

Rowan University

## Rowan Digital Works

---

Theses and Dissertations

---

7-8-2013

### Undecided students: a study of decision-making styles and choosing a college major at Rowan University

Kathleen Pasquarella

Follow this and additional works at: <https://rdw.rowan.edu/etd>



Part of the [Higher Education Commons](#)

---

#### Recommended Citation

Pasquarella, Kathleen, "Undecided students: a study of decision-making styles and choosing a college major at Rowan University" (2013). *Theses and Dissertations*. 391.  
<https://rdw.rowan.edu/etd/391>

This Thesis is brought to you for free and open access by Rowan Digital Works. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Rowan Digital Works. For more information, please contact [graduateresearch@rowan.edu](mailto:graduateresearch@rowan.edu).

**UNDECIDED STUDENTS: A STUDY OF DECISION-MAKING  
STYLES AND CHOOSING A COLLEGE MAJOR  
AT ROWAN UNIVERSITY**

by

Kathleen F. Pasquarella

A Thesis

Submitted to the  
Department of Educational Services, Administration, & Higher Education  
College of Education  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts in Higher Education Administration  
at  
Rowan University  
May 16, 2013

Thesis Chair: Burton Sisco, Ed.D.

© 2013 Kathleen F. Pasquarella

## **Acknowledgments**

I owe my deepest gratitude to Dr. Burton R. Sisco for his continuous support of my thesis study. His knowledge, patience, enthusiasm, and commitment to the highest standards have inspired and motivated me throughout this entire process. I would also like to thank Dr. MaryBeth Walpole for her lectures and discussions on related topics that inspired me to conduct this thesis study.

My sincere thanks to Dr. Rory McElwee, Assistant Vice President for Student Retention, for allowing me to conduct this research in the Center for Academic Advising and Exploration. I wish to express my warm and sincere thanks to Carol Eigenbrot, Interim Director of the Center for Academic Advising and Exploration for being a great mentor and supporter of my thesis. I wish to thank everyone in the CAAAdE and the Career Management Center for their overwhelming support throughout this study. I am particularly grateful to Samantha Scott for her help in distributing paper-based surveys and to June Ragone for her expertise and guidance in electronic survey distribution.

A special thank you to the students at Rowan University for their compliance with this study. Without their survey responses this study and new learning would not have been possible.

Lastly, I would like to thank my family for supporting me in all of my pursuits. I owe my loving thanks to my husband Dave Pasquarella and to my son David Pasquarella.

## **Abstract**

Kathleen F. Pasquarella

UNDECIDED STUDENTS: A STUDY OF DECISION-MAKING STYLES  
AND CHOOSING A COLLEGE MAJOR AT ROWAN UNIVERSITY

2012/13

Burton R. Sisco, Ed.D.

Master of Arts in Higher Education Administration

The purposes of this study were (a) to investigate the decision-making styles of undecided students who are in the process of choosing a major at Rowan University, (b) to investigate students' reactions to making a "real-life" decision such as choosing a major, and (c) to determine if there is a significant relationship between students' decision-making styles and the characteristics of gender, ethnicity, and class level. The subjects in this study were undecided, full-time, freshman and sophomore students in the Exploratory Studies Program (ESP) at Rowan University in Glassboro, NJ, during the 2012-2013 academic year. A survey consisting of 59 Likert scale items was used to collect data on demographics, decision-making styles and reactions to the decision-making process. Data analysis suggests that undecided students are thinking logically and conducting thorough searches in the decision-making process of choosing a major. Data analysis also suggests that undecided students see the outcome of their major decision as being life-framing. A weak positive correlation was found between gender and students' level of agreement that they often procrastinate when making important decisions. There were no statistically significant correlations between decision-making and ethnicity or class level.

## Table of Contents

Acknowledgments	iii
Abstract	iv
List of Tables	viii
Chapter	Page
<b>I. Introduction</b>	1
Purpose of the Study	2
Significance of the Study	2
Assumptions and Limitations	3
Operational Definitions	4
Research Questions	5
Overview of the Study	5
<b>II. Review of Literature</b>	7
Theoretical Studies on Student Development and Decision-Making	9
Relevant Studies on Decision-Making and Choosing a Major	15
A Direct Study on Undeclared Students and Choosing a Major	17
Exemplary Practices for Undecided Students	19
Summary of the Literature Review	21

## Table of Contents (Continued)

<b>III. Methodology</b>	23
Context of the Study	23
Population and Sample	24
Instrumentation	24
Data Collection	26
Data Analysis	27
<b>IV. Findings</b>	28
Profile of the Survey Sample	28
Analysis of Data	31
Research Question 1	31
Research Question 2	41
Research Question 3	47
<b>V. Summary, Discussion, Conclusions, and Recommendations</b>	49
Summary of the Study	49
Discussion of the Findings	50
Conclusions	54
Recommendations for Practice	57
Recommendations for Further Research	58

## Table of Contents (Continued)

References	59
Appendixes	
Appendix A: Institutional Review Board Approval Letter	61
Appendix B: Permission to Use Survey	63
Appendix C: Permission to Administer Survey	66
Appendix D: Survey Instrument	68
Appendix E: Grade Point Average (GPA) Table	73



## List of Tables

Table		Page
4.1	Demographics of Sample	28
4.2	General Decision-Making Style: Rational	32
4.3	General Decision-Making Style: Intuitive	34
4.4	General Decision-Making Style: Dependent	36
4.5	General Decision-Making Style: Avoidant	38
4.6	General Decision-Making Style: Spontaneous	40
4.7	Reactions Toward the Decision-Making Process	42
4.8	Correlation Between Gender and Undecided Students' Level of Agreement with Specific Decision-Making Styles	47

## **Chapter I**

### **Introduction**

Choosing a major is one of the most important decisions that college students must make. Many students who enter college have already chosen a major. But for others choosing a major is a difficult decision. Problems associated with major and career indecision among college students remain an issue in higher education. There are many costs associated with being an undecided student. First, there are financial costs incurred by students and their families when undecided students take unnecessary courses or transfer to other schools and find that some of their credits will not transfer. Second, undecided students often take more than four years to complete their college education. This may be caused by taking too long to decide on a major, changing majors too many times, or transferring to other institutions. Undecided students who end up spending more money and losing time often drop out of school. There are personal and economic consequences to students who fail to finish college as well as social consequences for the community. Furthermore, students who leave college affect the academic growth and revenue of institutions. Despite the programs and services available to help undecided students navigate the process of choosing a major, few studies have been done for the purpose of studying the decision-making styles of students in the process of choosing a major.

This thesis investigates the decision-making process of choosing an academic major. Specifically, it focuses on the relationship of undecided students' characteristics and decision-making styles and choosing a major at Rowan University.

### **Purpose of the Study**

The purpose of this study was to increase understanding of the decision-making process of undecided, full-time, freshman and sophomore students who were in the process of choosing an academic major. Specifically, this research examined undecided students in the Exploratory Studies Program (ESP) at Rowan University to describe student decision-making styles and how students decide on a major. This study also investigated the characteristics of undecided students.

### **Significance of the Study**

The findings of this study have the potential to help academic advisors who assist undecided students in choosing majors. A closer examination of students' decision-making processes can help academic advisors determine if students need additional support to learn decision-making skills. Undecided students who are taught how to cope with the uncertainty of choosing a major are less anxious. In turn they become involved in the choice process, successfully navigate their undergraduate years, stay in school for the duration of study, and graduate. Furthermore, undecided students in the process of choosing a major may also benefit from this study and gain insight about their own decision-making styles. This study will also add to the decision-making literature of choosing a major.

## **Assumptions and Limitations**

It is assumed that all participants in this study were undecided, full-time, freshman and sophomore students in the Exploratory Studies Program in the College of Humanities and Social Sciences at Rowan University. Also, it is assumed that students answered the survey questions truthfully and to the best of their ability.

There are likely to be limitations of this study due to participant's characteristics and its focus on students in the Exploratory Studies Program. Also, there is likely to be limitations related to the setting in which the study was conducted. For example, what may occur at Rowan University may not occur at another school due to differences in setting. The nature of the methodology may also limit the study. For example, students answering the survey may misinterpret a question or students may provide an answer but it is not their preferred answer. There is also potential for researcher bias while conducting this study and interacting with students in the Exploratory Studies Program. Procedural bias may also result if students were asked to complete a survey and they filled in their responses and completed the survey quickly. Or, procedural bias may also result due to the fact that I relied on others to distribute the survey to students. Sampling bias may also result since the type of sample selected may not be representative of all students in the Exploratory Studies Program.

## **Operational Definitions**

1. **Decided Students:** Decided students in this study refer to those students who are committed to an educational or career direction (Gordon, 2007).
2. **Decision-Making Process:** The mental processes (cognitive process) resulting in a course of action among several alternatives. Every decision-making process produces a final choice.
3. **Decision-Making Style:** The learned, habitual response pattern exhibited by an individual when confronted with a decision situation (Scott & Bruce, 1995).
4. **Exploratory Studies Program (ESP):** A program at Rowan University for incoming undecided students in the College of Humanities and Social Sciences.
5. **Practitioner:** A professional staff member at Rowan University engaged in the practice of a profession such as teaching or advising.
6. **Undecided Students:** Undecided students in this study refer to students in their freshman or sophomore year who are unwilling, unable, or unready to make educational and/or vocational decisions (Gordon, 2007).

## **Research Questions**

The study addressed the following research questions:

1. What are the decision-making styles of selected undecided students at Rowan University according to rational, intuitive, dependent, avoidant, and spontaneous distinct decision-making styles?
2. What are selected undecided students' reactions toward the decision-making process of choosing a major?
3. Is there a significant relationship between selected undecided students' decision-making styles and the following demographic information: gender, ethnicity, and class level?

## **Overview of the Study**

Chapter II provides a review of literature related to the study including a theory of student development in higher education, career decision-making theory, general decision-making theory, relevant studies on decision-making and choosing a major, as well as a direct study on undeclared students and choosing a major. Also included is literature on three exemplary programs.

