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The influence of career motivation on college major choice

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**THE INFLUENCE OF CAREER MOTIVATION ON COLLEGE MAJOR
CHOICE**

by

Candace R. Lehmann

A Thesis

Submitted to the
Department of Educational Services and Leadership
College of Education

In partial fulfillment of the requirement

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Thesis Chair: Tyrone McCombs, Ph.D.

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Dedications

This thesis is dedicated to the staff of the Office of Career Advancement and the University Advising center at Rowan University.

Acknowledgments

I dedicate this work to my parents. They have both been tremendously supportive throughout not only my academic career but my entire life. They have been there to listen to me complain about my struggles and gave me encouragement to continue to keep fighting. I would not be where I am today without their constant love and support.

I would like to thank my sisters who have been my personal editors and tutors during this project. They are my cheerleaders who constantly give me reality checks to remind me of all that I am capable of.

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Abstract

Candace R. Lehmann

THE INFLUENCE OF CAREER MOTIVATION ON COLLEGE MAJOR CHOICE
2018-2019

Tyrone McCombs, Ph.D.

Master of Arts in Higher Education

The goal of this study was to investigate whether current Rowan University students feel they are motivated to reach their career goals. The study further explored the attitudes and understanding of the advising process of students and their use of career planning related services. Subjects included Rowan University students who had visited the University Advising Center or the Office of Career Advancement. Student responses were gathered using an Advising and Career survey measuring responses on a Likert scale. Data were analyzed to determine the mean score of student career motivation and understanding of their role in achieving their career goals. Results of the data revealed positive attitudes about the advising students had received at Rowan University. Findings of the data revealed more positive attitudes toward Rowan advisors. Data also reveals overall students believe they are being properly prepared by Rowan University to achieve career goals.

Table of Contents

Abstract.....	v
List of Tables	ix
Chapter I: Introduction.....	1
Statement of Problem	2
Purpose of the Study	3
Significance of the Study	3
Assumptions and Limitations	4
Operational Definitions.....	5
Research Questions	6
Overview of the Report.....	6
Chapter II: Review of the Literature	8
Motivation for College Attendance	8
The Importance of a College Major	9
What Influences Student Major Choice	10
Career Goals and Career Motivation	11
Career Theory	13
Career Counseling.....	14
Career Campus Resources	15
Summary of Literature Review.....	16
Chapter III: Methodology	17
Context of Study	17
Population and Sampling	19

Table of Contents (Continued)

Data Collection Instrument20

Data Collection Procedures.....21

Data Analysis21

Chapter IV: Findings.....23

 Profile of Sample23

 Research question 127

 Research question 228

 Research question 330

 Research question 435

 Research question 537

Chapter V: Summary, Discussion, Conclusions, and Recommendations39

 Summary of Study39

 Discussion of Findings.....40

 Research question 140

 Research question 241

 Research question 342

 Research question 444

 Research question 546

 Conclusions.....47

 Recommendations for Further Practice48

 Recommendations for Further Research.....49

References.....50

Table of Contents (Continued)

Appendix A: IRB Approval52

Appendix B: Instrument: Student Survey54

List of Tables

Table	Page
Table 4.1 Student Majors	24
Table 4.2 Student Demographics	26
Table 4.3 Major Selection.....	27
Table 4.4 Major Choice Influence	28
Table 4.5 Career Plan.....	29
Table 4.6 Connecting Students to Careers	30
Table 4.7 Use of OCA Services	32
Table 4.8 Advisor Referral	32
Table 4.9 Advisor Information	33
Table 4.10 Connection to Major and Career Preparedness.....	36
Table 4.11 Expectations Post-Graduation.....	37
Table 4.12 Work Plans Post-Graduation	38

Chapter I

Introduction

A college degree has become the standard for recent high school graduates. The idea of getting a college degree is discussed as early as elementary school in many school districts. Knowing that college will be expected after high school, students must consider what attending college will mean to them. The earlier a student decides they want to attend college the earlier the college planning process begins. One major component in the college planning process is major choice. Major choice can limit or bolster the options of institutions to attend. This is why choosing a college major is so important. A college major will provide the student with a program guide of the required courses to earn a degree. For students who select a major prior to acceptance this creates a foundation of the expectations the student must meet. Students who do not choose a major prior to college acceptance or who change their major will require flexibility and adaptability in completing required courses for a degree.

Finances can often be seen as a deterrent to attending college. Rising college costs and student loan debt do not help the outlook of pursuing a college degree. Yet college continues to remain the standard next step after high school for most students. Data from a survey conducted after the great recession indicate the growing importance of employment opportunities, economic stability, college cost, and financial aid reasons why students attend college and the decisions they made during their college search process (Egan, Stozenberg, Zimmerman, Aragon, Sayson, & Rios-Aguilar, 2016). While students appear to see the value in earning a college degree they may not yet see the value in career exploration. Earning a college degree is not a guarantee to reaching a

career goal. However, a college degree can improve your overall life. According to the Bureau of Labor Statistics (2014), every additional level of education earned reduces your unemployment rate. One must be career motivated to be in the best position to reach their career goals.

Statement of Problem

College students assume they need to have a particular major in order to begin a career in their desired field but do not understand what other factors contribute to reaching their career goals. In some cases, a particular major will effectively prepare you to reach your career goals based on program requirement. Examples of majors that incorporate career motivation in their programs are Education, Accounting, Finance and Engineering.

However, the vast majority of college majors can be applied to countless career fields. According to the National Association of Colleges and Employers (NACE) (2017) employers will rank skills such as critical thinking and communication over more technical criteria when considering a candidate's career readiness. It is no longer necessary to earn a business degree to work in the business world. The best methods to work in an industry that does not require a degree in a specific major is through career motivation. The Bureau of Labor statistics (2017) recommends learning new technologies to gain flexibility in a career. They also recommend taking part in experiential learning. Experiential learning is the process of learning through direct experiences outside of the traditional classroom setting (The Regents of the University of Colorado, 2018). To gain experiential learning students are encouraged to pursue internships, part-time jobs, clubs, and organizations in their desired career area. By

taking the steps to educate oneself on a career field a student can develop not only the skills to work in that particular industry but also the connections with professionals currently in the field.

There appears to be a lack of career motivation at Rowan University, this causes students to have unrealistic career goals. Metz, Fouad, & Ihle-Helledy (2009), found that students career expectations do not resemble to reality of the current job market. Students are having higher expectations to work in the creative and artistic fields than there are available jobs. Their study also found the need for students to be more aware of the job market trends in order to have more realistic career expectations and goals. According to Bob Bullard, Director of the Office of Career Advancement at Rowan University, less than half of all Rowan undergraduates use the services of the Office of Career Advancement before graduation. Students need to be made aware of their career motivations when pursuing their career goals.

Purpose of the Study

This study was conducted to discover if student career motivations are influenced by their major choice. The study also examined the role played by academic advisors and career counselors in setting career goals and building career motivation.

Significance of the Study

A college degree is the first step to a better future. There is no college degree that is able provide a student with a guarantee of a career. In order to find a career and become successful in that career, one must take numerous steps. Unfortunately, there is no degree that can guarantee you a successful career. At Rowan University there is limited understanding of student career goals and career motivations.

There is a clear connection between major choice and career goals. This connection can be influenced by the student themselves, family, friends, or mentors. This study explores influences a student the most in their major decision making. Therefore, discovering what influences the career goals of a student. If students at Rowan University can acknowledge their influences of career goals there will be an increase in understanding why students choose certain majors.

Assumptions and Limitations

This study assumes that students honestly and willingly completed a survey about their career goals, career motivations, and academic major. This study also assumes that students understand their responsibility to use or take advantage of the career and advising services provided to them at Rowan University. Students who have not yet declared their major or who do not have specific career goals will likely respond to having less career motivation. While students who have chosen a major and have set career goals will respond as having more career motivation. This study also assumes students know the value of an effective career planning during their undergraduate career.

