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THE EFFECTS OF ENCOURAGING STUDENT-FACULTY INTERACTION ON

ACADEMIC SUCCESS, IDENTITY DEVELOPMENT, AND STUDENT RETENTION IN

THE FIRST YEAR OF COLLEGE

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DISSERTATION

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ABSTRACT

THE EFFECTS OF ENCOURAGING STUDENT-FACULTY INTERACTION ON ACADEMIC SUCCESS, IDENTITY DEVELOPMENT, AND STUDENT RETENTION IN THE FIRST YEAR OF COLLEGE

by

Katerina Karaivanova
University of New Hampshire, May, 2016

The study presented in this dissertation was designed to investigate the effects of a brief intervention encouraging student-faculty interaction among college students on their academic achievement, college adjustment and intent to withdraw. Additionally, the effects of identity style on academic achievement, college adjustment, and student-faculty interaction were examined. Two hundred and five first year students participated in a four-part study, measuring the frequency and quality of student-faculty interaction, college adjustment, and identity development at three different time points. Students were randomly assigned to one of three experimental groups; only one group received the advice to meet with faculty outside of the classroom at the beginning of the fall semester. Intent to withdraw was measured at the end of the semester, and first-semester GPA was obtained during the spring semester.

Results indicated a significant effect of the experimental treatment on one key outcome variable: level of institutional commitment. Students who received the advice to interact with faculty reported higher institutional commitment than the other groups, and in turn, institutional commitment was the only predictor of intent to withdraw. Academic achievement in the first semester was predicted by first generation status, quality and frequency of student-faculty interaction, and academic efficacy. In terms of identity development, students using the

information orientation were better equipped to handle the demands of the first year in college

than those using the diffuse orientation.

CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

Theories of College Adjustment and Retention

Transition into college can be difficult for many individuals. About 30% of students will drop out of college before their second year, and this number has been stable for the past 20 years (National Collegiate Retention and Persistence to Degree Rates, 2014). There are multiple theories that address possible reasons for students not succeeding in college and making the decision to drop out. The two most notable are Astin's (1984) theory of student involvement and Tinto's (1975) theory of student departure. Both theories complement each other in providing a reasonable explanation of the process through which students make withdrawal decisions.

Tinto (1975) was interested in describing the exact process through which the dropout process happens. As the basis of his theory, he viewed college adjustment as a process that takes into account the way students interact with the university system. He believed that students come into an institution with a pre-existing set of background characteristics that shape their initial commitments and expectations. Goal commitments refer to the goals and expectations a student has for him/herself, while institutional commitments refer to how attached the student is to the particular institution. As students progress through the first year, it is their experiences with both the academic and social aspects of the college environment that become more important than their initial commitments and expectations. Tinto suggests that these experiences result in a level of academic and social integration that, coupled with the quality of the experiences, change the goals and institutional commitments a student has (Tinto,1975; Pascarella & Terenzini, 1977). Ultimately these goals and commitments then shape the final decision a student makes about

staying at or withdrawing from the university (Tinto, 1975; Pascarella & Terenzini, 1977). Low commitment in either category can lead to drop out, but low institutional commitment is more likely to result in transferring to another institution than to leaving higher education altogether (Tinto, 1975; Webber, Krylow & Zhang, 2013).

Students start college with a set of background characteristics that are important in shaping their initial academic and social adjustment and may continue to influence them for the entire time they are at the university. One of the most prominent background characteristics is first generation status. Students who are the first ones in their families to attend college appear to be at a higher risk for withdrawal than those that come families where both parents attended college (Ishitani, 2003). They also show poorer social and academic adjustment, in general have lower GPA's and are less likely to complete an undergraduate degree in four years (Aspelmeier et al., 2012; Lohfink and Paulsen, 2005; Martinez, Sher, Krull, and Wood, 2009).

During their time in college, students encounter both the academic and social systems at the institution they attend (Tinto, 1975). Their success in the academic system is generally measured by academic performance standards such as GPA and by the intellectual development of the individual, which is the intrinsic evaluation of one's academic abilities. Improvements in both of these have been related repeatedly to higher chances of persistence (Tinto, 1975; Pascarella & Terenzini, 1977). The social system refers to any experiences that the student has outside of the classroom. This includes, but is not limited to living on campus, interactions with other students, faculty and staff, and participation in athletics, campus groups or Greek life (Tinto, 1975). Factors such as friendship formation, the individual's perceptions of social integration and of their social "fit" have all been positively associated with retention (Tinto, 1975; Pascarella & Terenzini, 1977). There were some concerns that excessive social integration

would lead to poor academic performance, but research suggests otherwise (Tinto, 1975). Participation in campus organizations seems to have no negative effects on persistence or academic performance. In addition, social interaction with faculty members appears to be beneficial to both academic adjustment and overall persistence (Tinto, 1975, 2006, Pascarella & Terenzini, 1977).

One of the early instruments designed to evaluate adjustment to college was the Student Adaptation to College Questionnaire (Gerdes and Mallinckrodt, 1994). It evaluates academic, social and institutional adjustment, as well as personal/emotional adjustment. Using this instrument, Gerdes and Mallinckrodt (1994) surveyed 208 students from a large public university at the beginning of their studies and then 6 years later. Based on whether students had graduated or dropped out, they were divided into two categories: "leavers" and "persisters". Using their academic records, high achieving students were labeled "in good-standing" and low achieving students were labeled "in bad standing". Thus, crossing graduation/drop out and good/bad standing variables created four possible categories for students to fall under. The goal of the study was to investigate whether social and academic adjustment could be used to predict attrition. The results showed that among all four groups, social adjustment was just as good a predictor of attrition as academic adjustment (Gerdes and Mallinckrodt, 1994).

Overall Tinto's theory provides a good framework for understanding how and why students choose to withdraw from college. He takes into account many different aspects of the students' experience and shows how they all work together to determine success in the first year or any subsequent year in college. However, his theory on its own does not specify the degree to which a student has to interact with the college environment to be successful; it just states that this has to happen. Astin's (1984) theory of student involvement adds to Tinto's theory of

student retention. Astin's goal was to create a theory that was easy to understand and that could explain most of the research results available at that time. His idea of student involvement refers to the "amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1984). This includes but is not limited to time spent studying, participating in extracurricular activities, being present on campus or in residence halls, and interacting with other students, faculty and staff. Astin's theory stresses the importance of quality, not just quantity of involvement. Involvement is also not an all or nothing process. Students fall on a continuum of the degree to which they are involved, as well as the type of involvement they have in academic and social activities.

Astin's theory builds on other student development theories that higher education practitioners often implicitly use when dealing with students. The central problem in those approaches is that they make the student a relatively passive recipient of knowledge, rather than an active participant (Astin, 1984). Other theories also assume that the more resources such as better facilities and famous faculty are available, the better that institution is for the student. In contrast, in the student involvement theory, the student takes responsibility for and is actively involved in his/her own education. Research supporting the theory focuses on several types of involvement including but not limited to out-of-class activities such as organizations and Greek life, athletics, interactions with faculty and staff, and academic involvement such as time spent studying and participation in research experiences. Regardless of the type of involvement however, the more engaged a student is, the better the outcomes are.

Astin's theory is supported by multiple research studies. Living in student on- campus housing has been suggested to have positive effects for all students (Terenzini, Pascarella & Blimling, 1999). While there have been some mixed results, the worst that different studies have

found is that living in a dorm does not hurt students' academic performance. Several studies, however, showed that living on campus is actually related to better performance, especially for first year students who live in freshmen-only dormitories. Being close to campus and living in a community of students who are also attending the university at the same time is associated with lower levels of dropout as well (Astin, 1984; Tinto, 1975). On a basic level, living close to campus allows students to participate more fully in different college activities (Astin, 1984). In addition, residence halls usually have many opportunities for students to get involved in activities that help them develop leadership skills, group work skills and meet many new people in the university setting. These readily available activities make it easier for students to be more involved, which ultimately leads to better social adjustment, and in turn to higher persistence rates (Astin, 1984; Tinto, 1975).

Participation in extracurricular activities including Greek life also improves the chances of retention (Astin, 1984; Webber, Krylow & Zhang, 2013). Collegiate sports in particular have a very strong effect. Contrary to more stereotypical beliefs, students who participate in Greek life are also among those who have higher persistence rates compared to students not involved in Greek life. For both athletics and Greek life, it is perhaps the feeling of belonging to a particular group associated with the university that makes students more committed to that particular institution. On-campus employment is beneficial as well, however full time off-campus employment is severely detrimental. Perhaps this is due to the fact that an off-campus job takes students away from the university setting and prevents them from being actively involved in university life (Astin, 1984; Webber, Krylow & Zhang, 2013).

Academic involvement is also positively related to college persistence to a certain degree (Tinto, 1975, Astin, 1984). Students who devote all of their time to just academic affairs suffer in

terms of social development and adjustment to college, most likely due to their isolation from other students and social activities (Astin, 1984). It seems that a good balance between the two types of engagement is best and helps students be successful in college. As part of academic involvement, but also social involvement, interaction with faculty members is perhaps the best predictor of student satisfaction and subsequently student retention of all the variables explored thus far. Students who have more interactions with faculty are less likely to withdraw from college. In one study, using the National Survey of Student Engagement (NSSE), first year students who interacted more with faculty had a higher overall GPA (Webber, Krylow and Zhang, 2013). Using the same survey, higher quality relationships with faculty members were also related to higher cumulative GPA. Moreover, the more engaged students were in different academic-related activities, the more satisfied they were with their academic experience.

Taken together, the two theories described above provide a comprehensive explanation of how and why students persist or withdraw from college. Tinto's (1975) theory provides the framework that explains the general process through which withdrawal decisions are made and the systems that are involved. Astin's (1984) theory of student involvement provides the exact mechanism through which the different systems are influenced by students' actions and experiences. Milem and Berger (1997) explored the idea that these two theories combined provided a better explanation of why students stay or leave the university than either theory alone. The researchers viewed involvement as a way to facilitate adjustment because they speculated that higher levels of engagement with the university would expose students to other students, faculty and staff, and would also allow them to get more involved in the academic system. The researchers suggested that this combination of factors would lead to higher levels of academic and social integration as well as better perception of the university itself, thus fostering

higher levels of institutional commitment.

To investigate the proposed interactions between the two theories, Milem and Berger (1997) used a longitudinal design in which they administered 3 different surveys in the beginning and middle of the first semester, and then again in the middle of the second semester. They used a variety of standardized first year experience questionnaires that had multiple overlapping items. The results supported that idea that involvement is very important in the first year of college, in particular during the fall. Early involvement influences the way students perceive the university and ultimately positively affects their subsequent engagement. Involvement with peers and faculty was positively related to a number of cognitive outcomes as well as higher perceptions of institutional support. Students who were not engaged during the fall semester were less likely to be engaged during the spring semester, and also had a more negative perception of institutional support. All of these findings combined suggest that early fall involvement is crucial for students' success throughout the first year (Milem and Berger, 1997).

Ultimately, college retention involves a complex interaction of different factors. Students bring in personal characteristics that shape their initial views, but then as they progress through their first semester, their involvement is what ultimately affects their drop out decisions (Astin, 1984; Tinto, 1975). The more involved students are in various academic and social tasks, the better adjusted they are and the more they are committed to the particular institution they attend (Astin, 1984; Tinto, 1975; Millem and Berger, 1997).

Student-Faculty Interaction

Student-faculty interaction can be broadly defined as any in-person contact between students and professors/instructors in any context outside of scheduled class time. From there, student-faculty interaction can be divided into different types of contacts. Students can talk to

faculty briefly before and after class, they can go to their professors' office or they can meet in a more social setting somewhere on campus (Pascarella & Terenzini, 1977). The nature of the interaction is variable as well. Some of the most often distinguished interactions are those about course-related matters, conversations about career development, more personal matters, or just socializing that is not academic in nature. Student-faculty interaction is among the forms of involvement that Astin recognizes as important in college adjustment and retention (1984).

The majority of research studies do not discriminate between the different types of out-of-class student-faculty interactions, nor do they assess the duration or quality of such interactions. Predominantly studies use a wide variety of standardized surveys such as the Freshman Survey, the College Student Survey, the College Student Experiences Questionnaire (CSEQ), or more recently the National Survey of Student Engagement (NSSE) (Lundberg & Schreiner, 2004, Endo & Harpel, 1982, Anaya & Cole, 2001). These surveys contain a standard set of questions assessing frequency and quality of student-faculty interaction on a Likert scale, but allow for little modification or addition of other relevant questions. Fewer studies employ novel surveys specifically created for a particular research program (Jaasma & Koper, 1999). Moreover, even fewer studies have experimentally manipulated frequency of interaction and its effects on student outcomes (Clark, Walker and Keith, 2002). Student-faculty interaction can be beneficial in several different ways, but the degree of benefit may depend on the quality of the interaction (Lamort & Coll, 1993). Positive interactions can improve students' academic achievement, increase satisfaction with college, improve intellectual and personal development, increase motivation to learn, and also affect student persistence (Lamort & Coll, 1993, Endo & Harpel, 1982, Jones, 2008).

Based on Tinto's model of student attrition, student-faculty interaction should increase not only the students' social integration but also their academic integration (Pascarella & Terenzini, 1977). Theoretically, this should lead to a higher rate of retention. Pascarella and Terenzini (1977) looked at several different types of student-faculty contact that lasted at least 10 minutes, and after accounting for background characteristics looked at differences between students who dropped out (leavers) and those who remained at the university (persisters). Persisters had a much higher frequency of interactions concerning intellectual or course-related matters compared to leavers (Lamort & Coll, 1993, Pascarella & Terenzini, 1977). In fact, out of all categories of interaction, the category for out-of-class contact concerning discussion of intellectual or course-related matters contributed the most towards predicting persistence (Pascarella & Terenzini, 1977). In a different study, students who interacted very little with faculty were almost twice as likely to withdraw compared to those who interacted a great deal with faculty (Lamort & Coll, 1993).

Frequent out-of-class interactions with faculty can have positive effects on academic achievement as well (Lamort & Coll, 1993, Anaya & Cole, 2001). Using the CSEQ and GPA as a measure of academic achievement, Anaya and Cole (2001) found that even after controlling for background characteristics, students who met with faculty members more had a higher grade point average than those who met with them less. This finding seems to be consistent in different disciplines as well. In another study, student-faculty interaction was used to predict the final course grade in a STEM course while controlling for GPA, gender and minority status (Micari & Pazos, 2012).

