

## ABSTRACT

JONES, SUSAN LEE. A Pathway for Baccalaureate Attainment: Exploring the Transition Experiences of STEAM Spring Connect Students at North Carolina State University. (Under the direction of Dr. Wendy Warner).

Obtaining a baccalaureate degree is the goal of many students pursuing higher education, however, there are multiple avenues for degree obtainment. Close proximity to home, low tuition, and open admission policies make community colleges the institution of choice for many students to begin their higher education career. With transfer, students experience transfer shock, a decline in academic performance, and an adjustment to the academic and social environment at the university setting. While many studies have identified adjustment factors transfer students experience, little research has been conducted on pathway programs or freshman transfer students. This study provides useful insight to the experiences and challenges of unique freshman transfer students in a baccalaureate pathway program through Astin's (1984) student involvement theory. Both quantitative and qualitative methodologies were employed to identify the experiences of students. A quantitative instrument identified the community college and university experiences, as well as, the transition and adjustment process of students. Through two qualitative focus groups, detailed experiences were further explored. The following themes emerged: *building transition capital, place-making within program, social motivation, acclimation to environment, Spring Connect clarity, and communication throughout transition.* This study concludes that freshman transfer students are unique in nature and require additional support when matriculating. The baccalaureate pathway program served the students as a resource, connecting students with friends, providing additional integration opportunities, and offering a sense of belonging throughout the transition process.

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A Pathway for Baccalaureate Attainment: Exploring the Transition Experiences of STEAM  
Spring Connect Students at North Carolina State University

by  
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## **DEDICATION**

This project is dedicated to the second cohort of the STEAM program at NC State. We maneuvered college together and I am thankful for the memories and life-long friendships that began in the summer of 2014.

This project is also dedicated to my parents who have supported me in every avenue of life. Thank you for always encouraging me to achieve my dreams and do my best in everything.

## **BIOGRAPHY**

Susan Jones is a native of Clinton, NC. It was in her high school agriculture courses where she became interested in agriculture and agricultural education as a career. After studying at Sampson Community College for one year, Susan transferred to NC State through the STEAM program. Throughout her undergraduate experience, Susan was actively involved with Sigma Alpha Sorority, the club softball team, and Poultry Science Club. Susan also served as a CALS Ambassador and spent time studying abroad. She graduated from NC State with Bachelor of Science degrees in Agricultural Education and Poultry Science. Upon graduating, Susan returned to NC State to pursue her Master of Science degree in Agricultural and Extension Education. She plans to enter the field of agricultural and extension education upon completion of the program.

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## **CHAPTER I**

### **Introduction**

Prior to the 1862 Morrill Act, higher education was reserved for the elite and offered education in areas of Latin and fine arts. The establishment of land-grant institutions brought opportunities for education in agriculture and mechanics, with a purpose to provide education to rural populations. Land-grant institutions still serve as source of baccalaureate attainment, while students are charting a different course, beginning their higher education at the community college level (McDowell, 2001). With close proximity to home, low tuition, and diverse course offerings, community colleges are the college of choice for many graduating seniors to begin their higher education journey (Ma & Baum, 2016). Enrolling roughly 5.1 million undergraduates in the spring of 2017 (National Student Clearinghouse Research Center, 2017), public two-year colleges are continuing to serve as a pipeline for baccalaureate attainment (Townsend, 1993). Although 80% of entering community college students are transfer seeking, indicating they would like to earn a bachelor's degree, only 30% of students actually transfer to four-year institutions (National Student Clearinghouse Research Center, 2017). In regards to the transfer profile at North Carolina State University (NC State), transfer students comprise approximately 20% of graduates each year. In 2017, 51% of transfer students matriculated from North Carolina community colleges (Office of Undergraduate Admissions, 2017). The experiences of transfer students differ from their native counterparts in many aspects, requiring an adjustment from community college to university environment.

Transfer students often experience a significant decline in their grades when they transfer. Hills (1965) coined this phenomena as “transfer shock” (p. 202). The academic and social adjustments students face when moving from a community college to a university setting

especially influences performance (Laanan, Starobin, & Eggleston, 2011). Academic momentum—the speed with which undergraduates initially progress in college—significantly affects their likelihood of completing a degree. Academic momentum is hindered when students have weak academic or social integration. This is particularly true for transfer students (Thomas, Walsh, Torr, Alvarez, & Malagon, 2018). Positive influence of learning and study skills at a community college such as note taking, problem solving, and time management assist in encouraging the academic adjustment of a transfer student (Laanan et al., 2011).

Some community college transfers, after successfully completing the transfer process, find their new institution an awkward fit (D’Amico, Dika, Elling, Algozzine, & Ginn, 2013). Townsend and Wilson (2006) found that given the community colleges’ small size in comparison to the university, transfer students’ fit within the university was particularly problematic. Satisfaction at the university environment is an important factor for students to adjust to their new environment. In terms of social adjustment, community college transfer students are likely to be less engaged in the four-year institutions in which they transfer (Laanan et al., 2011). Laanan (2001) also found that students’ experiences with faculty at the university level were found as a significant factor positively influencing students’ academic and social transfer adjustment. Advising and orientation programs at the receiving institution are one strategy to assist transfer students in making a good start at their new institution (Townsend & Wilson, 2006). NC State has implemented a program to provide earlier transition, while also offering additional supports to enhance transfer from the community college to university setting.

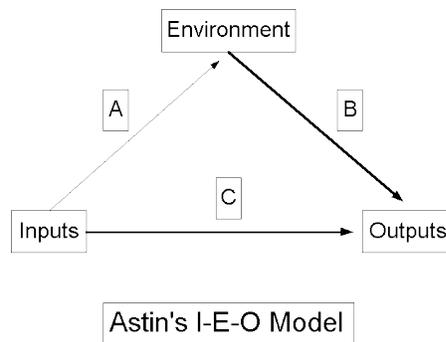
## Theoretical Framework

### The Study Involvement Theory

The student involvement theory serves as the framework guiding this study. Elements of the theory begin with defining *involvement* as a construct. Astin (1984) describes student involvement as “The quantity and quality of the physical and psychological energy that students invest in the college experience” (p. 528). Change or growth in the student during college is determined by comparing outcome characteristics with input characteristics (Astin, 1993). A student who devotes considerable energy to studying, spends time on campus, actively participates in student organizations, and interacts frequently with faculty members and other students is an example of a highly involved student (Astin, 1984).

The core concept of the theory encompasses three components. The first, *inputs*, refers to the characteristics of the student at the time of initial entry to the institution. Demographics, previous experiences, prior education and background are examples. The second is the student’s *environment*, accounting for the experiences throughout college. These include the various programs, policies, faculty, peers, and educational experiences to which the student is exposed. Lastly, *outputs* include the characteristics, knowledge, attitudes, beliefs, and values of a student after exposure to the environment (Astin, 1993). Astin includes five postulates to summarize his assumptions regarding involvement. First, involvement refers to the investment of physical and psychological energy in various objects. Second, involvement occurs along a continuum regardless of its object. Therefore, different students manifest different degrees of involvement in a given object, and the same student manifests different degrees of involvement in different objects at different times. Third, involvement has both quantitative and qualitative features. Fourth, the amount of student learning and personal development associated with any

educational program is directly proportional to the quality and quantity of student involvement in the program. Finally, the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (Astin, 1984). The theory emphasizes how participation in academically and socially purposeful activities facilitates student development. Therefore, students are more likely to persist to baccalaureate attainment when engaged in social and academic activities (Lester, Leonard, & Mathias, 2013). Figure 1 visualizes the Inputs-Environment-Outputs (I-E-O) Model.



*Figure 1.* Astin’s Inputs-Environment-Outputs (I-E-O) Model

Development of the student involvement theory originated from Astin’s experience with academicians treating students as a “black box” (Astin, 1984, p. 519). Within this black box, the input end describes the various policies and programs of a college or university. Outputs involved GPA or scores on a standardized test as achievement measures. Further examining the subject matter, resource, and individualized theories reveal how the student involvement theory places emphasis on student development outcomes (Astin, 1984).

### **Traditional Pedagogical Theories**

#### *The Subject Matter Theory*

Also described as the content theory, the subject-matter theory describes student learning and development depending on exposure to subject matter. Supporters of the theory believe

student learning is achieved through attending lectures, reading, and working in the library. Professors with the greatest subject matter knowledge are viewed highly in the subject-matter approach to learning. Therefore, knowledgeable professors involve their students passively, utilizing lectures for students to acquire knowledge. Highly motivated students who tend to be avid readers and good listeners benefit from this approach, while slower readers or students who lack interest in the subject are less served (Astin, 1984).

### *The Resource Theory*

Alternatively, the resource theory approach to student learning and development is achieved through available resources. Physical facilities, human resources, and fiscal resources encompass the multiple assistance opportunities available to students. Other aspects of the theory include identifying high-achieving students as resources. Therefore, the large number of these students on campuses enhance the learning environment. Universities use this approach when recruiting high quality students. Limitations of the theory include more focus on accumulation of resources and little attention on use or deployment of resources (Astin, 1984).

### *The Individualized (Eclectic) Theory*

This pedagogical theory assumes that one approach to teaching, subject-matter, and resources for all students is not adequate. The theory places emphasis on the individual student and the methods that best meet individualized needs. The term eclectic, stems from using a flexible approach of appropriating what is most useful from other pedagogical theories. The individualized approach differs from other pedagogical ideologies by emphasizing electives, tailored advising, and differentiated instructional techniques. While the theory is abstractly appealing, limitations include cost of implementation and difficulty in specifying beneficial techniques for specific learners.

## **Place in Pedagogy**

The theory of student involvement establishes a link between subject matter, resources, individualization and desired outcomes of students and professors. While the subject matter theory provides passive learning, the student involvement theory places students in a more active role. Therefore, to achieve intended curriculum outcomes, a student must put forth sufficient effort and invest energy. The student involvement theory encourages a greater emphasis on student motivation and time and energy the student devotes to learning, rather than what educators can do for students. The focus of concern shifts from course content, resources, and teaching techniques to student involvement. The theory of student involvement focuses on *how* students develop rather than *what* students develop (Astin, 1984). The student involvement theory provides advantage over traditional pedagogical theories as it directs attention away from content and techniques and toward the motivation and behavior of the student. Faculty can apply the student involvement theory when instructing students. Focusing less on the techniques being employed to students, the student involvement theory places more emphasis on what the student is actually doing in the class. Focusing solely on techniques while overlooking what is going on with the student can result in undesirable outcomes. Using the student involvement theory, educators can improve techniques, while also weighing a heavier emphasis on what the students are actually doing (Astin, 1984). College personnel, faculty, and administrators can use the student involvement theory to assess resources and activities involved in encouraging students to have a more active role in their college experience.

## **Relevant Research**

The student involvement theory was first introduced in a longitudinal study of college dropouts (Astin, 1977). The study aimed to identify college environment factors that

significantly affect persistence in college. Findings revealed retention factors suggested involvement, while those contributing to attrition, implied a lack of involvement. Other researchers have utilized Astin's theory in the college student persistence body of research and as a framework to understand transfer students (Laanan, 2007). Astin's model has also been compared to Tinto's theory of student departure (Milem & Berger, 1997).

### **Study Contributions**

The Input-Environment-Outcomes (I-E-O) model is utilized to understand how STEAM *Spring Connect* students can achieve a successful transition to NC State. It is important to specify the relevant outcomes, inputs, and environmental experiences that are to be assessed (Astin, 1993). For this study, inputs are a student's experiences prior to transitioning to NC State. These experiences include their geographic location, community college preparedness, and STEAM *Spring Connect* program fall semester resources. The environment describes the resources available to the students upon transitioning to NC State. These include university *Spring Connect* resources, department resources, and specifically, Student Transfer Enrollment Advising and Mentoring (STEAM) *Spring Connect* resources. Finally, outcomes include academic performance and social involvement of the student post-transition to NC State. Utilizing the I-E-O model to study student development, provides educators, students, and policy makers, a better basis for understanding how to achieve desired educational outcomes (Astin, 1993).

## Review of Literature

### Transfer Opportunity

#### *Community College Vehicle*

Community college transfer programs provide access for individuals to continue their education beyond their two-year institution (Laanan, 2001). Each year, millions of students across the United States move directly from secondary school to the more than 6,000 colleges and universities in the nation (College Board, 2020). This process whereby millions of young men and women annually choose, or are chosen by, colleges has been described as “the great sorting” (McPherson & Schapiro, 1990, p. 1). To sort the millions of applications, colleges identify factors such as courses taken, grades received, class rank, and standardized test scores (College Board, 2020). A mechanism is needed for selecting among the candidates (Zwick, 2007). Large, public state universities often use a mathematical formula compiling a student’s scores on standardized tests and their grade point average (College Board, 2020). Granting one candidate a seat at more popular institutions means keeping another one out (Zwick, 2007). The increase in number of students attending higher education institutions has increased (Reindl, 2007). Community colleges play an important role in the sorting that occurs in American higher education. Their open admission policy, combined with geographic proximity to home and low tuition, makes them an important pathway to postsecondary education for many students (Ma & Baum, 2016). An institutional study found evidence to support the idea that community colleges serve as a pipeline for obtaining a four-year degree (Townsend, 1993). Articulation agreements, specifying number of credit hours and subject matter that will transfer, at the community college and university level assist students in baccalaureate attainment. The first statewide articulation agreement originated in Florida in 1971. Transfer articulation in the 1980s focused on

community college to university transfer within the state (Kintzer & Wattenbarger, 1985).

Articulation agreements are shifting from once focusing on one transfer pattern, to accommodating the idea of “swirled” patterns, or students moving within various colleges in the state (de los Santos & Wright, 1989, p. 84). State articulations are also accommodating students who transfer with and without an associate’s degree (Townsend & Ignash, 2000). Not only students, but also state planners see the community college as a vehicle for facilitating baccalaureate attainment (Townsend, 2001).

### *Traditional versus Non-Traditional Transfer Students*

Each year, universities calculate enrollment numbers of incoming freshman, continuing students, and transfer students. However, difficulties arise in defining the concept of a transfer student (Cohen & Brawer, 1987). In some cases, students spend two years at a community college and the university concurrently, taking general education courses at the community college and major specific courses at the university. While other scenarios include students who study for one year at a community college ten years prior to continuing their education at a university, entering as a sophomore. Many beginning students briefly enroll at a community college just before starting at a four-year university, shortly after graduating from high school. These pools of students are often left out of the definition of a traditional transfer student. An ideal transfer student earns at least 60 transferable credit hours at the community college (Radwin & Horn, 2014), equivalent to two academic years of full-time enrollment considered for a bachelor’s degree. Some students transfer with less than 10 credits or with associate degrees. Transfer students are considered either traditional (those who attend college for the first time and are under the age of 24 years) or non-traditional (those who attend college over the age of 24). Therefore, the age range of transfer students can vary (Kinsella, 1998). The personal profile of

transfer students also varies (Mackinnon-Slaney, Barber, & Slaney, 1988). Non-traditional transfer students tend to be married and have dependents which they care for at home. Kinsella (1998) found the age of dependency ranges from infancy through old-age, with some caring for both their own children, as well as, aging parents and disabled spouses. Transfer students are often employed, with the work patterns differing between traditional and non-traditional students. Traditional transfer students tend to work part-time, while non-traditional students work full-time (Kinsella, 1998). Transfer students vary in their course load, some full-time and some part-time (Fredrickson, 1998). McGuire and Belcheir (2013) confirmed that multiple types of transfer students exist. Transfer GPA, prior attendance at multiple institutions, completion of coursework, number of credits transferred, and community college attendance vary among transfer students (McGuire & Belcheir, 2013). There are many different cases and scenarios involved when students transfer, making it difficult to fit all “transfer seeking” students into the mold of what a transfer student should look like (Radwin & Horn, 2014, p. 2). Transfer students are complex, leaving the transfer process multidimensional (Laanan et al., 2011).

## **Challenges**

### *Academic and Social Adjustment*

Students who utilize the community college as a pipeline for baccalaureate attainment face a different academic and social environment at the university as compared to the community college (Townsend, 1993). This alternative academic environment often leads to “transfer shock,” or the sudden dip in grade point average upon transition (Hills, 1965, p. 202). Students who intend to transfer to a four-year institution express little desire in becoming socially involved at the community college, which is different than their intentions at a four-year institution (Borglum & Kubala, 2000).

In recent years, it has been the goal of researchers to determine both the academic and social adjustment realities that transfer students face upon furthering their education at a four-year institution. One study found that faculty teaching practices was one area in which students faced adjustment. Townsend (1993) reported that community college transfer students adjusted from a cooperative classroom at the community college to a “go at it alone” approach by the faculty at the four-year university” (Townsend, 1993, p. 4). Findings also revealed an adjustment to classroom atmosphere and overall higher academic standards at the four-year institution in comparison to the community college (Townsend, 1993). Townsend also identified that alienation and isolation are common experiences at a four-year institution due to the large student body and course size. However, academic persistence of the transfer students in the study continued despite the size adjustment of the university. The goal of obtaining the baccalaureate degree kept students persisting despite the present adjustment factors (Townsend & Wilson, 2009). In an exploratory study, Townsend (1995) aimed to identify the view of the transfer process and academic environment from a community college to university setting. Findings showed students rarely utilized resources available to them at the community college to aid in their transition. Findings also revealed students perceived the academic standards at the university as “more difficult” than those of the community college suggesting most students experience limited or insufficient preparation at the community college for higher institution studies (Townsend, 1995, p. 182). To support academic adjustment and persistence, an institutional study found that community colleges should stress to transfer-seeking students the importance of achieving a high GPA (Townsend, McNerny, & Arnold, 1993). Academic integration is also attributed to the size of classes. One study revealed that students in larger

classes felt less supported and found it harder to learn in comparison to upper level smaller courses (Townsend & Wilson, 2009).

In regards to social adjustment, factors such as working in the evenings, knowing very few people among a large student body, and lack of connection limit the social integration of community college transfer students. Joining clubs and fraternities helped students “inter-socialize” (Townsend & Wilson, 2009, p. 416) among the large student body at the four-year institution. Not living on campus is another factor that limits the social adjustment of transfer students. Transfer students experience a different social environment at the four-year institution, compared to their community college. A smaller atmosphere allows students to get to know everyone in their class and makes for a more personal experience. Study groups were also reported as a strategy to improve social adjustment (Townsend & Wilson, 2009).

Identifying academic and social adjustment factors has also been the goal of Laanan in his numerous community college transfer student studies. In one study he found two negative predictors of academic adjustment are intellectual self-confidence and GPA at the community college. Therefore, students who experience a low GPA at the community college and lack confidence in their intellectual ability will have a difficult time adjusting to the academic standards at the four-year institution (Laanan, 2000). Negative perceptions about the four-year institution also influence the negative academic adjustment of transfer students (Laanan, 2007).

There are critical factors that should be employed at the two-year institution to enhance academic and social adjustment of transfer students. Meeting with academic advisors regularly correlated to a higher chance of difficult academic adjustment at the four-year institution. This finding is explained as students experiencing academic or social difficulties may utilize counseling or advising resources frequently to obtain assistance and overcome academic and

social challenges (Laanan, 2007). In contrast, counseling services at the community college serve as a resource for learning about many aspects of the university. Those who seek academic counseling devote time to enhancing their academic adjustment at the four-year institution. Students who increase their participation in academic workshops and study time increase their chance of positive academic adjustment (Laanan, 2000). Transfer students note the competitiveness among students at the four-year institution. Students who focus more on individual learning and less on the competition with their peers were found to likely experience a more positive academic adjustment after transferring (Laanan, 2007).

Laanan conceptualized transfer student capital to describe the preparation and resources transfer students bring with them to the four-year institution to enhance their academic and social adjustment (Laanan et al., 2011). Laanan found that a positive influence on learning and study skills at the community college enhance the adjustment transfer students make at a four-year institution (Laanan, 2001). The study also revealed that course learning was not a positive influence of social adjustment after transfer. Finally, an important factor influencing social adjustment was overall satisfaction of university environment (Laanan, 2001). In a related study, Laanan (2007) found students who participate in clubs or spend time socializing with friends experience a positive social adjustment (Laanan, 2007).

The academic and social adjustment that college students make is often compared to their native counterparts. Transfer students are less likely to be academically engaged compared to students who begin as freshman at four-year institutions. Ishitani and Mckitrick (2010) found that native students have established peer networks as they move throughout baccalaureate attainment, while transfer students may experience difficulty in establishing their own networks in the institution environment. One study reported that transfer students had to reduce their

commitments to increase study time (Berger & Malaney, 2003). Alternatively, integration of transfer students can be associated more with academics compared to social activities (D'Amico et al., 2013). To enhance academic and social adjustment, students should prepare for transfer by obtaining awareness, understanding their expectations, and using resources to work towards completing their baccalaureate goals (Berger & Malaney, 2003; Laanan, 2001).

### *Transfer Shock*

The decline in academic performance upon transfer from a community college to a university is defined as “transfer shock” (Hills, 1965, p. 202). Evaluating transfer shock has been the goal of multiple researchers. Findings from one study compared the transfer shock of transfer students and native students. Transfer students experienced transfer shock in the first semester, while native students experienced no significant decline in GPA. Transfer students did recover from transfer shock, while native students maintained or achieved a higher GPA (Glass Jr. & Harrington, 2002). Webb (1971) identified factors contributing to grade decrements upon transfer. Low grading standards at the community college in comparison to high grading standards at a university pose issues for students prior to transfer. Moving from one environment to another and making sense of the transition involves the ability to cope. As students learn to cope with their new environment, their academic performance should improve. The preparation for advanced work is also a factor contributing to transfer shock (Webb, 1971). McGuire and Belchier (2013) reported that transfer students who lacked previous four-year university experience, had the greatest transfer shock. Lack of advanced work in courses taken sequentially to university courses leaves a gap in preparation for more demanding academics. Self-centered approaches at the community college result in higher self-esteem of students, resulting in transfer shock when moving to the university setting (Townsend, 1995). Academic

potential of students is also a factor that plays a role in declining grades upon matriculation (Webb, 1971). One study revealed that transfer shock may vary across majors. One study found students who transferred into disciplines of education, fine arts, and humanities and social sciences experienced an increase in GPA upon transfer (Cejda, 1997). In contrast, a similar study found students in mathematics, sciences, and professional disciplines experienced a decline in GPA (Cejda, Kaylor, & Rewey, 1998). Community colleges, although serving as a pipeline for baccalaureate attainment, can contribute to increased transfer shock of students.

### *Faculty Perceptions*

Faculty serve as point of contact for transfer students. Faculty perceptions of non-traditional students is important in understanding how transfer students approach resources offered by faculty. One study reported faculty viewing transfer students as “academically underprepared” (Zerquera, Ziskin, & Torres, 2018, p. 36). Therefore, students lacked knowledge about content and maneuvering the university environment. An additional study reported that university staff should limit their assumptions about transfer students in regards to academic preparation services (Townsend & Wilson, 2009). Faculty also view transfer students as having multiple roles that affect their college experiences and lacking in academic self-confidence. In order to connect with non-traditional students, faculty expressed individual interactions and building relationships with transfer students is important for understanding students’ expectations and additional obligations (Zerquera et al., 2018).

Transfer students work with faculty at the university in which they are matriculating to gain insight on transfer courses and navigating the institution through advising. The student perceptions of university faculty is important to consider throughout the transition process. Townsend (1995) explored experiences of community college transfer students and detailed their

perceptions of faculty accessibility and willingness. Students reported overall, community college faculty were more approachable and helpful due to their teaching methods. Students expressed a positive attitude towards university faculty but discussed a “survival of the fittest” attitude towards students (Townsend, 1995, p. 189). Negative comments about university faculty perceptions from transfer students stem from the large class size. Professors in large lecture settings are viewed as not caring about students and their participation in the course in terms of attendance and disinterest in teaching (Townsend & Wilson, 2006). Laanan (2001) found academic adjustment was hindered due to transfer students recognizing four-year institution faculty and environment negatively stigmatizing transfer students (Laanan, 2001). Students who perceive faculty as approachable will be more likely to take advantage of resources such as office hours and assignment assistance (Laanan, 2000).

### **Avenues of Support**

Identifying how to foster transfer student success is one area of research continuously explored. One study examining students transferring to new, specific transfer programs, found three factors that inhibit successful transition: academic advising, financial aid, and social/cultural issues. The academic advising at the host community college of interest was weak and lacked knowledge of how to advise students transferring to the specific program at the university. Improper academic advising impedes success as it wastes financial resources and prolongs the matriculation process. Financial aid also affects success of transfer students as costs associated with community college compared to universities are lower. Social issues, such as lack of family support, also hinders the success of transfer students (Gard, Paton, & Gosselin, 2012).

In terms of academic success, Townsend (1993) found that academic persistence can be facilitated by transferring multiple credit hours, allowing for enrollment in major coursework upon transfer. One study found competency-based curriculum agreements designed by faculty at the receiving university facilitates first semester academic success (Cejda, 1998). Working with major professors on research projects also contributed to academic success. Those who participated in a research project felt especially integrated to the university academically (Townsend & Wilson, 2009). To enhance success, Flaga (2006) identified five dimensions of transition: Integrating, Learning Resources, Connecting, Familiarity, and Negotiating. She describes the dimensions as a “comprehensive picture” (Flaga, 2006, p. 5) of the issues facing students during their transition. These dimensions provide insight to both community colleges and universities to implement strategies for transition.

### **Background: STEAM Spring Connect at North Carolina State University**

#### **Spring Connect**

*Spring Connect* is a pathway initiative at NC State for incoming first-year students who are admitted for the spring semester and begin at NC State in January during their freshman year. The program is only available for traditional freshman students, those who begin higher education after their senior year of high school. The *Spring Connect* program is by invitation only and does not have an application process. Students are selected through the admissions office based off of their application criteria. Students apply to NC State in the fall of their senior year of high school and are notified of their admission in the spring semester, around March.

Students who are offered the *Spring Connect* program do not attend NC State in the fall of their freshman year. However, they begin their studies at NC State in the spring semester. Students who participate in the *Spring Connect* program have a choice of how to spend their fall

semester before beginning at NC State in the spring because admission is granted up-front. Therefore, students do not have to meet any GPA or credit requirements before being admitted to the university. One choice may be to enroll in classes at a community college or participate in *Prague Connect* where students spend time studying abroad in Prague for the semester. Students who choose this option work with an advisor in their college to identify courses that will transfer towards their degree. The second option for *Spring Connect* students is to work or intern. Students can obtain an internship during the fall semester to gain experience towards their degree. The third choice for *Spring Connect* students is to participate in personal enrichment. This option allows students to spend the semester volunteering, traveling, working on a project, or anything else they choose. *Spring Connect* students differ from traditional transfer students as they only spend one semester at a different institution prior to transitioning to NC State.

### **STEAM Spring Connect**

Nine colleges at NC State participate in *Spring Connect* and each college supports their *Spring Connect* students differently. In the College of Agriculture and Life Sciences (CALs) a *Spring Connect* coordinator is appointed to assist students in making a smooth transition to NC State. In CALs, *Spring Connect* students have additional opportunities to prepare for and experience NC State prior to enrolling in the spring semester. This integral component of the program is entitled Student Transition Enrollment Advising and Mentoring (STEAM). STEAM *Spring Connect* originates from a pathway program that was implemented in CALs, prior to the development of *Spring Connect* at NC State. The STEAM program was a donor funded initiative that provided access for rural students and invited students to participate in the spring of 2013 within CALs. The STEAM program was a college specific initiative, and did not have a university wide presence. The program invited selected students to spend one year at a

community college and offered admission after the successful completion of 30 transferable credit hours and an earned GPA of 3.0. In 2017, NC State developed *Spring Connect* as a university wide initiative. The STEAM program then combined with the *Spring Connect* initiative, leaving the STEAM *Spring Connect* program within CALS. In whole, the STEAM *Spring Connect* program is unique to CALS and offers students advising activities, mentoring, and experiences to better prepare them to begin their journey at NC State. In an effort to fulfill the land-grant mission, the STEAM *Spring Connect* program targets providing access to rural students and filling high need majors. Although *Spring Connect* is in its third year, the STEAM *Spring Connect* program organizes their cohorts numbering from the program's inception in 2013. Therefore, the spring of 2019 marked the seventh cohort of the program. The program is structured around the following components: Recruitment, Summer Start, Advising, Fall Events, ALS 103, Transition and Enrollment, and Tracking of all cohorts. With each new cohort, more initiatives are employed to increase the success of students.

The seventh cohort of the STEAM *Spring Connect* program accepted 174 students and enrolled 94. Students ranged in major with Animal Science, Agricultural Business Management, and Life Sciences First Year enrolling the most students. Students also ranged in demographic location, with 50% of students being from rural and suburban counties. The spring 2020 semester marks the fourth year of the *Spring Connect* program at NC State. Despite the many resources provided to students to ensure a smooth transition to NC State, the level at which STEAM *Spring Connect* students perform is academically lower compared to the performance of a traditional CALS student (Hubbard, 2019). Further research is needed to identify academic and social adjustment challenges related to freshman transfer students and specific transfer programs like STEAM *Spring Connect*.

## **Purpose of the Study**

The purpose of this study was to further explore the experiences of *STEAM Spring Connect* students. Additionally, the researcher sought to explore how the *STEAM Spring Connect* program aides in fulfilling the land-grant mission by providing access, as well as, benefits students within CALS.

## **Objectives**

The objectives in this study were to:

1. Explore the experiences of *STEAM Spring Connect* students throughout transition;
2. Explore the academic and social challenges associated with transitioning through the *STEAM Spring Connect* program; and
3. Explain how student involvement within the program plays a role in successful student transition from community college to university.

## **Definition of Terms**

**Academic Persistence/Success-** achieving the baccalaureate degree (Townsend, 2008).

**County Distress Rankings (Tiers)-** the North Carolina Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns each a Tier designation of 1, 2, or 3 (North Carolina Department of Commerce, 2020).

**Grade Point Average (GPA)-** the overall averaged subject-matter grade point (Strickland, 1998).

**Matriculation-** the process in which a student enrolls at a university (Ishitani & McKitrick, 2010).

**Native Students-** students who begin at a university the fall semester after graduating from high school (Krieg, 2011).

**Personal Enrichment-** an option for students to spend their fall semester gaining experiences traveling, working on a project, volunteering, discovering new hobbies or other skill building activities (Hubbard, 2019).

**Social Integration-** participation in university-sponsored social or co-curricular activities and events (Tinto, 1993).

**Student Transition Enrollment Advising and Mentoring (STEAM) Spring Connect-** a program for incoming first-year students who are admitted to join the NC State freshman class in the spring semester of their freshman year. Students transition to NC State after choosing to spend their fall semester taking courses at a community college, working/interning, or pursuing personal enrichment (Hubbard, 2019).

**STEAM Spring Connect Transfer Student-** a student who spends one semester working, pursuing personal enrichment, or taking courses at another institution before transitioning to NC State in the spring of their freshman year (Hubbard, 2019).

**Tiers 1, 2, & 3-** county tiers are calculated using four factors: average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3 (North Carolina Department of Commerce, 2020).

**Transfer Shock-** a severe decline in academic performance upon transfer (Hills, 1965).

**Transfer Student-** those students starting their collegiate careers somewhere else (Krieg, 2011).

**Transfer Seeking Students-** the proportion of students who intend to move to a four-year university to obtain a baccalaureate degree (Radwin & Horn, 2014).

**Transfer Student Capital (TSC)-** indicates how community college students accumulate knowledge in order to navigate the transfer process, such as understanding credit transfer

agreements between colleges, grade requirements for admission into a desired major, and course prerequisites (Lannan, Starobin, & Eggleston, 2011).

**Transition-** moving from a community college to university setting (Hubbard, 2019).

### **Assumptions**

1. The researcher assumed all STEAM *Spring Connect* students participating in the questionnaire and focus groups were honest and provided true experiences about their transition.
2. The researcher assumed the information received from the STEAM *Spring Connect* coordinator was accurate in nature and provided correct information about the participants in the study.
3. The researcher assumed the undergraduate students were not intimidated by the questionnaire and focus group questions about their community college, transition, and university experiences.
4. The researcher assumed the participants who participated in the study were similar in nature, experiences, and preparation because they all were participants in the seventh cohort of the STEAM *Spring Connect* program and attended a community college in the fall 2018 semester.

### **Limitations**

1. The scope of this study was limited to undergraduate students in CALS at NC State who were participants in the STEAM *Spring Connect* program and attended a community college in the fall 2018 semester.
2. The quantitative findings and conclusions of this research were limited to a survey design questionnaire.

3. The qualitative findings and conclusions of this research were limited to a qualitative focus group analysis and interpretation of the researcher and her findings as she was the main instrument of data collection.
4. The findings of the quantitative and qualitative analysis were limited to the availability and willingness of the undergraduate students who participated in the study.
5. The findings of the quantitative and qualitative methods were limited to a small sample size in both the pilot study and sample. The small sample size impacted construct formation in the quantitative study, and variation in responses throughout the qualitative study.
6. The findings were limited to the seventh cohort of the *STEAM Spring Connect* program.

### **Design**

This study utilized a two-phase sequential mixed method design. In a mixed method study, researchers employ both quantitative and qualitative methods of inquiry to further explore a topic. A sequential exploratory design involves collecting quantitative data and qualitative data at separate times (Creswell, 2003). Data were collected in two parts, a survey instrument and two focus groups. Quantitative data were collected using a modified version of the Laanan-Transfer Student Questionnaire (L-TSQ) instrument. A Likert-type scale was used to measure academic and social adjustment factors that occur when transferring from a community college to a four-year university and other experiences of *STEAM Spring Connect* students. Quantitative data were collected during the *STEAM Spring Connect* students' second semester at NC State.

Qualitative data were collected through two focus groups with students who completed the survey component of the study. The focus groups explored further the experiences of the

STEAM *Spring Connect* students while at the community college, and throughout their transition. Qualitative data were collected during the students' third semester at NC State.

## **Journal Article One**

### **Population**

The population included the students in the seventh cohort of the STEAM *Spring Connect* program in CALS at NC State ( $N = 94$ ). Students from the seventh cohort were selected to account for the additional resources developed for STEAM *Spring Connect* students, and to gain different perspectives of the STEAM *Spring Connect* program in the second year of its existence.

### **Sample**

A stratified sample and census was used for this study. The sample was selected from the seventh cohort of the STEAM *Spring Connect* program in CALS at NC State. Only students who attended a community college in the fall 2018 semester, prior to transitioning to NC State in the spring 2019 semester, were selected ( $n = 70$ ). Students who worked/interned, pursued personal enrichment, or enrolled in courses at a four-year institution were not included in the sample. Students were identified from information obtained by the STEAM *Spring Connect* coordinator, which indicated the students who attended community college. A census was then conducted to obtain survey responses from all selected students.

### **Instrumentation**

The instrument was submitted to the Institutional Review Board (IRB) at NC State, where the study was deemed exempt, noting its minimal harm to participants. The instrument utilized in this study measured social demographics, community college, and university experiences of students who transferred to a four-year institution from a community college through the STEAM *Spring Connect* program. Students responded to open-ended, partially open-

ended, and restricted items to describe their social demographics. Items measuring community college experiences varied from restricted to Likert-type scale items, where respondents indicated whether they *disagreed strongly, disagreed somewhat, neutral, agreed somewhat, or agreed strongly* to six questions related to specific community college and university experiences. Students indicated their frequency, *never, occasionally, often, or very often*, of certain actions at both the community college and university setting in four questions. The remaining questions asked respondents to indicate their reason for choosing to attend NC State, as well as, indicating characteristics of their college satisfaction as *very dissatisfied, dissatisfied, satisfied, very satisfied, or not applicable*. The instrument totaled 27 questions and was adapted from the L-TSQ which has a reliability of 0.75 (Laanan, 2004). A pilot study was conducted to determine reliability of the modified instrument. After the pilot study, the instrument was sent to the participants in the study sample.

### **Data Collection**

The instrument was administered through Qualtrics and delivered using NC State e-mail addresses. The STEAM *Spring Connect* coordinator provided e-mail addresses of the participants. Students completed the questionnaire on their own devices, within 10 minutes. Dillman's Tailored Design Method (Dillman, Smyth, & Christian, 2014) was followed when recruiting participation and sending reminder e-mails to non-respondents. Four follow-up emails were sent to participants. Each follow-up e-mail excluded participants who responded. Reminder e-mails re-defined the purpose of the study, the importance of respondents, and confidentiality. All personal information was kept confidential and was stored on a password protected computer. A personalized thank-you letter was sent to participants who completed the

questionnaire. The thank-you letter alerted participants about the opportunity to participate in future focus groups.

### **Data Analysis**

The Statistical Package for Social Sciences (SPSS) was utilized for descriptive statistics and reliability analysis of instrument items. Frequencies were conducted to determine the mean and standard deviation of instrument items. The reliability of similar items were tested to ensure internal consistency and reliability of constructs. Decisions about reliability were determined by the Cronbach's alpha, which measures how similar items are to each other. A Cronbach's alpha closer to one implies a greater similarity between instrument items (George & Mallery, 2011).

### **Study Limitations**

This study is limited to the seventh cohort of the STEAM *Spring Connect* program at NC State. Each cohort undergoes different experiences throughout their transition, making it difficult to generalize results to all cohorts of the STEAM *Spring Connect* Program. Although the instrument yielded a fairly high response rate, more responses would have provided a more representative sample.

## **Journal Article Two**

### **Population**

The population included the seventh cohort of the STEAM *Spring Connect* program in CALS at NC State ( $N = 94$ ). The population was selected to account for additional resources available to the seventh cohort of the program and to gain difference perspectives about the program in its second year.

### **Sample**

A purposive sample was used in this study. The sample was determined by the participants who completed the initial questionnaire. Only survey respondents were considered to

participate in the focus groups. The goal of the focus groups were to further explore the questionnaire items. Therefore, only students who completed the questionnaire were recruited to participate in the focus groups.

### **Instrumentation**

The focus group protocols were submitted to the Institutional Review Board (IRB) at NC State, where the study was deemed exempt. Two focus group were conducted during the *STEAM Spring Connect* students' third semester at NC State. Questions were adapted from the L-TSQ and interview questions used by Townsend (1995) in her case study identifying possible obstacles transfer students face throughout the transfer process and the academic environment at the university. A panel of experts ensured the consistency of the focus group questions. The researcher served as the instrument, removing all biases while employing trustworthiness through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985).

### **Data Collection**

Two focus groups were the source of data in this qualitative study. Students who completed the survey questionnaire were recruited to further explore their experiences as a *STEAM Spring Connect* student. Individuals were given the dates of two focus groups to participate in. Pizza, chips, and drinks were offered as an incentive to participate. Focus groups were conducted outside of class hours and in a reserved room within the Agricultural and Human Sciences building on the NC State campus. The building and room were chosen due to accessibility to the researcher and participants. The room was reserved two weeks in advanced and a reservation note was taped to the room one hour prior to the focus group meetings. Participants signed a form of consent, agreeing to be audio-recorded. The use of pseudonyms ensured confidentiality of the participants.

## **Data Analysis**

Focus groups were recorded on two audio-recording devices. An online transcription software was utilized to transcribe the focus groups. Edits were made to the transcriptions to account for missed or unidentified words, spelling errors, and gaps in the recording. Focus groups were transcribed within one week to recall any instances during the session to account for in the transcription. The constant comparative method was utilized to analyze data. Open-, axial-, and selective-coding techniques were employed to identify emerging themes (Merriam, 2009).

## **Study Limitations**

This study is limited to the unique experiences of the seventh cohort of the STEAM *Spring Connect* program. The study is also limited to the participation in both focus groups. The first focus group involved more participants compared to the second group. The participants in the first focus group were more open and talkative, while the second focus group yielded less discussion. The experiences of the participants are homogenous and unique, making it difficult to generalize the results to all STEAM *Spring Connect* students.

## **Summary**

Community colleges, once designed to serve the students who were not readily admissible to the university, with limited financial means, and poor academic records, now serve as a pipeline for students to earn baccalaureate degrees (Walker, 2001). Whether transferring from a small or large community college, students face differences in environment. Students at community colleges are accustomed to small classes, while upon transfer, are faced with lecture courses of 150-300 students. Transfer students also find the university student body consisting primarily of native students who have established friendships during their first year. Therefore, community college transfer students must orient themselves to a different educational

community than what they experienced at the community college (Townsend & Wilson, 2009). Community college students are starting at a new higher education institution, therefore, they may be affected by the same academic and social integration issues that native students face. Alternatively, community college transfer students may also face different challenges. Whether needs of community college transfer students are different or similar, it is important for receiving institutions to be aware of the needs of community college transfer students and employ strategies for success (Berger & Malaney, 2003; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005).

NC State employed the *Spring Connect* initiative to serve as a baccalaureate pathway for undergraduate students. CALS provides additional support through the STEAM component for *Spring Connect* students in the college. While the goal is to support students throughout their transition, efforts are not equaling student performance compared to traditional CALS students. Multiple research efforts have been conducted to identify the academic and social challenges that traditional transfer students face, however, little research involving second semester transfer students has been published.

It is the aim of the researcher to effectively understand the experiences and challenges STEAM *Spring Connect* students face throughout transition from community college to university setting. The findings and conclusions of the researchers are aimed to help future cohorts of the STEAM *Spring Connect* program by developing additional avenues of support for students studying at community college for one semester. The STEAM *Spring Connect* program provides an alternative pathway for students to earn a degree from NC State, it is the goal of the researcher that the findings of this study will allow the STEAM *Spring Connect* Coordinator

better understand the experiences and challenges of the students to further support their educational goals.

**CHAPTER II**  
**THE COMMUNITY COLLEGE AND UNIVERSITY EXPERIENCES OF STUDENTS**  
**IN A BACCALAUREATE PATHWAY PROGRAM**

**Introduction**

Transfer education has been a mission of public junior colleges since their inception in 1901 (Cooley, 2000). Community colleges are the institution of choice for millions of students because of their open-access philosophy, multi-cultural student body, and diverse curricula offerings (Laanan et al., 2011). The pathway to the baccalaureate degree can also be achieved by starting at a community college and transferring to a four-year institution (Laanan, 2001). With low tuition and a close proximity to home, community colleges are a desirable start for graduating seniors (Ma & Baum, 2016). Transfer students are especially important at the university level, comprising approximately 20% of yearly graduating classes at NC State (Office of Undergraduate Admissions, 2017).

Although there are benefits with transferring, some challenges can exist. After transfer, students are at risk of “transfer shock,” a decline of academic performance (Hills, 1965, p. 202). Preparing and supporting all transfer students the same way prior to and post-transfer is a challenge, as each transfer student ranges in age and experience (McGuire & Belcheir, 2013). Community college transfer students often find the university an awkward fit (D’Amico et al., 2013). Moving from small to large class sizes, as well as, interacting with native peers who have established peer groups requires a transition (Townsend & Wilson, 2009). As community college enrollment continues to grow, there is an increased concern about helping students not only successfully transfer, but succeed at four-year institutions (Berger, & Malaney, 2003).

## Theoretical Framework

The student involvement theory served as a framework for this study. Student involvement is defined by Astin (1984) as the physical and psychological energy put forth by students throughout their college experience in terms of quality and quantity. Astin's theory includes three components: inputs, environment, and outputs. *Inputs* encompass the characteristics of students at initial entry to an institution. *Environment* refers to student experiences throughout college. *Outputs* involve the knowledge, attitude, and belief changes after environment exposure. Astin's Inputs-Environment-Outputs (I-E-O) Model is visualized below.

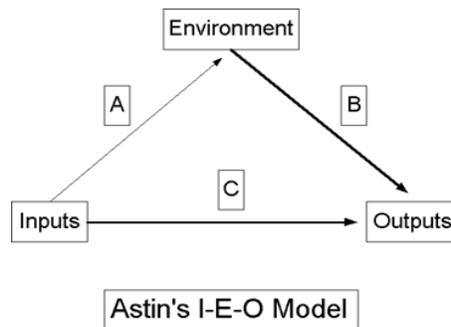


Figure 2. Astin's Inputs-Environment-Outputs (I-E-O) Model

Astin (1984) defines five postulates to summarize his assumptions regarding involvement:

(1) The investment of physical and psychological energy in various objects. 2)

Regardless of its object, involvement occurs along a continuum; that is, different students manifest different degrees of involvement in a given object, and the same student manifests different degrees of involvement in different objects at different times. 3.

Involvement has both qualitative and quantitative features. 4) The amount of student learning and personal development associated with any education program is directly

proportional to the quality and quantity of student involvement in the program. 5) The

effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (p. 519).

The student involvement theory emphasizes how academic and social participation throughout college facilitates student development and likelihood of baccalaureate attainment (Astin, 1984; Lester et al., 2013). Traditional pedagogical theories place emphasis on subject matter, resources, and individualization. The student involvement theory employs a different approach, placing more emphasis on how the student is developing, rather than developmental outcomes. The theory shifts attention from techniques and toward behavior of the student. Traditional pedagogical theories, such as the subject matter, resource, and individualized theory, place more emphasis on passive learning. In contrast, the student involvement theory gives students an active role in determining their desired outcomes.

A longitudinal study (Astin, 1977) utilized the theory to identify factors affecting persistence towards baccalaureate attainment. Practical applications of the theory are widespread. Faculty can utilize the theory to set more focus on their intended outcomes, rather than pedagogical techniques. Counselors and university personnel can utilize the student involvement theory as a frame of reference to increase involvement and work with students in low academic standing to identify where their energies are focused (Astin, 1984).

Utilizing the student involvement theory as a guiding frame throughout this study aided in identifying how the inputs and experiences of *STEAM Spring Connect* students affect their outcome, a successful transition from community college to university setting.

## Review of Literature

### Transfer Opportunity

#### *Community College Vehicle*

Community colleges serve many populations, fulfilling missions such as adult and continuing education, vocational training, as well as, transferring students for baccalaureate attainment (Banks, 1990). Increasing competition among high school seniors in terms of academics increases the competition among students, resulting in limited access for students at four-year institutions (Zwick, 2007). Changing workforce demands, requiring higher education have also increased the number of students seeking associates or bachelor degrees (Reindl, 2007). Proximity to home, low tuition, and open admission policies are desirable characteristics of students with long term goals of baccalaureate attainment (Ma & Baum, 2016). At least 50% of all students beginning at community colleges seek to transfer to four-year institutions. Articulation agreements between states regarding coursework facilitate transfer for students with associate degrees, as well as, those without (Townsend & Ignash, 2000). “Swirling” occurs when students move among various colleges in the state, rather than one transfer pattern, from community college to university (de los Santos & Wright, 1989, p. 84). Desirable characteristics, articulation agreements, and increased need for baccalaureate attainment, allow community colleges to serve as a pipeline to universities.

#### *Traditional vs. Non-Traditional Transfer Students*

Smoothing the transition process and supporting transfer student success has been the goal of researchers during the past thirty years. However, difficulties arise when defining a transfer student as a uniform concept (Cohen & Brawer, 1987). Transfer scenarios vary in terms of credit hour (Kinsella, 1998), prior years of work experience (Radwin & Horn, 2014), personal

obligations (Mackinnon-Slaney et al., 1998), and age, deeming students as traditional or non-traditional (Kinsella, 1998). A uniform definition of transfer does not exist among states, colleges, and researchers, making it difficult to compare all students who transfer. Ideal transfer students earn at least 60 credit hours at the community college, preparing them for a university career and baccalaureate attainment (Radwin & Horn, 2014).

## **Challenges**

### *Academic and Social Adjustment*

Moving from a community college to university setting results in experiencing new academic and social environments (Townsend, 1993). Studying the adjustment transfer students make in their new environments is the goal of many researchers. In terms of academics, students often perform poorer at the receiving institution compared to the community college. Hills (1965) coined this term as “transfer shock” (p. 202). Community college students express little interest in social involvement, while social engagement is a key component of the university environment, requiring social adjustment (Borglum & Kubala, 2000). One study found that transfer students feel isolated and alienated when introduced to the large student body and class size at the university (Townsend & Wilson, 2009). Although already a college student before arriving to their receiving institution, transfer students report “feeling like a freshman again” as they adjust to their new environment (Townsend, 2008, p. 77).

Factors affecting academic adjustment include negative perceptions of university academics (Laanan, 2007), as well as, lack of resource utilization by students at the community college (Townsend, 1995). Self-confidence and community college GPA were found to be negative predictors of academic adjustment. Students who earn a low GPA and lack confidence in academic ability experience difficulties in adjusting to the academic environment of the

university (Laanan, 2000). Factors affecting social adjustment include works schedule and lack of connection with other people. Lack of connection derives from not living on campus and navigating a larger atmosphere than what was experienced at the community college (Townsend & Wilson, 2009). Students who engaged themselves in clubs, organizations, or sports were found to experience a positive social adjustment compared to those who did not (Laanan, 2007). One approach to alleviating academic and social adjustment is Laanan's concept of transfer student capital, the preparation and resources transfer students bring with them to the university setting (Laanan et al., 2011). Laanan's work suggests that increasing transfer student capital through developing study, problem solving, and time management skills, is crucial for successful adjustment. Students can encourage positive academic and social success through meeting with counselors about their academic and transfer goals (Laanan, 2001).

### *Transfer Shock*

Hills (1965) coined "transfer shock" (p. 202) to describe the drop in grades of transfer students post matriculation. Researchers aim to identify factors associated with transfer shock to aid in the success of transfer students. One study compared transfer shock of native and transfer students, finding that native students experienced little to no decline in GPA (Glass Jr. & Harrington, 2002). Townsend (1995) reported the self-centered approach at community colleges leads to transfer shock when students arrive at the university. Other factors associated with transfer shock include low grading standards at community colleges, ability to cope with transition from different environments, and amount of advanced work preparation (Webb, 1971). Some instances of the transfer process result in higher academic performance upon transfer (Cedja, 1997). Although experiencing transfer shock is mostly a given for community college transfer students, recovery is possible at the receiving institution (Glass Jr. & Harrington, 2002).

### *Faculty Perceptions*

Transfer students differ from native students, therefore, research reveals faculty perceptions of transfer students exist at the receiving institution in terms of academic preparedness. Faculty also perceive transfer students as having multiple responsibilities and lacking in self-confidence (Zerquera et al., 2018). In contrast, student perceptions of university faculty also exist. In one study, students reported their community college faculty were more approachable and helpful (Townsend, 1995). As well, Allen, Smith, and Muehleck (2014) reported transfer students were more satisfied with pre rather than post-transition advising. Students reported a lack of individualization, accurate information, and accessibility in terms of their university advising experiences (Allen, Smith, & Muehleck, 2014). Negative student perceptions of faculty are rooted in the idea of large class size and disconnect between student and teacher, compared to the classroom environment at the community college (Townsend & Wilson, 2006).

To aid in developing the transfer student and faculty relationship, faculty reported individual interactions were key to developing relationships with students. Increasing individual interactions allows faculty to understand the experiences, work demands, and transfer student expectations (Zerquera et al., 2018). Transfer students viewing faculty as approachable are more likely to take advantage of talking with instructors, as well as, seeking advice and experiential opportunities to aid in transition (Laanan, 2000).

### **Avenues of Support**

Baccalaureate attainment is the long term goal of students intending to transfer from a community college to university setting. Researchers have sought to gain insight on the factors that influence the successful transition and integration of transfer students. Academic advising,

financial aid, and social issues are three areas identified by Gard et al. (2012) that impede successful transition. One study aimed to identify the services and programs transfer students thought should be offered at the receiving institution. Transfer centers, transfer-specific advising, transfer orientation, and mentors were among the services identified (Daddona, Modie-Milner, & Goodson, 2019). This article describes one program designed to smooth the transition from community college to university by providing additional resources to support academic and social adjustment of freshman transfer students.

### **STEAM Spring Connect Program**

The Student Transition Enrollment Advising and Mentoring (STEAM) *Spring Connect* program, at NC State, offers a unique pathway for invited students to pursue their baccalaureate degree. As students move off campus in the spring semester due to graduating, starting internships, or studying abroad, space opens up on campus. The extra space allows for the admission of additional students in the spring. High school seniors who apply to NC State during their senior year are offered admission to NC State for the spring semester of their freshman year. Admission is offered on the front-end, therefore, there are no additional requirements that must be met by students before earning their admission. Students have the option of how to spend their fall semester of their freshman year; either enrolling in courses, working/interning, or pursuing personal enrichment. With an initiative to provide access to rural students and fill under enrolled majors in the College of Agriculture and Life Sciences (CALs), the STEAM *Spring Connect* program works directly with students to aid transition to NC State.

The overarching goal of the STEAM *Spring Connect* program is to support students' academic adjustment throughout transition from community college, working, or personal enrichment to university setting. To aid in this effort, monthly advising activities are employed to

provide students with resources to practice important skills that they will need to be successful at NC State. In an effort to enhance the social adjustment of STEAM *Spring Connect* students, special events are organized to integrate students with NC State's campus, prior to transitioning.

Upon transitioning, to further enhance the academic and social integration of STEAM *Spring Connect* students, all students within the cohort are required to enroll in an introductory Agriculture and Life Sciences (ALS) 103 course instructed by the STEAM *Spring Connect* coordinator. Placing all students within the cohort in the same section of the ALS 103 course allows students to meet and work through their first semester of transition together. Topics covered in the course include academics, career, and diversity, with emphasis on STEAM *Spring Connect* experiences as well as, the integrated mentoring program, CALS CARES (Connecting, Accepting, Respecting, and Encouraging Students). The CALS CARES mentoring program is a college wide mentoring program for all freshman and transfer students. Students are grouped and assigned a mentor. Mentors are selected from CALS faculty, staff, and graduate students to host monthly meetings with their group.

STEAM *Spring Connect* students are unique in terms of their transfer experience. Through the program, students are further supported and receive additional resources that are meant to aid in their transition and success at the university level. Additional research is needed to identify the experiences of freshman transfer students who matriculate through specific transfer programs.

### **Purpose**

The purpose of this study was to explore the experiences of STEAM *Spring Connect* students. Additionally, the researcher sought to explore how students within the program academically persisted and were successful after matriculation.

## Objectives

The objectives of the study were to:

1. Explore community college experiences prior to transitioning to NC State;
2. Explore university experiences post-transition; and
3. Explain the adjustment process and college satisfaction of *STEAM Spring Connect* students.

## Methodology

A survey design was utilized for this study. The target population included all students from the seventh cohort of the *STEAM Spring Connect* program ( $N = 94$ ). The seventh cohort includes students who were admitted to NC State in the spring of 2018 and began at NC State in the spring 2019 semester. A stratified sample identified the individuals who attended a community college during the fall semester of 2018 ( $n = 70$ ).

Before data collection began, the study was submitted to the IRB at NC State. The questionnaire, consent statement, and invitation letter were submitted for review. The study was deemed exempt, noting the low risk for participants.

A stratified sample, followed by a census was employed in this study ( $n = 70$ ). Due to the small sample size, the census sought responses from every student who studied at a community college during the fall semester. The sample included undergraduate students who were currently enrolled, changed their degree, or were a part of the Life Sciences First Year program (LSFY) within the CALS *STEAM Spring Connect* program. Students who left the program before enrolling at NC State were not included in the sample. Email addresses of all students in the sample were obtained from the *STEAM Spring Connect* coordinator. The questionnaire was delivered through Qualtrics and sent to each student.

The research instrument measured social demographics, community college and university experiences, through a variety of survey items. Students responded to open-ended, partially open-ended, and restricted items to describe their social demographics. Items measuring community college experiences varied from restricted to Likert-type scale items, where respondents indicated whether they *disagreed strongly, disagreed somewhat, neutral, agreed somewhat, or agreed strongly* to six questions related to specific community college and university experiences. Students also indicated their frequency, *never, occasionally, often, or very often*, of certain actions at both the community college and university setting in four questions. The remaining questions asked respondents to indicate their reason for choosing to attend NC State, as well as, indicating characteristics of their college satisfaction as *very dissatisfied, dissatisfied, satisfied, very satisfied, or not applicable*. The questionnaire totaled 27 questions.

The survey instrument was adapted from Laanan (2004), and was a reduced version of the Laanan Transfer Student Questionnaire (L-TSQ), which was formulated of a result of extensive review of past survey instruments and previous studies in the body of transfer student literature (Laanan, 2004). The L-TSQ instrument was reduced in item number to tailor the questionnaire to the unique transfer students in the *STEAM Spring Connect* program. The open-ended questions from the original instrument were removed. The factor loading of each item on the L-TSQ was considered when selecting items to include in the modified version of the instrument. The original L-TSQ yielded a reliability of 0.75 (Laanan, 2004).

A pilot study was conducted to re-establish reliability of the modified L-TSQ instrument and to determine if additional changes were needed. The sixth cohort of the *STEAM Spring Connect* program was identified as the sample for the pilot study as those students most

resembled the study sample in the seventh cohort. A stratified sample, followed by a census was used in the pilot study ( $n = 34$ ). The questionnaire was administered through Qualtrics, and student emails were obtained from the STEAM *Spring Connect* coordinator. The questionnaire was completed by the students on a personal computer and each student was provided a unique access link with an expiration date. The survey required less than ten minutes to complete. The pilot study followed Dillman's Tailored Design Method (Dillman et al., 2014). Multiple contacts were made with the participants, with the message varying in each reminder email. The pilot study implementation began with an invitation email. The invitation email explained the pilot study, invited participants to respond, and explained confidentiality of the study. Three reminders were sent to participants inviting them to participate and indicated the importance of their response. A thank you letter was sent to all respondents who completed the survey at the conclusion of the pilot study. The pilot study yielded ( $n = 13$ ) responses, a response rate of 41%. SPSS was used to analyze descriptive statistics and reliability of items. Constructs were identified and tested for reliability and internal consistency. The Cronbach's alpha is a measure of internal consistency to determine whether the items within a construct measure the same thing. The value of alpha varies between 0 and 1.00. The closer the alpha is to 1.00, the greater the internal consistency of the items (George & Mallery, 2011). After the pilot study, all constructs yielded a Cronbach's alpha of at least 0.70, with one construct reporting the highest alpha of 0.95.

The survey instrument was re-evaluated. Changes were made to wording in the introductory section of the instrument. There were no changes made to the wording or scales of questions in the instrument. The instrument was then prepared for administration to the study sample. Dillman's Tailored Design Method was utilized throughout the study (Dillman et al.,

2014). NC State emails were obtained in a spreadsheet format from the *STEAM Spring Connect* coordinator. Qualtrics was utilized to administer the questionnaire. An invitation email was sent to all students in the sample asking for their participation, including details of the study and confidentiality. A unique link was provided for each student for tracking purposes. The first reminder email was sent three days after the invitation email. The first reminder email served the purpose to remind participants about the study and provided the link to the questionnaire a second time. The second reminder email was sent nine days after the invitation email and detailed the importance of responses. A third email reminder was sent 20 days after the invitation email. The third reminder re-established the need for responses and encouraged participation. A fourth, and final, reminder was sent one month after the invitation email. The final reminder asked for participation and described the importance of participation in the study. Few responses were yielded after the third and fourth reminders, therefore, additional follow-ups were not warranted (Dillman et al., 2014). Emails of the respondents who completed the survey were removed and not included in the follow-up emails. Students completed the questionnaire on personal devices and accessed the questionnaire through the invitation and reminder emails. The questionnaire took less than ten minutes to complete. Identifying information, including, names, e-mail addresses, and responses, was kept strictly confidential and was only accessed by the researcher. Sensitive information was stored on a university computer, only accessible with a password. Two personalized thank you letters were sent to the respondents thanking them for their participation and notifying about an opportunity to participate in focus groups at the conclusion of the data collection.

Data was analyzed using SPSS to determine descriptive statistics (mean, standard deviation), as well as, reliability and internal consistency among instrument items and constructs.

## Results

The instrument that provided data for this qualitative study was modified from the L-STQ. A census was conducted with the seventh cohort of STEAM *Spring Connect* students who attended a community college in the fall 2018 semester. Data was analyzed using SPSS to report reliabilities and descriptive statistics of instrument items.

### Characteristics of the Population

A total of ( $n = 70$ ) students were invited to complete the questionnaire. Of those invited, the questionnaire yielded a response rate of 49% ( $n = 34$ ) with two ( $n = 2$ ) respondents removed from analysis due to incomplete responses, resulting in a final response rate of 46% ( $n = 32$ ). Findings are organized by research objective. Each cohort of the STEAM *Spring Connect* program is unique, therefore, due to the small homogenous sample, the results cannot be generalized beyond this study.

The students included in the sample were all sophomores at who transitioned through the seventh cohort of the STEAM *Spring Connect* program to NC State from a community college. Respondents completed the questionnaire during the fall semester of their sophomore year, their second semester at NC State. Respondents represented 10 of the 17 majors offered within CALS. Majors included Agricultural Business Management, Plant and Soil Sciences, Animal Science, Agroecology and Sustainable Food Systems, Horticultural Science, Agricultural Education, Turfgrass Science, Poultry Science, Agricultural Science, and Life Sciences First Year.

Of the respondents, 53% ( $n = 17$ ) were female and 47% ( $n = 15$ ) were male, with an average age of 19 years-old. The ethnicity of students ranged, with 6% ( $n = 3$ ) Hispanic or Latino/a, 84% ( $n = 27$ ) White, and 3% ( $n = 1$ ) indicating their ethnicity as Indonesian. Two ( $n = 2$ ) students did not indicate their ethnicity. First-Generation College students represented 19% ( $n$

= 6) of respondents. Participants represented 23 counties, seven from Tier 1, 11 from Tier 2, and five from Tier 3.

### Findings Related to Objective 1

The first research question aimed to explore the experiences of STEAM *Spring Connect* students prior to transitioning to NC State. The specific experiences included time spent on the community college campus, employment, and study time. Table 1 describes the average time spent working a job while attending the community college. Ten students (31%) reported not working a job, while five students (16%) reported working more than 30 hours per week at the community college.

Table 1

#### *Employment while at Community College*

Variable	Community College	
	<i>n</i>	%
About how many hours did you spend working a job for pay?		
None, I didn't have a job	10	32.3
1 to 10 hours	5	16.1
11 to 15 hours	-	-
16 to 20 hours	7	22.6
21 to 20 hours	4	12.9
More than 30 hours	5	16.1

Table 2 displays the weekly hours spent on campus preparing for courses at the community college. A majority of students ( $n = 22$ ) (71%) spent one to five hours studying, while no students reported spending more than 15 hours studying. The amount of time, in hours, spent on the community college campus, not including time spent in class is also displayed. Twelve students (38.7%) reported spending one to three hours on campus, outside of class. Seven students (22.6%) indicated they spent zero hours on campus outside of class.

Table 2

*Weekly Hours Spent on Campus and Preparing for Courses at the Community College*

Variable	Community College	
	<i>n</i>	%
About how many hours did you spend studying or preparing for your classes?		
1 to 5 hours	22	71.0
8 to 10 hours	8	25.8
11 to 15 hours	1	3.2
16 to 20 hours	-	-
More than 20 hours	-	-
About how many hours a week did you spend on the community college campus, not counting time attending class?		
None	7	22.6
1 to 3 hours	12	38.7
4 to 6 hours	4	12.9
7 to 9 hours	4	12.9
10 to 12 hours	2	6.5
More than 20 hours	2	6.5

Students described their general courses, academic/STEAM *Spring Connect* coordinator advising, transition process, activities, faculty experiences, and learning and study skills while at the community college. Table 3 displays the means and standard deviations of four statements regarding courses at the community college. The students somewhat disagreed ( $M = 1.71$ ) that the courses were intellectually challenging and that the courses prepared them for academic rigor of NC State ( $M = 1.52$ ). Students somewhat disagreed their community college courses demanded intensive assignments ( $M = 1.48$ ) and prepared them for their academic major at NC State ( $M = 1.35$ ). The four statements yielded a Cronbach's alpha of 0.64, therefore was not reported or further compared as a construct.

Table 3

*Perceptions of Community College Courses (n = 31)*

Statement	<i>M</i>	<i>SD</i>
Overall, the courses were intellectually challenging.	1.71	0.64
The courses prepared me the academic standards at NC State.	1.52	0.93
The courses demanded intensive writing assignments and projects.	1.48	0.63
The course prepared me for my major at NC State.	1.35	0.80

*Note.* Real limits: 0-0.49 = disagree strongly; 0.50-1.49 = disagree somewhat; 1.50-2.49 = agree somewhat; 2.50-3.00 = agree strongly.

Table 4 describes the means and standard deviations of perceptions of academic and STEAM *Spring Connect* advising while at the community college. The students somewhat agreed that community college advisors identified courses needed to meet NC State requirements ( $M = 2.44$ ), provided helpful information during transition ( $M = 2.41$ ), and communicated about course requirements and educational plans ( $M = 2.38$ ). Students somewhat disagreed they met with advisors on a regular basis ( $M = 1.59$ ). Reliability statistics were conducted for the advising construct. The pilot study yielded a Cronbach’s alpha of 0.84, with the sample reporting an alpha of 0.89. The items can be grouped as a construct, however, no further comparisons were made in the study.

Table 4

*Perceptions of Academic/STEAM Spring Connect Advising (n = 32)*

Statement	<i>M</i>	<i>SD</i>
Advisors/STEAM <i>Spring Connect</i> Coordinator identified courses needed to meet the general education/major requirements of NC State.	2.44	0.84
Information received from academic advisors/STEAM <i>Spring Connect</i> Coordinator was helpful in the transition process.	2.41	0.71
I talked with an advisor/STEAM <i>Spring Connect</i> coordinator about courses to take, requirements, and education plans.	2.38	0.75
I met with academic advisors/STEAM <i>Spring Connect</i> coordinator on a regular basis.	1.59	0.91

*Note.* Real limits: 0-0.49 = disagree strongly; 0.50-1.49 = disagree somewhat; 1.50-2.49 = agree somewhat; 2.50-3.00 = agree strongly.

The mean and standard deviation of four statements regarding the transition process are displayed in Table 5. Students indicated they somewhat agreed they visited the campus to learn familiarity of departments ( $M = 2.16$ ), knew what to expect in terms of academics ( $M = 1.81$ ), and spoke with former STEAM *Spring Connect* students ( $M = 1.50$ ). The four items were not grouped as a construct due to a low Cronbach’s alpha.

Table 5

*Perceptions of Transition Process (n = 32)*

Statement	<i>M</i>	<i>SD</i>
I visited the NC State campus to learn where offices and departments were located.	2.16	0.72
I knew what to expect at NC State in terms of academics.	1.81	0.82
I spoke to former STEAM <i>Spring Connect</i> students to gain insight about their transition experiences.	1.50	1.08

*Note.* Real limits: 0-0.49 = disagree strongly; 0.50-1.49 = disagree somewhat; 1.50-2.49 = agree somewhat; 2.50-3.00 = agree strongly.

Items relating to perceptions of course skills at the community college are displayed in Table 6. The students somewhat agreed they took notes ( $M = 1.81$ ), thought about practical

applications ( $M = 1.81$ ), and made sense of their learning ( $M = 1.81$ ). The three statements were not able to be grouped as a construct due to an alpha of 0.65, which was much lower than the pilot study alpha of 0.90. Due to the low alpha, the course learning construct was unable to be compared between community college and university setting.

Table 6

*Perceptions of Community College Course Skills (n = 31)*

Statement	<i>M</i>	<i>SD</i>
Took detailed notes in class.	2.19	0.79
Thought about practical applications of the material.	1.87	0.67
Tried to see how different facts and ideas fit together.	1.81	0.65

*Note.* Real limits: 0-0.49 = disagree strongly; 0.50-1.49 = disagree somewhat; 1.50-2.49 = agree somewhat; 2.50-3.00 = agree strongly.

Four statements measured the student perceptions of community college faculty. Table 7 describes the means and standard deviations of each statement. Students indicated they often felt comfortable approaching faculty ( $M = 1.97$ ) and asking instructors about information related to courses ( $M = 1.90$ ). Students occasionally asked for criticism ( $M = 1.45$ ) and advice on work ( $M = 1.16$ ). The four statements were grouped as the faculty perceptions construct after the sample yielded an alpha of 0.71. The pilot study sample yielded an alpha of 0.93, which is higher than the data sample, however, both were above 0.70 which ensured the construct was reliable.

Table 7

*Perceptions of Community College Faculty (n = 31)*

Statement	<i>M</i>	<i>SD</i>
Felt comfortable approaching faculty outside of class.	1.97	0.88
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.).	1.90	0.91
Asked my instructor for comments and criticism about my work.	1.45	1.06
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	1.16	0.78

*Note.* Real limits: 0-0.49 = never; 0.50-1.49 = occasionally; 1.50-2.49 = often; 2.50-3.00 = very often.

The means and standard deviations specific to students’ perceptions of skill development at the community college are displayed in Table 8. The students were neutral to every statement provided. A reliability analysis was conducted on the five statements which yielded an alpha of 0.78. This construct was not further compared in the study.

Table 8

*Perceptions of Skill Development (n = 31)*

Statement	<i>M</i>	<i>SD</i>
Time Management	2.26	1.09
Problem Solving	2.23	1.06
Writing Skills	2.16	1.16
Mathematical Skills	1.90	1.17
Test Taking	1.84	1.16

*Note.* Real limits: 0-0.49 = disagree; 0.50-1.49 = disagree somewhat; 1.50-2.49 = neutral; 2.50-3.49 = agree strongly; 3.50-4.00 = agree strongly.

**Findings Related to Objective 2**

The second research question aimed to explore the experiences of *STEAM Spring Connect* students after their transition to NC State. It was the goal of the second section of the

instrument to define the university experiences, decision influence, course skills, and perceptions of faculty and the university of STEAM *Spring Connect* students after their transition. Table 9 describes the amount of hours spent working a job after transition. While at the university, 17 students (53%) reported not working a job, three students (9%) reported working one to 10 hours, while 3 (9%) students worked 11 to 15 hours per week. Five students reported working (16%) 16 to 20 hours, and four students (13%) worked 21 to 30 hours per week. While at the university, no students reported working more than 30 hours per week.

Table 9

*Employment after Transition to University*

Variable	University	
	<i>n</i>	%
About how many hours did you spend working a job for pay?		
None, I didn't have a job	17	53.1
1 to 10 hours	3	9.4
11 to 15 hours	3	9.4
16 to 20 hours	5	15.6
21 to 20 hours	4	12.5
More than 30 hours	-	-

Table 10 describes the means and standard deviations for the perceptions of course learning at NC State. Students stated they took notes in class very often ( $M = 2.66$ ), while occasionally thinking about practical applications ( $M = 2.34$ ) and how facts and ideas fit together ( $M = 2.31$ ). A reliability analysis was conducted after the pilot study which yielded an alpha of 0.94, much higher than the sample alpha of 0.64. Due to the low alpha, the three statements were not considered a valid construct for further comparison.

Table 10

*Perceptions of University Course Skills (n = 32)*

Statement	<i>M</i>	<i>SD</i>
Took detailed notes in class.	2.66	0.48
Thought about practical applications of the material.	2.34	0.70
Tried to see how different facts and ideas fit together.	2.31	0.64

*Note.* Real limits: 0-0.49 = never; 0.50-1.49 = occasionally; 1.50-2.49 = often; 2.50-3.00 = very often.

Table 11 describes the student perceptions of university faculty. Students often felt comfortable approaching university faculty ( $M = 2.03$ ), asking for information ( $M = 2.03$ ), criticism ( $M = 1.69$ ), and advice on work ( $M = 1.69$ ). A reliability analysis yielded an alpha of 0.95 for the pilot study and 0.88 for the study sample. Therefore, the four statements were identified as a valid construct. The community college and university faculty perceptions were further compared by a paired sample  $t$ -test, however, a definitive mean difference was not identified. Table 12 describes the average mean differences and overlapping confidence intervals, indicating little evidence that a true mean difference exists.

Table 11

*Student Perceptions of University Faculty (n = 31)*

Statement	<i>M</i>	<i>SD</i>
Felt comfortable approaching faculty outside of class.	2.03	0.82
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.).	2.03	0.82
Asked my instructor for comments and criticism about my work.	1.69	0.93
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	1.69	0.90

*Note.* Real limits: 0-0.49 = never; 0.50-1.49 = occasionally; 1.50-2.49 = often; 2.50-3.00 = very often.

Table 12

*Mean Comparison of Community College and University Faculty Experiences*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	95% CI	
				<i>LL</i>	<i>UL</i>
Community College Faculty Experiences	31	1.62	0.66	1.38	1.86
University Faculty Experiences	32	1.86	0.74	1.59	2.13

*Note.* Real limits: 0-0.49 = never; 0.50-1.49 = occasionally; 1.50-2.49 = often; 2.50-3.00 = very often. CI = confidence Interval; LL = lower limit, UL = upper limit.

The general perceptions of STEAM *Spring Connect* students post-transition were identified with 11 statements. Table 13 describes the means and standard deviations. Students strongly agreed they would still attend NC State if given the option to choose again ( $M = 2.58$ ). Students also strongly agreed that in order to benefit from NC State, students have to take the initiative ( $M = 2.58$ ). Students somewhat agreed that NC State is intellectually stimulating ( $M = 2.42$ ), courses are interesting and worthwhile ( $M = 2.06$ ), and faculty are easy to approach ( $M = 2.32$ ) and interested in academic development of students ( $M = 2.29$ ). The pilot study reliability analysis

yielded an alpha of 0.88, while the data sample produced a much lower alpha of 0.33. Therefore, the eleven statements were not grouped as a construct for further comparison.

Table 13

*Environment Perceptions of NC State (n = 31)*

Statement	<i>M</i>	<i>SD</i>
If I could start over again, I would still go to NC State.	2.71	0.64
If students expect to benefit from NC State has to offer, they have to take the initiative.	2.58	0.56
NC State is an intellectually stimulating and often exciting place to be.	2.42	0.62
Professors are strongly interested in the academic development of undergraduates.	2.29	0.69
I feel the courses I have taken at NC State have been interesting and worthwhile.	2.06	0.57
There is a stigma at NC State among students for having started at a community college.	1.10	0.91
Most students are treated like a “number.”	1.06	0.81
Because I am a “STEAM <i>Spring Connect</i> student” most students tend to underestimate my abilities.	1.00	0.91
Many students do not feel like they do not “fit in” on this campus.	1.00	0.68
Because I am a “STEAM <i>Spring Connect</i> student,” most faculty tend to underestimate my abilities.	0.90	0.91

*Note.* Real limits: 0-0.49 = disagree strongly; 0.50-1.49 = disagree somewhat; 1.50-2.49 = agree somewhat; 2.50-3.00 = agree strongly.

### Findings Related to Objective 3

The third research question aimed to explain the adjustment process and college satisfaction of STEAM *Spring Connect* students after transition. Table 14 displays the means and standard deviations of student perceptions about the adjustment process. Students somewhat agreed friends are easy to make at NC State ( $M = 2.23$ ), they are meeting as many people as they would like ( $M = 2.16$ ), and adjusting to the social environment was easy ( $M = 1.94$ ). Students somewhat agreed their level of stress increased ( $M = 1.90$ ), they experienced a dip in GPA ( $M = 1.52$ ), and adjusting to the academic environment at NC State was easy ( $M = 1.55$ ). The pilot

study sample yielded an alpha of 0.88, while the data sample yielded an alpha much lower. Items must be improved in order to group them as a construct for further comparison.

Table 14

*Perceptions of Adjustment Process (n = 31)*

Statement	<i>M</i>	<i>SD</i>
It is easy to make friends at NC State.	2.23	0.62
I am meeting as many people and making as many friends as I would like at NC State.	2.16	0.78
Adjusting to the social environment at NC State has been easy.	1.94	1.03
My level of stress increased when I started at NC State.	1.90	1.01
Adjusting to the academic standards or expectations at NC State has been easy.	1.55	1.03
I experienced a dip in grades (GPA) during my first semester at NC State.	1.52	1.29
There is a stigma at NC State among students for having started at a community college.	1.03	0.98
I often feel (felt) overwhelmed by the size of the student body.	1.00	0.86
Upon transitioning I felt alienated at NC State.	0.87	0.89

*Note.* Real limits: 0-0.49 = disagree strongly; 0.50-1.49 = disagree somewhat; 1.50-2.49 = agree somewhat; 2.50-3.00 = agree strongly.

Table 15 describes the means and standard deviations of the perceptions of college satisfaction of STEAM *Spring Connect* students post-transition. Twelve statements were provided where students indicated the extent to which they were dissatisfied or satisfied. The students were very satisfied with their decision to attend NC State ( $M = 3.69$ ), academic advising ( $M = 3.66$ ), college experience ( $M = 3.53$ ), quality of instruction ( $M = 3.53$ ), sense of belonging ( $M = 3.50$ ), and interaction with others ( $M = 3.50$ ). Student housing was one area in which students were dissatisfied ( $M = 2.78$ ). A reliability analysis yielded an alpha of 0.80 confirming the 12 statements can be grouped as a construct to determine college satisfaction. The construct was not further compared in the study.

Table 15

*Perceptions of College Satisfaction (n = 32)*

Statement	<i>M</i>	<i>SD</i>
Decision to transition to NC State.	3.69	0.47
Academic Advising.	3.66	0.55
Overall college experience.	3.53	0.80
Overall quality of instruction.	3.53	0.51
Sense of belonging at NC State.	3.50	0.57
Interaction with other students.	3.50	0.51
Courses in your major field.	3.47	0.80
Amount of contact with faculty.	3.44	0.56
Sense of community on campus.	3.41	0.71
Class size.	3.28	0.63
Ethnic/racial diversity of the faculty.	3.13	1.13
Student housing.	2.78	1.01

*Note.* Real limits: 0-.49 = not applicable; 0.50-1.49 = very dissatisfied; 1.50-2.49 = dissatisfied; 2.50-3.49 = satisfied; 3.50-4.00 = very satisfied.

Table 16 describes the average means and standard deviations for reasons that influenced the decision to attend NC State. The perception that NC State graduates get good jobs ( $M = 2.56$ ) was the most important reason for attending NC State. Social reputation ( $M = 1.66$ ), affordable tuition ( $M = 1.84$ ), and admission to professional school ( $M = 1.75$ ), were found as somewhat important. Deciding to attend NC State because of parents ( $M = 1.44$ ), recruiting ( $M = 0.88$ ), or siblings ( $M = 0.50$ ) were found as somewhat important but reported lower average means. The items reported a reliability of 0.70, however, further comparisons were not made in the study.

Table 16

*Reasons for Attending NC State (n = 32)*

Statement	<i>M</i>	<i>SD</i>
NC State graduates get good jobs.	2.56	0.84
NC State has a very good academic reputation.	2.38	0.83
NC State has affordable tuition.	1.84	1.05
NC State graduates gain admission to top graduate/professional schools.	1.75	1.08
NC State has a very good reputation for its social activities.	1.66	0.83
I was offered financial assistance.	1.44	1.32
Parents recommended that I attend NC State.	1.44	1.16
Convenience and location.	1.13	0.98
An NC State representative recruited me.	0.88	1.10
My brother(s)/sister(s) attended NC State.	0.50	1.11

*Note.* Real limits: 0-.49 = not important; 0.50-1.49 = somewhat important; 1.50-2.49 = important; 2.50-3.00 = important.

## **Summary and Conclusions**

The survey instrument revealed varied findings related to the experiences of STEAM *Spring Connect* students before and after transition to NC State. The experiences of the seventh cohort of the STEAM *Spring Connect* program are unique and homogenous. The findings to the quantitative study should not be generalized beyond this sample of students who attended the community college in the fall semester before transitioning to NC State.

### **Conclusions Related to Objective 1**

The goal of research question one was to explore the community college experiences of STEAM *Spring Connect* students prior to transition. Findings conclude that more students were employed, and spent more hours working per week while at the community college compared to the university setting. Students continued to work while at the university. Kinsella (1998) reported that transfer students tend to work at the community college and seek employment at the university, which is confirmed through this finding. In regard to the community college courses, students somewhat agreed that their courses were challenging, while also somewhat disagreeing that community college courses served as a preparation for university courses. This finding agrees with Webb (1971) who found advanced work preparation and low grading standards at the community college results in transfer shock. Findings in regards to skill development at the community college were neutral; neither confirming nor denying the community college assisted in developing needed university academic skills. Findings revealed a positive perception of advising experiences while at the community college. Students found the community college faculty approachable, occasionally asking for advice and criticism about assignments. This finding agrees with Townsend (1995) who concluded transfer students find community college faculty accessible and willing. Students indicated they attempted to enhance

their transition success by somewhat agreeing to all of the transition process statements (I visited the NC State campus to learn where offices and departments were located, I knew what to expect at NC State in terms of academics, and I spoke to former STEAM *Spring Connect* students to gain insight about their transition experiences). The three statements agree with the dimensions of transition identified by Flaga (2006).

### **Conclusions Related to Objective 2**

Exploring the experiences of STEAM *Spring Connect* students upon transitioning to NC State was the goal of the second research question. Findings revealed students were often taking notes in university courses and thinking abstractly about course material. Although mean comparisons were not made between the course skills at the community college and university, findings suggest that students were less involved with their courses at the community college. Perceptions of course learning at the community college and university were not compared due to insufficient construct formation. Findings revealed that students often took advantage of university faculty for advice and found them approachable. Perceptions of community college and university faculty were compared. Findings did not reveal a definitive difference in mean, therefore, a clear shift in experiences is not apparent. This finding does not support Townsend's (2005) findings that community college faculty are more approachable. Overall, findings revealed if students were given the option to start their college experience again, they would still choose NC State. In addition, respondents agreed strongly that students have to take initiative to obtain benefits from NC State, such as networking, course assistance, and experiential opportunities. This finding aligns with Astin's student involvement theory (1984) which describes how inputs influence outcomes at the university. Students perceived university professors as caring about their academic development, which differs from findings of Townsend

and Wilson (2006) who reported professors are perceived as not caring about students in their course participation. Students did not feel as though faculty underestimated their abilities because they were *STEAM Spring Connect* students. This finding contradicts the findings of Zerquera et al. (2018) who found faculty perceive transfer students as academically underprepared.

### **Conclusions Related to Objective 3**

The goal of the third research question was to explain the college satisfaction and adjustment process at NC State after transitioning. Overall, findings indicated a positive academic and social adjustment by *STEAM Spring Connect* students. One finding revealed students experienced a dip in their grades during their first semester at NC State. This finding aligns with Hill's (1965) concept of transfer shock, a decline in academic performance after transfer. Overall, *STEAM Spring Connect* students reported they did not feel stigmatized as a student for beginning at a community college. Findings also showed the students somewhat disagreed they felt overwhelmed by the size of the student body and did not feel alienated upon transfer. Townsend (2009) reported alienation is a common feeling of transfer students in the large university study body. Findings did not support a feeling of alienation by students. Overall, students were satisfied with NC State in terms of diversity, academic, and social environments. Students displayed strong satisfactions with their academic advising and overall decision to transition to NC State.

### **Implications**

Findings from this quantitative study can inform the *STEAM Spring Connect* program about the community college, university, and satisfaction experiences of *STEAM Spring Connect* students. The program can use this instrument to identify how *STEAM Spring Connect*

students perceive their community college courses, faculty, and advising prior to their transition. This study provides implications to the program on how students are spending their time at the community college. This information is important for determining how to support community college students while they are studying at the community college. Using the study to identify how many students work, and how many hours are worked per week, could inform the program about additional resources for working students such as tips on how to practice time management when working many hours during the week.

The program could also use the findings of this study to further identify the perceptions of community college courses. Identifying how the students perceived their academic preparation for NC State courses is important for understanding needed areas of additional academic support. This study provides implications for future cohort advising as it provides insight on how frequently students met with advisors and how useful they found their advising experiences. This information can inform the *STEAM Spring Connect* coordinator on future advising strategies by communicating to students the goals and importance of pre-transition advising.

This study provides additional implications for enhancing the transition capital of students. Using the study to identify how students described their preparation for the transition process could inform the program on additional areas needed for preparation, such as speaking to past *STEAM Spring Connect* students. Findings related to skill development can inform the program on the academic skills developed or needed by students. Academic resources, such as skill building workshops, could be developed that offer additional support to enhance the academic adjustment of students. The study also offers implications to the program for supporting students after transition. The program could use the findings to further support students through specific information sessions or workshops dedicated to course management and

approaching university faculty, as well as, maneuvering the university academic and social environment.

### **Recommendations for Future Research**

To further strengthen this study, the instrument could be improved to allow for additional research. Adding an additional section regarding specific STEAM *Spring Connect* events could be beneficial to identify events that need improvement or areas for additional integration opportunities. This would allow the STEAM *Spring Connect* coordinator to identify the less popular events, in addition to, events students would be interested in participating in prior to transition.

Items on the instrument could be improved allowing for construct formation and further comparisons against different groups of students in course learning and faculty perceptions at the community college and university. One study could identify similar and different transition experiences between First-Generation College students, as well as, rural, suburban, and urban students. Comparing students from different demographic locations across the state could identify how community colleges in differing demographic areas influence the transition process and employ further support. This would also allow the program to identify additional resources needed to further support First-Generation College students, rural, suburban and urban students.

Providing the instrument to students during their first semester at NC State in their mandated ALS 103 course would yield more responses. This would allow students to complete the instrument at a given time and further understand the importance of their responses.

An additional opportunity for research would involve students completing the instrument within their first two weeks of transition and again towards the ends of their first semester. This could provide useful information on how students developed and adjusted during their first semester in

real-time, compared to a retrospective analysis. Modifying the instrument for students who chose to work/intern or pursue personal enrichment during their fall semester would also be an area of research that could provide useful information. Identifying the adjustment process for students who did not attend community college in the fall could be further compared to identify needed resources of students who did not enroll in community college courses prior to transition.

**CHAPTER III**  
**STUDENTS' TRANSITION EXPERIENCES AFTER A BACCALAUREATE**  
**PATHWAY PROGRAM**

**Introduction**

Upon graduating high school, students have many options to either enter the workforce or continue their education. Open-access, low cost, and diverse curricula offerings make community colleges a desirable choice for millions of students (Laanan et al., 2011). Community colleges serve as a pipeline for baccalaureate attainment (Laanan, 2001). However, transfer students often suffer a loss in their level of grades, coined “transfer shock” (Hills, 1965, p. 202). Once completing the transfer process, the university is often an awkward fit (D’Amico et al., 2013). This is particularly due to the lack of academic and social involvement of transfer students at their new institution (Laanan et al., 2011). Transfer success can be encouraged through experience with faculty and advising programs (Townsend & Wilson, 2006; Laanan, 2001). Transfer students comprise approximately 20% of NC State graduates, with 51% of 2017 transfer students matriculating from a North Carolina community college (Office of Undergraduate Admissions, 2017). In order to enhance the success of transfer students and fulfill their land-grant mission, NC State has employed an advising and mentoring program to further ease the transition of freshman transfer students.

**Theoretical Framework**

The student involvement theory served as a lens for this qualitative study. The use of a theoretical framework in qualitative research is often questioned due to qualitative research being inductive. However, this study shapes the existing theory by analyzing and interpreting data using concepts of the student involvement theory (Merriam, 2009). Astin defines student

involvement as the quality and quantity of physical and psychological energy put forth by students throughout their college experience. Inputs, outputs, and environment are three components comprising the theory. *Inputs* involve the characteristics students possess when entering an institution. There are five postulates to summarize assumptions regarding involvement:

- (1) The investment of physical and psychological energy in various objects. 2) Regardless of its object, involvement occurs along a continuum; that is, different students manifest different degrees of involvement in a given object, and the same student manifests different degrees of involvement in different objects at different times. 3. Involvement has both qualitative and quantitative features. 4) The amount of student learning and personal development associated with any education program is directly proportional to the quality and quantity of student involvement in the program. 5) The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (Astin, 1984, p. 519).

Student experiences throughout college detail the *environment*. Experiences involve academic and social involvement and taking advantage of resources. *Outputs* refer to the knowledge, attitude, and belief changes with inputs and after environment exposure. The Input-Environment-Outputs (I-E-O) Model represents the theory and is visualized below.

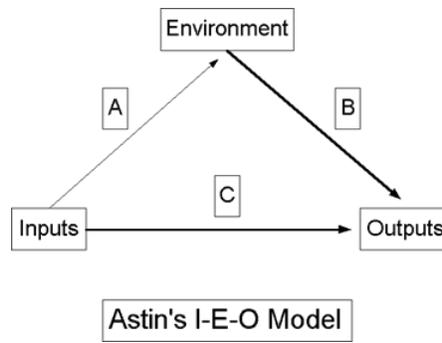


Figure 3. Astin’s Inputs-Environment-Outputs (I-E-O) Model

The student involvement theory details how baccalaureate attainment is influenced by academic and social participation throughout college (Astin, 1984; Lester et al., 2013). Traditional pedagogical theories place emphasis on student outcomes. Alternatively, the student involvement theory places emphasis on *how* the student is developing, rather than *what* the student is developing. The theory details the active role students have in determining desired outcomes, which differs from the passive role in traditional pedagogical theories.

Relevant research utilized the student involvement theory as a guide to determine factors affecting baccalaureate attainment (Astin, 1977). The student involvement theory has widespread applications. Utilization of the theory by faculty can shift focus from pedagogical techniques to intended outcomes. The I-E-O model provides a framework for university personnel to work with low performing students to set goals and identify where their energies are focused (Astin, 1984).

Interpreting data through the lens of the student involvement theory aides this study in explaining how the inputs and environments of STEAM *Spring Connect* students impact their experience throughout the program, and transition outcome.

## Review of Literature

### Transfer Opportunity

#### *Community College Vehicle*

Providing access to higher education institutions has been an important mission of public junior colleges since their 1901 inception (Cooley, 2000). Upon graduating high school students choose or are chosen by colleges (College Board, 2020). Workforce demands, requiring higher education, increases the number of students seeking higher education (Reindl, 2007). With increased application numbers and higher academic competition, granting one student admission, means keeping another student out (Zwick, 2007). Geographic proximity and low tuition make community college a viable option for pursuing higher education for students (Ma & Baum, 2016). Community colleges serve as an effective pipeline for students to obtain a baccalaureate degree (Townsend, 1993). Community colleges further support transition by establishing articulation agreements and specifying number of credit hours that will transfer (Kintzer & Wattenbarger, 1985). Once aimed to serve students who are transferring with associate degrees, articulation agreements now serve students with multiple institution transfers (de los Santos & Wright, 1989; Townsend & Ignash, 2000). Articulation agreements, low tuition, and proximity to home allow community colleges to provide a suitable pathway for matriculation to university settings (Ma & Baum, 2016).

#### *Traditional vs. Non-Traditional Transfer Students*

Each year, universities define enrollment numbers of the student body in terms of incoming freshman, continuing, and transfer students. Defining a transfer student is difficult as each case of transfer is unique (Cohen & Brawer, 1987). Time spent at community college before matriculation varies and may be left out of the definition of a traditional transfer student.

Historically, a transfer student earns 60 transferable credit hours, equivalent to two academic years, at the community college before matriculating to a university (Radwin & Horn, 2014). There are multiple types of transfer students (McGuire & Belcheir, 2013), ranging in age (Kinsella, 1998), and personal profile (Mackinnon-Slaney, Barber, & Slaney, 1988). Traditional transfer students are those who attend college under the age of 24, while non-traditional students are categorized as students attending college over the age of 24 (Kinsella, 1998). Fitting all transfer seeking students into one mold of what a transfer student should look like is difficult (Radwin & Horn, 2014). Transferring is a multidimensional process (Laanan et al., 2011) with each transfer student varying in terms of GPA, number of credits transferred, and length of attendance at community college (McGuire & Belcheir, 2013).

## **Challenges**

### *Academic and Social Adjustment*

Transferring to a university from a community college leaves students facing a different academic and social environment (Townsend, 1993). Often the academic adjustment required leads to a decline in academic performance (Hills, 1965). Social adjustment is also impacted, as students express more desire to become socially involved at the university compared to the community college (Borglum & Kubala, 2000). The feeling of isolation and alienation is often a result of transfer students once integrated into large student bodies and classes at the university (Townsend & Wilson, 2009). Adjusting to new academic and social environments leaves transfer students “feeling like a freshman again” although already a college student (Townsend, 2008, p. 77).

It is the goal of many researchers to explain factors influencing and supporting academic and social adjustment of transfer students. Negative perceptions of university coursework

(Laanan, 2007) and lack of resource utilization are two factors affecting academic adjustment (Townsend, 1995). Transfer students who lack academic self-confidence and earn a low community college GPA experience difficulty in adjusting academically to their new institution (Laanan, 2000). Social adjustment of transfer students is influenced by factors such as work schedules and lack of campus connection (Townsend & Wilson, 2009). Students who engage in extracurricular activities experience a positive social adjustment compared to those who do not (Laanan, 2007).

Transfer students are often compared to their native counterparts, which are likely to be academically and socially more engaged (Ishitani & Mckitrick, 2010). Students can ease their academic and social adjustment by increasing their transfer student capital, coined by Laanan (2001). This capital describes the preparation and resources transfer students bring with them to four year institutions (Laanan, 2001). Such resources include note taking, problem solving, and time management skills. In addition to these skills, students can further prepare for the academic and social adjustment associated with transfer by obtaining awareness, understanding expectations, and utilizing resources. Learning to adjust to the university setting allows transfer students to work towards completing their baccalaureate goals (Berger & Malaney, 2003; Laanan, 2001).

### *Transfer Shock*

Students who matriculate to the university setting from a community college experience a decline academic performance, coined as “transfer shock” (Hills, 1965, p. 202). Further exploring and defining factors associated with transfer shock, as well as, comparing transfer and native student transfer shock has been the goal of several researchers. Glass, Jr. and Harrington (2002) found there is no significant decline in GPA of native students compared to transfer

students, who experienced a drop in GPA during their first semester. Although experiencing transfer shock, transfer students do recover. Factors resulting in transfer shock include low grading standards at the community college, change in environment, and advanced work at the university (Webb, 1971). These factors encourage transfer shock among most transfer students, however, recovery is possible (Glass Jr. & Harrington, 2002).

### *Faculty Perceptions*

Transfer and native students differ in many areas and faculty perceptions of academic preparedness exist at receiving institutions (Zerquera et al., 2018). Student perceptions of university faculty also exist (Townsend, 1995). Transfer students perceive university faculty negatively stigmatizing them because they are transfer students (Laanan, 2001). A recent study reported transfer students were more satisfied with advising at their community college compared to institutional advising (Allen et al., 2014). Individual interactions and the development of relationships between faculty and students aid in advising experience for transfer students (Zequera et al., 2018). Negative student perceptions of faculty stem from large class size and greater disconnect between student and teacher at the university level compared to the community college (Townsend & Wilson, 2006). Students are more likely to feel comfortable approaching faculty and seek coursework advice when they view their faculty as approachable and remove negative perceptions (Laanan, 2000).

### **Avenues of Support**

Academic advising, financial aid, and social/cultural issues are three areas identified that can inhibit the success of transfer students. Improper academic advising at both the community college and university throughout transition can result in courses that do not transfer. Lack of course management can prolong the baccalaureate attainment of transfer students and hinder

their success. Higher university course costs compared to community college courses require additional financial aid stress for students, further impacting success (Gard et al., 2012).

Academic success can be supported through services and specific transfer programs. A research study (Daddona et al., 2019) found transfer centers, transfer-specific advising, and transfer orientation and mentoring were needed services at the receiving institution identified by transfer students. This article details how NC State provides advising, enrollment, and mentoring services to freshman transfer students through a unique baccalaureate pathway program.

### **STEAM Spring Connect Program**

NC State provides access for students to obtain a bachelor's degree through unique pathway programs. The Student Transition Enrollment Advising and Mentoring (STEAM) *Spring Connect* program is one initiative aimed to provide access to rural students and build support for under enrolled majors within CALS. As students move off campus due to graduating, starting internships, or studying abroad, space opens up on campus, which allows for the admission of additional students in the spring. Students are invited to participate in the program from the pool of freshman applicants. With admission granted in the spring of their senior year of high school, students have a variety of options for how to spend their fall semester before transitioning to NC State in the spring. Students have the option to spend the fall semester enrolled in courses at a community college, working, or pursuing personal enrichment. The STEAM *Spring Connect* program assists students in their transition by providing academic, advising, and mentoring support.

The STEAM *Spring Connect* program works to enhance academic skills necessary for success at the university level by employing monthly advising activities to further support and prepare students prior to their matriculation to the university. Social adjustment is supplemented

by special events geared towards integrating students with campus prior to arrival. Upon transferring, students in the program are further supported through a course specially designated for *STEAM Spring Connect* students, ALS 103. Within the course, students learn how to acclimate to the university setting alongside their fellow cohort members. Diversity, academics, and career readiness are three topics covered within the course. The CALS CARES (Connecting, Accepting, Respecting, and Encouraging Students) mentoring program is a college wide mentoring initiative offered to *STEAM Spring Connect* students to further enhance their transition experience and smooth their transition from community college to university. This program is offered to all freshman and transfer students within the college. *STEAM Spring Connect* students are unique to the university and receive additional support and resources to ease transition and promote success at the university. Further research is needed to identify how transition programs aid the transition process, as well as, the experiences and challenges first year transfer students face.

### **Purpose**

The purpose of this study was to explore perspectives of students who transitioned through the *STEAM Spring Connect* program. Additionally, the researcher sought to understand how the program provides access for varying demographic locations, as well as, benefits the majors within CALS.

### **Research Questions**

The research questions of this study sought to:

1. Explore transition resources needed by students;
2. Explore academic and social adjustment factors influencing transition; and
3. Explore challenges students face throughout transition.

## Methodology

Data for this basic qualitative study were collected through two focus groups of STEAM *Spring Connect* students at NC State who previously completed a questionnaire about their transition experiences. A purposive sample identified the participants who would be recruited to participate in the focus group. Purposeful sampling includes selecting individuals who display criteria directly reflecting the purpose of the study (Merriam, 2009). Only participants who completed the initial questionnaire ( $n = 34$ ) were recruited for the focus groups to offer detailed responses of the STEAM *Spring Connect* program experiences and further explore survey items. Two focus groups gathered information regarding STEAM *Spring Connect* experiences, available resources, perceptions, and recommendations.

The study was submitted to the Institutional Review Board (IRB) at NC State. The focus group protocol, adult consent form, and invitation letters were submitted for review. The study was deemed exempt, acknowledging the study was of minimal risk to participants

Participants were identified using the distribution history in Qualtrics. Names and emails were not directly associated with survey responses. The downloadable history linked the student email to a completion code: “finished survey,” “partially completed survey,” or “email sent.” Emails that indicated “finished survey” were sent an invitation letter recruiting them to participate in one of two focus groups. The invitation email detailed the date, location, and time of the focus groups. Pizza, chips, and drinks were offered as an incentive to participate. Students responded whether they were available to participate by email to the researcher. If students could not attend the date of one of the focus groups, the other date and time was offered to them. The first focus group conducted included eight participants, while the second focus group included five participants. The participants ranged in major with four students studying Agricultural

Education, three studying Agricultural Science, three studying Poultry Science, with Crop and Soil Sciences, Animal Science, and Agricultural Business Management represented by one student. Focus groups were conducted during the second week of the spring 2020 semester. To accommodate the schedule of undergraduate students, focus groups were scheduled from 5:00 pm- 6:00 pm. The researcher identified this time to prevent conflicts with extracurricular activities or other obligations of undergraduate students. Ten focus group questions were developed to address the questions specified in the study. Questions were adapted from the L-TSQ open ended questions and interview questions from a transfer student case study identifying obstacles community college transfer students face (Townsend, 1995). A room in the Agricultural and Extension Education building on the campus of NC State was reserved as the location for the focus group.

Consent forms were passed to participants before the start of the focus group. The consent form informed participants about the research study, detailed how responses would be used, and described the process of audio recording that would take place. Participants initialed beside a statement agreeing to be audio recorded, in addition to signing the consent form. Confidentiality was ensured through the use of pseudonyms. Each participant was instructed to create a pseudonym to go by and then write their name on a name tent. Tents were created to help students refer to each other as their pseudonyms. Two recording devices were utilized in both focus groups to ensure audio was recorded and to account for recording errors. Desks and chairs in the focus group location were arranged in a circle so each participant could see the other participant's faces and name tents. The researcher served as the moderator, asking the questions to the group and probing for additional insight on mentioned topics. An observer was present throughout the focus groups to take notes on time, body language of participants, and

reactions to questions. Once the focus groups were conducted, audio-recordings were uploaded to *Temi*, an online transcription service. Transcriptions were exported to Microsoft Word where edits were made by the researcher to clarify inaudible text and grammatically incorrect statements and phrases.

The constant comparative method, first proposed by Glaser and Strauss (1967), was used to analyze qualitative data in the study. This included, open-, axial-, and selective- coding where categories were formed. Open-coding refers to the process of making notations next to data which might be useful. Codes are then interpreted and organized into groups through the process of axial-coding. Axial codes were analyzed between both sets of data. The data was merged and through selective-coding, categories were formed and then narrowed to produce themes and sub-themes (Merriam, 2009).

Credibility, transferability, dependability, and confirmability are four techniques proposed by Lincoln and Guba (1985) for ensuring trustworthiness throughout qualitative research. Trustworthiness refers to “the degree of confidence that the findings of the study represent the respondents and their context” (Dooley, 2007, p. 38). Credibility was achieved through peer-debriefing and member-checks. Peer-debriefing involves discussing the process of the study, emerging findings, raw data, and interpretations with colleagues; while member-checking solicits feedback on emergent findings from participants (Merriam, 2009). Two graduate student colleagues peer debriefed codes and emergent themes and sub-themes. Two participants from the focus groups were selected to discuss codes and findings to determine whether the themes and sub-themes were accurate findings represented in the focus groups. Rich, thick description was employed to ensure transferability of the study. A descriptive account of the setting, participants, observations, and findings were recorded. The researcher ensured

dependability and confirmability of the study through an audit trail. Methodical procedures, decisions and reflections were documented to comprise the audit trail to ensure findings are traceable to raw data (Dooley, 2007; Merriam, 2009). The audit trail is included in Appendix G.

To further ensure trustworthiness, the researcher employed reflexivity. Throughout qualitative research, the researcher “reflects on who he or she is in inquiry and is sensitive to his or her personal biography and how it shapes the study” (Creswell, 2003, p. 182). Reflexivity acknowledges the biases of the researcher, which is important as the personal-self becomes inseparable from the researcher-self (Mertens, 2003; as cited by Creswell, 2003). A statement of subjectivity is included to ensure reflexivity throughout the qualitative study. The researcher is a graduate of NC State, where she matriculated through an alternative pathway program similar to the STEAM *Spring Connect* program. The researcher enrolled in courses at a community college for one year before matriculating to NC State. The researcher is from a rural area of North Carolina and was previously employed by the STEAM *Spring Connect* program where she worked with students in the seventh cohort of the program. The researcher served as an instructor for six participants in the research study and interacted with students throughout their transition.

## **Results**

Two focus groups with ( $n = 13$ ) total participants provided data for this basic qualitative study. After the transcription and coding process, 323 open codes were categorized into six themes and 14 sub-themes. Table 17 displays each research question with corresponding themes and sub-themes. Respondent quotes are included for both themes and sub-themes in the text. To protect the identity of participants, names are not used. The following abbreviations are used throughout the findings to indicate when a statement was made. Focus group one is represented by FG1, with the second focus group represented by FG2.

Table 17

*Emergent Themes and Sub-Themes Related to Research Questions*

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Research Question 1: Explore transition resources needed by students.

Theme 1: Building Transition Capital

Resources Needed

Needed Resources

Program Experience

Theme 2: Place-Making Within Program

Sense of Belonging

Importance of Friends

STEAM *Spring Connect* Events

Research Question 2: Explore academic and social adjustment factors influencing transition.

Theme 3: Social Motivation

Demographic Transition

Social Involvement

Theme 4: Acclimation to environment

Community College Experiences

Perceptions

NC State Experiences

Research Question 3: Explore challenges students face throughout transition

Theme 5: *Spring Connect* Clarity

Limited Understanding of *Spring Connect*

Theme 6: Communication Throughout Transition

Communication

Community College Advising

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## **Findings Related to Research Question 1**

The first objective of the study sought to explore specific resources that *STEAM Spring Connect* students need throughout transition from community college to NC State. *STEAM Spring Connect* students undergo a unique matriculation experience different than that of traditional transfer students, therefore, it was the goal of the research to identify additional resources needed by students. Themes that emerged to answer this question were building transition capital and place-making within program.

### **Theme 1: Building Transition Capital**

The first theme to emerge from participants' responses regarding resources was building transition capital. Similar to Laanan's transfer student capital (2001), transition capital encompasses the additional resources *Spring Connect* students can prepare themselves with to ensure a smoother transition.

#### *Resources Used*

The first sub-theme involved the resources that were used by *STEAM Spring Connect* students throughout their transition to NC State. When discussing community college resources, one student (FG1) noted the numerous opportunities available, "We had a really awesome library that had online resources. People would help you with your resume. I was able to get a job. There were a lot of really good things for students, like professional development." In contrast, a student (FG1) described their experience as: "My community college did not really have a lot of educational resources, whereas here, it is pretty much whatever you need under the sun." An additional resource discussed was the Transfer Equivalency Tool. One student (FG2) described,

I think the tool that really helped me a lot when choosing classes was the online tool where it shows what courses transfer and what they transfer as. Community college

courses have a number and letter attached and it was really easy to match that up the university. So that tool was really helpful.

A student in the first focus group (FG1) agreed, “We definitely utilized the course equivalency tool. I know a lot of people that got a lot of credits their first semester that did not transfer here. It was really helpful seeing the classes that would transfer.” Before students began taking courses at NC State, they noted the use of their academic advisor as a resource. A participant from the first focus group (FG1) commented,

Something that definitely was a resource we had here that definitely helped with transferring was our advisor. I mean I had [NC State advisor] as an advisor and she was definitely really good about making sure that my courses counted and I was enrolled in the right things. This was nice because it was my first semester and scheduling was new to me. So definitely the faculty.

### *Needed Resources*

The second sub-theme describes the needed resources of STEAM *Spring Connect* students. When asked to describe additional resources needed, opportunities for integration was one resource mentioned. One student (FG1) explained “I think going on campus and being able to walk around on our own and as a group would be beneficial before going in the spring.” Another student (FG1) agreed, “I just wish there had been a few more opportunities to get us on campus during the fall.” A second needed resource for integration noted by the participants was access to on campus job information. One student (FG1) described,

It was a serious struggle for me. I don’t know how it worked out for other people, but maybe some way to fix that. Some type of job fair, which there was, but like strictly for students that come in late or something like that.

A different student (FG1) agreed:

It was. I didn't even get a job last year but I looked for a job. I will say it was very difficult coming in during spring because most of the opportunities get filled up in the fall, at least for a lot of the agricultural units out on Lake Wheeler, a lot of them get filled up in the fall. Most of the time people stay there all year. I mean, I started at the feed mill in the fall. I'm still there, it just would have been nice to have something to help us get jobs.

In addition to integration, participants described resources needed for academic success. NC State utilizes Moodle for course administration. Other colleges and universities utilize different or similar course administrative programs. This was one area in which students described the need for additional resources. One student (FG1) noted:

I wish there were more resources for navigating Moodle. My community college didn't use Moodle, we used Blackboard, and so it was a whole different format. During the first week, I just kept going on and playing with it and tried to figure out where everything was and how to access stuff on the course. It was kind of difficult because I was in an English class and I had an assignment due that week and I was trying to figure out how to work Moodle at the same time.

A different student (FG1) agreed, "Having more information and knowing that WolfWare is Moodle would be helpful." Participants also noted resources for reaching out to NC State advisors prior to transfer would be helpful. One student (FG2) explained,

Even if our advisors can't reach out to us, at least show us how to reach out to our advisors. My parents told me to do that and it turned out to be extremely beneficial and

gave me a lot of opportunities. So just maybe making that more clear and kind of forcing us to do it.

### *Program Experience*

The third sub-theme describes participants' program experiences. When first discovering they would not be attending NC State in the fall semester, students expressed their feelings as "I'm not good enough (FG2)," "discouraged (FG2)," and "out casted (FG2)." However, after completing the STEAM *Spring Connect* program, more positive feelings were described. One student (FG1) conveyed the STEAM *Spring Connect* experience as:

I think it made the transition from high school to college a lot easier. A lot of my friends from high school went to NC State directly out of high school and just seeing their experiences that first semester, whenever they were first semester freshmen, their experiences with the transition process was a lot more difficult than my experiences as a *Spring Connect* student. Like I said earlier, I had that whole semester, going from high school to community college to university definitely helped.

A different student (FG2) agreed, "So overall, I think it was a really great program. I'm really glad. Honestly, I think I'm better, I was better off being a *Spring Connect* student than I was, if I were to get regular admission to be honest." An additional student (FG1) described their experience as:

I would say I've benefited greatly from this whole experience and I got a lot out of it because I attended the events and met a lot of people and it definitely made the transition much easier than just jumping right in. And I think that the whole community college aspect beforehand really benefitted me because it just got those different, those difficult

classes out of the way that I could take there than here. It was just overall a great experience.

## **Theme 2: Place-Making within Program**

The second theme present across the data was place-making within program. Throughout the data, participants described the importance of being a part of the *STEAM Spring Connect* program in many aspects.

### *Sense of Belonging*

The first sub-theme involved the sense of belonging felt while being a part of the *STEAM Spring Connect* program. One student (FG1) described, “Those of us that could not make it to the different activities, everyone was pretty welcoming once we got here. They wanted to be friends.” A different student (FG2) agreed,

You think you are the only one, but then you meet other *Spring Connect* students. I feel like whenever I first came to anything in the fall here at NC State, it was like “Oh you’re a *Spring Connect* student? Me too.” It’s like right there is a bond.

### *Importance of Friends*

The second sub-theme described the importance of new friendships made throughout the transition process. One student (FG1) described,

I feel like we made friendships that helped us get started so then we could walk to class together. And so it just like, it was like we had somebody to fall back on. But if we would have gotten here in the fall, a lot of the people I knew, they said that they did not make friends and so we had like a premade friend group kind of.

A different student (FG1) agreed, “Yeah. It’s like we are, we already had a group that we felt really comfortable around before we even got to school” when describing the transition. One

student (FG2) stated, “The other people I met that were also in *Spring Connect*, we kind of figured it out together and it made transitioning from home to here a lot easier.” One participant (FG1) described the importance of friends throughout the registration process as:

I had to call her, like whenever I was registering for my classes because I couldn’t get into one of the labs and I was freaking out and I was like, I don’t know what I’m doing. I’m like so confused. I was messaging on like Snapchat and stuff. And thankfully she was able to help me.

### *STEAM Spring Connect Events*

The third sub-theme involved *STEAM Spring Connect* events offered to students throughout their transition from community college to university. One student (FG1) described the events as,

I think with the STEAM program when they did do the CALS football tailgate, I really enjoyed that because it was a way for me to come up here, meet other people, new students. Also experiencing one of my first meetings here. So that was really nice.

A different student described the *Spring Connect* Advising Day as “Something that helped me meet new *Spring Connect* students, but it also helped me have a one on one face to face meeting with my advisor and make sure I’m on track.” A different student (FG1) disagreed, “So we only have that one advising day when we came and since I only took two classes at community college, I really didn’t know what I was doing. That was a lot to just try and understand in one day.” One student (FG1) explained, “I do live further away from here. So coming to the things that were held or even the advising day was hard.”

## **Findings Related to Research Question 2**

The second research question sought to explore the academic and social adjustment factors influencing community college to university transition. The academic and social environment at the community college is different than the university setting. Therefore, it was the goal of the researcher to identify the specific academic and social adjustment factors experienced by STEAM *Spring Connect* students. Social motivation and acclimation to environment were two themes that emerged to answer this research question.

### **Theme 3: Social Motivation**

The third theme to emerge from the data is social motivation. Throughout this theme, participants' described the different social aspects at the community college compared to their university.

#### *Demographic Transition*

The first sub-theme was demographic transition. Participants were asked to describe their demographic location as rural, suburban, or urban and then recall their transition experiences. One student from a suburban area (FG1) described, "But here it's just like always everybody's moving and going and like sometimes I'll actually just really slow down, that was a big adjustment of like how fast life moves out here." A different student (FG2) described the demographic transition as:

One thing for me specifically is, I've seen things at NC State like I've never seen before when it comes to like diversity and that kind of thing. You're up in an area where it's kind of everyone has the same ideas and thoughts and so coming to NC State really helped like broaden horizons and learn about different things, new things.

When discussing social adjustment, one student (FG2) described,

I think the biggest thing is just taking the initial step to like reach out and say “Hey I’m this person, we can be friends...let’s study together.” Coming from a small town, like everyone knew everybody. So I didn’t ever have to like introduce myself to someone.

While one student (FG1) described the new environment as “claustrophobic” and compared campus during class changes to “standing in the middle of Times Square.”

### *Social Involvement*

The second sub-theme describes the social involvement experience by students at their community college and at NC State. When discussing social involvement at the community college, one student (FG2) explained,

I really wanted to go to some of the events that they had in the community college but I almost had to like shut those opportunities off because I only thought, “Oh, I’m just here for a semester. There’s really not much, there’s not a lot of incentive for me to go to those things or events.” I just didn’t try to make those connections.

A different student (FG2) described, “My community college didn’t really have social events.”

When describing social involvement at NC State, one student (FG1) explained, “It’s nice to have different communities to like jump around and like do something different.” A different student (FG1) added, “The animal science club pushed me to actually want to stay here on campus and do stuff.” One student (FG1) described her experience joining clubs in the spring as: “When I got here, there were tons of people. They are very welcoming.” In addition, one student (FG2) noted, “That’s pretty much one third of what you’re doing is doing social things with clubs.”

Participants also spoke about their feelings towards social involvement in the fall semester. One student (FG1) commented, “I know for me, I’m a big sports fan, it does kind of suck coming in

the spring because you don't get to go to the football games." A different student (FG1) explained,

I had a harder time like finding clubs that I wanted to be interested in or that worked around my schedule. I think that was a little bit of a difficult thing coming in. You have to figure out where they're meeting and it's the spring, so like are they really accepting new members?

#### **Theme 4: Acclimation to Environment**

The fourth theme to emerge across the data was acclimation to environment. Adjusting to the university setting from the community college was described throughout this theme.

##### *Community College Experiences*

The first sub-theme involves participants' experiences at community colleges prior to transitioning to NC State. Participants described experiences related to faculty and courses. One student (FG1) described, "It was just a lot of me figuring out what to do, because I didn't really have that support from the community college." A different student (FG1) noted, "My teachers weren't as approachable or, you know, a lot of them had other jobs too, so they wouldn't have as much time to meet with me." One student (FG1) described one of their community college professors as "all over the place." When describing community college experiences, one student (FG2) added, "All of my community college professors or teachers were pretty on a one-to-one basis. They got to know their students on a personal level." One student (FG2) agreed, "Community college was definitely more one-on-one and I really enjoyed that." A different student (FG2) explained one difference in courses as,

One thing for me especially is at community college, my grades weren't focused on just exams. So that was one thing I had to come to NC State and realize like if you mess up

on one exam, you really have to pick up on the next. You don't necessarily have those little assignments in the middle to help boost that grade up.

### *Perceptions*

The second sub-theme included students' perceptions of NC State courses and faculty. One student (FG1) commented, "I was expecting that the classes were going to be just lecture based so we were just supposed to write it all down because that's what I had heard." A different student (FG2) explained, "I think I expected this to be hard," with a student agreeing, "I think I'm more surprised that I often do a class and it's really simple." In regards to faculty perceptions, one participant (FG1) described:

That's something that surprised me about [NC] State, was the fact that the professors were so good at being professors. What I, what I was kind of prepared for, was like the worst case scenario. Professors were just there to do their research and get on, but like I said, it surprised me.

A different student (FG1) added, "I was pleasantly surprised with my professors," when describing how one professor offered additional academic support outside of class to raise his final grade to a B from a C.

### *NC State Experiences*

The third sub-theme describes the NC State experiences of participants. The responses covered two areas, faculty and courses. One participant (FG1) described the faculty they interact with as "Super-passionate about what they do and they care about what they're teaching." A different participant (FG1) added, "Every single one of my professors is trying their hardest for me to do as well as I want." When asked to describe academic adjustment several statements were made regarding NC State courses. One student (FG1) described that she felt like she was

“underprepared.” With a different student (FG2) explaining, “It’s a lot more than it was [at community college].” Class size was one factor noted by many participants. One student (FG1) explained,

The class size was a little bit of a challenge you know...you’re coming from your pre-calculus class that had 20 people in it...and you’re sitting in the middle of the auditorium with 250 people and you’re looking around and you’re just thinking, “Oh how am I going to learn?”

A different student (FG2) replied similarly stating,

I would definitely say that going from community college classes of like 20 to 25 and then coming into a calculus class here at [NC] State with 250, it’s a big transition and something you have to try to deal with.

To overcome the class size difference, participants gave solutions for how they adjusted. One student (FG1) explained, “I feel like as long as you’re confident in yourself, then it’s something that may or may or may not bother you.” While another participant (FG1) commented, “I always spoke to the instructors.” A different solution involved staying focused. One participant (FG1) noted, “You sit in a seat that you can stay focused and you either find someone to sit with, or you sit by yourself where you can stay focused.” Participants also discussed a shift in effort required. One student (FG1) explained, “I will say, I feel like NC State has required more of, my work has regarded more work from me as a student than community college.” A different student (FG1) agreed, “NC State has required me to have a lot more like study habits and like figuring out how to study and how to get things done on time.” One student (FG2) added, “I think the big thing is just learning how to study for each individual class because you have to have a different study

method for each subject almost.” Time management was an additional skill noted by participants. One participant (FG2) commented:

I think time management is a big thing too. I had to change a lot of how I used to do things to how I do things now because just the workload that each class requires and studying for it and getting ready for exams and stuff.

A different student agreed:

I think just the stressor of trying to be more involved kind of forces you to have a better time management because right now with the new semester starting and me trying to still adjust to my classes and my new work schedule and then me trying to still be involved with campus and still have adequate time to study and learn all of the material it’s like there’s not enough time in the day.

### **Findings Related to Research Question 3**

The third research question aimed to explore the challenges STEAM *Spring Connect* students face throughout transition from community college to university. *Spring Connect* clarity, and communication throughout transition were two themes used to answer this research question.

#### **Theme 5: Spring Connect Clarity**

The fifth theme to emerge from the data regarded *Spring Connect* clarity throughout transition.

##### *Limited Understanding of Spring Connect*

One sub-theme described the limited understanding of *Spring Connect* by community colleges and students. One student (FG1) described her experience as:

They definitely don't really get that you're, you just need to get some credits and then you're getting out, they want you to ...pick a degree...I'm just going to be here for one semester and they don't really understand that.

A different student (FG1) had a similar experience and explained,

The courses that I had planned already that would transfer, I was like, "Okay I need to take these courses." Trying to explain to them, they didn't understand that I need to do this because I won't be here for the next semester.

An additional student noted, "[Community college advisors] helped me with my transition and everything like that but it was almost like they were kind of confused about it a little bit."

Participants' also described their confusion about the program. One participant commented, "I'm not sure about y'all, but like I didn't even know there was a *Spring Connect*." After this statement was made, all of the participants (FG2) agreed with "Yeah." One student (FG2) described in agreement, "I didn't know either whenever I got that note. I sent it to my Ag teacher and other people that I knew that had gone to NC State and I'm like, "What does this mean? I don't understand." When asked to describe potential solutions for the lack of knowledge about the program participants offered ideas. One student (FG1) described, "If I could change one thing about STEAM, it would be maybe having them reach out to [community] colleges." A different student (FG2) mentioned, "Just advertise it more...like normalize it a little more."

### **Theme 6: Communication throughout Transition**

The sixth theme to emerge from the data described communication through transition. Communication was one topic continuously discussed as a challenge throughout transition.

### *Communication*

The first sub-theme describes the communication obstacles faced by participants throughout their transition at both the community college and university. One student (FG1) described, “There just wasn’t that many people to communicate with.” A different student noted the experience with career services as, “Anytime I would email or call, I would always get a response way too late.” Communication with university personal was described by one student (FG1) as, “As far as university wide, if I were to reach out but I wasn’t like a current student...it was really hard to like get into contact with other people.” Communication during the fall semester was referenced again by one participant (FG1) commenting, “If I was contacting somebody on the university level...that was always more difficult.” In regards to communication at the community college, one student (FG1) mentioned. “One thing I didn’t like is like they didn’t communicate as well.” A different student (FG1) described, “I feel like just the lack of open communication...made the community college harder for me than here at [NC] State.” Communication obstacles at NC State were described with online professors. One student noted, “I felt like my English teacher [at NC State] wasn’t, didn’t have as much open communication just because he was online and it was harder kind of to communicate.”

### *Community College Advising*

The second sub-theme describes the advising experiences of the participants at the community college and university throughout their transition. When describing advising experiences at the community college, one student (FG1) described, “It was really kind of hard to work with the advisors.” A different student (FG2) commented, “Apparently I had an advisor in community college, but I didn’t know that person.” One student (FG2) described in agreement,

That's exactly what I was going to say. I didn't even know I had one. She didn't reach out to me until like the day that I started class [at NC State] and was like "Hey, you need to register for your classes." I [replied,] "I don't go to school there anymore."

### **Summary and Conclusions**

The responses of the two focus group participants allowed for varied and interesting findings. Conclusions drawn from the findings are detailed below. The *STEAM Spring Connect* program is a unique baccalaureate pathway program that is still new to NC State. It is difficult to generalize the findings of this basic qualitative study to other freshman transfer students as the focus group participants were homogenous in nature and the experiences of the seventh cohort of the *STEAM Spring Connect* program are unique.

#### **Conclusions Related to Research Question 1**

Research question one sought to explore the transition resources students needed throughout their transition from community college to university. When discussing resources used at the community college, one student described multiple resources available, while another student explained her community college offered little resources. Other resources utilized were employed by NC State and not their community colleges. This finding agrees with Townsend and Wilson (2009) that students rarely utilize available community college resources to aid in transition. Students took advantage of their NC State advisor as a resource throughout their transition process, understanding which courses would transfer and developing a relationship before starting courses at NC State. Previous literature describes community college students experiencing different attitudes from university faculty (Townsend, 1995). The responses contradicted this finding as university faculty were described as beneficial in aiding transition. Students noted several resources they would have liked to have access to such as opportunities

for campus integration, job accessibility, as well as, course administration information. Several participants expressed that they worked part-time while enrolled at their community college. Kinsella (1998) noted that traditional transfer students tend to work part time. Students were eager to work once arriving to NC State, but expressed a greater need for job information. Throughout the discussion, participants detailed a positive overall experience transitioning through the *STEAM Spring Connect* program. One student (FG2) even noted as being “Better off.” Other responses indicated the participants’ felt they benefited greatly and experienced a smoother transition because of the program. Laanan (2001) conceptualized transfer student capital as the resources students bring with them to the university to assist in adjustment. By using their resources, *STEAM Spring Connect* students were able to build their transition capital to aid in their transition, as well as, identify areas for further support. Conclusions regarding resources agree with Berger, Malaney, (2003) and Laanan, (2001) that transfer students should use resources to work towards completing their baccalaureate goals.

There was great discussion surrounding the importance of friends, belonging, and *STEAM* events within the *STEAM Spring Connect* cohort. Students noted they felt a sense of belonging within the program. Other findings revealed the *STEAM Spring Connect* events acquainted participants, allowing for friendship development prior to transitioning. Other responses indicated that students once felt “Out casted” (FG2) or like the “Only one” (FG2) but were able to bond with other students in the program. These feelings aligned with common experiences at four-year institutions found by Townsend and Wilson (2009). Although students felt belonging within the program, students also noted a lack of belonging with the study body or their freshman class. This finding agrees with Ishitani and Mckitrick (2010) who noted transfer students may experience difficulty in establishing networks in the university environment.

## **Conclusions Related to Research Question 2**

The goal of research question two was to explore academic and social adjustment factors that influence transition. When asked to describe their demographic location, participants represented rural, suburban, and urban areas. According to the findings, there is a transition that exists for students whether they are from a rural, suburban, or urban area. Students who were from rural areas commented more on their transition explaining how much faster life moves in Raleigh compared to their small hometowns. One student (FG2) mentioned the population of NC State was larger than the population of her town. While a different student (FG1) compared the central hub of campus to Times Square. Although transition existed for the students, positive feelings were associated with the move to Raleigh. One student (FG1) described how it was a luxury to be in close proximity to places, while a different student (FG2) commented on the different experiences gained by interacting with diverse people and differing mindsets than what were present in her hometown. Findings agree with Webb (1971) and the ability to cope when moving from one environment to another, and making sense of the transition.

Findings related to the social involvement of students who transitioned from a community college to university provided valuable insight. Findings revealed the differences between social involvement at the community college and university. One student (FG2) mentioned there were little opportunities for involvement at the community college level. A different student (FG2) expressed that social events were offered but there was little motivation to participate. The student also mentioned there was little incentive to participate due to only studying at the community college for one semester. Other findings revealed that students spent more time on their community college campus to make up for the long distance they had to drive for classes, and not for social involvement. Findings suggest that students only work to complete

transferrable courses at the community college and lack social motivation. These conclusions align with Borglum and Kubala (2000) who found that transfer seeking students express little desire in social involvement at the community college level. Findings associated with NC State involvement differ from the community college social involvement findings. One participant (FG1) described the desire to be involved at NC State. One student (FG2) commented that one third of time spent at NC State is towards becoming socially involved. Participants associated their involvement with clubs as a positive experience. Clubs were described as welcoming and easy to join. When asked about their social involvements, students described a wide array of activities from clubs, fraternities, and serving as teaching assistants. Findings agree with Townsend and Wilson (2009) that membership in clubs and fraternities aid in inter-socializing transfer students. Participants noted a positive social adjustment moving from community college to university and further described the eagerness campus clubs express for new membership in the spring. Students who were motivated to be socially involved at the university upon transition described a smoother social adjustment. This conclusion agrees with Laanan (2007), who found that students who participate in social activities will experience a positive social adjustment.

Participants discussed the varying environments experienced at their community college versus NC State. Community college courses were described as smaller, with more assignments to determine grades. Courses were also described as more lenient and having a smaller teacher to student ratio. When asked to describe adjustment factors, students described many aspects of the NC State courses. Class size was one factor continuously mentioned that required adjustment. One student explained he was concerned about his ability to learn after moving from a class of 20 students at the community college to a class of 250 students at NC State. Other students

alluded to their course preparation as academically behind or underprepared. This finding aligns with Townsend and Wilson (2009) who reported students in larger courses found it harder to learn. Participants' also noted the increased effort required in terms of completing coursework. Townsend (1993) reported that transfer students' face a go at it alone approach by the faculty at the university. Findings from this study disagree, as students reported teaching assistants, familiar faces, and tutoring as support mechanisms in their large courses. When asked how large class size was managed, participants described the importance of self-confidence. This finding agrees with Laanan (2000) in that students who lack self-confidence experience difficulties adjusting academically to the university environment. Others described the integration of smaller classes into their schedules. One participant (FG1) noted the balance of small and large courses reduced stress. Therefore, students who are able to enroll in smaller, major specific, courses during their first semester can smooth their academic adjustment. This conclusion agrees with Townsend (1993) that transfer students experience success when enrolled in major coursework upon transfer. NC State courses were described as having a heavier work load and requiring different study habits for different courses. Findings concluded that students were required to put forth more effort to succeed academically. This conclusion agrees with the work of Webb (1971) who reported transfer shock is contributed to lack of advanced work preparation. Findings also agree with Townsend (1993) who described there is an adjustment that exists between community college and university classroom atmosphere and academic standards.

Perceptions of the university and its faculty were also discussed, which revealed interesting findings. Participants described they once had negative perceptions of the faculty. Participants voiced they perceived the university professors caring little about students and courses, while putting effort into only their research. This finding supports the work of

Townsend and Wilson (2006) who noted professors in large class settings were perceived as lacking care and interest in teaching. Students discussed how they were surprised by the NC State professors due to their willingness to help students succeed. One student (FG1) attributed his biology professor working with him so in depth that he was able to earn a B instead of a C in the course. Others added they did not expect their professors to provide them course materials such as recorded lectures and PowerPoint slides. Zerquera et al. (2018) suggest faculty have a negative perception of transfer students. Participants from this study did not indicate any feelings of stigmatization by faculty, which provides a different insight to findings of previous literature.

### **Conclusions Related to Research Question 3**

The third research question aimed to explore challenges faced by students throughout transition. Throughout discussion, findings revealed an apparent disconnect in understanding the *Spring Connect* program. Several students admitted their community college lacked knowledge of the program. Participants noted they were confused when reading their decision letter. One student (FG2) explained that she didn't understand what the program was. Others indicated they had never heard of the program before. Participants offered advice for how to further educate community colleges, and even high school teachers and counselors. One student (FG2) suggested to highlight the benefits of the program. Others offered the idea of community college outreach. Through the findings, it is evident there is a knowledge gap surrounding the *STEAM Spring Connect* program which poses as a challenge throughout transition.

Findings from the discussion also cited communication barriers at both the community college and university. One student (FG1) described that, although there was open communication throughout transition, there were few people to communicate with. Other students discussed the difficulty when contacting university personnel in the fall semester. Lack

of communication at the community college was also discussed in terms of personnel and course professors. Communication, or lack thereof, was an additional challenge faced by students.

Advising was also an active discussion topic among the two focus groups. Students described negative experiences associated with their community college advising. One student (FG2) noted they did not know their advisor, while others mentioned their advisor did not reach out to them. One student (FG1) commented the advisors at the community college were hard to work with. The findings reveal that difficulties with advising may have stemmed from limited knowledge about the program and intent to transfer. This conclusion agrees with Gard et al. (2012) that academic advising at some community colleges is weak, lacking knowledge in how to advise students transferring to universities. Although experiences were negative among community college advisors, NC State advising experiences were positive. Students recognized that their NC State advisors prioritized advising and ensured their courses would transfer. One student (FG1) expressed there was little interaction with their NC State advisor while at the community college. Advising experiences throughout the transition were negative with community college advisors, resulting as a challenge for students.

The student involvement theory served as a lens for data interpretation. The inputs noted throughout discussion were resources at the community college and university prior to transitioning to NC State. Participants also noted university advising as a key input. The environment described the university setting after transition. Large class sizes, eagerness for social involvement, and demographic transition were areas in which environment influenced transition. Participants described a positive experience throughout the program, some even mentioning they were better off than starting at NC State in the fall semester. Inputs, combined with the environment, allowed for a smooth transition from community college to university; a

desirable outcome of the STEAM *Spring Connect* program. Participants also attributed their successful transition to the initiative they took to become involved with the STEAM *Spring Connect* program throughout transition. These findings align with Astin's student involvement theory, recognizing how the initiative students took throughout their transition resulted in a successful outcome.

### **Implications**

The findings from this study can aid stakeholders in identifying areas of strengths, weaknesses, as well as, new opportunities for growth. Findings can be used to identify areas to further support future cohorts in terms of resources. Findings indicated NC State advising, STEAM *Spring Connect* events, and formed friendships were resources employed by the program which aided transition. The STEAM *Spring Connect* program can build the transition capital of students by strengthening these resources for future cohorts of the program. Additional integration opportunities, course preparation, and knowledge of university software were described as needed resources by participants. This information can be used to develop additional resources to assist transition. Such resources could be workshops held to inform students about maneuvering university software or tips for adjusting to a university course load. Findings could also be used to seek additional funding to aid in the development of additional resources for students. Other colleges throughout the university who work with *Spring Connect* students could use these findings to identify resources they can employ to further support students throughout transition.

Findings revealed an overall positive opinion of the program. This information could be used when informing future students how the program was a positive influence for past students. Through the program, students met friends, felt a sense of belonging, and spoke highly of the

STEAM events. These findings inform the STEAM *Spring Connect* coordinator when planning future events. Identifying the impact of the friendships formed throughout the program in the fall semester highlights one unique aspect of the program. This information provides insight to the stakeholders of the program and could influence the development of more peer networking opportunities in the fall semester. One opportunity could involve past STEAM *Spring Connect* students speaking at events or the implementation of a peer mentoring program where a past STEAM *Spring Connect* student is paired with a new student during their fall semester, before transitioning. Collaborating with other colleges within NC State during the fall semester is another opportunity to integrate *Spring Connect* students across many disciplines.

This study provides insight to the academic and social adjustment factors students' faced after their transition. The STEAM *Spring Connect* coordinator could use this information to inform future cohorts how to smooth their adjustment by offering suggestions on how to acclimate to the social and academic environment at NC State. Tips such as talking with instructors, building self-confidence, and putting forth effort were suggested by the students in the study. Findings from the study could also be used to further inform future students from demographic locations different from Raleigh, NC, how to support their adjustment. Detailing the adjustment described by rural students in this study, such as feeling claustrophobic at times, the close proximity to places, and exposure to diversity and different mindsets, could inform rural and suburban students who are hesitant about leaving home. Showcasing the experiences of other students and their ability to adjust could reassure students from different demographic locations.

This study could further serve as a resource to alleviate the clarity and communication challenges associated with transition through the program. The STEAM *Spring Connect*

Coordinator could use this information to develop a system for further clarifying the program to community colleges and students. Findings could also be used to further market the program to prospective high school students, as well as, further educate high school agriculture teachers on how to support their senior students.

Using this study to explore employment opportunities is also an implication. The Provost's Professional Experience Program (PEP) at NC State supports academic success by funding on-campus work experiences that give students more time to focus on their studies. The program also gives students access to research and professional development opportunities. Collaborating, or potentially embarking funds with the PEP program, could be one solution to provide *Spring Connect* students access to employment the semester they arrive on campus. Making individual departments aware of the interest in employment by *Spring Connect* students could also provide opportunities for employment once students arrive to NC State. Connecting students with their departments opens the door for opportunities to engage in undergraduate research as a way for potential un-paid experience or as an avenue for potential future employment. Incorporating the various opportunities for employment in the ALS 103 class would allow students to understand how to connect and reach out to faculty regarding employment opportunities. This study allows the STEAM *Spring Connect* coordinator and key stakeholders to identify unique experiences of students for continued improvement, support, and success of the program.

### **Recommendations for Future Research**

To further strengthen this study, a paper survey could be administered to the STEAM *Spring Connect* students during their ALS 103 course during the spring semester, after they transition. This would yield more responses and would involve students closer to their time of

transition. This study could also be improved by conducting more focus groups with additional participants. Conducting separate focus groups for specific groups, such as First-Generation college students, would be useful to further compare the experiences of students in the STEAM *Spring Connect* program. Recruiting more participation for the focus groups will allow more experiences to be shared, further detailing the experiences of students. Comparing the different groups that comprise the students in the program who begin at a community college would provide further insight on unique adjustment factors and challenges faced by students.

One opportunity for future research involves First-Generation College students. Conducting focus groups with First-Generation college students about their specific transition experiences could provide additional insight on how the program can further support students within the program. Research could focus on *Spring Connect* First-Generation College students throughout the university, in addition to those in CALS.

A different area of research could involve the students who chose to work/intern or pursue personal enrichment during the fall semester. Administering a survey or conducting focus groups with those students would allow all students in the program to be represented and additional needs and resources to be highlighted. Information could be obtained from students who worked or interned during the fall semester about needed academic resources for university preparation. Identifying the experiences of students transitioning who took a gap semester, or spent time pursuing personal enrichment would also be insightful to understand additional challenges faced by students throughout the transition process.

More research could be conducted comparing *Spring Connect* programs across different colleges within the university. Identifying resources other colleges employ could be useful for CALS. Each college within NC State supports *Spring Connect* students differently. Some

colleges may employ additional resources or strategies for their students which may be beneficial for CALS students. In addition to across colleges, research could be conducted across majors within CALS to further identify how departments support *Spring Connect* students differently. Findings would be useful for departments to collaborate and identify additional support opportunities for STEAM *Spring Connect* students.

An additional opportunity for research could be collecting data at different points during the students' first semester at NC State. Identifying adjustment experiences at specific times throughout the first semester on campus would allow the STEAM *Spring Connect* program to further identify adjustment factors and areas of future improvement. This would further allow the program to identify how students maneuvered the adjustment process. A longitudinal study involving students in the program would be insightful to further examine the outcomes of the program. Modeling Astin's student involvement theory, a longitudinal study could reveal how the inputs and environment of STEAM *Spring Connect* students influences baccalaureate attainment. Identifying the number of students who successfully complete their baccalaureate degree would be useful information for stakeholders and the future of the program. Identifying the number of students who leave the university or do not progress towards their bachelor's degree would be insightful to identify additional areas of improvement for the program.

An additional research study could be employed to identify how the Summer Start program at NC State influences the transition experiences of *Spring Connect* students who choose to participate. The Summer Start program integrates newly admitted students over the course of a five week summer session where students enroll in courses to jump start their university career, while staying on campus. Comparing students who completed the Summer

Start program and those who did not would be useful for identifying if the Summer Start program aids the adjustment of STEAM *Spring Connect* students.

Further research on programs across the United States that employ programs similar to *Spring Connect* would be beneficial to identify how other community colleges and universities work together to aid transfer. Similar programs exist, such as the First-Year Spring Admission program at Cornell University. In an effort to allow more students to benefit from a Cornell education, the university developed the option for freshman students in two of Cornell's undergraduate colleges to start in the spring semester. Similarly, a front-end admission allows student to take classes, travel, work, or participate in public service during their fall semester. A timeline is followed to aid students in confirming their intent to enroll, as well as, registering for their courses (Cornell University Undergraduate Admissions, 2020). A similar program offered at the University of Southern California (USC) aims to bring in more talented students as space opens up on campus from graduates, students joining study abroad programs, or moving to off campus housing. A front-end admission decision provides multiple opportunities for how students can spend their fall semester. Before their spring admit, students have the option to enroll in courses, study abroad, take a gap semester, or work. A unique aspect of the USC Spring Admit program, is the Spring Admit Ambassador Program employed to serve as a resource for spring admit students. Through the program, incoming students are paired with current students who share insights from their own USC Spring Admit experience. Through the ambassador program, students are able to talk with current USC students about their fall plans, concerns, and expectations (Lindberg, 2019). Using research conducted on similar programs can provide insight on the initiatives employed by other universities to support their spring admit students. A collaborative research opportunity exists for universities offering freshman spring admissions to

further identify the adjustment factors and challenges that exist among students for future improvement of programs.

## CHAPTER IV

### SUMMARY AND CONCLUSIONS

To study the seventh cohort of the STEAM *Spring Connect* program at NC State, quantitative and qualitative methods were employed. The quantitative methodology consisted of a modified version of the Laanan-Transfer Student Questionnaire (L-TSQ). The instrument aimed to collect demographic information and further explore community college and university experiences of transfer students. Dillman's Tailored Design Method was modeled. The instrument was delivered to students' NC State email addresses through Qualtrics. Descriptive statistics and reliability analysis were conducted using SPSS software. The qualitative methodology consisted of a basic qualitative study which further explored the experiences of STEAM *Spring Connect* students. Two focus groups were conducted with participants who previously completed the survey component of the study. Participants were asked ten questions which were adapted from the L-TSQ open ended questions and a study by Townsend (1995) identifying obstacles transfer students face. The constant comparative method (Glaser & Strauss' (1967; as cited by Merriam, 2009) which involves open-, axial-, and selective-coding was used to form themes. Trustworthiness was ensured utilizing Lincoln and Guba's (1985) four techniques through member checking and peer debriefing, rich, thick, descriptions, and an audit trail. Participants completed the instrument during their second semester at NC State. Focus groups were conducted during their third semester. Identifying information was removed from responses to ensure confidentiality.

The first research objective aimed to explore the experiences of students transitioning through the STEAM *Spring Connect* program. Overall, the experiences of transitioning throughout the program were positive. Both quantitative and qualitative findings revealed that

students were happy with their decision to transfer and given the option to start the process again, they would still choose to attend NC State. The second research objective sought to explore the academic and social adjustment challenges associated with transitioning. The qualitative results revealed more specific academic and social challenges while the quantitative results highlighted the experiences of the community college and university. It was apparent through both methodologies the students experienced a drop in GPA and a more demanding academic environment at the university compared to the community college. In regards to social aspects, the qualitative results revealed a positive social adjustment and highlighted the importance of making friends through the *STEAM Spring Connect* program prior to transition. The quantitative results revealed it is easy to become socially involved at NC State. Overall, both the quantitative and qualitative findings did not reveal specific areas in which students struggled from a social aspect. The third research objective aimed to explain how the involvement of students influenced their transition. Overall, students reported that in order to benefit from the program, they have to take the initiative be involved with the program and university. Additionally, the qualitative results provided specific areas for improvement such as student communication between university staff and community college advisors, as well as, program advertisement to both students and community colleges. To conclude, this study revealed that *STEAM Spring Connect* students experience a positive transition from community college to university, however, there are areas for improvement to further enhance transition.

The two studies differed in findings that were revealed. The quantitative component of this study focused more on the experiences and perceptions of *STEAM Spring Connect* students, while the qualitative study sought detailed experiences and factors that influenced transition. One interesting finding between both studies was the experiences of community college faculty. The

qualitative results concluded a more negative experience with community college advisors and faculty due to the lack of knowledge about the program. Quantitative results revealed participants varied in how often they felt comfortable approaching community college faculty and asking for advice. One topic of discussion throughout the focus groups was the difference between community college and university faculty, where students indicated a preference for university faculty. However, in the quantitative findings, there was no clear mean difference between community college and university faculty experiences. In the qualitative results, students discussed a difference between community college and university faculty interactions; where university faculty were described as more approachable and helpful throughout the transition process compared to community college faculty. The development of skills was also an interesting findings between the two methodologies. Quantitative results revealed that students were neutral in the skills they developed at the community college, while qualitative results discussed the development of time and course management skills, increasing preparedness for the academic standards at NC State. Although separate methodologies, the quantitative and qualitative results complimented each other in further identifying the experiences, challenges, and transition process of STEAM *Spring Connect* students.

### **Conclusions Related to Theoretical Framework**

The student involvement theory (Astin, 1984) provided a framework for this study. The student involvement theory places students at the center of their outcomes, where more academic and social participation influences baccalaureate attainment. Three components of the student involvement theory include inputs, environment, and outputs. The inputs the students bring with them to the university, combined with the university environment, further influences the outcomes of obtaining a bachelor's degree. The framework provided a structure for this study in

determining how the inputs and environments of STEAM *Spring Connect* students impact their transition and adjustment process at the university. Both quantitative and qualitative results provided insights that confirm the intent of the student involvement theory. One statement on the instrument asked participants to agree or disagree with the statement “If students expect to benefit from what NC State has to offer, they have to take the initiative.” Students indicated they somewhat agreed with this statement. Qualitative results revealed that students experienced a smoother transition due to the support the STEAM *Spring Connect* program provided through events and friends. One student (FG2) commented, “I’ve benefited greatly from this whole experience and I got a lot out of it because I attended the events and met a lot of people and it definitely made the transition much easier than just jumping right in.” These findings support the idea that students have an active role in determining their outcomes. The student involvement theory could serve as a framework for the continued development of STEAM *Spring Connect* students in their baccalaureate attainment.

### **Implications**

This study provides several implications for the STEAM *Spring Connect* coordinator to consider when working with future cohorts. The results can be used to identify areas for improvement within the program, as well as, resources enhancing transition such as informative workshops and tutorials, in addition to, academic preparation tips. Results from the quantitative study informs the STEAM *Spring Connect* program about the experiences of students at the community college, as well as, the university. This is important for identifying how the two experiences differ. Qualitative results provide detailed of experiences of students, as well as, areas of improvement, such as pairing current students with past STEAM *Spring Connect*. Each cohort of the STEAM *Spring Connect* program differs in size, demographic area, and previous

experiences. Results from this study provide insight on the seventh cohort which can further inform the methods and resources employed for future cohorts. Implications reach beyond CALS. Each college within NC State works with *Spring Connect* students differently. Other colleges can use the results from this study to identify resources CALS employs to further improve their own programs. There are also implications beyond NC State. One goal of land-grant universities is to provide access to rural populations (McDowell, 2001). Land grant universities who are interested in offering alternative pathway programs for rural students could use these results to note the success of the STEAM *Spring Connect* program in promoting a smooth transition from community college to university. Other universities could further improve or develop access programs by modeling the *Spring Connect* program employed by NC State.

Community colleges who work with several *Spring Connect* programs, such as Wake Technical Community College, can use the results from this study to further identify how to support *Spring Connect* students. Although students are only enrolled at the community college for one semester, community colleges can further explore these results to identify areas in which they can assist transition. Tailored advising days and direct communication with the STEAM *Spring Connect* coordinator are two potential strategies to further support students while at the community college.

### **Recommendations for Future Research**

There are several areas for additional research to support *Spring Connect* students and first semester transfer students. One study could compare the transition success of students who study at the community college versus students who work/intern or pursue personal enrichment. Identifying the differences in experiences and preparation would be useful in understanding how

to further support all STEAM *Spring Connect* students. An additional area could identify the impact of the ALS 103 course in which all STEAM *Spring Connect* students enroll in upon transition. Identifying how the course further supports or benefits STEAM *Spring Connect* students after transition would be informative to the program and college.

Students within the STEAM *Spring Connect* program spend only one semester at the community college, which is a shorter time than traditional transfer students (Radwin & Horn, 2014). An additional research study could identify challenges or benefits to transitioning to the university setting after one semester compared to after one or two years. Comparing the experiences of traditional transfer students to STEAM *Spring Connect* students could inform the program on future implementation and practices.

An additional area of research could compare transfer students who matriculated to NC State on their own, without a pathway program, and STEAM *Spring Connect* students. Comparing the experiences of both would be useful in further understanding the preparation, benefits, and resources the STEAM *Spring Connect* program provides. This could also identify additional areas of support.

It is recommended that CALS replicate this study every year with each cohort of the program. Replicating the study with each cohort increases the sample size, allowing for more comparisons between experiences at the community college and university. In addition to replicating the study, following up with non-respondents would be a valuable area of research to gain additional perspectives about the program.

A longitudinal study could be conducted on STEAM *Spring Connect* students throughout their entire college experience. Continually identifying challenges and success associated with being a STEAM *Spring Connect* student while progressing towards the

baccalaureate degree is an additional area for research. A longitudinal study further exploring the graduation rates of STEAM *Spring Connect* students compared to traditional CALS students could be useful for future marketing of the program. Identifying the longitudinal effects of the alternative baccalaureate pathway program would be useful in identifying the long-term effects of providing student access to NC State and fulfilling the land-grant mission.

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## APPENDICES

**APPENDIX A: IRB Exempt Status Letter**

Dear Susan Jones:

Date: September 23, 2019

IRB Protocol 20296 has been assigned Exempt status

Title: Academic and Social Adjustment Challenges STEAM Spring Connect Students Face in Their First Year

PI: Warner, Wendy J

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101. Exempt d.2). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review. This approval does not expire, but any changes must be approved by the IRB prior to implementation.

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA00003429.
2. Any changes to the protocol and supporting documents must be submitted and approved by the IRB prior to implementation.
3. If any unanticipated problems or adverse events occur, they must be reported to the IRB office within 5 business days by completing and submitting the unanticipated problem form on the IRB website: <http://research.ncsu.edu/sparcs/compliance/irb/submission-guidance/>.
4. Any unapproved departure from your approved IRB protocol results in non-compliance. Please find information regarding non-compliance here: [http://research.ncsu.edu/sparcs-docs/irb/non-compliance\\_faq\\_sheet.pdf](http://research.ncsu.edu/sparcs-docs/irb/non-compliance_faq_sheet.pdf).

Please let us know if you have any questions.

\*\*\*\*\*

NCSU IRB Office

## APPENDIX B: Survey Invitation Text

Dear \${m://FirstName},

My name is Susan Jones and I am a second-year master's student in Agricultural and Extension Education. Last year, I assisted Ms. Anne Hubbard with the STEAM Spring Connect program and served as a TA for your ALS 103 course. I am writing to invite you to participate in a research study related to your experiences as a STEAM Spring Connect student. This study consists of a brief online survey and focus groups. The main purpose of this research is to understand how future STEAM Spring Connect students can be supported both academically and socially.

I understand that this is a busy time of year, but please take about **ten minutes** to answer this online survey. Your participation in this study is voluntary, and your willingness to participate will have no effect on your status at NC State. Upon completion of the survey, you may be recruited to share more details about your transition experiences through a focus group. Participation is voluntary, and if you choose to participate, you can expect to spend about 1 hour with 5-7 other participants.

### **Confidentiality**

Information obtained during this study that could identify you will be kept confidential and will be used for tracking purposes only. You can ensure that your responses will be protected as the data will be de-identified. This means it is stripped of all identifiable information linking you to your responses. Data will only be reported publically as group data (e.g. 25% of STEAM students indicated...”).

### **Follow this link to the Survey:**

[\\${l://SurveyLink?d=Take the Survey}](#)

Or copy and paste the URL below into your internet browser:

[\\${l://SurveyURL}](#)

### **Questions or Problems**

This survey has been granted approval by the Institutional Review Board. You are encouraged to ask questions at any time during the study.

- For further information on the study, send a message to [sljone13@ncsu.edu](mailto:sljone13@ncsu.edu) or call Susan Jones at (910)-990-4123
- If have questions about your rights as a research participant please contact the IRB office at [irb-director@ncsu.edu](mailto:irb-director@ncsu.edu) or call 1-(919)-515-8754.

Sincerely,

Susan Jones  
Graduate Teaching Assistant  
NC State

## APPENDIX C: Survey Instrument

9/19/2019

Qualtrics Survey Software

### Background Information

#### Transfer Student Survey

You are invited to participate in a research project designed to gain a better understanding of the factors that impact STEAM Spring Connect students transition to NC State University. The purpose of this survey is to understand the various factors that have the greatest impact on transfer students and their successes at NC State University. While there are no direct benefits to completing this survey, your input will be used to further improve the STEAM Spring Connect Program. This minimal risk survey will take approximately 30 minutes to complete. Information obtained during this study that could identify you will be kept strictly confidential and will be used for tracking purposes only. Your participation is completely voluntary and you may stop taking the survey during any time with no penalty. In addition, you may skip questions you do not feel completely comfortable answering. If you have questions about the study or desire information in the future regarding your participation you may contact Susan Jones at [sljone13@ncsu.edu](mailto:sljone13@ncsu.edu). If you have questions about your rights as a research participant please contact the IRB office at [irb-director@ncsu.edu](mailto:irb-director@ncsu.edu) or call (919)-515-8754

Thank you for your willingness to complete this survey.

I am fully aware of the nature and extent of my participation in this project as stated above. I hereby voluntarily agree to participate in this project. I acknowledge that I have read this consent statement and that I am 18 years of age or older.

<https://ncsu.ca1.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview>

1/20

9/19/2019

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- Yes, I agree
- No, I do not wish to participate.

NC State University  
Transfer Student Survey

Thank you for your willingness to complete this survey

Please answer the following questions based on your experiences as a STEAM Spring Connect student at NC State University. All information you provide will be kept completely confidential and will only be reported in summary. Responses will assist administrators in developing resources that will benefit STEAM Spring Connect students in providing a smoother transition from community college to university. Identifying information will be used for tracking purposes only and will not be associated to your response. After responses have been analyzed you may receive more information about participating in a focus group about your experiences in the STEAM Spring Connect Program

-The survey is divided into five sections

Thank you for indicating you would not like to participate in this study. If you decide you would like to participate in this study please follow the link included in the initial email or

<https://ncsu.ca1.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview>

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contact Susan Jones at [sijone13@ncsu.edu](mailto:sijone13@ncsu.edu).

#### Background Information

First, please complete the following background questions.

Current place of residence (during academic year).

- Residence hall or other university housing
- Fraternity or sorority house
- Private apartment or room within walking distance of the university
- House, apartment, etc (not walking distance from campus)
- With parents or relatives

What is the highest academic degree that you intend to obtain at any college?

- Bachelor (BA or BS)
- Master (MA or MS)
- Doctorate (Ph.D or Ed. D)
- Medical (MD, DDS, DO, or DVM)
- Other

At North Carolina State University?

- Bachelor (BA or BS)

- Master (MA or MS)
- Doctorate (Ph.D or Ed. D)
- Other

Gender

- Male
- Female

What is your age

What is your ethnic background?

- African American or Black
- Asian American/ Pacific Islander
- Hispanic or Latino/a
- Native American or Alaskan Native
- White (non-hispanic)
- Other

What county are from?

Are you a first generation college student?

- Yes  
 No

What is your current cumulative GPA?

#### Community College Experiences

The purpose of this section is to obtain information about your community college experiences prior to your transition to NCSU.

About how many hours a week did you usually spend on the community college campus, not counting time attending class?

- None  
 1 to 3 hours  
 4 to 6 hours  
 7 to 9 hours  
 10 to 12 hours  
 more than 20 hours

About how many hours did you usually spend studying or preparing for your classes?

- 1 to 5 hours  
 8 to 10 hours  
 11 to 15 hours  
 16 to 20 hours  
 more than 20 hours

During your time at the community college, about how many hours a week did you usually spend working a job for pay?

- None, I didn't have a job  
 1-10 hours  
 11-15 hours  
 16-20 hours  
 21-30 hours  
 more than 30 hours

#### General Courses

The following questions addresses various aspects of your community college experience. For each item below, please indicate the extent to which you disagree or agree with the statement.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
The courses demanded intensive writing assignments and projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, the courses were intellectually challenging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The courses prepared me for the academic standards at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The courses prepared me for my major at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Academic/ STEAM Spring Connect Coordinator Advising

The following items address the use of academic advising/counseling services at your community college and NCSU. Please indicate the extent to which you disagree or agree with each statement.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
Information received from academic advisors/ STEAM Spring Connect Coordinator was helpful in the transition process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
I met with academic advisors/ STEAM Spring Connect Coordinator on a regular basis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked with an advisor/STEAM Spring Connect Coordinator about courses to take, requirements, and education plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advisors/ STEAM Spring Connect Coordinator identified courses needed to meet the general education/major requirements of NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Transition Process

These items pertain to your perceptions about the "transition process" while you were enrolled at the community college. Please indicate the extent to which you disagree or agree with each statement.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
I researched various aspect of NCSU to get a better understanding of the environment and academic expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
I knew what to expect at NCSU in terms of academics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visited the NCSU campus to learn where offices and departments were located	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I spoke to former STEAM Spring Connect students to gain insight about their adjustment experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### College Activities at Your Community College

#### Course Learning

In your experience at your community college, about how often did you do each of the following?

	Never	Occasionally	Often	Very Often
Took detailed notes in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in class discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tried to see how different facts and ideas fit together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Never	Occasionally	Often	Very Often
Thought about practical applications of the material.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Experience with Faculty

How often did you do each of the following at your community college?

	Never	Occasionally	Often	Very Often
Visited faculty and sought their advice on class projects such as writing assignments and research papers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt comfortable approaching faculty outside of class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asked my instructor for comments and criticism about my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Learning and Study Skills

To what extent do you agree or disagree that your academic experiences at your community college gave you the skills you needed to prepare you for the standards and academic rigor

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at NCSU?

	Disagree Strongly	Disagree Somewhat	Neutral	Agree Somewhat	Agree Strongly
Mathematical Skills	<input type="radio"/>				
Problem Solving Skills	<input type="radio"/>				
Test Taking Skills	<input type="radio"/>				
Time Management Skills	<input type="radio"/>				
Writing Skills	<input type="radio"/>				

NCSU Experiences

The purpose of this section is to obtain information about your current experiences at NC State University

About how many hours a week do you usually spend working on a job for pay?

- Non, I don't have a job
- 1 to 10 hours
- 11 to 15 hours
- 16 to 20 hours
- 21 to 30 hours
- more than 30 hours

What is the most important reason for attending NCSU?

- To obtain a bachelor's degree
- To gain skills necessary to enter a new job or occupation
- To pursue graduate or professional school
- To satisfy a personal interest (cultural, social)

Listed below are some reasons that might have influenced your decision to attend NCSU. How important was each reason in your decision to come here?

	Not Important	Somewhat Important	Important	Very Important
NCSU has a very good academic reputation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NCSU has a very good reputation for its social activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was offered financial assistance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NCSU has affordable tuition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NCSU representative recruited me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NCSU's graduates gain admission to top graduate/professional schools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NCSU's graduates get good jobs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents recommended that I attend NCSU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not Important	Somewhat Important	Important	Very Important
My brother(s)/sister(s) attended NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Convenience and location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Did you attend the NCSU-sponsored Spring Connect Advising Day

- Yes
- No

How helpful was the Spring Connect Advising Day program in facilitating your transition to NCSU?

- Very unhelpful
- Somewhat unhelpful
- Somewhat helpful
- Very helpful

College Activities at NCSU

Course Learning

During the past year at NCSU, about how often did you do each of the following?

	Never	Occasionally	Often	Very Often
Took detailed notes in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in class discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tried to see how different facts and ideas fit together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thought about practical applications of the material.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Experience with Faculty

During the past year at NCSU, about how often did you do each of the following?

	Never	Occasionally	Often	Very Often
Visited faculty and sought their advice on class project such as writing assignments and research papers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt comfortable approaching faculty outside class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asked my instructor for information related to a course I was taking (grades, make-up work, assignments, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Occasionally	Often	Very Often
Asked my instructor for comments and criticisms, about my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

General Perceptions of NCSU

The following statements about your general perceptions, adjustment procedures, and opinion of your overall satisfaction at NCSU. Please indicate the extent to which you agree or disagree.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
NCSU faculty are easy to approach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because I am a "STEAM Spring Connect student," most faculty tend to underestimate my abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because I am a "STEAM Spring Connect student," most students tend to underestimate my abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a stigma at NCSU among students for having started at a community college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
Professors are strongly interested in the academic development of undergraduates.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most students are treated like a "number."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If students expect to benefit from what NCSU has to offer, they have to take the initiative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel the courses I have taken at NCSU have been interesting and worthwhile.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NCSU is an intellectually stimulating and often exciting place to be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many students feel like they do not "fit in" on this campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I could start over again, I would still go to NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Adjustment Process

Please indicate the extent to which you agree or disagree with the following statements.

Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
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	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
Adjusting to the academic standards or expectations at NCSU has been easy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adjusting to the social environment at NCSU has been easy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel (felt) overwhelmed by the size of the student body.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upon transitioning I felt alienated at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am meeting as many people and making as many friends as I would like at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The large classes intimidate me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My level of stress increased when I started at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced a dip in grades (GPA) during my first semester at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy to make friends at NCSU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

College Satisfaction

Please rate your satisfaction with each of the aspects of campus life listed below.

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Not Applicable
Sense of belonging at NCSU.	<input type="radio"/>				
Decision to transition to NCSU.	<input type="radio"/>				
Overall quality of instruction.	<input type="radio"/>				
Sense of community on campus.	<input type="radio"/>				
Academic Advising.	<input type="radio"/>				
Student Housing.	<input type="radio"/>				
Courses in your major field.	<input type="radio"/>				
Amount of contact with faculty.	<input type="radio"/>				
Class Size.	<input type="radio"/>				
Interaction with other students.	<input type="radio"/>				
Ethnic/racial diversity of the faculty.	<input type="radio"/>				
Overall college experience.	<input type="radio"/>				

Thank you

Thank you very much for taking time to complete this Transfer Student Survey.

## APPENDIX D: Focus Group Invitation Letter

### Focus Group Invitation Letter

Hi (First Name),

Thank you for your recent participation in my research study! I am writing to invite you to participate in a focus-group. A focus-group involves participants sharing information related to a topic. In this scenario the topic will cover your experiences as a STEAM Spring Connect student transitioning from community college to a university setting.

The purpose of this focus group is to learn more about your experiences in the STEAM Spring Connect program. You have been asked to participate because you are a student who was a part of the STEAM Spring Connect program who attended a community college in the fall 2018 semester, and because you are from a (rural, suburban, or urban) area, (or you reported you are a First-Generation college student).

**The focus group will be held on January 14<sup>th</sup> and 16<sup>th</sup>, 2020 from 5:00 PM- 6:00 PM in Ricks Hall Room 2. Please email me and let me know if you will be available to attend. If these time do not work for you please let me know and another time may can be arranged.**

I understand this is a busy time of year, but please take about an hour out of your busy schedule to participate in the focus group. Your responses are crucial to the research study and will provide insight to the resources needed for future STEAM Spring Connect cohorts.

### Confidentiality

Information obtained during the focus group that could identify you will be kept strictly confidential. To further ensure confidentiality, the data collected from the research study will be stored on a secure server, only accessible via a password protected computer. The anonymous focus group information will be used to enhance the resources and services provided to future STEAM Spring Connect students. Your name will not be directly connected to your responses in this focus group, however, relationships between demographics of the focus groups and responses will be analyzed. Your responses will only be reported publically as group data (e.g. 25% of STEAM students indicated...”).

### Questions or Problems

This survey has been granted approval by the Institutional Review Board. You are encouraged to ask questions at any time during the study.

- For further information on the study, send a message to sljone13@ncsu.edu or call Susan Jones at (910)-990-4123
- If have questions about your rights as a research participant please contact the IRB office at irb-director@ncsu.edu or call 1-(919)-515-8754.

Sincerely,  
Susan Jones

## APPENDIX E: Adult Consent Form

**NC STATE UNIVERSITY**

Informed Consent for Participation in Research

### **Recording and images**

As a part of this research, focus groups will be utilized. If you participate in a focus group, I would like your consent to audio record you. Please initial next to the sentence(s) that you agree to.

\_\_\_\_\_ I consent to being audio recorded.

\_\_\_\_\_ I do not consent to being audio recorded.

### **Risks and benefits**

There are minimal risks associated with participation in this research.

There are no direct benefits to your participation in the research. The indirect benefits are improving the STEAM Spring Connect program by providing personal experiences, as well as, contributing new knowledge to the scientific community.

### **Right to withdraw your participation**

You can stop participating in this study at any time for any reason. In order to stop your participation, please inform the researcher you no longer want to participate. If you choose to withdraw your consent and to stop participating in this research, you can expect to have your completed data not included in the research study.

### **Confidentiality, personal privacy, and data management**

Trust is the foundation of the participant/researcher relationship. Much of that principle of trust is tied to keeping your information private and in the manner that we have described to you in this form. The information that you share with me will be held in confidence to the fullest extent allowed by law. Protecting your privacy as related to this research is of utmost importance to me. Your responses will be de-identified and only reported in summary. How we manage, protect, and share your data are the principal ways that I protect your personal privacy. Data generated about you in this study will be de-identified.

**De-identified.** De-identified data is information or bio-specimen(s) that at one time could directly identify you, but your identity is separated from the data. Each research participant will be assigned a code. A research team member will have a master list with your code and real name that can be used to link to your data for tracking purposes. While I might be able to link your identity to your data at earlier stages in the research, when the research concludes, there will be no way your real identity will be linked to the data I publish.

To help maximize the benefits of your participation in this project, by further contributing to science and our community, your de-identified information may be stored for future research and may be shared with other people without additional consent from you.

### **Focus Group Non-Disclosure**

As a part of this study, focus groups will be utilized to gain a deeper understanding of experiences. Within each focus group there will be 5-7 participants. All responses that are shared within the focus group will be kept confidential by the principle investigator and the research participants. Focus group responses will be de-identified and only reported in summary form.

# NC STATE UNIVERSITY

Informed Consent for Participation in Research

## **Compensation**

For your participation in this study, you will not receive anything for participating. If you withdraw from the study prior to its completion, you will not be penalized.

## **What if you are an NCSU student?**

Your participation in this study is not a course requirement and your participation or lack thereof, will not affect your class standing or grades at NC State.

## **What if you are an NCSU employee?**

Your participation in this study is not a requirement of your employment at NCSU, and your participation or lack thereof, will not affect your job.

## **What if you have questions about this study?**

If you have questions at any time about the study itself or the procedures implemented in this study, you may contact the researcher, Susan Jones, 208 Ricks Hall, sljone13@ncsu.edu, (910)-990-4123 & Dr. Wendy Warner, wjwarner@ncsu, (919)-513-1169 .

## **What if you have questions about your rights as a research participant?**

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the NC State IRB (Institutional Review Board) Office. An IRB office helps participants if they have any issues regarding research activities. You can contact the NC State IRB Office via email at [irb-director@ncsu.edu](mailto:irb-director@ncsu.edu) or via phone at (919) 515-8754.

## **Consent To Participate**

By signing this consent form, I am affirming that I have read and understand the above information. All of the questions that I had about this research have been answered. I have chosen to participate in this study with the understanding that I may stop participating at any time without penalty or loss of benefits to which I am otherwise entitled. I am aware that I may revoke my consent at any time.

Participant's printed name \_\_\_\_\_

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

Investigator's signature \_\_\_\_\_ Date \_\_\_\_\_

## APPENDIX F: Focus Group Protocol

1. How would you describe your experience as a STEAM Spring Connect student?
2. Describe resources (if any) available to you at the community college or NC State that assisted your transition to NC State.
  - a. Probe: What resources would you have liked to have available to you?
3. Describe any resources available to you once you arrived to NC State that assisted in your adjustment to campus, classes, or any other aspects of NC State.
  - a. Probe: Which resources were most beneficial? Why? Describe any resources you wish you would have had available to you?
4. Did you encounter any challenges throughout the transition from community college to NC State?
  - a. Probe: If you encountered challenges, how did you overcome them? If you did not face any challenges how did you prepare yourself?
5. Can you describe your process for adjusting academically to NC State?
  - a. Probe: How prepared were you to start courses here? Were the courses what you expected they would be?
6. In what ways are you socially involved at NC State?
  - a. Probe: Why are you not involved (if not involved)? What affects your involvement ability? How to you plan to become more involved/less involved?
7. Take a moment to describe the demographic location you transferred from. Are you from a rural, suburban, urban area?
  - a. Probe: Did you experience an adjustment in location when moving to NC State? Can you describe any adjustment you faced moving to Raleigh from your home county?
8. Describe how alike or different your community college courses were in comparison to your NC State courses.
  - a. Probe: How did this prepare/not prepare you once you started courses at NC State?
9. What might the STEAM Spring Connect program have done differently to enhance your success or ease the transition to NC State?
  - a. Probe: If you could give advice to future STEAM Spring Connect students, what would that advice be?
10. Suppose you were in charge and could make one change that would improve the STEAM Spring Connect Program. What would you do?

## APPENDIX G: Qualitative Audit Trail

### Theme 1: Building Transition Capital

#### *Resources Used*

CC offered resources (FG1)  
Limited resources at CC library (FG2)  
CC limited resources (FG2)  
TCE is a helpful tool (FG1)  
Used NCSU advisors as a resource when choosing courses (FG1)  
NCSU resources are easily accessible (FG1)  
NCSU faculty provided resources (FG1)  
Email reminders are helpful (FG1)  
Having NCSU advisor is nice (FG1)  
NCSU advisor is nice (FG2)  
STEAM events used to meet people (FG2)  
TCE tool (FG2)  
ALS 103 was a resource (FG2)  
Tutoring (FG2)  
Library (FG2)  
NCSU advisor (FG2)  
ALS 103 helped (FG2)  
CC experience helps maneuver NCSU resources (FG1)  
Look for similar resources at NCSU (FG1)  
Success correlated to available resources (FG1)  
NCSU advisors selected courses that would transfer (FG2)  
Meeting people in CALS and major (ALS 103) (FG2)  
Having class with SC students (ALS 103) (FG2)  
ALS 103 forces interactions (FG2)

#### *Needed Resources*

More opportunities for integration (FG1)  
Tour of campus (FG1)  
More opportunities for campus familiarity (FG1)  
Need more CC advising support (FG1)  
More course admin resources (FG1)  
Increase advising interaction (FG1)  
More emphasis on “little stuff” (FG1)  
More info on grade distribution (FG1)  
One place for all information received (FG1)  
One central place for information (FG1)  
Access to job information (FG1)  
STEAM website (FG1)  
Resource for jobs (FG1)  
Involvement with clubs in the fall (FG2)  
Integrate with students outside of major (FG2)  
More social events (FG2)

Events for clubs in fall (FG2)  
Early interaction with advisors (FG2)  
Tips for reaching out to advisors (FG2)  
Increase social opportunities (FG2)  
Communication between advisors and students (FG2)

*Program Experience*

Integrated to NCSU well (FG1)  
Pretty well (FG1)  
Easier transition from HS to college (FG1)  
More difficult transition for native students (FG1)  
Easier transition from HS to college (FG1)  
Baby steps before university (FG1)  
Good experience (FG1)  
Prepared for NCSU (FG1)  
Felt prepared (FG1)  
Easy transition (FG1)  
Transition exists from rural and suburban areas (FG1)  
Good experience (FG2)  
Another step before university (FG2)  
Good transition from high school (FG2)  
Easier transition (FG2)  
Good program (FG2)  
Great program (FG2)  
GEPs done (FG2)  
More time to work (FG2)  
Cares for students (FG2)  
More family time (FG2)  
“I think I am better off” (FG2)  
Benefited greatly (FG2)  
GEPs done at CC (FG2)  
Saved money (FG2)  
Hard courses over (FG2)  
Discouraged in fall semester (FG2)  
“I’m not good enough” (FG2)  
Remember where they were (FG2)  
Begin on positive note (decision) (FG2)  
Not good enough (FG2)  
Out casted (FG2)  
“I’m the only one” (FG2)  
“Not good enough for fall” (FG2)  
Don’t be discouraged (FG2)  
Get out of comfort zone (FG2)  
Take advantage of fall events (FG2)  
STEAM is trying to help transition (FG2)  
Take advantage of STEAM events (FG2)

Keep an open mind (FG2)  
Reach out to people (FG2)  
Reach out for roommates (FG2)  
Expectations of difficult courses (FG2)

## **Theme 2: Place making within Program**

### *Sense of Belonging*

“You’re where you should be” (FG1)  
Students are welcome (FG1)  
Feels like home (FG1)  
Considered a student with NCSU email (FG1)  
Sense of belonging in major (FG1)  
Lack of belonging in freshman class (FG2)  
Need sense of welcome in fall (FG2)  
SC makes students feel like they are not the only ones (FG2)  
Lack of belonging in fall semester (FG2)

### *Importance of Friends*

Had someone to fall back on (FG1)  
Premade friend group (FG1)  
Comfortable in group (FG1)  
Own group (FG1)  
Friends help classes seem smaller (FG1)  
Familiar faces (FG1)  
Established friend group (FG1)  
Snowball effect with friends (FG1)  
Meeting SC students prior to transition (FG1)  
Meeting people through clubs (FG1)  
Know people on personal basis (FG1)  
Meeting lots of people is helpful (FG1)  
Support through major clubs (FG1)  
Helped registering (FG1)  
Snowballing friends (FG2)  
Having a niche before getting to NCSU (FG2)  
Figured it out together (FG2)  
Bonding over SC (FG2)

## **Theme 3: Social Motivation**

### *Demographic Transition*

Satellite campuses aid rural students (FG1)  
Positive rural to urban adjustment (FG1)  
Life moves faster (FG1)  
Lots of movement (FG1)  
Claustrophobic (FG1)  
Lots of people in one place (FG1)  
Close proximity to things (FG10)

Lost easily (FG2)  
Rural to urban transition (FG2)  
Never had to introduce self (FG2)  
Living along (FG2)  
Population of town =NCSU (FG2)  
Lost easily (FG2)  
Diversity→Different mindsets \*everyone agreed\* (FG2)

#### *Social Involvement*

Recreational involvement available (FG1)  
Students are open to socializing (FG1)  
Different communities to be involved in (FG1)  
Social involvement is easy at NCSU (FG1)  
Difficulty joining clubs in the spring (FG1)  
Clubs are welcoming (FG1)  
Clubs are eager for new membership (FG1)  
Experience talking to older students (FG1)  
Lack of social integration in fall (FG1)  
Worked at CC a lot (FG1)  
Open opportunities in spring (FG1)  
Want to be more involved (NCSU) (FG2)  
No motivation (CC) (FG2)  
1/3 time in clubs (NCSU) (FG2)  
No incentive to participate (CC) (FG2)  
Careless about connections (CC) (FG2)  
Few social events (CC) (FG2)

#### **Theme 4: Acclimation to Environment**

##### *NCSU Experiences*

Large class size (FG1)  
Self-confidence aids in large class size (FG1)  
“How am I going to learn?” (FG1)  
20→ 250 students (FG1)  
Stay focused (FG1)  
Tutoring (FG1)  
Talk with instructors (FG1)  
Talk with TAs (FG1)  
Mix smaller and larger courses (FG1)  
Mix small and large classes (FG1)  
More effort expected at NCSU (FG1)  
NCSU requires study habits (FG1)  
NCSU requires different study habits (FG1)  
NCSU courses are challenging (FG1)  
Find a system that works (FG1)  
Success is up to the student (FG1)  
Negative experience with TAs (FG1)

TAs supported students (FG1)  
Difficulty depends on class (FG1)  
Classes are easier to manage at NCSU (FG1)  
Experts in field teaching NCSU courses (FG1)  
Difficulty depends on class (FG1)  
Underprepared for NCSU (FG1)  
Academically behind (FG1)  
Positive experience with early enrollment (FG1)  
Early enrollment helped get classes (FG1)  
Organized (FG1)  
Help students' success (FG1)  
Professors are willing to meet with students (FG1)  
Professors are passionate and caring (FG1)  
Success correlated to teacher (FG1)  
Larger classes (FG2)  
Less one on one time (FG2)  
NCSU professors want to help (FG2)  
Bigger student: teacher ratio (FG2)  
Connection with major students (FG2)  
More expectations of students (FG2)  
Learned time management at NCSU (FG2)  
Hard (FG2)  
Some courses easier than expected (FG2)  
Higher expectations at NCSU (FG2)  
Increased studying (FG2)  
Courses require different study habits (FG2)  
"A lot more than it was" (FG2)  
Heavier work load (FG2)

### *CC Experiences*

Smaller CC student: teacher ratio (FG2)  
More assignments to help grade (FG2)  
More familiarity with students (FG2)  
CC more one on one (FG2)  
More connection with CC students (FG2)  
CC courses more lenient (FG2)  
Worked online courses from home (FG2)  
"All over the place" (FG1)  
Not approachable (FG1)  
Harder courses correlated to bad experiences with teachers (FG1)  
CC catered to students (FG1)  
Lack of CC support (FG1)

### *Perceptions*

Not taken seriously by NC State (FG1)  
Perceptions of NCSU faculty were negative (FG1)

Surprised by professors (FG1)  
NCSU courses were as expected (FG1)  
Perceived lecture based courses (FG1)  
Expectations of difficulty courses (FG2)

### **Theme 5: Spring Connect Clarity**

#### *Understanding Spring Connect*

CC don't understand SC (FG1)  
Better understanding of SC closer to NCSU (FG1)  
They don't understand (FG1)  
CC lack understanding about SC (FG1)  
CC outreach (FG1)  
CC letter for understanding (FG1)  
CC confusion (FG1)  
Confusion among CC about program (FG1)  
Educate high schools (FG2)  
No knowledge of SC (FG2)  
Inform Ag teachers (FG2)  
"I don't understand" (FG2)  
More advertisement (FG2)  
Normalization (FG2)  
Highlight benefits (FG2)  
Promote benefits (FG2)  
Needs to be understanding about program (FG2)

### **Theme 6: Communication throughout Transition**

#### *Communication*

Open communication throughout program (FG1)  
Limited people to communicate with (FG1)  
Difficulty communicated with career services (FG1)  
Lack of communication with NCSU (FG1)  
NCSU email aids in communication (FG1)  
Difficulty contacting NCSU in first semester (FG1)  
Little communication at CC (FG1)  
Limited communication with NCSU advisor while at CC (FG1)  
Communication with CC professors was not great (FG1)  
Difficulty communicating with online professors (FG1)

#### *Advising Experiences*

Hard to work with CC advisors (FG1)  
Self-manuevering through CC (FG1)  
Little advisor interaction at CC (FG2)  
Did not know advisor (FG2)  
CC advisor did not reach out (FG2)

**Observer Notes:***Focus Group 1*

Start Time: 5:05 PM

- University contacts hard to get info but not with STEAM program in CALS
- Making friends early with activities
- Being on campus with group
- Maybe a Saturday visit
- More nurturing/helpful faculty at CC
- #8 Rarely speaking-brought back to conversation
- Tutoring hard to talk to/get for math
- Class sizes
- Social media activity helpful
- NC State more work/have to stay on top of things
- Study habits important
- Love the honesty about study habits
- Scheduling on Sundays each week
- Professors put a lot of time and make a lot of resources available
- Media site→slides and recording of media
- Moodle resources for new students
- More reaching out/social aspect of advising
- WolfWare same as Moodle→ resources for navigating
- Social/Resources Night for going over info
- [Name]-deadline emails
- Priority registration
- Email system for reminder to keep up with all information
- STEAM Moodle page with resources and a timeline
- More communication about STEAM program to community college
- Job fair for students for mid-year transfers

End Time: 6:08 PM

*Focus Group 2*

Start Time: 5:00 PM

- These students are not as talkative
- More events in fall \*both focus groups mentioned this several times\*
- Accessibility to sporting events
- More advisor support/registering for classes
- Tight knit group of Spring Connect students to help with transition
- Pre-organized schedule for same major
- Students to help with advising

End Time: 5:44 PM

**Researcher Notes:**

- Focus Group 1 conducted on January 14<sup>th</sup>, 2020 at 5:00 PM

- Focus Group 2 conducted on January 16<sup>th</sup>, 2020 at 5:00 PM
- Transcription began on January 17<sup>th</sup> using Temi software
- Coded focus groups three times through for new and emerging codes
- Focus Group 1 yielded 178 open codes; Focus Group 2 yielded 145 open codes; 323 combined open codes
- Axial codes=17 for Focus Group 1; Axial codes=20; Combined axial codes=15
- 02/09/20- The axial code “Academic, Social, and Transition Obstacles” can further be merged to other axial codes.