I foresee the number of students who have career insight to be limited. A limited understanding of career insight could produce inaccurate results of goals and motivations. An additional limitation would be the influence of outside forces, for example family and friends on a student's career goals. The lack of clarity of survey questions and response options was another limitation. This study assumes that all students have at least one career goal. The more career goals a student has will have an impact on the amount of career motivation a student will possess.

Finally, there is a possibility of researcher bias because of my personal experiences as an academic advisor for exploratory studies students. Also, I have a strong belief in career motivation because of the important role it played in my academic and professional journey.

Operational Definitions

1. Approaches: Specific techniques used by advisors or career counselors to effectively support student's academic, personal, and career goals.
2. Career Development: The process by which individuals establish career or academic goals.
3. Career Goal: A clearly developed intent to pursue a given occupation.
4. Career Insight: As defined by London (1983), the extent that an individual has realistic and clear perceptions about one's own strengths and weaknesses and career goals.
5. Career Motivation: The desire to exert effort to enhance career goals.
6. Career Plan: A general idea of career and employment trajectory.
7. Career Prestige: Choosing a career based on the increase of status it can offer.
8. Program guide: A list of required courses specific to each major at Rowan University.
9. Students: Current undergraduate students at Rowan University during the 2018-2019 academic year.

Research Questions

This study explored the following five questions:

1. Why do college students select a particular major?
2. Do college students have a desired career in mind when selecting a major?
3. Are college students using and valuing the career and advising resources available to them on campus?
4. What connections do college students make between college major choice and desired career?
5. What is the desired timeline for employment of college students upon graduation?

Overview of the Report

Chapter II offers a review of the literature important to this study. This review analyzes the data from current and past studies to discover the types of advising transfer students receive and find helpful.

Chapter III illustrates the methodologies and procedures utilized in this study. In this chapter the context of the study, population, sample selection, demographics, data collection tools, data collection processes, and a final analysis of the data collected.

Chapter IV presents the findings of the study. This section revisits the research questions and summarizes the data via statistical analysis on student attitudes and content analysis on student additional comments.

Chapter V summarizes the contents of the study. This chapter discusses major findings of the study and offers suggestions and recommendations for further study.

Chapter II

Review of the Literature

College students have varying ideas of what to expect from their college experience. The obvious first expectation is to obtain a degree. Other expectations can range from becoming involved on campus, making friends, gaining knowledge, and making an impact. One expectation a student may have is to pursue a desirable career after graduation. Alexander Astin (1978) found that students primarily attend college to prepare for the career world and more than half expect to make more money by earning a college degree. In order to find a career after graduation a student must first be motivated. Career motivation should be present in all college students. It is assumed that college students are working toward career goals while in school but it is unclear as to how their choice of major influences their career motivation. Therefore, we are hoping to find a connection between major and career motivation.

Motivation for College Attendance

The higher level of education an individual receives the lower their unemployment rate will be and the higher the salary they will earn (Chen: Bureau of Labor Statistics, 2017). College has become the expected next step after graduation from high school. The standard for college attendance was set decades ago but it has continued with the new generations. One thing that has changed in recent years is the consideration of economics in the decision to attend college (Egan, Stozenberg, Zimmerman, Aragon, Sayson, & Rios-Aguilar, 2016). With ever rising college cost and student loan debt students are now considering alternate college options to save money. Careers are one reason students still see the value in attending college. According to the

Bureau of Labor Statistics (2018), there is a projection of 10% growth in careers requiring a bachelor's degree by 2026, this is higher than the 7% growth expected in all other occupations. Most careers require a minimum of a college degree to earn a position. Some careers have preferred degree majors while others simply want proof of any degree major. The need for college degrees in employment has continued the consistent enrollment in colleges by the new generations.

The Importance of a College Major

All college students must choose a major in order to graduate but it is not required to choose a major before being admitted to a college. The choice of major should be made by the time a student is a sophomore. This helps students stay on the 4-year college plan, which is the present goal at Rowan. Rowan advertises *15 to finish*, 15 to finish reminds students they should be taking 15 credits each semester to graduate with 120 credits in four years.

Students who attend college without a declared major are labeled as undecided (Gordon, 2007a) or exploratory (Carduner, Padak, & Reynolds, 2011). These students begin their college careers without being in a specific major but not necessarily without a specific career goal in mind. Students may choose a school they want to attend without the consideration for if that school offers their desired major or if they will be accepted into their desired major. There are career related benefits to choosing a major. Students in specific majors can gain inside information about careers and their competencies and inclinations for careers in that particular major (Fricke, Grogger, & Steinmayr, 2018). This gives students with a major an advantage over those who are undecided or exploratory. Undecided and exploratory students could be seen as lacking career

motivation because the lack of major. Research indicates that student personality contributes to major choice but there is a lack of evidence whether students who are undecided or exploratory have differing work values than those students already in major programs (Balsamo, Lauriola, & Saggino, 2013).

What Influences Student Major Choice

Selecting a college major is not easily done. It can be one of the most significant decisions a student makes (Workman, 2015). Students can begin considering their college major from an early age. Students are more influenced by family when choosing a college major than any other authority (Workman, 2015). A college major choice may or may not have a direct connection to a student's career choice. According to person-environment fit or PE fit (Furnham, Petrides, Tsaousis, Pappas, & Garrod, 2005; Judge & Bretz, 1992; Judge & Cable, 1997), students will select their education and work settings according to personality characteristics and work values (Balsamo, et. al). PE fit is explained as the personality characteristics and work values an individual possesses (Furnham, Petrides, Tsaousis, Pappas, & Garrod, 2005). The PE Fit of an individual will be influenced by many outside factors, home environment, school environment, and even part time work environment. Family, friends, mentors, and media can all also play a role developing the PE fit of a student. The college search and selection process as well as the college major choice would be influenced by PE fit.

It is generally understood that certain majors are designed or expected to lead to certain careers. Consideration is needed for those students who are not accepted into a major that leads to the students desired career field. Majors like engineering, business, and nursing programs are highly competitive and are seen as leading to lucrative careers.

These programs often receive more applicants and aspirants than can realistically succeed. At Rowan University there are strict requirements to be accepted into one of the above-mentioned majors. According to Kim Vogt (2018), Academic Advisor at Rowan University the majority of students she meets are Business major aspirants that will not be able to complete the degree in the typically four-year plan because the student cannot meet class requirements to be accepted into the new major.

Students career goals can be mismatched with their work values, academic ability, and career motivations. This mismatch can be a result of the students own choice or due to external forces, such as family expectations, self-awareness, or economic climate. Career decisions can not only be influenced by others but in some cases those decisions can be dictated by others (Workman, 2015). Often students are not given the opportunity to decide their own career goals. Not being afforded the opportunity to make decisions regarding one's career goals can result in a mismatch of career goals and career motivation but also personal-environment fit.

Career Goals and Career Motivation

The perception that going to college will lead to a better paying job is true for many college students. For the past 40 years, workers with bachelor's degrees had earnings approximately \$15,000 greater than those with associate's degrees and approximately \$24,000 more than those with a high school diploma (Karageorge, 2014). Students are taught that college graduates earn more than high school graduates and this is proven by the numbers. In our society, earning potential and money are important to being able to live a comfortable life. One problem with current college students is they fail to use the best resources when researching careers. Exposure to a field of study can

potentially lead students to future careers (Fricke et al., 2018). There is a clear connection between majors and careers but the disconnect occurs when students lack career motivation. Career motivation requires students to exert more than the minimum effort in school, part time jobs, and internships in order to pursue their desired career. In the Office of Career Advancement at Rowan University there are many first-time visitors who are alumni or graduating seniors. This is troubling considering the competitive job market that exists.

