From Doom to Bloom: The Effects of Pre-Major Coaching on Undecided Student Persistence

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Department of Community Care and Counseling, Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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Abstract

Student retention is a persistent dilemma in higher education because it is how student success is measured. Universities invest resources in retaining vulnerable populations and provide additional support measures because they are most at risk of dropping out. The premise of this study is that students who enter college without a major are considered vulnerable, as they are highly prone to drop out. Numerous studies have found that entering college with an "unknown/undecided" status negatively impacts retention, well-being, and motivation due to a lack of clearly defined educational goals. However, students and families often lack adequate information about the importance of declaring before entering college, as well as the costs, difficulties, and benefits of each major. A university education will likely be one of the student's largest financial endeavors. Families put much effort into *where* to send their child and *how* to pay for it without giving as much attention to *why* they are going to college in the first place. Starting college without a plan has grave financial and motivational consequences. Finding the right fit major is a proactive and intentional process; therefore, early intervention for undecided students is critical. This study will use a quantitative design to analyze archival data to determine the impact of pre-major coaching on retention. The aim is to compare students who have received pre-major coaching with those who have not on the following variables: time to declaration of a major, number of major changes, and progress toward graduation.

Keywords: freshmen, college, undecided, advising, retention, persistence, motivational interviewing, solution-focused brief therapy, strengths.

Dedication

To my husband Bert and children - Blaine, Claire, Olivia, Cade, and Will - who have been incredibly patient and accommodating with me as a student. Pursuing my master's degree in Pastoral Counseling and Life Coaching was an exciting and smooth experience, which led me to think that pursuing this doctorate would feel the same. I am deeply grateful to all of you for your tolerance and grace, as I underestimated the long and challenging road this would be. Although you have heard all your life that "Wycoff's never give up!" I was tempted to throw out our family mantra on many occasions. Your belief in me never wavered, and for that, I will be forever grateful.

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Lord Jesus, it is only because of you. Just you. For apart from you, I *absolutely* can do nothing (John 15:5). Thank you for motivating me with your presence and your Word to keep me going. Ecclesiastes 7:8: “Better is the end of a thing than its beginning, and the patient in spirit is better than the proud in spirit” (ESV). My feeble good intentions mean nothing without follow through, and you are the one who gave me the persistence and grit needed, along with the exceptional team you provided, which contributed to my getting to the end.

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process. You are using your talents and gifts profoundly, and I miss our meetings. I could not have done this without you!

I would like to express my deep reverence and inspiration for the *first* in our family lineage to get a doctorate—my daughter, Dr. Claire Wycoff. I admire you deeply and am in awe of the young woman that you are. Thank you for the endless hours of FaceTime as I shared my thoughts, tears, and frustrations and for your calm counsel and ideas.

Finally, to all my invested family members including my dear parents, friends, and co-workers who have cheered me on, thank you.

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Academic Advisor (AA)

Academic Caution (AC)

Degree Completion Plan (DCP)

Motivational Interviewing (MI)

Progress Toward Degree Completion (PTD)

Socioeconomic Status (SES)

Solution Focused Brief Therapy (SFBT)

Chapter One: Introduction

Overview

Universities consider retention to be one of their primary goals, and therefore, they invest a great deal of resources in retaining vulnerable populations (Black, 2018; Boyd et al., 2020; Saunders-Scott et al., 2018; Thomas et al., 2021). These populations include students from low SES backgrounds (Avery, 2010), first-generation students (Radunzel, 2018), students belonging to racial or ethnic minority groups (Museus et al., 2018), and those who may need additional academic support (Markell, 2020). There is an emphasis on retaining these students through additional support measures because they are most at risk of dropping out (Noel-Levitz, 2008). The premise of this study is that students who enter college without a major are part of this vulnerable population due to their risk of dropping out and that assisting them early on in declaring a major will increase their retention rates. This chapter begins with a background on the consequences of entering college without a major. There is a brief history of persistence and retention related to the university setting. The chapter will also present the problem and the purpose of the study. It concludes with an exposition of the significance of the study, an introduction to the research questions, and the definition of specific terms.

Background

Student retention is a persistent dilemma in higher education (Thomas et al., 2021) because it is often how universities quantify student success. Student success in higher education is measured by persistence, academic engagement, degree completion, and graduation rates (Gilson, 2018). These statistics, viewable to the public, indicate a university's educational effectiveness, which parents and students use to make college decisions (Gilson, 2018). Whereas colleges strive hard to increase their retention rates (Horn & Lee, 2016) among populations at

risk of dropping out, one population may be overlooked by both parents and colleges: students who enter college without a major.

Historical Context

Choosing a major is a weighty decision with high consequences. Yet, historically, students and parents consider this a decision that can occur once the student's college experience is well underway. Prior to entering college, students and parents spend a great deal of time researching ***where*** to go to college and ***how*** to finance one of the costliest endeavors of their lives. They often prioritize the act of obtaining a college degree without giving much consideration to ***what*** they are spending their money on (Selingo, 2015) and what is required to achieve degree completion (Bailey et al., 2015) and timely graduation.

One possible explanation for students' lack of prioritizing the decision to declare a major early on is that parents are offering outdated guidance. Parents' experience of college is typically much different from today's college experience. Historically, students focused on completing general education requirements during their first 2 years of college and switch to their major courses during their last 2 years. Therefore, some parents advise their children to take things slow, follow their example, and not stress about choosing their major courses until after completing general education requirements. However, parents' experience is not always in keeping with today's education system, as major courses start freshman year. One of the reasons why 1/3 of students are in the wrong fit major is pressure from parents to choose something that will lead to a lucrative career (Pritchard et al., 2018). Previous generations may push for what they might think is a worthy degree, yet their perceptions of the major are obsolete. Moreover, whereas it was once believed that providing students with an unlimited choice of classes and degree plans was beneficial and appealing to students, colleges and universities have discovered

that while some degree of exploration is beneficial, too much choice and a lack of direction is an impediment to degree completion (Bailey et al., 2015).

Lack of appropriate guidance results in students often lacking adequate information about the majors, including costs, difficulties, and benefits of each major (Baker, 2018). Students and parents will often *self-advise* or rely on the advice of friends and family members (Pu et al., 2021) regarding the college experience. However, these sources are not always well-informed about the specific requirements of the chosen university (Musoba et al., 2018). Students often think they are farther along in terms a timely graduation than they actually are. Students may enter their freshman year with numerous dual-enrolled credits and expect to earn a bachelor's degree with just 2 or 3 more years of classes. Students and parents are unaware of institutional components, such as prerequisites, Fall-only/Spring-only classes, and course sequencing, which affect progress toward degree completion (Musoba et al., 2018). Students and parents are frequently mistaken regarding the path to timely graduation, as it requires a strategic sequence of advanced classes required for a specific major (NSSE, 2014, 2016).

Past research on this high-risk population is outdated, and findings are inconsistent; however, the lack of and misinformed guidance that undeclared students may receive while navigating the college journey is supported by recent studies, which have shown that students who enter college without a major are more susceptible to dropping out of higher education or performing below average compared to their peers who have declared their major (Mangan, 2011; Reynolds et al., 2010; Spight, 2020). Without a plan, undeclared students often “meander through the curriculum, sampling courses that will not ultimately count toward degree requirements” (The University Leadership Council, 2012, p. 19).

Social Context

Lack of declaring a major is associated with lack of direction and lack of engagement (Kim, 2022). In a recent study, faculty members reported that incoming freshmen displayed heightened student disengagement (Kim, 2022). When students are disengaged, they are often less goal-oriented and focused (Hodge et al., 2017; Noel & Levitz, 2008). Faculty members point out that some of the tendencies they are seeing in students are shorter attention spans and growing mental health problems, and these issues predated the pandemic. Students are arriving on campus increasingly underprepared to handle the challenges of college life academically, emotionally, mentally, and physically (American College Health Association, 2021). The adversity encountered by COVID-19 has only accelerated these longer-term trends (Jaschik, 2022; Li et al., 2021).

In addition, due to COVID-19, many students were unable to reap the benefits of interacting with campuses, which may have provided them with more up-to-date information about declaring a major and requirements for degree completion. They were unable to engage in key experiences to prepare for college, such as visiting campuses, attending college fairs, and engaging in ACT/SAT testing (Chen & Lucock, 2022). ACT surveyed thousands of students and discovered that a large percentage missed out on critical activities to prepare for college because of the pandemic (Chen & Lucock, 2022). Moreover, the lack of in-person learning during COVID-19 has created significant academic learning loss, and many students deteriorated mentally and emotionally in isolation from the community (Birmingham et al., 2021; McIntosh & Stone, 2023).

Due to these and other factors, incoming college freshmen are susceptible to *languishing* in their first year on campus. Many psychologists and health professionals have pinpointed what

the dominant mental health issue concern is today: it is not anxiety or depression but *failure to thrive* (Ortberg, 2010, p. 29). Failure to thrive or languishing is the absence of mental health characterized by dissatisfaction, lack of engagement, and apathy (American Psychological Association [APA], 2023). While there are serious mental illnesses that need the treatment of counseling and/or medication, there is a far greater number of people who need help getting "unstuck" (Kollar, 2011; Ortberg, 2010, p.34). A student coming in without a major perpetuates the cycle of being stuck. The decision is costly, and without intervention and assistance, it could contribute to languishing.

Students and parents, especially at-risk (students on Academic Caution (AC), first-generation, undeclared), require professional and proactive customized advising to approach their right fit major (Mu & Fosnacht, 2019). This development of major courses starting freshmen year benefits students tremendously as they are confronted with the *wrong fit major* much sooner, allowing them to change majors early on. If a student realizes they are in the wrong major, studies show that those who change their major early on have a 20-40% greater chance of persisting and completing their college education than those who do not (Stanley, 2021).

Theoretical Context

Vincent Tinto's retention theory (Tinto, 1987) and Steve de Shazer's solution-focused brief therapy model (de Shazer, 1994) were used as the theoretical framework for this study. In brief, Vincent Tinto's student retention theory claims that the more positive interactions students have on campus, along with greater engagement in their campus community, the more likely they are to persist in their college education (Tinto, 1987). However, it can be difficult to engage when a student has not given enough time or thought about *why* they are there in the first place

(to get a college degree). Moreover, students who are undeclared often feel adrift. Students need to discover their strengths and their purpose, which would enhance engagement (Tinto, 1987; Xerri et al., 2018). Solution-focused brief therapy is a therapeutic approach that uses a future-focused, goal-directed method to find solutions to problems (de Shazer, 1994). Solution-focused brief therapy (SFBT) proposes that the solution to one's problems lie within and that these solutions can be found through guided exploration (de Shazer, 1994). Motivational interviewing, which is a technique of solution-focused therapy, fosters a collaborative spirit that aims to facilitate conversations in a way that enables the students to discover the solutions that already exist within them (McKergow, 2016). One can surmise from the premises of these two theories that if a student receives early intervention with a personalized and goal-orientated approach to strengthen their decision-making skills when choosing a major, they may be more inclined to persist. By utilizing these techniques, an academic advisor could work together with an undecided student to develop strategies that possibly will help them transition from a state of indecision to a state of decision.

There is limited literature discussing ways to provide targeted support for the undecided student population. Although there is research on motivational interviewing and SFBT in other contexts, such as therapy (Miller & Rollnick, 2013; Olney et al., 2009), there is a lack of research on its effectiveness in pre-major coaching. Moreover, research on motivational interviewing in conjunction with SFBT is lacking regarding its effect on timely declaration and graduation for the undecided student population.

Problem Statement

The problem is that undecided students are at risk for dropping out or not persisting in college (St. John et al., 2004; Kreysa, 2006; Wilcoxson & Wynder, 2010). According to Noel-

Levitz (2008), “Lack of clearly defined educational and career goals is often the main reason students give for not returning or pursuing a college degree” (p. 12). This means that students with an “undeclared/undecided” status are a vulnerable population worthy of research attention, although they are not always classified as such and given the support necessary to change their undeclared status. Moreover, there is conflicting information from research regarding the undecided student experience and whether universities should promote an undeclared status (Leppel, 2001; Peterson et al., 1991; Rose & Elton, 1971; St. John et al., 2004).

Noel-Levitz (2008) emphasized that “programs targeted specifically for undecided students have proven to significantly reduce attrition rates (p. 12). Early researchers have established academic advising as a key component in a strong retention model (Braun & Zolfagharian, 2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Vianden & Barlow, 2015). However, although persistence has been studied frequently, not all research results are useful for the undecided population (Shaw & Barbuti, 2010). Some persistence studies have not included undecided students in their research, further muddling definitive results about the undecided student’s path to success (Shaw & Barbuti, 2010). According to Cuseo (2005), a leading researcher in student success and retention, mandating undecided students to choose a major prematurely may adversely affect their persistence. Cuseo expressed that students must be allotted the proper amount of time to wrestle with major options, which could include multiple major changes. However, other research has shown that an undecided status negatively affects students' persistence and retention (Leppel, 2001; Peterson et al., 1991; Rose & Elton, 1971; St. John et al., 2004). This may be due to the fact that the process of “wrestling” with a major begins with choosing a major.

Selecting a major to explore from the beginning compels the student to focus on the task at hand, requiring their full attention. There is nothing to wrestle with if a student is not taking a course that begins to expose them to the major. If the plan does not work, change the plan, not the goal. Many experts in goal attainment have found through research that the goal an individual chooses *and* their level of commitment to that goal can greatly impact their likelihood of achieving it (Ajzen, 1985; Bandura, 1997; Carver & Scheier, 1998; Locke & Latham, 2006). Studies have shown that implementation intentions (plans) can significantly aid students in bridging the gap between goal-setting and goal-attainment (Gollwitzer & Oettinger, 2011).

Other vulnerable populations (pre-identified before the start of school) have the support they need to increase academic success, engagement, and retention. Examples include accommodations for learning challenges, academic support classes for students with low test scores or high school GPAs, and scholarships for first-generation or low SES students (De Clerq et al., 2018; Saunders-Scott et al., 2018). The research on first-year programs shows that strategic pre-major counseling/advising can assist students in declaring a major earlier (Ellis & Rangel, 2018; Shcheglova et al., 2020; Xerri et al., 2018).