Chapter III describes the methodology and the procedures used in the study including where the study took place, the sample population, student demographics, instrumentation, the survey, the data collection process, and data analysis.

Chapter IV provides the results of the study. This chapter focuses on addressing the research questions. A narrative explanation objectively reports what was found in the study and tables are used to summarize the data collected in the study.

Chapter V provides a summary of the study, discussion of the findings, and recommendations for practice and future research.

## **Chapter II**

### **Review of Literature**

Choosing a college major is often among the most difficult decisions that college students face. Many college students struggle with the decision-making process of choosing a major. Nationally there are estimated to be about 77% of all freshman and sophomore students who are deciding on a college major (McDaniels, Carter, Heinzen, Candrl, & Wieberg, 1994).

Carduner, Padak, and Reynolds (2011) found the following:

Administrators define undecided college students as those students who have not declared a major. In addition, there are college students who delay declaring their major even though they may have decided on a major, college students who have declared their major but who are still ambiguous about the decision, as well as frequent major-changers. (p. 14)

Research has shown that the majority of college students, especially freshman and sophomores, do not have the knowledge and experience to make a major or career decision (Kelly & White, as cited in Orndorff & Herr, 1996). Thus, problems related to major and career indecision among college students remains a major concern in higher education.



According to Gordon (2007), “there has been a decline in indecision research in the 1990s and into the new century (p. 47).” The decline is attributed to “an inadequate description of the academic and career indecision field, the absence of theoretical frameworks relating indecision to career development, and few counseling interventions have been studied” (Kelly & Lee, as cited in Gordon, 2007, p. 47). Although there are some studies available, this study fills a gap in the literature and describes what is known about the characteristics and decision-making styles of undecided freshman and sophomore college students in the process of choosing a major at Rowan University. First, I describe the characteristics of undecided freshman and sophomore college students in the process of choosing a college major at Rowan University. Second, I describe the decision-making styles of undecided freshman and sophomore college students. Third, I examine students’ reactions to making a “real-life” decision such as choosing a major. Last, I examine if there is a relationship between undecided students’ decision-making styles and gender, ethnicity, and class level. This chapter reviews the literature relevant to this study including the student developmental theory of Chickering (1969), the career decision theory of Tiedeman and O’Hara (1963), Harren’s (1979) decision-making theory, general decision-making theory of Scott and Bruce (1995), Klaczynski’s (2001) psychological theory of decision-making in late adolescence, as well as relevant studies on academic major and career decision making processes.

## **Theoretical Studies on Student Development and Decision-Making**

**Chickering's theory of student development.** Many college students go through a normal transition period and are not ready developmentally to make important decisions about their academic major and future career. Chickering (1969) identifies seven vectors of development that contribute to the formation of identity. His theory helps to explain how students' development in college can affect them socially, emotionally, physically, and intellectually. Chickering and Reisser (1993) assert:

(a) college students experience seven vectors "major highways for journeying toward individualization" of development throughout their college experience; (b) college students move through these vectors at different rates; (c) college students deal with issues from more than one vector at the same time; (d) navigating vectors is not necessarily linear; (e) the vectors build upon each other and lead to greater complexity, stability, and integration; (f) college students in order to achieve identity must proceed along these vectors developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. (pp. 34-52)

Chickering's theory also asserts that there are seven environmental factors including institutional objectives, institutional size, student-faculty relationships, curriculum, teaching, friendships, programs and services that influence student development (Chickering & Reisser, 1993). In addition, there are three admonitions that emphasize

the development of strong educational environments including integrating work and learning, recognizing and respecting diversity, and recognizing that learning and development involves new experiences and challenges (Chickering & Reisser, 1993). In the case of undecided freshman and sophomore students, Chickering's theory can be useful in explaining how college students are unique, develop at their own pace, and have different ability levels which effects students' decision-making process of choosing a major.

**Tiedeman and O'Hara's career decision theory.** Tiedeman and O'Hara (1963) proposed a theory of career decision-making that describes decision-making as a process made up of a series of tasks that individuals must progress through and accomplish. The decision-making process is divided into a planning phase and an action phase. There are four stages in the planning phase which include the exploration stage, crystallization stage, choice stage, and clarification stage. In the case of undecided first-year freshman, students accomplish a series of tasks as they progress through each of the planning stages. The exploration stage is the first stage that undecided students encounter as they begin to explore their strengths and weaknesses as well as academic and career interests. The second phase of the decision-making model is the crystallization stage. During the crystallization stage, undecided students who are progressing through the planning phase are able to examine the advantages and disadvantages of an academic major or career, evaluate alternative choices, and make temporary choices. The third phase of the decision-making model is the choice stage. Undecided students in the choice stage make

a definite major or career decision and are confident with their decision. The fourth and final phase of the decision-making model is the clarification stage. During this phase undecided students initiate and implement a plan of action.

There are also three stages in the action phase which include the induction stage, reformation stage, and integration stage. In the induction stage, the undecided student begins to get acquainted with the choice they have made and becomes proficient in the major or career. In the reformation stage, the undecided student is an advocate for the major or career and becomes more like others in the major or career. Finally, in the integration stage, the undecided student becomes fully integrated with others in the major or career and develops a sense of purpose.

Although Tiedeman and O'Hara's model provides a working knowledge of how students explore, crystallize, and clarify decisions, it oversimplifies the decision-making process and does not describe other factors and influences such as family members, resources within an institution, or knowing someone in an academic program or career field that need to be considered in the decision-making process. Also, their model does not account for how personal characteristics and behavior can affect the decision-making process.

**Harren's decision-making model.** Harren (1979) proposed a model of career decision-making which focused specifically on college students. Harren's model, based on Tiedeman and O'Hara's theory, describes the internal psychological process of decision-making, identifies important developmental and personality characteristics of the decision maker, and specifies environmental factors that influence decision-making. Harren describes a four-stage, sequential, decision-making process. In the awareness stage, individuals conduct a self-assessment of their present situation while also reflecting on the past and where they have been as well as the future and where they are going. In this stage individuals consider the consequences of their present situation and satisfaction with their prior decision-making. If dissatisfaction results, the individual moves into the planning stage. In the planning stage, individuals go through a process of identifying alternatives until they have narrowed down a specific decision and are satisfied with the decision. If a specific decision is not made then the process of expanding information, identifying alternatives, and narrowing choices continues until the individual is satisfied with a decision and is able to move to the commitment stage. In the commitment stage, as the individual's confidence with their decision increases, the commitment is integrated into the individual's attributes. Finally, in the implementation stage, plans are made to implement the decision unless the decision is affected adversely by internal or external factors.

Harren proposed that self-concept influences the decision-making process. Individuals who have a healthy self-concept tend to be more confident in their decision-making, purposive, and goal-oriented whereas individuals with a poor self-concept lack confidence and struggle with decision-making.

Harren also identified three decision-making styles which influence the decision-making process. Using rational decision-making, individuals make decisions logically and deliberately and accept responsibility for the decision they have made. In intuitive decision-making, individuals seek little information and make decisions based on “gut feelings” or what they “feel” is right. Finally, using a dependent approach to decision-making, individuals are heavily influenced by others when making decisions. These individuals tend to be passive and project responsibility for their decisions onto others.

Adapted from Chickering (1969), Harren also proposed that the student development concepts of autonomy, interpersonal maturity, and development of sense of purpose must be navigated and that an individual’s progress in the decision-making process depends on their progress in these developmental concepts

According to Harren (1979) other factors affecting the decision-maker include such conditions as the feedback an individual receives from others, level of anxiety within an individual, the amount of time an individual has to make a decision, the number of alternatives available to consider in the decision, and the consequences of the decision.

**A theory of general decision-making.** Scott and Bruce (1995) studied the decision-making habits and practices of individuals in the career decision-making process

and found that there are five different decision-making styles. Some individuals are rational decision makers who conduct thorough searches and use logic in their decision-making. Others are intuitive in their decision-making and rely on instincts and feelings when making a decision. Some individuals are dependent decision-makers and search for advice from others before making a decision. Another type of decision-making style is avoidance which is characterized by attempts to avoid decision-making. Finally, there is spontaneous decision-making which is characterized by making an immediate decision and a desire to complete the decision-making process quickly. The decision-making style of students is important to explore. Students who identify their personal decision-making style can gain insight on how they make decisions. Students can make improvements to their decision-making style by thinking about how they generally go about making a decision and evaluating what has worked or not worked for them previously. For students who lack a decision-making style, the discovery of a non-existent style can help students focus on a decision-making process.

Although Scott and Bruce studied how individuals go about making decisions and found that individuals use a combination of decision-making styles in making important decisions, they focused solely on the characteristic of decision-making style and did not examine other personal characteristics and factors such as the effects of emotion on the decision-making process of individuals.

**Psychological theory of decision-making in late adolescence.** Klaczynski (2005) identifies two different methods of decision-making. The analytical method of

decision-making is consciously controlled, effortful, and deliberate. Analytical decision-making operates on logic and attempts to break problems down into discrete components, thinking through, and examining all alternatives before arriving at a decision. In the case of undecided students using the analytic method, these students tend to evaluate all of their options before making important decisions such as choosing a major. The other method of decision-making is the heuristic or experiential method which requires less time to reach a decision, little cognitive effort, and has no basis in reasoning thus involving little or no attention to formal rules of decision-making. With this type of decision-making, decisions are made intuitively using a “gut feeling” or common sense. Undecided students using the heuristic method tend to limit the amount of information they need to consider when choosing a major.

### **Relevant Studies on Decision-Making and Choosing a Major**

A study conducted by Galotti et al. (2006) focused on the college major decision-making process of undergraduate students. Using a quantitative study, 135 students from Carleton College, who were about 15 months away from declaring a major, were surveyed. They were surveyed about the college major options they were considering, the criteria they were using and the importance of each criterion in choosing a major, their emotional responses to the decision-making process of choosing a major, the description of the decision-making process they used in choosing a major, and the sources of information they used or were planning to use in the decision-making process. In addition, students were surveyed on their decision-making style, their ability to plan



ahead, and their attitudes toward thinking and learning. The researchers were attempting to find out whether students with different decision-making styles perform differently when choosing a major and also where or at what points do students with different decision-making styles perform differently when choosing a major. Galotti et al. (2006) found that student decision-making styles do not change the way students structure the stages of the decision-making process when choosing a major. Furthermore, decision-making styles do not influence the way students collect information in the decision-making process of choosing a major. However, there was a relationship found between individual decision-making styles and the emotional responses to the decision-making process.

Another study by Carduner, Padak, and Reynolds (2011) focused on the academic major and career decision-making process of honors college students who were undecided about an educational or career choice. The study found that many participants frequently made use of rational choice processes for selecting an academic major and possible career. Undecided honors students were apt to conduct self-exploration, explore majors and careers, make a decision, and develop a plan and implement it. The study also found that participants used alternative processes for selecting an academic major and career. Participants frequently mentioned that other sources of information such as family, friends, teachers, advisors, university information, the Internet, were important in the academic and career decision-making process. Undecided honors students were also indecisive because of having multiple abilities and interests. The study also found that

multipotentiality presents a dilemma for undecided honors student. Many undecided honors students reported being confident that they can major in anything. However, they are more indecisive and less certain about a particular major. Undecided honors tend to need more time to explore their academic and career options.

### **A Direct Study on Undeclared Students and Choosing a Major**

A study conducted by Scharen (2010) at Rowan University from January through March 2010 examined the reasons, influences, and factors for selected undeclared students when choosing an academic major. Scharen used two instruments in her research. The first instrument was a cross sectional survey consisting of 6 background information items, 12 items related to reasons for choosing an academic major, and 17 items related to sources of information students thought were important in the major selection process. The survey was distributed to approximately 300 undeclared freshmen residents. Students were conveniently selected based on freshmen students living in Chestnut Hall during the 2009-2010 academic year. Of the 300 surveys distributed, 181 surveys were completed and returned. The second instrument was a series of interviews with 5 undeclared sophomore students who were choosing a college major. Students were purposely selected based on the sophomore students living in Edgewood Park Apartments during the 2009-2010 year. Students were interviewed three times over the course of three months. Students were asked questions about the majors they were interested in, why they were of interest, and how the major selection process was for them.

Scharen's (2010) research found that the majority of students made the decision to declare their major based upon the resources within the university, family member encouragement, and knowing someone in the related field. Also, of the data collected, 88% reported that personal interest in the program was a factor when declaring a major. Students' reported that interest in the program, motivation to continue in the program, and overall satisfactions with the major were all factors when declaring an academic program. Students also reported increased confidence once they had chosen a major. There was no significant relationship between students' class level and influences in choosing a major. There was a weak correlation between students' gender and resources within the university, influences from an advisor in the major, knowing someone in the related field, and knowing students in a similar program.

Scharen (2010) concluded that students believed that personal needs, skills, and occupation played a factor in choosing a major. Resources within the university, family, students in the major, and people already in the field influenced undeclared students' decision in choosing a major. Of the undeclared students surveyed, 52% strongly agreed or agreed that career information was the most important type of information that should be made available. Students were happy and more confident once they declared a major. Scharen (2010) made several suggestions for practice including having the Career and Academic Planning (CAP) Center survey students to determine further factors and influences when declaring major, providing undeclared students with a workshop on the process of declaring a major, and offering career counseling workshops to explore career

opportunities. Scharen also made several recommendations for further research including conducting a study to determine how successful academic advising sessions are with undeclared students in the process of declaring a major at Rowan University.

### **Exemplary Practices for Undecided Students**

There are many outstanding programs and services offered by colleges and universities to serve undecided students. The University of Wisconsin-La Crosse and its Academic Discovery Lab (ADL) is actively engaged in working with undecided students on their campus and has been highly effective in helping students choose a major and establish career goals. Prior to the opening of the ADL, the university's center responsible for academic advising and the office responsible for career advising were perceived poorly by students. Students failed to use the services and programs of each of these offices because they were confused about where to go for guidance. The findings of a task force suggested that the university establish a campus center jointly operated by faculty and career services staff. According to Korschgen and Hageseth (1997), in its first year of operation, the ADL served more than 1,200 students. Almost 40% of students using the ADL were undeclared students. Lab users were more than likely to remain in school (84% were still enrolled a year later versus 75% of non-users) and more likely (38%) to have declared a major than non-lab users (Korschgen & Hageseth, 1997).

At the Worcester Polytechnic Institute, administrators initiated The Major Selection Program (MSP) in 1989. The program provides services to assist undecided students in the selection of a major. A total of 138 freshmen or 20% of the 1989

freshman class participated in this voluntary program. The program is comprised of a seminar, a career resource library, and a Professionals-In-Action program that allows undeclared students to spend the day with professionals at work. According to Groccia and Harrity (1991), students were almost unanimous that the MSP helped them to make an informed decision about their major. At the end of the first semester, 76% of the undecided freshmen who participated in this program had declared a major compared with 41% of undecided freshmen who did not participate in the MSP (Groccia & Harrity, 1991).

Pennsylvania State University created the Division of Undergraduate Studies (DUS) in 1973 to serve the academic needs of undecided students. This division serves as the academic home of undecided students until they declare a major. Access to a primary advisor and the most up-to-date advising resources are key components of this program. For example, the DUS Navigator is a Web-based educational planning program for first-year students at Penn State. This program is especially useful for students who are exploring majors. Through the Navigator, undecided students can participate in lessons that will help them clarify their interests and abilities. The Navigator also enables undecided students to improve the way they obtain information about academic majors and careers and helps students to develop decision-making skills (Gordon, 2007).

## **Summary of the Literature Review**

The literature presented examines a theory of student development in higher education, career decision-making theory, a decision-making theory specifically for college students, a general decision-making theory, and a psychological theory of decision-making that occurs in late adolescence. Student development theory helps practitioners to understand the transition process of students, particularly undecided students who are in the process of making an academic and possible career decision. Decision-making theory also helps to enhance practitioners' understanding of undecided students. Practitioners who understand the decision-making styles of undecided students can offer more effective interventions to assist these students. Understanding the characteristics of different types of students also allows practitioners to create an environment that encourages and supports the undecided student.

Furthermore, the relevant studies on decision-making and choosing a major helps to explain indecision and identifies ways in which students might structure the decision-making process. According to Gordon (2007), "the results of all the years of research efforts have only confirmed the prevailing consensus that undecided students comprise a complex, heterogeneous group and their reasons for indecision are just as varied" (p. 4). This research looks at the characteristics and the decision-making styles of undecided freshman and sophomore college students in the decision-making process of choosing a major at Rowan University. The gap between enrolling in college as a freshman or sophomore and completing a degree as a senior is widening. More research is needed to

investigate the characteristics and decision-making styles of undecided freshman and sophomore college students in the process of choosing an academic major and career.

## **Chapter III**

### **Methodology**

#### **Context of the Study**

The study was conducted in the Center for Academic Advising & Exploration (CAAdE) at Rowan University, Glassboro, NJ. Rowan University founded in 1923 as a normal school specializing in training teachers, is a four-year comprehensive institution that provides liberal arts education as well as professional preparation from the baccalaureate through doctoral level (Rowan University, 2012). Rowan University is comprised of eight colleges including the Rohrer College of Business, College of Communication and Creative Arts, College of Education, College of Engineering, College of Graduate and Continuing Education, College of Humanities and Social Sciences, College of Performing Arts, and the College of Science and Mathematics, as well as the School of Biomedical Sciences and the Cooper Medical School of Rowan University and offers 15 academic degrees.

The CAAdE provides advising as well as other services to all undecided students in the Exploratory Studies Program (ESP), freshmen and sophomore students in Biological Science and Computer Science, freshmen in English, students in the Psychology minor, and Spanish. The CAAdE staff includes a director, two full-time assistant directors and part-time academic advisors. The Exploratory Studies Program (ESP) is the academic home within the College of Humanities and Social Sciences for students who have not yet declared an academic major.



## **Population and Sample**

The target population for this thesis is all undecided undergraduate students in New Jersey during the 2012-2013 academic year. The available population was undecided freshman and sophomore college students in the Exploratory Studies Program (ESP) at Rowan University in Glassboro, NJ, during the 2012-2013 academic year. The random sample for this quantitative study focused on all undecided freshman and sophomore college students in the Exploratory Studies Program (ESP) who visited the Center for Academic Advising & Exploration (CAAdE). The targeted number of students who received this survey was 260. Surveys were directly administered to students who visited the CAAdE. Participation was voluntary and all answers were kept confidential.

## **Instrumentation**

The instrument used to assess students' characteristics and decision-making styles was a paper survey comprised of three sections. The first section collected demographic information. Information for this section was based upon survey items from the 2012 CIRP Freshman Survey (Higher Education Research Institute, 2012) except for the questions about which campus students attend, whether or not students are in EOF/MAP, and current GPA. The second and third sections of the survey were adapted from surveys used in previous studies.

Permission was granted to replicate these two instruments in the current survey (Appendix B).

Galotti et al. (2006) adapted the *General Decision-Making Style* (GDMS) instrument from Scott and Bruce (1995) and used it in their study of decision-making styles of college students in the process of choosing a major at Carleton College. The instrument contained 30 statements which consisted of six items for each of the five decision-making styles (Rational, Intuitive, Avoidance, Dependent, and Spontaneous) and used a 7 point Likert scale. Each item is anticipated to measure a specific type of decision-making style. The internal reliabilities, computed with coefficient alpha, were .77, .82, .87, .81, and .87 respectively for the Rational, Intuitive, Avoidance, Dependent, and Spontaneous scales. These values were consistent with the values reported in the Scott and Bruce (1995) study.

Galotti (1999) developed the *Reactions to Decision-Making* survey for her study which focused on the way students at two southeastern Minnesota colleges make decisions when choosing an academic major. This instrument measured students' emotional responses to the decision-making process. The instrument contained 21 statements and used a 7 point Likert scale. Participants responded to each statement by selecting an integer between 1 (not at all) and 7 (completely). The questions were taken directly from each of these survey instruments and used in this current study.

Following approval from the Institutional Review Board of Rowan University (Appendix A), the survey was pilot tested by students in the Exploratory Studies Program

to obtain feedback on the survey's readability and validity. Next, the survey was administered to undecided freshman and sophomore students in the Exploratory Studies Program (ESP) at Rowan University who visited the CAAde.

The survey consisted of 59 Likert scale items and contains three sections: Background Information, Decision-Making Styles, and Reactions to the Decision-Making Process. The Background Information section has 8 items and focuses on participant's demographic information. The Decision-Making Styles section is comprised of 30 Likert scale items and asks participants to rate agreement with statements about how they make decisions. In this survey a 5 point Likert scale will be used because it is comparable to a 7 point Likert scale and will likely produce the same results. The Reactions to the Decision-Making Process section asks participants to answer 21 Likert scale items which focus on students' emotional responses to the decision-making process. The Cronbach Alpha reliability coefficients in the current survey were .74, .76, .89, .74, and .85 respectively for the Rational, Intuitive, Avoidance, Dependent, and Spontaneous scales indicating internal consistency of the items in each factor grouping.

### **Data Collection**

Following approval from the director of the Center for Academic Advising & Exploration (Appendix C) the survey (Appendix D) was distributed to undecided freshman and sophomore students who visited the CAAde. As part of the survey, participants were provided with information about informed consent and an explanation that participation was voluntary and would be kept anonymous. Also, an incentive of a

snack item was offered to participants to complete a survey. Participants finished the surveys immediately after receiving it and returned them directly to me.

### **Data Analysis**

The independent variables for this study are age, gender, ethnicity, class level, enrollment status, campus location, EOF/MAP status, and GPA. The dependent variable for this study is the decision-making styles of undecided freshman and sophomore college students who are in the process of choosing an academic major. The data were analyzed using the Statistics Package for the Social Sciences (SPSS) computer software. Descriptive statistics including frequency distribution mean, standard deviation, and percentages as well as bivariate correlations (Pearson product-moment calculations) were used to examine the data in regards to the research questions.

## Chapter IV

### Findings

#### Profile of the Survey Sample

The subjects for this study were randomly selected from undecided freshman and sophomore college students in the Exploratory Studies Program (ESP) at Rowan University during the 2012-2013 academic year. Of the 260 surveys distributed, 118 completed surveys were returned, yielding a response rate of 45%. Table 4.1 displays demographic data of the randomly selected sample.

Table 4.1

*Demographics of Sample (N = 118)*

Variable	<i>f</i>	%
Age		
18	37	31.4
19	55	46.6
20	18	15.3
21	6	5.1
22	2	1.7
Gender		
Male	64	54.2
Female	54	45.8
Racial/Ethnic Identity		
Black/African American	11	9.3
American Indian/Alaska Native	13	11.0
Asian/Pacific Islander	4	3.4
Hispanic/Latino	10	8.5
White, Non-Hispanic	69	58.5

Table 4.1 (continued)

Variable	<i>f</i>	%
Other	3	2.5
Choose not to indicate	8	6.8
Class Level		
Freshman	87	73.7
Sophomore	29	24.6
Choose not to indicate	2	1.7
Enrollment Status		
Full-Time	117	99.2
Choose not to indicate	1	.8
Campus Location		
Main Campus	115	97.5
Camden Campus	3	2.5
EOF/MAP Student		
Yes	21	17.8
No	87	73.7
Choose not to indicate	10	8.5

The subjects were between the ages of 18 and 22, with the majority (46.6%) being 19 years of age. There were 64 (54.2%) male and 54 (45.8%) female students that responded to the survey. In terms of racial/ethnic identity, there were 69 (58.5%) White, Non-Hispanic students, 13 (11%) American Indian/Alaska Native students, 11 (9.3%) Black/African American students, 10 (8.5%) Hispanic/Latino students, 4 (3.4%) Asian/Pacific Islander students, 3 (2.5%) students of other racial/ethnic identity and 8 (6.8%) students who chose not to indicate their racial identity. There were 87 (73.7%) freshman, 29 (24.6%) sophomore students and 2 (1.7%) students who did not

report their class level. In terms of enrollment status, 117 (99.2%) reported they were enrolled fulltime and 1 (.8%) did not indicate enrollment status. There were 115 (97.5%) students who attended Rowan University's Main Campus and 3 (2.5%) who attended the Camden Campus. Furthermore, 87 (73.7%) students indicated they were not an EOF/MAP student, 21 (17.8%) students indicated they were an EOF/MAP student, and 10 (8.5%) students did not indicate whether or not they were an EOF/MAP student. In terms of GPA, the overall average GPA was 2.90532. There were 110 (93%) students who reported GPA and 8 (7%) students who did not report GPA. The range of GPAs varied from 1.00, the lowest, to 4.00 the highest. A GPA of 3.0 was the most frequently reported GPA. (Appendix E) Of the students who reported GPA, 27 students reported having a GPA of 3.5 or above and 57 students reported a GPA less than 3.0.

## **Analysis of Data**

Research Question 1: What are the decision-making styles of selected undecided students at Rowan University according to rational, intuitive, dependent, avoidant and spontaneous decision-making styles?

In terms of rational decision-making, as shown in Table 4.2, 90.7% of students either agreed or strongly agreed that when they make decisions they weigh the possibilities. Eighty-five percent of students either agreed or strongly agreed that they make decisions in a logical and systematic way. Seventy-nine percent of students either agreed or strongly agreed that when making a decision, they consider various options in terms of a specific goal. Furthermore, 65.3% of students either agreed or strongly agreed they double-check information sources to be sure they have the right facts before making decisions whereas 25.4% of students reported being undecided about their agreement with this statement.



Table 4.2

*General Decision-Making Style: Rational**Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, Strongly Disagree = 1*

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
When I make decisions, I weigh the possibilities <i>N</i> =118, <i>M</i> =4.14, <i>SD</i> =.683	32	27.1	75	63.6	8	6.8	2	1.7	1	.8
I make decisions in a logical and systematic way <i>N</i> =118, <i>M</i> =4.09, <i>SD</i> =.704	32	27.1	68	57.6	15	12.7	3	2.5		
Before I make a decision, I make sure I have a clear understanding of the situation <i>N</i> =118, <i>M</i> =4.08, <i>SD</i> =.687	31	26.3	68	57.6	17	14.4	2	1.7		
My decision making requires careful thought <i>n</i> =117, <i>M</i> =3.93, <i>SD</i> =.796, Missing=1	27	22.9	61	51.7	23	19.5	6	5.1		
When making a decision, I consider various options in terms of a specific goal <i>N</i> =118, <i>M</i> =3.90, <i>SD</i> =.744	20	16.9	73	61.9	18	15.3	7	5.9		
I double-check my information sources to be sure I have the right facts before making decisions <i>N</i> =118, <i>M</i> =3.73, <i>SD</i> =.883	21	17.8	56	47.5	30	25.4	10	8.5	1	.8

As shown in Table 4.3, students also responded strongly to statements that purport to measure the intuitive approach to decision-making. Ninety-two percent of students either agreed or strongly agreed they generally make decisions that feel right to them. Eighty percent of students either agreed or strongly agreed that when they make a decision, they tend to go with the choice that feels best to them. Sixty-nine percent of students either agreed or strongly agreed with the statement about trusting their inner feelings and reactions when making a decision and 25.4% of the students reported they were undecided about their agreement with this statement.

Table 4.3

*General Decision-Making Style: Intuitive**Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, Strongly Disagree = 1*

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I generally make decisions that feel right for me <i>N</i> =118, <i>M</i> =4.33, <i>SD</i> =.641	49	41.5	60	50.8	8	6.8	1	.8		
When I make a decision, I tend to go with the choice that feels best to me <i>N</i> =118, <i>M</i> =3.97, <i>SD</i> =.727	24	20.3	70	59.3	21	17.8	2	1.7	1	.8
When I make decision I tend to rely on my intuition <i>N</i> =118, <i>M</i> =3.85, <i>SD</i> =.712	15	12.7	77	65.3	19	16.1	7	5.9		
When I make a decision, I trust my inner feelings and reactions <i>N</i> =118, <i>M</i> =3.78, <i>SD</i> =.839	20	16.9	61	51.7	30	25.4	5	4.2	2	1.7
When making decisions, I rely upon my instincts <i>N</i> =118, <i>M</i> =3.72, <i>SD</i> =.846	16	13.6	66	55.9	24	20.3	11	9.3	1	.8
When I make a decision, it is more important for me to feel the decision is right than to have a rational reason for it <i>N</i> =118, <i>M</i> =3.70, <i>SD</i> =.909	21	17.8	54	45.8	32	27.1	9	7.6	2	1.7

As shown in Table 4.4, which lists statements that signify a dependent style of decision-making, 80.5% of students either agreed or strongly agreed that if they have the support of others than it is easier for them to make decisions. Seventy-two percent of students either agreed or strongly agreed they use the advice of other people in making important decisions. Forty-four percent of students agreed or strongly agreed they often need assistance from other people when making important decisions. Finally, 32.2% of students either agreed or strongly agreed with the statement about the importance of getting advice from other people as compared to doing their own research when making decisions.