College students cannot be blamed for not understanding the importance of their role in the career process. There is a lack of exposure to career options at the undergraduate level (Freeman, 2012). Since elementary school students have been trained to learn a certain way. They have been wired for instruction and lack the self-efficacy to take control of their learning and future careers. As students become more aware of the vast number of careers they can pursue students are setting higher career goals. However, there are some areas in which schools are playing an important role in the progress of student career motivation. In high school students can take classes and assessments on what career areas they would be best suited. College also offer career development related courses. One such course designed and implemented by Edward Freeman (2012), to address departmental goals relating to communication skills and knowledge of careers, while letting student actively participate in their career development. The course design and assignments allow students to do self-reflection and research to discover best suited careers for their personality and goals. While these examples are a step in the right direction more programming related to careers is needed in the lower levels of our education system.

Career Theory

Career theory through the lens of cognitive science was initially applied by Braunstein-Bercovitz in 2013. Cognitive science is a combination of psychology, linguistics, and neuroscience (Chen & Zhou, 2018). The grouping of these theories creates an outline for the incorporation of all areas into one, Cognitive Science (Chen & Zhou, 2018). Applying cognitive science to career theory opens the possibilities of research that can be done on current students. College students are individuals who are complex and ever changing. The college students of today have concerns and challenges that students 20 and 30 years ago did not. Internal characteristics of college students like expectations, goals, and aspirations have stayed relatively the same but it is the external factors that have had an impact on career planning of college students. The career theory model of cognitive science is divided into four dimensions: career planning, career exploration, career decision making, and field information (Jarcho, Berkman, & Lieberman 2011; Del Missier, Mantyla, & De Bruin, 2012). The four dimensions should be considered by each and every student planning a career. The dimensions can be moved through in no set order and will be revisited throughout a student's journey (Chen et al., 2018). Starting the career theory dimensions with career exploration makes logical sense. The next dimensions to progress through are field information, career planning, and finally career decision making. Even though an order takes shape it is not a rigid structure or stage model that must be followed in a set order. Chen et al. (2018) explained that when a student follows the cognitive science theory of career planning they are more aware of their ability to control certain career decisions. It is unclear if any current

Rowan students are following the cognitive science model in their career related experiences.

Career Counseling

The process of career counseling is not designed to immediately employ the student or client who has met with a career counselor. The purpose is to create a plan of action for the student or client in order to discover career options and pathways. The misconception that career counselors place people in employment has long been the understanding of those outside the area of career counseling. According to Jennifer Kidd (2007), no longer is career counseling's purpose to help people make smart decisions about a particular career path. Career counselors assist their clients with more broad concerns in relation to careers. The obvious topics of education and work history will be present but also work life balance, unemployment, and furthering education or career.

Career counselors at Rowan University typically meet with students for one-hour appointments. In these appointments the career counselor asks questions to determine why the student is visiting the office. The typical reasons for current students are to help with job search, but for alumni and recent graduates the conversation goes beyond the job search process. When a Rowan alumnus visits the Office of Career Advancement the usual reason is to make a career change. It is possible the alumnus has been working in an area unrelated to their college major and are now facing an internal conflict of the stigma associated with not using your college degree in your career.

The skills needed to be a career counselor are the same skills needed to be any type of counselor. A career counselor must be empathetic and build rapport with students. The career counselor will often be expected to give advice or recommendations

but this is not the role of counselors (Kidd, 2007). The student and career counselor must work together to build an action plan with goals the student will aspire to reach on the path to career satisfaction.

Career Campus Resources

The Office of Career Advancement at Rowan University serves all current Rowan students and alumni. They offer services in resume writing, mock interviews, career counseling, and other career events. According to Mr. Britt, Assistant Director of the Office of Career Advancement (OCA) the office is one of the most underutilized on campus. The underutilization of the OCA could be related to student feelings about career planning. Career planning was found to be major source of stress among college students, they tended to feel anxiety as early as freshman year (Deer, Gohn, & Kanaya, 2018). This is a major concern on college campuses given the weight placed on career success after earning a college degree. Students begin college under the assumption this is what will lead to a successful career but feel a sense of anxiety about taking the next steps in setting their career plan in motion.

Another reason a student fails to use career resources on campus could be the lack of awareness or avoidance. Surveys indicated less than half of college students were aware of the resources offered on their campus (Fouad et al., 2006; McKeown & Lindorff, 2011). The majority of college campuses in the U.S. offer some form of career related services, whether that be in advising or a career office. A student should assume the responsibility to become involved on campus but the university holds the responsibility to engage the students in order to have well utilized programming and offices. The Office of Career Advancement is just one office at Rowan University that

provides its students with valuable resources, skills and techniques to help them succeed in school and after graduation.

Summary of Literature Review

It is clear that college students face challenges in major selection and in career motivation. Therein lies the challenge that major choice must be overcome in order to graduate but career motivation is not a necessity to graduate. Career motivation can and should begin before a student steps foot on a college campus. The key is to discover your career motivation and begin taking the necessary steps to reach your goal while in college. College students are motivated by inner cognitive processes and emotions when they make career decisions, and those decisions involve motivation that stems from self-understanding and influence of their external environment (Fargen & Friedman, 2014). A level of self-awareness must be present in a student if they truly want to achieve their academic and career goals.

The college experience is not solely focused on academics. There are many programs and campus engagement efforts designed to guarantee students have the best experience possible. If the end goal of college is to be gainfully employed than why do students not take advantage of the services provided? The motivation needed to pursue a career is different than setting a career goal. Career motivation involves the active pursuit of a career by participating in organizations and services offered at a career center, work experience, research, and self-efficacy. To become motivated a student will first need to self-reflect. This process is also required when considering college major choice. A student needs to weigh their values, beliefs, and strengths in order to find the best major fit and the ultimately the best career fit.

Chapter III

Methodology

Context of Study

This study was conducted at Rowan University in Glassboro, NJ. According to Rowan University Fast Facts (2018), Rowan University is a public research institution in southern New Jersey. Rowan was originally founded as Glassboro Normal School in 1923. In the following years the school became the New Jersey State Teachers College at Glassboro when the school offered a four-year program. The school changed again to Glassboro State College with the expansion of curriculum, enrollment, and campus buildings. In 1992 with the \$100 million donation from Henry and Betty Rowan the school changed its name to Rowan College of New Jersey in recognition of the generous gift. The college changed its name a final time in 1997 when it reached University status.

An overview of Rowan Fast Facts (2018), indicates that Rowan currently serves 19,465 students in bachelors to doctoral degree programs on three campuses. Rowan students come from 41 states and 35 countries. Six thousand five hundred and forty-six students live in residence facilities on the main campus of Rowan University in Glassboro, NJ. Rowan offers 18 division III athletics teams. The average SAT score was 1,279 for the Fall 2018 regular-admit freshman. There is a 17:1 student to faculty ratio and an average class size of 22 students. Rowan University operates on a budget of \$519 million. Currently 31.72 percent of Rowan students are from under-represented groups.

The focus of this study is on students who visit the Office of Career Advancement and the University Advising Center. The Office of Career Advancement (OCA) and the University Advising Center (UAC) are presently two separate offices that were once

housed together in one department known as the Career and Academic Planning (CAP) Center. The separation of the Office of Career Advancement and the University Advising occurred when the university changed its academic advising model.

The Office of Career Advancement and the University Advising Center are both located in Savitz hall. Savitz hall is an administrative building on campus. This building was envisioned to be a one stop location for all student administrative needs. Savitz hall is home to the Registrar, Financial Aid, Residential Learning and Housing, Bursar, Admissions, Career Advancement, the University Advising center, Ascend, and the Academic Success Center.

Rowan University previously followed a faculty advising model where the primary advisor of each student was a faculty member. Presently, Rowan follows a new model where each major has an advising department staffed with professional advisors. The separation of the Advising and Career offices has created a two-step process for students. The typically Rowan student should visit their advisor for academic support and a career counselor for career guidance.