Purpose Statement

The purpose of this quantitative archival study is to determine whether pre-major coaching with the inclusion of motivational interviewing, which is a solution-focused therapy technique (independent variable), has an impact on freshmen undeclared students choosing a major earlier (dependent variable) and making greater progress toward their degree (dependent variable) than students without coaching. Archival data in the form of college records from the database will be collected to evaluate and quantify the dependent variables, which are the time to declaration of a major, the number of major changes, and progress toward degree completion,

which will measure time to graduation. If there is a positive impact, pre-major coaching could be used for every incoming undecided student as a safety measure to get on the right path in a timely manner.

Significance of the Study

Multiple studies suggest that entering college with an undecided declaration negatively impacts student's wellbeing, motivation, and retention (Ellis & Rangel, 2018; Galilee-Belfer, 2012; Holland & Holland, 1977; Leppel, 2001; Noel-Levitz, 2008; Peterson et al., 1991; Rose & Elton, 1971; St. John et al., 2004; Thomas et al., 2021; Zajac & Komendant-Brodowska, 2018). This study investigates whether pre-major coaching in the form of motivational interviewing can influence a freshman student's ability to persist by shortening their time to declaration of a major and graduation. The research findings may benefit college and university student affairs to better assist students with discovering the right fit major to improve persistence, retention, and graduation rates. In addition, the findings may also be advantageous to parents and high school guidance counselors in encouraging students to consider declaring their major before arriving on campus or engage in pre-major coaching if offered. The findings may also encourage universities to offer pre-major coaching to undeclared students. The findings may also be valuable to other academic advisors who may encounter students needing to transition to a better-fitting major. If motivational interviewing is found to shorten time-to-graduation for students, advisors may want to explore the benefits of it. Finally, the study is significant because it potentially empowers undecided students by providing a method to strengthen their decision-making so they can attain their goal of a college degree in a timely manner (Braun & Zolfagharian, 2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Soppe et al., 2019; Vianden & Barlow, 2015).

Research Question(s)

RQ1: Does pre-major coaching in the form of motivational interviewing/solution-focused brief therapy [advising] shorten the time to declaration for undeclared students?

RQ2: Does pre-major coaching in the form of motivational interviewing/solution-focused brief therapy [advising] increase undeclared students' progress to graduation compared to those without pre-major coaching?

RQ 3: Is there a significant difference in the number of times students change majors between students who utilize pre-major coaching and those who do not?

Definitions

Several terms were of interest related to this study, which are defined here. These terms are used specifically to gain a greater understanding that is unique to this study.

Academic Advising - Advising provides the most significant mechanism by which students can directly or indirectly interact with representatives of the institution and clarify their educational/career goals as well as relate these goals to academic offerings (Noel-Levitz, 2008, p. 10).

Attrition – A measurement of students who fail to re-enroll at an institution in consecutive semesters (Berger, 2005, p. 7).

Credit - The unit of value, awarded for the successful completion of certain courses in relation to the total requirements for a diploma, certificate, or degree (National Assessment of Educational Progress [IPEDS], 2011).

Degree Completion Plan – A comprehensive list of courses for a specific program of study (NCES, 2023).

Dropout - A student whose initial educational goal was to complete at least a bachelor's degree but who did not complete it (Berger, 2005, p. 7).

Full-time enrollment - The number of students enrolled in higher education courses with total credit load equal to at least 75 % of the normal full-time course load (IPEDS, 2023).

Motivational Interviewing – A collaborative, goal-orientated style of communication with particular attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion (Miller & Rollnick, 2013, p. 29).

Persistence - The desire and action of a student to stay within the system of higher education from the beginning year through degree completion (Berger, 2005, p. 7).

Progress Toward Degree Completion – Credit production and progress towards a chosen degree of study (NCES, 2023).

Retention - The ability of a particular college or university to successfully graduate the students who initially enroll at that institution (Berger, 2005, p.3).

Self-efficacy-- an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1997).

Solution-Focused Brief Therapy – A future-focused, goal-orientated therapeutic approach emphasizing strengths and views clients as the experts on their own lives (de Shazer, 1994).

Success Rates in Higher Education Institutions - Typically measured by a student's persistence, academic engagement, degree completion, and graduation rate (Gilson, 2018).

Undecided--Those in need of a better understanding of themselves and also desiring heightened awareness of their career possibilities. (Okocha, 2002, p. 55).

Summary

Retention research shows that an undecided status negatively affects students' persistence and contributes to college dropout. (Leppel, 2001; Peterson et al., 1991; Rose & Elton, 1971; St. John et al., 2004). Pre-major coaching is a service that can assist in creating a clear path toward goals and finding purpose in the college experience. A student coming in without a major perpetuates the cycle of being stuck and may contribute to a feeling of purposelessness (Tinto, 1987). Lack of decision regarding a major is costly, and without intervention and assistance, it could contribute to languishing. When asked the common question, “What is your major?” responding with “I am undecided” or “I don’t know” can give off an impression of aimlessness and compound the feelings of being stuck. Choosing a college major is crucial as it provides students with a clear goal to strive towards. If a student is undecided, participating in pre-major coaching may assist the student in strengthening their decision-making abilities and take the emphasis off of what they are feeling (ambivalence or anxiety). Motivational interviewing, a form of solution-focused therapy/advising, may be especially effective in assisting with this crucial choice early on, leading to greater progress towards graduation and restoration of a sense of purpose. Motivational interviewing, a technique of SFBT, is a promising technique for this purpose because the collaboration between student and advisor aids in fostering a clearer idea of a student’s future goals and aspirations, increasing the likelihood of declaring a major early on and staying enrolled in the university.

Chapter Two: Literature Review

Overview

One of the most significant financial investments one will make is a college education. Students who show up without a plan when so much time and money is at stake could end up dropping out or overextending their time, which leads to increased costs (Baker, 2018). First-year university students are encountering substantial obstacles regarding decision-making (Mangan, 2011; Reynolds et al., 2010). The results from a multi-year national College and Career Readiness survey of high school students showed that the majority of freshmen students are inadequately prepared to make decisions regarding their choice of major and career goals (Harrington & Orosz, 2018). According to the national report on college readiness conducted by ACT (2018), one out of four graduating high school seniors indicated they were undecided or selected no major during testing.

Without proper guidance and clarity on degree plans prior to entering college, these students are in jeopardy of wasting time, money, and energy as they accumulate unnecessary credits toward a wrong-fit major. This lack of guidance can also hinder retention or graduation within the time limits granted by financial aid restrictions (McFarland et al., 2017). Students with time restrictions attached to their scholarships must graduate within the maximum time limit for their degree plan; therefore, it is critical that colleges assist students with getting on the right path as soon as possible (Harrington & Orosz, 2018).

This chapter provides a review of the literature on this topic. It first presents the literature on the conceptual or theoretical framework and then proceeds to present the related literature that serves as a foundation for this study. This includes literature on retention and factors related to the ability to choose a major.

Theoretical Framework

A framework is a model that allows one to organize a tremendous amount of information. It guides the process of interpreting people's communication and behavior and influences interventions (Watzlawick et al., 1967). A theoretical framework helps "fit concepts together and maintain a sense of coherence in your approach" (Thomas & Sosin, 2011, p. 304).

Vincent Tinto's retention theory and Steve de Shazer's solution-focused brief therapy model were used as the theoretical framework for this study. In brief, Vincent Tinto's student retention theory claims that the more positive interactions students have on campus, along with greater engagement in their campus community, the more likely they are to persist in their college education (Tinto, 1987). However, it can be difficult to engage when a student has not given enough time or thought about why they are there in the first place (to get a college degree). Solution-focused brief therapy is a therapeutic approach that uses a future-focused, goal-directed method to find solutions to problems (de Shazer, 1994). One can propose from combining these two theories that if a student receives early intervention with a personalized and goal-orientated approach to strengthen their decision-making skills when choosing a major, they may be more inclined to persist.

Vincent Tinto's Student Retention Theory

Vincent Tinto is a leading expert in student affairs and success strategies. He has used his experience as a university professor to build a theory of student retention in the field of higher education. Tinto has found that more students depart from their college education before finishing than persevering to complete their degree (Tinto, 1987). He developed an *interactional* model based on student's encounters with the university. Tinto's (1987) research showed that the more consistent, positive interactions a student had, the more connected they felt

and the more likely they were to persist. The more negative encounters the student experienced, the more likely they were to withdraw. Students spend a considerable amount of time in college outside the classroom; therefore, it is beneficial for faculty and staff to engage with students in a way that would encourage greater engagement (Gilson, 2018). Vincent Tinto is also a leading expert in student retention. He has urged universities to place emphasis on the first semester so that students are more likely to experience success (Genova, 2020). One such intervention is a student's engagement with competent academic advising. Studies have shown significant differences in academic performance between students who used academic advising and those who did not (Genvoa, 2020).

Moreover, early researchers have established academic advising as a key component in a strong retention model (Braun & Zolfagharian, 2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Vianden & Barlow, 2015). Tinto's advising theory proposes that first-year residential students go through three stages (Tinto, 1993): (a) separation, which is leaving the parental home and encountering new responsibilities; (b) transition, in which students are experiencing new and unfamiliar territory; (c) incorporation, in which students are in the process of learning to adapt and thrive in the college environment. Tinto described this time as a *rite of passage* and noted that students cannot move into the incorporation stage until they have successfully completed the separation and transition stage (Tinto, 1993). This theory helps to guide the current study because it sheds light on the unique transition's students are undergoing during this life stage of development. This study will determine whether factors, such as early intervention coaching, can help students sort through their strengths and interests for a potential major *before* encountering these challenges. The

rationale is that this intervention is critical to creating a path forward, enhancing motivation, and retaining the student until graduation.

Solution Focused Brief Therapy

Solution-focused therapy was developed in the late 1970s by Steve de Shazer and Insoo Kim Berg (de Shazer, 1994). This method of psychotherapy uses a goal-directed approach to find solutions to problems. After many years of observing client behavior and emotions during therapy sessions, de Shazer and Berg pinpointed the questions that regularly contributed to client progress and solutions. Questions and strategies that did not impact growth and problem-solving were eliminated (de Shazer et al., 2021). A solution-focused approach focuses on the present and preferred future—not the past.

This method fosters positive change by approaching each problem through small solutions that can be acted upon now (Kollar, 2011). In the context of professional advising, the goal would be to explore degree plans to find the right-fit major. Solution-focused therapy (or advising) uses a collaborative approach with the student, focusing on the student's strengths, qualities, and abilities, which fits well with both a counseling and Professional Advising model. Students are guided to develop a new awareness—not *insights* of buried pains and distress—but instead of overlooked, forgotten hopes, resources, and natural skill sets. De Shazer referred to developed awareness as *solution sight*, explaining, "This process of solution development can be summed up as helping an unrecognized difference become a difference that makes a difference" (de Shazer, 1988, p. 10). Evidence-based solution-focused brief therapy consists of strategies that constitute more of a way of thinking and being, with less emphasis on a model. Solution-focused brief therapy (SFBT) has become one of the leading methods of brief therapy worldwide, as well

as a major influence in the world of business, social policy, and education (de Shazer et al., 2021).

De Shazer makes clear that he did not develop a theory that "attempts to explain everything or can be used as if it were designed to explain everything" (de Shazer, 1994, p. 274). Instead, he asserts: "Ever since I began practicing brief therapy in the early 1970s, my research question was "What do therapists do that is useful?" In the 1980s, we changed this to "What do clients and therapists do together that is useful?" (de Shazer & Berg, 1997, p. 122).

Motivational Interviewing

Motivational Interviewing is a clinical tool used to help people move through ambivalence and toward change (Miller & Rollnick, 2013). Conversations about change often lead to reluctance or resistance. Motivational interviewing is a powerful approach to helping people (students) discover the motivation they need to make positive changes in their lives. Through skilled questioning and active listening, a helper (advisor) can assist a student in navigating obstacles preventing decision-making. Motivational interviewing (MI) aims to facilitate conversations in a way that encourages individuals to make changes based on their own personal values and interests (Miller & Rollnick, 2013). It blends well with other evidence-based clinical skills and approaches such as SFBT and encourages hope, channels motivation in a positive direction, and supports client self-efficacy (Olney et al., 2009). MI is grounded on the premise that "even when individuals believe it is important to make changes, they may not put forth significant effort unless they believe there is hope for success" (Wagner & McMahon, 2004, p. 155). Like solution-focused brief therapy, this tool is goal-orientated, collaborative, person-centered, evidence-based, and brief, using methods that can effectively and efficiently be utilized in fewer counseling/advising sessions (Olney et al., 2009).

The most common place to get stuck when there is a need for change or costly decision-making is ambivalence. The path out of ambivalence is to choose a direction and follow it, making necessary adjustments along the way. The counselor (or advisor) can develop a partnership to evoke the motivation and solution that already exists within the client (student). It is important to note that the way in which one counsels can have an impact on student motivation, either increasing or decreasing it (Miller & Rollnick, 2013).

Figure 1

Counseling/Advising Communication Styles

Note. Reprinted from "Conversations about Change," by W. Miller and S. Rollnick, Motivational Interviewing (3rd ed., p. 4), 2013, The Guilford Press. Copyright 2013 by William Miller and Stephen Rollnick.

A crucial aspect of language is its ability to motivate and influence behavior, aside from simply conveying information. Figure 1 conveys the different styles of helping with the spirit of SFBT and Motivational Interviewing right in the middle as a guiding style. Miller and Rollnick (2013) explain:

> Imagine going to another country and hiring a guide to help you. It is not the guide's job to order you when to arrive, where to go, and what to see or do. Neither does a good guide simply follow you around wherever you happen to wander. A skillful guide is a

> good listener and also offers expertise where needed. MI lives in this middle ground between directing and following, incorporating aspects of each (p. 5).

