Academic Thriving: Sophomores at St. Olaf College
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EXECUTIVE SUMMARY

In the fall of 2019, the Sociology/Anthropology 371 course conducted research on sophomore thriving at St. Olaf College. We sent an anonymous online survey to all 764 sophomores and received 248 responses (30.5%). Our sample reflects many demographics of the student body, and it matches the "rule of thumb" for a 30% sample of a population of 1,000 or less.

Prior research has found that students who are thriving academically are engaged learners and academically determined. Some key factors include meaningfully processing material and making connections between interests and learning material, investment of effort, time management, motivation to succeed, and self-efficacy. Previous studies have also found that increased interactions between faculty and students and higher levels of students' confidence in their major(s) decision leads to higher GPAs and overall academic success.

Our research focuses on four main questions:
1. Which students at St. Olaf College are thriving?
2. Does the amount of time students spend studying and working per week impact their GPA?
3. Are students' confidence levels in and the time they decide their major related to their academic transition or GPA?
4. What factors impact students' levels of academic self-efficacy and motivation?

The most important results of our research are as follows:
- Sophomores who spend more hours studying per week tend to have higher GPAs and overall academic thriving, but employment status did not have an impact.
- Students tend to feel academically supported by professors but tend to limit their student-professor interactions outside of class to before or after class time.
- If students' academic transition from their first year went well, they were likely to be more confident in their choice of major. However, the time students decide on their major(s) seemed to have no impact on their academic transition.
- The sooner students decided on their major(s), the less likely they are to express confidence in their declared or intended major(s).
- White sophomores and non-first-generation sophomores are more likely to academically thrive than sophomore students of color and first-generation sophomores.

Based on our research, we offer four recommendations:
1. Increase academic thriving by increasing student-professor interactions. Professors could require meetings during the semester to check in and create a more positive, productive, and personal relationships with the students.
2. Boost first generation students' academic thriving by implementing programs, events, or groups that focus on improving their academic motivation and self-efficacy.
3. Address the tendency for early deciders to be less confident in their major(s) by supporting students in waiting to declare a major until sophomore spring.
4. Boost declared students' confidence in their major by promoting involvement and excitement. Each department could organize a "majors" event twice a semester.

BACKGROUND AND LITERATURE

Understanding the Factors that Contribute to the Academic Thriving of College Sophomores

College students have been a focus of social science research and previous studies have provided unique insights to better understand the college experience. However, research surrounding college sophomores is very limited. Our study focuses on college sophomores and the extent to which they thrive. Students can thrive in a multitude of ways, including culturally, socially, personally, and academically. Our main focus surrounds "academic thriving," with a concentration on academic self-efficacy, academic determination and persistence, adjustment to higher-level classes, and certainty about one's major(s). Within these subtopics we identify main themes that we found most influential for the direction of our research: student demographics, faculty and staff interactions, levels of interest in major-related classes, and grade point average (GPA). We explored scholarly articles that focus on variables that influence college students' ability to be academically successful. Our goal for this research is to understand the key factors contributing to sophomores' academic thriving at St. Olaf College, and whether these factors contribute to overall thriving.

Many students experience what is called the "sophomore slump" during their second year of college. The sophomore slump is when students seem to drift through their second year of college as they struggle to determine what they hope to gain from college and establish short- and long-term goals. When facing new academic challenges, sophomores may disengage from their academic life and exist in their own sphere counter to the academic path of engaged learning (Lemons and Richmond 1987; Gardner 2000; Pattengale and Schreiner 2000). More recently, Gregg-Jolly et al. (2011) redefined the sophomore slump to include one or more of the following features: academic deficiencies, academic disengagement, dissatisfaction with the collegiate experience, major and career indecision, and developmental confusion. Not all students experience the sophomore slump, but it is important to understand the factors that lead sophomores into this state and away from the path of academically thriving.

Psychologists Corey Keyes and Jon Haidt (2002) describe the concept of flourishing as a life lived with high levels of emotional, psychological, and social well-being. Those considered to be flourishing have an enthusiasm for life, are productively engaged with others and in society, and are resilient in the face of personal challenges. Using this concept, Laurie Schreiner (2010) defined thriving as the experiences of college students who are fully engaged intellectually, socially, and emotionally. Thriving college students are not only academically successful but also experience a sense of community and a level of psychological well-being that contributes to their persistence to graduation and allows them to gain maximum benefit from being in college. Thriving is comprised of engaged learning, academic determination, positive perspective, diverse citizenship, and social connectedness. Schreiner identifies three categories of thriving: academic, intrapersonal, and interpersonal.

For the purpose of our study, we will primarily use Schreiner's definition of academic thriving, which is characterized by engaged learning and academic determination. Students who are thriving academically are psychologically engaged in the learning process rather than continuously going through the motions of everyday class life. The first component, engaged learning, occurs when students are meaningfully processing material and making connections between their interests and the necessary learning material. The second component to

academic thriving, academic determination, is characterized by an investment of effort, an ability to manage one's time and the multiple academic and personal demands of the college environment, a motivation to succeed, and the intentional pursuit of one's goals. Students who are academically thriving are motivated to do well, have educational goals that are important to them, and have strategies to reach these goals. Some important factors that contribute to academic thriving are a students' demographic background, their interactions with faculty, and their interest in their major.

Demographic variables are known to influence students' academic success in college. Overall, studies have shown that variables such as sex, ethnicity, and socioeconomic status, among others, have significant impacts on students' ability to thrive academically. Graunke and Woosley (2005) determined that sex, ethnicity, transfer status, and employment status were all significant predictors of GPA. With respect to differing socioeconomic status, Guiffrida et al. (2013) found that students from a higher socioeconomic status have the luxury of studying subjects that are interesting to them more than lower socioeconomic status students, which allows them to engage in majors more suited to their interests rather than their financial needs.

Another important demographic associated with academic thriving is whether a student is from an international background studying in the United States. Wu, Garza and Guzman (2015) conducted research on international students and found that they face more academic barriers than domestic students, such as language barriers, isolation from classmates, and lack of interactions with professors. However, Probertson et al. (2000) surveyed staff experiences with international students and found that staff are not empathetic to the international students' language proficiency and staff criticized international students for not taking responsibility for their academic advancement. Possible solutions for these students include utilization of school resources, dorm/campus activities, language support, campus counseling services, and student organizations as ways to ease the adjustment process.

Aside from international students, first-generation students also encounter challenges that are unique to them compared to second-generation students. Ting (2003) studied first-generation versus second-generation students and beyond and concluded that first-generation students experience distinct barriers such as lack of educational aspirations due to family and personal circumstances, which impacts their experience in postsecondary education and creates a higher risk of attrition.

Interactions between faculty and students are critical factors contributing to students' academic success. Most students feel that faculty are concerned with their academic success, and increased interactions with faculty leads to better academic performance. Interactions with faculty may include office hours or out-of-class meetings with professors, school counseling appointments, and meeting with advisors. Graunke and Woosley (2005) found that interactions with faculty were significant predictors of college students' academic success. Brown-Welty et al. (2010) found that interactions with faculty are important factors in helping students increase aspirations about their career, educational goals, and perceptions of academic self-efficacy, which is defined as students' motivation to succeed and the intentional pursuit of their goals (Schreiner 2010). Further, Guiffrida et al. (2013) found that students who attend college with the intent to connect with faculty and staff are most likely to establish meaningful relationships and earn higher GPAs.