The Office of Career Advancement currently focuses on assisting students with career preparations and readiness. This includes resume critiques, mock interviews, and the job search process. The University Advising Center now provides strictly academic guidance for exploratory studies students and students changing their major. The study measures students' viewpoints of the advising and career experiences they have received at Rowan. The study also considers student motivation toward achieving personal career goals.

Population and Sampling

The target population for this study were students who visited the University Advising Center at Rowan University for change of major advising and students who visited the Office of Career Advancement for resume critique, mock interview or job search assistance. A sampling of convenience was used to select student participants. The majority of students visited the University Advising center either to change their major or to determine major requirements. The remaining students were those who visited the Office of Career Advancement for a resume critique, mock interview, or job search assistance. When a student visits the OCA for a resume critique, mock interview, or job search assistance they have a one on one meeting with a career counselor or intern to review their current resume. When a student meets with an advisor in the UAC they meet for approximately 30 minutes to review the new major requirements or to review class options and recommendations for the upcoming semester.

The target sample consisted of a population of 100 students at Rowan University. The sample size was determined by the average case load of advisors in the University Advising Center and number of referrals made to the Office of Career advancement. There were no restrictions placed on the number of times a student changed their major or on the number of years attending Rowan University. Therefore, there were no restrictions on the amount of times a student visited the University Advising Center or the Office of Career Advancement.

Data Collection Instrument

A *College Major and Career Motivation* survey was used to collect quantitative data. The instrument (Appendix B) used was self-designed specifically for the purposes of this study. I based the questions in the instrument on discussions and findings in the literature review as well as professional knowledge from experience in the advising and career fields at Rowan University. The 40-item questionnaire posed questions using a 5-point Likert type scale (Strongly Agree/ Somewhat Agree/ Neither Agree nor Disagree/ Somewhat Disagree/ Strongly Disagree) to measure student viewpoints about their current major, advisor, and career goals and motivation. The instrument consisted of eleven questions regarding student viewpoints on advising at Rowan, eleven questions regarding student viewpoints on career services at Rowan, and twelve questions regarding student major choice and career motivation. The remaining question were to gain basic demographic information such as current academic level, current major, and if the student transferred from another institution.

The instrument validity and reliability are based on the opinions of students who have visited the Office of Career Advancement and the University Advising Center. Confirmation of validity of the survey was also obtained from both the Assistant Director of the Office of Career Advancement and the Associate Director of Advising Services in the University Advising Center. The administration of the instrument was field tested on two undergraduate students currently attending Rowan University. No errors or problems of understanding of the questions were reported and the administration did not exceed 15 minutes. The survey was deemed valid because students were able to

choose what questions they responded to and were given questions that they could easily understand.

Data Collection Procedures

Prior to the collection of any data, the Institutional Review Board application (Appendix A) was submitted and approved. Permission was obtained from the IRB to collect data using the College Major and Career Motivation Survey. I personally administered the instrument to students at several locations. The survey was administered after advising meeting in the University Advising center, following a resume critique, mock interview, or job search in the Office of Career Advancement, and finally emailed to professors of the two following courses: Rowan 101: College Success and Career Planning & Development. The remaining surveys were administered by email through Qualtrics. Students were offered the option to begin the survey immediately and complete the survey at a later time and return it at an agreed upon date. To help build a stronger return ratio, I offered an incentive for completing the survey. The incentive was a snack bag of granola bars and cookies. To keep the data anonymous there was no personally identifiable data was collected on the survey. This study surveyed students ages 18 and over with a skip option in Qualtrics to end the survey if the student was not 18 or over. Consent was obtained by checking a box on the Qualtrics survey and then completing the survey.

Data Analysis

Data were analyzed in Statistical Package for the Social Sciences (SPSS) to determine the influence of major choice and career motivation based on the instrument. The demographic information was collected to gain background information on the

students who completed the survey. There was no identifiable information requested. For the purposes of this study there was no need to look at age, race, or gender. Therefore, the previously mentioned information is not included in the demographic section of the instrument. The background or demographic information collected examined grade level in college, current major, and finally if the student transferred from another institution. The goal is to determine if students are influenced to making career and major decisions and to determine their viewpoints on the experiences they have had with advising and careers at Rowan.

The independent variables in this study are current academic year, current major, and if the student has transferred from another institution. The dependent variables are the student opinions on the advising process, advisor interactions, advisor referral, the services offered in the OCA, the knowledge of career counselors, how the student chose a major, and if they believe that major will help them reach their career goals. Using the SPSS, I analyzed the data using descriptive statistics. The descriptive statistics focused on frequency distribution, percentages, means, and standard deviations of the variables. These areas were examined regarding the research questions.

Chapter IV

Findings

Profile of Sample

The subjects of this study were approached at the University Advising center, the Office of Career Advancement, via email, and in specific sections of the course Rowan 101 and the course Career planning and development on a voluntary basis from February to March 2019. The two courses are general education elective courses designed in an effort to support student success at Rowan. The Career planning course was not created or designed by the Office of Career Advancement. The total sample size for this study was 105, the desired sample was 100. To expedite the survey completion time, 83 surveys were administered in Qualtrics and 22 were printed from the Qualtrics site. The use of an online survey resulted in a yield of 105%.

Table 4.1 provided the breakdown of the various majors of the students surveyed. The highest major reported was Psychology with Biology and Exploratory studies reported the second most often.

Table 4.1

<i>Student Majors</i>		
<i>Variables</i>	<i>f</i>	<i>%</i>
Current Major		
Psychology	18	17.14
Biology	8	7.6
Exploratory Studies	8	7.6
Athletic Training	6	5.7
Law & Justice	6	5.7
Marketing	6	5.7
Computer Science	5	4.7
Education	4	3.8
Computing Informatics	3	2.8
Accounting	2	1.9
Human Performance	2	1.9
Management	2	1.9
Business	2	1.9
Communication	2	1.9
Community Health	2	1.9
Human Resources	2	1.9
Liberal Studies	2	1.9
Music Industry	2	1.9
Sociology	2	1.9
Advertising	1	0.9
Biochemistry	1	0.9
Economics	1	0.9
Engineering	1	0.9
Finance	1	0.9
History	1	0.9
Nutrition	1	0.9
Political Science	1	0.9
Public Relations	1	0.9
Radio/TV/Film	1	0.9
Supply Chain Management	1	0.9
Writing Arts	1	0.9

The diverse range of majors shown in table 4.1 provided insight to various career pathways. Based on a common issue of changing major, more and more students are becoming comfortable with not immediately selecting a major and choose to be undecided or exploratory (Workman, 2015). The ideal population was Exploratory Studies students at Rowan University. After low response rates, the instrument was distributed to a broader range of students, this included students with selected majors. The two largest majors with responses were Biology and Psychology. Biology and Exploratory Studies students responded at the same rate but were surpassed by Psychology undergraduates. The Bureau of Labor Statistics projects 23% job growth in career areas connected to Psychology degrees.

The 31 majors reported indicate the intended population was not targeted effectively. This study desired a higher response rate from students who identify as Exploratory Studies. The self-reporting of current major assumes the honesty of the student responding with the official major on their transcript and not the desired or intended major. This study assumed students understood the difference between an intended or planned major and the current major in progress as listed on official Rowan University documents.

Table 4.2 represents the student demographics of the student and shows that 61% were freshman, 16.2% were sophomores, 9.5% were juniors, and 13.3% were seniors. Table 4.2 also indicates transfer students made up 42.8% of the population surveyed and 51.4% of students were not transfer students, with the remaining students choosing not to answer or unsure.