Table 4.4

*General Decision-Making Style: Dependent**Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, Strongly Disagree = 1*

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
If I have the support of others, it is easier for me to make decisions <i>n</i> =115, <i>M</i> =4.12, <i>SD</i> =.774, Missing=3	38	32.2	57	48.3	16	13.6	4	3.4		
I use the advice of other people in making important decisions <i>N</i> =118, <i>M</i> =3.79, <i>SD</i> =.749	14	11.9	72	61.0	27	22.9	3	2.5	2	1.7
I like to have someone steer me in the right direction when I am faced with important decisions <i>N</i> =118, <i>M</i> =3.64, <i>SD</i> =.920	18	15.3	56	47.5	30	25.4	12	10.2	2	1.71
I rarely make important decisions without consulting other people <i>n</i> =117, <i>M</i> =3.41, <i>SD</i> =.930, Missing=1	11	9.3	50	42.4	33	28.0	22	18.6	1	.8
I often need the assistance of other people when making important decisions <i>N</i> =118, <i>M</i> =3.06, <i>SD</i> =1.193	12	10.2	40	33.9	20	16.9	35	29.7	11	9.3

Table 4.4 (continued)

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I think that it is more important to get advice from other people than it is to do my own research when making decisions <i>N</i> =118, <i>M</i> =3.02, <i>SD</i> =1.054	11	9.3	27	22.9	39	33.1	35	29.7	6	5.1

With regard to avoidant decision-making style, as shown in Table 4.5, 40.7% of students either agreed or strongly agreed with the statement about procrastinating when it comes to making important decisions. Thirty-six percent of students either agreed or strongly agreed that they would rather have things work themselves out than for them to make a decision. Forty-three percent of students either disagreed or strongly disagreed with the statement about generally making important decisions at the last minute. Forty-four percent of students either disagreed or strongly disagreed with the statement about avoiding making important decisions until the pressure is on. And, 47% of students reported that they either disagreed or strongly disagreed with the statement about postponing decision-making whenever possible.

Table 4.5

*General Decision-Making Style: Avoidant*

*Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, Strongly Disagree = 1*

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
I often procrastinate when it comes to making important decisions <i>N</i> =118, <i>M</i> =3.11, <i>SD</i> =1.218	17	14.4	31	26.3	30	25.4	28	23.7	12	10.2
I would rather have things work themselves out than for me to have to make a decision <i>N</i> =118, <i>M</i> =3.09, <i>SD</i> =1.125	12	10.2	30	25.4	37	31.4	30	25.4	8	6.8
I put off making many decisions because thinking about them makes me uneasy <i>N</i> =118, <i>M</i> =3.03, <i>SD</i> =1.187	14	11.9	32	27.1	25	21.2	37	31.4	10	8.5
I generally make important decisions at the last minute <i>n</i> =116, <i>M</i> =2.92, <i>SD</i> =1.173, Missing=2	13	11.01	26	22.0	26	22.0	41	34.7	10	8.5
I avoid making important decisions until the pressure is on <i>N</i> =118, <i>M</i> =2.90, <i>SD</i> =1.143	9	7.6	33	28.0	24	20.3	41	34.7	11	9.3
I postpone decision making whenever possible <i>N</i> =118, <i>M</i> =2.88, <i>SD</i> =1.118	12	10.2	24	20.3	27	22.9	48	40.7	7	5.9

As shown in Table 4.6, which measures spontaneous decision-making style, 49.2% of students indicated they agreed or strongly agreed that they do what seems natural at the moment when making decisions. Thirty-two percent either agreed or strongly agreed that they make quick decisions whereas 38.2% either disagreed or strongly disagreed with this statement. Forty percent of students either disagreed or strongly disagreed that they make snap decisions and 56% of students disagreed or strongly disagreed that they make decisions as fast as they can, so as not to drag out the process.



Table 4.6

*General Decision-Making Style: Spontaneous*

*Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, Strongly Disagree = 1*

Item	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
When making decisions, I do what seems natural at the moment <i>n</i> =117, <i>M</i> =3.37, <i>SD</i> =.943, Missing=1	10	8.5	48	40.7	37	31.4	19	16.1	3	2.5
I make quick decisions <i>N</i> =118, <i>M</i> =2.93, <i>SD</i> =.993	5	4.2	33	28.0	35	29.7	39	33.1	6	5.1
I often make decisions on the spur of the moment <i>N</i> =118, <i>M</i> =2.86, <i>SD</i> =.942	2	1.7	33	28.0	36	30.5	41	34.7	6	5.1
I often make impulsive decisions <i>n</i> =117, <i>M</i> =2.84, <i>SD</i> =1.017, Missing=1	7	5.9	23	19.5	39	33.1	40	33.9	8	6.8
I generally make snap decisions <i>N</i> =118, <i>M</i> =2.79, <i>SD</i> =.986	3	2.5	27	22.9	41	34.7	36	30.5	11	9.3
I make decisions as fast as I can, so as not to drag out the process <i>N</i> =118, <i>M</i> =2.58, <i>SD</i> =1.073	7	5.9	17	14.4	28	23.7	51	43.2	15	12.7

Research Question 2: What are selected undecided students' reactions toward the decision-making process of choosing a major?

Overall students recognize their decision to declare a major to be very important. As shown in Table 4.7, on a scale which ranged from 7 (completely) to 1 (not at all), 81% of students either completely agreed, agreed, or somewhat agreed they are putting much emphasis on the future consequences of their major decision. Seventy-eight percent of students either completely agreed, agreed, or somewhat agreed their major decision is guided by their overall values, principles, goals and/or objectives. Seventy-nine percent of students indicated they either completely agreed, agreed, or somewhat agreed they are open to discovering new options in the decision-making process. Seventy percent of students either completely agreed, agreed, or somewhat agreed that the major decision is stressful. Sixty-four percent of students reported that they are moderately certain they are making the right major decision. Also, 64% of students either agreed, somewhat agreed, or neither agreed or disagreed with the statement of how independently of other people they are making this major decision.

Table 4.7

*Reactions Toward the Decision-Making Process*  
*Scale of Agreement Between 1 (not at all) and 7 (completely)*

Item	7		6		5		4		3		2		1	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>f</i>	%
How much emphasis are you placing on the future consequences of your decision? <i>N</i> =118, <i>M</i> =5.59, <i>SD</i> =1.397	37	31.4	34	28.8	24	20.3	15	12.7	4	3.4	1	.8	3	2.5
How much is your decision guided by your overall values, principles, goals and/or objectives? <i>n</i> =117, <i>M</i> =5.54, <i>SD</i> =1.454, Missing=1	38	32.2	30	25.4	24	20.3	14	11.9	6	5.1	3	2.5	2	1.7
How open are you to discovering new options for this decision? <i>N</i> =118, <i>M</i> =5.46, <i>SD</i> =1.318	32	27.1	28	23.7	33	28.0	15	12.7	8	6.8	1	.8	1	.8
How difficult is this decision relative to other decisions you have previously made? <i>N</i> =118, <i>M</i> =5.11, <i>SD</i> =1.364	19	16.1	28	23.7	38	32.2	21	17.8	7	5.9	2	1.7	3	2.5

Table 4.7 (Continued)

Item	7		6		5		4		3		2		1	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
How stressful is it to make this decision? <i>n</i> =117, <i>M</i> =5.06, <i>SD</i> =1.743, Missing=1	27	22.9	29	24.6	26	22.0	15	12.7	7	5.9	5	4.2	8	6.8
How comfortable are you with the way you are making this decision? <i>N</i> =118, <i>M</i> =5.05, <i>SD</i> =1.473	20	16.9	34	28.8	21	17.8	26	22.0	12	10.2	2	1.7	3	2.5
How much have you explored your current options for this decision? <i>n</i> =117, <i>M</i> =5.02, <i>SD</i> =1.396, Missing=1	16	13.6	32	27.1	30	25.4	25	21.2	7	5.9	5	4.2	2	1.7
How much are you using specific criteria to make this decision? <i>n</i> =117, <i>M</i> =4.96, <i>SD</i> =1.447, Missing=1	19	16.1	25	21.2	33	28.0	19	16.1	16	13.6	3	2.5	2	1.7
How well informed are you about each of your options? <i>n</i> =117, <i>M</i> =4.93, <i>SD</i> =1.394, Missing=1	15	12.7	27	22.9	37	31.4	19	16.1	13	11.0	4	3.4	2	1.7
How satisfied do you feel with the amount of information you are obtaining while making this decision? <i>N</i> =118, <i>M</i> =4.84, <i>SD</i> =1.342	13	11.0	26	22.0	31	26.3	28	23.7	13	11.0	4	3.4	1	.8

Table 4.7 (Continued)

Item	7		6		5		4		3		2		1	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
How much are you drawing on your intuitions “gut” reactions and feelings to make this decision? <i>n</i> =117, <i>M</i> =4.74, <i>SD</i> =1.403, Missing=1	7	5.9	30	25.4	39	33.1	23	19.5	7	5.9	7	5.9	4	3.4
How independently of other people are you making this decision? <i>n</i> =114, <i>M</i> =4.69, <i>SD</i> =1.500, Missing=4	17	14.4	14	11.9	34	28.8	27	22.9	14	11.9	4	3.4	4	3.4
How much are you using previous habits or policies in making this decision? <i>n</i> =117, <i>M</i> =4.69, <i>SD</i> =1.545, Missing=1	12	10.2	27	22.9	31	26.3	25	21.2	9	7.6	8	6.8	5	4.2
How certain are you that you are making the right decision? <i>N</i> =118, <i>M</i> =4.58, <i>SD</i> =1.630	16	13.6	17	14.4	34	28.8	24	20.3	13	11.0	7	5.9	7	5.9
How final is your current list of options for this decision? <i>n</i> =116, <i>M</i> =4.46, <i>SD</i> =1.429, Missing=2	7	5.9	21	17.8	33	28.0	27	22.9	16	13.6	9	7.6	3	2.5

Table 4.7 (Continued)

Item	7		6		5		4		3		2		1	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
How much are you making tradeoffs among different possibilities in making this decision? <i>n</i> =116, <i>M</i> =4.32, <i>SD</i> =1.381, Missing=2	6	5.1	18	15.3	28	23.7	32	27.1	22	18.6	7	5.9	3	2.5
How rushed or pressured do you feel in making this decision? <i>n</i> =117, <i>M</i> =4.27, <i>SD</i> =1.745, Missing=1	14	11.9	15	12.7	29	24.6	20	16.9	18	15.3	12	10.2	9	7.6
How often are you ruling out possibilities because of one or a few criteria? <i>n</i> =116, <i>M</i> =4.25, <i>SD</i> =1.503, Missing=2	7	7.9	17	14.4	27	22.9	33	28.0	18	15.3	7	5.9	7	5.9
How much are you enjoying making this decision? <i>n</i> =117, <i>M</i> =4.12, <i>SD</i> =1.738, Missing=1	13	11.0	11	9.3	26	22.0	29	24.6	14	11.9	13	11.0	11	9.3
How much are you avoiding or putting off making this decision? <i>n</i> =117, <i>M</i> =4.04, <i>SD</i> =1.949, Missing=1	17	14.4	17	14.4	12	10.2	23	19.5	18	15.3	16	13.6	14	11.9

Table 4.7 (Continued)

Item	7		6		5		4		3		2		1	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
How likely are you to make this decision at the last minute or on the spur of the moment?														
<i>n</i> =116, <i>M</i> =3.58, <i>SD</i> =1.755, Missing=2	6	5.1	13	11.0	17	14.4	22	18.6	25	21.2	14	11.9	19	16.1

Research Question 3: Is there a significant relationship between selected undecided students' decision-making styles and the following demographic information: gender, ethnicity, and class level?

A Pearson product moment was calculated for the relationship between gender and their level of agreement with statements purporting to measure specific decision-making styles (see Table 4.8). A weak positive correlation was found regarding students' agreement that they often procrastinate when it comes to making important decisions ( $r = .281, p < .002$ ). A weak positive correlation was also found regarding students' agreement that they often need assistance of other people when making important decisions ( $r = .255, p < .005$ ). A weak negative correlation was found regarding students' level of agreement with making decisions in a logical and systematic way ( $r = -.244, p < .008$ ).

Table 4.8

*Correlation Between Gender and Undecided Students' Level of Agreement with Specific Decision-Making Styles (N = 118)*

Statement	<i>r</i>	<i>p</i>
I often procrastinate when it comes to making important decisions.	.281	.002*
I often need the assistance of other people when making important decisions.	.255	.005*



Table 4.8 (Continued)

Statement	<i>r</i>	<i>r</i>
I make decisions in a logical and systematic way.	-.244	.008*

\*Correlation is significant at the 0.05 level (2-tailed).

There were no statistically significant correlations between ethnicity and decision-making styles or class level and decision-making styles.

## **Chapter V**

### **Summary, Discussion, Conclusions, and Recommendations**

#### **Summary of the Study**

This study investigated the decision-making styles of undecided freshman and sophomore students in the process of choosing a major. This study was also designed to investigate students' reactions toward the decision-making process of choosing a major. Furthermore, the study sought to investigate the relationship between decision-making styles and the characteristics of gender, ethnicity, and class level. The subjects in this study were undecided, full-time, freshman and sophomore students in the Exploratory Studies Program (ESP) at Rowan University in Glassboro, NJ, during the 2012-2013 academic year.

A three-part survey, which included information about informed consent, was distributed to 260 subjects. The first part of the survey collected demographic data and had 8 items. The second part of the survey was comprised of 30 Likert scale items pertaining to decision-making styles. This survey, adapted from Galotti et al. (2006), asked subjects to rate their agreement with statements about how they make decisions in general. The 30 statements contained six items forming five different decision-making styles with each purporting to measure a distinct approach to decision-making: rational, intuitive, dependent, avoidant, and spontaneous. Responses were rated from 5 (strongly agree) to 1 (strongly disagree).

The third part of the survey contained 21 Likert scale items pertaining to students' reactions to the decision-making process of choosing a major. This survey, adapted from Galotti (1999) asked subjects to rate their agreement with statements which describe their reactions to making a specific decision (i.e. choosing a major) or statements describing approaches to making this specific decision. Responses were rated from 7 (completely) to 1 (not at all). One hundred- eighteen completed surveys were anonymously returned, yielding a response rate of 45%.

Descriptive statistics including frequency, mean, standard deviation, percentage, and bivariate correlations were used to analyze the data collected from the completed surveys. Using the Statistical Package for the Social Sciences (SPSS) computer software, variations in students' levels of agreement with decision-making styles and reactions to the decision-making process of choosing a major were explored. Significant statistical relationships were determined using Pearson product-moment correlations.

### **Discussion of the Findings**

Based upon the research findings, the majority of undecided freshman and sophomore students in the Exploratory Studies Program surveyed at Rowan University describe themselves as rational. Undecided students are thinking thoroughly and rationally. Students' level of agreement with statements that measure rational decision-making was higher than any of the other decision-making styles being measured. Students' also responded strongly to statements

that measure the intuitive style of decision-making characterized by a reliance on hunches and feelings. Ninety-two percent of students either agreed or strongly agreed they generally make decisions that feel right to them. Undecided students reported high levels of agreement with statements that measured both rational and intuitive decision-making. This finding supports Scott & Bruce's (1995) study who found that people use a combination of decision-making styles when making important decisions.

Students surveyed agreed less with statements measuring dependent, avoidant, and spontaneous styles of decision-making. Seventy-two percent of students either agreed or strongly agreed with the dependent statement that they use the advice of other people in making important decisions. This finding supports Scharen's (2010) study who found that university resources, family member encouragement, knowing someone who works in a related position and other students enrolled in the same major were all factors when declaring a major. Forty-one percent of students either agreed or strongly agreed with the avoidant statement about procrastinating when it comes to making important decisions. And, 49.2% of students indicated they agreed or strongly agreed with the spontaneous statement that they do what seems natural at the moment when making decisions.

Students use a variety of decision-making styles. While the majority of undecided freshman and sophomore students indicated they are rational or

intuitive decision makers, other students indicated they are more dependent, avoidant, or spontaneous decision makers. Some students prepare for making important decisions and look at all alternatives before making a decision. Other students seek little information and make decisions intuitively based on what they “feel” is right. There are students who seek advice and depend on others before making decisions. Some students avoid decisions by postponing them and others make rush decisions in order to quickly complete the decision-making process. Whether students are independent and confident in their decision-making or more hesitant and require help in making a decision all students are unique and develop at their own pace.

Chickering’s theory of identity development and the seven vectors provide insights into understanding the development of undecided freshman and sophomore students. Some undecided students may take longer to move through the vectors than others. Undecided students who described themselves as rational are proceeding along the seven vectors including developing competence, managing emotions or developing emotional maturity, developing autonomy and moving toward interdependence, developing mature relationships, establishing an identity and a clear sense of self, developing purpose, and finally developing integrity. Whereas undecided students who described themselves as intuitive decision-makers may also be proceeding along the seven vectors but may still lack skills in critical thinking, analyzing alternative major choices, and drawing

conclusions. This is why they seek little information and make decisions based on what they “feel” is right. Undecided students who are more dependent decision makers may not be ready developmentally to make important decisions on their own and therefore are moving through the seven vectors at a slower pace than rational decision makers. Undecided students who agreed or strongly agreed with the dependent statement that they use the advice of other people in making decision are still developing competence, managing emotions, developing independence, establishing their identity, developing purpose and integrity. The same is true for undecided students who avoid making important decisions or make an important decision quickly just to get through the process of decision-making. These students are still navigating the seven vectors and have not yet acquired the skills that are necessary to handle making important decisions.

The finding that undecided freshman and sophomore students were characterized as rational also supports the previous study conducted by Carduner et al. (2011). Students reported they frequently made use of rational choice processes. They were likely to conduct self-exploration, explore majors and careers, make a decision, and develop and implement a plan before selecting a major.

In terms of undecided students’ reactions toward the decision-making process of choosing a major, students gave high ratings to several items indicating the decision of choosing a major is very important. Undecided students see the outcome of their decision as a life-framing one. A total of 81% of students either

completely agreed, agreed, or somewhat agreed they are putting much emphasis on the future consequences of their major decision. Seventy-eight percent of students either completely agreed, agreed, or somewhat agreed their major decision is guided by their overall values, principles, goals and/or objectives. This finding supports Galotti's (1999) study who had similar results. Students reported they take this decision very seriously. Students highly agreed that much of their decision is guided by their overall values, principles, goals, and/or objectives. Also, students indicated they are placing much emphasis on the future consequences of their major decision.

There was minimal statistical significance determined regarding the relationship of decision-making styles to gender. There was no statistical significance determined regarding the relationship between decision-making styles and ethnicity or decision-making styles and class level. This finding may be due to limitations in the sampling or procedures of the study and may not necessarily mean that there is not relationship.

## **Conclusions**

The results of this study generally support the findings of previous related studies. Overall, undecided students reported high levels of agreement with various statements related to rational and intuitive decision-making styles. Despite high levels of agreement with rational and intuitive decision-making styles, some undecided students either agreed or strongly agreed with statements measuring dependent, avoidant, or spontaneous decision-making styles.

All undecided students' self-reported measures must be taken into account. Professional advisors need to be attuned to how undecided students make decisions and be prepared to help undecided students explore major options. In addition to undecided students who think rationally and intuitively, some undecided students seek advice from others in their decision-making. Others have a tendency to avoid making important decisions and some make decisions hastily suggesting the need for academic or professional advisors to work with undecided students. Advisors can assist undecided students with their indecisiveness. In the Center for Academic Advising and Exploration (CAAdE) professional advisors assist undecided students in the decision-making process of choosing a major. Regardless of undecided students' decision-making styles, professional advisors help undecided students access resources to assess their academic and career interests. In turn, undecided students are more involved in evaluating major options, exploring career possibilities and making informed major and career choices.

Looking to the future, the present findings inform academic and professional advisors of how undecided students think and make decisions. Understanding the decision-making styles of undecided students and how they decide on a major can help advisors determine what additional support is needed. Similar to the programs offered at the University of Wisconsin-LaCrosse (Korschgen & Hageseth, 1997), Worcester Polytechnic Institute (Groccia & Harranty, 1991), and Pennsylvania State University (Gordon, 2007), the professional



advisors in the Center for Academic Advising & Exploration (CAAdE) at Rowan University assist undecided students in selecting a college major. In addition to meeting with undecided students individually, CAAdE offers programs to explore major and career options and conducts student self-assessments and workshops. Based on the present findings, workshops which focus on improving decision-making skills would be beneficial to undecided students. Workshops with themes of responsibility, procrastination, anxiety, on-the-spot decision making, and steps in logical decision-making can be offered. With regard to undecided students who depend on others to make decisions for them, professional advisors can provide guidance so that undecided students become more involved in their own decision-making rather than have the advisor, family, or friends make the major decision for them. Undecided students who exhibit avoidant and spontaneous decision-making styles can be taught skills for processing information, setting goals, and making decisions that will help them to reach their academic and career goals.

In terms of students' reactions toward the decision-making process of choosing a major, students indicated the decision is very important and strongly agreed that much of their decision is guided by their overall values, principles, goals, and/or objectives. Students also strongly agreed they are placing much emphasis on the future consequences of their major decision. Overall, undecided students are participating in the decision-making process of choosing a major. Undecided students see the outcome of their decision as life-framing.

## **Recommendations for Practice**

Based on the findings and conclusions of the study, the following suggestions are presented:

1. Faculty and Professional advisors can help undecided students learn new decision-making skills or make improvements to the decision-making skills they already possess to help them overcome any limitations in their present decision-making style and guide them toward more rational decision-making.
2. Faculty and Professional advisors could conduct a focus group to explore how undecided students feel about the decision-making process of choosing a major.
3. Faculty and Professional advisors could evaluate the extent to which they are focusing their efforts on supporting undecided students facing the decision about a major.
4. Faculty and Professional advisors can offer self-help workshops to help undecided students deal with the stress they experience during the decision-making process.
5. Faculty and Professional advisors can offer programs and services that will give undecided students the opportunity to explore many major options before making a major decision.

## **Recommendations for Further Research**

Based on the findings and conclusions of the study, the following suggestions are presented:

1. Further studies should be conducted with larger populations to confirm the findings of this study.
2. Conduct a qualitative study with undecided students that focuses on their decision-making styles.
3. Conduct a follow-up study with participants, after they have declared a major, to learn if the decision-making style they exhibited influenced how they gathered information to make their major decision.
4. Conduct a similar study at a private institution to investigate decision-making styles of undecided students in the process of choosing a major.

## References

- Carduner, J., Padak, G. M., & Reynolds, J. (2011). Exploratory honors students: Academic major and career decision making. *NACADA Journal*, 31(1), 14-28.
- Chickering, A.W. (1969). *Education and identity*. San Francisco, CA: Jossey-Bass.
- Chickering, A.W., & Reisser, L. (1993). *Education and identity* (2<sup>nd</sup> ed.) San Francisco. CA: Jossey-Bass.
- Galotti, K. M., Ciner, E., Altenbaumer, H. E., Geerts, H. J., Rupp, A., & Woulfe, J. (2006). Decision-making styles in a real-life decision: Choosing a college major. *Personality & Individual Differences*, 41(4), 629-639. Retrieved on June 6, 2012 from Rowan University Campbell Library Interlibrary Loan.
- Galotti, K. M. (1999). Making a 'major' real-life decision: College students choosing an academic major. *Journal of Educational Psychology*, 91(2), 379-387. doi:10.1037/0022-0663.91.2.379
- Gordon, V. N. (2007). *The undecided college student* (3<sup>rd</sup> ed). Springfield, MA: Charles C. Thomas.
- Groccia, J. E., & Harrity, M. B. (1991). The major selection program: A proactive retention and enrichment program for undecided freshmen. *Journal of College Student Development*, 32(2), 178-170.
- Harren, V. A. (1979). A model of career decision-making for college students. *Journal of Vocational Behavior*, 14(2), 119-133. Retrieved November 2, 2012 from Rowan University Campbell Library Interlibrary Loan.
- Higher Education Research Institute. *2012 CIRP Freshman Survey Instrument*. Retrieved on November 4, 2012 from <http://heri.ucla.edu/monographs/TheAmericanFreshman2012.pdf>
- Korschgen, A. J., & Hageseth, J. A. (1997). Undecided students: How one college developed a collaborative approach to help students choose majors and careers. *Journal of Career Planning and Employment*, 57, 49-51. Retrieved September 26, 2011 from <http://libra.rowan.edu/illiad/illiad.dll?SessionID=Q203356838N&Action=10&Form=69 &Value=49527>

- Klaczynski, P. A. (2001). Analytic and heuristic processing influences on adolescent reasoning and decision-making. *Child Development, 72*(3), 844-861. Retrieved November 4, 2012 from JSTOR online database at <http://www.jstor.org/stable/1132450>
- McDaniels, R. M., Carter, J. K., Heinzen, C. J., Candrl, K. L., & Wieberg, A. M. (1994). Undecided/undeclared: Working with “deciding” students. *Journal of Career Development, 21*(2), 135-139.
- Orndorff, R. M., & Herr, E. L. (1996). A comparative study of declared and undeclared college students on career uncertainty and involvement in career development activities. *Journal of Counseling & Development, 31*, 632-639.
- Rowan University: Welcome to Rowan University. Retrieved on November 4, 2012 from <http://www.rowan.edu/subpages/about/#mission>
- Scharen, R. M. (2010). *Making a major decision: Undeclared student retention and the process of choosing an academic major at Rowan University* (Master’s Thesis, Rowan University, 2010). Retrieved May 18, 2012 from Rowan University Campbell Library.
- Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement, 55*(5), 818-831. Retrieved on June 15, 2012 from Sage Journals Online Database at <http://epm.sagepub.com.ezproxy.rowan.edu/content/55/5/818.full.pdf+html>
- Tiedeman, D. V., & O’Hara, R. P. (1963). *Career development: Choice and adjustment*. New York, NY: College Entrance Examination Board. Retrieved on June 15, 2012 from Penn Libraries Research Annex.

**Appendix A**  
**Institutional Review Board Approval Letter**



January 30, 2013

Kathy Pasquarella  
53 Long Bow Drive  
Sewell, NJ 08080

Dear Kathy Pasquarella:

In accordance with the University's IRB policies and 45 CFR 46, the Federal Policy for the Protection of Human Subjects, I am pleased to inform you that the Rowan University Institutional Review Board (IRB) has exempted your project, category 2.

IRB application number: 2013-127

Project Title: Deciding on a Major: The Relationship of Students' Characteristics and Decision-Making Styles and Choosing a Major at Rowan University

If you need to make significant modifications to your study, you must notify the IRB immediately. Please reference the above-cited IRB application number in any future communications with our office regarding this research.

If, during your research, you encounter any unanticipated problems involving risks to subjects, you must report this immediately to Dr. Harriet Hartman ([hartman@rowan.edu](mailto:hartman@rowan.edu) or call 856-256-4500, ext. 3787) or contact Dr. Shreekanth Mandayam, Associate Provost for Research ([shreek@rowan.edu](mailto:shreek@rowan.edu) or call 856-256-5150).

If you have any administrative questions, please contact Karen Heiser ([heiser@rowan.edu](mailto:heiser@rowan.edu) or 856-256-5150).

Sincerely,

A handwritten signature in cursive script that reads "Harriet Hartman".

Harriet Hartman, Ph.D.  
Chair, Rowan University IRB

c: Burton Sisco, Educational Services, Administration, Higher Education, James Hall

Office of Research  
Bole Hall  
201 Mullica Hill Road  
Glassboro, NJ 08028-1701

856-256-5150  
856-256-4425 fax

**Appendix B**  
**Permission to Use Survey**



XFINITY Connect

kpasquarella@comcast.net

Font Size

**Re: Permission Request for Use of Research Instruments****From :** Kathleen M. Galotti <kgalotti@carleton.edu>

Mon, Nov 19, 2012 10:02 PM

**Subject :** Re: Permission Request for Use of Research Instruments

2 attachments

**To :** kpasquarella@comcast.net

✓ Sure thing. I'm attaching the instruments (the Reactions to Decisions instrument has been slightly modified from the 1999 article).

**From:** kpasquarella@comcast.net**To:** kgalotti@carleton.edu**Sent:** Monday, November 19, 2012 12:03:05 PM**Subject:** Permission Request for Use of Research Instruments

Dear Dr. Galotti.

My name is Kathy Pasquarella and I am currently a master's student in the M.A. in Higher Education Administration program at Rowan University in Southern New Jersey.

Over the last few years I have become very interested in the undecided college student facing the decision of choosing a major. I am currently working on my thesis and researching the relationship of undecided student's characteristics and decision-making styles and choosing a major at Rowan University. I am very interested in your area of research and have read your studies on college students and decision-making. They have been very interesting and helpful to me as I begin to investigate decision-making here at Rowan. I plan to cite some of your previous research in my thesis as well.

With your permission, I would like to replicate in my thesis two instruments from your research. Namely, the Decision-making Styles Survey adapted from Scott and Bruce (1995) in "Decision-making styles in a real-life decision: Choosing a college major" (2006) and the Affective Reactions to Decision-making Survey in "Making a "Major" Real-Life Decision: College Students Choosing an Academic Major" (1999). I plan to develop a survey that will collect information on student characteristics, types of decision-making styles, and student's responses to the decision-making process.

If these arrangements meet with your approval, please let me know what process I must follow to obtain copies of these instruments.

Thank you very much for your time and consideration. I look forward to hearing from you.

Sincerely,

Kathy Pasquarella  
53 Long Bow Drive  
Sewell, NJ 08080  
856.343.9721

RTD key.docx  
122 KB

GDMS key.docx  
118 KB

XFINITY Connect

kpasquarella@comcast.net

Font Size

## Re: Permission Request for Use of Research Instruments

**From :** Kathleen M. Galotti <kgalotti@carleton.edu>  
**Subject :** Re: Permission Request for Use of Research Instruments  
**To :** kpasquarella@comcast.net

Mon, Nov 19, 2012 10:03 PM

Kathy,

I hit return too quickly. I meant to also wish you good luck with your project, and let you know I'd be very interested to see what you find.

Best,

Kathie Galotti

**From:** kpasquarella@comcast.net  
**To:** kgalotti@carleton.edu  
**Sent:** Monday, November 19, 2012 12:03:05 PM  
**Subject:** Permission Request for Use of Research Instruments

Dear Dr. Galotti.

My name is Kathy Pasquarella and I am currently a master's student in the M.A. in Higher Education Administration program at Rowan University in Southern New Jersey.

Over the last few years I have become very interested in the undecided college student facing the decision of choosing a major. I am currently working on my thesis and researching the relationship of undecided student's characteristics and decision-making styles and choosing a major at Rowan University. I am very interested in your area of research and have read your studies on college students and decision-making. They have been very interesting and helpful to me as I begin to investigate decision-making here at Rowan. I plan to cite some of your previous research in my thesis as well.

With your permission, I would like to replicate in my thesis two instruments from your research. Namely, the Decision-making Styles Survey adapted from Scott and Bruce (1995) in "Decision-making styles in a real-life decision: Choosing a college major" (2006) and the Affective Reactions to Decision-making Survey in "Making a "Major" Real-Life Decision: College Students Choosing an Academic Major" (1999). I plan to develop a survey that will collect information on student characteristics, types of decision-making styles, and student's responses to the decision-making process.

If these arrangements meet with your approval, please let me know what process I must follow to obtain copies of these instruments.

Thank you very much for your time and consideration. I look forward to hearing from you.

Sincerely,

Kathy Pasquarella  
53 Long Bow Drive  
Sewell, NJ 08080  
856.343.9721

## **Appendix C**

### **Permission to Administer Survey**



January 10, 2013

To Whom It May Concern:

I am writing this letter to verify that in my function as Coordinator of the Center for Academic Advising & Exploration, CAAdE, at Rowan University, I am aware and am in accord with the research study that Ms. Kathy Pasquarella plans to conduct with students in the Exploratory Studies Program, ESP. I have discussed the purpose and parameters of this research with Ms. Pasquarella and will support her research and also will assist with data collection.

Ms. Pasquarella has assured me this research study involving human subjects will be conducted using an alternate consent statement on the top of the survey and that all participants will remain anonymous. Furthermore, this research will be conducted in accordance with the Institutional Review Board's guidelines.

If you have any questions regarding this, please feel free to contact me at 856-256-4228.

Sincerely,

A handwritten signature in cursive script that reads "Carol A. Eigenbröt".

Carol A. Eigenbröt

Coordinator

Center for Academic Advising  
& Exploration  
Savitz Hall  
201 Mullica Hill Road  
Glassboro, N.J. 08028-1701

856-256-4459  
856-256-4437 fax

**Appendix D**  
**Survey Instrument**

## Decision-Making Styles Survey

*The purpose of this study is to gain a better understanding of the decision-making styles of students in the process of choosing a major. While your participation is voluntary and you are not required to answer any of the questions herein, your cooperation and participation are important to the success of the project and are greatly appreciated. It will take approximately 5 to 10 minutes to complete this survey. If you choose to participate, please understand that all responses are anonymous and no personal information is being requested. Furthermore, whether you participate or not, your decision will have no effect on your status with the university. Your completion of this survey constitutes informed consent and your willingness to participate and you attest that you are 18 years old or older. If you have any questions, please contact Kathy Pasquarella at 856.343.9721 (pasqua14@students.rowan.edu) or Dr. Burton Sisco at 856.256.4000, Ext. 3717*

**Part I. Background Information:** Please respond to each item below.

1. Please indicate your age: \_\_\_\_\_
2. Please indicate your gender:  Male  Female
3. Please indicate your racial/ethnic identity:  Black or African American  American Indian/Alaska Native  Asian/Pacific Islander  Hispanic/Latino  White, Non-Hispanic  
 Other  Choose not to indicate
4. Please indicate your class level:  Freshman  Sophomore
5. Please indicate your current enrollment status:  Full-Time  Part-Time
6. Please indicate which campus you attend:  Main Campus  Camden Campus
7. Please indicate whether or not you are an EOF/MAP student:  Yes  No
8. Please indicate your current GPA: \_\_\_\_\_

**Part II. Decision-making Styles:** Listed below are statements describing how individuals make important decisions. Using the scale provided, please circle the number to the right that best describes your agreement with each statement.

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. I make decisions in a logical and systematic way.	5	4	3	2	1
2. When I make decisions I tend to rely on my intuition.	5	4	3	2	1
3. I avoid making important decisions until the pressure is on.	5	4	3	2	1
4. I often need the assistance of other people when making important decisions.	5	4	3	2	1
5. When making decisions, I rely upon my instincts.	5	4	3	2	1

## Decision-Making Styles Survey

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
6. I generally make decisions that feel right to me.	5	4	3	2	1
7. I generally make snap decisions.	5	4	3	2	1
8. I rarely make important decisions without consulting other people.	5	4	3	2	1
9. I often make decisions on the spur of the moment.	5	4	3	2	1
10. I double-check my information sources to be sure I have the right facts before making decisions.	5	4	3	2	1
11. I make quick decisions.	5	4	3	2	1
12. If I have the support of others, it is easier for me to make important decisions.	5	4	3	2	1
13. When I make a decision, it is more important for me to feel the decision is right than to have a rational reason for it.	5	4	3	2	1
14. I use the advice of other people in making important decisions.	5	4	3	2	1
15. I often make impulsive decisions.	5	4	3	2	1
16. My decision making requires careful thought.	5	4	3	2	1
17. I like to have someone steer me in the right direction when I am faced with important decisions.	5	4	3	2	1
18. I postpone decision making whenever possible.	5	4	3	2	1
19. When making decisions, I do what seems natural at the moment.	5	4	3	2	1
20. I often procrastinate when it comes to making important decisions.	5	4	3	2	1
21. When making a decision, I consider various options in terms of a specific goal.	5	4	3	2	1
22. I generally make important decisions at the last minute.	5	4	3	2	1
23. I put off making many decisions because thinking about them makes me uneasy.	5	4	3	2	1
24. When I make a decision, I trust my inner feelings and reactions.	5	4	3	2	1

## Decision-Making Styles Survey

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
25. When I make decisions, I weigh the possibilities.	5	4	3	2	1
26. I think that it's more important to get advice from other people than it is to do my own research when making decisions.	5	4	3	2	1
27. I make decisions as fast as I can, so as not to drag out the process.	5	4	3	2	1
28. Before I make a decision, I make sure I have a clear understanding of the situation.	5	4	3	2	1
29. When I make a decision, I tend to go with the choice that feels best to me.	5	4	3	2	1
30. I would rather have things work themselves out than for me to have to make a decision.	5	4	3	2	1

**Part III Decision-making Process Reactions:** Listed below are statements about reactions to making a specific decision (i.e. choosing a major) or statements describing approaches to making a specific decision. Please circle the number that best describes your agreement with each statement.

Statement	Scale of Agreement
How much emphasis are you placing on the future consequences of your decision?	Not at all 1 2 3 4 5 6 7 Completely
How difficult is this decision, relative to other decisions you have previously made?	Not at all 1 2 3 4 5 6 7 Completely
How comfortable are you with the way you are making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How much is your decision guided by your overall values, principles, goals and/or objectives?	Not at all 1 2 3 4 5 6 7 Completely
How open are you to discovering new options for this decision?	Not at all 1 2 3 4 5 6 7 Completely
How likely are you to make this decision at the last minute or on the spur of the moment?	Not at all 1 2 3 4 5 6 7 Completely
How much are you enjoying making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How certain are you that you are making the right decision?	Not at all 1 2 3 4 5 6 7 Completely
How much are you using specific criteria to make this decision?	Not at all 1 2 3 4 5 6 7 Completely



## Decision-Making Styles Survey

Statement	Scale of Agreement
How stressful is it to make this decision?	Not at all 1 2 3 4 5 6 7 Completely
How satisfied do you feel with the amount of information you are obtaining while making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How often are you ruling out possibilities because of one or a few criteria?	Not at all 1 2 3 4 5 6 7 Completely
How much are you drawing on your intuitions, "gut" reactions and feelings to make this decision?	Not at all 1 2 3 4 5 6 7 Completely
How rushed or pressured do you feel in making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How final is your current list of options for this decision?	Not at all 1 2 3 4 5 6 7 Completely
How much are you making tradeoffs among different possibilities in making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How independently of other people are you making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How much are you using previous habits or policies in making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How well informed are you about each of your options?	Not at all 1 2 3 4 5 6 7 Completely
How much are you avoiding or putting off making this decision?	Not at all 1 2 3 4 5 6 7 Completely
How much have you explored your current options for this decision?	Not at all 1 2 3 4 5 6 7 Completely

Thank you for your participation in the study!!!

## **Appendix E**

### **Grade Point Average (GPA) Table**

*Grade Point Average (n=110, Missing=8)*

<i>GPA</i>	<i>f</i>	<i>%</i>	<i>GPA</i>	<i>f</i>	<i>%</i>
1.000	1	.8	3.030	1	.8
1.100	1	.8	3.077	1	.8
1.250	1	.8	3.100	2	1.7
1.470	1	.8	3.150	1	.8
1.500	2	1.7	3.175	1	.8
1.890	1	.8	3.200	1	.8
2.000	1	.8	3.230	1	.8
2.070	1	.8	3.263	1	.8
2.100	1	.8	3.300	1	.8
2.200	3	2.5	3.400	4	3.4
2.300	5	4.2	3.450	1	.8
2.370	1	.8	3.500	8	6.8
2.375	1	.8	3.560	1	.8
2.400	2	1.7	3.581	1	.8
2.470	1	.8	3.590	1	.8
2.480	1	.8	3.600	3	2.5
2.500	6	5.1	3.660	1	.8
2.580	1	.8	3.700	2	1.7
2.600	5	4.2	3.740	1	.8
2.700	3	2.5	3.800	2	1.7
2.750	1	.8	3.820	1	.8
2.765	1	.8	3.869	1	.8
2.780	1	.8	3.870	1	.8
2.800	4	3.4	3.900	1	.8
2.880	1	.8	3.940	1	.8
2.900	9	7.6	3.970	1	.8
2.980	1	.8	4.000	1	.8
3.000	11	9.3			