A Collaborative Approach

Solution-focused therapy and motivational interviewing establish a warm, collaborative therapeutic alliance. Problems or issues are not ignored or minimized with this model but rather require a teamwork approach between the counselor and counselee (or advisor and advisee). The goal of the technique and this collaborative approach is to resolve the presenting problem as quickly and effectively as possible so students can move forward with their lives (McKergow, 2016). The counselee [or student] has all the resources needed to find the solution. Students are already experts on themselves and are at least in touch with their preferences and dislikes. As Kollar (2011) stated, "The priority is to help the counselee [student] get unstuck" (p. 41). This is not a method that is done *to* or *on* someone but is an active partnership that is done *for* and *with* a student (Miller & Rollnick, 2013, p. 15). The positive focus on solutions, rather than dwelling on deficits, enables students to become involved in resolving their hindrances, which makes for an empowering approach. Along with SFBT, motivational interviewing complements other treatment methods and addresses reluctance and ambivalence in the decision-making process.

The Role of the Advisor

The advisor first builds rapport and demonstrates fit. Johnson and Johnson (2014) note that "the counselor's [professional advisor's] personality (including empathy, warmth, and kindness) is a critical ingredient in creating a strong therapeutic relationship" (p. 19). This therapeutic alliance is important to create goal initiatives (Thomas & Sosin, 2011). According to a study conducted by Sogunro (2015), approximately 70% of the participants believed that

maintaining high motivation levels for the student was dependent on effective academic advising and a positive perception of the advisor-student relationship.

At the beginning of the encounter, the first goal is to establish rapport and understand the problem—not the *why* but the how and what is happening—so that students can move away from a sole focus on *the problem*, which in the context of this study is not knowing what to do for a major. The chief role of the advisor is to listen well, so the student feels heard. Solution-focused brief therapy adapts Carl Roger's core conditions for listening to this approach. These core conditions are congruence, unconditional positive regard, and empathy (CUE). Attributes of congruence include "realness, genuineness, engaged body language" (Kollar, 2011, p. 142). Unconditional positive regard includes "respect for the client [student], holding the client [student] in high regard at all times" (Kollar, 2011, p. 142). Empathy is "showing a complete understanding of the client's [student's] thoughts and feelings" (Kollar, 2011, p.142).

When using a solution-focused approach along with MI, it is important for the advisor to establish a sense of collaboration in the relationship. As Cannistra and Hoyt (2020) explain, being too insistent can lead to resistance, while imposing ideas can result in opposition. Miller and Rollnick (2013) describe the interaction as a delicate dance rather than a wrestling match. It is important to work alongside the student and know the motivations, goals, narratives, and language surrounding their situation. Advisors help explore with the students to create their own solutions and goal setting. Solutions are highly individualized based on the student's strengths and life experiences (Cannistra & Hoyt, 2020).

De Shazer recommended that the counselor [Professional Advisor] be purposeful in influencing the student's view of the problem in a manner that leads to a solution (de Shazer, 2021). The guiding assumption is that students already have personal competencies (Kollar,

2011, p. 62) and the counseling relationship is *positional* (p. 80). This means that students are going to show up to their advising session in a willing position (curious/eager), a blaming position (someone else's fault for being stuck), or an attending position (unwilling/uninterested) (de Shazer, 1988, p. 42).

Goal description/formulation is "When the counselee shifts to a focus on goals—instead of feelings—the process of change begins" (Kollar, 2011, p. 94). Scaling questions are also helpful in shifting the focus to possibilities and desired outcomes as the advisor-advisee moves toward a partnership, as this is a collaborative effort. It is most productive when students are in a *willing position*, which means that they show eagerness to gain a clearer perspective. In fact, progress cannot be made unless students are in a *willing position*. Miller and Rollnick (2013) emphasize that people *must* enter into the process of MI with an engaged and optimistic state of heart and mind in order to create movement in goal setting.

The advisor aims to help students work toward a perception shift and write a new story/narrative about their future. This is part of becoming unstuck because it helps clarify an issue they felt ambivalent about. Petersen (2015) emphasized the idea that "changing the way we think alters the way we feel" (p. 28).

There are three basic rules in solution-focused therapy that counselors or advisors need to be aware of (a) If it ain't broke, don't fix it; (b) Once you know what works, do more of it; (c) If it doesn't work, don't do it again; do something different (Cannistra & Hoyt, 2020). Sharing similarities in goal setting and collaboration, the core skills of motivational interviewing according to Miller & Rollnick (2013, p. 33), are the following:

- Asking open questions
- Affirming the student's strengths, efforts, and resources

- Reflective listening
- Summarizing
- Informing and advising

Related Literature

When considering the existing literature, the problem relevant to this study is that there is a significant focus on supporting vulnerable populations in higher education who may be at risk of not graduating (Black, 2018; Boyd et al., 2020; Saunders-Scott et al., 2018; Thomas et al., 2021) These populations include low SES backgrounds, first-generation students, students belonging to racial or ethnic minority groups, and those who may need additional academic support (Markell, 2020). Students with difficulty or anxiety in choosing a major are designated as "undecided or unknown." Undeclared students are part of this vulnerable population because of a lack of vision or direction but are often not given the same support measures.

In addition, it is vital to conduct research on undecided students as they are one of the rapidly increasing groups in higher education. According to Lewallen (1995), undecided majors make up anywhere from 20% to 50% of new college students. This group is considered vulnerable and less likely to continue their studies (Mangan, 2011; Reynolds et al., 2010; Spight, 2020). Students who leave college prematurely are more likely to have an unfulfilling career and not reach their full potential (Thomas et al., 2021). Other studies show that they face higher mental health issues and are more likely to engage in deviant behavior (Thomas et al., 2021). Research has shown that students who are committed to academic goals have higher engagement, which contributes to enhanced well-being (Hodge et al., 2017). This study looks at the effects of early intervention with undecided students and if there is any difference in students

declaring earlier and making progress toward degree completion (therefore enhancing retention and persistence rates) than students without coaching.

The Ramifications of COVID-19 to Student Preparedness

Students who graduated from high school before 2020 engaged in activities to prepare for college, but many students missed out on key experiences after 2020, according to a new survey by ACT, which developed the standardized test that so many students take to get into college (Chen & Lucock, 2022). They surveyed thousands of students and discovered that a large percentage missed out on critical activities to prepare for college and did so because of the pandemic (Chen & Lucock, 2022). In addition, there is a discrepancy between students who had more in-person learning and those who experienced fewer disruptions in school. Students with more in-person learning and fewer disruptions are able to show up for college in a better emotional state to adapt to college and focus on academics (Tomasik et al., 2021). Daily support from counselors and teachers, socializing with peers face to face, and the availability of in-person school events foster consistency and help prepare students for college.

In a recent study, faculty members reported heightened student disengagement from incoming freshmen (Kim, 2022). The group of respondents represented a range of educational institutions, from small private colleges to large public universities and community colleges. They described shared classroom challenges such as lack of attendance, avoidance of participation, and skipping the readings or homework (Kim, 2022). While professors are used to seeing burnout, it is evident that newer college students struggle the most. The discipline of study skills and academic excellence has deteriorated during the shift to remote learning, especially during the critical high school years (Li et al., 2021). As a result of remote learning, homework loads were often easier, deadlines became negotiable, cheating increased, and

shortcuts became the norm as thousands of students were left in isolation (Kim, 2022). In addition, the use of Zoom, where recording and posting information later became the norm, has misled students to disengage because they could go back and watch the recording later. The problem is that many do not go back to review it (Jaschik, 2022). Faculty members report that very few students watched the previously recorded videos, and class size had been reduced to only 20%-30% in attendance when attending class is optional (Jaschik, 2022).

The transition from high school to college is filled with academic and social challenges. If a student does not learn how to navigate this transition successfully, the student may develop poor mental health or prematurely drop out of their college journey (Noel & Levitz, 2008). Despite the efforts from higher education institutions, students abandon the college journey at an astoundingly high level (Marley & Wilcox, 2021). Vincent Tinto's postsecondary persistence theory states that college students drop out due to low academic performance, inadequate interactions with faculty and staff, lack of engagement in extracurricular activities, poor peer group interactions, and major/career indecision (Tinto, 1987).

Retention

Student retention is a persistent dilemma in higher education (Thomas et al., 2021) because it is often how universities measure student success. Student success in higher education is an accountability measure to gauge a student's persistence, academic engagement, degree completion, and graduation rate (Gilson, 2018). These statistics, viewable to the public, indicate a university's educational effectiveness that parents and students use to make their college decisions (Gilson, 2018).

Lack of retention most often happens after the first year (Tinto, 1987). Students enrolled in their first year of college often experience culture shock after leaving the parental home, and

loneliness, isolation, and academic adjustments set in (Thomas et al., 2021). Student disengagement and low academic motivation are at-risk behaviors for students not finishing their academic journey (Thomas et al., 2021). Retention research identifies “undecided students as a group that is highly dropout prone. The lack of clearly defined educational and career goals is often the main reason students give for not returning or pursuing a college degree” (Noel & Levitz, 2008, p. 12). Students who leave college prematurely are more likely to have an unfulfilling career and not reach their full potential (Thomas et al., 2021).

Factors Related to Retention

Studying persistent rates is of great interest to universities (Astin et al., 2012). Studies have analyzed several factors, including academic performance (Allen & Robbins, 2008), characteristics of students (Arum & Roska, 2011), and the differences between majors and persistence (Leppel, 2001). Numerous studies have found that entering college with an "unknown/undecided" status has a negative impact on persistence (St. John et al., 2004; Kreysa, 2006; Wilcoxson & Wynder, 2010). Holland and Holland (1977) suggest that "undecided students tend to drop out, earn fewer credits, and get lower grades" (p. 411). Factors to be reviewed in this section include the role of grit on persistence, supportive relationships, and students' behavioral and emotional health.

The Role of Grit on Persistence

One of the primary contributions of psychology in the role of persistence and retention has been to identify specific personality traits or non-cognitive factors associated with motivation and growth as mechanisms to increase college persistence and retention (Smart et al., 2011). Students enroll in college to attain knowledge and skills, and the learning process is dependent upon prior preparation as well as non-cognitive factors.

Research has shown that a college student's ability to handle the stress that comes with attending higher education institutions, also known as their level of resilience, has a significant impact on their chances of achieving success in college (Galatzer-Levy et al., 2012). Resilience is an attribute based on both internal and external factors (Riopel, 2023). Resilient people tend to have solid social support, which is an external factor. They have a strong sense of control over their environment, which is an internal attribute, and are resourceful in gaining information and tools, which indicates an ability to access the help they need to be successful. Finally, they are able to bounce back from disappointments (Riopel, 2023).

Grit can be described as the ability to achieve performance goals with a high amount of stamina. For this reason, grit has been identified as a predictor of resiliency and performance (Whipple & Dimitrova-Grajzl, 2020). Grit is a character strength that contributes to resilience by helping students persevere despite stress. Grit, therefore, is vital for student success (Howard et al., 2019). Howard et al. (2019) defined *grit* as the "tolerance for adversity in the pursuit of goal achievement" (p. 189), and grit has been associated with persistence, self-control, reliability, engagement, and academic productivity. In their study, Howard et al. found that "grittier participants attained a significantly higher education level than their peers." (p. 190).

Grit can also be specified as the ability to manage challenges and failure while conserving stamina to resist defeat (Duckworth & Quinn, 2009). Students experience numerous stressors as they begin their college journey. They must manage new challenges, such as living away from their parental home for the first time and dealing with roommates, finances, and elevated academic expectations (Prevatt et al., 2011). One may wonder why two students with the same syllabus perceive the workload differently. This difference in perception of the

workload could be attributed to the student's purpose for attending and their internal motivation to study and engage in the university (Xerri et al., 2018).

Protective factors to retain students have been the focus of higher education and include support with coping strategies, skills, strengths, and other resources (Howard et al., 2019). Predictors of grit have received little attention. Little is known about how one acquires the character trait of grit, but parenting behaviors may be partially responsible for its development (Howard et al., 2019).

Supportive Relationships and Hope Aiding in Persistence

According to D'Amico and Fruiht (2020), supportive relationships with faculty, staff, and advisors through mentoring and coaching-based programs increase students' abilities to persist. Working closely with an invested adult through mentoring can build social, mental, and academic support in the hopes of retaining the student and, in so doing, enhancing their well-being and sense of accomplishment (D'Amico & Fruiht, 2020). Not only can supportive relationships promote success, but the results of D'Amico and Fruiht's study suggest that building hope is another way to increase student persistence and achievement (D'Amico & Fruiht, 2020). Goal setting and teaching strategies to accomplish these goals and develop grit can be built into existing curricula and advising sessions (D'Amico & Fruiht, 2020). A sense of purpose regarding studying (which is affected by the right fit major), peer-to-peer relationships, and teacher/staff-peer relationships substantially affect student engagement (Xerri et al., 2018). A keen sense of purpose and staff-student relationships are also key to managing workloads (Xerri et al., 2018).

Factors that Improve Retention

Aiding students to acclimate to more rigorous academic skills, stress management, meaningful relationships with faculty/staff, and campus involvement has been shown to improve persistence (Astin, 1999; D'Amico & Fruiht, 2020; Education Advisory Board [EAB], 2016; Emekako & Van Der Westhuizen, 2021; Leppel, 2001; Thomas et al., 2021; Tinto & Pusser, 2006). Retaining first-year university students has become a leading priority for administrators. They invest resources for student success, including retention software, academic advising/coaching, and first-year experience (FYE) programs. FYE programs can support social and academic integration and increase a student's commitment to degree completion (Shcheglova et al., 2020). Colleges and universities that offer such programs report that these programs impact retention (Ellis & Rangel, 2018). In FYE programs, students can learn effective study skills, time management, and on-campus extracurricular activities. They help to support a sense of belonging and engagement with the campus early on. FYEs are most effective when students are required to be enrolled during the first semester of freshmen year. Students receive mentorship, academic success strategies, small class sizes, and additional advising information (Ellis & Rangel, 2018; Shcheglova et al., 2020; Xerri et al., 2018).

Other factors critical to helping students stay committed to their college journey include student behavioral and emotional health. Unmanaged depression, antisocial behaviors, lack of resilience to stressful events, and substance use are associated with dropping out. It is not a matter of one or the other, but considering all these factors is beneficial to encourage the students to stay on track (Thomas et al., 2021).