Table 4.2

Student Demographics

<i>Variables</i>	<i>f</i>	<i>%</i>
Current Academic Year		
Senior	14	13.3
Junior	10	9.5
Sophomore	17	16.2
Freshman	64	61
Transfer Students		
Yes	45	42.8
Not sure	2	1.9
No	54	51.4
Missing	4	3.8

Tables 4.1 and 4.2 provided the needed demographic information on students sampled. Table 4.1 shows the large number of freshman students, totaling 64 of the 105-total sample. We are also able to discover from table 4.2 the number of transfer students. Transfer students were not a targeted population but I believe there was a need to identify those students. Table 4.1 lists all majors of the student sample. Psychology is the most popular with 10 more than the next majors, Biology and Exploratory Studies (undecided). Of the 105 students participating in this study there were over 30 majors. Rowan University offers 80 bachelor's degree programs (Rowan Fast Facts, 2018). With 37.5% Rowan majors represented we can assume there is an active effort to connect students with careers, advising, and the Office of Career Advancement.

Research question 1. Why do college students select a particular major?

The evaluation of student major selection began with determining what influenced a student when selecting their major. Official college major selection generally takes place in the college application process.

Table 4.3

Major Selection

Item	Family		Friends		Teacher/ Coach/ Counselor		Other		Ability/Skill	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
What influenced your major choice? <i>N</i> =97, <i>SD</i> =1.593, <i>M</i> =3.58, Missing=8	21	21.6	5	5.2	10	10.3	19	19.6	42	43.3

Table 4.3 illustrates that outside factors like family, friends, and a counselor, teacher or coach are not as common as a student’s individual ability or skills when selecting a major. The most common response for influence of major choice was ability/skill, with 43.3%. The next most common response was family with 21.6%. Friends had the least amount (5.2%) of reported influence on major selection.

Research question 2. Do college students have a desired career in mind when selecting a major?

Table 4.4 illustrates the percentages of students who have chosen their major based on their future career plans.

Table 4.4

Major Choice Influence

Item	Strongly Agree		Somewhat Agree		Neither agree nor disagree		Somewhat Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Your career plans influenced your major choice <i>N</i> =98, <i>SD</i> =.870, <i>M</i> =1.84, Missing=7	42	42.9	34	34.7	18	18.4	4	4.1	0	0

In Table 4.4 most students responded in agreement when asked if their career plans influenced their choice of major. The 42.9% strong agreement and 34.7% somewhat agreement indicated most students do have a career plan when selecting a college major. There were no responses of strong disagreement.

Table 4.5 illustrates whether students have career plans after graduation.

Table 4.5

Career Plan

Item	Yes		Maybe		No	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Do you have a career plan for after graduation? <i>N</i> =105, <i>SD</i> =0.675, <i>M</i> =1.67, Missing=0	47	44.8	46	43.8	12	11.4

In Table 4.5, 44.8% of students responded yes, they do have career plans after graduation. The responses of maybe and no were also illustrated. Maybe responses were at 43.8%, much higher than anticipated and no responses were 11.4%.

Research question 3. Are college students using and valuing the career and advising resources available to them on campus?

In Table 4.6 the data illustrate the connection between student understanding and value of utilizing resources provided by the Office of Career Advancement.

Table 4.6

Connecting Students to Careers

Item	Strongly Agree		Somewhat Agree		Neither Agree nor Disagree		Somewhat Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
The OCA provided helpful information about the career search process <i>N</i> =95, <i>SD</i> =0.882, <i>M</i> =2.2, Missing=10	26	27.4	26	27.4	42	44.2	0	0	1	1.1
The OCA staff were friendly and knowledgeable in assisting me with my career goals <i>N</i> =87, <i>SD</i> =0.942, <i>M</i> =2.21, Missing=18	28	32.2	15	17.2	43	49.4	0	0	1	1.1
After visiting the OCA, I feel more prepared to begin planning my career <i>N</i> =90, <i>SD</i> =0.882, <i>M</i> =2.31, Missing=15	21	23.3	23	25.6	44	48.9	1	1.1	1	1.1

Table 4.6 (continued)

Connecting Students to Careers

Item	Strongly Agree		Somewhat Agree		Neither Agree nor Disagree		Somewhat Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
After visiting the OCA, I am more confident in my career goals and plans <i>N</i> =97, <i>SD</i> =0.973, <i>M</i> =2.03, Missing=8	40	41.2	17	17.5	38	39.2	1	1.0	1	1.0
I plan to continue using the services of the OCA to assist in my career planning <i>N</i> =97, <i>SD</i> =0.954, <i>M</i> =1.92, Missing=8	44	45.4	20	20.6	31	32.0	1	1.0	1	1.0
I believe my career plans are achievable since attending Rowan <i>N</i> =97, <i>SD</i> =0.798, <i>M</i> =1.61, Missing=8	52	53.6	35	36.1	7	7.2	2	2.1	1	1.0

Table 4.6 illustrates the value students place on the career resources available at Rowan University. The student responses were neutral overall. There was one instance when a majority of students were in strong agreement. The question if students believe their career plans are achievable since attending Rowan had 53.6% strong agreement.

Table 4.7

Use of OCA Services

Item	Agree		Disagree		other	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I have used a service offered by the OCA <i>N</i> =103, <i>SD</i> 0.465, <i>M</i> =1.69, Missing=2	32	31.1	71	68.9	0	0

Table 4.7 provides the number of students who have used a service offered by the OCA. The majority of students (68.9%) indicated they have not used a service offered by the OCA.

Table 4.8

Advisor Referral

Item	Agree		Disagree		other	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
My advisor has referred me to the OCA <i>N</i> =99, <i>SD</i> =.675, <i>M</i> =1.75, Missing=6	38	38.4	48	48.5	13	13.1

Table 4.8 addressed research question 3 in regards to advisor referrals to the Office of Career Advancement. Academic Advisors play an important role in major progress and career planning.

At Rowan the Career and Advising offices are separate but work collaboratively to support student needs. Advisors should be referring students to the OCA as part of the advising process. There is a clear connection between the number of students who have been referred to the OCA by an Advisor and the students who have used one of the OCA career services.

Table 4.9

Advisor Information

Item	Strongly Agree		Somewhat Agree		Neither Agree nor Disagree		Somewhat Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
My advisor provides information concerning careers <i>N</i> =99, <i>SD</i> =1.160, <i>M</i> =1.98, Missing=6	50	50.5	14	14.1	26	26.3	5	5.1	4	4.0
My advisor helps me explore careers in my field of interest <i>N</i> =100, <i>SD</i> =1.207, <i>M</i> =2.24, Missing=5	35	35.0	27	27.0	24	24.0	7	7.0	7	7.0
My advisor encourages me to take an active role in setting career goals <i>N</i> =100, <i>SD</i> =1.198, <i>M</i> =2.20, Missing=5	38	38.0	23	23.0	26	26.0	7	7.0	6	6.0

Table 4.9 addressed the student impressions of an advisor's role in the career process. An embedded academic advisor is housed in the academic department they advise. Therefore, embedded advisors are expected to have a greater knowledge of the career opportunities for their assigned majors. Shown in table 4.9 there is a majority of advisors whom provide career information to students.

The concerning responses were in connection to the action an advisor could take in assisting with careers. Most students did not respond with strong agreement to the questions: My advisor helps me explore careers in my field of interest and My advisor encourages me to take an active role in setting career goals. It is undetermined if the advisor considers career planning one of their roles. Previous research has indicated there is a lack of awareness of career services by students on college campuses (Fouad et al., 2006). In addition to the lack of awareness of career services there was also a lack of readiness to make career related decisions (Fouad et al., 2006). There is room for improvement at Rowan in regards to the career services offered and how career planning should be seen as a process.

Research question 4. What connections do college students make between college major choice and desired career?

In Table 4.10 there is a clear connection demonstrated between student major choice and their feelings on its impact on their career. Students agreed in majority that their major is preparing them for the career field. It is also shown that students do not believe a different major would help in reaching the same career goals. The responses indicated a level of student understanding on the importance of choosing a major based on career plans.