A disturbing finding in most studies was that the highest frequency of student-faculty interaction was for academic purposes, but even that was only at about 50% of all students

(Anaya and Cole, 2001). This means that even fewer students had other types of interactions with their professors (e.g., only about 19% of students had informal interactions with their professors) and that at best only 50% of students met with their professors even once. GPA was also higher for students with more frequent interactions than those whose background characteristics predicted higher academic performance but who never interacted with faculty (Lamort & Coll, 1993). These results were similar to what Guerrero and Rod (2013) discovered by using frequency of interaction in terms of office-hours visits to predict the grade for the course students were taking. After controlling for gender, socioeconomic status, class year, age, race and major, a higher number of office-hours visits was associated with a higher grade in the course. While this was not a very strong effect, the researchers showed that such interactions are helpful, possibly due to the fact that they promote students to be engaged in their own education rather than being passive recipients of knowledge (Guerrero and Rod, 2013). It is however possible that the causal relationship between interaction and performance is driven by the fact that more engaged and motivated students will have more student-faculty interactions than those who are not as involved in their education.

Student-faculty interaction has an effect not only on direct measures of academic success such as GPA, but also on measures of academic self-efficacy. Academic self-efficacy refers to student's belief in their own academic abilities. In one study, while overall out-of-class communication with faculty was not related to academic self-efficacy, a specific type of interaction was (Kim & Sax, 2014). Students who asked faculty for advice outside of the classroom more often also reported increased academic self-efficacy (Kim & Sax, 2014; Micari & Pazos, 2012). Similar findings were also reported in a study where academic self-efficacy

could be predicted by the amount of out-of-class interaction with faculty as well as feeling respected by faculty and peers (Komarraju, Musulkin and Bhottacharya, 2010).

In a different study, also using the CSEQ for measures of student-faculty contact, frequency of contact had no significant effect on learning, however quality of contact did (Lundberg & Schreiner, 2004). While the study was looking for differences between students of different ethnicities, the findings showed that the quality of student-faculty interactions significantly predicted learning for all groups. Similar results were also found in a sample of students from Puerto Rico (Dika, 2012). In a sample of first generation students, quality of student-faculty interactions was positively related not only to social and academic integration but also to students' academic self-concept. The student-faculty interactions were also a better predictor than background variables such as ethnicity, first generation status, sex and age (Lundberg & Schreiner, 2004). While white students had the highest satisfaction scores for student-faculty interaction, the only significantly different group was Native American students, whose scores were much lower. That being said, frequency and quality of student-faculty interaction explained nearly a quarter of the variance for Native American students, and only 16% for white students. Another study however, found that minority groups and first generation students had less positive interactions with faculty, which could perhaps explain the lower frequency of interactions in these groups (Dika, 2012). The frequency and effects of student-faculty interaction also differ by gender. Women in general report more frequent and more positive interactions with faculty than do men, although in one study student-faculty interaction benefitted males' academic performance more than females' (Sax, Bryant & Harper, 2005). In a different study, while persistence for both men and women benefitted from contacts regarding intellectual or course-related matters, interactions about possible careers or other course and

academic information was a significant benefit only for men (Pascarella & Terenzini, 1979). In contrast, interactions concerning campus issues or more informal interactions were significantly correlated with persistence only for women.

In other research, while frequency of student-faculty interaction did not have an effect on academic achievement, it did positively affect other intellectual outcomes (Endo & Harpel, 1982). Even though the results were not significant, the researchers found that informal student-faculty interaction had a positive effect on students' satisfaction with their education. Dika (2012) found that students who were required to talk to faculty outside of class showed more effective learning that those who were not. This study suggested an interesting explanation for the connection between student-faculty interaction and academic achievement. While the researcher confirmed that higher frequency of interaction was associated with greater academic achievement, he also acknowledged that the direction of the effect was not known. In other words, it was not known whether higher achieving students interacted with faculty more, or whether students who interacted with faculty more performed better academically as a result (Dika, 2012).

A study by Jaasma and Koper (1999) looked at the effects of frequency, length and satisfaction with student-faculty interactions on nonverbal and verbal immediacy as well as student motivation. Nonverbal and verbal immediacy referred to the way students perceived their instructors. In theory, higher scores on these measures indicated higher satisfaction with instructors and served to increase the probability of more interactions. The data indicated that frequency of contact was positively related to both verbal and nonverbal immediacy, while student motivation was positively related to frequency of contact. However, nonverbal immediacy was only related to frequency of informal interactions but not to frequency of formal

contact such as office visits. Both verbal and non-verbal immediacy and motivation were positively related to the length of office visits.

Most studies that have looked at student-faculty interactions use correlational data based on whether the student has or has not had any interactions with their professors outside of class (Clark, Walker and Keith, 2002). Only one study took a more experimental approach to assess the effect of out of class communication with faculty. The experimental group had to attend a mandatory meeting with their instructor at mid- semester while the control group did not. The researchers only found significant differences between the two groups in terms of their affective learning, which included their perceptions of the course content and immediacy of the instructor, with students in the experimental group having higher scores. They did not find any significant differences in cognitive learning or in students' final grades for the course. There were several problems with this study, including the fact that the groups were separated by the course in which students were enrolled. Thus, there may have been underlying differences in the two groups being compared. The researchers also required only one outside meeting with the instructor, which may not be enough for any long-term effects to occur (Clark, Walker and Keith, 2002).

While multiple studies have shown that student-faculty interactions are related to many positive effects on a variety of student outcomes, it is important to note that such interaction is not very frequent. As noted previously, most studies have indicated that at best only about half of students ever talk to their professors outside of the classroom (Jaasma & Koper, 1999, Anaya & Cole, 2001). Cotton and Wilson (2006) interviewed students and found out that most students only interact with faculty when specific problems arise. Most students do not seem to realize that they can interact with faculty for more than just academic reasons and that there are benefits to

such interactions. In fact, when students in their study reported more frequent interaction, they also reported a higher sense of belonging at the university (Cotton and Wilson, 2006). Students in professional programs interact with faculty less outside of class than those in liberal arts programs (Endo & Harpel, 1982). At University of New Hampshire, specifically, these trends seem to be similar. In a 2014 study, 35% of first year students never discussed course related matters with their professors, while 45% of first year students only sometimes engaged in such conversations (NSSE, 2014). Only 7% of students indicated that they often engaged in conversations with faculty about career development, and only 4% of students reported that they often were involved in interactions that were not academically related. A more positive statistic is that the majority of students reported good to excellent interactions with faculty.

Overall, student-faculty interaction is an important component in student life. Frequent and meaningful interactions are related to better education and intellectual outcomes as well as higher academic achievement. More frequent student-faculty contacts are also positively related to student persistence, perhaps due to their effect on other student outcomes, which in turn affect the students' adjustment to college. A study by Fuentes, Alvarado, Berdan and DeAngelo (2014), indicates that the earlier students start interacting with faculty the better their subsequent interactions tend to be. Early student-faculty contact significantly predicted later mentorship. If the mere contact between students and faculty is enough to benefit students' experiences in college, then students should be encouraged or perhaps even required to meet with their professors. Additionally, instructors should be made aware of the benefits for students that such interactions have.

Identity Development in College

The time when students first enter college coincides with many developmental changes. Identity development, a concept that was first referenced by Erik Erikson and later developed by James Marcia (1966), refers to the subjective state of an individual through which he/she explores and construes the world (Berzonsky, 1992). Marcia's identity statuses consider two dimensions: crisis and commitment (Marcia, 1966; Berzonsky, 1989). Crisis refers to the active exploration of identity beliefs while commitment is the values and views one holds that are more stable and permanent. Thus, there are four possible identity statuses. People in the identity achievement category have gone through a period of exploration and have committed to an identity. Moratorium is the status of people who are still exploring but have not committed to an identity, while foreclosure is the opposite: people have committed to an identity without spending time exploring. Foreclosed individuals usually commit to an identity based on outside influences such as parents, but do not spend time exploring different options. The last identity status is identity diffusion, in which a person is neither committed nor actively exploring possible identities (Marcia, 1966; Berzonsky, 1989).

Research suggests that after the age of 19, the number of people in moratorium decreases significantly, while the number of people in the identity achieved category rises (Kroger, Martinussen, and Marcia, 2010). This would be the time students first start college, so the first year may be crucial to their identity development, but can also be stressful as they are trying to explore and commit to an identity. Differences in identity status have also been related to differences in academic performance. For example, Cross and Allen (1970) found that students in the identity achieved category had a significantly higher GPA than students in any of the other

categories. The limitation of this study was that the researchers only looked at male students, so the results were difficult to generalize.

Based on Marcia's theory, Berzonsky created a set of identity styles that explain how individuals approach problem solving and decision making (Berzonsky, 1989, 1992). He mapped the three different identity styles or orientations to Marcia's identity statuses. According to Berzonsky's rubric, people who are in the identity achieved or moratorium status usually use the information orientation identity style. They actively seek out possible solutions and evaluate different options before committing to one. People who are in the foreclosed identity status employ problem solving and decision making strategies that mirror the way they picked an identity. They use the normative orientation and are heavily influenced by standards and opinions of other people such as their parents or other authorities. People who are in the identity diffused category tend to have a diffuse orientation which involves delaying decision making until the last possible moment, when they are heavily influenced by the situation and/or possible rewards/punishments (Berzonsky, 1989, 1992).

Research on identity style differences has shown that people utilizing different styles also have very different ways of coping with stress (Berzonsky, 1992). Not surprisingly, people using the information orientation tend to cope with stress best, by using active problem solving strategies to deal with the issues at hand. In contrast, people using normative and diffuse orientations use more defensive coping strategies that do not actually remove the source of their stress, but allow them to actively avoid it. The ability to cope with stress can also be easily associated with the ability to successfully transition to life in college (Berzonsky & Kuk, 2000). In higher education, people often assume that first year students have the capability to handle the stress and demands of the university based solely on the fact that they were accepted (Boyd,

Hunt, Kandell, and Lucas, 2003). That may not always be true, however, as students come into their first college year at varying levels of development. In fact, according to Boyd, Hunt, Kandell and Lucas (2003), students are equally distributed between the three identity styles with 36% falling into the diffuse orientation category and about 33% each into the information or normative orientation categories. A similar distribution was found in a study of university students in South Africa (Seabi, 2013).

In general, Boyd et al. (2003) indicated that women were more likely to have an information orientation than men, and men were more likely to use the diffuse orientation. Further exploration of the different styles has suggested some major differences among the three. Students who employ an information orientation style appear to be best prepared to make the transition to college seamlessly since they are best adapted to working through the stressors encountered in college, particularly during the first year (Berzonsky & Kuk, 2000, Boyd et al., 2003). Students using the information orientation style are more involved in their education and show more academic autonomy compared to their fellow students who use a normative or diffused orientation (Berzonsky & Kuk, 2000, 2005). Those who use the information orientation style are more likely to have picked a major, while remaining open to further exploration of possible paths of study (Boyd et al., 2003). They also do not anticipate having difficulties adjusting to college.

People using a normative orientation seem to be more committed to their identity style than the other groups (Berzonsky & Kuk, 2005). These students feel supported by their families in their academic decisions, feel well prepared for college and are committed to their major (Boyd et al., 2003). In contrast, students in the diffused category scored significantly lower than any other group on measures related to academic autonomy (Berzonsky & Kuk, 2000). They

anticipated having difficulties in college and did not feel as well prepared as their peers (Boyd et al., 2003). They did not have a major in mind, but felt under pressure to choose. The differences between people using different identity styles had an effect after four years in college as well. Students who used the diffuse orientation, men in particular, were more likely to be in lower academic standing than students in any other identity style category. Moreover, by the end of their third semester, more than one third of the students using the diffuse orientation had either dropped out or were on academic probation. These differences were not observed in women. Out of all students, men in the diffuse category were more likely to change their major, while men in the normative orientation category were least likely to do so (Boyd et al., 2003).

Identity development can also have an effect on academic achievement since differences in identity status and identity style could lead to individuals making different choices and exhibiting different behaviors in the classroom (Hejazi, Shahraray, Farsinejad and Asgary, 2008). Students utilizing the information orientation have better academic performance than those using the diffuse orientation (Berzonsky & Kuk, 2005, Seabi, 2013). They are also more involved in their education and develop more and better interpersonal relationships than people using the diffuse orientation (Berzonsky & Kuk, 2000). Students who use the diffuse orientation, especially men, perform worse than those who use the information orientation (Boyd et al., 2003, Seabi, 2013). In the study of university students in South Africa, there were no differences between students using the information or diffuse orientation and those using the normative orientation (Seabi, 2013). However, the diffuse orientation students were much more likely to be on academic probation or drop out than students using any other identity style (Boyd et al., 2003).

One of the ways identity styles affect academic achievement might be through their effects on self-efficacy, or people's beliefs that they can perform the tasks required (Hejazi et al., 2008). Self-efficacy is an important component of student success as it can directly and indirectly influence academic performance (Chemers, Hu and Garcia, 2001). Self-efficacy seems to be a mediator when predicting academic achievement using identity style. When evaluated as predictors, only two of the three identity styles are related to academic achievement. Information orientation is positively correlated to achievement while diffuse orientation is negatively related. Using a normative orientation however has almost a zero correlation with academic achievement. Altogether, these variables predict about 8% of the variance in academic achievement. When using identity styles to predict self-efficacy however, the results are more useful. Information and normative styles positively predict self-efficacy, while the diffuse style negatively predicts self-efficacy. Self-efficacy in turn can be used to reliably predict academic achievement. Using self-efficacy as a mediator significantly improves this model by explaining close to 20% of the variability in academic achievement scores (Hejazi et al., 2008).

Another way identity styles can affect academic achievement is through the mediating effects of possible selves (Cadely, Pittman, Kerpelman and Adler-Baeder, 2011). The concept of possible selves involves the mental representations of what students want and expect to become in the future. By using a structural model, researchers found that the information orientation has a positive association with possible selves, while the diffuse orientation has a negative association. Using a normative orientation had no effect on either possible selves or grades. After factoring in the effect of identity style on possible selves, there was still an overall effect on academic achievement with students using the information orientation performing better than those using the diffuse style (Cadely et al., 2011).

Overall, students' identity development appears to be important in predicting their academic performance in college. Using an information orientation seems to be the most beneficial, while having a diffuse orientation seems to be the most detrimental (Berzonsky & Kuk, 2005; Boyd et al., 2003; Seabi, 2013). Students entering the university are roughly equally divided among the three identity styles, but that can change during their time in college (Seabi, 2013; Boyd et al., 2003). Using the information orientation is positively associated with academic achievement (Berzonsky & Kuk, 2005; Boyd et al., 2003; Seabi, 2013). Using the diffuse style is negatively associated with academic achievement and the students who use this style are most likely to struggle and drop out.

Purpose of the Study

The present study aims to further the understanding of the effect of student-faculty interactions, and combine that with what is known about identity development. In his book "Making the Most of College", Richard Light suggests that good advising is crucial to student success, as rated by both professors and students (2004). He states that the best advice he can give students is to encourage them to get to know at least one instructor better outside of class. Light's statement, combined with the research to date, suggests that encouraging students to interact with faculty might actually be an excellent idea for many advisors of undergraduates. If student-faculty interaction is beneficial to students, then encouraging them to seek this out would be important, and it could make the difference between their staying at the university or withdrawing.