In previous research, the campus environment, engagement in collaborative learning, and the level of student-faculty interactions have been investigated as factors potentially associated with retention (Griffin et al., 2019). At a public mid-sized university, Griffin et al. (2019)

conducted a study comparing the characteristics of first-year students who progressed to Year 2 with those who did not return for their second year. The authors used the National Survey of Student Engagement to collect data on experiences with the campus environment, engagement in collaborative learning, and the level of student-faculty interaction. The authors also examined differences in student engagement based on gender, race/ethnicity, and whether the student was a first-generation college student. The study included 1,402 first-year college students. The results indicated that those students who continued to their sophomore year had significantly higher engagement in collaborative learning scores during their first year (Griffin et al., 2019).

Another factor associated with retention is interest and satisfaction with one's major (Pritchard et al., 2018). When students are satisfied and interested in their major, their learning is improved, and they are likely to be retained by the university (Pritchard et al., 2018). The choice of major is a significant component of a student having an overall positive experience in college (Pritchard et al., 2018).

Factors Affecting the Ability to Choose a Major

Entering college as an undecided student can stem from a multitude of reasons and influences (or lack of influences). Orndorff and Herr (1996) assert that "most college students have not been exposed to a range and a variety of career options before choosing an academic major or a career direction" (p. 633). Their level of exposure can significantly influence a college freshman's decision-making process. It is common for them to be unsure about their primary subject of study or occupational area after graduation due to a lack of exposure (Lewallen, 1994).

Several factors impact students' ability to decide on a major. The factors that are the focus of this literature review are the importance of self-efficacy, having engaged in core self-

evaluation, sense of calling, sense of belonging, decision-making difficulties, coddling of COVID-19, wrong-fit major, incompetent advising, and first-year experience (FYE) programs.

Self-Efficacy

Self-efficacy refers to a person's confidence in their ability to succeed in a specific situation or task (Schunk & DeBenedetto, 2021). It is a learned behavior and can depend on various circumstances where one may feel capable of succeeding in one task but not in another. A high level of self-efficacy helps promote goal attainment (Bandura, 1997). Those with low self-efficacy tend to become defeated and might withdraw from the task at hand. Students do not always use logical steps in decision-making and are often affected by personality characteristics (Shen et al., 2021). Previous studies have shown that those with high levels of personality traits related to self-perception and self-evaluation, such as high self-identity and self-efficacy, experience fewer decision-making difficulties (Shen et al., 2021).

Some universities employ a well-known strength assessment known as the Clifton Strengths Finder. The assessment was developed by Don Clifton in 1949 as he set out to empower human development by studying what was right with people (Gallup, Inc., 2017). The qualities he set out to identify were not based on personality or what needed improvement. Clifton found that emphasizing strengths can increase students' self-awareness and academic self-efficacy (Soria & Stubblefield, 2015). Strengths-based education has also benefited students in career exploration and goal attainment (Seemiller & Clayton, 2019). Over 90% of Fortune 500 companies, as well as many universities, use the Clifton Strengths Finder assessment (Gallup, Inc., 2017). More than 600 colleges and universities use strengths-based education, where students are required to take the Clifton Strengths Finder as part of their advising (Nelson, 2022). Identifying one's strengths could provide a beneficial clue to choosing a major (Ellis & Rangel,

2018), and for this reason, professional advisors for undecided students may be apt to recommend that undecided students be required to take it to get direction for their academic exploration.

Sense of Calling

A *sense of calling* is defined as a "person's belief that he or she is called upon to do a certain kind of work" (Abouras, 2021, p. 241). This concept does not have to be applied or understood from a religious point of view. Career calling can serve as a driving force to surge forward in finding the right fit major or career. The call could come from a person's inner strengths, the needs of society, or by God. When one has a sense of calling, it can provide momentum. Self-evaluation and career calling positively impact college students' career decision-making (Shen et al., 2021). Research shows a strong link between calling and personal well-being, which may also help promote college student success (Abouras, 2021).

Further studies show that the sense of calling is linked to a sizable predictor of life meaning, personal growth and development, and academic satisfaction, especially when the desire for the calling experience exists (Abouras, 2021). Strengths of self-efficacy, civic engagement, and spirituality were the top three predictors of sense of calling in Abouras' (2021) study, and the author suggested that sense of calling should remain a topic of further investigation for student affairs professionals. In addition, research shows that students who report higher levels of spirituality also recount greater levels of engagement, which enhances persistence and completion rates (Gilson, 2018).

Sense of Belonging

A sense of belonging refers to feeling valued, noticed, and included at one’s college (Pedler et al., 2022). Research indicates that higher education students who experience a greater

sense of belonging tend to have higher GPAs, higher motivation, more academic self-confidence, and greater enjoyment in their studies; these attributes positively and significantly impact student retention (Pedler et al., 2022). In Pedler's research, students who frequently considered dropping out had a lower sense of belonging than students who did not (Pedler et al., 2022).

Decision-Making Difficulties

Self-knowledge/core self-evaluation is defined as being in touch with one's strengths, emotional state, personality traits, and behavioral patterns, which all contribute toward the ability to make decisions (Shen et al., 2021). Students do not always use logical steps in decision-making and are often affected by personality characteristics (Shen et al., 2021). Costly decision-making with long-term ramifications is some of the most difficult for students to navigate. Students may experience heightened emotions that diminish their cognitive decision-making capacity (Peterson et al., 1991). Their ability to cope also may be limited by a lack of prior experience with loss, failure, or decision-making (Barclay, 2017; Dann-Messier et al., 2014).

Effective strategies are needed to help with students' difficulties in choosing their major and future careers in ways that will keep them on track. Barriers affecting decision-making include (Shen et al., 2021):

- Occupational mismatch.
- Feeble career (major) preplanning.
- Lack of readiness to enter college.
- Inconsistent information.
- Low-level core evaluation.
- Lack of environmental exploration/limited life experience.
- Lack of necessary knowledge and skills (p. 2).

Coddling of COVID-19

The entitlement culture of today's youth has slowly been increasing, but it seems there has been an extreme acceleration since the outbreak of COVID-19 (Birmingham et al., 2021; McIntosh & Stone, 2023). Data show that after the pandemic, most youth (70%) rated their ability to cope with challenges as medium to exceptionally low (Boys & Girls Clubs of America National Youth Outcomes Initiative Member Survey, 2022). This syndrome is associated with parents, coaches, teachers, and school administrators shielding today's students from disappointment or failure. The bar of expectations continues to be lowered from cultivating the idea of *no wrong answers*, *participation trophies*, the elimination of SAT/ACT testing for entry to college to protect those who cannot qualify, and attendance and late assignment/lack of quality "grace." Some call it a coddling syndrome, whereas others call it hypersensitive and slothful (Fillat & Miller, 2022).

The essential skills requirement to graduate from high school has been halted since COVID-19 in Oregon, and many states continue to follow suit (Lambert, 2023). The Oregon State Board of Education voted unanimously for students to bypass having to demonstrate competence in essential subjects through standardized testing and is considering *equity grading* instead of the traditional A to F grading scale (Lambert, 2023). It has been reported by the American College Health Association (2021) that students often come to college lacking the necessary academic, emotional, and mental preparation. Despite this, college academics remain as rigorous as ever.

There are benefits to having positive pressure applied to individuals to raise the bar of expectations and help create momentum. Such pressure differs from imparting to youth messages of perfection and unreasonable pressure that drive students to hopelessness and despair. Tennis

legend Billie Jean King often said, “Pressure is a privilege. Usually if you have tremendous pressure, it is because an opportunity comes along. No pressure, no expectations—which means not finding out what you might be capable of” (Cook, 2021, para. 2). In their book, *Life Reimagined: Discovering Your New Life Possibilities*, Leider and Webber (2013) pointed out that individuals who endure the stress of major/career planning or career changes can be “pushed by pain or pulled by possibility” (p. 8). Unfortunately, many individuals are not naturally motivated by the prospect of possibilities and instead find themselves unexpectedly thrown into the daunting task of underprepared decision-making.

Motivation Affecting Decision-Making When Choosing a Major

There has been much research on factors that affect choosing the right fit major. Motivation is a dominant factor and can be encouraged extrinsically, such as pressure from others to get a degree that will earn a lot of money. However, the most successful and consistent students are driven intrinsically by areas of interest or what they feel most connected to. For example, many students change their major once because they develop an interest in something else; it occurs especially when students take a class outside of their major (Vu et al., 2019). The trait of persistence is a key factor when students learn early on that perseverance during challenging circumstances leads to success. This may explain why self-efficacy continues to be a strong indicator of success. Self-efficacy is defined as an individual’s belief in their ability to carry out the necessary actions to achieve desired results (Bandura, 1997). Other factors that can influence students’ choice of major include the influence of favorite teachers or other aspiring adults, cultural and socioeconomic background, and ample information on various majors. Early intervention in exposure to more rigorous subjects might also cause a student to choose a STEM degree (Vu et al., 2019).

One in three students will change their major because of a lack of interest or ability (National Center for Education Statistics, 2017). Interest is strongly related to longer-term educational outcomes, even more so than ability and personality. Interest in the subject/major affects persistence in one's major in college and is associated with a higher cumulative GPA and completing one's degree in a timely manner. There is value in sorting out these factors as soon as possible. ACT created a new score report called Interest-Major Fit and categorized degrees as low, medium, or high based on students' answers. Students who choose majors well aligned with these results are likely to persist compared to students who choose majors that are not a good fit (Moore & Cruce, 2020).

When students enter college, they are expected to choose a major that will be the right fit. Research shows that taking courses in a major early on can gauge interest and aptitude in finding the right fit (Soppe et al., 2019). The findings of one study suggested that testing ability, beliefs, interests, and sense of belonging can be influential in students making the right choice (Soppe et al., 2019). These findings also suggest that the more aspects of "right fit" that are assessed, the more likely a matching procedure will affect incoming first-year students (Soppe et al., 2019).

Murphy (2000) found that each time students change their major *early on*, their chance of graduating increases by 40%. Micceri (2001) noted that students who changed their major graduated at a rate of 20-40% higher than those who never changed their majors. Tinto (1987) explained that the decision to change majors is part of a student's innate goal-clarification process, which research has shown has a positive impact on persistence (Anderson et al., 1989; EAB, 2016; Straumsheim, 2016). This research emphasizes the importance of finding the right fit major as soon as possible, which increases motivation to keep moving forward to graduation.

There is a lack of a unified theory explaining how students go about choosing a degree. Many freshmen students do not have a clearly defined career plan (Harrington & Orosz, 2018). Career guidance in high school is limited at best. The U.S. Departments of Education, Labor, and Health and Human Services noted that while high school guidance counseling typically includes a college planning component, career planning and exploration are scarcely addressed (Dann-Messier, Wu, & Greenburg, 2014). Researchers know that structured and focused guidance helps a student; however, there is a gap in data on the decision-making process a student goes through in choosing a major. This is because this data is complex to collect and measure. Research shows that many students choose from a common decision-making model by first looking at all the options they are aware of, then at options, they are willing to consider, and then a set of guidelines that lead them to a final choice (Baker & Orona, 2018).

Wrong Fit Major

Whereas changing majors is common, the rate depends on the preliminary major chosen; within health-related fields, the rate is approximately 26%, and for mathematics, it is approximately 52% (National Center for Education Statistics, 2017). If a student desires to change their major, without guidance, they are more likely to declare a major that others living in close proximity, such as the dorms, have chosen (Pu et al., 2021). Changing majors or declaring later in the college journey can substantially add more time due to the need to meet new prerequisites for the new degree program (EAB, 2016). In addition to requiring more time in school, accumulating excess credit hours also increases the overall cost of one's education (Moore & Cruce, 2020). Some students will stay in their current major despite disinterest or lack of satisfaction due to the negative consequences of time and cost. However, doing so can have a negative impact on grades and student persistence (Moore & Cruce, 2020).

There is value in discovering early on if a program study would be the right fit for a student's interests, abilities, and personality (Moore & Cruce, 2020). In Moore and Cruce's (2020) study, ACT-tested students had an opportunity to fill out an Interest-Major-Fit inventory. They hypothesized that if students received confirmation early on that their results aligned well (or did not align well) with their desired future major, then this confirmation of the right fit of their desired path could be a logical starting point for the student (Moore & Cruce, 2020). Their findings supported their hypothesis.

The Impact of Competent Advising

Professional Advisors are one of the most significant functions within student affairs and can influence students' learning and development (Light, 2001). Advisors can play a vital role in attracting and retaining students at their universities (Elliott, 2020). Prospective students are often unaware of navigating the overwhelming and multifaceted college environment until they contact their advisor, who often fulfills a parental role (Stage & Dannells, 2012; Filson & Whittington, 2013). Academic advisors represent the face of the university and convey critical information to students and parents (Elliott, 2020). Academic advisors serve as the eyes and ears of college students for university administrators (Elliott, 2020).

Competent advising may be one of the most unacknowledged components of a successful college experience (Elliott, 2020). Academic advisors are a primary source of helping students connect to campus resources, assisting students in their major and career goals, and serving as counselors and guides (Elliott, 2020). Many students who enter college undecided about their major or change it during college require skilled advising for success. Tinto and Pusser (2006) note that without proper guidance in the first year or during major changes, students may lose

motivation, increase their likelihood of dropping out, or experience a longer time to degree completion.

According to Shellenbarger (2016), academic advising provides students with a unique opportunity to build relationships with someone in their institution who genuinely cares about their success. Vianden and Barlow (2015) discovered that using academic advising services was strongly correlated with loyalty to the institution, suggesting that academic advisors can foster a stronger connection between students and their institution than other positions on campus. Academic advising has been established as a crucial component of the postsecondary educational experience through decades of research (O'Banion, 2012).

Historically, academic advisors were considered clerical workers (Kerr, 2018). Academic advising has undergone significant changes in recent times. It is no longer just about providing superficial information or selecting courses for students. Instead, advisers now focus on creating trajectories that help students achieve their long-term career objectives (Pasquini & Eaton, 2019). The development of the National Academic Advising Association (NACADA) in 1997 increased the professionalism of the academic advisor role (Kerr, 2018). NACADA is now known as NACADA: The Global Community for Academic Advising. The formation of the professional association helped advance and grow the academic advising profession (Kerr, 2018).