Based on student responses to not changing their major even if it would not affect career plans indicated an assumed interest in their major by the student. Rowan students indicate that they have chosen a major to reach a desired career goal. There has been a reported increase of student stress toward the career planning process in recent years (Deer, Gohn, & Kanaya, 2017). The participants of this study agreed they were taking concrete steps toward career goals.

Table 4.10

Connection to Major and Career Preparedness

Item	Strongly Agree		Somewhat Agree		Neither Agree nor Disagree		Somewhat Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Do you believe your major will help you reach your career goals? <i>N</i> =103, <i>SD</i> =0.747, <i>M</i> =1.59, Missing=2	55	53.4	38	36.9	7	6.8	3	2.9	0	0
Do you feel your major is preparing you for your desired career field? <i>N</i> =104, <i>SD</i> =1.007, <i>M</i> =1.77, Missing=1	53	51.0	32	30.8	13	12.5	2	1.9	4	3.8
Do you feel you will use what you learned at Rowan in your career? <i>N</i> =104, <i>SD</i> =0.798, <i>M</i> =1.57, Missing=1	58	55.8	38	36.5	5	4.8	1	1.0	2	1.9
Do you think a different major would help you reach the same career goals? <i>N</i> =104, <i>SD</i> =1.196, <i>M</i> =2.58, Missing=1	20	19.2	37	35.6	22	21.2	17	16.3	8	7.7
If you could change your major and it would not affect your career plans would you? <i>N</i> =103, <i>SD</i> =1.475, <i>M</i> =2.74, Missing=2	28	27.2	25	24.3	15	14.6	16	15.5	19	18.4
I have taken concrete steps to achieving my career goals? <i>N</i> =98, <i>SD</i> =0.816, <i>M</i> =1.88, Missing=7	34	34.7	47	48.0	12	12.2	5	5.1	0	0

Research question 5. What is the desired timeline for employment of college students upon graduation?

Table 4.11 illustrates student plans for after graduation. This study asked whether students plan to go directly into the work force or if they have alternative plans.

Table 4.11

Expectations Post-Graduation

Item	Work		Graduate school/Continue education		Volunteer		Other	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
What do you plan to do after you graduate <i>N</i> =100, <i>SD</i> =0.7, <i>M</i> =1.43, Missing=5	65	65%	31	31%	0	0	4	4.0

Table 4.11 illustrates all possible student plans for after graduation. When students were asked what they planned to do after graduation 65% responded they wanted to go directly into the workforce. Following work was graduate school or continuing education at 31%. For the students who wanted to work upon graduation the majority wanted to begin that work immediately with 57.1%. Responses to this inquiry

were included to make connections between career goals and work goals. It was also intended to see if students desired to work immediately after graduating from Rowan.

It is reassuring to discover most students plan to work directly after graduation from Rowan. From the student responses it can be assumed the reasoning to attend college remains related to the opportunity of employability upon degree completion.

Table 4.12 illustrates the timeline for the students who responded they plan to begin working after graduation.

Table 4.12

Work Plans Post-Graduation

Item	Immediately		In a few months		Next year		other	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
If you plan to work after graduation, how soon would you like to start your career <i>N</i> =91, <i>SD</i> =0.92, <i>M</i> =1.66, Missing=14	52	57.1	25	27.5	7	7.7	7	7.7

Table 4.12 illustrates the majority (57.1%) of students plan to work immediately after graduating from Rowan. There was also a 27.5% student response that indicated they plan to work within a few months after graduation.

Chapter V

Summary, Discussion, Conclusions, and Recommendations

Summary of Study

The study investigated what factors influenced student major choice and whether current Rowan University students feel they are motivated to reach their career goals. The study further explored the attitudes and understanding of the services offered by the Office of Career Advancement (OCA) and University Advising Services. The subjects of this study were Rowan University undergraduate students of grade levels freshman to senior. The study investigated if Rowan students made connections between their choice of major and their desired career.

A self-designed Career and Major survey was administered. The survey included a total of 42 items, with the majority on a 5-point Likert type scale. The questions were organized by topic area for the efficiency and simplicity of capturing the most responses.

The anticipated grade level for this study was freshmen and sophomore undergraduate students. Table 4.2 demonstrates that the majority of student were freshmen (61%) and sophomores (16.2%), but a number of undergraduate seniors (13.3%) also participated in this study. The participation of students in their senior year does not skew the data collected. It was assumed senior undergraduates would be more removed from their major selection process. Therefore, they would not be able to respond effectively to the instrument.

This study considered transfer (42.8%) students an important population to measure. Transfer students can be an overlooked student group on college campuses. In

an effort to fully understand where students are in their academic progress beyond academic year, transfer status was crucial.

Overall, the study discovered that the majority (68.9%) of the students surveyed had not used any services offered by the OCA. Of the 31 majors reported Psychology was the largest group with 17.14%. Followed by Biology and Exploratory Studies both with 7.6%. Twenty-two of the reported majors had 2 or less students indicate they were in the academic program.

Discussion of Findings

Research question 1. Why do college students select a particular major?

Students responded (43.3%) that personal ability and skills were the greatest factor in determining their college major. The second greatest influence of major choice was family (21.6%), followed by other (19.6). Some examples of other responses were athletics, research, and media. The lowest influences were teachers, coaches, or counselors (10.3%) and finally friends (5.2%).

When students were asked about the connection between their career plans and major choice the majority of students were in some form of agreement. Many students strongly agreed (42.9%) they were influenced by their career when choosing a major and 34.7% of students agreed somewhat. This demonstrates the intentionality of student major choice. The amount of agreement proves that students do understand the connection between their major and career plans. It is not certain from this response if students choose majors based on salary expectations, career area growth, or career prestige.

Overall, there appears to be a career focus when selecting a college major. The depth of what skills and abilities students find to contribute to their career plans was not discovered in this study. The student sample population of mostly freshmen has to be taken into consideration and student self-efficacy questioned. The self-efficacy of a college student is not a constant but an evolving force. College students face many challenges when seeking employment and must maintain a level of resiliency when continuing to send resumes and go on interviews with low success rates (Deer et al., 2017). The study did not ask about the specific actions taken by students in the career process. Therefore, student self-perception may be skewed at this current stage of the student experience.

Research question 2. Do college students have a desired career in mind when selecting a major?

To determine if students have a desired career when selecting a major, students were asked if their career plans influenced their college major choice. There was an overall agreement to this question. Strong agreement from students was 42.9% and agreement was 34.7%. There was also 18.4% neutral response and 4.1% somewhat disagreement, but no strong disagreement recorded.

When students were asked about having a career plan after graduation all students responded. Some (44.8%) students responded yes but, a concerning number responded maybe (43.8%) to having a career plan. This response may not be accurate due to the lack of clarity of the question. A misunderstanding of the question would result in invalid data. An additional factor could be the number of participants that were freshmen in

comparison with the junior and senior students. Therefore, the responses should not be considered in future research.

Student responses to research question 1 and question 2 indicated that Rowan students are intentional in major choice and action toward career goals. The responses also indicate students understand the connection between a college major and career plans.

Research question 3. Are college students using and valuing the career and advising resources available to them on campus?

This research question was meant to examine the student perceptions of the services offered at Rowan. There is also the need to establish what students expect from the advisor student relationship and career counselor student relationship. The survey questions to establish results for research question 3 were focused on advisors and career counselors.

First this study wanted to determine how many students used a service offered by the Office of Career Advancement (OCA). The majority (68.9%) of students responded they had not used a service offered by the OCA. The assumption was students are aware of the OCA from a Rowan 101 course but have never used a service such as a resume critique or mock interview. The low percentage (31.1%) of students who have used an OCA service are later illustrated in neutral responses about quality of OCA services.

Multiple responses to questions of the effectiveness of the Office of Career Advancement and its services were not valid or valuable due to the lack of agreement or disagreement. Four questions specifically resulted in higher percentage of neutral responses. The questions were as follows: The OCA provided helpful information about

the career search process, the OCA staff were friendly and knowledgeable in assisting me with career goals, after visiting the OCA I feel more prepared to begin career planning, and lastly, after visiting the OCA I am more confident in my career goals and plans. Without the agreement or disagreement there is no way to determine how the services of the OCA are perceived by students.

