Exploring the Relationship between Transfer Students' Social Networks and their Experience of Transfer Shock

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Abstract

In this full student-led research paper, we investigate the social networks of both lateral and vertical engineering transfer students to determine how integrated they are at their current institution, and how their social connectedness can affect the extent of their transfer shock. Transfer shock is a decrease in GPA that a transfer student might experience at their receiving institution and can affect student retention and likelihood of graduation. The research questions we aim to answer are: 1) *How do the social networks of lateral and vertical transfer students differ from one another?* and 2) *What is the correlation between a transfer student's social network and their experience of transfer shock?*

To answer the research questions, a survey was sent to all engineering undergraduate transfer students at a mid-sized, Mid-Atlantic university. The survey included basic demographic questions (age, race, gender, major), transfer status, perception of transfer shock, and questions regarding the participant's social network. The social network questions asked the participant to name up to 10 of their closest friends at the university and answer demographic questions about these friends (age, gender, major, and whether a friend is a transfer student). Participants then identified how they interacted with each friend and whether the friends they named knew one another in order to generate an ego network for each participant.

Social network analysis was done using the software Cytoscape and during this analysis, the goal was to investigate ego network homophily, social capital, and network density. The homophily measure allowed us to determine the extent to which vertical and lateral transfer students form bonds with other transfer students compared to non-transfer students. Social capital is a measure of worth resulting from social interactions within a social network. For example, if a transfer student harbors friendships with students who can assist them academically or socially, they are more likely to succeed later on. Network density measures how interconnected an individual's social network is. Collectively, these questions should help with understanding differences between vertical and lateral transfer students' networks and how a transfer student's social network impacts their degree of transfer shock.

The results of this study showed that there was little difference between the social networks of lateral and vertical transfer students in terms of network density. However, our analysis did show a significant negative correlation between the density of a transfer student's social network and their experience of transfer shock. These findings could provide insight to faculty and staff who support transfer students and may suggest interventions to reduce transfer shock.

Introduction

Transfer students make up approximately 17.4% of the engineering student population at our institution of interest [1]. Since they represent a significant portion of the undergraduate population, it is important to understand how their college experience differs from a traditional student's experience. One aspect of this experience is social integration, which is the ability to create new relationships with other students [2]. The main focus of our study is to examine the

social networks of undergraduate transfer students at a mid-sized, Mid-Atlantic University to understand how socially integrated they are and whether their level of social integration affects their experience of transfer shock (i.e., a reduction in GPA at the receiving institution) [3]. This research paper answers the following research questions: 1) *How do the social networks of lateral and vertical transfer students differ from one another?* And 2) *What is the correlation between a transfer student's social network and their experience of transfer shock?*

Background

The complex nature of transfer students' experiences upon transfer can be explained by the Amended Model of Adaptation to Transfer Transition, or AMATT [4]. This model suggests that a students' perception of their transition, the environmental characteristics the student faces, and individual characteristics of the student all impact whether the student will thrive or merely survive at their receiving institution. One measure of thriving is the transferring student's GPA after transferring. When a transfer student's GPA at their receiving institution is lower than at their pre-transfer institution, that student is said to experience transfer shock [3]. This change in GPA can impact a student's confidence in their abilities, and can affect their retention and time to graduation [5]. We focus on two environmental characteristics from AMATT: pre-transition environment (e.g., lateral vs. vertical transfer) and interpersonal support systems.

Pre-Transition Environment: Lateral vs. Vertical Transfer

Vertical transfer students are those who transfer from a two-year institution to a four-year institution, while lateral transfer students are those who transfer from a four-year institution to another four-year institution. Research has shown that lateral transfer students experience higher GPAs in their first term at their receiving institution compared to vertical transfer students [3]. Vertical transfer students who come from 2-year institutions may be accustomed to individualized attention from faculty, due to smaller class sizes that are typically found at 2-year colleges. This allows students to form relationships with professors and boosts students' confidence [6]. Additionally, vertical transfer students may not be used to the type of instruction common at 4-year institutions. This can create a new challenge that vertical transfer students are not used to experiencing [6, 8]. By contrast, lateral transfer students may fare better in their transition to another institution because they are more familiar with the way 4-year universities operate [7]. When a student transfers from one 4-year institution to another, they are more likely than their vertical-transfer counterparts to have a good sense of the academic culture they are entering. Although they may be more informed on the way 4-year institutions function, it is imperative to recognize that lateral transfer students can face the same struggles as vertical transfer students upon changing universities [6].

Besides the pre-transition environment, the interpersonal relationships that transfer students have can affect their experience of transfer shock.

