control group, I used a mixed two-way repeated measures ANOVA to determine whether any changes in student GPAs were the result of the interaction between the type of advising condition and time

measured at the three time points noted earlier, time of transfer (incoming), after the first term at the university, and after the second term at the university (see Table 2).

Table 2

ANOVA Test of Significance for GPA by Group Over Time

	n	Incoming GPA		First-Term GPA		Second-Term GPA		F	p	ηp^2
		M_1	SD	M_2	SD	M_3	SD			
Douglas	22	3.38	0.42	3.69	0.61	3.33	1.08	.82	.44	.02
Yuma	28	3.10	0.43	3.41	0.65	3.30	0.67			

While I found a significant result indicating differences within-subjects over time on GPA ($F(2,96) = 4.10$, $p = 0.02$, $\eta_p^2 = 0.08$), I found no significant interaction between advising condition group and time on GPA ($F(2,47) = 0.82$, $p = 0.44$, $\eta_p^2 = 0.02$). I also found there was no significant main effect (between-subjects) of advising condition on GPA overall ($F(1,48) = 2.03$, $p = 0.16$, $\eta_p^2 = 0.04$). These findings suggest no effect of the CATS advising intervention on academic performance over time, as measured by GPA.

Digging deeper into the within-subjects effect of time on GPA, again, with a repeated measures ANOVA in a post hoc analysis with a Bonferroni adjustment, I revealed there was a significant increase at the $p < 0.05$ level from the community college incoming GPA to the first term GPA at the university with a mean difference of -0.31 (95% CI, -0.57 to -0.05), $p = 0.02$), but not from first term GPA to second term GPA with a mean difference of 0.23 (95% CI, -0.02 to 0.49) $p = .09$), nor from incoming GPA to second term GPA with mean difference of -0.08 (95% CI, -0.39 to 0.24), $p = 1.00$). While not of direct interest to my research question (RQ3b), this is worth noting because it is in

direct opposition to the expected first-term GPA result from the transfer shock literature. Given this, I approached the interpretation of first-term GPA data with caution as I note the timing of the study during the COVID-19 pandemic. Interim pass/fail grading policies were introduced as a COVID-19 mitigation at the University for the Fall 2020 term, the first term at the University for this cohort. This interim policy allowed students who perceived they were struggling in a course to select a pass/fail grading option. This unforeseen policy adjustment may have artificially increased GPAs in Fall 2020 and reduced the visible impact of transfer shock on the students' first-term GPAs.

Additionally, as noted earlier, I chose not to input estimations of missing GPA values (an option per Kaiser, 2014) which had the effect of removing four students from the Yuma group and one student was eliminated from the Douglas group. Because these missing values influenced differences in retention between groups, also important to note is that the analysis of the differences in GPA with missing (i.e., unretained) participants removed might have also introduced bias. To address this limitation of the study, I used member checking and triangulation to help counter and explain this, and also increase the overall trustworthiness of my study as best I could (Ivankova, 2019).

Student Survey

For my *t* test analyses on the student survey results, described prior, I included all 15 respondents who submitted a complete survey, excluding three respondents who did not proceed beyond the first question and one who responded to only the first 25% of the questions. All respondents (*n*=15) completed the English form of the survey instrument. Of the nine Douglas respondents (*n*=9/15; 60%), all nine were Hispanic (100%), five were female (*n*=5/9; 56%), seven were Pell eligible (as a measure of low SES) (*n*=7/9;

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78%), and all nine had an average transfer GPA of 3.36. Of the Yuma respondents (*n*=6/15; 40%), all six were Hispanic (*n*=6/6; 100%), four were female (*n*=4/6; 67%), five were Pell eligible (*n*=5/6; 83%), and all six had an average transfer GPA of 3.39. Noted earlier, I found no significant differences between the respondent groups on these key demographics; in fact, respondents were more alike than the Fall 2020 incoming cohorts from which they were sampled.

As also described prior, I performed an independent *t* test for each of the three constructs using the summated item data obtained from my two groups of students: Douglas and Yuma. I used the independent *t* test to determine if differences in the groups for the constructs of academic advising satisfaction (RQ1), perception of support (RQ1), and informational capital (RQ2), could be attributed to the CATS advising intervention (see Table 3).

Table 3

Survey Construct Results with t Test by Group

	Douglas			Yuma					
	n	Mean	SD	n	Mean	SD	*t*	*p*	*d*
Satisfaction	9	46.78	1.30	6	41.17	4.12	3.87*	<0.01	2.75
Perception of Support	9	58.33	1.12	6	50.00	4.38	4.56*	<0.01	2.86
Informational Capital	9	67.56	3.05	6	60.83	5.88	2.93*	0.01	4.36

*$p < 0.05$

Levene's test for equality of variances was significant on the Perception of Support constructs at the $p < 0.05$ level; therefore, I could only assume homogeneity of

variance for Satisfaction and Informational Capital. On the construct of Satisfaction, Douglas students reported greater advising satisfaction (M = 46.78, SD = 1.30) than Yuma students (M=41.17, SD= 4.12), and this was significant at the 95% confidence interval level, $t(13) = 3.87$, $p < 0.01$. On the construct of Perception of Support, Douglas students reported greater perception of support (M = 58.33, SD = 1.12) than Yuma students (M = 50.00, SD = 4.38), and this was significant at the 95% confidence interval level, $t(5.44) = 4.56$, $p < 0.01$. On the construct of Informational Capital, Douglas students reported greater informational capital (M = 67.56, SD = 3.05) than Yuma students (M = 60.83, SD = 5.88), and this was significant at the 95% confidence interval level, $t(13) = 2.93$, $p = 0.01$.

As noted earlier, to understand the effect size of the survey results, I used Cohen's (1988) effect size measurement. I found effect sizes of greater than 2.0 (see Table 3) meaning the difference between the group means was greater than two standard deviations and therefore indicated a very large effect.

Correspondingly, the CATS advising program seemed to have had a significant, large, positive effect on student satisfaction, perception of support, and informational capital. While I have addressed concerns with applying t test analyses to individual Likert-style questions as noted earlier, I (and others) should take caution in the interpretation of the individual item results and focus, rather, on the summated constructs. On individual survey items, though, it is worth noting that small to medium effect sizes were seen on those items with significant difference between groups at the 95% confidence interval, as well (see Appendix L).

Although these survey data also indicate that the CATS advising program also positively impacted transfer students' advising experiences I, again, recognize (and want readers to recognize) several threats to validity that could affect these results. In a quasi-experimental design such as this, the risk of *nonequivalence* of groups is present (Smith & Glass, 1987). While I compared traditional risk factors for student attrition between groups and found similar levels of protection and risk between groups on key demographic factors, as noted prior, there is still the possibility of other variables differing between groups, introducing *alternative causes,* otherwise defined as rival hypotheses. While alternative causes remain a threat to validity, since both groups received advising services and I only administered surveys and interviews after the advising intervention took place, the risk of experimentation and experimenter effects including *demand characteristics* (altered subject behavior to try to meet perceived expectations of the study), *testing* (or practice effect on results from a pretest), and *instrumentation* (changes in the instrument or measurement) were negated. And, although *history,* whereby different students might have received differential support services during the time of the study, should also be noted as a threat to validity, in that the differential support services offered were actually the intervention of interest and should actually reflect the efficacy of the independent variable. However, one *history* threat to this study is related to students' enrollment choices at the Yuma location, wherein students have access to transfer to on-site programs offered by three state universities. In Douglas, UArizona is the only on-site university, so while the CATS Advising support services offered were the intervention of interest, UArizona is also the only choice for on-

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site services (as differentiated from primarily online services or irregular on-site support provided by the other two).

Qualitative Survey Data

Using the dramaturgical coding approach I described earlier helped me approach the open-ended statements of the survey respondents from a diverse set of perspectives (see survey coding table in Appendix M). The dramaturgical perspectives included emotions (supportedness, mentorship, comfort), attitudes (satisfaction levels, perception of success), objectives (major selection, information, transfer), conflicts (COVID impacts on communication, loss of in-person connections, finances, time), tactics (asking questions, getting prepared, starting the process early, communication, staying on track), and subtexts (importance of understanding both institutions, consistency of support) (Saldaña, 2016). Overall, students' responses on the open-ended survey questions fell into themes capturing their transfer experiences relating to *Information Transmission*, the *Importance of the Advising Relationship*, and their *Transfer Advising Satisfaction*.

Several Douglas students expressed awareness of the extensive knowledge the advisor could share and the unique *information transmission* role their Cochise Cats advisor played in understanding both institutions or, as one student stated, knowing "the game for both community college and university." Another Douglas student described the CATS advisor's role in helping students "get a head start at the University level." Contrary, a Yuma student distinguished the need to "ask for help from whomever is available" to get the support he needed, and another Yuma student stated she found "everyone had something different" with respect to getting transfer and degree requirements information. All Douglas and Yuma students surveyed expressed their

perceptions of having support from their advisor, and the *importance of the advising relationship*, and recognized help available to them in "just being able to talk to someone." But Douglas students continued to note more specifically their perceived advantage in the *information transmission* from their advisor to help them "stay on track" and follow "classes in the correct sequence."