Students who have used the services of the OCA reported that they plan to continue using those services resulted in positive agreement with 45.4% strongly agreeing and 20.6% somewhat agreeing. This indicates a student understanding of the importance of the OCA services in career preparation. There was a majority of students (53.6%) who strongly agree their career plans are achievable since attending Rowan University. This response indicated there is a positive perception of Rowan University.

In addition to OCA quality this study analyzed advisor support of career planning. Advisor perceptions by students were mixed. Advisors are not required to have career related discussions with students. The advisor is typically responsible for Academic course selection and academic planning. Students responded that 48.5% were not referred to the OCA by an advisor. This response rate indicates there is less advisor referral than anticipated prior to this study.

Students mostly agreed (50.5% Strongly Agree and 14.1% Somewhat Agree) that advisors provide information about careers in student appointments. Advisors appeared to be less assistive when it came to career exploration with 35% strong agreement and encouragement of career goals with 38% strong agreement. In both instances 24%-26% responded to neither agree nor disagree. The lack of agreement or disagreement could be the result of students never meeting with their advisor or not asking career related

questions in an advising meeting. Career exploration has been a typical function of the Office of Career Advancement and Advisors could feel this is not part of their role in advising. The Advisor would be justified in referring a student to the Office of Career Advancement for further in-depth career related conversations.

Research question 4. What connections do college students make between college major choice and desired career?

Students were asked a group of questions to determine student connections between their chosen college major and desired career plans. Students responded very positively when asked if they believed their major will help them reach their career goals. The majority (53.4%) of students responded they strongly agree with the previous questions and 36.9% of students responded with somewhat agreement. Participants responded with 51.0% strong agreement their major is preparing for their desired career field and 30.8% somewhat agreed. The strong disagreement was a mere 3.8% and somewhat disagreement was 1.9%. This indicates students have a strong belief in the connection of their major with the career world. When asked to consider if you will use what you learned at Rowan in your career the majority was again in agreement. Responses indicated 55.8% strongly agreed and 36.5% somewhat agreed with the question. The question was not specific to major in an effort to determine student concept of Rowan in connection with their career.

The next grouping of questions was to further understand the connection students made with their major. When asked if a different major would help them achieve the same career goals there was a wide range of responses. Of the participants 19.2% strongly agreed, 7.7% strongly disagreed and the remaining percentages fell in-between

somewhat agree (35.6%), somewhat disagree (16.3%) and neither agree nor disagree (21.2%). There was a large response rate to this question with 1 missing. The range of responses demonstrates a lack of understanding the role a major can play in reaching career goals. Although some students had strong agreement to previous major and career connected questions this specific question appeared to confuse some. The second question that could have been perceived as confusing due to the range of response percentages was if a student could change their major and it would have no impact on their career plans would they change their major. The range in responses could be associated with student interest and appreciation for their major. Another possibility could be students truly believe their major is a key factor to achieving their career goals and progressing in their career plan. The responses were, 18.4% strongly disagree with changing their major followed by 15.5% somewhat disagreeing, 14.6% neither agree nor disagree, 24.3% somewhat agree and 27.2% strongly agree. The strong agreement is the highest percentage but is not possible to determine the reasoning for the consideration. Students who responded in strong agreement could have experiences that would assist them with career related plans or they could be interested in careers where a certain major is not a requirement.

The last survey question related to major and career connections asked if students have taken steps to achieve their career goals. Knowing the majority of students in this sample are first year students it is possible they do not know what steps are considered valuable when progressing toward a career goal. Even with the majority of freshmen students in the sample size there was more agreement than disagreement or neutrality. No students strongly disagreed and less than a quarter somewhat disagreed (5.1%) and

were neutral (12.2%). Students responded as follows, 48% somewhat agreed and 34.7% strongly agreed. The responses in high agreement demonstrate student understanding of pursuing a bachelor's degree as a concrete step to achieving a career goal. If the sample size had a higher number of upperclassmen I believe the agreement would be even greater. There is a great possibility that strong agreement would be the majority if upper classmen who have completed research, internships, or career related work were the majority of the sample size.

Research question 5. What is the desired timeline for employment of college students upon graduation?

The final research question was included to learn what student expectations were upon graduation. In 2013 there were about 10% of full time and salaried workers aged 25 and over with a master's degrees. The pursuit of advanced degrees is expected to continue to grow in upcoming years (Torpey & Terrell, 2015). Most students (65%) surveyed responded that they plan to go into the work force after graduation. There were also 31% of students who indicated they planned to attend graduate school or continue their education in some way. Medical school and other certifications were not expressly listed as options. There was no option to select more than one response but there was an "other" selection available.

The students who plan to go directly to the work force after graduation could possible pursue advanced degrees and other educational experiences in addition to being in the career world. It is assumed the respondents who chose work are primarily focused on work and intend to work full-time. The students who do intend to work after graduation and indicated so on the survey were asked when they anticipated to start

working. Majority of students said immediately with 57.1%, following behind slightly is working in a few months at 27.5%. Beyond a few months the percentages are low and are not mentioned.

Conclusions

The result of this study showed that students were aware of the connection between majors and careers. A college major will provide a foundation or focus in an area of interest. This foundation will develop as a student progress through the required courses from lower level to upper level. The background knowledge gained from a major will hopefully lead students to the desired career path. There are instances where any major will be valuable in many career fields, but this is not a universal truth.

Motivation and action appeared to be strong among the Rowan student sample. Students were taking steps to meet goals they have set and possess the motivation to follow through. The large number of freshmen who participated in the study will have an influence on the impact of motivation and action in connection with careers. The earlier a student is made aware of resources and opportunities the more likely they will participate. This was shown through the responses to continuing using the services provided by the Office of Career Advancement.

The number of students who were empowered to select a college major based on personal ability and skills shows students are self-aware before entering college. The awareness did not appear to falter with the level of honesty in responses received. There were questions not completed or with neutral responses indicating student comfort with answer choice.

Overall, this study was able to demonstrate students understand the connection between college major choice and career plans.

Recommendations for Further Practice

1. All incoming freshmen and transfer students should complete the course Career Planning & Development. This course is currently designed for upperclassmen but it would be most beneficial to undergraduates to introduce the career planning process and the services of the Office of Career Advancement.
2. Required visits to University Advising and the Office of Career Advancement programming as experiential learning requirements. Students in majors are often provided more resources than students who are exploratory. The creation of a campus wide experiential learning requirement would establish equity across campus.
3. Mandatory Focus-2 assessment and result consultation with Career Counselor. The Focus-2 assessment is the Rowan career area tool that helps students understand where their strengths and skills fit best.
4. Collaboration between the Office of Career Advancement, Academic departments and Advising offices at Rowan. Increasing the awareness of the services and resources campus wide.
5. Increase in marketing of Career events, so students will be able to participate early in their college career.

Recommendations for Further Research

1. Further studies should be conducted with larger student populations to confirm findings of this study. It would include all students at Rowan, not those who visited the Office of Career Advancement and the University Advising Center.
2. Approach the study using a qualitative method. Student interviews or focus groups led by other students would provide candid, specific feedback about the major decision process, Rowan advising and career services, and career goals and plans.
3. Include more demographic information such as race, gender, ethnicity, first generation status, and socioeconomic status. Determine what demographic factors influence major choice and career plans.
4. Conduct this study in local high schools to determine when the college major and career planning process begins in relation to location, socioeconomic status, race, ethnicity, and gender.
5. Conduct a longitudinal study of students from middle school through senior year of college. Show the progress of student development in relation to career goals.