Interpersonal Support Systems

Students who are more socially integrated may experience transfer shock less severely than less socially integrated students. Research has shown that having a large social circle is positively correlated with student performance [9]. This means that a student who has many social connections tends to perform better academically than those students who might not have as

many. By having those connections, transfer students have academic resources and support systems, helping them with their transition to their new institution. Additionally, a student's social connections can act as sources of information and assistance, making the experience better for transfer students overall. This makes for a smoother transition to their new environment, and potentially reduces the transfer shock intensity they might experience.

Beyond simply a reduction in GPA, transfer shock can also be described as the difficulty that transfer students face when adapting to their new surroundings [10]. Many 4-year universities have a lively campus with opportunities for social interaction, however transfer students may find it difficult to adapt because they are not used to this new environment [11]. This can cause trouble with fitting in, finding a study group, or receiving assistance from peers or faculty when needed the most.

Research has found that transfer students tend to prioritize academic over social integration [2], likely because of transfer shock. However, social and academic pressures are interrelated—the challenge of both forming new social connections and discerning how to spend time with friends in a new environment can affect transfer students' success [12]. Students who already have connections at their receiving institution may have an easier time integrating socially than those who do not [4]. Establishing relationships with peers in the same classes can assist students in developing study groups and having others to relate to. By creating a sense of community, a difficult class can become less stressful when other students are sharing the same struggles. Support systems that are both adequate and of quality are vital to a student's success [4].

Institutions can implement academic and social integration services that can assist transfer students to find their footing in a new environment [13]. Small scale solutions can include extensive information sessions highlighting helpful resources to help acclimate transfer students academically [13] and transfer-student social events to assist in forming social connections with peers in and outside of their major [14]-[15]. Larger scale solutions can include research experiences for transfer students [16] and even partnerships between two-year and four-year institutions to ease the transition process. One such program had students complete 1 year at a county college before transferring to a 4-year institution, entering at the sophomore grade level [17]. This partnership allowed the institutions to share resources and reduce a sense of disruption during transition. Another program smoothed the transition with structured community building, mentoring, and workshops [14]. These different approaches address different aspects of the transfer student experience, though nearly all of them have a social component—even those programs which emphasize academic success still build social connections as a byproduct of their primary goals.

In order to analyze the social integration of transfer students, results from our survey were used to create social networks based on social and academic factors. This allows for a visualization on the connection between the transfer student and the people in their network, as well as whether there was a prior relationship which relates to each students' social integration.

Social Network Analysis

In this study, social networks of undergraduate engineering transfer students are utilized to investigate the connections students have formed and whether the structure of their social

network impacts the extent of their transfer shock. To do this we have chosen to analyze the social capital and network density of ego networks. Ego networks represent the social connections of a single individual. For our study, the person who answered the survey is the "ego" and the people they have included in their social network are denoted as "alters." The ego network is a visualization of the ego's alters and the connections between the alters. The figure below depicts a visual representation of a typical ego network.

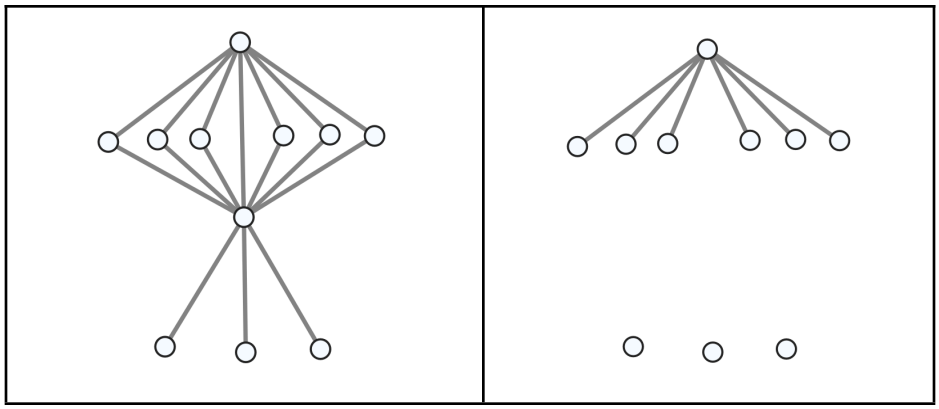

Figure 1. Example of an ego network with the ego node (left) and without the ego node (right). In the right image, the ego node is omitted and the ego-alter connections are implied, which makes the separate groups more obvious.

Social capital refers to the resources available to individuals through social network connections to allow them to succeed [18]. In this study, social capital is defined as the number of alters a student has that they can socialize with and/or work with academically. Research has found that social capital can be directly correlated to how successful a student can be academically [19].

Network density measures how interconnected a student's social network is. A network density of 1 means that the ego network is extremely interconnected and each alter knows each other, while a lower network density indicates that many alters are not friends with one another. Examples of ego networks with a low and high network density are seen in Figure 2.

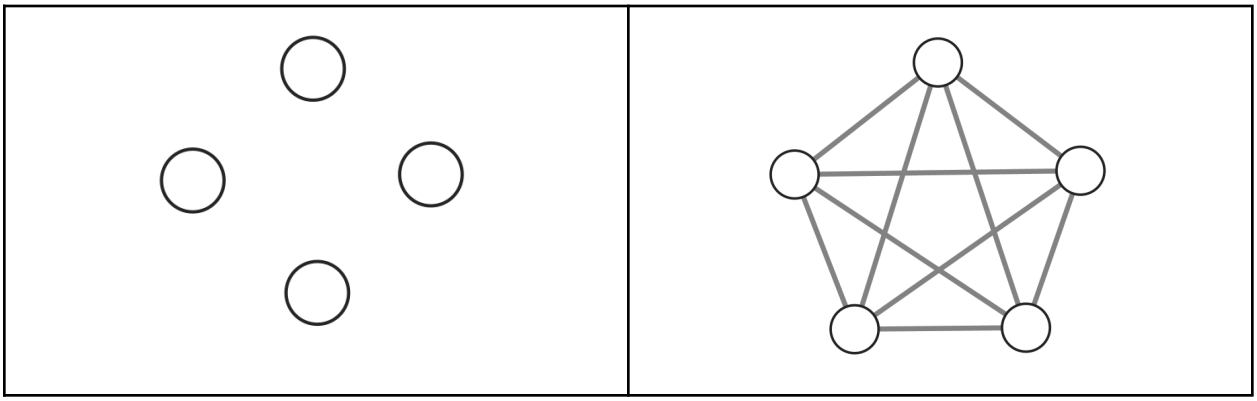

Figure 2. Ego networks created to visualize network density. The ego network on the left has a density of 0, whereas the ego network on the right has a density of 1. Gray lines represent the connections between the ego's alters. The ego node has been removed from both images and the ego-alter relationship is implied.

Methods

In order to study the relationship between social networks and student success, our team sent out an anonymous survey to engineering transfer students at a mid-sized, Mid-Atlantic University. The survey was designed using Qualtrics and consisted of a series of questions to answer our research questions: *1) How do the social networks of lateral and vertical transfer students differ from one another?* and *2) What is the correlation between a transfer student's social network and their experience of transfer shock?*

The full survey can be found in the Appendix section of this research paper. Appropriate approval for human subjects research was obtained from the IRB prior to distribution of the survey to students. The survey started with a series of demographic questions such as transfer status, major, age, race, gender, and GPA. The next set of questions asked whether the student experienced transfer shock, whether they were helped by a transfer advisor, and how close they felt to students in and out of their major. Next, participants were asked how often they spend time with students from their department outside of class/school-related activities on a four-point Likert scale (never, sometimes, often, always). The last set of questions asked the student to list up to 10 of their closest friends at the University and basic demographic questions about their friends, and whether connections existed between the friends they listed.

The survey was distributed to all engineering students at the institution of interest, regardless of transfer status. The first question asked what kind of transfer student they were and if a student chose the option: " None of these," the survey would end. Survey results were analyzed using Excel, Cytoscape, and SPSS.

Results and Discussion

A total of 26 social networks were created for the students who completed the survey. 17 students identified as vertical transfers and 9 students identified as lateral transfers. Additionally, 17 students reported experiencing transfer shock, while 9 students reported that they did not experience transfer shock (Table 1).

Table 1: Breakdown of responses to the survey by transfer type and presence of transfer shock.

	Vertical Transfer	**Lateral Transfer**	**Total**
Transfer Shock	13	4	17
No Transfer Shock	4	5	9
Total	17	9	26

RQ1: How do the social networks of lateral and vertical transfer students differ from one another?

We considered this question from two perspectives: the density of the ego networks and the social capital present in each ego network.

Network Density

An independent-samples t-test was conducted to compare network density for lateral and vertical transfer students. Normality of the continuous outcome variable density was checked and found to be within normal range. Levene's test for equality of variances was passed and groups were found to be comparable ($F = 0.10$, $p = 0.75$). There was no statistically significant difference in the density for lateral transfers ($M = 0.75$, $SD = 0.20$) and vertical transfers ($M = 0.73$, $SD = 0.23$); $t_{24} = 0.24$, $p = 0.81$, 95% CI [-0.16, 0.21].

The effect size for this analysis was $d = 0.10$ with a 95% CI [-0.71, 0.91], which is considered a negligible effect size, with replications possibly finding a larger effect. Additionally, the test was underpowered ($1-\beta = 0.06$) due to the negligible effect and the small sample sizes for the two groups ($n = 9, 17$). The average density value for lateral transfers was 0.75, while it was 0.73 for vertical transfers. The relative closeness of these values could be due to the small sample size or the difference in the number of responses between lateral and vertical transfer students. Based on this, we were unable to confirm an effect of transfer type on the network density of transfer students.

These results suggest that transfer type is not related to network density. There are many other factors of student life that may have a greater effect on social network density. For example, transfer students are often placed in classes with students who are not in the same year as them due to the number of credits transferred or prerequisite requirements at the receiving institution [8]. As a result, the transfer student could struggle to form friendships with classmates in their year. Since this and other phenomena are not unique to a particular type of transfer student, it is unlikely that a difference between transfer types would be observed.

Social Capital

An independent-samples t-test was conducted to compare the percentage of social friends for lateral and vertical transfer students. Normality of the continuous outcome variable percentage of social friends was checked and found to be within normal range. Levene's test for equality of variances passed and groups were found to be comparable ($F = 1.64$, $p = 0.21$). The difference in the percentage of social friends for lateral transfers ($M = 0.79$, $SD = 0.34$) and vertical transfers ($M = 0.53$, $SD = 0.40$) was approaching statistical significance; $t_{24} = 1.62$, $p = 0.12$, 95% CI [-0.07, 0.58].

The effect size for this analysis was $d = 0.67$ with a 95% CI [-0.17, 1.49], which is considered a large effect size, with replications likely finding a similar effect. Additionally, the test was underpowered ($1-\beta = 0.64$) due to the small sample sizes for the two groups ($n = 9, 17$). This suggests that vertical transfers are having to adjust to the academic rigors of a four-year institution, therefore making them more focused on their academics than socializing [3].

In the context of studying together, lateral transfers reported studying with 78% of their alters, while vertical transfers reported studying with 53% of their alters. This could be a result of vertical transfers that tend to prioritize academic integration rather than social integration [3]. Figure 3 shows the comparison of the social networks of a lateral and vertical transfer student, and the way in which they spent time with their alters (socialization vs. studying).

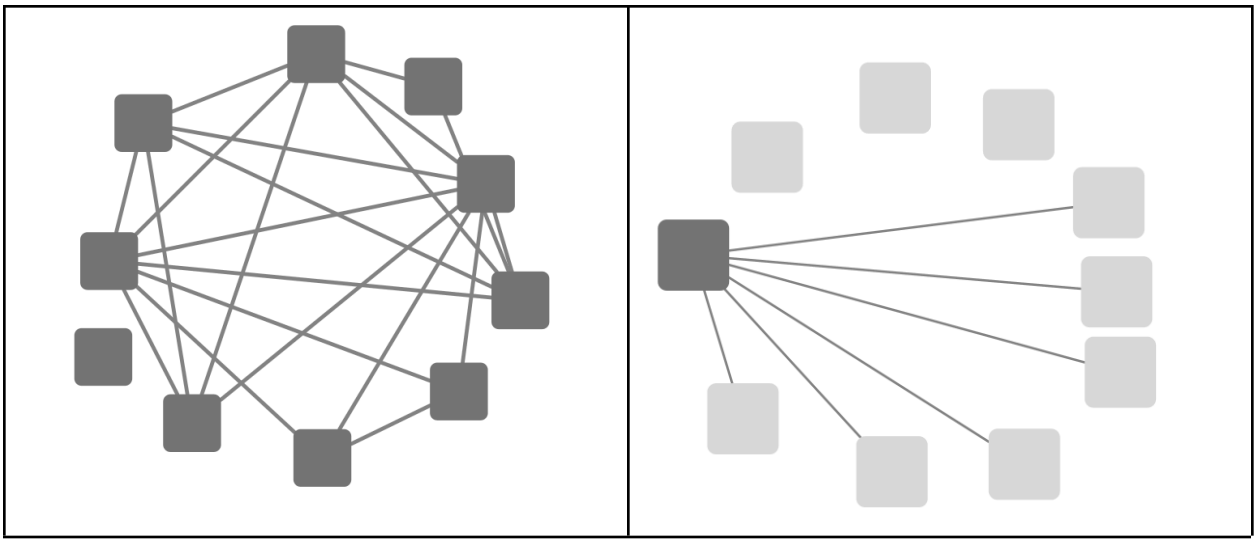

Figure 3. Ego network of a lateral transfer student with 10 social friends (left) and ego network of a vertical transfer student with 9 study buddies (right); dark gray boxes indicate alters that the ego only socializes with, light gray boxes indicate alters that the ego studies with. Gray lines represent the connections between the ego's alters. The ego node has been removed from both images and the ego-alter relationship is implied.

The left panel of Figure 3 represents a social network created in Cytoscape using the results of a completed survey by a lateral transfer student with a group of 10 friends. This student had a network in which all the time spent by the ego and alters was within social settings. The right panel of Figure 3 represents a social network of a vertical transfer student, additionally with a group of 10 friends. While this student still had an equal number of friends, the ego spent time primarily studying instead of socializing amongst this group. Within these social networks, both groups of transfer students have social capital in the alters that each student has to socialize with and/or work with academically [19].

The results of the study suggest that the social networks of both lateral and vertical transfer students are about the same in terms of interconnectedness. Both types of transfer students are part of social networks that are typically tight-knit, which means that most of the people in the networks are familiar with each other. Whereas lateral transfer students mostly socialize with the people in their networks, vertical transfer students study more with the people in their networks.

RQ2: What is the correlation between a transfer student's social network and their experience of transfer shock?

Network Density

An independent-samples t-test was conducted to compare the density of social networks for transfer students that experienced transfer shock and for transfer students that did not. Normality of the continuous outcome variable density was checked and found to be within normal range. Levene's test for equality of variances was passed and groups were found to be comparable ($F = 0.09$, $p = 0.77$). There was not a statistically significant difference in density for transfer students

who did experience transfer shock (M = 0.78, SD = 0.19) and transfer students who did not. (M = 0.66, SD = 0.24); t_{24} = -1.37, p = 0.18, 95% CI [-0.30, -0.06].

Although there was not a statistically significant difference, the effect size for this analysis was d = -0.57 with a 95% CI [-1.38, 0.26], which is considered a large effect size, with replications likely finding a similar effect. The test was underpowered (1-β = 0.60) due to a small sample size of data, and the difference in the number of respondents who experienced transfer shock and those who did not (n=17 and n=9, respectively). With a larger sample size, it may have been easier to see more accurate correlation between the groups and obtain a powered result as well.

These results suggest that students who experienced transfer shock were involved in more dense networks, in which the alters were more (or completely) interconnected. This implies that time spent between the ego and its alters was spent in smaller, compartmentalized circles. This implies that students who experienced transfer shock are less socially integrated—they are not members of multiple distinct social circles on campus, instead choosing to spend time with the same small circle repeatedly [2]. As a result, students who experienced transfer shock may lack a sense of community in other circles, and lead to them to struggle more academically due to a lack of social and academic integration [20].

The left panel of Figure 4 represents a social network created in Cytoscape using the results of a completed survey by a transfer student who experienced shock. This network is completely interconnected, with all of the alters knowing each other (density of 1.00). The right panel of Figure 4 represents a social network of a student who did not experience transfer shock, and shows that, while the student still had a large group of friends, there was more division within the group. The ego had relationships with each alter, but all the alters were not all connected to each other in this student's circle.

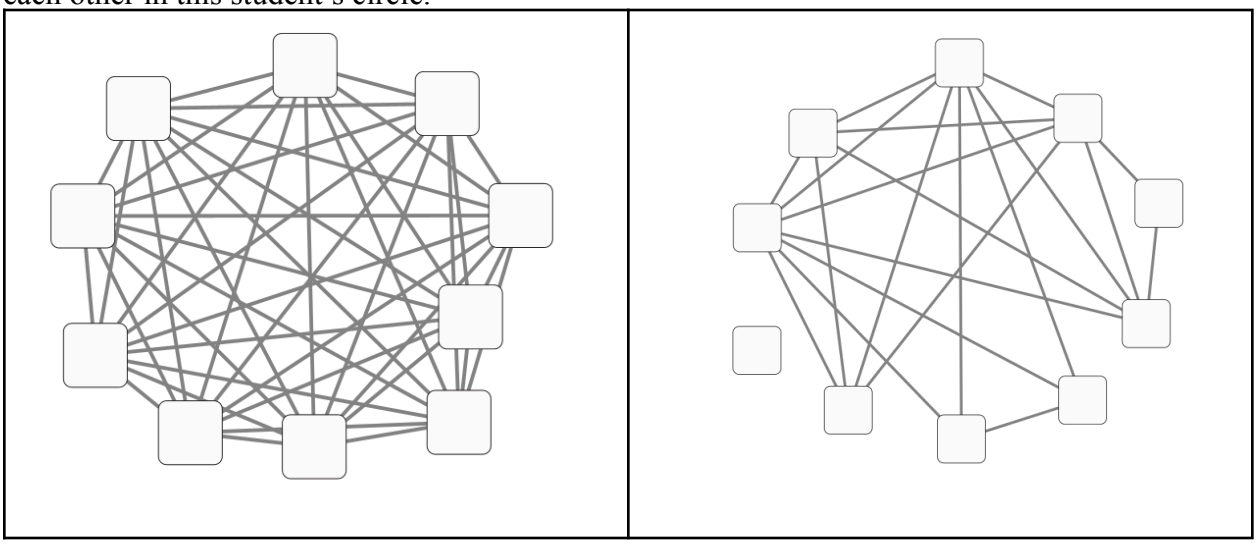

Figure 4. Ego network of a transfer shock student, density of 1.00 (Left) and ego network of a non transfer shock student, density of 0.55 (Right). Gray lines represent the connections between the ego's alters. The ego node has been removed from both images and the ego-alter relationship is implied.

The results from this research question suggest that students who experienced transfer shock may have focused less on integrating socially, which could contribute to lesser feelings of belonging on campus. Additionally, it can also be inferred that transfer students who made intentional efforts to socialize in more diverse settings—studying, attending campus events, taking out-of-major electives, etc.—experienced transfer shock less frequently. The ego may have had separate groups to socialize with and study with, instead of keeping to just one interconnected circle. There are many factors that transfer students face such as time management and adjusting to an increased workload in classes, so by an ego having more groups to interact with and an increase in social capital and integration, it contributes to no evidence of transfer shock within these social networks [21]. Having more diverse connections and relationships may have helped students alleviate or better manage these common integration factors. This may have allowed this group of transfer students to balance socializing and studying, which might have stabilized their GPA following their transition to their receiving institution [3].

Social Capital

An independent-samples t-test was conducted to compare the amount of social time with classmates for students that experienced transfer shock and for students that did not. Normality of the continuous outcome variable social time was checked and found to be within normal range. Levene's test for equality of variances was passed and groups were found to be comparable ($F = 0.53$, $p = 0.47$). The difference in social for students that experienced transfer shock ($M = 2.33$, $SD = 1.00$) and for students that did not experience transfer shock was approaching statistical significance ($M = 1.71$, $SD = 0.85$); $t_{24} = 1.69$, $p = 0.10$, 95% CI [-1.40, 1.39].

The effect size for this analysis was $d = 0.70$ with a 95% CI [-0.14, 1.52], which is considered a medium effect size, with replications likely to find a similar effect. Additionally, the test was underpowered ($1-\beta = 0.32$) due to the medium effect and the small sample sizes for the two groups ($n = 9, 17$). These results suggest that students who experienced transfer shock spent more time socializing/in social groups of friends than students who did not experience transfer shock. This may imply that students who experienced transfer shock prioritized going out and spending time with friends outside of school over academics, which may have resulted in the drop in GPA within the first few semesters post transfer. Previous research has found that transfer students often struggle to socially integrate into their new campuses, and so either over-prioritize social experiences (by "scheduling in" time at university-sponsored co-curriculars) or entirely de-prioritize them due to a perception that failure is likely [22]. The relationship seen here is likely the latter: transfer students over-prioritizing social activities, which causes them to suffer academically [23].

Conclusions

In this project, the goal was to compare the social networks of lateral and vertical transfer students, and determine if there is a correlation between social networks and transfer shock. To achieve this goal, a survey was created and distributed to undergraduate engineering students at a mid-sized Mid-Atlantic university that included questions such as demographics, transfer status, their experience of transfer shock, a list of their closest friends, and the level and type of relationships that exist within this social circle. From the survey data, ego networks were created

for each person who completed the survey and the different networks for lateral and vertical students were compared and analyzed.

From the ego network analysis, it was found that there was no significant difference between the network density of the social networks of vertical and lateral transfer students. This finding was unexpected because a majority of vertical students typically transfer from nearby two-year institutions, thereby making it more probable that they already know students attending the institution that they are transferring to. However, as shown in the data, both types of transfer students have very similar social network densities. In reality, some of the vertical transfers who completed the survey might have transferred from out-of-state, which could explain why their social networks are less interconnected.

Students who had more dense social networks were more likely to experience transfer shock. This could indicate that transfer students step directly into pre-structured social groups (such as clubs and fraternities) rather than continually meeting new people to become truly socially integrated on campus. Conversely, it was found that students who experienced transfer shock reported that they spent more social time with friends outside of class and other academic activities. Combined, these results suggest that there is an ideal “sweet spot” between socializing and academics, and that transfer students may struggle longer to find it and/or experience disproportionate consequences for experimenting with this balance compared to their non-transfer peers. As such, the researchers recommend that universities implement programs which could help transfer students find this balance more quickly and with more support, perhaps with the help of student and faculty mentors.

Limitations and Future Work

For this study, the main limitation faced was the number of survey respondents. In total, 32 total responses were recorded, but only 26 were fully completed. Of these 26 responses, only 9 students were lateral transfers, which made this group underrepresented. Having a small sample size reduced the number of ego networks that could be analyzed and made it difficult to make a comparison of the social networks between the two types of transfer students. In addition, there was a lack of specific subpopulations, with respect to lateral and vertical transfer students and whether they were either in-state or out-of-state transfers. This might have skewed the ego networks by not treating each subpopulation as an entity on its own. These limitations can be further addressed with more individualized survey questions and in the next round of data analysis.

For the next phase of this study we plan to separate the different subpopulations of transfer students and analyze how they differ from one another, pending more survey respondents.

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Appendix - Survey Instrument

Q1 Informed Consent

You are invited to participate in this online research survey entitled Student Resource Usage. You are included in this survey because you are a current undergraduate student of engineering at X University. The number of subjects to be enrolled in the study will be 90.

The survey may take approximately 5-10 minutes to complete. Your participation is voluntary. If you do not wish to participate in this survey, do not respond to this online survey. Completing this survey indicates that you are voluntarily giving consent to participate in the survey. This anonymous survey will not impact your standing as a X University student and it is not a requisite or requirement for courses.

The purpose of this research study is to determine the social networks of transfer students and attempt to quantify the link between social networks and academic success.

There are no risks or discomforts associated with this survey. **There may be no direct benefit to you**, however, by participating in this study, you may help us understand how students interact with and are educated by faculty.

The information you share in your response will be protected and made confidential for publication. **Your data will be de-identified during this process. We will store the data in a secure computer file and the file will be destroyed once the data has been published**. Any part of the research that is published as part of this study will not include your individual information. If you have any questions about the survey, you can contact the PI.This study has been approved by the IRB, PRO-2023-359.

Please complete the checkbox below.

To participate in this survey, you must be 18 years or older and a current undergraduate student of engineering at X University.

[] Yes, I consent.

[] No, I do not consent.

Q1 What is your transfer status?

[]Vertical In-State (2-year New Jersey Institution to X University)

[]Vertical out-of-State (2-year non-New Jersey Institution to X University)

[]Lateral In-State (2-year New Jersey Institution to X University)

[]Lateral out-of-State (4-year non-New Jersey Institution to X University)

Q2 What is your age?

_____

Q3 What is your gender identity?

[] Male

[] Female

[] Non-binary / Third gender

[] Self-describe _____

[] Prefer not to say

Q4 What is your race/ethnicity?

[] White or caucasian

[] Black or African American

[] Hispanic/Latino

[] American Indian or Alaskan Native

[] Asian

[] Native Hawaiian or Pacific Islander

[] Other _____

Q5 Where do you live?

[] College affiliated housing

[] Non college affiliated housing with other students

[] Non college affiliated housing without other students

Q6 Select which Engineering department you are a part of:

[] Mechanical

[] Electrical & Computer

[] Biomedical

[] Engineering Entrepreneurship

[] Chemical

[] Civil & Environmental

[] Other _____

Q7 What is your GPA?

[] 4.0 - 3.51

[] 3.5 - 3.01

[] 3.0 - 2.51

[] 2.5 - 2.01

[] 2.0 - 1.51

[] 1.5 - 1.01

[] 1.0 - 0.51

[] I don’t have a GPA yet

Q8 Did you receive a degree/certificate from your previous institution?

[] I received an associate’s

[] I received a certificate

[] I did not receive a degree or certificate

Q9 How long was the gap between your time at your previous institution and your current institution?

[] No gap

[] Less than a year

[] More than a year

[] Other: _____

Q10 How many semesters have you completed at this institution?

[] 0. This is my first semester

[] 1

[] 2

[] 3

[] 4

[] More than 4

Q11 Transfer shock is defined as the difficulty transfer students face, both academically and socially upon a completed transfer. Some effects of it could be; having a harder time making friends/relating to people, a temporary decrease in GPA, and stress from heightened expectations/change in academic environment. Is transfer shock something you experienced upon transferring to X University?

[] Yes, I did experience transfer shock and some of its effects

[] No, I didn't experience transfer shock at all

[] Unsure

Q12 Did you have an academic advisor throughout the transfer process?

[] I had a transfer advisor

[] I had an academic advisor who was NOT a transfer advisor, but did help me through the process

[] I did not have an academic or transfer advisor help me through the process

Q13 Did you know any X University students before you transferred?

[] Yes, someone in my major

[] Yes, someone in a different major

[] No

Q14 I feel socially connected to other students in my department:

[] Strongly Disagree

[] Disagree

[] Neither agree nor disagree

[] Agree

[] Strongly Agree

Q15 I feel socially connected to other students outside of my department:

[] Strongly Disagree

[] Disagree

[] Neither agree nor disagree

[] Agree

[] Strongly Agree

Q16 How often do you study/do work in a group setting?

[] Never

[] Sometimes

[] Often

[] Always

Q17 How often do you spend time with students from your department out of class time or outside of school-related activities?

[] Never

[] Sometimes

[] Often

[] Always

Q18 I am involved in clubs/activities in my department

[] Strongly Disagree

[] Disagree

[] Neither agree nor disagree

[] Agree

[] Strongly Agree

Q19 Who are your closest friends at this University (up to 10): Please DO NOT give full names, provide initials or nicknames.

Friend #1 _____

Friend #2 _____

Friend #3 _____

Friend #4 _____

Friend #5 _____

Friend #6 _____

Friend #7 _____

Friend #8 _____

Friend #9 _____

Friend #10 _____

Q20 What is their major?

	Mech Engr	Elec Engr	Civil Engr	Engr Entr	Chem Engr	Biomed Engr	Non Engr
Friend 1	[]	[]	[]	[]	[]	[]	[]
Friend 2	[]	[]	[]	[]	[]	[]	[]
Friend 3	[]	[]	[]	[]	[]	[]	[]
Friend 4	[]	[]	[]	[]	[]	[]	[]
Friend 5	[]	[]	[]	[]	[]	[]	[]

Friend 6	[]	[]	[]	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]	[]	[]	[]

Q21 How do you spend time with this person?

	Studying/Group work	Extracurriculars/Clubs	Coworkers	Social Time outside of class	Other
Friend 1	[]	[]	[]	[]	[]
Friend 2	[]	[]	[]	[]	[]
Friend 3	[]	[]	[]	[]	[]
Friend 4	[]	[]	[]	[]	[]
Friend 5	[]	[]	[]	[]	[]
Friend 6	[]	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]	[]

Q22 What is their gender?

	Male	Female	Non-Binary	Prefer not to say
Friend 1	[]	[]	[]	[]
Friend 2	[]	[]	[]	[]

Friend 3	[]	[]	[]	[]
Friend 4	[]	[]	[]	[]
Friend 5	[]	[]	[]	[]
Friend 6	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q23 Are they the same race/ethnicity as you?

	Yes	No	Unsure
Friend 1	[]	[]	[]
Friend 2	[]	[]	[]
Friend 3	[]	[]	[]
Friend 4	[]	[]	[]
Friend 5	[]	[]	[]
Friend 6	[]	[]	[]
Friend 7	[]	[]	[]
Friend 8	[]	[]	[]
Friend 9	[]	[]	[]
Friend 10	[]	[]	[]

Q24 Are they the same year in school as you?

	Yes	No	Unsure

Friend 1	[]	[]	[]
Friend 2	[]	[]	[]
Friend 3	[]	[]	[]
Friend 4	[]	[]	[]
Friend 5	[]	[]	[]
Friend 6	[]	[]	[]
Friend 7	[]	[]	[]
Friend 8	[]	[]	[]
Friend 9	[]	[]	[]
Friend 10	[]	[]	[]

Q25 Are they also a transfer student?

	Yes	No	Unsure
Friend 1	[]	[]	[]
Friend 2	[]	[]	[]
Friend 3	[]	[]	[]
Friend 4	[]	[]	[]
Friend 5	[]	[]	[]
Friend 6	[]	[]	[]
Friend 7	[]	[]	[]
Friend 8	[]	[]	[]
Friend 9	[]	[]	[]
Friend 10	[]	[]	[]

Q26 Did you know this person before you transferred to X University?

	Yes	No	Unsure
Friend 1	[]	[]	[]
Friend 2	[]	[]	[]
Friend 3	[]	[]	[]
Friend 4	[]	[]	[]
Friend 5	[]	[]	[]
Friend 6	[]	[]	[]
Friend 7	[]	[]	[]
Friend 8	[]	[]	[]
Friend 9	[]	[]	[]
Friend 10	[]	[]	[]

Q27 Is Friend 1 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don't Know
Friend 2	[]	[]	[]	[]
Friend 3	[]	[]	[]	[]
Friend 4	[]	[]	[]	[]
Friend 5	[]	[]	[]	[]
Friend 6	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]

Friend 10	[]	[]	[]	[]

Q28 Is Friend 2 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don't Know
Friend 3	[]	[]	[]	[]
Friend 4	[]	[]	[]	[]
Friend 5	[]	[]	[]	[]
Friend 6	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q29 Is Friend 3 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don't Know
Friend 4	[]	[]	[]	[]
Friend 5	[]	[]	[]	[]
Friend 6	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q30 Is Friend 4 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don’t Know
Friend 5	[]	[]	[]	[]
Friend 6	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q31 Is Friend 5 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don’t Know
Friend 6	[]	[]	[]	[]
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q32 Is Friend 6 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don’t Know
Friend 7	[]	[]	[]	[]
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q33 Is Friend 7 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don’t Know
Friend 8	[]	[]	[]	[]
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q34 Is Friend 8 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don’t Know
Friend 9	[]	[]	[]	[]
Friend 10	[]	[]	[]	[]

Q35 Is Friend 9 friends with any of the following people?

	Strangers	Moderate Friends	Close Friends	I Don’t Know
Friend 10	[]	[]	[]	[]

Q36 Please share any other thoughts:

_____

_____

_____

_____