Students' interest in their major is a significant predictor of their level of academic thriving. The factors that impact the courses students plan to take include whether their major fits their

personal interests or values, how confident they feel about their choice of major, and their career goals. For example, if a student wants to be a nurse, they are more likely to take nursing courses and graduate with a nursing major. Graunke and Woosley (2005) deduced that certainty in the choice of major was a significant predictor of sophomore academic success and GPA. Students' decision on their major often reflects their personal interests. Tracey and Robbins (2006) found that students who have specific career goals or interests are more inclined to choose a major that directly relates to their intended career. One way that this is tested is using the Holland's Personality test, a section of the American College Testing (ACT) that identifies students' potential career and vocational choices according to their personalities and interests. This personality test asks students a variety of questions that translate to a specific personality type based on their score: realistic, investigative, artistic, social, enterprising, and conventional. Based on the personality type that the assessment identifies, the student is given suggestions on possible career options or fields to study. Moore and Cruce (2019) concluded that students' GPAs are higher when students major in subjects that correlate to their Holland's personality test score. Uncertainty in a students' major may create tensions and prolong graduation, which could have an adverse effect on college students' academic success (Anderson and Schreiner 2000).

Although research specific to sophomores is minimal, the studies we found largely revolve around major declaration decisions and certainty. Graunke and Woosley (2005) concluded that certainty in the choice of major was a significant predictor of sophomore academic success and GPA. Further, Gardner (2000) found that sophomores were more likely than students in other classes to state that their biggest personal problem was confirming their major selection or deciding on an appropriate career because of the increased levels of stress that this decision can create. With respect to class schedules, Anderson and Schreiner (2000) noted that sophomores are often in the transition from general education courses to courses specific to an academic major. Uncertainty about a major may create tensions that could have an adverse effect on their success in these classes and their overall experience at the institution.

Students' motivation, determination, values of education, and perceptions of self-efficacy are heavily influenced by the desire to have a high GPA. Students often feel the stress of achieving a high GPA in order to get into graduate school, obtain jobs and internships, and receive or maintain scholarships. These factors also influenced students' levels of competence and their ability to be academically successful. Self-efficacy is the strongest predictor of GPA when examining academic success (Solberg and Villarreal, 1997). Attending college to fulfill the desire to connect with college faculty/staff is positively associated with GPA (Guiffrida et al. 2013). Fostering a sense of self-efficacy may influence students' GPAs and hence increase their persistence rates. Hartley (2011) found that the higher level of persistence a student has, the higher their GPA. In other words, students who were committed to meeting the challenges of academics had higher cumulative GPAs. However, the relationship between students' ability to tolerate stress and GPA was negative, meaning students who reported being able to tolerate stress levels also had lower cumulative GPAs. Students who went to college with the intent to establish relationships with peers was negatively associated with GPA, meaning students who reported going to college to make friends had lower cumulative GPAs.

Prior research specific to college sophomores has provided us with key factors to focus on while researching sophomore academic thriving at St. Olaf College. Literature specific to college sophomores is minimal, but the information we found about sophomores is key to our study. For example, Gardner (2000) found that sophomores exist in their own "sphere" where they

become more engaged in individual activities rather than in the academic path of an engaged learner.

Sophomores were less likely than students in other classes to see faculty as actively engaged in students' personal and academic development and as actively involved with their learning (Gardner 2000). Juillerat (2000) found that sophomores at private colleges rated factors such as a sense of belonging and approachable faculty as more important than students at other class levels. Brown-Welty et al. (2010) found that interactions with faculty and social networking with peers are important factors in helping first-generation college sophomores increase aspirations about their career and educational goals and have higher perceptions of self-efficacy. Further, Graunke and Woosley (2005) found that interactions with faculty were significant predictors of sophomores' academic success and GPA.

After analyzing prior literature on academic thriving of students, our goal was to conduct a study that could possibly bridge the gaps in that scholarship. Existing literature has minimal data on college sophomores specifically and using variables that have been identified in prior scholarly studies, we aim to understand whether or not these factors impact sophomores' academic thriving at St. Olaf College.

RESEARCH METHODS

In Fall 2019, we conducted a research study on the overall thriving of sophomores. Through an online survey, we examined the factors that impact the academic thriving of sophomores at St. Olaf College. The college is a small liberal arts institution located in the upper midwest of the United States with a population of about 3000 undergraduate students representing 49 states plus the District of Columbia and 85 countries. Our research is a part of a larger study that examines multiple components of sophomore thriving and slumping, including the social and psychological aspects. Collectively, we conducted an online survey that sophomores received access to in November of 2019 via a link through their school email address and had access to complete it for one week. To increase the response rates of the sophomores, we held several tabling sessions outside of the cafeteria to serve as encouragement and a reminder to complete the survey. Our group's main focus is on sophomores' levels of academic self-efficacy, the certainty in choice of major, transitions to higher-level courses, and students' overall determination and motivation, and how these factors affect sophomores' performance levels and overall academic thriving at St. Olaf College.

Focus Group
We conducted a focus group in the fall semester of 2019 with seven respondents who were sophomores and juniors to get descriptive data on current students' thoughts on our topics and to guide the development of our survey research. Participation was voluntary, and we provided food as an incentive. We used information from prior literature to structure our questions, asking participants about their sophomore experiences at St. Olaf. The questions revolved around students' levels of self-efficacy, adjustment to higher-level courses, certainty in their majors, and the factors that motivated participants to attend college and succeed in the classroom. Participants provided key insights of their experiences in response to these questions, with additional insight on interactions with faculty and staff members, study habits, and many other crucial topics.

Independent and Dependent Variables

After analyzing the prior literature, we determined seven key variables related to the overall concept of academic thriving of college sophomores, four as independent variables and three as dependent variables. Our dependent variables, as determined from prior literature, included overall thriving of sophomores, but we primarily focused on sophomores' GPAs, their academic adjustment to higher-level courses, and their levels of determination and persistence to succeed academically. Our independent variables included student demographics such as sex, race, and employment status; faculty and student interactions; major certainty and interests related to the major; and students' levels of self-efficacy.

Relying on data from the focus group and research from prior literature, we constructed eight survey questions consisting of matrices and open- and close-ended questions. We also used data from 25 survey questions that were constructed by our peers who were evaluating other components of sophomore thriving. We evaluated the independent variable of students' levels of academic motivation and the factors that influenced them to be successful in the classroom by asking for the participant's level of agreement (strongly agree, agree, neutral, disagree, strongly disagree) with several statements such as, "my grades are one of my top priorities," and "I regularly procrastinate on school work," along with open-ended questions. We measured the independent variable of sophomore certainty in their major by asking about their declared or intended major along with asking about their levels of confidence in their major, including how confident they were that their declared or intended major would lead them to happiness or success in the future. We used an ordinal measurement by providing response options of extremely confident, very confident, moderately confident, slightly confident, and not at all confident. In order to examine the independent variable of faculty and student interactions, we asked students to report how many times they had met with faculty members (an ordinal measurement with the options of 0 times, 1-2 times, 3-4 times, 5 times or more) both in and out of the classroom, along with whether the student felt supported by faculty members. Using an interval measurement, we also asked students to identify their GPA, one of our dependent variables, using response categories from "2.0 or lower" to "4.0," increasing by increments of 0.25 each time. See Appendix B for the entirety of our survey questions.

Validity

All researchers strive to achieve validity in their own research with minimal errors. This is because validity, as defined by Neuman (2007), tells us how well an idea about social reality "fits" with actual, empirical reality. Face validity is judgement from the scientific community that an indicator truly measures its construct (Neuman 2007). We achieved face validity for our research by consulting experienced researchers such as professors and fellow classmates who were also involved in the focus of academic thriving among sophomores. We also achieved face validity by using key variables and sample methods found in peer-reviewed studies published in academic journals. Content validity addresses whether the full content of a definition is represented in a measure (Neuman 2007). To test academic thriving and achieve content validity, we ensured that the survey covered all of the dimensions we included in our research concepts. For example, we defined engaged learning as the act of students meaningfully processing material and making connections between their interests and the necessary learning material (Schreiner 2010). We then measured engaged learning in several ways; for example, we asked respondents if they participate actively in class and think about the material they learned in class outside of school. By doing so, we were able to analyze whether respondents are meaningfully processing material and making connections between their interests and the necessary learning material.

Reliability

Researchers also strive to create consistent and dependable measurements. Reliability means that repeated, stable outcomes are the same under identical or similar conditions (Neuman 2007). To ensure reliability in our study, we strategically constructed our survey questions to encapsulate all the key variables and specifically asked several questions about each one. We primarily used matrices and open-ended questions to receive as much data about one subtopic as possible. For example, to determine students' confidence in their major or potential major, we asked a series of five questions in a matrix to get as much information as possible. We scaled our variables numerically and were careful to be specific to each question. For example, when asking students to reveal their GPA, we listed specific categories (0-2.00, 2.00-2.24, 2.24-2.49 … 3.50-3.74, 3.75-4.00) to ensure we received clear and accurate data. We also created indexes for several of our variables, including interactions with faculty outside of the classroom, in order to analyze them from different dimensions.

Sample

The target population, sophomore students, for our survey included all sophomores attending St. Olaf College during the fall semester 2019. Due to the electronic survey delivery mode, our data relied on voluntary participation with a gift card drawing as an incentive to complete the survey, which took approximately 15 minutes to complete. Out of 764 total sophomores at St. Olaf College, 248 responded to our online survey. Of the students, 21.4% (53) of the respondents were male, 58.5% (145) of the respondents were female, and 2% (5) included all other gender identifications. Only 2.0% (5) of the participants were transfer students. In respect to the participants' racial or ethnic identity, 58.1% (144) of students identified as white, 2.4% (6) of students identified as black or African American, 6.5% (16) identified as Hispanic/Latinx, and 14.2% (35) of the responses included all other racial or ethnic identities. First generation students made up 15.7% (39) of the respondents. 8.1% (20) of the respondents were international students. Employed students made up 59.6% (148) of our sample, with 4.8% (12) employed at an off-campus organization and 54.8% (136) employed on campus.

Ethics

All members conducting this research completed a CITI training course on how to appropriately study humans with integrity, ethics and in a safe environment with minimal risks or ethical violations. Our professor received approval from the Institutional Review Board (IRB), a committee that oversees the impacts of research procedures, to oversee this research on students at St. Olaf College. We took the utmost responsibility to ensure our participants' information was kept anonymous and that respondents' answers would in no way cause harm or any sort of repercussion to them. Our team never had access to any identifying information such as names or email addresses of the respondents. By reading the introduction email and clicking on the link, participants voluntarily consented to taking the survey, and could exit the link at any time. There could be a possibility that students did not read the introduction email properly, which could lead to some informed consent issues. Participants had the option to submit their email address following the survey in a separate form from the results for a chance to win a gift card. Overall, we created a survey that would cause minimal risks or repercussions to participants, ensured privacy of personal information, and ensured informed consent.

We understood that we will potentially be studying students who may be considered vulnerable or special populations, including students with disabilities, racial and ethnic minorities, those with precarious visa statuses, and others who may be socially or economically disadvantaged. Participants also may have been asked questions that they felt threatened by ("threatening" questions can challenge a respondent's good sense of self, for example, by

asking about a poor GPA), but we were careful in creating a survey that would cause minimum distress or discomfort to the students.

RESEARCH RESULTS AND DISCUSSION

Research Question 1: Which students at St. Olaf are thriving?

Univariate Analysis

Our univariate analysis revealed which groups of sophomores at St. Olaf College tend to be thriving. We constructed a 15-item "Sophomore Thriving Index" consisting of the five components of thriving: engaged learning, academic determination, a positive perspective, diverse citizenship, and social connectedness. To see a complete list of questions included in the index, see Appendix A. Scores ranged from 34 to 68, as shown in Figure 1 below, with an average thriving score of 53.23.
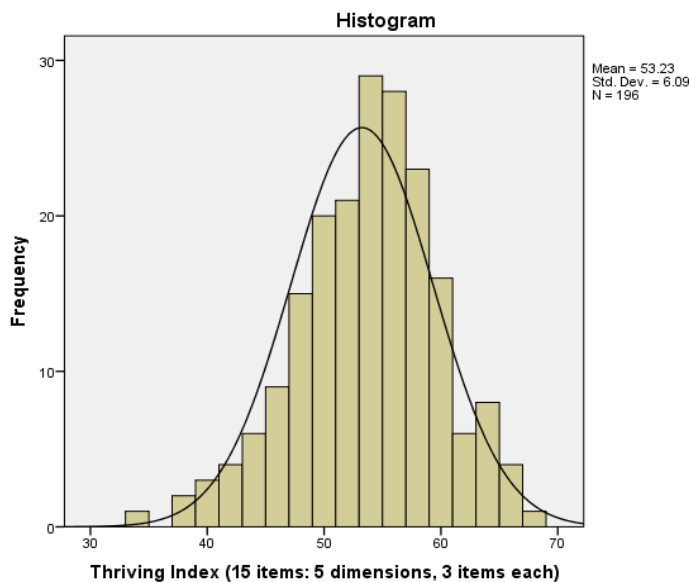
Figure 1. Sophomore Thriving Index scores

The academic items included in the Sophomore Thriving Index are shown in Table 1, below. With respect to engaged learning, 79.8% of respondents agreed (strongly or somewhat) that they can find ways of applying skills learned in class to other areas of life, 83.4% of respondents agreed that they think about class material outside of class or studying, and 76.5% of respondents agreed they actively participate in class. With respect to academic determination, 88.4% of respondents agreed that grades are a top priority to them. However, 53.3% agreed that they regularly procrastinate on homework, and only 36.6% of respondents agreed that they go above and beyond homework expectations and requirements.

Table 1: *Academic factors included in the thriving index*

	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree
I can find ways of applying the skills I'm learning in class to other areas of my life.	30%	49.8%	16.1%	4.1%	0.0%
I find think about what I'm learning in classes even when I'm not in class or studying.	34.6%	48.8%	11.5%	5.1%	0.0%
I participate actively in class.	25.8%	50.7%	13.8%	8.8%	0.9%
My grades are one of my top priorities.	54.9%	33.5%	4.2%	6.5%	0.9%
I tend to go beyond requirements and expectations for my assignments.	9.7%	26.9%	31.5%	24.1%	7.9%
I regularly procrastinate on school work.	18.7%	34.6%	18.2%	16.4%	12.1%

Bivariate Analysis

Our bivariate analysis consisted of testing demographic factors including gender, race/ethnicity, first-generation student, and employment status against the Sophomore Thriving Index. We conducted independent samples t-tests to compare the mean scores of each demographic group on our thriving index and found both significant and nonsignificant results. The following demographics had significant differences:

- Race/ethnicity: We found a significant difference ($p<.05$) between the mean thriving scores of white students (m=53.79, sd=5.67) and students of color (m=51.44, sd=6.98). White sophomores at St. Olaf tend to thrive more than sophomore students of color.
- First generation students: We found a significant difference ($p<.05$) between the mean thriving scores of first-generation college students (m=50.58, sd=5.4) and non-first-generation college students (m=53.80, sd=6.14). Non-first-generation sophomores tend to thrive more at St. Olaf than first-generation sophomores.

The following demographics showed no statistically significant differences:

- Gender: We found a nonsignificant difference ($p>.05$) between the mean academic thriving score for males (m=53.77, sd=7.15) and females (m=53.26, sd=5.75). There seems to be no difference between thriving among male and female sophomores at St. Olaf.
- Employment status: We found a nonsignificant difference ($p>.05$) between the mean academic thriving scores for employed students (m=53.46, sd=6.02) and unemployed students (m=52.77, sd=6.54). There seems to be no difference in thriving between the employed and unemployed sophomores.

Discussion

Our data showed that students at St. Olaf tend to be thriving. Previous research stated that gender, race/ethnicity, employment status, and generational status impact students' levels of thriving (Graunke and Woosley 2005, Brown-Welty et al. 2010), and our results align with those findings. Using the same demographic variables to test overall sophomore thriving at St. Olaf College, we found that white sophomores are thriving more than sophomore students of color, and non-first-generation sophomores are thriving more than first-generation sophomores. We did not find any statistically significant difference between males and females or employed and unemployed students and overall thriving at St. Olaf College.

Research Question 2: Does the amount of time students spend studying and working per week impact their GPA?

Univariate Analysis

Our univariate analysis revealed how students utilize their time outside of the classroom. We asked respondents to report how many hours per week they spend studying and working for pay. As shown in Table 2, most respondents reported spending 10 or more hours studying per week (67.5%) and 6 or fewer hours working for pay per week (57.5%), with 27.3% of respondents reporting not working for pay at all. We also asked respondents to report their current GPA and found that over half (53.9%) of respondents reported a GPA of 3.50 or higher, with only 14.7% reporting a GPA of 2.99 or below. See Table 3 for GPA results.

Table 2. Hours per week students spend this semester studying

	0-3 hours	4-6 hours	7-9 hours	10-12 hours	13/+ hours
Studying	5.4%	16.3%	10.8%	18.8%	48.7%
Working for pay	42.2%	15.3%	20.2%	13.2%	9.1%

Table 3. Students' current GPAs

GPA	Percentage
3.75-4.00	23.5%
3.50-3.74	30.4%
3.25-3.49	17.6%
3.00-3.24	13.7%
2.75-2.99	8.3%
0.00-2.74	6.4%

Bivariate Analysis

Our bivariate analysis consisted of testing whether students' current GPAs are related to how many hours they spend per week studying and working for pay. We calculated Spearman's rho correlation coefficients to test the relationships between GPA and hours spent studying and working for pay per week and found one significant relationship. We found a significant, weak to moderate, positive relationship (r=.174, p<.05), indicating a linear relationship between time spent per week studying and GPA. When testing GPA against time spent working for pay, we found a weak, nonsignificant relationship (r=.015, p>.05). More time studying is associated with higher GPA but more time working for pay is not.

Discussion

These findings provide insight into how the amount of time students spend studying per week tends to affect students' GPAs. The unsurprising positive relationship between the amount of time students spend studying and GPA tells us that students who spend more hours studying per week tend to have higher GPAs. These results supported prior research stating that the more time students spend studying, the higher their GPA will tend to be (Tracey and Robbins 2006).

The weak, nonsignificant relationship between students' time spent working for pay and GPA suggests that within our sample, the number of hours students spend working per week does

not influence their GPA. This finding was surprising because we expected that the number of hours students spend working for pay per week would be a significant predictor of GPA, as found by Graunke and Woosley (2005).

Research Question 3: How is students' confidence in their major(s) related to their GPA, their academic transition from first year to sophomore year, and the timing of their choice of major(s)?

Univariate Analysis

We asked respondents if they had decided on a major (declared a major or had an intended major) at the time of survey distribution, and if so, when they made this decision. We found that most respondents (96.8%) had chosen their major, with 74.2% deciding during their first year or before college. We also asked them to report how confident they are in their declared or intended major(s). We found that nearly all respondents who have a declared or intended major (94.7%) reported feeling moderately to extremely confident in their choice of major(s) or anticipated major(s). Most respondents also felt very or extremely confident that their major(s) or anticipated major(s) reflects their personal interests (85.7%). See Table 4 for percentages. We then created a 5-item Major Confidence Index that included several questions related to students' confidence in their declared or intended major(s), such as how confident students are that their declared or intended major(s) will lead them to success or happiness in life, all shown in Table 4 below.

Table 4. Items measuring confidence in major

	Extremely confident	Very confident	Moderately confident	Slightly confident	Not confident at all
I am _____ in my choice of major(s) or anticipated major(s).	31.1%	36.4%	27.2%	1.5%	3.9%
My major(s) or anticipated major(s) reflect my personal interests.	45.8%	39.9%	10.3%	3.9%	0.0%
My major(s) or anticipated major(s) leads directly to a specific career (e.g. nursing major and nursing career).	19.2%	17.7%	26.6%	18.2%	18.2%
My major(s) will bring me success in the future (internship, job, income, etc.).	27.5%	23.5%	34.8%	11.8%	2.5%
My major(s) will lead me to happiness in the future.	25.7%	35.1%	28.7%	8.9%	1.5%

Scores on the Confidence in Major index ranged from 25-50, with a higher score meaning higher confidence in major. Students scored an average of 38.2, with over half the respondents (51.2%) scoring between 36 and 42. See Figure 2.
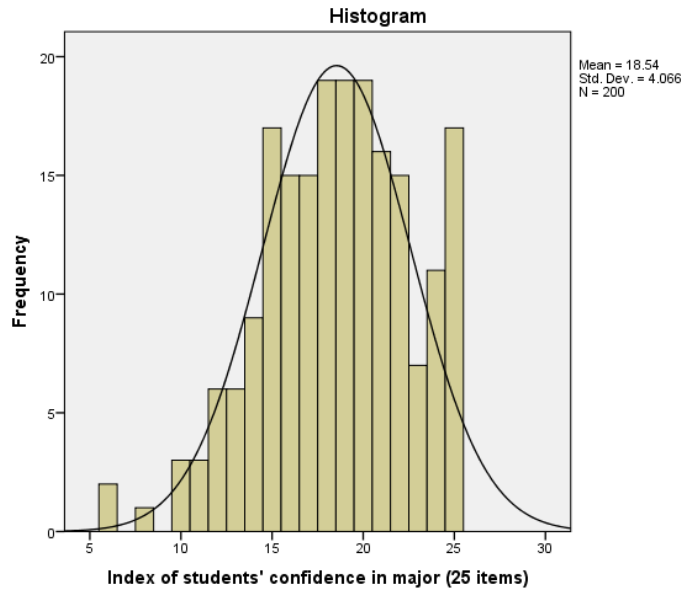
Figure 2. Confidence in Major Index scores

We also asked the students to describe how well they transitioned academically from their first year to their sophomore year. We found that 71.7% of respondents had a good or very good academic transition from first year to sophomore year whereas only 11.3% reported having a poor or very poor academic transition. See Table 5 for academic transition results.

Table 5. *Description of students' academic transitions from first year to sophomore year*

	Very good	Good	Neutral	Poor	Very poor
Academic	23.6%	48.1%	17.0%	8.5%	2.8%

Bivariate Analysis

Our bivariate analysis consisted of testing whether or not the time when students decide on their major impacts their academic transition, their current GPA, and their levels of confidence in their major (if decided). We then tested whether or not students' overall confidence levels in their major(s) decisions impacts students' current GPA and their academic transition. We conducted multiple tests for these relationships and found interesting results. The following analyses were calculated using Spearman rho tests and are statistically significant:

- Students' overall confidence in major and academic transition: We found a significant, positive, and weak to moderate relationship ($r=.224$, $p<.05$) between students' overall confidence in their declared or intended major(s) and how well they transitioned from first year to sophomore year.
- Students' overall confidence in major and major decision time: We found a significant, moderate and negative relationship ($r=-.353$, $p<.05$) between students' overall confidence in their major and the time they decided on their major. Students who have decided on their major(s) earlier tend to express less confidence in their major decision.

The following analyses were also calculated by Spearman's rho tests but found only nonsignificant relationships:

- Major decision time and academic transition: We found a nonsignificant, weak and negative relationship (r=-.011, p>.05) between the two. The time that students decide their major(s) does not impact their academic transition from first year to sophomore year.
- Major decision time and GPA: We found a nonsignificant, weak and negative relationship (r=-.035, p>.05) between the time students decide on their major and students' current GPA. The time students decide on their major(s) tends to not have an impact on their GPA.
- Students' overall confidence in major and GPA: We found a nonsignificant, weak and negative relationship (r=-.023, p>.05) between students' overall confidence in their major decision and students' GPAs. Students' overall confidence in their majors tends to not impact their GPA.

Discussion

These findings provide insight into what factors relate to students' academic thriving, including when students decided on, and their levels of confidence in, their declared or intended major(s) and the students' perceived quality of their academic transition from first year to second year. Our findings indicate that if students' academic transition went well, they tended to be more confident in their major choice. However, we found that the time when students decided on their major(s) seemed to have no impact on the students' academic transition.

Another relationship we found was between the time when students decided their declared or intended major(s) and overall how confident they felt about the major(s). This relationship indicates that the sooner students decided on their major(s), the less likely they are to express high confidence in their declared or intended major(s). Cruce and Moore (2019) found that the earlier students decide on their major the more confident they are likely to be, however our results contradicted those findings.

Prior literature revealed that students who choose majors that fit their interests are more likely to be confident in their major and therefore have higher cumulative GPAs at graduation (Tracey and Robbins 2006). However, our results contradict the literature, showing that St. Olaf sophomores' confidence in their major did not impact their GPA.

Research Question 4: What factors impact students' levels of academic self-efficacy and motivation?

Univariate Analysis

In order to analyze which sophomores tend to thrive academically at St. Olaf, we chose several demographics to test, including gender, race/ethnicity, first-generation student, and employment status. See the Methods section or Appendix A for the percentages of these student groups in our sample.

We asked respondents how frequently they meet with professors and for what reasons. We found that sophomores at St. Olaf reported doing the following in the first 10 weeks of the semester at least one time: dropping in during their professors' office hours (89.7%), meeting

with professors before or after class at least once (82.7%), and getting help with assignments (87.5%) or discussing course materials (75.6%). However, we found that a large minority of students (42.2%) reported that they had not met with professors at all for a *scheduled meeting* besides advising. See Table 6 for percentages.

Table 6. Frequency of student/professor interactions outside of class

	0 times	1-2 times	3-4 times	5 times or more
Dropping in during office hours	10.3%	36.6%	33.6%	19.4%
Before or after class	17.3%	35.5%	26.0%	21.2%
During a scheduled meeting other than for advising	**42.2%**	36.1%	17.0%	4.8%
To get help or clarification regarding a specific question or assignment	12.6%	37.7%	28.6%	21.2%
To discuss course material	24.3%	40.0%	21.7%	13.9%

We also asked students if they felt overall academically supported by their professors. As shown in Table 7, we found that 82% of students felt academically supported to a large extent or more, whereas no respondents stated they did not feel academically supported at all.

Table 7. Level of academic support students feel from professors

	To a very large extent	To a large extent	To a moderate extent	To a small extent	Not at all
I feel academically supported by my professors overall	41.5%	41.0%	12.7%	4.8%	0.0%

We then created a 10-item "Academic Thriving Index" capturing students' levels of academic thriving by carefully selecting questions from our survey about students' academic motivation and self-efficacy that related to our conceptual definition of academic thriving. Items on this index asked students to indicate their level of agreement (5 response categories, from Strongly agree to Strongly disagree) with the following statements:

1. I am confident that I will reach my academic goals this semester.
2. I can find ways of applying the skills I'm learning in class to other areas of my life.
3. I find think about what I'm learning in classes even when I'm not in class or studying.
4. I participate actively in class.
5. I am motivated to succeed academically by a genuine interest in my courses.
6. My grades are one of my top priorities.
7. I regularly procrastinate on school work.
8. I am prepared for exams and quizzes.
9. I believe I can perform well, even when coursework becomes stressful.
10. I tend to go beyond requirements and expectations for my assignments.

We summed the scores for students' responses to these items. Results from the index showed scores ranging from 25 to 50, with an average score of 38.2, as shown below in Figure 7. The majority of students (63.5%) scored between 36 and 44, indicating overall middle to higher levels of academic thriving. See Appendix A for all scores and percentages.
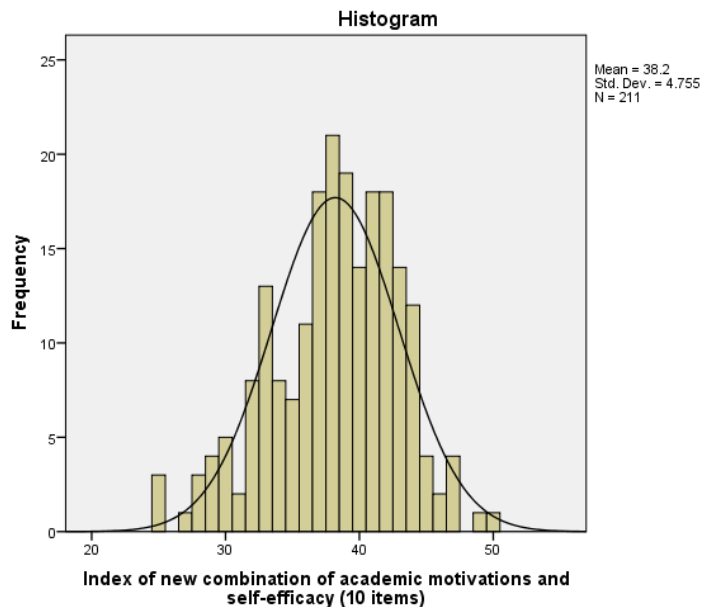
Figure 7: Academic Thriving Index scores

Bivariate Analysis

Our bivariate analysis consisted of examining several student demographics such as gender, race/ethnicity, first-generation students, and employed students to test whether demographics are related to students' levels of academic motivation and self-efficacy, as measured by the Academic Thriving Index. In order to perform the bivariate analysis, we grouped the variable gender into only male and female, grouped race/ethnicity into only white and students of color, and grouped employment status into only employed and unemployed. This is potentially problematic as we lose data on complex identities and statuses, but we would be unable to run bivariate tests without doing this because some specific identity categories (e.g. non-gendered) included only very small percentages of respondents. We conducted several independent samples t-tests to compare the mean scores of each demographic group on our Academic Thriving Index and found interesting results. We found statistically significant differences between the mean index scores for the following demographics:

- Race/ethnicity: We found a significant difference ($p<.05$) between the mean academic thriving scores of white students (m=38.94, sd=4.24) and students of color (m=36.23, sd=5.51). White sophomores at St. Olaf tend to have higher levels of academic thriving than sophomore students of color.
- First-generation students: We found a significant difference ($p<.05$) between the mean academic thriving scores of first-generation students (m=36.25, sd=5.21) and non-first-generation students (m=38.66, sd=4.53). Non-first-generation college sophomores at St. Olaf tend to academically thrive more than first-generation sophomores.

The following demographics have only nonsignificant differences between the mean scores:
- Gender: We found a nonsignificant difference ($p>.05$) between the mean academic thriving score for males (m=38.96, sd=4.75) and females (m=38.12, sd=4.66).

- Employed students: We found a nonsignificant difference (p>.05) between the mean academic thriving score for employed students (m=38.52, sd=4.43) and the mean academic thriving score for unemployed students (m=37.36, sd=5.71).

To test the relationship between students' overall confidence in their major(s) and academic thriving, we calculated a Pearson correlation coefficient and found a significant, positive, moderate relationship (r=.366, p<.05) between the two variables. Students who expressed higher confidence in their major(s) tend to thrive academically more than students who expressed less confidence. We then calculated both a Spearman rho correlation coefficient and a one-way ANOVA to test the relationship and compare the mean scores between the time when students decide on their major(s) (before college, during their first year, or this semester) and academic thriving, and found only a nonsignificant, negative relationship or difference (r=-.043, p>.05) between the two variables. The time when students decide on their major did not impact academic thriving.

We then tested the relationship between students' perceptions of feeling supported academically by professors and academic thriving. We calculated a Spearman rho correlation coefficient, and found there to be a significant, positive, moderate to strong relationship (r=.412, p<.05) between the two variables. Sophomores who feel supported academically by their professors also tend to be thriving academically more than sophomores who feel unsupported.

We then tested the frequencies and reasons for students meeting with professors outside of class with academic thriving and found mixed results. The following information was calculated by conducting several Spearman rho correlation coefficients. We found two significant relationships:
- Meeting with professors before or after class and academic thriving: We found a significant, positive, weak to moderate relationship (r=.155, p<.05) between the two variables. Students who meet more with professors before or after class tend to thrive academically more than students who meet less with professors before or after class.
- Meeting with professors to get clarity on an assignment and academic thriving: We found a significant, weak, positive relationship (r=.135, p<.05) between the two variables. Students who meet more with professors to get clarity on an assignment tend to thrive academically more than students who do not.

The following two relationships were calculated using a Spearman rho correlation coefficient and found to have only nonsignificant relationships:
- Meeting with professors during a scheduled meeting and academic thriving: We found a nonsignificant, weak relationship (r=.069, p>.05) between the two variables. Students who meet more with professors during a scheduled meeting are not thriving academically more than students who met less during scheduled meetings.
- Meeting with professors to discuss course material and academic thriving: We found a nonsignificant, weak relationship (r=.053, p>.05) between the two variables. Students who meet with professors to discuss course material more frequently are not thriving academically more than students who meet less with professors for the same reason.

We tested whether students' levels of academic thriving are related to their academic transition from first year to sophomore year and their GPA. We calculated Spearman rho correlation coefficients and found the following statistically significant results:
- Academic transition and academic thriving: We found a significant, positive, and strong relationship (r=.551, p<.05) between the two variables, also indicating a linear

relationship. Students who had a good academic transition from first year to sophomore year also tend to be thriving academically more than students who had a poor transition.

- GPA and academic thriving: We found a significant, positive, moderate to strong relationship ($r=.389$, $p<.05$) between the two variables, also indicating a linear relationship. Students with higher GPAs tended to be thriving academically more than students with lower GPAs.

Discussion

Prior literature stated that gender, race/ethnicity, employment status, and generational status impact students' levels of academic thriving (Graunke and Woosley 2005; Brown-Welty et al. 2010). When analyzing the different demographic variables, we found that some students are more likely to be thriving academically than others. There seems to be no difference between males and females and their level of academic thriving, and employment status also does not impact whether or not a student is thriving academically. There is a difference, however, between white sophomores and sophomore students of color. White sophomores at St. Olaf are more likely to be thriving academically than sophomore students of color. We also found that non-first-generation sophomores are more likely to be thriving academically than first-generation sophomores at St. Olaf.

Overall, we found that students tend to feel supported academically by their professors. However, students are only meeting with professors for academic reasons inconsistently and under certain circumstances. Students who meet with professors more frequently before or after class or to receive clarity on a homework assignment are more likely to be thriving academically than their peers who don't meet with professors for these reasons. These results support Graunke and Woosley's (2005) literature that faculty/student interactions improve students' academic thriving. Contradicting prior research is our finding that sophomores who meet more with professors during scheduled meetings or to discuss course material are no more or less likely to be thriving academically than their counterparts. This may be due to inadequate testing, as our survey did not capture the length and quality of the meetings with professors nor the depth of interaction.

Sophomores at St. Olaf with higher GPAs are, by definition, more likely to be thriving academically than sophomores with lower GPAs, although GPA is only a crude measure of thriving. Also, students who reported having a better academic transition from first year to sophomore year are more likely to be thriving academically than those with a worse transition. We expected these results as both support previous literature stating that higher GPAs and better academic transitions lead to academic thriving (Graunke and Woosley 2005; Wu et al. 2015).

CONCLUSION AND RECOMMENDATIONS

Our research focused on St. Olaf sophomore thriving, primarily on students' academic transition from first to second year, their academic thriving, which includes students' motivation and self-efficacy levels, and their grade point averages (GPA). Overall, our study led us to many insightful findings about sophomores at St. Olaf. Students who expressed greater confidence in their major(s) tended to have better academic transitions from first year to sophomore year. However, the earlier students decided on their major, the less likely they were to express confidence in it.

Students expressed that they felt supported academically by their professors, and those who meet more frequently with professors before or after class or to receive clarity on an assignment were more likely to be thriving academically than their peers who don't. However, we found no relationship between academic thriving and meeting professors during a scheduled meeting or to discuss general course material. We found it particularly interesting that students are more willing to meet professors before or after class than at any other time, and that meetings are primarily for asking specific questions about a homework assignment rather than conversational or personal meetings.

As the histogram of our Academic Thriving Index showed, there is a relatively normal distribution of thriving scores, with scores clustering toward the higher end of our curve. This means that overall, sophomores at St. Olaf tend to have moderate to higher levels of academic thriving, including academic motivation and academic self-efficacy.

One main strength of our research was the timing of survey distribution. Since our survey was distributed in November, sophomores had only been in their second year for about 10 weeks, and still had enough memory of their first year to offer us academic comparisons. Due to the small student population and the large response rate, we are able to generalize our results back to St. Olaf College sophomores overall and make recommendations for how to improve their academic thriving.

We are unable to generalize our findings beyond St. Olaf College because our sample was drawn from St. Olaf only. The timing of the survey could also be a limitation because students could feel differently in the remaining months of sophomore year. Due to the small percentage of respondents who were international or transfer students, more research is necessary on these populations as we could not include them in our bivariate analysis.

Based on our research, we offer four recommendations:
1. Increase academic thriving among sophomores by increasing student-professor interactions. Professors could require or strongly encourage meetings during the semester to check in and create a more positive, productive, and personal relationships with the students.
2. Boost first generation sophomores' academic thriving by implementing programs, events, or groups that focus on improving their academic motivation and self-efficacy.
3. Address the tendency for early deciders to be less confident in their major(s) by supporting them in waiting to declare a major until sophomore spring.
4. Boost declared students' confidence in their major by promoting involvement and excitement. For example, each department could organize a "majors" event twice a semester.

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Appendix A

Research Question 1: Which students at St. Olaf are thriving?

Table 1 (Expanded): Academic factors included in the thriving index

Engaged Learning	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree
I can find ways of applying the skills I'm learning in class to other areas of my life.	26.2% **(65)**	43.5% **(108)**	14.1% **(35)**	3.6% **(9)**	0.0% **(0)**
I find that I think about what I'm learning in classes even when I'm not in class or studying.	30.2% **(75)**	42.7% **(106)**	10.1% **(25)**	4.4% **(11)**	0.0% **(0)**
I participate actively in class.	22.6% **(56)**	44.4% **(110)**	12.1% **(30)**	7.7% **(19)**	0.8% **(2)**
Academic Determination					
My grades are one of my top priorities.	47.6% **(118)**	29.0% **(72)**	3.6% **(9)**	5.6% **(14)**	0.8% **(2)**
I tend to go beyond requirements and expectations for my assignments.	8.5% **(21)**	23.4% **(58)**	27.4% **(68)**	21.0% **(52)**	6.9% **(17)**
I regularly procrastinate on school work.	16.1% **(40)**	29.8% **(74)**	15.7% **(39)**	14.1% **(35)**	10.5% **(26)**
Positive Perspective	**Strongly agree**	**Somewhat agree**	**Neutral**	**Somewhat disagree**	**Strongly disagree**
I feel hopeful about my future after graduation from St. Olaf.	38.7% **(96)**	37.5% **(93)**	9.3% **(23)**	6.9% **(17)**	2.0% **(5)**
	To a very large extent	**To a large extent**	**To a moderate extent**	**To a small extent**	**Not at all**
I give up on the situation or walk away from it. (referring to a stressful situation)	2.0% **(5)**	6.5% **(16)**	13.7% **(34)**	29.8% **(74)**	31.9% **(79)**
I keep a positive perspective.	10.5% **(26)**	19.8% **(49)**	30.2% **(75)**	18.1% **(45)**	4.8% **(12)**
Diverse Citizenship	**Very different**	**Somewhat different**	**Both similar and different**	**Somewhat similar**	**Very similar**
How similar or different are you and your friends in racial/ethnic identity?	11.3% **(28)**	6.5% **(16)**	30.2% **(75)**	22.2% **(55)**	27.4% **(68)**
How similar or different are you and your friends in political identity?	4.0% **(10)**	6.9% **(17)**	19.0% **(47)**	33.5% **(83)**	34.3% **(85)**
	Extremely important	**Very important**	**Moderately important**	**A little important**	**Not at all important**
How important is making a contribution to the world in motivating you to participate in co-curriculars?	22.2% **(55)**	29.4% **(73)**	23.4% **(58)**	14.1% **(35)**	5.6% **(14)**
Social Connectedness	**To a very large extent**	**To a large extent**	**To a moderate extent**	**To a small extent**	**Not at all**
My friends and I listen to each other.	38.3% **(95)**	44.4% **(110)**	13.7% **(34)**	2.0% **(5)**	0.4% **(1)**
I believe my St. Olaf friendships will last beyond graduation.	25.4% **(63)**	31.9% **(79)**	29.8% **(74)**	8.9% **(22)**	2.4% **(6)**
	Strongly agree	**Somewhat agree**	**Neutral**	**Somewhat disagree**	**Strongly disagree**
I feel valued by St. Olaf College.	25.0% **(62)**	34.7% **(86)**	18.5% **(46)**	11.3% **(28)**	3.6% **(9)**

Scores and frequencies of sophomore thriving index

Thriving Index (15 items: 5 dimensions, 3 items each)

Score	Frequency	Valid Percent
34	1	0.5%
37	1	0.5%
38	1	0.5%
39	1	0.5%
40	2	1.0%
41	2	1.0%
42	2	1.0%
43	4	2.0%
44	2	1.0%
45	5	2.6%
46	4	2.0%
47	8	4.1%
48	7	3.6%
49	9	4.6%
50	11	5.6%
51	13	6.6%
52	8	4.1%
53	12	6.1%
54	17	8.7%
55	17	8.7%
56	11	5.6%
57	7	3.6%
58	16	8.2%
59	7	3.6%
60	9	4.6%
61	4	2.0%
62	2	1.0%
63	4	2.0%
64	4	2.0%
65	4	2.0%
68	1	0.5%

Statistics of the thriving index: mean, median, standard deviation, and valid and missing n counts

Statistics	
N (Valid)	196
N (Missing)	52
Mean	53.23
Median	54.00
Std. deviation	6.09

Independent samples t-test results:

Race/ethnicity and thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	1.372	.243	-2.316	181	.022	-2.348	1.014
Equal variances not assumed			-2.097	70.179	.040	-2.348	1.119

Group Statistics: N counts, mean, standard deviation, and standard error mean of race/ethnicity and thriving index

Race/ethnicity (grouped)	N	Mean	Std. deviation	Std. error mean
Students of color, including bi-/multi-racial	48	51.44	6.983	1.008
White students	135	53.79	5.660	.487

First generation students and thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.571	.451	2.796	184	.006	3.228	1.154
Equal variances not assumed			3.038	51.493	.004	3.228	1.062

Group Statistics: N counts, mean, standard deviation, and standard error mean of generational status and thriving index

Generational status	N	Mean	Std. deviation	Std. error mean
Non-first generation	153	53.80	6.137	.496
First-generation	33	50.58	5.397	.939

Gender binary and thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	3.812	.052	-.483	178	.630	-.503	1.042
Equal variances not assumed			-.435	68.146	.665	-.503	1.156

Group Statistics: N counts, mean, standard deviation, and standard error mean of gender binary and thriving index

Gender binary	N	Mean	Std. deviation	Std. error mean
Female	133	53.26	5.746	.498
Male	47	53.77	7.151	1.043

Employment status and thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.290	.591	-.647	177	.519	-.696	1.076
Equal variances not assumed			-.619	66.032	.538	-.696	1.123

Group Statistics: N counts, mean, standard deviation, and standard error mean of employment status and thriving index

Employment status	N	Mean	Std. deviation	Std. error mean
Not employed	43	52.77	6.542	.998
Employed	136	53.46	6.021	.516

Research Question 2: Does the amount of time students spend studying and working per week impact their GPA?

Spearman rho correlation coefficient results:
Amount of time students study per week and GPA

		Time spent studying per week	GPA (grouped)
How much time students spend studying per week in hours	Correlation coefficient	1.000	.174*
	Sig. (2-tailed)	.	.007
	N	240	200

*Correlation is significant at the 0.01 level (1-tailed)

Amount of time students work per week and GPA

		Time spent working per week	GPA (grouped)
How much time students spend working per week in hours	Correlation coefficient	1.000	.015
	Sig. (2-tailed)	.	.417
	N	204	201

Research Question 3: How do students' confidence in their major(s) contribute to their level of academic thriving?

Scores and frequencies of the major confidence index

Major Confidence Index (5 items: 5 questions, 5 items each)		
Score	Frequency	Valid Percent
6	2	1.0%
8	1	0.5%
10	3	1.5%
11	3	1.5%
12	6	3.0%
13	6	3.0%
14	9	4.5%
15	17	8.5%
16	15	7.5%
17	15	7.5%
18	19	9.5%
19	19	9.5%
20	19	9.5%
21	16	8.0%
22	15	7.5%
23	7	3.5%
24	11	5.5%
25	17	8.5%

Statistics of the major confidence index: mean, median, standard deviation, and valid and missing n counts

Statistics	
N (Valid)	200
N (Missing)	48
Mean	18.54
Median	19.00
Std. deviation	4.066

Spearman rho correlation coefficient results:

Students' confidence in their major (major confidence index) and academic transition

		Major confidence index	Academic transition
Major confidence index (5 items)	Correlation coefficient	1.000	.224*
	Sig. (2-tailed)	.	.001
	N	200	212

*Correlation is significant at the 0.01 level (1-tailed)

Students' confidence in their major (major confidence index) and major decision time

		Major confidence index	Major decision time
Major confidence index (5 items)	Correlation coefficient	1.000	-.353*
	Sig. (2-tailed)	.	.000
	N	200	145

*Correlation is significant at the 0.01 level (1-tailed)

Major decision time and academic transition

		Major decision time	Academic transition
Major decision time	Correlation coefficient	1.000	-.011
	Sig. (2-tailed)	.	.445
	N	149	146

Major decision time and GPA

		Major decision time	Academic transition
Major decision time	Correlation coefficient	1.000	-.035
	Sig. (2-tailed)	.	.341
	N	149	138

Students' confidence in their major and major decision time

		Major confidence index	Major decision time
Major confidence index (5 items)	Correlation coefficient	1.000	-.023
	Sig. (2-tailed)	.	.376
	N	200	184

Research Question 4: What factors impact students' levels of academic self-efficacy and motivation?

Table 6 (Expanded): Frequency of interactions with professors in these ways outside of class (NOT including advising appointments)

	0 times	1-2 times	3-4 times	5 or more times
Dropping in during office hours	10.3% **(24)**	36.6% **(85)**	33.6% **(78)**	19.4% **(45)**
Before or after class	17.3% **(40)**	35.5% **(82)**	26.0% **(60)**	21.2% **(49)**
During a scheduled meeting other than for advising	42.2% **(97)**	36.1% **(83)**	17.0% **(39)**	4.8% **(11)**
Meeting by chance	43.1% **(90)**	42.6% **(89)**	14.4% **(30)**	0% **(0)**
Electronically (such as via email, text, etc.)	3.2% **(8)**	18.1% **(45)**	52.7% **(59)**	0 **(0)**

Statistics of frequency of interactions with professors outside of class: N counts and mode

Statistics					
		Office hours	Before/after class	Scheduled meeting	Meeting by chance	Electronically
N	Valid	232	231	230	209	112
	Missing	16	17	18	39	136
Mode		1	1	0	0	2

Frequency of interactions with professors in these ways outside of class (NOT including advising appointments)

	0 times	1-2 times	3-4 times	5 times or more
To get help or clarification regarding a specific question or assignment	12.6% **(29)**	37.7% **(87)**	28.6% **(66)**	21.2% **(49)**
To discuss course material	24.3% **(56)**	40.0% **(92)**	21.7% **(50)**	13.9% **(32)**
To get help or advice about a personal difficulty	66.2% **(149)**	27.6% **(62)**	5.3% **(12)**	0.9% **(2)**
To discuss future opportunities (for research, internships, etc.)	45.9% **(105)**	40.6% **(93)**	10.0% **(23)**	3.5% **(8)**

Statistics of frequency of interactions with professors outside of class: N counts and mode

Statistics				
		Homework help or clarification	Discuss course material	To get help or advice	Discuss future opportunities
N	Valid	231	230	225	229
	Missing	17	18	23	19
Mode		1	1	0	0

Scores and frequencies of the academic thriving index

Academic Thriving Index (10 items: 10 questions, 5 items each)		
Score	Frequency	Valid Percent
25	3	1.4%
27	1	0.5%
28	3	1.4%
29	4	1.9%
30	5	2.4%
31	2	0.9%
32	8	3.8%
33	13	6.2%
34	8	3.8%
35	7	3.3%
36	11	5.2%
37	18	8.5%
38	21	10.0%
39	19	9.0%
40	14	6.6%
41	18	8.5%
42	18	8.5%
43	14	6.6%
44	12	5.7%
45	4	1.9%
46	2	0.9%
47	4	1.9%
49	1	0.5%
50	1	0.5%

Statistics of the academic thriving index: mean, median, standard deviation, and valid and missing n counts

Statistics	
N (Valid)	211
N (Missing)	37
Mean	38.20
Median	39.00
Std. deviation	4.755

Independent samples t-test results:

Race/ethnicity and academic thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	6.600	.011	-3.685	192	.000	-2.710	.735
Equal variances not assumed			-3.304	82.719	.001	-2.710	.820

Group Statistics: N counts, mean, standard deviation, and standard error mean of race/ethnicity and academic thriving index

Race/ethnicity (grouped)	N	Mean	Std. deviation	Std. error mean
Students of color, including bi-/multi-racial	56	36.23	5.510	.736
White students	138	38.94	4.242	.361

First generation students and academic thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	2.229	.137	2.811	195	.005	2.415	.859
Equal variances not assumed			2.573	47.556	.013	2.415	.938

Group Statistics: N counts, mean, standard deviation, and standard error mean of generational status and academic thriving index

Generational status	N	Mean	Std. deviation	Std. error mean
Non-first generation	161	38.66	4.530	.357
First-generation	36	36.25	5.206	.868

Gender binary and academic thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.201	.654	-1.104	188	.271	-.846	.766
Equal variances not assumed			-1.094	87.607	.277	-.846	.773

Group Statistics: N counts, mean, standard deviation, and standard error mean of gender binary and academic thriving index

Gender binary	N	Mean	Std. deviation	Std. error mean
Female	139	38.12	4.656	.395
Male	51	38.96	4.745	.664

Employment status and academic thriving index t-test

	F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	4.906	.028	-1.432	187	.154	-1.165	.814
Equal variances not assumed			-1.255	61.455	.214	-1.165	.928

Group Statistics: N counts, mean, standard deviation, and standard error mean of employment status and academic thriving index

Employment status	N	Mean	Std. deviation	Std. error mean
Not employed	45	37.36	5.713	.852
Employed	144	38.52	4.434	.370

Spearman rho correlation coefficient results:

Meeting with professors before or after class and academic thriving index

		Academic thriving index	Meeting before/after class
Academic thriving index (10 items)	Correlation coefficient	1.000	.155*
	Sig. (2-tailed)	.	.012
	N	211	210

Meeting with professors to get clarity on a homework assignment and academic thriving index

		Academic thriving index	Meeting to get clarity on an assignment
Academic thriving index (10 items)	Correlation coefficient	1.000	.138*
	Sig. (2-tailed)	.	.023
	N	211	210

Meeting with professors during a scheduled meeting and academic thriving index

		Academic thriving index	Scheduled meeting
Academic thriving index (10 items)	Correlation coefficient	1.000	.069
	Sig. (2-tailed)	.	.162
	N	211	209

Meeting with professors to discuss course material and academic thriving index

		Academic thriving index	Meeting to discuss course material
Academic thriving index (10 items)	Correlation coefficient	1.000	.053
	Sig. (2-tailed)	.	.221
	N	211	209

Academic transition and academic thriving index

		Academic thriving index	Academic transition
Academic thriving index (10 items)	Correlation coefficient	1.000	.551*
	Sig. (2-tailed)	.	.000
	N	211	206

GPA and academic thriving index

		Academic thriving index	Academic transition
Academic thriving index (10 items)	Correlation coefficient	1.000	.389*
	Sig. (2-tailed)	.	.000
	N	211	204

Appendix B

Survey Questions:

1. ***Think about the factors that motivated you to go to college, such as teachers, family, personal desires, career, independence, etc. What were the <u>two most important factors</u> that motivated you?***

   Response categories: Open-ended

2. ***Do you have a declared major or an intended major (or more than one) yet?***

   Response categories:
   - Yes, I have a declared major(s).
   - Yes, I have an intended major(s) but I haven't declared it yet.
   - No, and I don't yet have an intended major(s). (If this is your answer, please SKIP to question __.)

3. ***If you answered yes above, what is your declared or intended major(s)? (If you have or intend an individual self-designed major, simply write "individual." If you prefer not to reveal your declared or intended major(s), it would help to know which academic division of the college they are in: Fine Arts, Humanities, Natural Sciences and Math, Social Sciences, or Interdisciplinary Studies).***

   Response categories: Open-ended

4. ***When did you decide on your declared or intended college major(s)? (Select all that apply if you have more than one major.)***

   Response categories:
   - Before college
   - First year
   - This semester
   - Currently undecided (If you chose this answer, please SKIP to question __.)

5. ***Please indicate your level of confidence regarding each of the items below.***
   a. I am _____ in my choice of major(s) or anticipated major(s).
   b. My major(s) or anticipated major(s) leads directly to a specific career (e.g. nursing major and nursing career).
   c. My major(s) or anticipated major(s) reflect my personal interests.
   d. My major(s) will bring me success in the future (internships, jobs, income, etc.).
   e. My major(s) will lead me to happiness in the future.

   Response categories:
   - Extremely confident
   - Very confident

- Moderately confident
- Slightly confident
- Not confident at all

6. ***To what extent do you agree or disagree with each of these statements?***
   a. I am confident that I will reach my academic goals this semester.
   b. I can find ways of applying the skills I'm learning in class to other areas of my life.
   c. I find think about what I'm learning in classes even when I'm not in class or studying.
   d. I participate actively in class.
   e. I am less engaged in my sophomore classes than I was in my first-year classes.
   f. I am motivated to succeed academically by a genuine interest in my courses.
   g. I am motivated to succeed academically by outside sources such as the need to maintain a scholarship or athlete status or expectations from my family.
   h. My friends encourage me to complete my homework.

   Response categories:
   - Strongly agree
   - Somewhat agree
   - Neutral
   - Somewhat disagree
   - Strongly disagree

7. ***How much do you agree or disagree with the following statements?***
   a. My grades are one of my top priorities.
   b. My employment positively impacts my ability to do well in school.
   c. My professors adequately prepare students for productive group work in class.
   d. I regularly procrastinate on school work.
   e. I am prepared for exams and quizzes.
   f. I believe I can perform well, even when coursework becomes stressful.
   g. I tend to go beyond requirement and expectations for my assignments.

   Response categories:
   - Strongly agree
   - Somewhat agree
   - Neutral
   - Somewhat disagree
   - Strongly disagree
   - Not applicable

8. ***Are there other people or factors that have a positive influence on your homework completion or your grades?***

   Response categories: Open-ended