Similar to the quantitative survey response findings reported, between the two groups I also found distinctions in *transfer advising satisfaction* levels with more Douglas students specifically expressing advising satisfaction (78%) with their transfer than Yuma students (67%). A Douglas student, for example, stated the advisor took "a lot of stress off of my shoulders," while several more Douglas students expressed their perceptions of support, with one who directly wrote, "I felt well supported by the academic advisor." However, around half of the students in each group reported unsatisfactory experiences, particularly related to COVID-19 mitigation procedures. From both groups, responses included disappointment in "not being able to meet face-to-face" and "not [being] able to physically attend class and orientation." The interviews with Douglas students further expand these themes, as detailed next.

Student and Advisor Interviews

The data the seven student and three advisor participants provided during their interviews revealed the same, three prevalent themes, as aligned with the open-ended survey responses just described: *Information Transmission*, *Importance of the Advising Relationship*, and *Transfer Advising Satisfaction* (see student and advisor interview coding in Appendices N and O respectively). Here, however, given these data were

collected via interviews, there are more data to help explicate what each of these themes seemingly meant as per study participants.

Information Transmission

The students I interviewed all spoke of the importance of learning about college, majors, classes, and processes. Almost all expressed the importance of asking questions about resources and transfer course requirements but noted they did not always do so when they should have. One student recognized, "sometimes we need people more knowledgeable in whatever area we're struggling." Another student noted that once assigned to the advisor, "I had questions that were really specifically answered…so that made me more secure about the way I was transferring." One CATS advisor confirmed:

> Some students didn't even know that [UArizona] was there, that the program was there, that there were financial resources for them, that they could get financial aid, and all these different things that they could use as [UArizona] students. And, when they learn about it, they're like, okay, I'll do it.

Several students commented on the importance of having a "clear roadmap" for their transfer journey. For some, this was help with sequencing of their community college and university courses; for others, it was more process-based to understand financial aid and transfer requirements. One student shared the importance he placed on the CATS advisor removing his fears when she "laid it all out clear…and said…this is what you're going to do here, and this is what you need to do." Another said his CATS advisor "would lay it out just in a few steps for me to understand…in easy terms" and helped him "know what the next four years [were] going to look like." Yet another student stated that every semester, "when it was time to enroll in classes, having the advisor…giving me that [transfer] information…was very helpful." The CATS advisors' knowledge about both institutions increased the informational capital that all the students

acknowledged made the CATS advisor more helpful than other staff and advisors, with one student specifying, "she gave me the most information about Cochise College and [UArizona] requirements." The CATS advisors all expressed the appreciation they felt from their students, with one stating, "they're grateful that they had that transfer bridge built for them."

A common experience shared by the students was "transferring where [they] had all the information [they] needed." All three CATS advisors confirmed that an important part of their role is determining students' readiness to transfer to the university. One advisor clearly stated, "I wouldn't encourage students to apply, unless I was for sure they were ready to transfer," and another expanded, "you walk them through the whole first two years and then you tell them when to apply." The third said, "it's a more refined process…I'm able to see their [community college degree] audits;" she would tell them "let's start applying because you're going to be ready." They described taking the guesswork out of the experience for the students and "walking them through" their two- and four-year educations. One student described her important decision to delay her transfer to the university at the advice of her CATS advisor and expressed her gratitude of being advised to transfer at a time when she would have a more substantial scholarship opportunity.

The students I interviewed also mentioned barriers to their education including finances, first-generation concerns and fears, and family responsibilities. However, one student noted, "if I ever had a problem or something [my CATS advisor] was the first person to know and get me set up real quick." One first-generation student in Douglas noted that her "advisor really influenced [her] in those types of decisions [allowing her

to] actually get [her] degree without having to get any type of loans." She likened her advisor acting as "a mom for a first-generation student" since her own family did not have the knowledge to help her through the financial and transfer opportunities. In the interviews, the advisors did not specifically share with me their role in providing options to students, but the results of the student interviews pointed to this as an important function of their informational capital and in building trust with their students. As one student described, the CATS advisor "never tried to convince…or influence [her] decision," but rather supported her by giving her options of what she could do.

Advisors and students alike recognized the significance of the CATS advisor role in sharing information to navigate the two institutions and facilitate successful transfer decisions and processes. To summarize these information transmission effects, one student said of their integration at the university, "after transferring I realized how much more prepared I actually was and how much more confident it made me." The information transmission described in the interviews underlines Laanan et al.'s (2010) conceptual definition of transfer student capital, with the CATS advisor acting as the cross-institutional agent imparting positive perceptions of transfer, navigating the transition for the student (RQ3a), and empowering students with institutional knowledge (RQ2) to aid in their integration (see also Lukszo & Hayes, 2019; Stanton-Salazar, 2011).

Advising Relationships

Most of the students and all the CATS advisors I interviewed indicated the importance of the advising relationship on the students' retention and transfer success. One student recalled that her CATS advisor "said she would follow me through

[UArizona] and she helped me and she prepared me." Likewise, one of the CATS advisors stated:

> [For] Douglas students, support is a huge thing for them. Feeling supported, feeling that they belong to the campus, that they're not just a number, that people are there for them, that they care, that people are there to support them...It makes a difference.

A student described her relationship with her CATS advisor as deeper than those with other personnel, stating the CATS advisor "was always there for us, more like a friend." Another student said he recognized the CATS advisor was looking out for him by sending him information and regular encouragement to help him stay on track. Several students mentioned the CATS advisors being more approachable than others, increasing their level of comfort, building rapport, and helping make going to school feel easier.

Beyond the support provided, the CATS advisors reported recognizing that the CATS advising model provides students with consistency across institutions; moreover, that students "build that relationship and trust" with the CATS advisor at the community college, and that "students know that we're a constant here" given they will have the same CATS advisor at the university. One of the advisors referenced the CATS advising model as a real-world example of the concept of looping in education (see Grant et al., 1996); she stated the students see the CATS advisor as "a key person that's a constant in their life, which has a calming effect." Another CATS advisor reiterated, "they need that bridge in between that's going to be constant."

With respect to retaining the students through the transfer pathway at the institutions, one of the CATS advisors noted that "even if [students are] thinking of leaving, they have that relationship with you, and then I guess they feel that they have to stay because you support them." Another CATS advisor said students feel the "weight of

somebody there that's keeping [them] accountable." One student confirmed the importance of the advising relationship on his retention when he said, "she kind of kept me going in a lot of ways."

Related to their larger academic and career goals, a few students stated that they had not planned to transfer until after they first spoke to the CATS advisor, and after working with the CATS advisor they elevated their goals from completing an associate's degree to continuing through the transfer process to complete a bachelor's degree. One student stated, "I didn't think about transfer right away," and another planned to "get an associate's and then start working." One student identified that once he was settled in at the community college and was assigned to the CATS advisor, he became "comfortable, confident, and ready to keep moving forward." One of the advisors confirmed that some of the students "would never have had that conversation with anybody [and] they would have just stayed with an associate['s] degree" if they did not have a relationship with the CATS transfer advisor. In fact, most of the students recalled when they were assigned to the CATS advisor and expressed how that changed their transfer path. As one student added, "ever since then it's just been a great experience." Another underscored this by noting that "without [the CATS advisor's] support, I think I wouldn't have applied or anything cuz it looked like a scary process."

Advisors and students alike articulated the importance of the relationships between students and advisors at various points in the student journey, including major selection and decisions to continue to enroll or pursue transfer. Even in my Cycle Zero research, two students interviewed described the relationship with the CATS advisor as "the key" to their transfer and academic success (Wieland, 2019). The sense of someone

looking out for them and being a constant source of support appears to have increased

student integration with both institutions (RQ1) and their commitment to their goals

(RQ3a). For transfer students specifically, as also noted in previous research, developing

integration can be challenging because of the transitional nature of the systems and

relationships (see Davies & Kratky, 2000; Laanan, 2007; Townsend & Wilson, 2006);

however, these interview responses indicate recognition of successful relationship

building with the CATS advisor as a constant source of integration and support for such

students in their transfer journeys.

Transfer Advising Satisfaction

Every student I interviewed expressed his/her satisfaction with the transfer

process. More specifically, four (*n*=4/7; 57%) indicated they had a "smooth transition" to

the University, five (*n*=5/7; 71%) stated that their transfer was a "great experience," and

one (*n*=1/7; 14%) used the word, "streamlined." One student added that she anticipated it

could have been harder when she said, "it wasn't very difficult, as I would think it would

be in other places." The CATS advisors also described the student transfer experience as

"seamless" and "refined" and explained that students can "go to [UArizona] knowing that

that they're going to have that [same] advisor [with whom] they already have built that

trust and that communication and have seen like what their pathway will look like." One

student specifically said:

> I didn't feel the transfer process at all. I just trusted that everything was going to
> be set for [UArizona] and everything that I took at Cochise College, because it
> was already a pathway. I was good to go, and I was able to have everything I
> needed.

Of note, primarily because of the inclusion of GPA as a measure of student success in this study, none of the students interviewed mentioned GPA or performance in classes when asked about their satisfaction with their experience or how they would define their success as a transfer student. As evidenced by their responses, students instead cited successfully transferring to UArizona, persisting in enrollment, building supportive relationships, completing degree milestones, and achieving their career outcomes as reasons they were satisfied and how they defined their personal measures of success.

One CATS advisor used a Bible verse to describe the small challenges that students face in achieving their educational and transfer goals. She told me, "small foxes spoil the vine," explaining that during students' journeys many small barriers can add up to spoil the whole transfer experience. Of the CATS advisor role, she said, "we're putting out traps for the small foxes." Here, she described a somewhat regular occasion where she requested transcript fee waivers for students when they "didn't even know that's something we did." But her actions eliminated a payment barrier (or a small fox) for them.

While all the students noted the smooth transfer transition they experienced between institutions, however, the advisors I interviewed noted the opposite about the transfer advising experience. As an employee of both institutions, one of the advisors expressed "it sometimes feels like I belong nowhere" and described herself "in the middle" as the self-proclaimed "bridge" between the institutions but not really belonging at either. In reference to their coworkers at both institutions, two advisors mentioned the lack of understanding and acknowledgement of their work by their peers and institutional leadership, with one saying, "I do all of this, but [they] don't see it." All three CATS

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advisors mentioned the challenge of the position, how hard and sometimes overwhelming it was to work in "two different worlds," and how important buy-in and support from both institutions was to the quality of their delivery of quality advising to the students. They all recognized that the CATS advisor role bore additional responsibility, advanced advising knowledge, and increased workload and while they reported seeing the positive results of the position, they acknowledged the tax of the extra load they carried compared to other advisors at each institution. This lack of belonging and understanding expressly felt by the advisors was not reflected in the student experience; instead, most of the students directly expressed comfort and support at both institutions pre-, during, and post-transfer.

Overall, students' satisfaction with their CATS advisor experience was evident in the overwhelmingly positive responses regarding their CATS experience and with their individual advisors. All advisors interviewed also noted student gratitude and satisfaction with the CATS advising model. Given the risk factors of the Douglas population to educational attainment, as also evidenced in prior literature (see Fink & Jenkins, 2017; Jain et al., 2016; Shapiro et al., 2017, Wyner et al., 2016), the importance of students' expressions of satisfaction with their transfer advising experience (RQ1) cannot be understated in the students decisions to retain through the transfer pathway (RQ3a).

DISCUSSION AND IMPLICATIONS

In triangulating the results from the various data sources in my study (again, see Appendix I), I revisited each research question to uncover meta-inferences aligned with my theoretical frameworks and report and discuss the related implications below.

Research Question 1

In examining RQ1 (whether differences existed in transfer advising support satisfaction level between Douglas where students received the CATS program, and Yuma where students did not receive the CATS program), I found that students who received the CATS advising intervention in Douglas were reportedly more satisfied with their transfer experience than those who received the traditional transfer advising model in Yuma. Students in the CATS model reported higher advising satisfaction and fewer challenges with navigating the transition between their two institutions. However, CATS advisors reported feeling more challenged in the delivery of the CATS advising than what they perceived were the experiences of their other academic advisor peers who only worked for one institution (see also more forthcoming).

Implications

The reported higher transfer student advising satisfaction in Douglas with the CATS advising model is certainly an indicator of program success. However, while it is ideal that students have a positive transfer experience, as noted prior, student satisfaction is often an overused measure of advising programs and is not in itself enough to assess the value of the model. That being said, Tinto's (1993) model of student departure and later studies support the finding that positive experiences of the students are important in promoting their integration at the institution(s) and tend to increase their commitment to

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completion goals (Astin, 1993; Levin & Levin, 1991; Liu & Liu, 2000). This means the higher transfer student advising satisfaction in Douglas is an important foundational marker of the value of the CATS advising model, but this finding should be combined with additional results, for example, as investigated via my other research questions, particularly as related to informational capital and retention, to sufficiently assess the model's impact.

Hence, and perhaps of greater interest in the findings surrounding RQ1 is that although students were reportedly more satisfied with the transfer advising experience, the advisors seemingly have more challenging experiences, as also just noted. This means providing more support for the advisors is implicated in this context, as well as for others considering a similar partnership approach. Figure 4 visually portrays my findings as per the student experience and the transference of challenges on the CATS advisors.

Figure 4

CATS Advisor Results Model
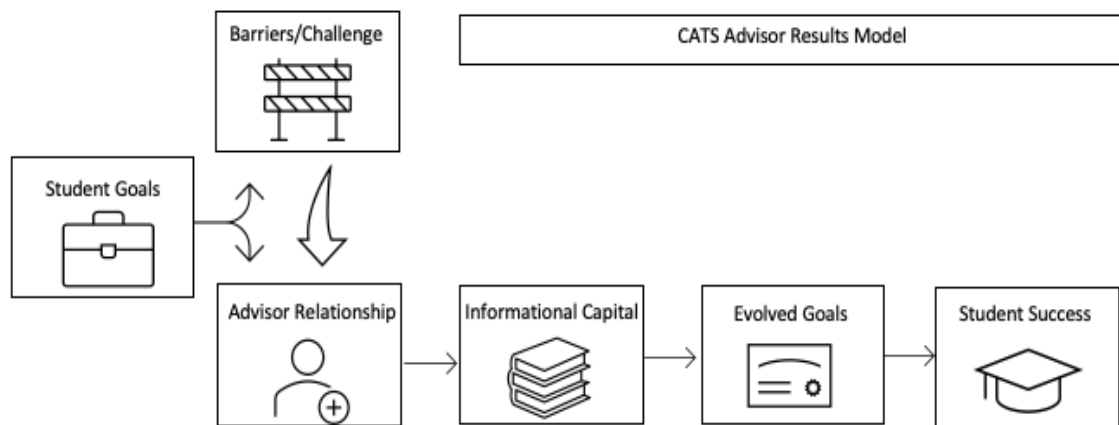
The model in Figure 4 demonstrates that students enter their higher education journey with goals (see again Tinto, 1993) but often encounter barriers to persistence, transfer, or

completion (see, among others, Carlsen & Gangeness, 2020; Crisp & Nora, 2010; Townsend, 1995). Advisor interview results demonstrated the CATS advisor role has the effect of absorbing those barriers and, via assignment to and relationships with CATS advisors, students gain key informational capital to aid in their transfer success (as evidenced in student survey results and discussed further below). Student responses in the interviews indicated that the students' goals further evolved with their newfound informational capital, pushing them beyond their original assumptions and expectations of higher education and leading them to believe they could achieve their definitions of success: enrollment persistence, degree completion, and career attainment. This result may not have been possible without the transference of the barriers and challenges to the advisor instead of the student, further indicating the need for advisor support and training in order to maintain student satisfaction rates.

Research Question 2

Next, with regards to RQ2 (how students perceived the CATS advising to impact their transfer capital), I found that students involved with the CATS advising model perceived that they had gained more transfer capital when compared to students involved in the other advising model. Noted earlier, previous qualitative research on transfer student experiences demonstrates that articulation agreements and transfer credit tools are beginning to improve credit transfer processes, but students are still finding that new institutions present them with challenges to which they must still acclimate (see Townsend & Wilson, 2006; Berger & Malaney, 2003). In other words, while the informational contexts of transfer student capital may be improving nationally, other key components and capital leading to successful transfer, including meaningful relationships

and integration at the new institution, have not. In addition to the CATS program reportedly providing student participants (e.g., from Douglas) relatively more informational capital, students and advisors reported the CATS advising model also resolved some of the additional informational barriers to understanding transfer processes or developing institutional integration noted by students in previous studies (see Harbin, 1997; Jackson & Laanan, 2015; Kirk-Kuwaye & Nishida, 2001; Lopez & Jones, 2017; Townsend & Wilson, 2006; Swecker et al., 2013).

Implications

This finding means that in addition to the CATS advisors providing students with reportedly greater informational capital, the support they provided also incorporated transfer capital with respect to relationships and integration that was perceived not to be garnered through traditional transfer advising models. The informational capital combined with integration support demonstrated by the CATS advising model appeared to have unique application to supporting transfer populations to successful transfer and retention outcomes. While previous studies and efforts have improved informational capital, the CATS advising model not only did that but also provided built-in integration support and, related, improved student satisfaction (RQ1). Thus, the findings of RQ1 and RQ2 are even more relevant to improving the transfer experience when combined. However, even though both students and advisors expressed the transfer capital, relational, and integration value of the CATS advising model, interviews with advisors and with institutional staff in the current study and in previous cycles of research indicate that institutional partners may not be able to see the same capital gained. If institutional leaders and colleagues do not see the work or value of the CATS advisors in improving

transfer success, I would recommend a focused effort on improved communication and program visibility including sharing student stories and outcomes. The results of this study would be a good place to start with targeted presentations but a regular communication plan including a semesterly newsletter and/or leadership report could better inform perceptions. Student success stories highlight the real-life impact of the advising program and would continue to tell the story through the lived experiences and expressed words of the students.

Research Question 3a

With respect to RQ3a (whether differences existed in retention through first enrollment, first-term, and first-year at the university between Douglas where students received the CATS program, and Yuma, where students did not receive the CATS program), in addition to finding quantitative evidence of higher retention in Douglas through the transfer process to enrollment, after the first-term, and after the first-year, I found that students and advisors alike described CATS advising as important in making the transfer process easier and as providing a consistent advising relationship throughout the student lifecycle. Students noted that their transfer was encouraged and successfully attempted with support of their CATS advisors, and this did have an impact on their decisions to transfer.

Implications

Because the support and information provided by the CATS advisor was noted as instrumental in many Douglas students' decisions to transfer, this suggests the existence of the CATS advisor position, in which the advisor acted as an institutional agent, fostered the potential of student transfer behavior. Referring to Figures 1 and 4 depicting

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the supporting framework and outcomes of the advising model, student transfer goals and commitment to persistence, as evidenced in the archival data, also appear impacted by the CATS advisor role. Tinto's (1993) model of student departure connects the student satisfaction results earlier to these corresponding retention results whereby the Douglas students who were reportedly more satisfied with their transfer advising are then more likely to retain through the transfer and enrollment lifecycle. Bloom et al.'s (2008) AI framework would also suggest that the long-term CATS advising relationship contributed to the students' continued commitment and advancement of their goals. In the context of rural borderland Arizona where transfer behavior and degree attainment are low, these results underscore the importance of a continued focus and attention to student transfer goals in advising interactions. It should be noted that the Yuma location is also home to two other four-year state institutions so student access to choices in the region may have impacted transfer behavior.

Research Question 3b

Regarding RQ3b, whether differences existed between academic performance (e.g., GPAs) at the time of transfer, first semester, and second semester at the university in Douglas and Yuma, the advising intervention did not appear to influence student performance as measured by GPA at those three time points. Interestingly, in the interviews, students did not specifically report GPA or academic performance as an important measure of their transfer student success but rather focused their definitions of success on persistence, degree completion, and pursuing a career path they might enjoy. In other words, even though increased GPAs did not register as one hypothesized and desired impact of the CATS advising program, this finding did not seem to carry much

weight, to students themselves (although others may disagree) as a valued outcome of the program anyhow.

Implications

While the impact of transfer on student GPA has been a studied area of interest since Hill (1965) defined transfer shock, my study suggests GPA may not be as important an indicator of success or the existence of transfer barriers as past research would suggest. For example, there was evidence of student GPAs actually having increased post-transfer which is counterintuitive to the implication of the experienced challenges of transfer articulated by students and advisors in this study. However, given the interim grading policies in place during my study, I am also cautious of addressing any implications without further investigation (see more next).

FUTURE RESEARCH

In examining RQ1, transfer student advising satisfaction, one unexpected and important finding of this study was the apparent transmission of the challenge of transferring between institutions. Instead of the students feeling the challenges of transferring between the two institutions, the advisors felt the challenge of working across the two institutions. While Douglas students reported fewer of the challenges and institutional process barriers to transfer (including the need for increased informational capital, navigating and interpreting two systems, and lacking a sense of belonging) than previous research suggests (Berger & Malaney, 2003; Jain et al., 2011; Lukszo & Hayes, 2020; Townsend, 1995; Townsend & Wilson, 2006; Vaala, 1991), similar challenges and barriers appear to have been transferred to the advisors. Indeed, CATS advisors reported feeling a lack of belonging to either of the two institutions because of their bridged roles, and they expressed multiple challenges pertaining to managing information, expectations, and processes across both institutions (see also Carlsen & Gangeness, 2020). Further inquiry into the advisor experience of the CATS model and the apparent challenges and barriers of the advising role would, accordingly, be important for the future longevity or expansion of the CATS model. Analogous to the findings of Carlsen and Gangeness (2020), the need for advisor support in balancing workloads and needs of both institutions are evident, also in order to successfully hire, train, and retain shared advisors in programs such as these. Therefore, determining the best supports, training, and professional development opportunities for the CATS advisors is a recommended next area of inquiry.

An additional suggested area for future research related to RQ1, and also RQ2, transfer student capital, includes deeper qualitative inquiry into the Yuma student experience to collect data about the unique advising and student support experiences and needs at this location. Further inquiry here would be an important starting point for consideration of implementation of a similar collaborative advising model in the Yuma region. I recommend, for example, an approach that also lends more insight into the RQ3a finding of significantly lower retention or yield from application to first-term enrollment in Yuma.

Related to RQ3b, the potential impact of the advising model on transfer student GPAs, I noted earlier that independent of group membership, I found first term post-transfer GPAs were significantly different from the community college incoming GPAs. What was interesting about this finding was the direction of difference, which was in direct opposition to the transfer shock literature (Hills, 1965; Keeley & House, 1993; Lanaan, 2001). Students in this study actually earned higher GPAs in their first term after transfer than their incoming transfer GPAs. I did not find a significant difference in the second term post-transfer, however. Regardless, this finding should still be interpreted with caution given, as also mentioned prior, the interim grading policy changes in the Fall 2020 term implemented during the COVID-19 pandemic. This also requires further inquiry to determine any impacts of the CATS advising program on GPA once the pandemic (hopefully) passes and all variables pertinent to the CATS program return to normal. This is also important despite the finding that students did not define their GPAs as an indicator of their success.

Lastly, due to timing constraints of my study, I recognize that a key research question missing from this study was whether there may have eventually been any differences in four-year degree completion rates between students who experienced the CATS advising model and those who did not. While the short timeframe of my study did not allow me to follow the cohort through to baccalaureate degree completion, and other points of retention that I could have observed and measured with more time, measuring degree completion (and related indicators) is a commonly referenced marker of transfer student success in the literature (see, among others, Carlsen & Gangeness, 2020; Pascarella et al., 1986). Long-term retention is certainly necessary to examine in order to fully. more holistically, and certainly longitudinally evaluate the effectiveness of the CATS advising program.

CONCLUSION

In concluding this study, I reflected on the context of my study in rural borderland Arizona where baccalaureate degree attainment is lagging (Arizona Board of Regents, 2021). I used theoretical models of student departure, transfer student capital, and appreciative advising to inform my CATS advising intervention in recognition of previous findings that student satisfaction and student capital play key roles in the success of transfer students, also in order for them to persist to four-year institutions and attain their educational and career goals. Students who received the CATS advising intervention in this study were significantly more likely to a) be satisfied with their transfer advising experience, b) perceive increased transfer knowledge (capital), and c) retain through transfer and UArizona enrollment at higher rates in comparison to their peers who had access to a more traditional set of advisors situated in a more traditional advising model. Finally, related to CATS students' success as transfer students in this context, these students were also able to articulate their appreciation and recognition of the impact of their relationships with their CATS advisors. These are all findings that were not only important for students in this study' setting, but also likely have implications for other students, advisors, and leaders of other advising models who may be thinking about increasing transfer behavior and success in similar ways.

Notwithstanding, I cannot conclude this study without noting the concurrent timing of the COVID-19 pandemic. The pandemic introduced new and unexpected conditions and variables to the study, some of which may continue to reveal themselves outside of the timeline of my research. Early results of recent studies suggest the pandemic has led to increased barriers to access and a decline in higher education

enrollment for underrepresented student populations (Anderson, 2020; Barber et al., 2021; Walsh et al., 2021). Perhaps the most impactful pandemic-related factor occurring midway through this study was the resignation of a long-time, seasoned CATS advisor, which may have unfortunately affected some of the positive, long-term relationship building effects I designed the CATS intervention to produce.

Related, throughout this study, in order to reveal and clarify any of my underlying assumptions and biases, I attempted to maintain awareness of my own positionality and personal views (Ivankova, 2019). For example, performing this research as a practitioner at a Hispanic Serving Institution, I acknowledged that I brought a lens of servingness, defined broadly as the intentional, and culturally sustaining, efforts of institutions to serve Hispanic students in the context of student outcomes, experiences, organizational structures, external forces, and white supremacy (Garcia et al., 2019). But watching the COVID-19 pandemic further exacerbate access and barrier disparities for students, particularly students of color, in rural communities with lesser access to high-speed broadband access, financial means, medical and social services, and other community resources (Anderson, 2020; Barber et al., 2021; Walsh et al., 2021) made for some of the toughest years of my career, thus far.

While via this study I could not address the myriad of historical and current social inequities and oppression, however, I could examine whether additional student supports offered in partnership between UArizona and regional community colleges could help offset some of the larger systemic barriers to students' transfer experiences. Trickling down, the improvement of local educational experiences and opportunities hopefully leads to greater personal and professional development of local students and ultimately

the improvement of local community outlooks. With that being said, I believe that it is my duty as an educator to still initiate, implement, and evaluate programs such as the CATS program, also with a mindset towards increasing equitable conditions for educational access for all students, and particularly considering the recent enrollment, cultural, and economic impacts of the COVID-19 pandemic and acts of racial injustice. Despite the noted limitations and unique context of the study, the positive outcomes and results I found after the CATS advising intervention certainly make this collaborative transfer advising model worthy of further pursuit to help address said historical and current disparities in the student experience and outcomes. Whatever the future may hold for my career in higher education, I know these findings and this research experience will influence me, and I will continue to advocate for equity-minded approaches for transfer student success hereafter as such.

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APPENDIX A

ARIZONA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD APPROVAL

Figure A1

Arizona State University Institutional Review Board Approval

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Audrey Beardsley
Division of Educational Leadership and Innovation - West Campus
-
audrey.beardsley@asu.edu

Dear Audrey Beardsley:

On 4/5/2021 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Colaborativo Advising for Transfer Success: An Appreciative Assessment
Investigator:	Audrey Beardsley
IRB ID:	STUDY00013696
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Interview_Consent_Advisors__Colaborativo Advising for Transfer Success.pdf, Category: Consent Form; • Interview_Consent_Students__Colaborativo Advising for Transfer Success.pdf, Category: Consent Form; • Interview_Questions_Advisors__Colaborativo Advising for Transfer Success.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Interview_Questions_Student__Colaborativo Advising for Transfer Success.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • IRB_SBS_Protocol AB_SW.docx, Category: IRB Protocol; • Recruitment_Materials_Email_Colaborativo Advising for Transfer Success.pdf, Category: Recruitment Materials;

	• Site Approval__Colaborativo Advising for Transfer Success.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Survey Questions_Colaborativo Advising for Transfer Success.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Survey_Consent_Colaborativo Advising for Transfer Success.pdf, Category: Consent Form;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (1) Educational settings, (2) Tests, surveys, interviews, or observation on 4/5/2021.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

Sincerely,

IRB Administrator

cc: Sarah Wieland
       Sarah Wieland

APPENDIX B

UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD SITE APPROVAL

Figure B1

University of Arizona Institutional Review Board Site Approval

THE UNIVERSITY OF ARIZONA
Research
Innovation & Impact

Human Subjects
Protection Program

1618 E. Helen St.
P.O.Box 245137
Tucson, AZ 85724-5137
Tel: (520) 626-6721
http://rgw.arizona.edu/compliance/home

Date: 04/13/2021
Principal Investigator: Sarah Wieland
Protocol Title: Colaborativo Advising for Transfer Success: An Appreciative Assessment
Level of Review: Administrative Review

Based on the information provided by the Principal Investigator (and recommendation of the Department), the request to use The University of Arizona as a site for this human research has been:

Approved

Please contact the IRB Office with any questions at VPR-IRB@email.arizona.edu.

Thanks,

Christine Melton-Lopez, MS, CIP
IRB Director

APPENDIX C

DEMOGRAPHIC CHI SQUARE ANALYSES

Table C1

Fall 2020 Cohort Pell Eligibility Disaggregated by Group

Group	Not Pell Eligible	Pell Eligible	Total
Douglas	17.4%	82.6%	100.0%
	(N=4)	(N=19)	(N=23)
Yuma	48.5%	51.5%	100.0%
	(N=16)	(N=17)	(N=33)
Total	35.7%	64.3%	100.0%
	(N=20)	(N=36)	(N=56)

$\chi^2(1, N = 56) = 5.71, p = 0.02$

Table C2

Fall 2020 Cohort Cumulative Transfer GPA Disaggregated by Group

Group	2.00-2.49	2.50-2.99	3.00-3.49	3.50-4.00	Total
Douglas	0.0%	26.1%	26.1%	47.8%	100.0%
	(N=0)	(N=6)	(N=6)	(N=11)	(N=23)
Yuma	9.1%	33.3%	39.4%	18.2%	100.0%
	(N=3)	(N=11)	(N=13)	(N=6)	(N=33)
Total	5.4%	30.4%	33.9%	30.4%	100.0%
	(N=3)	(N=17)	(N=19)	(N=17)	(N=56)

$\chi^2(3, N = 56) = 6.96, p = 0.07$

Table C3

Fall 2020 Cohort Transfer GPA Descriptive Statistics by Group

Group	Mean	SD	Range
Douglas	3.37 (N=23)	0.41 (N=23)	2.70-4.00 (N=23)
Yuma	3.08 (N=33)	0.40 (N=33)	2.38-4.00 (N=33)
Total	3.20 (N=56)	0.43 (N=56)	2.38-4.00 (N=56)

Table C4

Fall 2020 Cohort Gender Disaggregated by Group

Group	Female	Male	Total
Douglas	69.6% (N=16)	30.4% (N=7)	100.0% (N=23)
Yuma	51.5% (N=17)	48.5% (N=16)	100.0% (N=33)
Total	58.9% (N=33)	41.1% (N=23)	100.0% (N=56)

$\chi^2(1, N = 56) = 1.83, p = 0.18$

Table C5

Fall 2020 Cohort Ethnicity Disaggregated by Group

Group	White	Hispanic	Asian	Not Reported	Total
Douglas	0.0%	95.7%	0.0%	4.3%	100.0%
	(N=0)	(N=22)	(N=0)	(N=1)	(N=23)
Yuma	18.2%	75.8%	3.0%	1.8%	100.0%
	(N=6)	(N=25)	(N=1)	(N=1)	(N=33)
Total	10.7%	83.9%	1.8%	3.6%	100.0%
	(N=6)	(N=47)	(N=1)	(N=2)	(N=56)

$\chi^2(3, N = 56) = 5.58, p = 0.13$

Table C6

Survey Respondents Pell Eligibility Disaggregated by Group

Group	Not Pell Eligible	Pell Eligible	Total
Douglas	22.2%	77.8%	100.0%
	(N=2)	(N=7)	(N=9)
Yuma	16.7%	83.3%	100.0%
	(N=1)	(N=5)	(N=6)
Total	20.0%	80.0%	100.0%
	(N=3)	(N=12)	(N=15)

$\chi^2(1, N = 15) = 0.07, p = 0.79$

Table C7

Survey Respondents Cumulative Transfer GPA Disaggregated by Group

Group	2.00-2.49	2.50-2.99	3.00-3.49	3.50-4.00	Total
Douglas	0.0%	22.2%	33.3%	44.4%	100.0%
	(N=0)	(N=2)	(N=3)	(N=4)	(N=9)
Yuma	0.0%	16.7%	50.0%	33.3%	100.0%
	(N=0)	(N=1)	(N=3)	(N=2)	(N=6)
Total	0.0%	20.0%	40.0%	40.0%	100.0%
	(N=0)	(N=3)	(N=6)	(N=6)	(N=15)

$$\chi^2(2, N = 15) = 0.42, p = 0.81$$

Table C8

Survey Respondents Gender Disaggregated by Group

Group	Female	Male	Total
Douglas	55.6%	44.4%	100.0%
	(N=5)	(N=4)	(N=9)
Yuma	66.7%	33.3%	100.0%
	(N=4)	(N=2)	(N=6)
Total	60.0%	40.0%	100.0%
	(N=9)	(N=6)	(N=15)

$$\chi^2(1, N = 15) = 0.19, p = 0.67$$

Table C9

Survey Respondents Ethnicity Disaggregated by Group

Group	White	Hispanic	Asian	Not Reported	Total
Douglas	0.0%	100.0%	0.0%	0.0%	100.0%
	(N=0)	(N=9)	(N=0)	(N=0)	(N=9)
Yuma	0.0%	100.0%	0.0%	0.0%	100.0%
	(N=0)	(N=6)	(N=0)	(N=0)	(N=6)
Total	0.0%	100.0%	0.0%	0.0%	100.0%
	(N=0)	(N=15)	(N=0)	(N=0)	(N=15)

$\chi^2(1, N = 15) = $ n/a Constant

Table C10

Douglas Pell Eligibility Disaggregated by Population v. Sample

Douglas	Not Pell Eligible	Pell Eligible	Total
Population	17.4%	82.6%	100.0%
	(N=4)	(N=19)	(N=23)
Sample	22.2%	77.8%	100.0%
	(N=2)	(N=7)	(N=9)
Total	18.8%	80.0%	100.0%
	(N=6)	(N=26)	(N=32)

$\chi^2(1, N = 32) = 0.10, p = 0.75$

Table C11

Douglas Cumulative Transfer GPA Disaggregated by Population v. Sample

Douglas	2.00-2.49	2.50-2.99	3.00-3.49	3.50-4.00	Total
Population	0.0%	26.1%	26.1%	47.8%	100.0%
	(N=0)	(N=6)	(N=6)	(N=11)	(N=23)
Sample	0.0%	22.2%	33.3%	44.4%	100.0%
	(N=0)	(N=2)	(N=3)	(N=4)	(N=9)
Total	0.0%	25.0%	28.1%	46.9%	100.0%
	(N=0)	(N=8)	(N=9)	(N=15)	(N=32)

$\chi^2(2, N = 32) = 0.18, p = 0.92$

Table C12

Douglas Gender Disaggregated by Population v. Sample

Douglas	Female	Male	Total
Population	69.6%	30.4%	100.0%
	(N=16)	(N=7)	(N=23)
Sample	55.6%	44.4%	100.0%
	(N=5)	(N=4)	(N=9)
Total	65.6%	34.4%	100.0%
	(N=21)	(N=11)	(N=32)

$\chi^2(1, N = 32) = 0.56, p = 0.45$

Table C13

Douglas Ethnicity Disaggregated by Population v. Sample

Douglas	White	Hispanic	Asian	Not Reported	Total
Population	0.0%	95.7%	0.0%	4.3%	100.0%
	(N=0)	(N=22)	(N=0)	(N=1)	(N=23)
Sample	0.0%	100.0%	0.0%	0.0%	100.0%
	(N=0)	(N=9)	(N=0)	(N=0)	(N=9)
Total	0.0%	96.9%	0.0%	3.1%	100.0%
	(N=0)	(N=31)	(N=0)	(N=1)	(N=32)

$\chi^2(1, N = 32) = 0.40, p = 0.53$

Table C14

Yuma Pell Eligibility Disaggregated by Population v. Sample

Yuma	Not Pell Eligible	Pell Eligible	Total
Population	48.5%	51.5%	100.0%
	(N=16)	(N=17)	(N=33)
Sample	16.7%	83.3%	100.0%
	(N=1)	(N=5)	(N=6)
Total	43.6%	56.4%	100.0%
	(N=17)	(N=22)	(N=39)

$\chi^2(1, N = 39) = 2.09, p = 0.15$

Table C15

Yuma Cumulative Transfer GPA Disaggregated by Population v. Sample

Yuma	2.00-2.49	2.50-2.99	3.00-3.49	3.50-4.00	Total
Population	9.1%	33.3%	39.4%	18.2%	100.0%
	(N=3)	(N=11)	(N=13)	(N=6)	(N=33)
Sample	0.0%	16.7%	50.0%	33.3%	100.0%
	(N=0)	(N=1)	(N=3)	(N=2)	(N=6)
Total	7.7%	30.8%	41.0%	20.5%	100.0%
	(N=3)	(N=12)	(N=16)	(N=8)	(N=39)

$\chi^2(3, N = 39) = 1.71, p = 0.63$

Table C16

Yuma Gender Disaggregated by Population v. Sample

Yuma	Female	Male	Total
Population	51.5%	48.5%	100.0%
	(N=17)	(N=16)	(N=33)
Sample	66.7%	33.3%	100.0%
	(N=4)	(N=2)	(N=6)
Total	53.8%	46.2%	100.0%
	(N=21)	(N=18)	(N=39)

$\chi^2(1, N = 39) = 0.47, p = 0.49$

Table C17

Yuma Ethnicity Disaggregated by Population v. Sample

Yuma	White	Hispanic	Asian	Not Reported	Total
Population	18.2%	75.8%	3.0%	3.0%	100.0%
	(N=6)	(N=25)	(N=1)	(N=1)	(N=33)
Sample	0.0%	100.0%	0.0%	0.0%	100.0%
	(N=0)	(N=6)	(N=0)	(N=0)	(N=6)
Total	15.4%	75.5%	2.6%	2.6%	100.0%
	(N=6)	(N=31)	(N=1)	(N=1)	(N=39)

$\chi^2(3, N = 39) = 1.83, p = 0.61$

APPENDIX D

STUDY TIMELINE

Table D1

Timelines and Procedures of the Study

Timeframe	Actions	Procedures
March	Obtained IRB approval	Fill out and submit IRB forms for ASU and UArizona
March	Piloted student survey	Distribute pilot survey to student workers and analyze results for reliability with Cronbach's alpha
April	Informed stakeholders	Contact and inform Cochise Cats Coalition and advising leadership at both institutions
April-August	Distributed student survey	Obtain informed consent from participants, send student survey to student email accounts, and record survey data.
July	Interview preparation	Select student interview participants and schedule interviews with advisors and students over summer
September-October	Administered advisor and student interviews	Conduct and transcribe interviews
September	Collected archival data	After 21st day census for Fall 2021, obtain institutional data from UArizona data warehouse
October-December	Analyzed data	Conduct quantitative analysis Conduct qualitative analysis
December	Triangulated integrated data	Combine, integrate, connect, or embed qualitative and quantitative data to explain findings

APPENDIX E

TRANSFER SURVEY

INSTRUCTIONS

My name is Sarah Wieland and I serve as the University of Arizona's Assistant Vice Provost for Distance Education. I provide direction to the university's land-grant mission of delivering regionally relevant educational programs and building inclusive and supportive learning environments for diverse student populations across our statewide learning centers. Concurrently, I am a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at ASU. I am working under the supervision of Dr. Audrey Beardsley, a faculty member in MLFTC. My research focuses on increasing transfer student success through innovative advising practices and partnerships. Via this doctoral research study, I am seeking to examine the extent to which students feel satisfied with, supported during, and informed by, their transfer advising experience.

Students who complete the survey will receive a $5 Amazon gift card. Your participation in this study is voluntary. If you choose not to participate or withdraw from the study at any time, there will be no penalty whatsoever. Survey answers may inform future improvements to our advising services, thus, there is potential to enhance the experiences of students. There are no foreseeable risks or discomforts to your participation. Your answers will be confidential. Results from this study may be used in reports, presentations, or publications but your name will not be used.

This survey instrument has two sections. Each section will appear on a new page and the survey bar at the top will display your progress through the survey. Each section contains a mix of Likert-scale questions and open-ended questions. Participating in this survey should take you about 20 minutes to complete.

SECTION I: PREPARATION FOR TRANSFER[1,2]
In this section are a series of items about your experience preparing to transfer to the University of Arizona.

Please use this scale to rate your level of agreement or disagreement with the following statements.

Strongly Agree (6)	Agree (5)	Somewhat Agree (4)	Somewhat Disagree (3)	Disagree (2)	Strongly Disagree (1)

1. The community college advising I received prepared me well for success at the University of Arizona
2. Accurate information about transferring to a four-year institution or university was readily available to me at my community college
3. I started planning my transfer to a four-year college or university during my first year of attendance at my community college
4. My academic advisor at my community college was informative about the requirements for transfer to the University of Arizona

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5. I am satisfied with the academic advising experience I had attending my community college
6. I regularly consulted my advisor at the community college
7. I completed all of my lower division (100-200 level) requirements at the community college before transferring to the University of Arizona
8. Attending my community college first was beneficial for my academic success
9. I am satisfied with the experience I had transferring to the University of Arizona
10. I felt supported in my transfer to the University of Arizona
11. I was prepared to transfer to the University of Arizona

Open-Ended
12. What advice would you give to another student planning to transfer?
13. If you had to do it over again, what, if anything, would you do different?

SECTION II: TRANSFER ADVISING[3,4]
In this section are a series of items about your experience with academic advising as a transfer student. Think about the academic advising you received with regard to your transfer to the University of Arizona and upon your initial transfer to the University. If you were advised by more than one academic advisor, answer these questions while reflecting on the transfer advising experience with the advisor with whom you had the most interactions during your transfer to the University.

Please use this scale to rate your level of agreement or disagreement with the following statements.

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
(6)	(5)	(4)	(3)	(2)	(1)

14. My academic advisor was approachable
15. My advisor cared about me and my goals
16. I received the help I needed to apply my academic major to my career goals
17. My academic advisor helped me identify resources to finance my education
18. I regularly consulted my advisor
19. I trusted my academic advisor
20. My advisor helped me make decisions about my long-term academic and career plans
21. If I had a problem (financial aid, study skills, emotional/physical health, etc.), my advisor would help me or know where to send me to get help
22. My advisor had good knowledge of university and college policies and procedures or knew where to find them
23. It was worth my time to meet regularly with my advisor
24. I would recommend my advisor to a friend
25. If my advisor did not know the answer to a question, they would connect me to someone who did
26. My advisor listened to what I had to say

27. My advisor was knowledgeable about program or graduation requirements
28. My advisor and I worked together as a team
29. The transfer advising I received helped me be a successful University of Arizona student
30. Academic advising appointments were positive experiences
31. My transfer advising experience met my expectations
32. Overall, I am satisfied with the academic advising support I had as a University of Arizona transfer student

Open-Ended
33. What kinds of supports do you feel helped you be successful in your transfer to the university?
34. What advising improvements would have helped you feel more supported in your transfer experience?
35. In what ways, if any, did the COVID-19 pandemic affect your transfer experience?

[1]Adapted from "A Survey of Transfer Students at Four-Year Institutions Serving a California Community College" by C. Harbin, 1997, *Community College Review*, *25*(2), p. 21-40 (https://doi.org/10.1177/009155219702500203)
[2]Adapted From "Student Satisfaction Inventory: 4-Year College and University Version Form B" by L. Schreiner and S. Juillerat, 2006, (https://www.ruffalonl.com/complete-enrollment-management/student-success/student-satisfaction-assessment/student-satisfaction-inventory/samples/).
[3]Adapted from "A Survey of Undergraduate Reactions to Academic Advising" by M. Lynch, 2004, *NACADA Journal, 24*(1-2), p. 62-74 (https://doi.org/10.12930/0271-9517-24.1-2.62)
[4] Adapted from "Capturing the Student Perspective: A New Instrument for Measuring Advising Satisfaction", by M. Teasley and E. Buchanan, 2013, *NACADA Journal, 33*(2), p. 4-15.

APPENDIX F

SURVEY ALIGNMENT KEY

Satisfaction (RQ1)
Positive institutional experiences and interactions increase satisfaction (Model of Student Departure – Tinto)

5. I am satisfied with the academic advising experience I had attending my community college
8. Attending my community college first was beneficial for my academic success
9. I am satisfied with the experience I had transferring to the University of Arizona
23. It was worth my time to meet regularly with my advisor
24. I would recommend my advisor to a friend
30. Academic advising appointments were positive experiences
31. My transfer advising experience met my expectations
32. Overall, I am satisfied with the academic advising support I had as a University of Arizona transfer student

Perception of Support (RQ1)
Institutional Agents enforce positive perceptions of support (Transfer Student Capital – Laanan)

6. I regularly consulted my advisor at the community college
10. I felt supported in my transfer to the University of Arizona
14. My academic advisor was approachable
15. My advisor cared about me and my goals
16. I received the help I need to apply my academic major to my career goals
18. I regularly consulted my advisor
19. I trusted my academic advisor
20. My advisor helped me make decisions about my long-term academic and career plans
26. My advisor listened to what I had to say
28. My advisor and I worked together as a team

Informational Capital (RQ2)
Institutional Agents impart informational capital (Transfer Student Capital – Laanan)

1. My community college advising prepared me well for success at the University of Arizona
2. Accurate information about transferring to a four-year institution or university was readily available to me at my community college
3. I started planning my transfer to a four-year college or university during my first year of attendance at my community college
4. My academic advisor at my community college was informative about the requirements for transfer to the University of Arizona
7. I completed all of my lower division (100-200 level) requirements at the community college before transferring to the University of Arizona
11. I was prepared to transfer to the University of Arizona

17. My academic advisor helped me identify resources to finance my education

21. If I had a problem (financial aid, study skills, emotional/physical health, etc.), my advisor(s) would be able to help me or know where to send me to get help

22. My advisor(s) had good knowledge of university and college policies and procedures or knew where to find them

25. If my advisor(s) didn't not know the answer to a question, they would connect me to someone who did

27. My advisor was knowledgeable about program or graduation requirements

29. The transfer advising I received helped me be a successful University of Arizona student

Open Ended Questions

12. What advice would you give to another student planning to transfer?

13. If you had to do it over again, what, if anything, would you do different?

33. What kinds of supports do you feel helped you be successful in your transfer to the university?

34. What advising improvements would have helped you feel more supported in your transfer experience?

35. In what ways, if any, did the COVID-19 pandemic affect your transfer experience?

APPENDIX G

STUDENT INTERVIEW PROTOCOL

I. Introduction
1. Welcome to the student interview session (Disarm)
2. Overview of CATS model and Doctoral Research Project (Disarm):

> As a reminder, I serve as the UA's Assistant Vice Provost for Distance Education and provide direction to our statewide mission of building inclusive and supportive learning environments for our diverse distance student population. Concurrently, I am a student, just like you, a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at ASU. I am working under the direction of Dr. Audrey Beardsley, a faculty member in MLFTC. My research focuses on increasing transfer student success through innovative advising practices. As a student in MLFTC's Doctor of Education (EdD) program, I am undertaking my dissertation as a mixed methods action research project. The Cochise Cats advising program is the innovation of interest in my study. Your participation in this study is voluntary. If you choose not to participate or withdraw from the study at any time, there will be no penalty whatsoever.

> The benefit to participation is the opportunity for you to reflect on and think more about transfer student success. Interview responses will also inform future improvements to our advising services, thus, there is potential to enhance the experiences of students. There are no foreseeable risks or discomforts to your participation. Your responses will be confidential. Results from this study may be used in reports, presentations, or publications but your name will not be used.

3. Obtain verbal consent to partake in interview and audio recording

II. Questions
1. Tell me about your experience as a Cochise Cat, starting at Cochise College and transferring to the University of Arizona. (Discover)
2. How did the COVID-19 pandemic affect your transfer plans or experience? (Discover)
3. Was it your intent to transfer to a four-year university when you started at the community college? Yes No, If No, when did you make the decision? What factors prompted you to decide to transfer? (Discover & Dream)
4. What does it mean to you to be a successful transfer student? (Dream)
5. What supports do you think are important for a transfer student to have from their advisor? (Design)
6. What advice would you give students planning to transfer to the University of Arizona? (Deliver)
7. What adjustments should be made to transfer advising to improve the student experience? (Don't Settle)

III. Thanks and Conclusion (Deliver)

APPENDIX H

ADVISOR INTERVIEW PROTOCOL

I. Introduction

1. Welcome to the advisor interview session (Disarm)
2. Overview of CATS model and Doctoral Research Project: (Disarm)

   As a reminder, I serve as the UA's Assistant Vice Provost for Distance Education and provide direction to our statewide mission of building inclusive and supportive learning environments for our diverse distance student population. Concurrently, I am a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at ASU. I am working under the direction of Dr. Audrey Beardsley, a faculty member in MLFTC. My research focuses on increasing transfer student success through innovative advising practices. As a student in MLFTC's Doctor of Education (EdD) program, I am undertaking my dissertation as a mixed methods action research project. The Cochise Cats advising program is the innovation of interest in my study. Your participation in this study is voluntary. If you choose not to participate or withdraw from the study at any time, there will be no penalty whatsoever.

   The benefit to participation is the opportunity for you to reflect on and think more about transfer student success. Interview responses will also inform future iterations of the study. Thus, there is potential to enhance the experiences of students. There are no foreseeable risks or discomforts to your participation.

   Your responses will be confidential. Results from this study may be used in reports, presentations, or publications but your name will not be used.

3. Obtain verbal consent to partake in interview and audio recording
4. Provide summary of major findings from student survey, success data, and interviews. (Discover)

II. Questions

1. Drawing on your experience, do these findings sound correct? (Discover)
2. What effects do you think the COVID-19 pandemic may have had on these results? (Discover)
3. Drawing on your experience, is there anything that appears to be missing in these findings? (Dream)
4. Why do you think we found these results? (Design)
5. What adjustments should be made to the CATS advising model to improve the student experience? (Don't Settle)

III. Thanks and Conclusion (Deliver)

APPENDIX I

TRIANGULATION MATRIX

Table G1

Triangulation Matrix

Research Question	Finding	Source	Meta-Inference
RQ1: Do differences exist in transfer advising support satisfaction level between Douglas where students receive the CATS program, and Yuma where students do not receive the CATS program?	Transfer students are more satisfied in the CATS advising model than the traditional transfer advising model	Student Surveys Student Interviews Advisor Interviews	● Transfer students are more satisfied with their academic advising support and their transfer experience in the CATS model than the traditional transfer advising model ● The CATS advising model reassigns the challenges of navigating two institutions from the student to the advisor
RQ2: How do students perceive the CATS Advising intervention impacted their transfer student capital?	CATS Advising imparts transfer informational capital not found in a traditional transfer advising model	Student Surveys Student Interviews Advisor Interviews Cycle 0 and 1 Interviews	● Both students and advisors see the transfer capital value in the CATS advising model but institutional partners may not
RQ3A: Do differences exist between transfer student success in Douglas where students receive the CATS program, and in Yuma, where students do not receive the CATS program, where success is defined as retention through the transfer process, first semester, and second	CATS advising is described as making the transfer process easier and provides a consistent advising relationship throughout the student lifecycle. Significant	Archival Data Student Interviews Advisor Interviews	● Students transferring with the support of a CATS advisor have better retention to enrollment, after first-term, and after first-year ● Transfer is encouraged and more often successfully attempted with support of CATS

semester at the university and	differences exist in retention of students receiving the CATS advising intervention.		advisor ● Student decisions to transfer are impacted by CATS advising
RQ3B: Do differences exist between transfer student success in Douglas where students receive the CATS program, and in Yuma, where students do not receive the CATS program, where success is defined as academic performance (e.g., GPAs) at the time of transfer, first semester, and second semester at the university.	No differences in academic performance, or GPA, were found between students in the two advising conditions	Archival Data Advisor Interviews Student Interviews	● Students report success meaning persistence, degree completion, and a lucrative career they enjoy. ● Students did not identify GPA as an important consideration of success, nor did GPA emerge as an impact of the advising program

APPENDIX J

RETENTION CHI SQUARE ANALYSES

Table J1

Applicants Retained to Enroll in the First-Term (Time 1)

Location	Retained	Not Retained	Total
Douglas	85.2%	14.8%	100.0%
	(N=23)	(N=4)	(N=27)
Yuma	49.3%	50.7%	100.0%
	(N=33)	(N=34)	(N=67)
Total	59.6%	40.4%	100.0%
	(N=66)	(N=38)	(N=94)

$$\chi^2(1, N = 94) = 10.32, p = 0.01$$

Table J2

Retained after First-Term (Time 2)

Location	Retained	Not Retained	Total
Douglas	85.2%	14.8%	100.0%
	(N=23)	(N=4)	(N=27)
Yuma	41.8%	58.2%	100.0%
	(N=28)	(N=39)	(N=67)
Total	54.3%	45.7%	100.0%
	(N=51)	(N=43)	(N=94)

$$\chi^2(1, N = 94) = 14.60, p < 0.01$$

Table J3

Retained after First-Year (Time 3)

Location	Retained	Not Retained	Total
Douglas	81.5% (N=22)	18.5% (N=5)	100.0% (N=27)
Yuma	43.3% (N=29)	56.7% (N=38)	100.0% (N=67)
Total	54.3% (N=51)	45.7% (N=43)	100.0% (N=94)

$$\chi^2(1, N = 94) = 11.31, p < 0.01$$

APPENDIX K

LOGLINEAR ANALYSES

Table K1

Loglinear Analysis of Partial Association Between Location and Retention

Location	Retained	Not Retained
Douglas	84.0%	16.0%
	(N=68)	(N=13)
Yuma	44.8%	55.2%
	(N=90)	(N=111)
Total	56.0%	44.0%
	(N=158)	(N=124)

$\chi^2(1, N = 282) = 39.12, p < 0.01$

Table K2

Loglinear Analysis of Partial Association Between Time and Retention

Retention	Time 1	Time 2	Time 3
Retained	59.5%	54.3%	54.3%
	(N=56)	(N=51)	(N=51)
Not Retained	40.5%	45.7%	45.7%
	(N=38)	(N=43)	(N=43)
Total	100.0%	100.0%	100.0%
	(N=94)	(N=94)	(N=94)

$\chi^2(2, N = 282) = 0.83, p = 0.66$

Table K3

Loglinear Analysis of Time on Location and Retention (Three-Way)

Location	Time 1		Time 2		Time 3	
	Retained	Not	Retained	Not	Retained	Not
Douglas	85.2%	14.8%	85.2%	14.8%	81.5%	18.5%
	(N=23)	(N=4)	(N=23)	(N=4)	(N=22)	(N=5)
Yuma	49.3%	50.7%	41.8%	58.2%	43.3%	56.7%
	(N=33)	(N=34)	(N=28)	(N=39)	(N=29)	(N=38)
Total	59.6%	40.4%	54.3%	45.7%	54.3%	45.7%
	(N=56)	(N=38)	(N=51)	(N=43)	(N=51)	(N=43)

$\chi^2(2, N = 282) = 0.00, p = 1.00$

APPENDIX L

SIGNIFICANT DIFFERENCES ON INDIVIDUAL SURVEY ITEMS

Table L1

Significant Differences on Individual Survey Items

Construct /Item	Question	Douglas		Yuma				
		Mean	SD	Mean	SD	*t*	*p*	*d*
Satisfaction								
23	It was worth my time to meet regularly with my academic advisor	5.89	0.33	4.50	0.84	3.87	<0.01	0.58
24	I would recommend my advisor to a friend	5.89	0.33	4.83	0.75	3.74	<0.01	0.54
31	My transfer advising experience met my expectations	5.89	0.33	5.17	0.41	3.61	<0.01	0.36
32	Overall, I am satisfied with the academic advising support I had as a UArizona student	6.00	0.00	5.33	0.52	3.16	0.03	0.32
Perception of Support								
15	My advisor cared about my goals	6.00	0.00	5.33	0.52	3.16	0.03	0.32
16	I received the help I needed to apply my academic major to my career goals	6.00	0.00	5.33	0.52	3.16	0.03	0.32
18	I regularly consulted my advisor	5.56	0.53	4.50	0.84	3.02	0.01	0.66
19	I trusted my academic advisor	6.00	0.00	4.83	0.75	3.80	0.01	0.47
26	My advisor listened to what I had to say	6.00	0.00	5.17	0.75	2.71	0.04	0.47
28	My advisor and I worked together as a team	6.00	0.00	5.00	0.63	4.84	<0.01	0.39

	Informational Capital							
17	My academic advisor helped me identify resources to finance my education	5.78	0.44	5.00	0.63	2.82	0.01	0.52
21	If I have a problem, my advisor would help me or know where to send me to get help	5.89	0.33	5.00	0.63	3.58	<0.01	0.47
22	My advisor had good knowledge of university and college policies and procedures or knew where to find them	5.89	0.33	5.17	0.41	3.77	<0.01	0.36
25	If my advisor did not know the answer to a question, they would connect me to someone who did	6.00	0.00	5.17	0.75	2.71	0.04	0.47
27	My advisor was knowledgeable about program or graduation requirements	6.00	0.00	5.33	0.52	3.16	0.03	0.32
29	The transfer advising I received helped me be a successful UArizona student	6.00	0.00	5.17	0.75	2.71	0.04	0.47

APPENDIX M

CODING OF OPEN-ENDED SURVEY RESPONSES

Table M1

Coding Of Open-Ended Survey Responses

Category	Dramaturgical Code	In Vivo Code
Informational	Objectives	Stay Financially Afloat
		Knew What I Needed
		Stay on Track
	Subtexts	Know Both Institutions
	Tactics	Ask Questions
		Be Prepared
		Start Early
Relational	Conflicts	Hard to Communicate (COVID)
		Not Able to Meet Face-to-Face (COVID)
		Huge Adjustment
	Emotions	Lots of Support
		Good Relationship
		Talk to Someone
	Subtexts	Not Changing
	Tactics	Communicating
Satisfaction	Attitudes	Didn't Like That
		Wouldn't Do Anything Different
	Conflicts	No Major Complications
		I Had Trouble With
		Somewhat Challenging
	Emotions	More Confident
		Never Felt Lost

APPENDIX N

CODING OF STUDENT INTERVIEW RESPONSES

Table N1

Coding Of Student Interview Responses

Category	Dramaturgical Code	In Vivo Code
Advisor Relationship	Attitudes	Everything Was Great
	Emotions	Comfort
		A Lot of Support
		Mentor
		Guidance
		Reach Out to the Right People
		Relationship
	Subtexts	Same Advisor
		Assigned Advisor
	Tactics	Communicating
		Make Connections
		Regular Meetings
Challenges-Barriers	Attitudes	Compared to Other Advisors
	Conflicts	Paying for Expenses
		COVID
		First Generation
		Something New
Goals	Attitudes	Smooth
	Objectives	Get My Degree
		Pick My Major
		Help Me Transfer
	Tactics	Stay on Track
Informational Capital	Tactics	Ask Questions
		Clear Roadmap
		Know When to Apply
		Options

APPENDIX O

CODING OF ADVISING INTERVIEW RESPONSES

Table O1

Coding Of Advisor Interview Responses

Category	Dramaturgical Code	In Vivo Code
Advisor Relationship	Emotions	Belonging
		Comfort
		Confidence
		Relationship
	Tactics	Accountability
		Student Support
	Subtexts	Consistency
Dealing with Transition	Attitudes	Advisor Support
	Conflicts	Advisor Challenges
		Transfer Shock
	Objectives	Retention
		Smooth Transition
Informational Capital	Conflicts	Barriers
		English as a Second Language
	Objectives	Graduation Goals
		GPA Success
	Tactics	Information
		Know Both Institutions
		Walk Them Through
	Subtexts	Readiness for Transfer