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Appendix A

IRB Approval

DHHS Federal Wide Assurance Identifier: FWA00007111

IRB Chair Person: Harriet Hartman

IRB Director: Sreekant Murthy

Effective Date:

eIRB Notice of Approval

STUDY PROFILE

Study ID: Pro2018000279

Title: The influence of career motivation on college major choice.

Principal Investigator:	Tyrone McCombs	Study Coordinator:	
Co-Investigator(s):	Candace Lehmann	Other Study Staff:	There are no items to display
Sponsor:	Department Funded	Approval Cycle:	Not Applicable
Risk Determination:	Minimal Risk	Device Determination:	Not Applicable
Review Type:	Exempt	Exempt Category:	2

CURRENT SUBMISSION STATUS

Submission Type:	Research Protocol/Study	Submission Status:	Approved
Approval Date:	2/7/2019	Expiration Date:	
Continuation Review Required:	Progress Report		

Pregnancy Code:	No Pregnant Women as Subjects	Pediatric Code:	No Children As Subjects	Prisoner Code:	No Prisoners As Subjects
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Protocol:	Recruitment email Protocol CL Consent Document	Consent:	There are no items to display	Recruitment Materials:	There are no items to display
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*** Study Performance Sites:**

Glassboro Campus 201 Mullica hill Road glassboro, NJ 08028

There are no items to display

ALL APPROVED INVESTIGATOR(S) MUST COMPLY WITH THE FOLLOWING:

1. Conduct the research in accordance with the protocol, applicable laws and regulations, and the principles of research ethics as set forth in the Belmont Report.
- 2a. **Continuing Review:** Approval is valid until the protocol expiration date shown above. To avoid lapses in approval, submit a continuation application at least eight weeks before the study expiration date.
- 2b. **Progress Report:** Approval is valid until the protocol expiration date shown above. To avoid lapses, an annual progress report is required at least 21 days prior to the expiration date.
3. **Expiration of IRB Approval:** If IRB approval expires, effective the date of expiration and until the continuing review approval is issued: **All research activities must stop unless the IRB finds that it is in the best interest of individual subjects to continue. (This determination shall be based on a separate written request from the PI to the IRB.) No new subjects may be enrolled and no samples/charts/surveys may be collected, reviewed, and/or analyzed.**
4. **Amendments/Modifications/Revisions :** If you wish to change any aspect of this study after the approval date mentioned in this letter, including but not limited to, study procedures, consent form(s), investigators, advertisements, the protocol document, investigator drug brochure, or accrual goals, you are required to obtain IRB review and approval prior to implementation of these changes unless necessary to eliminate apparent immediate hazards to subjects. This policy is also applicable to progress reports.
5. **Unanticipated Problems:** Unanticipated problems involving risk to subjects or others must be reported to the IRB Office (45 CFR 46, 21 CFR 312, 812) as required, in the appropriate time as specified in the attachment online at: <http://www.rowan.edu/som/hsp/>
6. **Protocol Deviations and Violations:** Deviations from/violations of the approved study protocol must be reported to the IRB Office (45 CFR 46, 21 CFR 312, 812) as required, in the appropriate time as specified in the attachment online at: <http://www.rowan.edu/som/hsp/>
7. **Consent/Assent:** The IRB has reviewed and approved the consent and/or assent process, waiver and/or alteration described in this protocol as required by 45 CFR 46 and 21 CFR 50, 56, (if FDA regulated research). Only the versions of the documents included in the approved process may be used to document informed consent and/or assent of study subjects; each subject must receive a copy of the approved form(s); and a copy of each signed form must be filed in a secure place in the subject's medical/patient/research record.
8. **Completion of Study:** Notify the IRB when your study has been completed or stopped for any reason. Neither study closure by the sponsor nor the investigator removes the obligation for submission of timely continuing review application, progress report or final report.
9. The Investigator(s) did not participate in the review, discussion, or vote of this protocol.
10. Letter Comments: *There are no additional comments.*

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Study.PI Name
Study.Co-Investigators

Appendix B

Instrument: Student Survey

College Major and Career Motivation Survey

Dear Students, You are invited to participate in a research study entitled “The influence of career motivation on college major choice”. You are included in this survey because you are an undergraduate student who has visited the University Advising Center at Rowan University. The number of subjects to be enrolled in this study will be 100 undergraduate students. The survey may take approximately 5 minutes to complete. Your participation is voluntary. If you do not wish to participate in this survey, then do not respond to this survey. Completing this survey indicates that you are voluntarily giving consent to participate in the survey. We expect the study to last until April 25, 2019. The purpose of this research study is to gauge the career motivation and knowledge of career planning of undergraduate students at Rowan University. There are no risks or discomforts associated with this survey. There may be no direct benefit to you, however, by participating in this study, you may help us understand how well-prepared Rowan students are for the career field. Your response will be kept anonymous. We will store the data in a secure computer file and the file will be destroyed once the data has been published. Any part of the research that is published as part of this study will not include your individual information. If you agree to participate in the survey or have any questions about the survey, you can contact me at or my thesis advisor, Dr. Tyrone McCombs at mccombst@rowan.edu but you will not be asked to give any personal identification. Sincerely, Candace Lehmann Graduate Student Higher Education: Academic Advising lehmannc@rowan.edu

Are you over the age of 18

Yes

No

Are you a current Rowan student?

Yes

No

Do you consent to taking part in this survey

- Yes
- No

What is your current academic year

- Freshman
- Sophomore
- Junior
- Senior

What is your current major

Do you have the same major as when you began at Rowan

- Yes
- No

Do you have a career plan for after graduation

- Yes
- Maybe
- No

Do you believe your major will help you reach your career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Are you a transfer student?

- Yes
- Maybe
- No

What type of institution did you transfer from

- New Jersey Community College
- In state 2 year institution
- Out of state 2 year institution
- In State 4 year institution
- Out of state 4 year institution
- Other

What influenced your major choice most

- Family
- Friends
- Teacher/Coach/Counselor
- Other _____
- Ability/Skills

Your career plans influenced your major choice

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Are you motivated to achieve your career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

I have made realistic career goals as a Rowan student

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

I am aware of my responsibility in reaching my career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

I have taken concrete steps to achieving my career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

I believe my career plans are achievable since attending Rowan

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

What do you plan to do after you graduate

- Work
- Graduate school/Continue education
- Volunteer
- Other _____

If you plan to work after graduation how soon would you like to start your career

- Immediately
- In a few months
- Next year
- Other _____

How frequently do you meet with your Academic Advisor

- Once a semester
- Twice a semester
- 3 or more times a semester
- Only prior to registration
- Other

How well does the Advising process at Rowan fit your needs

- Extremely well
- Very well
- Moderately well
- Slightly well
- Not well at all

My Advisor is a good listener

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor expresses interest in me as an individual

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor respects my opinions and feelings

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor is approachable and easy to talk to

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor checks to make sure we understand each other

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor provides information concerning careers

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor encourages me to take an active role in setting career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor helps me explore careers in my field of interest

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

My Advisor has referred me to the Office of Career Advancement

- Agree
- Disagree
- Other _____

I have used a service offered by the Office of Career Advancement

- Agree
- Disagree

If you have visited the Office of Career Advancement, what service have you used

- Met with a Career Counselor
- Resume critique
- Mock interview
- Other _____

If you have not used the Office of Career Advancement do you plan to do so in the future

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

The Office of Career Advancement provided helpful information about the career search process

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

The Office of Career Advancement staff were friendly and knowledgeable in assisting me with my career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

After visiting the Office of Career Advancement I feel more prepared to begin career planning

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

After visiting the Office of Career Advancement I am confident in my career goals and plans

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

I plan to continue using the services of the Office of Career Advancement to assist with my career planning

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Do you feel your major is preparing you for your desired career field

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Do you feel you will use what you learned at Rowan in your career

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Do you think a different major would help you reach the same career goals

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

If you could change your major and it would not affect your career plans would you

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree