Vertical, Horizontal, and Swirling Transfer Students: Who is the Most Successful Transfer Student and Why Does It Matter?

A Thesis Presented
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Submitted to the School of Education and Human Services of Canisius College in partial fulfillment Of the requirements for the degree of MASTER’S OF SCIENCE

May, 2017
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Abstract

In order to manage transfer student enrollment and success at four-year institutions, an understanding of the academic background of each transfer student may significantly impact student achievement. While there is mention in literature about students who transfer from four-year institution to four-year institution (horizontal transfer) and students who transfer from a two-year institution to a four-year institution (vertical transfer), the focus of the research has typically been on the outcome of the transfer and not the route each individual student may take to get there (Mcguire and Belcheir, 2013). The purpose of this study is to define three main types of transfer students; vertical, horizontal, and swirling and assess if there are different levels of students’ success between each category defined by enrollment, orientation participation, GPA, retention, and matriculation to graduation. This study explores three types of transfer student characteristics, student demographics, and their connection to academic success at Canisius College.
Review of Literature

Vertical Transfer

In higher education, a transfer student is defined as the movement of a student from one institution to another (What is a college transfer?, n.d.). Students may move institutions for reasons including, but not limited to, academic goals, family obligations, relocation, program of choice, problems at the institution, financial, and personal reasons (Bowen & Bok, 1998; Cope & Hannah, 1975). Other times, students engage in a trial enrollment period where they experiment with one institution with the possibility of transferring to another when they are unsure of their program choice. Students who are sure of their program choice may choose to complete their intended program at their home institution, but take advantage of unique opportunities throughout other institutions, such as elective courses and study abroad at the same time (McCormick, 2003). The movement of a college transfer student can come in multiple forms. A student who attends a two-year college and transfers to a four-year institution is considered a “vertical” transfer student (Terris, 2009). Two-year colleges play a significant role in the United States higher education market. In fall of 2014, approximately 7.3 million students were enrolled in community colleges, making up 42% of all undergraduate students in the United States (Ma and Baum, 2016). According to a study from the National Student Clearinghouse, one in five community college students transfer to a four-year institution and 45% of students who finished a four-year degree in the 2010-2011 academic year previously attended a two-year college (Fain, 2012).

Students are attracted to two-year colleges for multiple reasons. In many cases, two-year colleges have lower tuition and fees compared to four-year colleges and their close proximity to communities allow students to live at home which equates to substantial savings for living
expenses. Having the option to attend community college is notably important for low-income students who struggle with balancing their course load and managing financial responsibilities outside of school (Reynolds, 2012). Two-year colleges often have more flexible schedules which are designed to allow students to attend classes while maintaining a full-time or part-time job (Reynolds, 2012). Additionally, community colleges have an open-admissions policy, which makes it possible for students to attend who may not have had the academic credentials to get into the four-year school of their choice right out of high school. This also provides learning opportunities for non-traditional students who may be attending college many years after receiving a high school diploma or GED (Ma and Baum, 2016). Community college students tend to be older than traditional college students as most of them did not decide to attend higher education immediately upon graduating high school. Community colleges provide a means of postsecondary education for many who would not have attended college otherwise (Ma and Baum, 2016).

Although half of the nation’s first-time undergraduate students discover a diverse and flexible curriculum at community colleges, their academic and vocational goals are often met with adjustment challenges when it is time to continue their education at a four-year institution. Challenges can range from psychological, to academic, to environmental (Laanan, 2001). Students often experience difficulty when it comes to transferring their credits to a four-year institution which can cause added frustration. A study conducted by Oregon University in 2000 determined that when a student transferred from an area community college to four-year universities, only about 83% of their credits transferred (Brown, 2001). The overall transition can be a difficult move between two vastly different cultural settings (Miller & Erisman, 2011). Difficulty transitioning between institutions often causes students to experience “transfer shock.”
“Transfer shock” (Hill 1965) is a term that has been commonly used in research to explain a drop in a student’s GPA their first semester at a four-year college after transferring from a two-year or community college. Transfer student research began to be conducted in 1928 by Showman when he compared community college students to native students at the University of California. Native students are students who attend college the fall after they graduate from high school and receive their bachelor’s degree while only ever attending one institution (Brown, 2011). This research was expanded in 1965 with the concept of “transfer shock.” Over fifty years after Hill created the term “transfer shock,” the topic is still relevant and the phenomenon of decreased grade point averages after transferring to a four-year college still exists. Many factors can contribute to transfer shock such as, major of study, size of institution, number of credits at the point of transfer, academic advisor, and age (Hill, 1965). Keeley & House (1993) reported that students 25 years of age and older experienced very little transfer shock compared to younger students transferring in their sophomore year (Thurmond, 2007).

As community college enrollment started to increase in the 1970’s and 1980’s, transfer students typically earned grades .20 to .30 points lower than their GPA’s before they transferred from their two-year institution (Thurmond, n.d.). However, transfer student’s grades tend to increase after their first semester at a four-year school (Thurmond, n.d.). Laanan (2001) explained that students transferring from a community college are likely to experience “a complex adjustment process-academically, socially, and psychologically – because of the environmental differences between two- and four-year institutions” (p. 5).

Research has expanded on the concept of transfer shock to investigate factors other than GPA such as experiences, the transfer process, academic integration and student demographics (Laanan, Starobin, and Eggleston, L. E., 2010). Academic integration refers to the interactions
that transfer students have with their faculty members both in the classroom and through outside learning experiences. There are two types of academic integration, formal and informal. Formal measures academic performances and informal is the interactions between faculty and students (Hennessey, 2015). Typically, transfer students experience both academic and social integration as further explored in Tinto’s model (1993). Although Tinto’s model has been updated since 1975, one thing that has remained consistent is that students’ academic and social interactions on campus directly affect their commitment to an institution. Negative interactive experiences for students who transfer from a two-year institution to a four-year institution can increase the probability of the student transferring again (Mondal and Galbraith, 2015). Tinto’s model demonstrates that students who are academically and socially integrated on campus exhibit positive outcomes for student success (Mondal and Galbraith, 2015).

Thurmond (2007) questions why the 1965 term “transfer shock” is still relevant a half century later. Although studies have been completed to identify students who may experience academic difficulty when transferring to a four-year institution, research has not changed practices. Although transfer shock is universal, it is not typically severe. While institutions can work with students to prepare them for transfer shock, some transfers are unplanned. Students may unexpectedly transfer to a four-year institution sooner due to relocation for job or family members, and other unforeseen circumstances. Students who experience an unplanned transfer benefit greater from individual academic advising rather than group orientations (Thurmond, 2007). Attending a community college before transferring to a four-year institution can be beneficial for many students as they progress through their academic career. Through the struggles, many students see success.
Horizontal

In the United States, most four year institutions typically admit transfer students from other four-year institutions in addition to two-year institutions. These students are considered horizontal transfer students (Terris, 2009). While many researchers have compared the academic success of transfer students to native students and transfer students from community colleges, little research has specifically studied horizontal transfer students. A study conducted by the National Center for Education Statistics (NCES) showed that between 1999-2000, 47.3% of students who began in a four-year institution and completed a bachelor’s degree enrolled in more than one intuition. Of these students, 28.3% enrolled in two, 13% enrolled in three, and 6.1% enrolled in four or more (Peter & Cataldi, 2005). Students who begin at a four-year institution and transfer to another four-year institution often receive less attention than vertical transfer students. This typically happens for three reasons. First, many theories and models, such as Tinto’s (2003) model are centered on students’ academic and social experiences from the institution they originally enroll (Li, 2010). Second, policy makers have not realized the inefficiency in four-year to four-year transfers (Li, 2010). These students typically repeat unnecessary courses, which extends their completion date and increases their educational costs for both the students and the government. While many institutions have begun to create articulation agreements with two-year schools, students transferring from a four-year institution to another four-year institution often face difficulty transferring their credits (Li, 2010). Often times, institutions only accept a maximum of 90 credits from other four-year institutions (Li, 2010). Third, four-year to four-year transfer students are often placed in more upper-level courses, which can be more expensive for institutions to run. Four-year transfers are also coming
when they left their previous institution in the first place. One of the biggest reasons a student leaves their institution is because of their academic performance. According to Cope and Hannah (1975), academic underachievement is the most commonly reported reason for students voluntarily leaving. Students who are not strong academic achievers according to their GPA may not be motivated to perform well and therefore receive less attention and encouragement from students who want to stay. This can lead to the decision to leave or academic dismissal from the institution (Li, 2010).

Aside from academics, financial concerns play a large factor in a student’s decision to leave. Substantial increases in tuition and fees have impacted affordability for higher education throughout the country which are negatively associated with student loyalty, especially amongst lower-income students. However, these financial concerns are different depending on student characteristics, college experience, financial aid eligibility, and institutional characteristics (Li, 2010).

Institutional attributes refer to the environment and characteristics of an institution which made the school attractive to the student in the first place. Students who have a hard time adjusting to the environment, may feel the need to withdraw (Tinto, 2003). Tinto’s model largely emphasizes the importance of student fit, social and academic integration, and classroom experience, faculty-student relationships, and academic performance in relation to student persistence. Characteristics of the institution which can have an effect on student persistence include whether or not it is public or private, quality, size, population, and highest degree offered
One of the strongest factors according to Astin (2003) is that the institutional size negatively affects degree completion. This is largely due to social integration on campus which is more difficult at larger institutions (Li, 2010). In addition to these factors, each institution offers different degree programs. According to a study conducted by the U.S. Department of Education (2001), 22% of 82 students surveyed concluded that they left their previous institution because the desired program was not available. Of the 82 students, 17% reported logistics were the cause of transfer and only 8% reported it was because of financial affordability (Li, 2001).

Based on this data, academic reasons continue to be the top reason for students to transfer from four-year institution to four-year institution. That being said, students who transfer for academic reasons may be more likely to complete their bachelor’s degree than students who leave for other reasons (Li, 2001).

The National Survey of Student Engagement, commonly known as “NSSE” found that horizontal transfer students are more likely than vertical transfer students to participate in “high impact” experiences such as internships, studying abroad, and faculty-supervised research (Terris, 2009). While horizontal transfers are more involved than vertical transfers, they are still less likely than native students to participate in these activities. For example, NSSE determined that 62% of native seniors participated in internships, compared to only 49% of horizontal transfers and 43% of vertical transfer students (Terris, 2009). This gap is even greater when comparing students studying abroad. NSSE determined that 20% of native students’ study abroad, compared to 15% of horizontal students and only 7% of vertical transfer students (Terris, 2009). Surprisingly, although horizontal students reported a greater chance of participating in activities, they were less likely to report overall satisfaction than other transfer students (Terris, 2009). Indiana University professor Mr. McCormick thinks that this may be because the students
were not able to succeed in building relationships at their first college. While NSSE helps gather data and information from about 75% of faculty members like Mr. McCormick, only about a third reported that their findings lead to improvement of faculty programs and support (Terris, 2009).

**Swirling**

As vertical and horizontal transfer students struggle with adjusting to a new environment, a third population of students, known as swirling transfer students bring new challenges to higher education (Terris, 2009). The term “swirling student” was created by Alfredo de los Santos and Irene Wright in 1990 to recognize the back-and-forth multi-institutional attendance pattern amongst college students (Borden, 2004). Swirling transfer students are multi-institutional transfers who attend more than two post-secondary institutions, both two-year and four-year before completing a bachelor’s degree. Swirling transfer students may also participate in a “reverse transfer” where the student begins at a four-year institution and then transfers to a community college (Palmer, 2003). Swirling emerged in the 1980’s, but it was not considered a pattern at that time. Adleman (1988) discovered swirling while reviewing students’ transcripts and found that dozens of students had attended three or more institutions before obtaining a bachelor’s degree. Over the years, research on swirling transfer students has increased, but is still minimal. Due to the lack of research on swirling students, an abundance of the research is more focused on reverse transfer students and trends in college attendance. Students leaving their four-year institution to attend community college typically do so because of problems they face at the four-year institution (Brown, 2011). However, this trend is also related to other factors such as change of degree program, travel abroad, exchange programs, and personal tribulations (Borden, 2004). The traditional vertical transfer seems to be known as the most common type of transfer,
however, the Indiana Commission for Higher Education reported that the “reverse transfer” from a four-year to two-year institution was more frequent than the traditional vertical transfer. Another factor that plays into the swirling process is often high school students enter college with transfer credits obtained from community colleges that they took while still in high school (Borden, 2004).

Swirling transfer students encounter the same problems as the horizontal and vertical transfer students in terms of credit transferability. This issue is especially important for swirling students because they are transferring credits from several institutions and may lose even more credits than the other types of transfer students (Brown, 2011). Not only do students lose credits due to course articulation, but swirling students who many have attended multiple institutions over many years may also lose credits because of major and program changes over time (Brown, 2011). Studies conducted by Adleman (1999) and Kearney and Townsend (1995) both show that although swirling students have more difficulty transferring their credits, these students are persistent and constantly working towards completing their bachelor’s degree. Although persistent, attending multiple institution has a negative effect on time to degree completion for swirling students (Peter and Cataldi, 2005). This is due to credit transferability, requirements between various institutions, and outside reasons such as relocation and family status (Peter and Cataldi, 2005).

Swirling students face many challenges such as credit transferability, environmental adjustments, and time to degree completion. However, attending multiple institutions to earn a bachelor’s degree can have many benefits for students. Students who are not sure if their program choice upon entering college may have to transfer institutions once they decide which program they would like to pursue. Having the option to transfer allows the student to keep most
of the credits they have earned while working towards their academic goals (Borden, 2004). The growing number of programs offered through distance education increases the likelihood of swirl, but allows students to take classes from institutions all over the world without ever having to relocate (Borden, 2004). While student success is typically a main goal of all institutions, efforts to improve cost effectiveness, expand access, and leveraging technology can all cause swirling (Borden, 2004). Swirling in turn can affect program development for faculty when students decide to come and go throughout the duration of their program (Borden, 2004). While a benefit for students and sometimes an inconvenience for faculty and staff, institutions have to embrace the swirling phenomenon and learn to accommodate these types of students (Borden, 2004). Since institutions often use graduation rates as a gauge for institution performance, it is important for colleges and universities to gain a better understanding of why student choose this academic path. The main questions for institutions to start to uncover are who are swirling students and why do they swirl (Brown, 2011)?

**Transfer Student Characteristics**

**Ethnicity**

Transfer students contribute to student body richness in regards to race, ethnicity, age, veteran status, socioeconomic status, and life experience (Stremple, 2013). According to Brown (2011) the national transfer student rate was roughly 20-25%, but the transfer rate of minorities was 10-20% lower than white students. Kearney (1995) also discovered that amongst swirling students, 64% were white, 14% were African American, and 13% were Asian. Older studies determine that African American males were more likely to transfer than any other minority group (Brown, 2011; Passarella, 1985). According to a study conducted by McGuire and Belcheir (2013) in which 14,333 transfer students participated, only 11% self-identified as
members of a minority group. While these findings show that less minority students are transferring between multiple institutions, Lee and Frank (1990) discovered that the effects of race in terms of transferring are relatively low but that minority students typically choose to follow more traditional paths. Additionally, Mayhew (2007) found that orientation programs are beneficial for transfer students’ academic success, but that those findings were not affected by the students’ race.

Age

McGuire and Blechier’s study (2013) also found the median age was 22 and the mean was 25, which is consistent with Kearney, Townsend and Kearney’s findings (1995). Contradicting information was found by Lebad (1999) whose research showed that 36% of 22-30-year-old transfer students participated in swirling transfer patterns (Brown, 2011). Brown (2011) took a different approach in reporting a majority of study participants were between 19-29 years of age, while 39% were within the 30-49 and 50-59 ranges.

Gender Identity

Kearney (1995) also showed that 53% of the 420 students in their study who transferred were men and 47% were women, discovering that there is not a large gender gap between transfer students. However, that study does confirm that women are less likely to transfer than men, which is consistent with research conducted by Lee and Frank (1990) who also found that women were less likely to transfer than men. Rab (2004) concluded that in more recent years, women were more likely to transfer than men. However, that may be because women have outnumbered men on American college campuses since the 1970’s (Rocheleau, 2016).
Socioeconomic Status

More recently, Goldrick, Rab and Pfeffer (2009) found that socioeconomic status affected transfer students. Students who come from families with a higher income and who have parents who have attended college are more likely to have access to important information and resources to permit them to follow a more traditional educational path. Students who come from lower income families were found to participate in multiple attendance patterns because they were more likely to begin at a community college and then transfer to a four-year institution (Goldrick-Rab, 2006). This data is consistent with research conducted by Brown (2011) which also determined that minority students were more likely to participate in vertical and swirling transfer patterns due to community colleges being the main point of entry from lower-income students.

Veteran Status

Another transfer student characteristic which is not always included in transfer student research is veteran status. A series of tragic attacks against the United State which took place on September 11, 2001 changed the course of the nation and as a result, over 2 million veterans were deployed to Iraq to support Operation Iraqi Freedom (OIF) (Dunkin, 2012). Former President George W. Bush signed into law provisions commonly known as the Post 9/11 GI Bill. This new legislation increased the educational benefits for veterans and led to a large increase of veterans enrolling into higher education in the United States once they returned from Iraq (Dunkin, 2012).

The last time institutions saw a large influx in military veterans enrolling into higher education was when the original GI Bill of rights was passed in 1944 (Dunkin, 2012). This influx
not only affects veterans, but also has an impact on the institutions. Unlike traditional students, veterans do not have to worry about how to finance the cost of their education as a majority of veterans will have one hundred percent of their tuition cost covered by the United States government (Dunkin, 2012).

As transfer students need special services in comparison to native students, veteran students have their own special needs as well. The term “military friendly” has been used to identify institutions that have special provisions for veteran students such as fee-waived applications, veteran coordinators, and acceptance of military credit for their courses (Dunkin, 2012). In addition, many veterans face other obstacles due to their time of service such as Post-Traumatic Stress Disorder (PTSD), which they may need special services for on campus (Dunkin, 2012). PTSD can affect how veteran students integrate to campus life both academically and socially (Dunkin, 2012). Female veteran students have different needs than males given that 23-30% of female veterans experience sexual assault while serving active duty (Dunkin, 2012). Institutions must explore their campus climate and the services that are offered to veteran services to ensure their success and satisfaction on campus. In 2010, many veterans felt as if there is little campus support for veterans which is an issue that colleges and universities who are looking to enroll veteran students must address (Dunkin, 2012).

**Engagement and Retention**

In addition to benchmarking number of applications, percentage of accepted students, and number of students enrolled, four-year institutions should also keep track of retention rates amongst enrolled transfer students; particularly compared to non-transfer students (Stremple, 2013). Retention refers to the institution’s ability to keep students through to degree completion (Hennessey, 2015). Throughout the nation’s history, state and government legislation have
assisted with student retention through programs such as the GI Bill, the Civil Rights Act, and offering financial aid (Hennessey, 2015). Institutional retention efforts develop from acknowledging that obstacles effect student persistence and the institution has a responsibly to help the student through them (Hennessey, 2015). This begins with examining institutional procedures and how those procedures can have a significant impact on a transfer student’s likelihood to be retained (Hennessey, 2015). Research has moved from the concept of transfer shock to more complex questions about how the transfer process within institutions affects transfer student retention (Laanan, Starobin, and Eggleston, L. E. (2010). Transfer enrollment and articulation policies are different across institutions and states. Factors between different policies are important to examine when trying to explain how and why transfer students are successful, unsuccessful, and how their transfer experience affects their success (Laanan, Starobin, and Eggleston, L. E. (2010).

Strempke (2013) stated “By ensuring there are educational ‘on-ramps’ to partially offset the many ‘off-ramps,’ we build national capacity that helps assure access and excellence for all” (p.5). As four-year institutions continuously struggle with state and government financial support coupled with rising tuition costs, the challenge of creating ‘on-ramps’ to promote retention becomes increasingly difficult for institutions (Strempke, 2013). By 2003, more than 8 million students were enrolled in community colleges throughout the United States, many with plans to vertically continue their education at a four-year institution (Strempke, 2013). Strempke (2013) states that more nation-wide policies are needed to help promote the vertical transition from a two-year to four-year institution.

According to Jacobs (2007), retention begins before matriculations. College officials at both two-year and four-year institutions must focus on the needs of transfer students throughout
their entire educational career. One way this can be done before a student matriculates is by taking the “guesswork” out of the enrollment process and formulating articulation agreements between community colleges and four-year institutions so that students can plan out their academic plan of study while they are still at the community college (Jacobs, 2004). This process can be beneficial for both vertical transfer student and swirling transfer students. Creating partnerships with community colleges can guarantee full credit articulation to the four-year institution, in turn giving the student more reason to stay once they transfer from the community college to the four-year institution (Borden, 2004). While building relationships with community colleges, the four-year institution can begin to build a better reputation for being a transfer friendly institution and attract more students to transfer in (Borden, 2004). Outside of the institutions, college student transfer becomes a state policy issue, according to Jane Wellman (Borden, 2004). States can work together to create paths between institutions via course articulation agreements.

Institutions such as Syracuse University have already begun to implement similar practices which cultivate a transfer-friendly environment as well as fostering access and the institutional mission (Stemple, 2013). Eileen Stemple (2013) visited 45 universities of various types and determined that in order to effectively recruit and retain transfer students, institutions must have the appropriate staff and resources dedicated to student success. The first step to ensuring an institution has the proper staff and resources is to outline best practices in a strategic plan which is driven by the institutional mission (Stemple, 2013). This is important because a transfer-friendly environment includes departments such as admissions, marketing, financial aid, residence life, academic advising, orientation, career services, student services, alumni relations, and faculty. In order for an institution to be committed to creating a transfer-friendly atmosphere,
the transfer process should be consistent in promoting transfer success in each area (Stemple, 2013).

Often, students attend community college because the financial cost is typically much less than many four-year institutions. Setting up essential agreements such as articulation agreements, two plus two agreements, equivalency sheets, and duel admission program between community college and four-year institutions not only helps students create their academic career plan, but also helps save transfer students time and money knowing their time at the community college is a wise investment (Stremple, 2013). Creating these types of agreements may sound like a simple task, however, they require a deep investment involving faculty, staff, and administrators at the connecting institutions (Stremple, 2013). In order for these types of agreements to be affective, the coursework must be carefully aligned to foster retention once the student arrives at the four-year institution (Stremple, 2013). Students who begin their education at a community college typically take longer to complete their degree than traditional students who enter as freshmen (Borden, 2004). Making transfer students a center of an institutions enrollment strategy can provide benefits for not only the students, but for the partnering institutions (Stremple, 2013).

Once enrolled, transfer student engagement can have an effect on retention rates (Ghusson, 2016). Kuh (2009) defined student engagement as the time and effort students apply to activities which promote their learning and development. Institutions striving to attract transfer students need to create certain campus environments by shaping their academic, interpersonal, and extracurricular offerings allowing students to engage both academically and socially (Ghusson, 2016). Student engagement has a way to help transfer students overcome initial academic challenges and have a positive experience at their new institution. As students
have positive interactions with faculty, staff, peers, and their environment, they will be more likely to succeed academically; improving retention and graduation rates (Ghusson, 2016).

Since transfer students are largely influenced by how successful they are at the institution they transfer into, offering ways for transfer students to engage academically and socially is important for institutions to incorporate in their programs (Ghusson, 2016). Many institutions offer student engagement services that target freshman and lack the appropriate programs and services for transfer students (Ghusson, 2016). Most research has focused on horizontal students coming from community colleges and there is still little research showing the degree outcomes for horizontal transfers (Ghusson, 2016). Student engagement is often different between horizontal transfer students and vertical transfer students because vertical transfer students coming from community colleges are often older, work part-time, come from low socioeconomic backgrounds which can influence their opportunity to engage on campus (Ghusson, 2016).

First year transfer students tend to find their campus environments less supportive than native students in terms of faculty interaction and opportunities to become involved in student life (Ghusson, 2016). In order for transfer students to be successful and earn a bachelor’s degree, institutions should focus on making improvements for transfer students. Most research has been focused on why students transfer to another institution and not about their experiences and engagement on campus after they transfer (Ghusson, 2016).

**Orientation**

Although transfer student retention begins prior to matriculation, part of accommodating transfer students includes development of a transfer student specific orientation. For the community college students, several institutions have instituted transfer seminars and summer bridge programs which help students with academic preparation before arrival (Stremple, 2013).
Boston University is credited with organizing the first orientation program in 1888 to help students adjust to university life (Ward-Roof, 2010). When the first orientation programs were created, they were run by faculty to help students understand their role within the institution. Faculty were responsible for welcoming students on campus (Ward-Roof, 2010). Since the beginning, these orientations were informal and helped students get settled into residence halls, sign up for classes, and to learn the traditions of the university. Upperclassman were also part of these events, which is a tradition that is still followed today (Ward-Roof, 2010).

By 1940, more than one-hundred American institutions were hosting orientation events. Since faculty had the large responsibility of coordinating classroom materials, the orientation programs were hosted by the dean of men. The dean of men acted *in loco parentis* and was therefore also responsible for discipline (Ward-Roof, 2010). Soon after, other members of the college realized they also had an interest in ensuring that students learned about the resources they had to offer during orientation. In an attempt to help learn how to efficiently help students acclimate to the university, orientation directors met for the first time in Columbus, Ohio as the National Orientation Directors Association (NODA) (Ward-Roof, 2010). Although NODA had been created, there was still a lack of research on the subject of orientation, so NODA led to the creation of the Council for the Advancement Standards in Higher Education to establish standards of practice for institutions to use in their own orientation programs (CAS, 2003). Mayhew et. al (2007) found that transfer students were more likely than traditional students to view these orientation as a beneficial program to help them achieve academic learning objectives.

During his Presidency, Barak Obama had a vision for every American to complete at least two years of postsecondary education (Miller & Erisman, 2011). Because of that vision
more students have enrolled in community colleges making the number of community college students transferring to four-year institutions great than ever. By 2010, enrollment at community colleges has increased so drastically in states, such as California, that institutions do not have the adequate resources to manage the growth (Miller & Erisman, 2011). Since over half of first-year students enroll at community colleges, it is crucial that students who transfer from a community college to a four-year institution are given the resources needed during orientation to be successful (Miller & Erisman, 2011). Students transferring from community colleges are more likely to be from low-income families, first generation students, and from historically underrepresented racial and ethnic minorities (Miller & Erisman, 2011).

The Pell Institute for the Study of Opportunity in Higher Education conducted a study to support low-income, first-generation students at four-year institutions in Texas and determined that a transfer student specific orientation is needed (Miller & Erisman, 2011). However, transfer student orientations must be conducted the right way in order to accommodate transfer students’ busy schedules, transfer specific advising questions, and helping transfer students adjust (Miller & Erisman, 2011). A large roadblock when it comes to planning a transfer orientation is that transfer students may not think they need orientation upon enrollment because they have been to college before. However, once the semester begins, they may realize that the institution is unfamiliar and they are unaware of how to access the support services they need. The Pell Institute for the Study of Opportunity in Higher Education therefor decided that offering orientation two to three weeks after the start of the semester may be the best way to assist students with their needs. However, this would require an additional small orientation to be conducted at the start of the semester (Miller & Erisman, 2011).
Assisting Transfer Students

Regardless of transfer students’ multi-institutional path, vertical, horizontal, reverse, or swirling, and student demographics, the above-mentioned studies have concluded that students transfer for multiple reasons and may experience many challenges during the process. Assisting students who attend multiple institutions can have positive affects for the students’ academic paths as well as benefits for faculty members and their institutions (Borden, 2004). Before deciding how to assist students, institutions need to decide if they want to encourage students to choose a more traditional path or reconsider who they design and deliver programs to accommodate the growing variety of attendance patterns (Borden, 2004). As faculty work to plan, implement, assess, and improve their programs, the reality of transfer students coming in and out of programs at any given time is problematic (Borden, 2004). Faculty and staff now have the task of creating undergraduate programs where students may enter and leave while still accommodating the traditional students who move through the program in a linear way (Borden, 2004). Institutions face challenges when students enter at different levels and with different academic backgrounds. This includes the difference in rigor of the courses between community colleges and four-year school (Miller & Erisman, 2011). However, setting up articulation agreements and course equivalency guidelines between institutions can streamline the process (Stremple, 2013). Internally, it is important for institutions who have decided to embrace transfer students to keep an electronic database of all articulated and approved courses to make sure agreements are clear, transparent, and consistent campus-wide (Stremple, 2013). The internal communication structure between departments should be stream-lined across campus and include staff from admissions, financial aid, student affairs, and alumni. Assisting transfer students is a campus-wide movement which directly involves multiple departments (Stremple, 2013). Senior
management can create “working groups” and a senior leadership advisory board which is strictly focused on transfer efforts (Stremple, 2013). At large institutions, it is important to house information in one centralized location, such as the Provost’s office (Stremple, 2013).

Admissions personnel typically work to target specific goals pertaining to transfer applicants, students admitted, and transfer students who matriculate into certain programs. These benchmarks are necessary for the quantitative and qualitative assessments which effect institutional enrollment and retention strategies (Stremple, 2013). Admissions personnel also act as the liaison for transfer students to assist them with a smooth transition between institutions, especially if the programs are designed to foster transferability (Stremple, 2013).

From a student affairs standpoint, institutions can recruit peer mentors who are former transfer students to guide and assist prospective transfer students. These student mentors have already had the experience of transitioning to the institution and can help new students navigate the support services on campus (Miller & Erisman, 2011). Peer mentors can invite students to sit on classes with them and demystify the transfer process while sharing their personal success stories. Peer mentors can also assist admissions counselors by visiting community college campuses and work with the same students as they transition to the four-year institution (Stremple, 2013). Creating services, such as peer mentors will help to support transfer students with their transition and give the transfer students a personal mentor outside of their academic advisor. In addition to peer mentor programs, certain staff and faculty, such as admissions counselors and academic advisors should be dedicated specifically to working with transfer student populations. Transfer-specific academic advising and career counseling can help students conquer both the obstacles of degree completion and job placement (Miller & Erisman, 2011). These individuals can also create transfer specific orientations with a private-welcome ceremony
to both meet the specific needs of transfer students, but also integrate them into the rest of campus. Dedicated faculty, staff, and transfer student mentors can lead to creating campus leadership roles exclusively for transfer students (Stremple, 2013).

The greater part of institutions with large numbers of incoming transfer students offer guaranteed on-campus housing. This helps make sure students can acclimate to the campus environment while ensuring they have a safe place to live, rather than fending for themselves off campus. Institutions should try to include transfer students in guaranteed housing programs with additional transfer student learning communities to connect them with other transfer students on campus (Stremple, 2013).

The more important issue when it comes to transfer students, especially swirling transfers, is the learning environment of the students and how that needs to be addressed by institutions (Borden, 2004). Individual academic advisors and faculty need to support students who enter their programs midway. Knowing where students come from, how much orientation the student needs, and their preexisting knowledge and abilities can help institutions support the student individually (Borden, 2004). Aside from academic advising, this may be done through competency centered assessments in which the degree is awarded based on the assessments and the courses amongst institutions should be created to help students develop those competencies (Borden, 2004). Rather than institutions working to improve retention throughout their programs and continue the risk of students leaving to seek other opportunities, it would be in the best interest of the institutions and the students to develop policies and procedures to promote transfer friendly environments for the ever-growing phenomenon of the transfer and swirling transfer student populations.
Methodology

The research for this study has been approached with archived quantitative data. This study explored three different patterns of students who enrolled in multiple higher education institutions while obtaining their bachelor's degree. The three types of students this study focused on are vertical transfer students transferring from a two-year school to a four-year school, horizontal transfer students transferring from a four-year school to a four-year school, and swirling transfer students who attend multiple institutions, both two year and four year. While many years of research have been conducted to determine, who transfer students are and why they transfer, so far there is no research that looks at these three types of transfer student enrollment backgrounds to determine how institutions can best assist them. The research questions that this study explored are: Who are Canisius College transfer students? Are there patterns in academic success based on transfer student type? Overall, which type of transfer student is the most successful at Canisius College? By looking at each individual in this study and analyzing their enrollment background, researchers gained further understanding of who transfer students are, why students transfer, and which type of transfer student is the most successful in order to determine how to best assist students throughout their academic careers.

This study explored difference in GPA and progression to graduation between vertical, horizontal, and swirling transfer students. Additionally, the researcher examined veteran status, ethnicity, and age upon enrolling to determine if particular student demographics have any additional effects on Canisius College transfer student academic success. The researcher examined students’ prior institutions(s), incoming GPA, whether the student experienced a dip in their GPA due to “transfer shock,” time to degree completion, and if the student was retained or transferred again.
The data was collected during the 2016-2017 academic year at Canisius College, a four-year college in Buffalo, New York. Canisius is a small, private institution with approximately 2,900 undergraduate students in three schools, Business, Education, and Arts and Sciences. Students transferred into Canisius College programs during traditional fall and spring semesters. The data was collected from multiple departments and reflect the 2013-2014, 2014-2015, and 2015-2016 academic enrollment years. All students included in this study are undergraduate students who are matriculated into a four-year bachelor’s degree program.

This study was conducted in three parts. First, data was collected from the office of admissions, the office of the registrar, and from the orientation coordinator. Data included, students who matriculated into the institution as a transfer student in these academic years, students’ age upon enrolling, students who enrolled in classes after the semester has already begun, students who had a rise or drop in GPA, students’ gender identity, veteran status, Pell Grant eligibility, students who participated in orientation, and whether the student was retained or left the college. There were no restrictions on data based on age, gender identity, race, social class, or sexual orientation. Identities of students remained confidential and for research purposes only.

In the second part of the study, the researcher analyzed the student data to determine if there was a difference in GPA, retention, and progression to graduation amongst the three types of transfer students. The researcher also looked to see if there were patterns in GPA, retention, and progression to graduation based on students’ ethnicity, age upon enrolling, gender identity, socioeconomic status, and veteran status.
In the third part of the study, the researcher used these findings to determine whether or not transfer students' characteristics and prior enrollment history (transfer, horizontal, or swirling) determined their success at Canisius College. By determining the success of transfer students, faculty and staff can implement programs and policies on campus to assist populations of transfer students who struggle with the transition to Canisius College and degree completion.

Because Canisius is a small institution, it was decided to combine data from three academic years. While combining data increased the number in the dataset, it led to some limitations in the data. Limitations included that students entered Canisius at different points in their academic careers with different amounts of credit hours, which may have affected their ability to adjust to their academic coursework and time to degree completion. Also, looking at different academic years made data more inconsistent than if the students included in the study all enrolled in the same semester because the amounts of students enrolling from one academic year to another are not the same.
Results

Introduction

The researcher collected data from various departments on campus for all transfer students enrolled for the fall and spring semesters during the 2013-2014, 2014-2015, and 2015-2016 academic years. For each student, the data collected includes: age upon enrolling, state of residence, gender, veteran status, ethnicity, incoming major, application date, registration date, FAFSA completion, expected family contribution (EFC), prior college name, prior college type, number of previous colleges/universities attended, entering GPA, GPA after first semester at Canisius, difference in GPA after first semester at Canisius, orientation attendance, first year retention, estimated graduation date, approximate length to graduation, and whether the student left Canisius voluntarily, was dismissed from Canisius, was awarded a degree, or is still matriculating towards degree completion.

This study was developed with the creation of three research questions:

a. Vertical, Horizontal, and Swirling: Who are Canisius College Transfer Students?

b. Are there patterns in academic success for transfer students based on transfer student type, veteran status, ethnicity, age upon enrolling, orientation attendance, date of registration, or socioeconomic status?

c. Overall, which type of transfer student shows the most academic successful at Canisius College based on GPA, retention, and matriculation to graduation?
Transfer Student Type

The main part of this study was to analyze the prior enrollment history of Canisius College transfer students to determine if they are a vertical, horizontal, or swirling transfer student. Over the course of three academic years, 2013-2014, 2014-2015, and 2015-2016, a total of 390 undergraduate students transferred from previous higher education institutions and matriculated into four-year degree programs at Canisius College.

Vertical transfer students, who have only attended one two-year institution or community college before matriculating to Canisius College totaled 97 students, making up 25% of transfer students who enrolled over the three-year period. Horizontal transfer students, who attended one four-year institution before transferring to Canisius College totaled 109 students, making up 28% of the transfer students in this study. The largest amount of transfer students over the three-year period were swirling transfer students. Swirling transfer students attended more than one institution including both community colleges and four-year institutions before transferring to Canisius. In total, 182 students were classified as swirling transfer students, making up 47% of the total students included in the study. Additionally, 2 students were classified as military students. These students did not attend either a two-year institution or a four-year institution. Instead, they transferred to Canisius College with military education equivalent to college credit from the American Council on Education. Canisius College classifies these students as transfer students. Military students are counted as vertical transfer students in Table 1 below.
Table 1.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Vertical</th>
<th>Horizontal</th>
<th>Swirling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>25%</td>
<td>28%</td>
<td>47%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Asian Pacific Islander</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Black Non-Hispanic</td>
<td>0%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Not Reported</td>
<td>3%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Nor Reported Non-Hispanic</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>73%</td>
<td>82%</td>
<td>85%</td>
</tr>
<tr>
<td>Age Upon Entering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>78%</td>
<td>93%</td>
<td>64%</td>
</tr>
<tr>
<td>23-27</td>
<td>12%</td>
<td>5%</td>
<td>23%</td>
</tr>
<tr>
<td>28-32</td>
<td>9%</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td>33-37</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>38+</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Gender Identity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>54%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>Female</td>
<td>46%</td>
<td>52%</td>
<td>51%</td>
</tr>
<tr>
<td>Pell Grant Eligibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible</td>
<td>32%</td>
<td>13%</td>
<td>25%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>62%</td>
<td>72%</td>
<td>62%</td>
</tr>
<tr>
<td>Unknown</td>
<td>6%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Veteran Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veteran</td>
<td>5%</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td>Non-Veteran</td>
<td>95%</td>
<td>97%</td>
<td>85%</td>
</tr>
<tr>
<td>Entering GPA</td>
<td>3.03</td>
<td>3.0</td>
<td>3.05</td>
</tr>
<tr>
<td>Orientation Attendance</td>
<td>82%</td>
<td>80%</td>
<td>66%</td>
</tr>
<tr>
<td>Difference in GPA</td>
<td>-0.26</td>
<td>0.28</td>
<td>0.05</td>
</tr>
<tr>
<td>1st Year Retention</td>
<td>82%</td>
<td>86%</td>
<td>88%</td>
</tr>
</tbody>
</table>

Institution Type

Vertical transfer students previously matriculated into a program at a two-year institution such as community college, business school, or Military institute. These students enrolled in one two-year institution prior to matriculating into a four-year degree program at Canisius College. Of the students in this study, 97 students, totaling 25% are classified as a vertical transfer student.
and make up the smallest population of transfer students in this study. The largest majority of students who transfer from community colleges to Canisius College come from Erie Community College, which is in the same county as Canisius College. The next largest majority of transfer students from community college come from community colleges in neighboring counties, such as Niagara county.

The next smallest population of transfer students who transfer to Canisius College during the three academic years looked at in this study are horizontal transfer students, including 109 students and making up 27% of total transfer students. Horizontal transfer students previously matriculated into a program at a four-year college or university. These students enrolled in one four-year institution prior to matriculating into a four-year degree program at Canisius College. The largest majority of horizontal transfer students who transferred to Canisius College came from state schools within the State University of New York (SUNY) system. A staggering number of 60% of horizontal transfer students came from state schools within New York.

The second largest population of horizontal transfer students transferred from four-year institutions that are similar to Canisius College. While students transferred from both private and public institutions that are located outside of Erie county, 11% of horizontal transfer students transferred from Jesuit institutions, like Canisius. This indicates that students may have gone away for college, missed home, and wanted to continue with a Jesuit education. The other 29% of horizontal transfer students transferred from a mix of private and public institutions throughout the country.

Swirling transfer students previously matriculated into two or more programs at both four-year and two-year institutions. Students who attended multiple institutions before transferring to Canisius College make up 47% of the students in this study for a total of 182
The results of this study have proven that the largest population of transfer students at Canisius College are swirling transfer students who have attended multiple institutions, both two-year and four-year, before transferring to Canisius College. Swirling students attended as few as 2 other institutions and as many as 7 other institutions before transferring to Canisius. Within these students, some have already completed an associate’s degree or bachelor’s degree and came to Canisius to further their education.

The population of swirling transfer students included 15% of students who had previously attended Canisius College, left, matriculated into another institution, and then transferred back to Canisius College. Swirling transfer students were more likely to leave Canisius College and transfer to another institution. Out of the swirling transfer students, 3% of them did not complete their degree at Canisius and transferred to another institution. Some students transferred back to a previous institution, some transferred to a community college, and some transferred to an entirely new institution again.

Table 2.

<table>
<thead>
<tr>
<th>Transfer Student Type</th>
<th>Total # of Student</th>
<th>Percentage of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>99</td>
<td>25%</td>
</tr>
<tr>
<td>Horizontal</td>
<td>109</td>
<td>28%</td>
</tr>
<tr>
<td>Swirling</td>
<td>182</td>
<td>47%</td>
</tr>
</tbody>
</table>

**Ethnicity**

Canisius College has a predominately White Non-Hispanic transfer student population, totaling 317 students, making up 81% of all students in this study. The second largest population was Black Non-Hispanic students, making up 8% and totaling 33 students. The smaller ethnicity...
populations were American Indian/Alaskan Native, totaling 2%, Asian Pacific Islander totaling 2%, and Hispanic, totaling 3%. In this study, 2% of students did not report their ethnicity and 2% of students did not report their ethnicity, but did indicate they are Non-Hispanic. All three types of transfer students showed diversity within ethnicity. However, all three populations demonstrated a large population of White Non-Hispanic students. Of all students who transferred to Canisius College, 81% identified themselves as White Non-Hispanic. These numbers had slight differences between transfer student populations.

Vertical transfer students have some more diverse ethnic backgrounds compared to the total amount of transfer students in this study. Vertical transfer students had the largest population of Hispanic students (11%) and the largest population of Asian Pacific Islander students (5%). However, as shown in Table 3, vertical transfer students also had the largest number of students who did not report their ethnicity, so there may be some actual difference in those figures. Looking at vertical transfer students, 73% of students identified themselves as White Non-Hispanic, 11% as Hispanic, 5% as Asian Pacific Islander, 3% did not report their ethnicity, 3% did not report their ethnicity, but indicated that they are Non-Hispanic, 2% identified as American Indian/Alaskan Native, and 0% identified as Black Non-Hispanic.

Horizontal transfer students are less ethnically diverse compared to vertical students in this study. Horizontal students had the largest population of Black Non-Hispanic students at 9%. Black Non-Hispanic students are most likely to transfer from a four-year institution to a four-year institution as horizontal transfer students. On the other end, 82% of students identified themselves as White Non-Hispanic, 4% as Hispanic, 1% as Asian Pacific Islander, 3% did not report their ethnicity, but indicated that they are Non-Hispanic, 2% identified as American Indian/Alaskan Native, and 9% identified as Black Non-Hispanic.
Swirling transfer students are least ethnically diverse compared to the total number of students in this study. Based on this study, White Non-Hispanic students are more likely to attend multiple institutions as part of a swirling phenomenon than the other student populations. In total, 85% of students identified themselves as White Non-Hispanic, 3% as Hispanic, 1% as Asian Pacific Islander, 2% did not report their ethnicity, but indicated that they are Non-Hispanic, 2% identified as American Indian/Alaskan Native, and 6% identified as Black Non-Hispanic, and 2% did not report their ethnicity.

Table 3.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Vertical</th>
<th>Horizontal</th>
<th>Swirling</th>
<th>Military</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaskan Native</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Asian Pacific Islander</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Black Non-Hispanic</td>
<td>0%</td>
<td>9%</td>
<td>6%</td>
<td>50%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11%</td>
<td>4%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Not Reported</td>
<td>3%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Nor Reported Non-Hispanic</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>73%</td>
<td>82%</td>
<td>85%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Age

As a private, four-year, liberal arts institution, Canisius has a large population of traditional students. Non-traditional transfer students still came close in the age range of traditional students between the ages of 18-22. In this study, 293 students entered Canisius College between the ages of 18-22 making up 75% of students in this study. The other students fell into the following categories based on the age the entered Canisius: 16% were 23-27, 5%
were 28-32, 2% were 33-37, and 2% were over the age of 38. While 75% of transfer students were between the traditional ages of 18-22, this study did uncover some variation between transfer student types.

Vertical transfer students showed a range of ages. Vertical transfer students between the ages of 18-22 equaled 78%, however, there were also a larger percentage of students between 23-27 at 12%. Only 9% vertical transfer students were over the age of 28. The other age ranges entering as vertical transfer students include: 12% ages 23-27, 8% 28-32, 0% 33-37 and 1% of students entered over the age of 38.

Horizontal transfer students showed a much larger percentage of students who were ages 18-22 at 93%. Only 8 students from four-year institutions were over the age of 23 and there weren’t any horizontal transfer students who were over the age of 33. The other age ranges entering as vertical transfer students include: 5% ages 23-27, 3% 28-32. There were not any horizontal transfer students who entered over the age of 32. This is consistent with the previous research which explained that horizontal transfer students may transfer from four-year institution to four-year institution due to homesickness, lack of program, and issues integrating academically and socially on campus.

Swirling transfer students showed a much greater age range than vertical and horizontal students. Only 64% of swirling transfer students were between the ages of 18-22. A large percentage of swirling students were between 23-27 years old, and others were as old as 54 upon entering Canisius. Swirling transfer students have a wide range of incoming age compared to the other transfer student populations in this study. A majority of swirling transfer students fall into the traditional student age range, equaling 64% of horizontal transfer students entering Canisius College between the ages of 18-22. The other age ranges entering as swirling transfer students
include: 23% ages 23-27, 6% ages 28-32, 5% ages 33-37, and 3% entered Canisius over the age of 38.

Table 4.

<table>
<thead>
<tr>
<th>Age Upon Entering</th>
<th>Vertical</th>
<th>Horizontal</th>
<th>Swirling</th>
<th>Military</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-22</td>
<td>78%</td>
<td>93%</td>
<td>64%</td>
<td>50%</td>
</tr>
<tr>
<td>23-27</td>
<td>12%</td>
<td>5%</td>
<td>23%</td>
<td>50%</td>
</tr>
<tr>
<td>28-32</td>
<td>9%</td>
<td>2%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>33-37</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>38+</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Gender

Looking at all 390 students included in this study, exactly 50% of the students were male and 50% were female. All students identified with a male or female gender.

Although there were large differences in age between the types of transfer student populations, there was not as large of a difference between gender identity. Males were slightly more likely to transfer from community colleges to Canisius College than females. Females made up 46% of vertical transfer students and males made up 54%. This is very close to the horizontal transfer students which reflected 52% female and swirling which reflected 51% female. Females made up 51% of all swirling transfer students compared to 49% of males.
Table 5.

<table>
<thead>
<tr>
<th>Transfer Student Type</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>Horizontal</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>Swirling</td>
<td>49%</td>
<td>51%</td>
</tr>
</tbody>
</table>

**Socioeconomic Status**

For this study, socio-economic status was determined by the students’ eligibility for the Federal Pell Grant. Students who are eligible for the grant typically show a greater financial need. This need is determined by the students’ estimated family contribution (EFC) on the FAFSA application. Of the students in this study, 88% of students completed the FAFSA and 12% of students did not complete the FAFSA. Of the students who did complete the FAFSA, only 26% were eligible for the Federal Pell Grant and 74% of students were not eligible. The majority of students had a high enough expected family contribution (EFC) to disqualify them for the government grant. This determines that students who transfer to Canisius College typically come from higher socioeconomic backgrounds.

Looking at students who completed the FAFSA, 31% of vertical transfer students were eligible for the Federal Pell Grant, showing a greater financial need than the 61% who were not eligible. Out of the vertical transfer students, 6% did not complete the FAFSA. This number is greater than swirling transfer students who showed 25% of students eligible for the Federal Pell Grant and only 13% of horizontal students. Looking at students who completed the FAFSA, 14% of horizontal transfer students were eligible for the Federal Pell Grant, showing a greater financial need than the 86% who were not eligible. Out of the vertical transfer students, 100%
completed the FAFSA to indicate their Pell Grant eligibility. Horizontal and swirling students had the greatest number of students who did not complete the FAFSA in an attempt to apply for financial aid. Looking at the swirling transfer students, 13% of swirling transfer students completed the FAFSA to indicate their Pell Grant eligibility and 24% of swirling transfer students were eligible for the Federal Pell Grant, showing a greater financial need than the 63% who were not eligible.

Table 6.

<table>
<thead>
<tr>
<th>Pell Grant Eligibility</th>
<th>Vertical</th>
<th>Horizontal</th>
<th>Swirling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible</td>
<td>32%</td>
<td>13%</td>
<td>25%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>62%</td>
<td>72%</td>
<td>62%</td>
</tr>
<tr>
<td>Unknown</td>
<td>6%</td>
<td>13%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Veteran Status

Canisius College considers military students who left high school, joined the Armed Forces, and earned Military credits transfer students. Of the students in this study, 2 of them were military students without any other higher education experiences. Of the students who attended higher education institutions as well as joined the armed forces, 10% of transfer students in these academic years were veterans.

Students who have served in the United States Armed Forces and attended a two-year school make up 5% of vertical transfer students at Canisius College. Students who have served in the United States Armed Forces and attended a four-year college or university make up 3% of horizontal transfer students at Canisius College. Students who have served in the United States Armed Forces and attended multiple institutions make up 15% of swirling transfer students at
Canisius College. Swirling transfer students have the largest population of veterans compared to the other transfer student groups in this study.

**Table 7.**

<table>
<thead>
<tr>
<th>Transfer Student Type</th>
<th>Veteran</th>
<th>Non-Veteran</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td>Horizontal</td>
<td>3%</td>
<td>97%</td>
</tr>
<tr>
<td>Swirling</td>
<td>15%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Are there patterns in academic success based on transfer student type?

**Orientation**

Orientation is hosted in August for the fall semester and January for the spring semester. All transfer students who matriculated during the three academic years in this study had the opportunity to attend orientation at the start of the semester they enrolled. In this study, 66% of students who enrolled attended orientation at the start of their first semester. For both fall and spring orientation sessions, 82% of vertical transfer students attended orientation at the beginning of their first semester. For both fall and spring orientation sessions, 80% of horizontal transfer students attended orientation at the beginning of their first semester. For both fall and spring orientation sessions, 66% of swirling transfer students attended orientation at the beginning of their first semester. Swirling transfer students are less likely to attend orientation than the other transfer student populations in this study.

**GPA**

Based on Canisius College admission’s requirements, transfer students must have between a 2.0-3.0 cumulative GPA to be accepted. This GPA is different based on academic
program. Overall, transfer students entering Canisius College had an average of 3.03 cumulative GPA. In total, transfer students had a -0.01 drop in their GPA after their first semester.

Most vertical transfer students in this study showed a drop in their GPA after their first semester. Overall vertical transfer students’ GPA decreased -0.26 after their first semester. Most horizontal transfer students experienced an increase in the GPA after the first semester. On average, horizontal transfer students’ GPA increased +0.28% after their first semester. Most swirling transfer students experienced an increase in the GPA after the first semester. On average, swirling transfer students’ GPA increased +0.05 after their first semester.

**First year retention**

First year retention is made up the fall and spring semesters only. Of the students in this study, 86% of the students attended for one full year. The remaining students were not retained for the full year and left before their second semester. Students left the college for multiple reasons including academic dismissal, transferred to another institution, medical leave, and unknown reason.

Of the students in this study, 82% of vertical transfer students attended for one full year. The remaining students were not retained for the full year and left before their second semester. Students left the college for multiple reasons including academic dismissal, transferred to another institution, medical leave, and unknown reason. Of the horizontal students in this study, 86% attended for one full year. The remaining were not retained for the full year and left before their second semester. Students left the college for multiple reasons including academic dismissal, transferred to another institution, medical leave, and unknown reason. Of the students in this study, 88% of swirling transfer students attended for one full year. Students left the
college for multiple reasons including academic dismissal, transferred to another institution, medical leave, and unknown reason.

Table 8.

<table>
<thead>
<tr>
<th>Transfer Student Type</th>
<th>Entering GPA</th>
<th>Orientation</th>
<th>Difference in GPA</th>
<th>1st Year Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>3.03</td>
<td>82%</td>
<td>-0.26</td>
<td>82%</td>
</tr>
<tr>
<td>Horizontal</td>
<td>3.0</td>
<td>80%</td>
<td>+0.28</td>
<td>86%</td>
</tr>
<tr>
<td>Swirling</td>
<td>3.05</td>
<td>66%</td>
<td>+0.05</td>
<td>88%</td>
</tr>
<tr>
<td>Military</td>
<td>2.3</td>
<td>50%</td>
<td>+0.02</td>
<td>100%</td>
</tr>
</tbody>
</table>

Length to Graduation

On average, it takes transfer students approximately 3 academic years to complete their four-year degree once they enter Canisius. This does not include students who change their major after their first semester at Canisius.

On average, it takes a vertical transfer student approximately 2.95 additional academic years to complete their four-year degree once they enter Canisius. This does not include students who change their major after their first semester at Canisius. This number is slightly less than the overall student population in this study. On average, it takes a horizontal transfer student approximately 3 additional academic years to complete their four-year degree once they enter Canisius. This does not include students who change their major after their first semester at Canisius. On average, it takes a swirling transfer student approximately 3 additional academic years to complete their four-year degree once they enter Canisius.

Overall, which type of transfer student is the most successful at Canisius College?
For the purpose of this study, the most successful transfer student is defined by the type of transfer student with the overall highest GPA, retention rates, and progress to graduation. Overall, 69% of vertical transfer students experienced a decrease in the GPA after their first semester, proving that students transferring from community colleges to Canisius are struggling with the transition. Of the students who experienced a drop in their GPA, 37% of them were academically dismissed or left the college before obtaining their degree. Vertical transfer students, both veteran and non-veteran, are least likely to receive their degree at Canisius. Of the students researched in this study, only 70% of vertical transfer students have been awarded their four-year degree or are still in progress of degree completion. The other 30% have been academically dismissed or left the institution.

The horizontal students in this study have the largest increase in GPA (+0.28) after their first semester. Of these students, 54% horizontal students experienced an increase in GPA (+0.28) after the first semester and 86% of horizontal students were retained for one year.

Swirling students showed an increase in average GPA (+0.05) after their first semester, but the increase was not as large as horizontal students. Swirling students are familiar with the college enrollment and transition process, which likely aided in their success. Of the three transfer student populations, swirling students were the most likely to be retained and matriculate towards graduation. In total, 80% of swirling transfer students have been awarded a four-year degree or are currently working towards degree completion. Overall, based on GPA and retention, this study shows that swirling transfer students the most successful type of transfer student at Canisius College.
Discussion

The purpose of this quantitative study is to understand the academic history of vertical, horizontal, and swirling transfer students and determine whether or not their prior enrollment background affects their success at Canisius College. Specifically, this study sought to explore the definitions of vertical, horizontal, and swirling transfer students and identify each type of student’s GPA after their first semester, estimated length to graduation, and overall retention to determine if one type of transfer student is more successful than the others. Understanding and learning about the experiences of vertical, horizontal, and swirling transfer students is not widely examined in past research. Therefore, in order to know how to best serve transfer students enrolling at Canisius College, the college must be aware if a particular population of transfer students needs more or less assistance than the others. The data in this study collected from the office of admissions, the office of the registrar, and from the orientation coordinator at Canisius College included students who matriculated into a four-year degree program with transfer credits from a previous institution(s). These students are defined as transfer students. Students who transfer from one institution from another do so for reasons including, but not limited to, academic goals, family obligations, relocation, program choice, problems at the previous institution, and financial and personal reasons.

Canisius College has a large population of traditional students entering as freshman between the ages of 18-22. Because of the traditional student population at Canisius, there is often assumptions on campus that students transferring into Canisius are either traditional, vertical transfer students transferring in from a community college, or they are horizontal transfer students who go away to school as freshman and transfer to Canisius to be closer to home. The results of this study have proven that the traditional, vertical transfer student makes up the
smallest population of students transferring to Canisius College and swirling transfer students who attended multiple institutions make up the largest. Students transferring to Canisius College are more diverse than the student’s in McGuire and Belcheir’s study (2013), which found that only 11% of transfer students self-identified as part of a minority group. At Canisius College, 19% of transfer students self-identified as part of a minority group. This information is consistent with Brown’s (2011) information which indicated that the national transfer rate of minority students is 10-20%. The two military students self-identified at 50% Black Non-Hispanic and 50% White Non-Hispanic.

Every student in this study identified as either male or female. There were slightly more females than males who transferred to Canisius in both the horizontal and swirling transfer student groups. This data is consistent with the research conducted by Rab (2004), which concluded that in more recent years, women were more likely to transfer than men. However, that may be because women have outnumbered men on American college campuses since the 1970’s (Rocheleau, 2016). Overall, there is an equal number of students who identify as either male or female transferring to Canisius.

Half of the nation’s undergraduate students enroll at a community college. From there, half of them transfer to a four-year institution. These students are considered vertical transfer students. Although half of the nation’s undergraduate students enroll at a community college or two-year institution, only 25% of transfer students coming into Canisius College are vertical transfer students. Most vertical transfer students experienced “transfer shock” their first semester and only 70% of vertical transfer students are retained.

As consistent with Hill’s (1965) research on “transfer shock,” many vertical transfer students transferring from community college to Canisius College experienced transfer shock
their first semester. Vertical transfer students were more likely than horizontal or swirling students to attend orientation, however, vertical transfer students experienced the largest drop in GPA after their first semester at Canisius. Of the vertical students who attended orientation, which is meant to help them become acclimated with campus life, 82% experienced “transfer shock.” The Canisius fall orientation has a breakout session for transfer students, but the spring orientation does not. Overall, 69% of vertical transfer students experienced a decrease in the GPA after their first semester, proving that students transferring from community colleges to Canisius are struggling with the transition. Of the students who experienced a drop in their GPA, 37% of them were academically dismissed or left the college before obtaining their degree. Vertical transfer students who experienced a drop-in GPA were predominately White Non-Hispanic, but were comprised of 4 identified ethnicities. Of the vertical transfer students who experienced transfer shock, 64% identified as White Non-Hispanic and 14% identified as Black Non-Hispanic. Overall, vertical transfer students at Canisius College experience transfer shock, have the largest drop in GPA, identify with one of four ethnicities, and are more likely to register for courses after the semester has already begun.

The average difference in GPA between the time vertical students entered Canisius College and the end of their first semester is -0.26. 22% of vertical students who experienced a drop in their GPA did not continue their studies at Canisius for a full year. Three of the vertical students who left were academically dismissed and 11 transferred to other institutions. Of the vertical transfer students who experienced a decrease in their GPA, 23% registered for courses after the semester had already begun. Vertical transfer students were only group of transfer students who registered for courses after the semester began.
Vertical transfer students, both veteran and non-veteran, are least likely to receive their degree at Canisius. Of the students researched in this study, only 70% of vertical transfer students have been awarded their four-year degree or are still in progress of degree completion. The other 30% have been academically dismissed or left the institution. Canisius College advertises as a “Military Friendly” campus which accepts all GI Benefits, including Chapter 33, Post 9/11 GI, and Yellow Ribbon. Despite the financial benefit, there are not a lot of military veterans transferring to Canisius College. During the academic years included in this study, 38 veteran students transferred to Canisius, which is approximately 10% of the total transfer student population. The transfer veteran student population consists of 5 reported ethnicities and, like the total transfer student population, most veterans did not qualify for the Federal Pell Grant based on the FAFSA. Out of the veterans in this study, 74% were considered swirling transfer students and attended between 2 and 7 previous institutions.

The two military students who were included as vertical transfer students in this study and only attended the American Council on Education for military credit had mixed success. In comparison, the two had very different academic performance results. One student, who identified as a Black Non-Hispanic male registered for courses after the semester began, did not attend orientation, experienced a -1.40 drop in GPA after the first semester, and was academically dismissed before graduating. The other military student who identified as a White Non-Hispanic Male, registered before the semester began, attended orientation, experienced a 1.44 increase in GPA after the first semester, and is on track to graduate within 3 years. He is still in progress of completing his bachelor’s degree at Canisius College. This data shows the importance of military students, with no prior college experience, attending orientation and registered for classed before they begin.
The Canisius enrollment management team includes a Transfer Admissions Counselor who spends a majority of time specifically recruiting community college students. The Transfer Admissions Counselor builds relationships directly with community colleges across New York State to recruit vertical transfer students to Canisius. A large amount of effort and cost is dedicated to recruiting these students and they only make up 25% of all transfer students who actually enroll and vertical transfer students are not highly retained. This is drastically different from the national statistics of community college students who make up 42% of all enrolled undergraduate students (Ma and Baum, 2016). It is recommended that the Transfer Admissions Counselor work more closely with community colleges students to see what would help them with academic and social integration on campus.

Additionally, it may be beneficial for the Academic Advisors and Orientation Coordinator to incorporate more transfer services during the students’ first semester to help lower the students’ chances of experiencing “transfer shock.” While orientation is intended to inform students of campus services, most students have difficulty with the transition from community college to Canisius College which negatively affects their academic performance. As noted in some students’ academic files, they transferred to four-year state schools due to financial reasons. It is recommended that orientation also include a financial planning piece to help transfer students financially plan for the remainder of their program at Canisius. It is recommended that the Transfer Admissions Counselor, the Academic Advisor, and the Orientation Coordinator reevaluate the transfer process for vertical transfer student to help assess their academic and social needs at Canisius College to improve retention and student success.
In the United States, most four year institutions typically admit transfer students from other four-year institutions in addition to two-year institutions. These students are considered horizontal transfer students (Terris, 2009). Students who begin at a four-year institution and transfer to another four-year institution often receive less attention than vertical transfer students. For Canisius College, this may be problematic because 28% of transfer students in this study were defined as horizontal transfer students. Most of the horizontal students (60%) transferred from state institutions in New York. All of these state (SUNY) institutions have tuition which is much lower than Canisius College. Some of these students may have transferred from the state institutions to Canisius College because it was more cost effective to begin at a state institution. Others may have transferred because the state institutions had very large class sizes, large campuses, less of a personalized experience for students, or did not have their desired program. These results are consistent with Tinto’s model which emphasizes the importance of student fit, social and academic integration, and the classroom experience (Tinto, 2003).

The horizontal students in this study have the largest increase in GPA (+0.28) after their first semester. Of these students, 54% horizontal students experienced an increase in GPA (+0.28) after the first and 86% of horizontal students were retained for one year and identified with one of five different ethnic backgrounds. Most horizontal students showed an improvement in academic performance after transferring to Canisius. Horizontal students attended the same orientation sessions as vertical transfer students and were given the same information about campus services. Most horizontal students (80%) attended orientation and they were more likely to be retained after their first year than vertical transfer students. Consistent with the literature, it is likely that institutional attributes at Canisius provided the environmental characteristics which had a positive effect on student integration.
The Transfer Admissions Counselor cannot recruit four-year transfer students using the same outreach as vertical transfer students, therefore, horizontal transfer students receive less attention than vertical students. Despite this, horizontal students showed the highest increase in GPA after the first semester at Canisius College. Horizontal students are typically traditional students who transfer early on in their academic career for academic or social reasons. Although horizontal students showed the highest increase in GPA, they did not have the highest retention percentages and were likely to be dismissed or transfer again. This information is consistent with researched that students transfer from four-year institution to four-year institution due to Tinto’s model which emphasized the importance of student fit, social and academic integration, classroom experiences, and faculty-student relationships (Li, 2010).

Horizontal students were less likely to be eligible for Federal Financial Aid even when they did complete the FAFSA. These numbers are consistent with researched which showed that students who come from lower income families were found to participate in multiple attendance patterns because they were more likely to begin at a community college and then transfer to a four-year institution (Goldrick-Rab, 2006). Brown (2011) determined that minority students were more likely to come from lower-income families. Students in this study who self-identified as part of a minority population did not necessarily come from lower-income families. Of the minority students in this study, 51% were not eligible for the Federal Pell Grant and 49% were. Although the military students included in this study had their tuition covered by their military benefits, both students completed the FAFSA and both were eligible for the Federal Pell Grant. Overall, students transferring to Canisius College come from greater socioeconomic backgrounds and most are not eligible for the Federal Pell Grant.
Swirling transfer students are multi-institutional transfers who attend more than two post-secondary institutions, both two-year and four-year before completing a bachelor’s degree. Of the transfer students included in this study, swirling transfer students made up the largest population of transfer students at Canisius College coming in at 48%. At Canisius, students defined as swirling transfer students attended as many as 7 institutions before enrolling at Canisius. Swirling students in this study showed various age ranges and ethnicities. Veteran students in this study show the widest range of enrollment histories and attend multiple institutions. This is likely due to the fact that veterans do not have to worry about how to finance the cost of their education as a majority of veterans will have one hundred percent of their tuition cost covered by the United States government (Dunkin, 2012).

Swirling students showed an increase in average GPA (+0.05) after their first semester, but the increase was not as large as horizontal students. Swirling students are familiar with the college enrollment and transition process, which likely aided in their success. Of the three transfer student populations, swirling students were the most likely to be retained and matriculate towards graduation. In total, 80% of swirling transfer students have been awarded a four-year degree or are currently working towards degree completion.

Despite the increase in GPA and highest first year retention percentage at 88%, swirling students were least likely to attend orientation. Only 66% of swirling transfer students attended orientation. Since swirling students make up the largest population of transfer students at Canisius College, this data shows that many transfer students are not attending orientation their first semester. Overall, based on GPA and retention, this study shows that swirling transfer students the most successful type of transfer student at Canisius College. As consistent with the literature, swirling students had difficulty with transfer creditability and showed the longest
length to graduation and were the least likely to engage in new student orientation. Despite the challenges of credit transferability, the inconvenience for faculty and staff, and the lack of orientation, swirling transfer students have the highest retention rates and are more likely to progress towards degree completion at Canisius.

Knowing that swirling transfer students are the most successful and vertical transfer students are the least successful at Canisius College can help Canisius College faculty and staff develop recruitment strategies, programs, and advising techniques to manage and improve overall retention and success of transfer students at the institution. In the future, it may be in the institution’s best interest to continue future research, specifically on transfer students. In 2015, Canisius College hired a Transfer Admissions Counselor to help ensure prospective transfer students had the attention and resources needed for a successful transition. In the same year, Canisius College hired an Orientation Coordinator. In 2016, the Orientation Coordinator reorganized the traditional fall orientation sessions to include transfer-specific activities.

Recommendations for future research would be to look at the effectiveness of the implementation of the Transfer Admissions Counselor position in addition to the effectiveness of the transfer student orientation activities implemented by the Orientation Coordinator to determine if these efforts have influenced transfer student success in terms of retention and degree completion.
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