The present study investigates whether a brief intervention such as encouraging students to meet with faculty members is a viable tool for advisors to use in order to boost academic performance and retention. Previous research suggests that brief interventions can have a

profound effect on college students' outcomes (Wilson and Linville, 1982). In one study, students in the experimental group were given written reports indicating that GPA improves after the first semester, while students in the control group were not. The results showed that students in the experimental group not only performed better on a sample GRE test a week after the intervention, but their GPA was higher than the control group's a year later. In another study, a similar one-time intervention--showing students videotaped interviews of other students saying that their grades improved throughout the semester--was associated with better performance on subsequent exams and the final exam in a particular course (Noel, Forsyth & Kelley, 1987). More recently, Walton and Cohen (2011) provided students with a brief intervention on social belonging in college, where they had students of different backgrounds talk about the difficulties they encountered as first year students and how they overcame them. This intervention had a profound effect specifically on minority students not only at the end of their first semester, but also going forward until they graduated. Minority students who received the intervention had higher GPA's by the end of their senior years than those who did not receive the intervention. It is important to note that this effect was only present for minority students (Walton and Cohen, 2011).

In the current study, students were randomly assigned to one of three conditions: early in the semester they were either given the advice to seek out instructors outside of class or they were not given this advice, instead participating in one of two alternate treatment conditions. The frequency and quality of student-faculty interactions during the semester was measured at three separate time points: in the survey given at the beginning of the study, in the check-in survey, and again in the last survey given at the end of the semester (See Table 1 for a timeline of the procedure). Other measures such as first generation status, academic motivation, adjustment to

college, and academic self-concept were taken, to look for possible links between these measures and the frequency and quality of student-faculty interaction. Students also reported how likely they were to withdraw from the university at the end of the semester. An important goal was to investigate whether intent to withdraw could be predicted from experimental condition, student-faculty interaction and college adjustment. Finally, measures of identity development helped investigate possible links between students' identity status and the likelihood of their meeting with instructors outside of class. The literature suggests that students using the information orientation are better equipped to handle the challenges they face in college, while those using a diffuse orientation do not do as well. Thus, it was possible that students using the information orientation would be more prone to interact with faculty outside of class.

Research Questions

Based on the existing research literature the following questions were investigated in the present study:

1. Does encouraging student-faculty interaction have an effect on frequency of interactions, quality of interactions, academic and social adjustment, academic motivation, and academic achievement?

   a. Hypothesis 1: Students who are encouraged to interact with faculty more often will have more positive and more frequent interactions.

   b. Hypothesis 2: Students who are encouraged to interact with faculty will be better adjusted to college both academically and socially, will have higher levels of academic motivation and academic adjustment as measured by their end-of-semester GPA.

2. Are first generation students at a disadvantage compared to non-first generation students in terms of college adjustment, academic achievement and frequency and quality of student-faculty interaction?

3. Are there any gender differences in college adjustment and success measures or identity development measures?

   a. Hypothesis 1: Based on previous research, it is expected that women will report have more frequent interaction and better adjustment to college than men. (Sax, Bryant & Harper, 2005)

   b. Hypothesis 2: Based on previous research, it is expected that proportionally more women will use the information orientation than men. (Boyd et al., 2003)

4. Do students who intend to withdraw have lower levels of college adjustment, and lower frequency and quality of student-faculty interaction, than students who plan to stay at the university?

5. Does identity development affect the frequency of student-faculty interaction and any other college adjustment variable?

   a. Hypothesis 1: Students using the information orientation at the beginning of the study will interact with faculty more often than students using the normative or diffuse orientation.

   b. Hypothesis 2: Students using the information orientation at the end of the study will have higher quality student-faculty interactions than those using the normative or diffuse orientation.

6. What is the relation between student-faculty interaction frequency and quality, and measures of college adjustment and success?

a. Hypothesis 1: Higher student-faculty interaction will be associated with better GPA, higher academic adjustment, higher academic self-concept, higher levels of social Integration, as well as institutional and degree commitment.

7. Can academic achievement be predicted from any of the college adjustment and student-faculty interaction variables as suggested by previous research by Anaya and Cole (2001)?

8. Can withdrawal from the university be predicted using academic and social integration, academic motivation, degree and institutional commitment, and frequency and quality of student-faculty interaction?

a. Hypothesis 1: Based on previous research students who are not adjusted well academically and socially will have lower academic motivation, degree and institutional commitment, less frequent interactions, and poorer quality of student-faculty interactions and will be more likely to withdraw (Lamport & Coll, 1993).

b. Hypothesis 2: Students who were encouraged to interact with faculty will be less likely to withdraw at the end of the semester.

CHAPTER 2: METHOD

Participants

Participants were 205 first year students (164 female, 41 male) at the University of New Hampshire (UNH), ranging in age from 18 to 23 years ($M = 18.18$ years, $SD = .493$). Participants were recruited through the Research Participation System (SONA) and through introductory-level classes in the Department of Psychology. Participants recruited through the SONA system received research credits for participation in the survey, while the rest were entered in a raffle for an iPad, and/or received extra credit points in class.

Instruments

Demographic Information. Participants were asked to provide demographic information including age and gender. They were asked whether they were first generation students and whether they were new to UNH or transfer students. Participants were also asked to provide their high school GPA, verbal and math SAT scores, and information about whether they had participated or were currently participating in any type of college success program such as Upward Bound, McNair Scholars, or another TRIO program (See Appendix C-I.).

College Persistence Questionnaire. The college persistence questionnaire is a 69-item survey that measures adjustment to college in several different aspects (Davidson, Beck, & Milligan, 2009). Adjustment is measured in terms of the following categories: academic integration, academic motivation, academic efficacy, financial strain, social integration, collegiate stress, advising, degree commitment, institutional commitment and scholastic conscientiousness. For example, a question assessing academic integration is, "How well do you understand the thinking of your instructors when they lecture or ask students to answer questions

in class?" See Appendix C-II for specific questions in each category.

Identity Style Inventory. The Identity Style Inventory is a 40-item questionnaire that measures the degree to which people utilize one of the three identity style orientations and the degree to which they are committed to that style using a 5-point Likert scale. The inventory provides four separate scores, one for each of the three styles– Normative, Information and Diffuse -- and one for commitment. For example, a question assessing the Information identity style asks participants the extent to which they agree with the statement, "I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me." Using standardized scores of the raw scores for each category, participants can be assigned a dominant identity style orientation (Berzonsky & Sullivan, 1992). Both the scores for each category, and the identity style dominant category were used in different parts of the data analysis in the present study. See Appendix C-III for specific questionnaire items.

Student-Faculty Interaction. Student-faculty interaction was measured in several different ways. One question directly asked students to report the approximate number of times they had met with faculty outside of class in the past, either for the past two weeks (on the check-in survey) or during the current semester. Additionally, questions from the "Experiences with Faculty" section of the College Student Experiences Questionnaire (CSEQ) was used to assess general frequencies of different types of interaction with faculty. An example of a question from the CSEQ is, "Talked with your instructor about information related to a course you were taking." An additional question assessed the students' overall satisfaction and quality of their interactions with faculty. Finally, students were asked to describe a positive and a negative interaction they had experienced in the past 2 weeks (on the check-in survey), or throughout the semester in general. See Appendix C-IV for specific questions.

Academic Achievement. Several measures were used to assess academic achievement. Participants were asked to provide a prediction of what their GPA would be at the end of the fall semester. They were also asked for permission to access their records and get their actual GPA at the end of the fall semester. Another measure of Academic Achievement was the Academic Self Concept Scale, a 40-item questionnaire that rates the students' perceived ability to succeed academically. For example, an item assessing self-efficacy is, "I feel capable of helping others with their class work." See Appendix C-V for specific items in this survey.

Plans to withdraw. Participants were asked about their decision to stay at UNH or withdraw at the end of the semester/school year. If they responded that they were withdrawing they were asked to provide a reason and asked whether they were transferring to a different institution or leaving higher education altogether. Specific questions can be found in Appendix C-VI.

Procedure

The study took place in the fall semester and had four separate components – an initial survey, a face-to-face meeting, a check-in survey, and an end-of-semester survey. After students signed up to participate, they were asked to complete an entry survey online through Qualtrics. The survey consisted of all questions listed in the Instruments section, except for predicted GPA and Decision to Withdraw questions. Following completion of the initial survey, students signed-up for a face-to-face meeting.

The face-to-face meeting lasted about 10-15 minutes. Participants were randomly assigned to one of three conditions: Experimental, Control or No Treatment. Students in the Experimental group were asked about their experience at UNH so far, and were asked to watch a four-and-a-half minute long video of current students and recent graduates talking about the

benefits of student-faculty interaction. At the end of the meeting, these students were encouraged to meet with faculty outside of the classroom and were given a brief description of the timeline for the remainder of the study.

Students assigned to the Control group were asked if they had explored campus and what their favorite location was. Following the brief conversation, they watched a video of the same students from the Experimental group video talking about their favorite places on campus. The video format and length were similar to the Experimental group video; only the context was different. At the end of the meeting students were given a brief description of the timeline for the remainder of the study. Students assigned to the No Treatment group were provided with a timeline of the remainder of the study but were not engaged in any conversation otherwise and did not see a video.

About two weeks after the face-to-face meeting, students completed a check-in survey, which consisted of questions regarding academic and social adjustment and student-faculty interaction. The academic and social Integration questions were included in order for the survey to be identical for all groups, without stressing the student-faculty interaction component to the Control and No Treatment groups. At the end of the check-in survey, both the experimental and control groups were prompted to watch the videos again.

Two to three weeks after the check-in survey students completed the end-of-semester survey, which was similar in nature to the initial survey, but also included questions regarding their decision to withdraw at the end of the semester, as well as predicted GPA for the fall semester. The demographic questions from the initial survey were not included.

In the spring semester, all students who completed the fall surveys were contacted to take part in a brief follow-up survey and offered a movie rental credit in return for their participation.

This survey had a similar structure to the mid-semester check-in survey. A detailed timeline of

the procedure is described in Table 1.

CHAPTER 3: PILOT STUDY RESULTS

A preliminary study was conducted in the spring of 2015 to evaluate the survey instruments to be used in the dissertation project. In this pilot study, 160 students took an online survey that included all the instruments listed in the Methods Chapter. Participants were predominantly freshmen, sophomores and juniors, aged 18-25 years. Approximately 69% of participants were female and 31% male; 16% were first generation students and 11% reported having transferred into UNH from another institution.

The goal of this study was to test the instruments against the participant pool at the University of New Hampshire, as well as to look for potential relations between variables to aid in the analysis in the main study. Most students took less than an hour to complete the survey which aligns with the time frame for the full study. The data were analyzed to explore potential differences in college adjustment, academic success, and student-faculty interaction frequency and quality among different groups of students. Additionally, the ability to predict GPA and withdrawal from those variables was investigated as well.

Results

Reliability Analysis. In order to analyze the data, raw scores from the College Persistence Questionnaire were combined to form ten college adjustment variables. Raw scores from the Identity style questionnaire were combined to represent the three identity styles, a sum of all CSEQ questions provided with a general frequency of interaction score, and all items from the ASCS formed a variable of academic self-concept. Cronbach's Alpha was calculated for all variables created (Table 2) to evaluate reliability. All variables had good reliability with alpha

values of .6 to less than .9. The reliability for each scale was comparable to that reported in previous literature (Berzonsky, 1989, Davidson et al., 2009, Gonyea et al., 2003, Reynolds, 1988)

Gender Differences. Women (*M*=1.36, *SD* = .73) scored higher than men (*M*=1.01, *SD*=.98) on one measure in the College Persistence Questionnaire - institutional commitment, *t*(158) = -2.562, *p*=.011, *d*=-.44.

Transfer Students. Students who transferred to UNH (*M*=.01, *SD*=.76) reported higher stress levels than those who started at UNH (M=-.43, SD=.68), *t*(158)=-2.572, *p*=.011, *d*=-.65.

First Generation status. First generation status did not have an effect on any of the variables that were measured except for financial strain and collegiate stress. Financial strain was part of the College Persistence Questionnaire and measured the financial difficulties students encounter while in college. First generation students (*M*=-.97, *SD*=1.1) reported higher financial strain than non-first generation students (*M*=-.38, *SD*=1.02), *t*(158)=-2.614, *p*=.01, *d*=-.57. First generation students (*M*=-.64, *SD*=.69) also reported higher levels of stress than non first generation students (*M*=-.34, *SD*=.69), *t*(158)=-2.016, *p*=.045, *d*=-.44. No other differences were found.

Identity Development. One-way ANOVA's were conducted to see if there were any differences in college adjustment or student-faculty interaction frequency and quality between students using different identity styles. Students using the normative orientation (*M*=.64, *SD*=.49) reported lower academic adjustment than those using the information orientation (*M*=.96, *SD*=.51), *F*(2,151)=5.84, *p*=.004, η^2=.07. Normative orientation students (*M*=2.90, *SD*=.52) also reported lower GPA than information orientation students (*M*=3.26, *SD*=.41), *F*(2,86)=3.56 *p*=.033, η^2=.08. Students using the information orientation (*M*=.26, *SD*=.43) had

higher levels of academic motivation than those using the normative orientation (*M*=.002, *SD*=.47), $F(2,151)$=3.94, *p*=.022, η^2=.05. Students utilizing the information orientation (*M*=.91, *SD*=.49) or the diffuse orientation (*M*=75, *SD*=.53) reported higher academic efficacy than those using the normative orientation (*M*=.40, *SD*=62), $F(2,151)$=11.53 *p*<.001, η^2=.13. Normative orientation students (*M*=1.39, *SD*=.54) were less committed to obtaining a degree than those in the diffuse orientation category (*M*=1.70, *SD*=.30), $F(2,151)$=6.07, *p*=.003, η^2=.07. Lastly, students using the information orientation (*M*=1.19, *SD*=.63) or the diffuse orientation (*M*=1.16, *SD*=.60) were more scholastically conscientious than those using the normative orientation (*M*=.69, *SD*=.89), $F(2,151)$=7.91, *p*=.001, η^2=.095.

Class Year. One-Way ANOVA's were conducted to look for any differences in college adjustment and student-faculty interaction frequency and quality. Sophomores (*M*=1.23, *SD*=.59) scored higher in scholastic conscientiousness than freshmen (*M*=.85, *SD*=.86), juniors (*M*=.88, *SD*=.80) and seniors (*M*=.64, *SD*=.78), $F(3,156)$=3.38, *p*=.020, η^2=.06.

Correlational Analyses. Table 3 shows the Pearson correlations among all variables. Notably, higher frequency of student-faculty interaction was associated with higher levels of academic integration (*r*=.225, *p*=.005), academic motivation (*r*=.339, *p*<.001), social Integration (*r*=.163, *p*=.043), better quality of interactions (*r*=.260, *p*=.001), and lower levels of collegiate stress (*r*=-.160, *p*=.047).

Higher satisfaction with student-faculty interactions was associated with higher academic integration (*r*=.515, *p*<.001), academic motivation (*r*=.264, *p*=.001), academic efficacy (*r*=.311, *p*<.001), social integration (*r*=.3014, *p*<.001), better advising (*r*=.342, *p*<.001) and higher degree commitment (*r*=.288, *p*<.001).

Higher self-reported GPA was associated with higher levels of academic efficacy (r=.338, p=.001) as well as higher levels of scholastic conscientiousness (r=.238, p=.022).

Regression Analysis. In order to investigate whether we could predict withdrawal or academic success, two regression analyses were conducted. Since this was a pilot study to determine how college adjustment variables and student-faculty interaction are related and could be used to predict withdrawal and academic success, both regression analyses were conducted in a forward model, excluding predictors that did not have significant effects.

There were three proposed models to predict GPA, which are outlined in Table 4. The model using academic efficacy, scholastic conscientiousness and advising as predictors was significant (F(3, 73)=8.50, p<.001) and explained roughly 26% of the variance in GPA.

In order to predict whether students intend to withdraw from the university a binary logistic regression was conducted. Similarly, a forward model was used, in which predictor variables are entered in the equation if they make a significant contribution. Wald values were used as criteria for including predictors. The model that could best predict withdrawal included only institutional commitment as a predictor and was able to accurately predict whether students intended to leave college 98.7% of the time (the accuracy was 100% for students who intend to stay and about 70% for students intending to leave the university).

Discussion

The fact that first generation status had minimal effect on the variables measured does not map on to findings in the existing literature. It is possible that the sample of first generation students was too small for any effects to be evident as only about 16% of the students reported first generation status. Moreover, the students were not specifically first year students, so it is

possible that the first year is the most critical year in their adjustment to college, and any differences are not significant for subsequent years in college.

The prediction of whether students will withdraw from the university was dependent on their level of institutional commitment, which refers to the level to which the student is attached to the specific institution he/she is attending. As such it is not surprising that this variable plays a crucial role in the decision to withdraw. It must be noted however, that due to the extremely small sample of students who indicated that they were thinking about withdrawing, the reliability of this finding is questionable and required replication in the full study.

The ability to predict GPA by the use of academic efficacy, advising and scholastic conscientiousness was also not surprising. Students who are more academically focused should do better. Having advising as a predictor for GPA was an interesting finding as it was not directly correlated with GPA. That being said, students who perceive their advising as being better may be more prepared for the academic challenges and would in theory be enrolled in courses that better match their interests, so it is possible that a relationship between the two exists. Additionally, advising is often done by faculty, so it is a type of student-faculty interaction. This is a promising results as it may indicate the importance of student-faculty interaction in predicting academic achievement. It is possible however, that these results are not going to be replicated in the full study, since the GPA used in the pilot was self-reported by students and may not accurately reflect their actual academic success.

Surprisingly, identity development was not a significant predictor for academic achievement, even though there were differences in academic achievement between the identity groups. Perhaps this is due to the fact that similar differences exist between identity orientations for scholastic conscientiousness and academic efficacy, so it is possible that identity

development is contributing to those differences, which in turn can be used to predict academic achievement.

The correlational analysis yielded some interesting results as well. Most importantly, more frequent student-faculty interactions were associated not only with better quality of interactions, but also with better college adjustment and higher motivation. This is consistent with previous literature, further confirming that the measures that were chosen adequately measure the frequency and quality of interactions (Anaya & Cole, 2001, Jaasma & Koper, 1999).

Overall, the pilot study provided information that was helpful in conducting the full study. Students were able to complete the survey with no problems, and the scales were reliable and showed similar reliability scores as indicated in past research (Berzonsky, 1989, Davidson et al., 2009, Gonyea et al., 2003, Reynolds, 1988).

CHAPTER 4: MAIN STUDY RESULTS

The following results section first describes the characteristics of the sample and the

distribution of participants across assigned experimental conditions. It then briefly describes

preparation for data analysis before turning to the presentation of results, organized according to

the research questions presented in the introduction.

Sample characteristics.

A total of 205 first year students participated in the study. Gender distribution across the

three groups (Experimental, Control, No Treatment) was equal (X^2 (2) = .611, p=.737), with

approximately 80% female participants in each group. The 46 first generation students who

participated (22% of the sample, which is comparable to the proportion of first generation

students at UNH) were also equally divided across the three groups (X^2 (2) = .3.225, p=.199). Of

the entire sample, 27.8% were classified as using the information style, 29.3% as using the

normative style and 36.1% as using a diffuse identity style. The different identity styles were

evenly distributed among the experimental conditions (X^2 (4) = 3.604, p=.462).

Preparation of data.

The data were analyzed using SPSS. To facilitate the analysis, several portions of the raw

data were recoded at the outset. For the College Persistence Questionnaire, ten variables were

created to address different aspects of college adjustment. The Identity Style Inventory was

recoded into four variables; each participant has a continuous score on each of the three different

identity style variables and the variable indexing commitment to an identity. Additionally, an

identity style category—a single categorical variable with three levels--was created using the

method noted previously in which standardized versions of the raw scores for each category were used to determine each participant's dominant identity style (Berzonsky and Sullivan, 1992).

Several variables were also created to address student-faculty interaction. These included the reported frequency of student-faculty interaction at each time point, a variable reporting frequency of interactions from the College Persistence Questionnaire, as well as variables representing quality of interactions at each time point.

Analyses and findings relevant to each of the eight central research questions are described below.

Research Question 1: **Does encouraging student-faculty interaction have an effect on frequency of interactions, quality of interactions, academic and social adjustment, academic motivation, and academic achievement?**

One-way ANOVAs were conducted using the three-level experimental group variable (Experimental, Control, No Treatment) as the independent variable, to look for differences between groups in the college adjustment and student-faculty interactions variables. Descriptive statistics and test results can be found in Table 5. No significant differences were found between groups for any of the outcome variables except for institutional commitment at the end of the semester. Experimental group participants who had been encouraged to interact with faculty had a significantly higher level of institutional commitment compared to Control group participants ($F(2,202) = 3.14$, $p=.045$, $\eta^2=.03$). This analysis also revealed an underlying difference in high school GPA between the groups, such that the Control group had a lower self-reported high school GPA than the No Treatment group ($F(2,166)=5.98$, $p=.003$, $\eta^2=.07$).

Research Question 2: Are first generation students at a disadvantage compared to non-first generation students in terms of college adjustment, academic achievement and frequency and quality of student-faculty interaction?

Independent samples t-tests were conducted to test for differences between first-generation students and non first generation students in terms of college adjustment, identity development, and frequency and quality of student-faculty interactions. Table 6 contains the means, standard deviations and test statistics for each comparison. First generation students had a significantly lower GPA than their non first generation peers ($t(188)=3.37$, $p=.001$, $d=.59$). First generation students also scored lower in terms of academic efficacy ($t(200)=2.48$, $p=.014$, $d=.42$) and higher in terms of collegiate stress ($t(200)=2.08$, $p=.039$, $d=-.33$) than non first generation students. First generation students tended to be less academically integrated than their peers, a finding that reached a marginal level of significance ($t(200)=1.85$, $p=.065$, $d=.32$).

Research Question 3: Are there any gender differences in college adjustment and success measures or identity development measures?

To investigate any differences between males and females, independent sample t-tests were conducted. In comparison with men, women were more academically motivated ($t(203)=-2.48$, $p=.014$, $d=-45$), experienced more stress ($t(203)=2.74$, $p=.007$, $d=.48$), and had a higher level of degree commitment ($t(203)=-3.89$, $p<.001$, $d=-.63$). Women also scored higher than men on academic integration ($t(203)=-1.95$, $p=.053$, $d=-.35$) and social integration ($t(203)=-1.83$, $p=.068$, $d=-.34$); these finding reached a marginal level of statistical significance. Means and standard deviations for all comparisons can be found in Table 7. In addition, a chi square test was performed to look for differences between men and women in identity development. The

results indicated that the distribution of identity styles is similar between the two genders (X^2 (2) = 1.174, *p*=.556).

Research Question 4: Do students who intend to withdraw have lower levels of college adjustment and lower frequency and quality of student-faculty interaction than students who plan to stay at the university?

Independent samples t-tests were conducted to investigate any differences between people who planned to withdraw at the end of the semester (Leavers) and those who did not (Persisters). Persisters were more academically integrated (*t*(203)=-2.73, *p*=.007, *d*= .87) and more socially integrated (*t*(203)=-4.66, *p*<.001, *d*=-1.58) than leavers and they had a higher degree of commitment (*t*(203)=-2.21, *p*=.028, *d*=-.62) and higher institutional commitment (*t*(203)=-10.45, *p*<.001, *d*=-3.63). Contrary to expectations, leavers scored higher on the Academic Self-Concept Scale (*t*(203)=3.16, *p*=.002, *d*=.59), and reported more frequent interactions with faculty (*t*(203)=2.47, *p*=.014, *d*=.60). All means, standard deviations, and non-significant results can be found in Table 8. To ensure that these results were not driven by outliers in the data, the distribution of scores for each group was investigated. There was no participant that reported scores further than two standard deviations from the mean of the group, thus all participants were included in the analysis.

Research Question 5: Does identity development affect the frequency of student-faculty interaction and any other college adjustment variable?

A series of one-way ANOVA's were conducted with participants' dominant identity style (Berzonsky and Sullivan, 1992) as the independent variable and different measures of college adjustment and frequency and quality of student-faculty interaction as dependent variables. Means, standard deviations and F values are listed in Table 9. The results indicated

that students using the information orientation had a significantly higher high school GPA

($F(2,153) = 4.11$, $p=.018$, $\eta^2=.05$), and Fall semester college GPA ($F(2, 177)=3.999$, $p=.02$,

$\eta^2=.04$) compared to those using the diffuse orientation.

Additionally, students using the information or normative styles showed higher levels of

academic integration than those using the diffuse style ($F(2, 188)=7.45$, $p=.001$, $\eta^2=.07$). They

were also more academically motivated ($F(2,188)=8.98$, $p<.001$, $\eta^2=.09$), and had higher levels

of academic efficacy ($F(2,188)=5.898$, $p=.003$, $\eta^2=.06$) than students using the diffuse style.

Students using the normative style were better socially integrated ($F(2,188)=3.91$, $p=.022$,

$\eta^2=.04$), and had higher levels of institutional commitment ($F(2,188)=3.16$, $p=.045$, $\eta^2=.03$) than

those using the diffuse style, and they reported meeting with faculty more often ($F(2,183)=3.04$,

$p=.05$, $\eta^2=.03$). Students using either the information or normative style had a higher level of

degree commitment than those using the diffuse style ($F(2,188)=8.595$, $p<.001$, $\eta^2=.08$).

Finally, students using the information style were more scholastically conscientious than those

using the diffuse style ($F(2,188)=7.397$, $p=.001$, $\eta^2=.07$).

Since students who use the diffuse style score lower on most of the measures of college

adjustment, and first generation students generally perform worse as well, 2x3 ANOVAs were

used to look for any possible interactions between identity style and first generation status. There

were no significant interactions between identity style and first generation status.

Research Question 6: What is the relation between student-faculty interaction frequency

and quality, and measures of college adjustment and success?

To evaluate the relation between student-faculty interaction and quality and measures of

college adjustment and academic achievement, Pearson correlations were calculated for each

relevant pair of variables. All correlations can be found in Table 10. Higher quality of student-

faculty interaction was associated with higher academic motivation ($r=.197$, $p=.005$), higher levels of academic integration ($r=.468$, $p<.001$), higher levels of academic efficacy ($r=.284$, $p<.001$), as well as higher levels of degree ($r=.213$, $p=.002$) and institutional commitment ($r=.196$, $p=.005$). Higher frequency of student-faculty interaction was associated with lower GPA ($r=-.153$, $p=.035$), higher satisfaction with student-faculty interactions ($r=.271$, $p<.001$), higher levels of academic motivation ($r=.427$, $p<.001$), higher levels of academic integration ($r=.170$, $p=.015$), and lower levels of scholastic conscientiousness ($r=-.148$, $p=.036$). The correlations relevant to student-faculty interactions and college adjustment variables can be found in Figure 1.

Research Question 7: Can academic achievement be predicted from any of the college adjustment and student-faculty interaction variables as suggested by previous research by Anaya and Cole (2001)?

To investigate whether we could predict academic achievement from any of the college adjustment and student-faculty interaction variables a multiple regression was conducted. Predictor variables were variables that were strongly correlated with GPA. (See Table 10 for exact correlations.) Based on the correlation analysis, academic integration, academic efficacy, collegiate stress, degree commitment, scholastic conscientiousness, student-faculty interaction quality, and the relative frequency of student-faculty interaction as indicated by the CSEQ were chosen as predictors. Additionally, since there were significant differences in GPA between first generation students and non first generation students, first generation status was also added as a predictor. High school GPA was also added as a predictor, as there is a strong correlation between high school academic performance and college success. A regression equation was fitted in two models utilizing a combination of the above mentioned variables. Summary of these

models can be found in Table 11. Both of the resulting regression equations were significant, explaining 40% and 38.6% of the variance respectively. First generation status, quality and frequency of student-faculty interaction, and academic efficacy were the only significant predictors.

Research Question 8: Can withdrawal from the university be predicted using academic and social integration, academic motivation, degree and institutional commitment, and frequency and quality of student-faculty interaction?

To evaluate whether withdrawal from the university can be predicted using academic and Social Integration, academic motivation, degree and institutional commitment, and frequency and quality of student-faculty interaction, a binary logistic regression was conducted. A test of the full model against a constant-only model was statistically significant, indicating that the predictors as a set reliably distinguished between people who planned to withdraw and those who did not ($X^2(7)=61.019$, $p<.001$). Nagelkerke's R^2 of .807 indicated a strong relation between prediction and grouping. Prediction success overall was 97.4% (98.9% for stay and 70% for withdraw). The Wald criterion demonstrated that only institutional commitment made a significant contribution to the prediction ($p=.007$). The estimated odds for withdrawal are much lower for students with higher levels of institutional commitment than for those with lower levels of institutional commitment (Figure 2).

CHAPTER 5: DISCUSSION AND CONCLUSION

The main purpose of this study was evaluate whether encouraging student-faculty interaction has an effect on the frequency of such interaction, as well as on college adjustment and college success. Additionally, relations between student-faculty interaction frequency and quality, college adjustment, identity development and academic success were explored. The goal was to determine whether academic success and intent to withdraw from the university could be predicted using all or some of these factors. Overall, the results indicated some important relationships between student-faculty interaction, college adjustment, academic success, and intention to withdraw. Below, results pertinent to each of the research questions described at the outset are evaluated, followed by a discussion of limitations, future directions and overall conclusions.

Research Question 1: Does encouraging student-faculty interaction have an effect on frequency of interactions, quality of interactions, academic and social adjustment, academic motivation, and academic achievement?

To evaluate whether giving the advice to students to interact with their professors, which was suggested by Richard Light (2001) as a very important part of the college experience, an experimental design divided students into three randomly-assigned groups. One group received the advice to interact with faculty after watching a short video of students talking about the benefits of such interactions; another one went through a similar conversation and watched a different video about favorite locations on campus, and a third group did not have either experience. It should be noted that while gender distribution was controlled for in each group, first generation status and identity style were not. That proved not to be a problem as the 46 first

generation students were equally distributed between groups. Additionally, students using different identity styles were equally distributed among the three experimental conditions. This was helpful, as those factors could not have contributed to any differences that were seen between groups.

Contrary to expectations, there were no significant differences between any of the three groups in terms of reported frequency or quality of student-faculty interactions. However, the intervention did have a significant and practically important effect on institutional commitment. Students who were encouraged to interact with faculty more reported higher levels of institutional commitment than students who did not receive this encouragement. As such, it appears that while encouraging student-faculty interaction did not have a direct effect on the reported number of times students met with faculty, it did affect how connected they felt to the institution. Perhaps, just watching the videos of students talking about their positive experiences with faculty made students feel better about the university they were attending because while they might not have had any student faculty experiences themselves, positive or negative, their peers appeared to have positive experiences.

There are several factors that may have contributed to the experimental condition not having an effect on the frequency of interaction. First of all, all students except one were taking this study either for extra credit or as part of the research experience requirement for introductory level classes. This brings into question how seriously they took the study and whether they even considered following the advice. Additionally, since the advice did not come from a faculty advisor or an academic advisor/administrator, students again might not have taken it seriously and as something they should do.

Lastly, the way student-faculty interaction was measured was not ideal. Students at each time point were asked to provide an estimate of how many times they have met with a faculty outside of class either throughout the entire semester or in the case of the check-in survey in the past couple of weeks. By asking this question to account for an entire semester of interactions, it might have been difficult for students to come up with an accurate number. Moreover, the question did not queue them to the type of interactions that would be acceptable as student-faculty interaction. This would mean that participants might not have counted certain interactions because they happened immediately before or after class, or were informal short conversations in passing.

Research Question 2: Are first generation students at a disadvantage compared to non-first generation students in terms of college adjustment, academic achievement and frequency and quality of student-faculty interaction?

The literature on first generation students' college development suggests that those students are generally at a disadvantage compared to their non first generation peers (Aspelmeier, 2012; Ishitani, 2003; Lofnik and Paulsen, 2005; Martinez et al., 2009). In the present study only some of these results were replicated. First generation students were not more likely than their peers to predict that they would withdraw at the end of the semester. Out of the 10 students who indicated they were withdrawing, only two were first generation students. There also were no differences between first generation students and non first generation students in terms of identity development. A proportionally equal number of first generation students fell into each identity style category as non first generation students.

There were some notable differences in college adjustment and academic success. First generation students had lower first semester GPAs than their non first generation peers consistent

with some prior studies (Martinez, et al., 2009). While there was no difference in term of high school GPA, it is not unreasonable to assume that first generation students generally also come from lower income families and as such may not have received the same quality of education as their peers. This could account for them also having lower self-efficacy and lower levels of academic integration. Additionally, only two of the 44 first generation students had participated in any type of college preparatory program, which could have helped them academically. If these students are struggling academically, the levels of stress they experience would be higher, a finding that was significant in the analyses as well.

Overall, the differences observed mapped onto previous research. First generation students appear to be less academically prepared for the challenges of college, which is reflected in the lower GPA's they obtain. Nonetheless, these students did not appear to be at a higher risk for withdrawal, at least not in the first semester of college.

Research Question 3: Are there any gender differences in college adjustment and success measures or identity development measures?

Some of the literature suggests that women are more likely to use the information identity style than men, however this finding was not supported by the present research (Boyd et al., 2003). Women, however, were more motivated and more committed to obtaining their degree. They also scored marginally higher on measures of academic and social integration, indicating that compared to men they seemed to adjust better to life in college. Despite this, women also experienced more stress compared to men, suggesting that while they seem to do better in college it might come at a price of being more stressed. Overall, there were not enough differences in the experiences of men and women to include gender as a predictor in any of the regression analyses – neither gender was more likely to withdraw, nor were there any gender

differences in student-faculty interaction frequency or quality. The sample used in this study was not perfectly balanced between men and women but that does reflect the university population and particularly the general distribution of gender in Psychology classes.

Research Question 4: Do students who intend to withdraw have lower levels of college adjustment, and lower frequency and quality of student-faculty interaction, than students who plan to stay at the university?

Prior to investigating whether college adjustment, student-faculty interaction and identity development can be used to predict intention to withdraw, the possible differences between students who planned to leave and those who planned to stay were investigated. Unsurprisingly, students who were planning to stay scored better on a variety of college adjustment measures including academic and social integration, and degree and institutional commitment. This finding is consistent with Tinto's theory of departure, as social and academic integration are crucial for students to be successful and remain at the university (1975). As postulated by Tinto, it is the levels of social and academic adjustment that influence the institutional and goal commitments that in turn guide the decision to withdraw.

An unexpected result was the fact that students who said they were planning to leave scored higher on the Academic Self-Concept Scale than those who were not, indicating that they felt better about their academic abilities. Additionally, students who were planning to leave reported higher frequencies of student-faculty interaction. A possible explanation for the higher academic self-concept in students intending to withdraw could be that these students thought they were comfortable with all the required academic skills and felt confident in their abilities, but in reality were lacking some skills that would have made them successful. The intention to withdraw, however, might not have had anything to do with academics per se. These students did

not have lower GPA's than the ones who were not planning to leave. After looking more closely

at the reasons for withdrawal that were provided in the last survey, two major reasons were

prevalent. Students who were planning to withdraw either did not like the university and thought

it was not the right fit ("I don't like it here. I like my classes and professors but nothing else.") or

they reported financial reasons for withdrawing ("I am transferring to the University of Rhode

Island to get in-state tuition").

Overall, students who planned to withdraw scored lower in institutional commitment than

those who planned to stay. About 50% of those who indicated they were likely to leave also

reported fit to be an issue and not necessarily on the academic side of the student experience. In

support of that, only 1 of the 9 students who indicated they were likely to withdraw and for

whom GPA was available achieved under a 3.0, further suggesting that the decision to withdraw

is not necessarily driven by academic factors, but by more social factors.

Research Question 5: Does identity development affect the frequency of student-faculty

interaction and any other college adjustment variable?

Students were evenly distributed among the three identity styles, a finding supported by

previous research (Boyd et al., 2003, Seabi, 2013). In evaluating whether identity development

plays a role in college adjustment, college success and student-faculty interaction frequency and

quality, several important differences stood out. Students who use the information style are those

who have either found an identity they are comfortable with or are actively exploring at the

moment (Berzonsky, 1989, 1992; Marcia, 1966). Thus it is not surprising that they had higher

first semester GPA's than those in the diffuse style, as they are more actively involved in their

education and have set goals. These results replicate previous findings (Berzonsky & Kuk, 2005,

Seabi, 2013). Adding in the students who have a foreclosed identity and have committed to an

identity based on outside influences, participants using the information or normative style scored better on multiple measures of college adjustment, compared to their peers using the diffuse style. Again, these results are not surprising, as students who have the diffuse style also have the diffuse/avoidant identity and are neither committed nor actively involved in identity exploration or their education. Thus, information and normative orientation students were more academically motivated, felt more comfortable with their own academic skills and were more committed to receiving a degree.

Interestingly, students in the normative orientation met with faculty more often than those in the diffuse orientation and were also more committed to staying at UNH. Those using the normative orientation are students who are in the foreclosed identity category and are heavily influenced by other people. They are most likely to have declared a major because their parents told them it was the best decision and not because they wanted to. Perhaps the increased frequency of student-faculty interaction is due to the fact that people in the foreclosed category seek out external approval for their decisions. Thus they are more likely to seek out advice from faculty. The higher level of institutional commitment is surprising however, as it might be expected that they will not be as committed since they might have followed their parent's advice on where to go to college rather than make their own decisions. Perhaps it is way for them to justify their decision by finding things they like about the university and staying on track to complete their degree. Alternatively, since these students typically do not attempt to explore their options, but rather make decisions based on other people's opinions, they might not be motivated enough to look for a place that might be a better fit. Thus, they are content to attend whatever university they are enrolled in, which could explain the level of commitment – they have a plan and have no reason not to follow through with it.

Research Question 6: What is the relation between student-faculty interaction frequency and quality, and measures of college adjustment and success?

For student-faculty interaction to be important for student success, it needed to be related to different measures of college adjustment and success. Previous literature suggests that both quality and frequency of interaction are important so the relationships between those two and college adjustment and success were investigated (Anaya & Coll, 2001; Kim & Sax, 2014; Lamport & Coll, 1993). Higher quality of student-faculty interaction was related to higher academic motivation, academic integration, academic efficacy, and GPA, as well as higher degree and institutional commitment. Higher frequencies of interaction were related to higher quality of interactions, higher levels of academic motivation and Integration, but lower GPA and lower levels of scholastic conscientiousness.

The positive correlations support previous research, and indicate that student-faculty interaction quality and frequency are both related to better outcomes in college. The negative correlation results were somewhat surprising as previous research suggests that increased frequency of interactions is related to better academic achievement as measured by GPA, and that students who interact with faculty more are also those who are more concerned with their education and more motivated to learn and succeed, thus should be more scholastically conscientious (Lamport & Coll, 1993). It is possible that the students who were struggling were more likely to seek out help from instructors and thus reported higher frequencies of interactions. Since the sample was comprised mainly of students who were in introductory level classes, those might not have been challenging enough for the higher achieving students to need help from instructors, and did not warrant out-of-class interactions. Additionally, introductory level classes

tend to be larger, which could deter students from interacting with their instructors, as it is easier to blend in with the rest of the class, and might be more difficult to approach the instructor.

Research Question 7: Can academic achievement be predicted from any of the college adjustment and student-faculty interaction variables as suggested by previous research by Anaya and Cole (2001)?

Another major goal of this study was to determine whether college adjustment and student-faculty interaction could be used to predict academic achievement as measured by GPA. The predictors that were used to explain about 39% of the variability in GPA were high school GPA, student-faculty interaction frequency and quality and academic efficacy, and first generation status. As expected, first generation status contributed negatively to the equation, suggesting that being a first generation student contributed to having a lower GPA. Also, not surprisingly, academic efficacy, student-faculty interaction quality, and high-school GPA were positive predictors, where higher values predicted higher first semester GPA. A surprising result was the negative contribution of student-faculty interaction frequency; however, while significant, the contribution was very small and did not have an overall large impact on the first semester GPA. Overall, being able to predict 39% of the variability in GPA is not a bad start, but there are certainly other factors that can affect academic performance that were not explored in this study.

Research Question 8: **Can withdrawal from the university be predicted using academic and social integration, academic motivation, degree and institutional commitment, and frequency and quality of student-faculty interaction?**

Lastly, the ability to predict intention to withdraw was evaluated. Institutional commitment is directly related to withdrawal decisions based on Tinto's theory (1975). This was

confirmed in the fact that institutional commitment was the only significant predictor of intention to withdraw. In fact, the estimated probability of withdrawing for students with very low scores on institutional commitment was close to 100%, but dropped down to almost 0 at average or higher levels of commitment. The lack of other significant predictors was somewhat surprising considering the fact that students who planned to withdraw were less academically and socially integrated, and had lower levels of degree commitment in addition to lower levels of institutional commitment. However, going back to Tinto's theory, it is the academic and social integration that then shapes the level of institutional commitment (Tinto, 1975). The overall equation had a 98% accuracy in predicting intention to withdraw, however, since only about 5% of the entire sample indicated they intended to leave, more research is necessary to confirm the validity of the equation. While it is encouraging that few individuals reported they intended to withdraw, from a research perspective it would have been beneficial to have a larger number to use in the regression. The low number of people in the intend to withdraw category could be the reason why student-faculty interaction was not a significant predictor, even though there was a significant difference in that number between the two groups as indicated by previous analysis.

Limitations of the study

As mentioned previously there were several major limitations to this study, which could have contributed to the experimental design not having the intended effect on reported number of student faculty interactions. The sample used was a convenience sample, and students may not have been motivated to fully participate in the study and did not take the advice from the researcher seriously, as something they needed to do outside the study for their own benefit. Additionally, it is perhaps the way the advice was delivered, in a short videotaped message, that was not salient enough for students to take into consideration. It may also be the case that five

weeks was not enough time for any effects to show. Data collection in the spring did not yield enough participants to be able to adequately investigate long-term effects of this intervention so no long-term effects can be discussed. It would also have been helpful to have data not only on the intention to withdraw but on actual attrition rates in the sample. This could potentially include students that decided to withdraw after the conclusion of the study.

The initial study design also called for more participants per group than were acquired. While there were still close to 70 people in each group, and analyses could be conducted, a larger sample size would have been beneficial in providing more power to the comparisons. A power analysis indicated that the power for the majority of non-significant tests was between 0 and 50% and for the significant results was between 60-100%. The commonly accepted power level is 80% or above, indicating that the analysis of a large portion of the the results was underpowered. This could potentially explain why some of the results from previous research were not replicated in this study.

Another possible limitation of the study can be the time of the data collection. All data was collected from mid semester to the end of the fall semester. It is possible that the intervention came too late in the semester, which is why the advice did not actually increase the frequency of interactions. It is possible that advising students at the very beginning of the semester would change the way they approach their classes and their experiences with different instructors.

Future directions

To further evaluate the effects of student-faculty interaction and whether encouraging such interaction is helpful, a slightly different design could be used in future research. Ideally, getting academic advisors to give that advice to students during formal advising sessions instead

of a researcher would be best, as that would ideally be a person who students respect and know rather than a complete stranger. Additionally, the study design can be incorporated into regular advising sessions such that students do not have to go out of their way to receive the advice. Another important research question would be to determine whether the effect on institutional commitment was primarily due to the video of students' experiences or due to the conversation with the researcher. This is important, since if just watching the video is beneficial, it can be easily incorporated in orientation activities and does not necessarily require individual meetings with students. On the other hand, if it is the advice itself and not the video that affects institutional commitment, the future research described above could help develop better ways to help students.

The way the question about frequencies of interaction is asked could be changed as well. If there is a way for students to report every week how many times they met with faculty and whom they met with, that would provide more accurate frequency data. The question posed to participants about frequency of interactions should also be phrased in a way that encompasses all the different types of interactions, or should be split into several questions that address each major category of interactions. Perhaps, giving examples of what constitutes a student-faculty interaction will be beneficial as it will prompt students to include interactions they may have dismissed otherwise. It would also be interesting to categorize the types of interactions and see if certain types are more helpful then others, and whether quality of interactions varies by the type of meeting. Additionally, the present study only looked at in-person student-faculty interaction. Different modes of interaction should be included such email and other types of electronic communication. This would help create a better picture of how students interact with their

instructors and what the effects of different types of interactions are regardless of the way such interactions occur.

Conclusion

The present study evaluated a possible intervention to increase student-faculty interaction, and thereby decrease student attrition. While the intervention did not directly increase student-faculty interaction, it did positively affect institutional commitment. Students who saw other students talk about their experiences with faculty and also received the advice to go talk to faculty, were more committed to the university than those who did not. In turn, institutional commitment was the only significant predictor of likelihood to withdraw, predicting correctly nearly 98% of all cases. Students who were happy with the institution they attend were less likely to report they were planning to withdraw than those students who were unhappy, regardless of academic standing, background characteristics such as first generation status and high school GPA, and other college adjustment factors including academic adjustment and motivation, social adjustment and student-faculty interaction frequency and quality. This finding is important, as it suggests that encouraging students to interact with faculty and showing them why such interactions are important may be a way to help students be more successful and remain at the university they start at until they graduate.

A secondary goal of this study was to evaluate differences among students using different identity orientations. Confirming findings from previous studies, the results indicated that students who utilize the information or normative orientation are better off than students who use the diffuse orientation. This finding, while not surprising, is important because the students in the latter category generally do not put forth an effort to either find solutions to their problems, or figure out who they are and what they want to be. Thus, they perform worse academically, are

less likely to go talk to faculty outside of class, and end up being less committed to staying at the institution they currently attend.

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APPENDIX A: Tables

Table 1. Timeline of the Procedure

Time	Group	Procedure
Week 1	Experimental Control No Treatment	Students fill out initial survey online. At the end of the survey they sign up for a face-to-face meeting. Survey included: - Demographic – age, gender, ethnicity, first generation, SAT scores, high school GPA - CESQ interaction frequency and student-faculty interaction questions: since the beginning of the semester - CPQ: full measure of different aspects of college adjustment - Academic self efficacy scale - ISI – identity style inventory - Students were also asked for consent to have their fall GPA accessed at the end of the semester.
Face-to-face meeting	Experimental Control	In this meeting student were asked several questions about their college experience so far. "What has your experience been so far?" "How do you like your classes and professors so far?" "Is there anything that you are worried about in your first year?" Following that students will be shown a video featuring current UNH students talking about their experience with student-faculty interactions and what benefits they see from that. At the end of the video students will be once more told that student-faculty interaction is extremely beneficial and that they should in the next couple of week try to meet with one of their instructors outside of class – even if it is just to ask a question about the class. Students were then given a general timeline for the rest of the study. In this meeting students will be asked several general questions about their familiarity with campus and their favorite places on campus. "Have you walked around campus a lot?" "What is your favorite spot on campus to spend time with your friends?" "What is your favorite spot on campus to study and why?"

	No Treatment	Following that students will watch a video using the same UNH students but talking about favorite place on campus and students will be encouraged to walk around more and explore new places. Students were then given a general timeline for the rest of the study. Students were given a general timeline for the rest of the study.
Week 3	Experimental Control No Treatment	Students filled out a short survey. All students answered the same questions. The question included in the check-in survey will be: - CESQ and student-faculty interaction frequency and experience ratings - CPQ – only the academic and social adjustment sections. At the end of the survey the Experimental and Control groups had the opportunity to watch the videos they watched during the face to face meeting.
Week 6	Experimental Control No Treatment	Students filled out the last survey for the semester. The survey was the same as the initial survey with some key differences: - Demographic information will not be collected again. - Instead of asking for SAT scores and high school GPA, students will be ask to self-report their expected GPA.
March, 2016	Experimental Control No Treatment	Students were contacted to complete a short survey. All students answered the same questions. The question included in the check-in survey will be: - CESQ and student-faculty interaction frequency and experience ratings - CPQ – only the academic and social adjustment sections.

Table 2. Cronbach's Alpha for dependent variables in the pilot study.

Variables	Number of Items	Chronbach's Alpha
Academic integration	7	.701
Academic motivation	8	.593
Academic efficacy	5	.647
Financial strain	4	.852
Social integration	6	.803
Collegiate stress	4	.690
Advising	4	.720
Degree commitment	6	.634
Institutional commitment	4	.673
Scholastic conscientiousness	4	.699
Student-faculty interaction	10	.876
Information orientation	11	.723
Normative orientation	9	.654
Diffuse orientation	10	.794
Academic self-concept	40	.629

Table 3. Correlations Between College Adjustment Variables, Academic Success and Student-Faculty Interaction in the Pilot Study.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Academic integration	1													
2. Academic motivation	.325**	1												
3. Academic efficacy	.436**	.214**	1											
4. Financial strain	-.014	-.093	-.006	1										
5. Social integration	.242**	.157*	.065	.017	1									
6. Collegiate stress	.023	-.207**	.266**	.341**	.020	1								
7. Advising	.437**	.118	.152	.196*	.250**	.190*	1							
8. Degree commitment	.384**	.127	.297**	.126	.243**	.088	.081	1						
9. Institutional commitment	.286**	-.015	.116	.211**	.167*	.124	.219**	.275**	1					
10. Scholastic conscientiousness	.199*	.113	.176*	.109	.075	.201*	.156*	.309**	.340**	1				
11. GPA	.114	.113	.338**	.030	.052	.012	-.183	.124	.078	.238*	1			
12. Student-faculty interaction quality	.515**	.264**	.311**	.054	.304*	.038	.342**	.288*	.061	.128	.027	1		
13. Student-faculty interaction frequency (CSEQ)	.225**	.339**	.129	-.060	.163*	-.160*	.132	-.112	.044	-.080	-.101	.260**	1	
14. Student-faculty interaction frequency	.000	.088	.043	.004	.094	-.111	.045	-.032	.071	.040	-.148	.052	.338**	1
15. Academic self-concept	.165*	.176*	-.018	-.143	-.052	-.256**	.091	-.265**	-.232**	-.394**	.030	.157	.272**	.059

* p<.05, ** p<.01, ***p<.001

Table 4. Summary of Regression Analysis Models for Predicting GPA in the Pilot Study.

Predictor	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Constant	2.824	.09		2.657	.119		2.661	.115	
Academic efficacy	.383	.106	.386**	.351	.104	.354**	.335	.101	.338**
Scholastic conscientiousness				.178	.086	.219*	.245	.087	.302**
Advising							-.162	.065	-.264**
R^2	.149			.196			.259		
F for change in R^2	13.139**			9.107***			8.503***		

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 5. Differences in Background Characteristics, College Adjustment, Academic Achievement, and Student-Faculty Interaction Frequency and Quality Between the Experimental, Control and No Treatment Groups.

Variable	Mean (SD)			*F*	*p*
	Experimental	Control	No Treatment		
Verbal SAT	546.34(92.86)	555.21(64.16)	553.09(87.53)	.126	.882
Math SAT	553.02(96.81)	540.25(72.12)	547.33(97.29)	.266	.767
High School GPA	3.45(.28)	3.34(.30)	3.54(.34)	5.980	.003**
GPA	3.10(.52)	2.99(.55)	3.13(.64)	1.074	.344
Academic integration	.84(.55)	.82(.60)	.79(.52)	.113	.893
Academic motivation	.26(.48)	.22(.53)	.22(.46)	.149	.862
Academic efficacy	.43(.62)	.40(.62)	.46(.59)	.183	.833
Financial strain	-.42(1.01)	-.39(.94)	-.59(.87)	.908	.405
Social integration	.68(.81)	.50(.83)	.50(.79)	1.199	.304
Collegiate stress	-.45(.54)	-.38(.70)	-.38(.57)	.311	.733
Advising	.65(.83)	.68(.69)	.59(.76)	.221	.802
Degree commitment	1.49(.53)	1.41(.53)	1.41(.55)	.531	.589
Institutional commitment	1.32(.78)	.89(1.11)	1.03(1.10)	3.139	.045*
Scholastic conscientiousness	.91(.88)	1.09(.71)	1.08(.83)	1.108	.332
ASCS	105.90(9.43)	104.74(5.99)	105.77(8.36)	.426	.654
Interaction quality	5.05(1.16)	5.03(1.27)	4.77(1.14)	1.107	.333
Interaction frequency (CSEQ)	20.76(5.22)	21.13(5.66)	19.99(5.10)	.814	.445
Interaction frequency	3.57(2.77)	3.01(2.89)	3.35(3.11)	.615	.542

* p<.05, ** p<.01, *** p<.001

Table 6. Differences in College Adjustment, Academic Achievement, and Student-Faculty Interaction Frequency and Quality Between First Generation Students and Non-First Generation Students.

Variable	First Generation	n	M	SD	t	p
GPA	*Yes*	41	2.81	.56	3.365	.001**
	No	149	3.14	.56		
Academic integration	*Yes*	46	.68	.51	1.853	.065
	No	156	.85	.56		
Academic motivation	*Yes*	46	.19	.52	.678	.499
	No	156	.25	.49		
Academic efficacy	*Yes*	46	.23	.60	2.476	.014*
	No	156	.48	.60		
Financial strain	*Yes*	46	-.55	.89	.729	.467
	No	156	-.44	.96		
Social integration	*Yes*	46	.41	.75	1.364	.174
	No	156	.60	.83		
Collegiate stress	*Yes*	46	-.57	.68	2.078	.039*
	No	156	-.36	.58		
Advising	*Yes*	46	.58	.74	.520	.604
	No	156	.64	.77		
Degree commitment	*Yes*	46	1.37	.52	.997	.320
	No	156	1.46	.54		
Institutional commitment	*Yes*	46	1.04	1.00	.319	.750
	No	156	1.10	1.03		
Scholastic conscientiousness	*Yes*	46	.99	.76	.315	.753
	No	156	1.03	.83		
Academic self-concept	*Yes*	46	107.24	10.82	-1.676	.095
	No	153	105.00	6.86		
Interaction quality	*Yes*	44	4.84	1.18	.680	.497
	No	154	4.98	1.21		
Interaction frequency (CSEQ)	*Yes*	46	20.39	5.23	.295	.768
	No	154	20.66	5.37		
Interaction frequency	*Yes*	45	3.13	3.25	.405	.686
	No	152	3.34	2.84		

* p<.05, ** p<.01, *** p<.001

Table 7. Gender Differences in College Adjustment, Academic Achievement, and Student-Faculty Interaction Frequency and Quality.

Variable	Gender	n	M	SD	t	p
GPA	Male	38	3.01	.57	-.738	.462
	Female	154	3.09	.57		
Academic integration	Male	41	.67	.44	-1.947	.053
	Female	164	.85	.57		
Academic motivation	Male	41	.07	.44	-2.481	.014*
	Female	164	.28	.50		
Academic efficacy	Male	41	.50	.54	.806	.421
	Female	164	.41	.62		
Financial strain	Male	41	-.31	1.01	1.165	.246
	Female	163	-.50	.92		
Social integration	Male	41	.35	.70	-1.832	.068
	Female	164	.61	.83		
Collegiate stress	Male	41	-.18	.57	2.742	.007**
	Female	164	-.46	.60		
Advising	Male	41	.51	.85	-1.180	.239
	Female	164	.67	.74		
Degree commitment	Male	41	1.15	.63	-3.893	<.001***
	Female	164	1.50	.48		
Institutional commitment	Male	41	1.09	.74	.091	.927
	Female	164	1.08	1.08		
Scholastic conscientiousness	Male	41	.87	.83	-1.433	.153
	Female	164	1.07	.80		
Academic self-concept	Male	40	105.85	8.72	.343	.732
	Female	162	105.36	7.85		
Interaction quality	Male	41	4.88	1.45	-.433	.666
	Female	160	4.97	1.21		
Interaction frequency (CSEQ)	Male	41	20.07	5.35	-.749	.455
	Female	162	20.77	5.33		
Interaction frequency	Male	40	3.13	2.98	-.448	.655
	Female	160	3.36	2.91		

* p<.05, ** p<.01, *** p<.001

Table 8. Differences in College Adjustment, Academic Achievement, and Student-Faculty Interaction Frequency and Quality Between Students Who Plan to Withdraw and Those Who Do Not.

Variable	Withdraw	n	M	SD	t	p
GPA	*Yes*	9	3.10	.62	-.151	.880
	No	183	3.07	.57		
Academic integration	*Yes*	10	.36	.57	-2.726	.007**
	No	195	.84	.54		
Academic motivation	*Yes*	10	.03	.39	-1.391	.166
	No	195	.25	.49		
Academic efficacy	*Yes*	10	.24	.68	-1.013	.312
	No	195	.44	.60		
Financial strain	*Yes*	10	-.63	.96	-.556	.579
	No	194	-.46	.94		
Social integration	*Yes*	10	-.55	.70	-4.66	<.001***
	No	195	.61	.77		
Collegiate stress	*Yes*	10	-.55	.45	-.777	.438
	No	195	-.40	.61		
Advising	*Yes*	10	.23	.64	-1.767	.079
	No	195	.66	.76		
Degree commitment	*Yes*	10	1.07	.70	-2.208	.028*
	No	195	1.45	.52		
Institutional commitment	*Yes*	10	-1.58	.71	-10.446	<.001***
	No	195	1.22	.83		
Scholastic conscientiousness	*Yes*	10	1.18	.70	.595	.552
	No	195	1.02	.81		
Academic self-concept	*Yes*	10	113.1	17.80	3.161	.002**
	No	192	105.06	7.03		
Interaction quality	*Yes*	10	4.40	1.51	-1.499	.436
	No	191	4.98	1.17		
Interaction frequency (CSEQ)	*Yes*	10	19.50	8.14	-.687	.493
	No	193	20.69	5.17		
Interaction frequency	*Yes*	10	5.5	4.65	2.469	.014*
	No	190	3.19	2.77		

* p<.05, ** p<.01, *** p<.001

Table 9. Differences in Background Characteristics, College Adjustment, Academic Achievement, and Student-Faculty Interaction Frequency and Quality Between Identity Style Groups.

Variable	Mean (SD)			*F*	*p*
	Information	**Normative**	**Diffuse**		
Verbal SAT	562.90(91.59)	543.64(82.48)	552.50(70.00)	.493	.612
Math SAT	552.02(88.44)	546.49(75.03)	552.80(95.69)	.073	.929
High School GPA	3.55(.34)	3.42(.27)	3.38(.32)	4.112	.018*
GPA	3.25(.59)	3.05(.56)	2.97(.54)	3.999	.02*
Academic integration	.94(.58)	.93(.60)	.63(.45)	7.452	.001**
Academic motivation	.37(.52)	.31(.51)	.05(.40)	8.978	<.001***
Academic efficacy	.59(.64)	.51(.64)	.25(.52)	5.898	.003**
Financial strain	-.56(.91)	-.41(.93)	-.41(.94)	.503	.606
Social integration	.45(.93)	.78(.69)	.42(.77)	3.906	.022*
Collegiate stress	-.31(.60)	-.52(.63)	-.36(.60)	1.842	.161
Advising	.64(.80)	.79(.78)	.48(.73)	2.764	.066
Degree commitment	1.55(.49)	1.59(.43)	1.26(.57)	8.595	<.001***
Institutional commitment	1.14(1.03)	1.29(.91)	.86(1.06)	3.156	.045*
Scholastic conscientiousness	1.33(.69)	1.09(.79)	.82(.78)	7.397	.001**
ASCS	104.02(5.72)	106.83(8.30)	105.75(9.12)	1.808	.167
Interaction quality	5.16(1.19)	4.95(1.16)	4.81(1.20)	1.392	.251
Interaction frequency (CSEQ)	20.45(5.50)	21.07(4.46)	19.72(5.40)	1.140	.322
Interaction frequency	3.17(2.71)	3.86(3.12)	2.66(2.58)	3.042	.05*

* p<.05, ** p<.01, *** p<.001

Table 10. Correlations Between College Adjustment Variables, Student-Faculty Interactions and Academic Achievement Variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. HS GPA	1														
2. GPA	.395**	1													
3. Academic integration	.115	.215**	1												
4. Academic motivation	.011	.000	.377**	1											
5. Academic efficacy	.212**	.440**	.511**	.327**	1										
6. Financial strain	.017	.071	.113	-.068	.189**	1									
7. Social integration	-.064	-.023	.494**	.207**	.204**	.177*	1								
8. Collegiate stress	.014	.181*	.177*	-.149*	.344**	.331**	.105	1							
9. Advising	-.009	-.055	.604**	.216**	.201**	.121	.470**	.124	1						
10. Degree commitment	.298**	.310**	.506**	.181**	.375**	.020	.301**	.055	.336**	1					
11. Institutional commitment	.210**	.065	.465**	.100	.213**	.130	.570***	.257**	.401**	.393**	1				
12. Scholastic conscientiousness	.296**	.282**	.156*	.013	.268**	.094	-.008	.286**	.118	.404**	.218**	1			
13. Interaction frequency	-.148	.011	-.035	.113	-.008	-.013	-.041	-.016	.007	-.091	-.093	.048	1		
14. CSEQ Total	-.104	-.153*	.170*	.427**	.116	-.006	.122	-.103	.126	-.072	-.035	-.148*	.372**	1	
15. Interaction quality	.043	.198*	.468**	.197**	.284**	.156*	.221**	.114	.294**	.213**	.196**	.124	.096	.271**	1
16. ASCS	.016	.015	-.076	-.016	.001	-.162*	-.075	-.204**	-.133	-.147*	-.262**	-.211**	.059	.191**	-.013

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 11. Summary Table for Multiple Regression Models Predicting First Semester GPA.

Predictors	Model 1		Model 2	
	B	SE B	B	SE B
Intercept	.970	.492	1.001*	.489
First Generation	-.202*	.095	-.189*	.095
High School GPA	.519***	.130	.569***	.124
Student-faculty interaction quality	.093**	.037	.083*	.034
Student-faculty interaction frequency	-.016*	.008	-.020**	.008
Scholastic conscientiousness	.063	.056		
Degree commitment	.075	.094		
Collegiate stress	.011	.073		
Academic efficacy	.334***	.078	.339***	.066
Academic integration	-.108	.096		
R^2	.402		.386	
F(df)	10.444(9,140)		18.112(5, 144)	
p of F	<.001		<.001	

APPENDIX B: Figures

Figure 1. Correlations Between Student-Faculty Interaction Variables, Academic Achievement and College Adjustment variables.
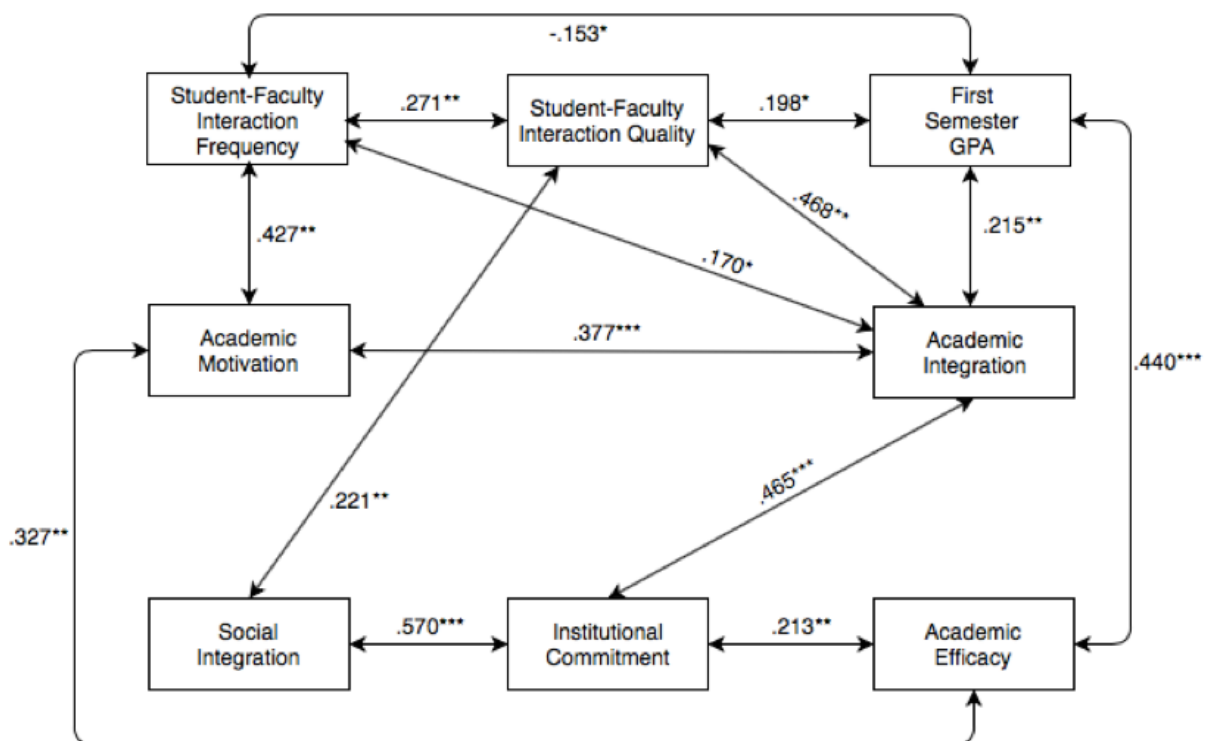
Figure 2. Probability of Withdrawing Given Different Levels of Institutional Commitment and Controlling for Academic and Social Integration, Degree Commitment, Student-faculty Interaction Frequency and Quality and Academic Motivation.
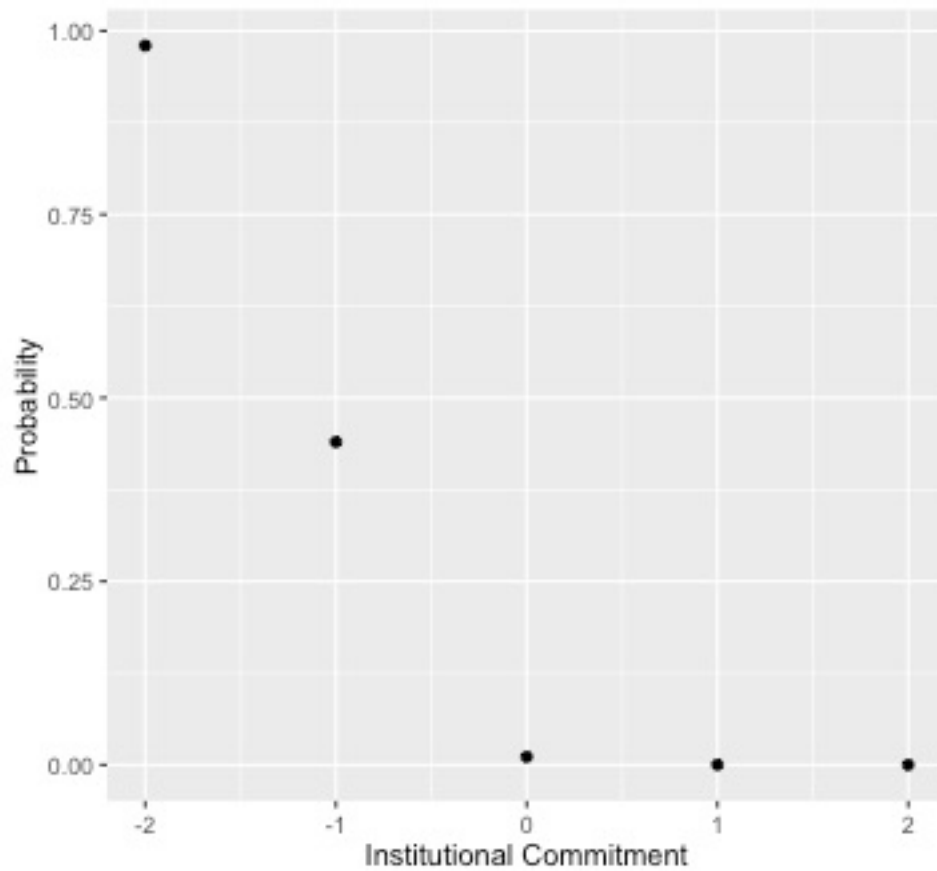
APPENDIX C: Instruments

I. Demographic Information

Age:

Gender:

Major:

Did you begin college here, or did you transfer from another institution?

a) started here

b) transferred

Did either of your parents graduate from college?

a) Yes both

b) No

c) Only one parent

d) Don't know

Did you participate or are you currently participating in a college prep/college success program?

a) Yes

b) No

If you answered yes, which one:

a) Upward Bound

b) McNair Scholars

c) Another TRIO program (please specify): _____

d) Other (please specify): _____

What was your verbal SAT score?

What was your math SAT score?

What was your high school GPA (unweighted if applicable)?

II. College Persistence Questionnaire

    a. Academic Integration

1. On average across all your courses, how interested are you in the things that are being said during class discussions? *very interested / somewhat interested / neutral / somewhat disinterested / very disinterested / not applicable*

2. In general, how satisfied are you with the quality of instruction you are receiving here? *very satisfied / somewhat satisfied / neutral / somewhat dissatisfied / very dissatisfied / not applicable*

3. How well do you understand the thinking of your instructors when they lecture or ask students to answer questions in class? *very well / well / neutral / not well / not at all well / not applicable*

4. How satisfied are you with the extent of your intellectual growth and interest in ideas since coming here? *very satisfied / somewhat satisfied / neutral / somewhat dissatisfied / very dissatisfied / not applicable*

5. How much of a connection do you see between what you are learning here and your future career possibilities? *very much / much / some / little / very little / not applicable*

6. How concerned about your intellectual growth are the faculty here? *very concerned / somewhat concerned / neutral / somewhat unconcerned / very unconcerned / not applicable*

7. How would you rate the quality of the instruction you are receiving here? *excellent / good / fair / poor / very poor / not applicable*

    b. Academic motivation

1. In general, how enthused are you about doing academic tasks? *very enthusiastic / somewhat enthusiastic / neutral / somewhat unenthusiastic / very unenthusiastic / not applicable*

2. Some courses seem to take a lot more time than others. How much extra time are you willing to devote to your studies in those courses? *very much extra time / much extra time / some extra time / a little extra time / very little extra time / not applicable*

3. How inclined are you to do most of your studying within 24 hours of a test rather than earlier? *very inclined / somewhat inclined / a little inclined / not very inclined / not at all inclined / not applicable*

4. How often do you read educationally-related material not assigned in courses? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

5. Students vary widely in their view of what constitutes a good course, including the notion that the best course is one that asks students to do very little. In your own view, how much work would be asked of students in a really good course? *very much / much / some / little / very little / not applicable*

6. How often do you encounter course assignments that are actually enjoyable to do? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

7. This semester, how much time do you spend studying each week relative to the number of credit hours you are taking? Assume each credit hour equals one hour of studying per week. *many more hours studying than the credit hours / a few more hours studying than the credit hours / the same number of hours studying as the credit hours / a few less hours studying than the credit hours / a lot less hours studying than the credit hours / not applicable*

8. How much time do you spend proofreading writing assignments before submitting them? *a lot / some / little / very little / none / not applicable*

c. Academic Efficacy

1. How confident are you that you can get the grades you want? *very confident / somewhat confident / neutral / somewhat unconfident / very unconfident / not applicable*

2. How good are you at correctly anticipating what will be on tests beforehand? *very good / somewhat good / neutral / somewhat bad / very bad / not applicable*

3. When you consider the techniques you use to study, how effective do you think your study skills are? *very effective / somewhat effective / neutral / somewhat ineffective / very ineffective / not applicable*

4. When you are waiting for a submitted assignment to be graded, how assured do you feel that the work you have done is acceptable? *very assured / somewhat assured / neutral / somewhat unassured / very unassured / not applicable*

5. How much doubt do you have about being able to make the grades you want? *very much doubt / much doubt / some doubt / little doubt / very little doubt / not applicable*

d. Financial Strain

1. How often do you worry about having enough money to meet your needs? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

2. How difficult is it for you or your family to be able to handle college costs? *very difficult / somewhat difficult / neutral / somewhat easy / very easy / not applicable*

3. When considering the financial costs of being in college, how often do you feel unable to do things that other students here can afford to do? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

4. How much of a financial strain is it for you to purchase the essential resources you need for courses such as books and supplies? *very large strain / somewhat of a strain / neutral / a little strain / hardly any strain at all / not applicable*

e. Social Integration

1. What is your overall impression of the other students here? *very favorable / somewhat favorable / neutral / somewhat unfavorable / very unfavorable / not applicable*

2. How much have your interactions with other students had an impact on your personal growth, attitudes, and values? *very much / much / some / little / very little / not applicable*

3. How strong is your sense of connectedness with others (faculty, students, staff) on this campus? *very strong / somewhat strong / neutral / somewhat weak / very weak / not applicable*

4. When you think about your overall social life here (friends, college organizations, extracurricular activities, and so on), how satisfied are you with yours? *very satisfied / somewhat satisfied / neutral / somewhat dissatisfied / very dissatisfied / not applicable*

5. How much have your interactions with other students had an impact on your intellectual growth and interest in ideas? *very much / much / some / little / very little / not applicable*

6. How much do you think you have in common with other students here? *very much / much / some / little / very little / not applicable*

f. Collegiate Stress

1. Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution? *very much stress / much stress / some stress / a little stress / very little stress / not applicable*

2. How much pressure do you feel when trying to meet deadlines for course assignments? *extreme pressure / much pressure / some pressure / a little pressure / hardly any pressure at all / not applicable*

3. How often do you feel overwhelmed by the academic workload here? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

4. How much do other aspects of your life suffer because you are a college student? *very much / much / some / little / very little / not applicable*

g. Advising

1. How easy is it to get answers to your questions about things related to your education here? *very easy / somewhat easy / neutral / somewhat hard / very hard / not applicable*

2. How satisfied are you with the academic advising you receive here? *very satisfied / somewhat satisfied / neutral / somewhat dissatisfied / very dissatisfied / not applicable*

3. How well does this institution communicate important information to students such as academic rules, degree requirements, individual course requirements, campus news and events, extracurricular activities, tuition costs, financial aid and scholarship opportunities? *very well / well / neutral / not well / not at all well / not applicable*

4. How would you rate the academic advisement you receive here? *excellent / good / fair / poor / very poor / not applicable*

h. Degree Commitment

1. How supportive is your family of your pursuit of a college degree, in terms of their encouragement and expectations? *very supportive / somewhat supportive / neutral / somewhat unsupportive / very unsupportive / not applicable*

2. At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere? *very strong / somewhat strong / neutral / somewhat weak / very weak / not applicable*

3. When you think of the people who mean the most to you (friends and family), how disappointed do you think they would be if you quit school? *very disappointed / somewhat disappointed / neutral / not very disappointed / not at all disappointed / not applicable*

4. There are so many things that can interfere with students making progress toward a degree, feelings of uncertainty about finishing are likely to occur along the way. At this

moment in time, how certain are you that you will earn a college degree? *very certain / somewhat certain / neutral / somewhat uncertain / very uncertain / not applicable*

5. After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere? *very strong / somewhat strong / neutral / somewhat weak / very weak / not applicable*

6. When you consider the benefits of having a college degree and the costs of earning it, how much would you say that the benefits outweigh the costs, if at all? *benefits far outweigh the costs / benefits somewhat outweigh the costs / benefits and costs are equal / costs somewhat outweigh the benefits/ costs far outweigh the benefits / not applicable*

i. Institutional Commitment

1. How confident are you that this is the right college or university for you? *very confident / somewhat confident / neutral / somewhat unconfident / very unconfident / not applicable*

2. How much thought have you given to stopping your education here (perhaps transferring to another college, going to work, or leaving for other reasons)? *a lot of thought / some thought / neutral / little thought / very little thought / not applicable*

3. How likely is it that you will reenroll here next semester? *very likely / somewhat likely / neutral / somewhat unlikely / very unlikely / not applicable*

4. How likely is it you will earn a degree from here? *very likely / somewhat likely / neutral / somewhat unlikely / very unlikely / not applicable*

j. Scholastic Conscientiousness

1. College students have many academic responsibilities. How often do you forget those that you regard as important? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

2. How often do you turn in assignments past the due date? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

3. How often do you miss class for reasons other than illness or participation in school-related activities? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

4. How often do you arrive late for classes, meetings, and other college events? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

k. Additional items

1. How much does the cost of courses limit how many you take? *very much / much / some / little / very little / not applicable*

2. When you think about the advantages and disadvantages of attending this school, how much do you think the advantages outweigh the disadvantages, or vice versa? *disadvantages far outweigh the advantages / disadvantages somewhat outweigh the advantages / disadvantages and advantages are equal / advantages somewhat outweigh the disadvantages / advantages far outweigh the disadvantages / not applicable*

3. During the first class session, many instructors present students with an overview of the course. In general, how accurate have these previews been in forecasting what you actually experienced in these courses? *very accurate / somewhat accurate / neutral / somewhat inaccurate / very inaccurate / not applicable*

4. How much do the instructors and the courses make you feel like you can do the work successfully? *very much / much / some / little / very little / not applicable*

5. Based on your current financial situation, how inclined are you to work more hours per week than you want in order to pay bills? *very inclined / somewhat inclined / a little inclined / not very inclined / not at all inclined / not applicable*

6. In general, when you receive evaluative feedback from instructors, how useful has it been in figuring out how to improve? *very useful / somewhat useful / neutral / not very useful / not at all useful / not applicable*

7. On a typical day, how preoccupied are you with personal troubles? *very preoccupied / somewhat preoccupied / a little preoccupied / not very preoccupied / not at all preoccupied / not applicable*

8. How fair are the tests at this school? *very unfair / somewhat unfair / neutral / somewhat fair / very fair / not applicable*

9. The life of a college student typically has both positive and negative aspects. At this time, would you say that the positives outweigh the negatives, or vice versa? *positives far outweigh the negatives / positives somewhat outweigh the negatives / positives and negatives are equal / negatives somewhat outweigh the positives / negatives far outweigh the positives / not applicable*

10. How clear have the instructors and syllabi usually been in detailing what you need to do in order to be successful in courses? *very unclear / somewhat unclear / neutral / somewhat clear / very clear / not applicable*

11. On a typical day, how much do you worry about getting your work done on time? *very much / much / some / a little / very little / not applicable*

12. Relative to what you expected when beginning college, how interesting have you found class sessions to be? *much less interesting / less interesting / about as interesting as expected / more interesting / much more interesting / not applicable*

13. How much loyalty do you feel to this college, based on your experiences here? *very much loyalty / much loyalty / some loyalty / little loyalty / very little loyalty / not applicable*

14. How often do you encounter course work that makes you wonder whether you can do it successfully? *very often / somewhat often / sometimes / rarely / very rarely / not applicable*

15. If you are supposed to complete a reading assignment before the next class session, how likely are you to actually do it? *very likely / somewhat likely / neutral / somewhat unlikely / very unlikely / not applicable*

16. How good is your school performance relative to the expectations of your parents or others who are important to you? *far below their expectations / below their expectations / about what they expected / better than they expected / much better than they expected / not applicable*

17. How organized are you in terms of keeping track of upcoming assignments and tests? *very organized / somewhat organized / neutral / somewhat disorganized / very disorganized / not applicable*

III. Identity style Inventory

<u>INSTRUCTIONS</u>

You will find a number of statements about beliefs, attitudes, and/or ways of dealing with issues. Read each carefully, then use it to describe yourself. On the answer sheet, bubble in the number which indicates the extent to which you <u>think</u> the statement represents you. There are <u>no</u> right or wrong answers. For instance, if the statement is <u>very much like you</u>, mark a 5, if it is <u>not like you</u> at all, mark a 1. Use the 1 to 5 point scale to indicate the <u>degree</u> to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.

(NOT AT ALL LIKE ME)   1   2   3   4   5   (VERY MUCH LIKE ME)

1. Regarding religious beliefs, I know basically what I believe and don't believe. (COMM)
2. I've spent a great deal of time thinking seriously about what I should do with my life. (INFO)
3. I'm not really sure what I'm doing in school; I guess things will work themselves out. (DIFF)
4. I've more-or-less always operated according to the values with which I was brought up. (NORM)
5. I've spent a good deal of time reading and talking to others about religious ideas. (INFO)
6. When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective. (INFO)
7. I know what I want to do with my future. (COMM)
8. It doesn't pay to worry about values in advance; I decide things as they happen. (DIFF)
9. I'm not really sure what I believe about religion. (COMM/REV)
10. I've always had purpose in my life; I was brought up to know what to strive for. (NORM)
11. I'm not sure which values I really hold. (COMM/REV)
12. I have some consistent political views; I have a definite stand on where the government and country should be headed. (COMM)
13. Many times by not concerning myself with personal problems, they work themselves out. (DIFF)
14. I'm not sure what I want to do in the future. (COMM/REV)

15. I'm really into my major; it's the academic area that is right for me. (COMM)

16. I've spent a lot of time reading and trying to make some sense out of political issues. (INFO)

17. I'm not really thinking about my future now; it's still a long way off. (DIFF)

18. I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me. (INFO)

19. Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts. (NORM)

20. I'm not sure what I should major in (or change to). (COMM/REV)

21. I've known since high school that I was going to college and what I was going to major in. (NORM)

22. I have a definite set of values that I use in order to make personal decisions. (COMM)

23. I think it's better to have a firm set of beliefs than to be openminded. (NORM)

24. When I have to make a decision, I try to wait as long as possible in order to see what will happen. (DIFF)

25. When I have a personal problem, I try to analyze the situation in order to understand it. (INFO)

26. I find it's best to seek out advice from professionals (e.g., clergy, doctors, lawyers) when I have problems. (INFO)

27. It's best for me not to take life too seriously; I just try to enjoy it. (DIFF)

28. I think it's better to have fixed values, than to consider alternative value systems. (NORM)

29. I try not to think about or deal with problems as long as I can. (DIFF)

30. I find that personal problems often turn out to be interesting challenges. (INFO)

31. I try to avoid personal situations that will require me to think a lot and deal with them on my own. (DIFF)

32. Once I know the correct way to handle a problem, I prefer to stick with it. (NORM)

33. When I have to make a decision, I like to spend a lot of time thinking about my options. (INFO)

34. I prefer to deal with situations where I can rely on social norms and standards. (NORM)

35. I like to have the responsibility for handling problems in my life that require me to think on my own. (INFO)

36. Sometimes I refuse to believe a problem will happen, and things manage to work themselves out. (DIFF)

37. When making important decisions I like to have as much information as possible. (INFO)

38. When I know a situation is going to cause me stress, I try to avoid it. (DIFF)

39. To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals. (COMM)

40. I find it's best for me to rely on the advice of close friends or relatives when I have a problem. (NORM)

IV. Student-Faculty Interaction

Directions: In your experience at this institution during the current school year, about how often have you done each of the following?

Very Often / Often / Occasionally / Never

1. Talked with your instructor about information related to a course you were taking (grades, make-up work, assignments, etc)
2. Discussed your academic program of course selection with a faculty member.
3. Discussed ideas for a term paper or other class project with a faculty member
4. Discussed your career pans and ambitions with a faculty member
5. Worked harder as a result of feedback from an instructor
6. Socialized with a faculty member outside of class (had a snack or soft drink, etc)
7. Participated with other students in a discussion with one or more faculty members outside of class
8. Asked your instructor for comments and criticisms about your academic performance
9. Worked harder than you thought you could to meet an instructor's expectations and standards
10. Worked with a faculty member on a research project.

11. Thinking of your own experience please rate the quality of your relationships with faculty members.

$$7 - 6 - 5 - 4 - 3 - 2 - 1$$

Approachable, Helpful, Understanding Encouraging |||| Remote, Discouraging, Unsympathetic

12. Please describe a positive interaction with one of your professors.
13. Please describe a negative interaction with one of your professors.
14. How many times have you met with one of your instructors outside of class this semester?

V. Academic Achievement

Expected GPA:

Academic Self Concept Scale

1- Strongly disagree 2- disagree 3 – agree 4 – strongly agree

1. Being a student is a very rewarding experience.

2. If I try hard enough, I will be able to get good grades.

3. Most of the time my efforts in school are rewarded.

4. No matter how hard I try I do not do well in school.

5. I often expect to do poorly on exams.

6. All in all, I feel I am a capable student.

7. I do well in my courses given the amount of time I dedicate to studying.

8. My parents are not satisfied with my grades in college.

9. Others view me as intelligent.

10. Most courses are very easy for me.

11. I sometimes feel like dropping out of school.

12. Most of my classmates do better in school than I do.

13. Most of my instructors think that I am a good student.

14. At times I feel college is too difficult for me.

15. All in all, I am proud of my grades in college.

16. Most of the time while taking a test I feel confident.

17. I feel capable of helping others with their class work.

18. I feel teachers' standards are too high for me.

19. It is hard for me to keep up with my class work.

20. I am satisfied with the class assignments that I turn in.

21. At times I feel like a failure.

22. I feel I do not study enough before a test.

23. Most exams are easy for me.

24. I have doubts that I will do well in my major.

25. For me, studying hard pays off.

26. I have a hard time getting through school.

27. I am good at scheduling my study time.

28.I have a fairly clear sense of my academic goals.

29.I'd like to be a much better student than I am now.

30.I often get discouraged about school.

31.I enjoy doing my homework.

32.I consider myself a very good student.

33.I usually get the grades I deserve in my courses.

34.I do not study as much as I should.

35.I usually feel on top of my work by finals week.

36.Others consider me a good student.

37.I feel that I am better than the average college student.

38.In most of the courses, I feel that my classmates are better prepared than I am. 39.I feel that I do not have the necessary abilities for certain courses in my major. 40.I have poor study habits.

VI. Decision to Withdraw

1. Are you planning to withdraw from the university at the end of the semester?

2. If yes, are you transferring to a different institution?

a) Yes

b) No

3. If yes, why?

APPENDIX D: APPROVAL LETTERS

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Department of Psychology

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cola.unh.edu/psychology

April 13, 2015

Katerina Karaivanova

Department of Psychology

Dear Kat,

This letter confirms that your study, "College Experiences" was approved by me on behalf of the Psychology DRC on April 13, 2015 and assigned the code number EApril132015.

Sincerely, on behalf of the Psychology DRC

Rebecca MWarner

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October 15, 2015

Katerina Karaivanova

Department of Psychology

Dear Kat,

This letter confirms that your study, "Student Faculty Interactions" was approved by me on behalf of the Psychology DRC on October 15, 2015 and assigned the code number EOct152015.

Sincerely, on behalf of the Psychology DRC

Rebecca M Warner

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CSEQ

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Item Usage Agreement
College Student Experiences Questionnaire
Assessment Program

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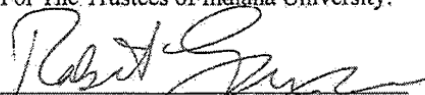E-mail: cseq@indiana.edu • Web: www.iub.edu/~cseq

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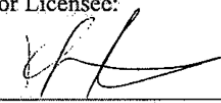
The undersigned hereby consent to the terms of this Agreement and confirm that they have all necessary authority to enter into this Agreement.

For The Trustees of Indiana University:

_____   _____9-17-15_____
Robert M. Gonyea   Date
Associate Director, Center for Postsecondary Research
Director, CSEQ Assessment Program
Indiana University

For Licensee:

_____   _____9/17/15_____
Name, Title, and Organization   Date
KATERINA   KARAIVANOVA
UNIVERSITY OF NEW HAMPSHIRE