Researchers have not arrived at a universal definition of academic advising. One study described it as a "high-impact practice," which affects student retention and is a vital and essential component in guiding students toward success (Larson et al., 2018, p. 7). Sometimes referred to as *advising scholars*, advisors must be able to empower students to do hard things and make decisions by facilitating, enabling, helping, encouraging, inspiring, and motivating (Larson et al., 2018). Academic advising is an important strategy that offers support and furthers

retention in a similar way that First Year Experience programs do (Emekako & Van der Westhuizen, 2021; Leppel, 2001; Thomas et al., 2021; Tinto, 1987; Tinto & Pusser, 2006).

Vincent Tinto's (1993) model of student integration has been highly influential in the field of student success as it points to what universities can do to improve student retention. Research has supported the premise of his model that the more positive interactions a student has on campus, the more likely they will stay on track and finish their degree (Emekako & Van der Westhuizen, 2021; Harrington & Orosz, 2018; Young & Hopp, 2014). A student's motivational level, social and academic success, and support tremendously impact their desire to continue in their college endeavor (Young-Jones et al., 2013). Having an intentional method of guidance, [such as a solution-focused brief therapy approach to academic advising], can help improve advising experiences with the undecided population, leading to retention and improved student success (Braun & Zolfagharian, 2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Vianden & Barlow, 2015).

Through an informed and intentional process, academic advising sessions must be applied deliberately (Nero et al., 2018). Advisors must be knowledgeable about theories of student development and be able to apply multiple strategies (Bensimon, 2007). Advisors have an advantage in shaping the student experience through their advising approaches. Moreover, academic advisers help foster a student's sense of belonging to their school because they experience someone being there who cares about their well-being (Elliott, 2020). Successful advising has a nurturing aspect, and engaging with students must be transformational, not transactional, but challenging due to time constraints in advising sessions (Kerr, 2018).

Advising is not the only factor responsible for the academic development of students but an advisor seeks to understand the level of impact academic advising has on the development of

students' academic performance (Drake, 2011). The data show the importance of academic advising and the areas of student needs that should be focused on. Therefore, whereas academic advising is not the sole determiner of student retention, it can contribute to improved performance (Drake, 2011; Kuh et al., 2005).

Dropout behavior is similar no matter where a student is attending. Some students plan to drop out after a specific amount of time (most commonly after the first year, Tinto, 1987), some drop out after failing a class, and some drop out due to disappointment with their chosen majors/career path (Zajac & Komendant-Brodowska, 2018). Competent advising can remedy the latter two reasons for dropping out (Zajac & Komendant-Brodowska, 2018). If advisors could help improve the decision-making process by providing more information about the majors and the skills needed for completion, as well as support throughout the process, this could help prevent the prominent level of dropout rates (Zajac & Komendant-Brodowska, 2018).

First-Year Experience (FYE) Programs

First-Year Experience (FYE) are seminar programs that substantially support incoming first-year students in their first year of college (Karp et al., 2015; Young & Hopp, 2014). FYEs have been found to be critical in helping students declare a major early on, primarily when taught by advisors who can offer a steady academic support system more consistently (Ellis & Rangel, 2018). First-year experience (FYE) seminars can help new students transition to their university by teaching them effective study skills and time management. In addition, it can guide students in finding the right fit major with a clearly defined plan and provide small group support systems (Harrington & Orosz, 2018). This also creates an opportunity for frequent interaction with faculty and staff to help meet students' individual needs (Freer, 2016).

With FYEs, it is not the *program* that makes the difference, but these experiences serve as a conduit to taking exceptional care of the student. Universities with these success programs for first-year students often enlist academic advisors to launch the programs due to having close contact with students (Harrington & Orosz, 2018). Employing academic advisors as instructors in FYEs is also advantageous because students will have more consistent guidance with major and career planning, registering for courses, and accountability with degree completion (Ellis & Rangel, 2018). Academic advisors typically already have one-on-one contact with incoming first-year university students. They are the ideal candidates to lead the charge on an FYE program meeting weekly for the first semester a student is on campus (Bensimon, 2007). In an advising role in FYE, advisors are most effective when they are purposeful and intrusive (Freer, 2016). As college students arrive on campus with more academic and personal challenges, advising that is solution-focused and proactive can help students engage with the campus and persist with staying on track (Albecker, 2015; Bliss, 2004; Nero et al., 2018).

A FYE program is focused on empowering the individual needs of students. Many universities have executed this invasive first-semester collaborative and intentional program or variation of some kind (Nero et al., 2018). In this context, "invasive" refers to delving into the challenges that students must confront and conquer in order to achieve success in college. This program has been designed to cater to first-semester students in a unique and versatile manner, utilizing a collaborative approach in its implementation. Whether students have sustaining relationships at home or not, there does need to be an intentional support system fostered on campus to help students grow and develop into their maximum potential (Harrington & Orosz, 2018; Mu & Fosnacht, 2019). The FYE is one such program that addresses this need.

Challenges and Barriers to Programs

A challenge and barrier to getting university support for first-year experience programs or a formal specialized academic coaching program for vulnerable populations center around retention (Barefoot, 2000; Ellis & Rangel, 2018; Gardner, 2006; Gardner, 2015). However, research and practitioner experience inform higher education that what students need most are transparent guidance to a degree, strong interpersonal relationships, and a sense of connection between educational objectives and long-term goals (Harrington & Orosz, 2018). Studies show that students who have a clearly defined path and engage in meaningful connections with staff persist in learning and retention (Harrington & Orosz, 2018). In addition, research has shown that students who use academic advising services are more inclined to complete their degree at the same institution rather than transfer before obtaining their degree (Allen et al., 2013).

While it is important to demonstrate progress in education and retain students, it is crucial to remember that higher education should strive for more than just retention as the ultimate goal (Gardner, 2006). Measuring educational attainment through retention is just one method and is not always effectively assessed (Barefoot, 2000). When retention is the focus, institutions can become self-serving, and faculty can be less likely to invest in first-year programs because the focus is more closely aligned with a business model of higher education (Freer, 2016).

Some challenges stem from bureaucratic barriers to student success (Mu & Fosnacht, 2019). These can be overcome by implementing orientation programs, small group community opportunities, and success tools for adapting to the first year, especially with vulnerable populations, which can foster early student engagement. Addressing student mental health and family support programs can create support networks for student success.

Collaboration with other members within the university, partnerships, and data-driven decision-making can also build university support. Educational institutions should consider more than just retention rates in assessing their success, as the ultimate goal of education is to promote learning. Freer (2016) stated the following:

> We need more information about what works, as well as tested models and tools for assessment. We need evidence—not assumptions or tightly held beliefs based on our own experience. Even classic student development and retention theories, which many of us seem to believe are timeless and irrefutable, need to be reevaluated in light of the changing characteristics of today's students. (p. 20)

The Power of Parents

Parents and students will often put in more effort on *where* to go to college, *how* to finance it, preparing for ACT/SAT, and dual enrollment credits rather than highlight the primary reason for this enormous investment—choosing a major and graduating with a degree (Selingo, 2016). Sometimes, the college does not have the major a student is interested in without investigating options ahead of time.

Parents have a powerful opportunity to be proactive contributors to helping their students find the right fit major (Howard et al., 2019). They are the first to notice their child's strengths and natural interests. Effective parenting characteristics are warmth, encouragement, interest in day-to-day activities, and support in challenging circumstances (Schofield, 2014). Parents who provide training and assistance with daily problems and lavish praise and enthusiasm for achievements positively impact their children's attitudes and confidence across all cultures (Barber et al., 2005).

The Role of Parenting Style

Parenting styles play a prominent role in how involved parents are in their child's decision-making and their child's sense of competence and autonomy (Bandura, 1993; Nawaz & Gilani, 2011). Parents also have a role in developing grit and resilience in their children. Students who shy away or crumble from the positive pressure required for timely decision-making often come from a "hands-off approach" or enabling parenting style (Howard et al., 2019;).

Authoritative parenting, defined positively as having an elevated level of responsiveness and involvement, takes a balanced approach to offering support, autonomy, and accountability (El-Hassan & Ghalayini, 2019; Richardson et al., 2012). This parenting style helps students develop emotion regulation, responsibility, initiative, increased academic success, and a higher grade point average. Research shows that the parent-student relationship offers a stress buffer due to the positive attachment relationship, therefore increasing motivation and grit (Howard et al., 2019). However, *overparenting,* or what has been referred to as *helicopter parenting,* has been associated with negative outcomes for the student, such as poor autonomy development.

According to Isaac Newton's first law of motion (law of inertia), what is currently at rest will stay at rest until an external factor moves it (Assem, 2023). Dr. Jim Taylor, an expert in high-performance psychology, coined the phrase *law of human inertia,* which stipulates that people naturally resist change and will tend to stay put unless a greater force is introduced (Hehman et al., 2015). This same law of inertia prevents people from making much-needed changes or decisions. Parents can contribute to this phenomenon unintentionally by attempting to reduce the burden on their children of the necessity of making weighty decisions. Resisting the inertia of rest is necessary to avoid becoming stagnant, as inaction leads to no progress and can hinder the ability to make decisions. (Hehman et al., 2015).

The Myth that Dual-Enrollment Will Save Time and Money

High school acceleration programs have gained momentum around the United States. The earlier versions are still around today: advanced placement (AP) courses and international baccalaureate (IB) schools. These programs allow students to take college-level courses as part of their high school curriculum, followed by an exam to test college-level knowledge that will translate into college credits if passed successfully (Jagesic et al., 2022).

Dual enrollment programs also allow students to earn college credit in high school. Dual enrollment programs have grown exponentially in the last ten years (Loveland, 2017). In 2013, President Obama contributed significantly to dual enrollment funding in hopes of increasing admission to higher education. According to the U.S. Department of Education (2016), approximately 10,000 high school students have received $20 million in Federal Financial Aid to take dual enrollment courses, 80% of which are through community colleges.

Dual enrollment programs are considered a viable solution to dwindling high school and graduation rates. Students who take advantage of these programs often experience increased levels of motivation and engagement with their academics, which frequently leads to participation in higher education after graduation (Jagesic et al., 2022). A report from the U.S. Department of Education showed that providing students the opportunity to take more demanding coursework during the high school years will prepare students for the expectations of college (Cassidy et al., 2010).

However, whereas dual enrollment programs show favorable outcomes, one criticism has been the lack of oversight and standardization (Carey, 2015). The opportunity to take college credit is offered in various settings, and these programs vary significantly in terms of focus (Marken et al., 2013). A possible risk is that students begin to create a college transcript;

therefore, poor performance can harm potential scholarships and other financial aid (Loveland, 2017). Another potential detriment is that credits taken through these programs do not apply equally to degree plans. Math and science requirements, for example, are fully dependent upon the major, and some of the other general education categories are major-specific. Students haphazardly take courses that do not apply to their future degree plans and accumulate excessive and unnecessary credits (Complete College America (2018); Harrington & Orosz, 2018).

Summary

First-year college students are at risk of experiencing a sense of powerlessness and failure as the majority are being launched out of their parental homes for the first time. Their environment is new, and not all students are equipped to handle the academic, financial, mental, emotional, spiritual, and physical stressors of successfully transitioning to college (Kim, 2022). Resiliency factors, such as grit and persistence, play a part in a student's success, and early intervention strategies could increase success for first year on-campus students.

There is some debate about whether colleges should force students to declare a major (Stanley, 2021). Students are often required to declare a major after reaching a certain number of credits, while other colleges do not offer "undecided" as an option. However, students frequently lack adequate information about the major and are still growing in their personal development. The findings of Pritchard et al. (2018) showed that many adults report that their greatest life regret is their undergraduate major. When students are satisfied and interested in their major, their learning is improved, and they are likely to be retained by the university. The choice of major is a significant component of a student's overall positive college experience.

Educators in higher education have taken an increased interest in academic advising as a profession and practice, leading to a growing demand for more research related to undecided

students in the field. (Kerr, 2018). The current study addresses the gap in the literature in aiming to understand better the effects of pre-major coaching using motivational interviewing with solution-focused brief therapy [advising] on accelerating the choice of major and the subsequent implications to GPA, persistence, and retention.

As of 2020, The National Center for Education Statistics reported that approximately 64% of first-year students completed their undergraduate degrees in 6 years (NCES, 2022). It is worthwhile investigating the variables that enhance academic success, often measured by GPA and student retention. Unfortunately, the significant contribution of professional advising, especially with vulnerable populations, is often underestimated in student success and retention (Light, 2001). More specifically, further research is needed to identify the components of academic advising that contribute to students finding the right fit major. The goal of this study was to link strategies to student declaration of a major. The aim was to study how motivational interviewing and SFBT advising affect undeclared students and to acknowledge any population variations that require unique consideration when creating and implementing advising strategies.

Chapter Three: Methods

Overview

This chapter will present the research design used to conduct a quantitative descriptive design study analyzing archival data. The research design is the foundation for the research questions also listed in this chapter. The questions are devised to provide data concerning whether pre-major coaching impacts students declaring earlier and progress toward their degree plans. Following the list of research questions is a brief description of the setting and participants involved in the study. Finally, the study's procedures are described, along with data collection and clarification of analysis methods.

Design

This study utilized a quantitative descriptive design, using both descriptive and inferential statistics, to analyze archival data to determine the impact of pre-major coaching on retention. When using a quantitative design, the focus is on numerical data to test hypotheses, measure relationships of quantifiable variables, and maintain objectivity throughout the study (Warner, 2012). The research utilized an ex-post factor, nonexperimental, descriptive research design to compare students who have received pre-major coaching with those who did not on the following variables: time to declaration of a major, number of major changes, and progress toward graduation. The research design was categorized as nonexperimental because I did not manipulate the independent variables by placing participants into two groups (pre-major coaching and those who did not) and administering a pre-and post-test (Heppner et al., 2015). According to Laerd Statistics (2018), "Descriptive statistics is the term given to the analysis of data that helps describe, show or summarize data in a meaningful way such that, for example, patterns might emerge from the data" (Descriptive Statistics, para 1.). Inferential statistics are

"techniques that allow us to use these samples to make generalizations about the populations from which the samples were drawn" (Laird Statistics, 2018, Inferential Statistics, para. 2).

Archival data in the form of college records from the database were utilized because they most accurately quantify the dependent variables, which are the time to declaration of a major, the number of major changes, and progress toward graduation. These variables measure retention. The participants already belonged to one of the two independent variable categories, pre-major coaching (i.e., those who have received pre-major coaching and those who had not received pre-major coaching). The university's institutional research department provided an anonymous data set containing general and limited student demographic information.

A quantitative descriptive design was considered the appropriate choice for determining the influence of pre-major coaching on retention for the following reasons. Quantitative design allows the researcher to determine the analysis results with more accuracy, validity, and generalizability than qualitative research. In addition, when using a qualitative approach involving interviews with students, it might be challenging to interview students who dropped out. Quantitative research typically involves a more rigid and deductive approach, with variables and hypotheses being clearly defined prior to data collection (Heppner et al., 2015). The analysis produces less biased outcomes as the numbers are set before the evaluation. Analyzing data in the aggregate also helps protect the anonymity of the subjects. The research aimed to uphold ethical standards by safeguarding the confidentiality of participants' personal data, particularly concerning human subjects.

According to Heppner et al. (2015), it is common to utilize inferential statistics in order to assess disparities between treatment and control groups. For this situation, the categorization will depend on whether or not the participants received pre-major coaching. With inferential

statistics, the focus is on making predictions or generalizations about a population based on a sample dataset of that population. The goal is to find evidence that an effect or relationship between variables exists in a population. To determine the effect of coaching on student retention variables, a quantitative design was chosen as the optimal approach, using inferential statistics to test hypotheses and descriptive statistics to describe the population and understand the influence of other variables, such as demographic covariates, on the dependent variables.

Research Question(s)

RQ1: Does pre-major coaching in the form of motivational interviewing/solution-focused brief therapy [advising] shorten the time to declaration for undeclared students?

RQ2: Does pre-major coaching in the form of motivational interviewing/solution-focused brief therapy [advising] increase undeclared students' progress to graduation compared to those without pre-major coaching?

RQ 3: Is there a significant difference in the number of times students change majors between students who utilize pre-major coaching and those who do not?

Hypothesis(es)

The study will aim to examine the following assumptions:

H1o: There will be no statistically significant difference between students who have received coaching and those who have not on the time they take to declare a major.

H1a: There will be a statistically significant difference between students who have received coaching and those who have not on the time they take to declare a major.

H2o: There will be no statistically significant difference between students who have received coaching and those who have not made progress toward completion of their degree.

H2a: There will be a statistically significant difference between students who have received coaching and those who have not made progress toward completing their degree.

H3o: There will be no statistically significant difference between students who have received coaching and those who have not on the number of major changes.

H3a: There will be a statistically significant difference between students who have received coaching and those who have not on the number of major changes.

Participants and Setting

Participants in this study consisted of new first-year students enrolled in a private 4-year university located in a mid-Atlantic state. There are approximately 13,000-15,000 residential students, with nearly 8000 students living on campus. The student body represents all 50 states in the US and 70+ countries. The student profile is roughly 46% male and 54% female, with over 3,500 full and part-time faculty. There are over 250 residential undergraduate degrees offered in addition to 20 NCAA Division athletic programs, 40+ Club Sports teams, and an emphasis on community service.

A convenience sample was used due to the close proximity and the availability to collect necessary data for the study (Heppner et al., 2015). First-year students are defined as students entering the residential program who have never attended a residential university previously. These students are identified as participants based on the Admissions Department classification after acceptance of the application to allow data collection from the researcher to analyze time to declaration, number of major changes, progress on chosen degree plan, and retention.

Archival data was collected on first-year residential students who have received pre-major coaching and those who did not receive pre-major coaching from the dates 2018-2023. For this study, the number of participants in the sample will be 2421, which is approximately 100% of the population, which is comprised of the number of students who were undecided between those 5 years attending this 4-year university. Thus, this sample was expected to exceed the required minimum for a small effect size. According to Kadam and Bhalerao (2010), when no previous research has shown the effect size between pre-major coaching and these retention variables, the sample size required would be larger because the effect size is unknown based on previous research. When calculating a sample size based on 2421 students, at a 50% population proportion, with a confidence level of 95% alpha of .05, the sample size should be 332 to detect significance (Calculator.net, 2013). Therefore, 2400 should be sufficient to conduct these analyses.

Instrumentation

This study utilized archival data from this university's retrieval database. The results proved to have strong external validity because of the substantial number of participants and reliance on quantitative data collected in a real-life setting (Heppner et al., 2015). The data retrieved from the university's IT department included progress toward degree completion, time to declaration of major, and number of major changes. In this study, both descriptive statistics and inferential statistical analyses were conducted to ascertain whether a relationship between the independent and dependent variables existed. In addition, because other factors may be affecting student's ability to choose a major, several other demographic variables were analyzed to study the factors contributing to the lack of major declaration. This section includes the

independent, dependent, and demographic variables that will be included in the study. Table 1 shows the independent, dependent, and demographic variables in this study.

Table 1

Study Variables

Variables	Type of variable
Dependent variables	
Time to declaration of major	Continuous
Number of changes in majors	Continuous
Progress to degree completion	Continuous
Independent variables	
Pre-major coaching	Dummy coded
Yes	
No	
Demographic covariates	
International student	Dummy coded
Yes	
No	
Gender	Dummy coded
Female	
Male	
Low SES (determined by cut off score Expected Family Contribution [EFC])	Dummy coded
Yes	
No	
First-generation student	Dummy coded
Yes	
No	
Academic Caution status	Dummy coded
Yes	
No	
Student living on campus	Dummy coded
Yes	
No	
Student living on main campus dorms	Dummy coded
Yes	
No	
Students with Dependent Grant in Aid [DGIA]	Dummy coded
Yes	
No	
Non-Hispanic White	Dummy coded
Yes	
No	
High school GPA	Continuous
Institutional GPA until student declares final destination major	
Age	Continuous

Independent Variable

The independent variable (IV) of interest was coaching. The research examined the impact of pre-major coaching on undeclared students vs. those who received no pre-major coaching. Motivational interviewing is a tool that integrates well with solution-focused brief therapy [advising]; it is a goal-directed approach designed to help students become aware of their inner strengths, qualities, and abilities that will enable them to find the right fit major. Students are notified that this opportunity exists before they start their first semester, although participation is not mandatory.

IV (1): Participated in pre-major coaching or did not participate in pre-major coaching (dichotomous categorical variable measured by yes or no).

Dependent Variable

A total of three dependent variables (DVs) were examined in this study. The first one was how long it took to declare a major. The second one was how many changes of majors a student declared. The third dependent variable was progress toward degree completion (PTD). Students who received coaching was compared with students who did not receive coaching.

DV (1): Semester student declared a major. Measured by the total number of semesters the student had been enrolled in college at the time of first declaring a major, with the summer before entering college as a result of coaching as 1, the first semester counting as 2, and so on.

DV (2): Change of major after first declaration (continuous variable measured by number of times student had changed major). The number of major changes was totaled to determine this variable.

DV (3): Progress to degree completion. The progress toward a chosen major was evaluated based on the credits obtained.

Demographic Covariates

Besides the independent variable of pre-major coaching, other factors, in the form of demographic variables, may be affecting a student's ability to choose a major. Therefore, several other variables, were pulled and analyzed to determine their effect on the dependent variables in the study. These variables included the following:

- Institutional GPA until student declares final destination major.
- International student.
- Gender.
- Pell Grant distribution to determine socioeconomic status (SES).
- Academic Caution (AC) status (student with low high school GPA, low SAT or ACT scores, and/or low placement scores upon entry for math and English assessment exams).
- Student living on campus vs. commuter student (student living off campus).
- Student living on main campus dorms vs. non-traditional dorms such as East or Annex.
- Age.
- Race/ethnicity.

Procedures

The university's data analysts provided an anonymous data set. The data from students who received coaching was pulled, as well as data from students who did not receive coaching. The data set contained information about other variable descriptions, such as SES, ethnicity, age, Academic Caution (AC), residential vs. commuter student, and male/female. Race/ethnic classification consists of White, Black, and other minority (Hispanic, Asian, and multiracial) groups. The students whose data are pulled will be less than 25 and greater than 15 years of age. All students were classified as residential full-time students. Full-time enrollment is defined as a student enrolled in higher education courses with a total semester credit load of 12 + hours (NCES, 2023).

This study analyzed major declaration data, the number of major changes after the initial major declaration, and progress to degree completion. Data collected was from 2018-2019, pre-COVID and before pre-major coaching techniques were used on students. In addition, data was collected for 2021-2023 post-COVID, and pre-major coaching techniques were used for the undecided population. Data during 2020 are unpredictable due to the pandemic and its effects on students. Data was secured from the university's retrieval database along with data on time to major declaration, progress to degree completion, number of major changes, and dropout rates.

Data Analysis

The purpose of this study was to approach the data with an eagerness to discover an understanding of the relationship, if any, between pre-major coaching, time to major declaration, and student persistence with degree progress. A quantitative descriptive analysis and hypothesis testing of variables collected through archival data collection was conducted on first-year students who entered the university undecided and those who did and did not utilize pre-major

coaching. In addition, demographic variables were assessed to analyze other factors that may impact student declaration of a major.

Coding of the Variables

The archival data was imported into SPSS Version 29. The variables were coded as dummy variables. The coaching variable was coded as "1" for all who received pre-major coaching and "0" for all of those who did not receive coaching. This was the first variable entered into the model. The other variables were coded as follows. For low SES, a cut off score (to be determined) on EFC will determine whether the student's family was low SES or not. The variable was low SES yes or no and was coded 1 if "yes" and 0 if "no." For students living on campus versus commuter student (student living off campus), student living on campus was coded 1 versus 0 for students living off campus. For ethnicity, Non-Hispanic White = 1 and ethnic minority = 0. For gender, female = 1; male = 0. For international student, international student = 1 and not international student = 0. For academic caution status, academic caution status = 1; non-academic cautious status = 0; student living on main campus dorms vs. non-traditional dorms such as East or Annex, student living on main campus dorms = 1 and all other areas = 0. The following are continuous variables, GPA and age.

Preliminary Testing

A frequency analysis was performed to examine the demographics of the archival sample in terms of gender, international student status, campus status, GPA and all demographic variables collected for this study. Then, a descriptive analysis showing the means and standard deviations of the independent variables on dependent variables was presented in tabular form. The means and standard deviations of each demographic (dummy) IV was compared with respect to the three dependent variables. The means and standard deviations of coaching versus

non-coaching was compared first, followed by each of the demographic dummy variables. For example, the means and standard deviations between academic caution students and all other students were compared with each of the dependent variables. Students who received coaching and students who have not received coaching versus non-coaching was compared with respect to the demographic variables as well.

As part of the preliminary analyses, *t* tests were performed to examine differences between those who received pre-major coaching and those who did not on each dependent variable. Then differences between non-coaching demographic variables and the dependent variables were also tested through *t* tests. For example, students with international status versus students who were not international students was tested, followed by male versus females, low SES, academic caution status yes or no, living on campus yes or no, living on main campus dorms yes or no, and non-Hispanic White yes or no.

Determining Relationships Between Demographic Variables and Study Variables

Hypothesis testing occurred through both *t* tests and hierarchical regressions. First, the two groups were students who received coaching and those who did not receive coaching (IV) was compared using *t* tests on each of the three DVs: Time to declaration of major, number of changes in majors, and progress toward graduation was assessed.

Then, in order to understand the true contribution of the coaching variable to the dependent variables, hierarchical regression analyses were performed on each of the dependent variables: time to declaration, change of majors, and progress on degree completion. Coaching and non-coaching was a dummy variable (yes received coaching or no), which was entered first. This determined the extent to which pre-major coaching explains the variance of each dependent variable. Then, one demographic covariate was entered at a time to understand its contribution to

the overall model. GPA and age was entered as continuous variables. With a hierarchical regression, one can determine the contribution of each variable to explaining the variance of a dependent variable and whether or not that variable made a significant change in the model, indicating whether it was a significant variable in explaining the dependent variable. Explaining the variance of the dependent variable means that the model explained, in this case, time to declaration, in terms of a percentage of the variable. The larger the R^2 is, the more it explained. I looked at the significance of F_{change} or $F\Delta$ in the overall model with the contribution of each variable. By the final step, this procedure illustrated which variables made significant contributions to the model when all other variables were controlled for.

Statistical Power: Type I Error and Type II Error

The ability of a test to accurately determine whether there is a distinction between two groups is known as the statistical power of the test (Gravetter et al., 2018). Another way to define the power of a test is the likelihood of it rejecting the null hypothesis when it is actually false (Heppner et al., 2015; Warner, 2012). Type I error refers to the probability of rejecting the null hypothesis when it is true. Type II error refers to the likelihood of accepting a null hypothesis when it is false (Heppner et al., 2015; Warner, 2012). If the null hypothesis is false, a statistical test with greater robustness and power will more likely discover significance. A parametric test will be utilized as adhering to the standard assumptions of statistical tests and often results in more robust inferences from the data (Heppner et al., 2015; Warner, 2012). A G* power analysis was applied to ensure that the sample size was sufficient to detect a relationship of significance when there is one. Enough power in the sample size should avoid Type II errors. In this study, the sample size was determined based on its ability to represent the larger population of first year students between the ages of 15 and 25.

Chapter Four: Findings

Overview

This chapter will present the results of the study, beginning with descriptive statistics followed by hypothesis testing with inferential statistics.

Descriptive Statistics

Descriptive statistics were used to describe the archival data collected on several cohorts: Fall 18, Fall 19, and Summer 21-23, who attended the university from which the data were collected. The means and standard deviations of all the study variables are shown in tabular form. Not all the covariates that were intended to be captured had data available to collect. As a result, students could not be compared on SES status due to the inability to collect data on students with EFC statistics as reported on the FAFSA and students with Pell Grants. Moreover, data on students using DGIA, receiving free tuition as a result of a parent working at the university, could not be collected due to time constraints. Comparisons were made on statuses that have shown disparities in persistence and dropout rates. Academic Caution (AC) status, gender, and ethnicity were described, and *t* tests performed. In addition, persistence was tracked, as well as undeclared to declared status in the Summer 21-23 cohorts whether due to email nudge or coaching. Finally, a *t* test was conducted to determine whether coaching by the researcher and other advisors was equally effective. Table 2 shows the demographic attributes of the cohorts entering in Fall 18 and 19, and the three summer cohorts who were coached: 21-23. The total population of the sample was 2421. Not all students reported their ethnic identity (n = 943) and there was a larger percentage of Whites (n = 706) than any other ethnic group.

Table 2

Demographic Attributes of Undecided Students (N = 2421)

Demographic variables	*N*	%
Age	2421	100
15-16	49	2
17	125	5
18	921	39
19	1017	43
20	164	7
21	50	2
22-25	50	2
Missing	43	2
Ethnicity	943	100
African American	51	5
American Indian	7	1
Asian	40	4
Hispanic/Latino	40	4
Mexican American	6	1
Not Specified	79	8
Pacific Islander	6	1
Puerto Rican	8	1
White	706	75
Gender	2421	100
Male	1179	49
Female	1242	51
International Student	2421	100
Yes	41	2
No	2380	98
On campus housing first semester (vs. commuting)	2421	100
Yes	2094	86
No	327	14
Location of campus housing first semester	2094	100
Annex	1	0
Campus East	415	20
Circle	215	10
Commons	998	48
Hill	302	14
Quad Living	92	4
South Tower	71	3
Entered on AC status	2421	100
Yes	160	7
No	2261	93
Low SES status as determined by receiving Pell Grant	2421	100
Yes	230	10
No	2191	90

Students were equally distributed in terms of gender, with the number of females (51%) slightly higher than males (49%). Ages upon entering the university ranged from 15 to 25, with a mean of age of 18.68. Eight ethnicities were self-reported. Three fourths of the sample identified as White, and 8% did not specify their ethnicity. Ethnic minorities identified were African American (5%), followed by Asian (4%), Hispanic/Latino 4%, with Puerto Ricans, Pacific Islanders, American Indians representing 1% of the total population including the Fall of 18 and 19 and the Summer 21-23 cohorts.

Descriptive Statistics for Uncoached Cohorts: Fall 2019 and Fall 2019

The data on declaration were not being tracked in Fall 18 and Fall 19; nor was coaching being done at that time. The demographic variables that were analyzed for Fall 18 and 19 were Academic Caution (AC) status, gender, and ethnicity, are shown in Tables 3 - 5, respectively. The following variables were coded as dummy variables: AC caution status yes or no, with AC caution status = 1 and non-AC caution status = 0. Gender and ethnicity were coded female = 1 and male = 0. Ethnicity was coded non-Hispanic White = 1 and ethnic minority = 0.

Significant differences were found between those who entered the university with AC status in the Fall 18 cohort on number of attempted credits, age, and GPA of most recent semester. Those with AC status had more attempted credits ($p < .011$), fewer changes in majors ($p < .037$), and lower GPA ($p < .001$) than students without AC status. In Fall 19, only GPA ($p < .001$), was significant, with non-AC status having higher GPAs. Regarding gender, in Fall 18, males attempted significantly more credits than female ($p = .029$), females were younger ($p = .017$), and their GPA was higher ($p < .001$) than males. In Fall of 19 females had higher GPAs than males overall ($p = .012$). Regarding ethnicity, in Fall 18, no significant differences were detected between non-Hispanic Whites and students who identified as ethnic minorities. In Fall

19, non-Hispanic Whites were significantly younger (p = .033), had higher GPAs (p = .039), and were enrolled in more total semesters (p = .049) at the university from which the data were collected.

Table 3

Fall of 18 and 19 Cohorts and Influence of AC Status on Time to Graduation, Number of Credits to Degree Completion, Number of Changes in Major Since Declaration, Age, and GPA

Dependent variables	AC status			Non-AC status					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Fall 18									
Number of credits left to degree completion*	3	32.000	55.425	41	11.122	21.438	.649	.291	.864
If graduated, how many attempted credits?	9	137.44	13.343	154	125.43	15.229	2.313	.011	.793
Number of changes since declaration of major	26	2.23	1.531	187	2.47	1.384	–1.797	.037	–.378
Age first semester of matriculation	31	18.87	1.204	209	18.70	1.329	–.012	.495	–.002
GPA of most recent semester attended	30	2.443	.8051	209	3.068	.915	–5.916	<.001	–1.091
Total semesters enrolled in U	30	6.60	2.943	206	6.11	2.497	–1.973	.057	–.369
Fall 19									
Number of credits left to degree completion*	11	8.727	13.252	58	9.862	19.202	–.187	.426	–.062
If graduated, how many attempted credits?	8	127.75	13.593	108	123.07	14.542	.881	.190	.323
Number of changes since declaration of major	22	1.59	.854	559	1.98	.991	–.799	.213	–.167
Age first semester of matriculation	25	18.64	.952	567	18.56	1.184	.663	.254	.128
GPA of most recent semester attended	24	1.833	1.159	558	3.187	.871	–3.549	<.001	–.693
Total semesters enrolled in U	23	3.26	1.959	556	3.79	1.047	.977	.165	.191

Note. d = Cohen's *d*; AC status = 1; non-AC status = 0; *Fewer number of credits left to degree completion = greater progress towards degree completion; *the data from the Fall 18 and Fall 19 may not be as reliable as they are for the other cohorts (Summer 21, 22, 23) on this variable.

Table 4

Fall of 18 and 19 Cohorts and Influence of Gender on Time to Graduation, Number of Credits to Degree Completion, Number of Changes in Major Since Declaration, Age, and GPA

Dependent variables	Female			Male					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Fall 18									
Number of credits left to degree completion[a]	21	12.619	24.514	23	12.478	24.980	.019	.985	.006
If graduated, how many attempted credits?	96	123.92	14.244	67	129.22	16.398	-2.198	.029	–.350
Number of changes since declaration of major	142	2.37	1.376	125	2.32	1.354	.276	.783	.034
Age first semester of matriculation	160	18.43	.749	144	19.15	3.748	-2.404	.017	–.276
GPA of most recent semester attended	159	3.2316	.818	143	2.810	.92115	4.216	<.001	.486
Total semesters enrolled in U	156	6.47	2.293	142	6.51	2.443	–.145	.885	–.017
Fall 19									
Number of credits left to degree completion[a]	34	6.912	13.769	35	12.371	21.703	–1.244	.218	–.299
If graduated, how many attempted credits?	58	123.45	14.230	58	123.34	14.833	.038	.969	.007
Number of changes since declaration of major	99	2.60	1.505	114	2.30	1.296	1.551	.122	.213
Age first semester of matriculation	111	18.56	1.157	129	18.87	1.422	–1.831	.068	–.237
GPA of most recent semester attended	110	3.152	.875	129	2.850	.945	2.547	.012	.330
Total semesters enrolled in U	109	6.10	2.646	127	6.24	2.486	–.405	.686	–.053

Note. d = Cohen's *d*; AC status = 1; non-AC status = 0; *Fewer number of credits left to degree completion = greater progress towards degree completion; *the data from the Fall 18 and Fall 19 may not be as reliable as they are for the other cohorts (Summer 21, 22, 23).

Table 5

Fall of 18 and 19 Cohorts and Influence of Ethnicity on Time to Graduation, Number of Credits to Degree Completion, Number of Changes in Major Since Declaration, Age, and GPA

Dependent variables	Non-Hispanic White			Ethnic Minority					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Fall 18									
Number of credits left to degree completion[a]	29	5.724	15.482	4	.0000	.00000	.729	.471	.389
If graduated, how many attempted credits?	132	124.90	15.564	26	130.58	13.659	–1.732	.085	–.372
Number of changes since declaration of major	199	2.28	1.367	48	2.56	1.335	–1.308	.192	–.210
Age first semester of matriculation	226	18.77	3.043	57	18.65	.767	.308	.758	.046
GPA of most recent semester attended	225	3.054	.914	56	2.964	.8409	.672	.502	.100
Total semesters enrolled in U	222	6.51	2.334	55	6.56	2.455	–.141	.888	–.021
Fall 19									
Number of credits left to degree completion[a]	43	3.953	11.309	9	6.333	9.772	–.586	.560	–.215
If graduated, how many attempted credits?	87	123.26	14.180	18	124.05	18.135	–.205	.838	–.053
Number of changes since declaration of major	143	2.52	1.462	38	2.24	1.283	1.077	.283	.197
Age first semester of matriculation	155	18.57	1.195	47	19.15	1.706	–2.623	.033	–.437
GPA of most recent semester attended	154	3.117	.8157	47	2.749	1.109	2.475	.039	.412
Total semesters enrolled in U	152	6.46	2.414	47	5.51	2.955	2.006	.049	.372

Note. d = Cohen's *d*; AC status = 1; non-AC status = 0; *Fewer number of credits left to degree completion = greater progress towards degree completion; *the data from the Fall 18 and Fall 19 may not be as reliable as they are for the other cohorts (Summer 21, 22, 23).

Descriptive Statistics for Coached Cohorts: Summer 21, 22, and 23

The three cohorts entering in the three successive years from Summer 21 to Summer 23 received email nudges and coaching and their means and standard deviations and results of *t* tests on several demographic variables are shown in Tables 6-8. Differences in AC status, gender, and ethnicity were determined by *t* tests on the dependent variables, including time to declaration of major, number of changes in major since declaration, and progress toward degree completion. Differences in these categories and age, GPA, and number of semesters at the university where the data were collected are also shown.

For those entering in Summer 21 on AC status, there were significant differences between these students and non-AC status on number of units left to complete their degree ($p < .001$), with those on non-AC status with fewer credits to complete their degree, number of attempted credits ($p = .028$), with those on AC status attempting significantly more credits, and differences in GPA were marginally significant ($p = .070$), with non-AC students showing a higher GPA than AC students. In Summer 22, differences were detected in number of credits to complete degree ($p < .001$), with those on AC status having more to go to graduate, and GPA ($p < .001$), with those on AC status having a significantly lower GPA. In Summer 23, only GPA ($p < .001$) was still significant between those who entered on AC status and those who did not enter on AC status. This may indicate a trend from implementing coaching beginning in 21, indicating that as the advisors were refining their coaching technique, the effects of coaching were beginning to be detected on this variable by 23. Regarding gender disparities, in Summer 21, there were significant differences on number of credits left to degree completion, number of changes since declaration of major, and GPA. Females had significantly fewer credits left to complete their degree ($p < .001$), and more changes in major since declaration of major ($p < .001$), were younger ($p = .004$), and had a higher GPA ($p < .001$) than males. In Summer 22, females had more changes in major since declaration ($p = .005$) and were younger than males ($p = .009$). In Summer 23, only age and GPA showed disparities in gender, with females being younger ($p < .001$) and having a higher GPA ($p < .001$) than males. Again, coaching since 21 may have influenced these trends in minimizing disparities between gender. Regarding, ethnicity, ethnic minorities who entered in Summer 21 attempted significantly more credits ($p = .004$). In Summer 22, they tended to be significantly younger ($p =.008$), and in Summer 23, they had a lower GPA ($p = .050$) than White students.

Table 6

Summer of 21, 22, and 23 Cohorts and Influence of AC Status on Time to Declaration, Number of Credits to Degree Completion, Number of Changes in Major Since Declaration, Age, and GPA

Dependent variables	AC status			Non-AC status					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Summer 21									
Time to declaration*	39	.205	.469	788	.206	.460	–.006	.995	–.001
Number of credits left to degree completion[a]	17	45.118	26.018	537	27.400	21.228	3.364	<.001	.829
If graduated, how many attempted credits?	1	141.00	00.000	30	84.266	24.160	2.310	.028	2.348
Number of changes since declaration of major	36	2.19	1.431	746	2.27	1.154	1.445	. 697	–.067
Age first semester of matriculation	38	18.95	1.089	770	18.65	1.225	–.390	.149	.240
GPA of most recent semester attended	37	1.95	1.028	748	3.07	.900	–7.375	.070	–1.242
Total semesters enrolled in U	35	4.06	2.07	754	4.98	1.74	–2.583	.014	–.523
Summer 22									
Time to declaration*	26	.308	.618	581	.289	.562	.164	.870	.033
Number of credits left to degree completion[a]	9	85.889	15.202	457	50.163	21.040	5.065	<.001	1.705
Number of changes since declaration of major	22	1.59	.854	559	1.98	.991	–1.825	.069	–.369
Age first semester of matriculation	25	18.64	.952	567	18.56	1.184	.315	.753	.064
GPA of most recent semester attended	24	1.833	1.159	558	3.187	.871	–5.650	<.001	1.5331
Total semesters enrolled in U	23	3.26	1.959	556	3.79	1.047	–1.282	.213	–.481
Summer 23									
Time to declaration*	21	.472	.750	340	.262	.466	1.295	.209	–1.28
Number of credits left to degree completion[a]	17	81.647	37.825	308	79.79	23.39	.200	.844	.076
Number of changes since declaration of major[b]	19	1.37	.496	325	1.34	.540	.260	.795	.061
Age first semester of matriculation	20	19	.973	336	18.67	1.190	1.228	.220	.283
GPA of most recent semester enrolled	20	1.952	1.205	328	3.182	.942	–4.484	<.001	–1.283
Total semesters enrolled in U	20	1.80	.410	329	2.02	.573	–1.722	.086	–.397

Note. d = Cohen's *d*; AC status = 1; non-AC status = 0; *Time to declaration = declaring in Summer = 0 Fall = 1, Spring = 2; *Smaller mean in terms of semesters = shorter time to declaration; [a]Fewer number of credits left to degree completion = greater progress towards degree completion.

Table 7

Summer of 21, 22, and 23 Cohorts and Influence of Gender on Time to Declaration, Number of Credits to Degree Completion, Number of Changes in Major Since Declaration, Age, and GPA

Dependent variables	Female			Male					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Summer 21									
Time to declaration*	446	.191	.436	381	.223	.487	–1.004	.158	–.071
Number of credits left to degree completion[a]	298	23.973	20.041	256	32.566	22.411	–4.764	<.001	–.406
If graduated, how many attempted credits?	16	89.000	25.361	15	83.000	26.881	.639	.264	.230
Number of changes since declaration of major[b]	421	2.39	1.211	361	2.13	1.099	3.110	<.001	.221
Age first semester of matriculation	434	18.56	1.320	374	18.79	1.081	–2.673	.004	–.189
GPA of most recent semester attended	419	3.123	.88944	366	2.9064	.977	3.236	<.001	.233
Total semesters enrolled in U	425	5.01	1.742	364	4.85	1.791	1.274	.104	.091
Summer 22									
Time to declaration*	323	.263	.525	284	.320	.606	–1.237	.212	–.102
Number of credits left to degree completion[a]	251	50.222	20.474	215	51.591	22.667	–.685	.464	–.064
Number of changes since declaration of major[b]	311	2.07	1.018	270	1.84	.940	2.809	.005	.234
Age first semester of matriculation	317	18.45	1.189	275	18.70	1.146	–2.603	.009	–.214
GPA of most recent semester attended	313	3.2084	.93665	269	3.0407	.901	2.193	.029	.182
Total semesters enrolled in U	309	3.76	1.028	270	3.77	1.179	–1.282	.943	–.006
Summer 23									
Time to declaration*	159	.264	.470	202	.282	.503	–.348	.728	–.037
Number of credits left to degree completion[a]	143	79.957	21.045	182	79.841	26.597	.044	.965	.005
Number of changes since declaration of major[b]	151	1.34	.576	193	1.34	.506	.016	.987	.002
Age first semester of matriculation	155	18.43	.953	201	18.89	1.297	-3.708	<.001	–.396
GPA of most recent semester enrolled	151	3.315	.841	197	2.9562	1.082	3.487	<.001	.365
Total semesters enrolled in U	152	1.99	.345	197	2.03	.692	-.769	.442	–.077

Note. d = Cohen's *d*; *Time to declaration = declaring in Summer = 0 Fall= 1, Spring = 2; *Smaller mean in terms of semesters = shorter time to declaration; [a]Fewer number of credits towards degree completion = greater progress towards degree completion; [b] The researcher anticipated fewer changes in major after declaration as a result of coaching.

Table 8

Summer of 21, 22, and 23 Cohorts and Influence of Ethnicity on Time to Declaration, Number of Credits to Degree Completion, Number of Changes in Major Since Declaration, Age, and GPA

Dependent variables	Non-Hispanic White			Ethnic Minority					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Summer 21									
Time to declaration*	202	.233	.519	70	.2143	.447	.264	.792	.037
Number of credits left to degree completion[a]	138	26.75	22.23	45	30.067	25.381	–.838	.277	–.144
If graduated, how many attempted credits?	8	82.375	26.592	6	125.33	14.855	–3.542	.004	–1.913
Number of changes since declaration of major[b]	191	2.37	1.210	68	2.10	1.067	1.589	.113	.224
Age first semester of matriculation	200	18.61	1.862	70	18.76	1.388	–.625	.532	–.087
GPA of most recent semester attended	193	2.996	.8905	67	3.06	.828	–.558	.578	–.079
Total semesters enrolled in U	194	5.08	1.715	68	4.93	1.806	.615	.539	.087
Summer 22									
Time to declaration*	85	.2824	.54798	38	.2895	.56511	–.066	.948	–.013
Number of credits left to degree completion[a]	62	51.532	20.145	29	50.207	23.633	.277	.783	.062
Number of changes since declaration of major[b]	81	2.15	1.074	36	2.03	.971	.576	.566	.115
Age first semester of matriculation	83	18.12	1.193	38	18.84	1.685	–2.698	.008	–.529
GPA of most recent semester attended	83	3.158	.885	37	3.204	.839	–.268	.789	–.053
Total semesters enrolled in U	82	3.91	1.307	38	4.18	1.784	–.932	353	–.183
Summer 23									
Time to declaration*	17	.470	.624	10	.200	.4216	1.341	.192	.559
Number of credits left to degree completion[a]	15	77.933	26.900	10	88.800	22.374	-1.055	.302	25.226
Number of changes since declaration of major[b]	15	1.47	.640	10	1.80	.632	-1.282	.213	.637
Age first semester of matriculation	17	18.35	.862	10	19.20	2.098	-1.481	.151	1.435
GPA of most recent semester enrolled	17	3.3464	.713	10	2.570	1.260	2.056	.050	.94701
Total semesters enrolled in U	17	2.29	1.105	10	2.50	1.581	-.398	.694	1.297

Note. d = Cohen's *d*; *Time to declaration = declaring in Summer = 0 Fall= 1, Spring = 2; *Smaller mean in terms of semesters = shorter time to declaration; [a]Fewer number of credits towards degree completion = greater progress towards degree completion; [b] The researcher anticipated fewer changes in major after declaration as a result of coaching.

Persistence

The archival data in the study were used to determine if pre-major coaching impacts student's persistence in the following areas:

- Does it shorten the time to declaration for students with an undecided status?
- Does pre-major coaching increase students' progress to graduation compared to those without pre-major coaching?
- Is there a significant difference in the number of times students change majors between students who utilize pre-major coaching and those who do not.

Descriptive statistics were performed to examine how the coaching variables and the dependent variables interacted with dropout rates. Dropout is an indicator of persistence. Therefore, a *t* test was performed on those who dropped out and those who did not on the dependent variables of this study, including other variables that may have influenced persistence at the university. The results of the *t* test showed significant differences between those who dropped out and those who did not on GPA ($p < .001$), number of changes in major after declaration ($p < .001$), age at first semester matriculated ($p < .001$), total semesters enrolled in the university ($p < .001$), and marginally significant differences in progress towards degree completion ($p = .097$). Those who did not drop out were younger, had a higher GPA, changed majors fewer times, and had made greater progress towards degree completion than those who dropped out.

Table 9

Results of t tests for Students Who Dropped Out Versus Those Who Did Not on GPA, Age first semester matriculated, How Many Major Changes After Declaration of Major, Progress Towards Degree Completion

Progress towards degree completion*	Dropped out			Did not drop out					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Current GPA of most recent semester attended	636	2.312	1.2039	1375	3.283	.694	–18.82	.001	–1.094
Age first semester matriculation	680	18.87	2.062	1375	18.58	.69453	–3.451	.012	.197
Number of credits left to degree completion*	37	56.054	36.226	1375	48.105	29.685	1.323	.097	.266
How many major changes after UNDE status?[a]	565	1.71	1.056	1368	2.11	1.103	–7.316	<.001	–.366
Total semesters enrolled in U	630	3.40	2.371	1373	4.34	1.690	–8943	<.001	–.486

Note. d = Cohen's *d*; * number of credits towards degree completion = greater progress towards degree completion;
[a]The researcher anticipated fewer changes in major after declaration as a result of coaching.

Table 10 shows the persistence rates of undeclared students from Fall 18 to Fall 23. Those who dropped out without coaching constituted a majority of the cohorts who entered in the Fall of each successive year. The drop out trends for the 21, 22, 23 cohorts show that most of the students who dropped out during those years had not received pre-major coaching as an intervention.

Table 10

Persistence—Enrolled, Graduated, Dropped Out, Dropped Out Without Pre-Major Coaching

Undeclared Semester	Number of UNDEs	Still Enrolled		Graduated		Dropped out without graduating		Dropped out/no pre-major coaching	
	N	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Fall 2018	298	4	1	168	56	126	42	126	100
Fall 2019	215	14	7	117	54	84	39	84	100
Sum 2021	827	497	60	31	4	299	36	221	74
Fall 2021	169	109	64	4	2	56	33	28	47
Sum 2022	607	454	75	5	1	148	24	109	74
Fall 2022	153	113	74	2	1	40	26	17	43
Sum 2023	361	323	89	n/a	0	38	11	22	58
Fall 2023	97	88	91	n/a	0	9	9	5	56

Note. UNDE = undeclared.

Table 11 shows the three summer cohorts who were coached on when they declared and whether they declared from the email nudge or coaching. The table also shows the total who declared as a result of either. Approximately 100% of each cohort entering in Summer 21, 22, and 23 either received an email nudge and declared their major or received coaching and declared. All who entered in Fall had declared by Spring, taking only 2 semesters to declare.

Table 11

Undeclared to Declared in Coached Cohorts (Summer 21, 22, 23)

Undeclared semester	Total undeclared students	Declared from email nudge		Received pre-major coaching		Declared from pre-major coaching		Total declared from advising (email nudge or coaching)		Not coached	
	n	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Summer 21	827	553	69	201	24	100	50	653	79	73	9
Fall 21	169			157	93			127	80	12	7
Spring 22	42			18	43			18	100	24	57
Summer 22	607	357	59	194	32	90	46	447	74	56	9
Fall 22	153			144	94			109	76	9	6
Spring 23	44			17	39			17	100	27	61
Summer 23	361	194	54	129	36	68	53	262	73	38	11
Fall 23	97			88	91			84	95	9	9
Spring 24	13			13	100			13	100	0	0

Differences Between Researcher and Other Advisors Coaching

In order to determine whether differences existed in coaching between the researcher's coaching style and the other advisors, a *t* test was conducted for the Summer 22 and 23 cohorts. In Summer 21, the researcher coached all the students ($n = 201$) using Solution-Focused with Motivational Interviewing techniques, so no comparisons could be made for that year. The other advisors used these same techniques as well. In 22, the researcher coached nearly twice as many (374 versus 208 who were coached by other advisors), and in 23, over double that of other advisors (243 versus 105). As shown in Table 12, in the analyses conducted, the other advisors also had success in shortening time to declaration ($p = .001$ for both years); however, the researcher's students made greater progress towards degree completion ($p = .084$ for 22, $p = .001$ for 23). These results show that pre-major coaching is a method that can be replicated and is effective with students finding their major early when used by coaches and counselors who have been trained.

Table 12

Results of t tests for Researcher's Summer 21 and 22 Students Coached by Researcher Versus Other Advisors on Study Variables

Variable	Researcher coached			Other advisors coached					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Summer 22									
Time to declaration Summer 22*	387	.452	.944	208	.0045	.886	13.390	<.001	.858
Current GPA of most recent semester attended	374	3.119	.944	208	3.15	.886	–3.421	.342	–.035
Number of credits left to degree completion[a]	300	49.83	21.702	166	52.70	21.074	–1.38	.084	–.133
How many major changes after UNDE status?[b]	78	2.19	1.590	19	2.63	1.116	–1.153	.252	–.165
Summer 23									
Time to declaration Summer 23*	254	.386	.541	107	.0093	.097	10.684	<.001	.457
Current GPA of most recent semester attended	243	3.112	1.010	105	3.112	.978	.001	.999	.000
Number of credits left to degree completion[a]	227	76.77	24.92	98	87.12	21.104	–3.84	<.001	–.434
How many major changes after UNDE status?[b]	242	1.31	.546	102	1.40	.512	–1.454	.073	–.172

Note. d = Cohen's *d*; *Time to declaration = declaring in Summer = 0 Fall= 1, Spring = 2; *Smaller mean in terms of semesters = shorter time to declaration; [a]Fewer number of credits towards degree completion = greater progress towards degree completion; [b] The researcher anticipated fewer changes in major after declaration as a result of coaching.

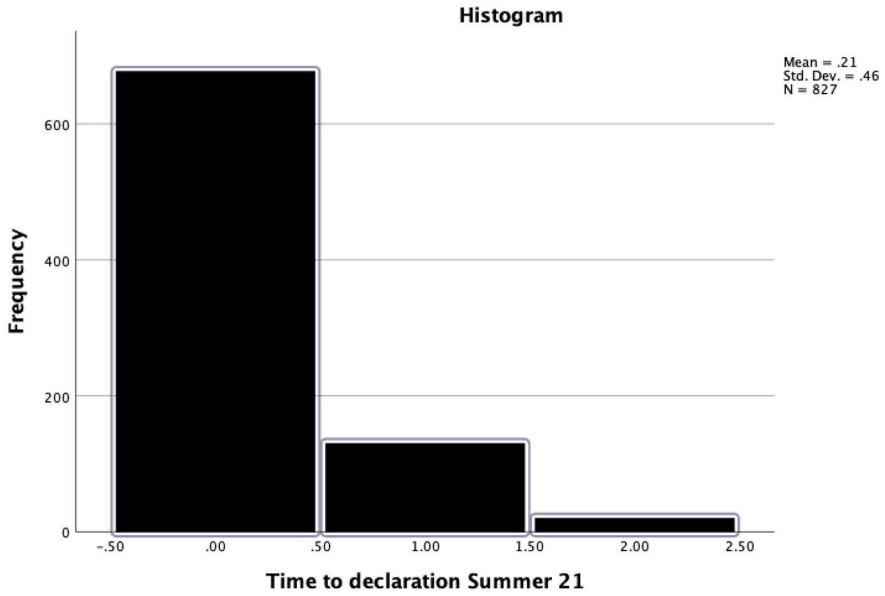
Results

Preliminary Analyses

The data used to measure the dependent variables were analyzed to determine whether they met the assumptions of the analyses used to test the hypotheses of this study. Descriptive analysis was conducted, and the skewness and kurtosis of the data were inspected. The following guidelines were used to determine normality of the data using skewness and kurtosis levels: –2 to +2 for skewness and –7 to +7 for kurtosis (Bryne, 2010; Hair et al., 2010). Table 13 shows that the data for the dependent variables were within acceptable limits of normality. Whereas the skewness of time to declaration in Summer 21 was slightly above desirable, it was deemed to be acceptable for the purposes of this study rather than use procedures to remove data in the form of outliers or transformation of data. It should be noted that the reason for the skewed distribution had to do with so many students declaring by the Spring semester. Those that declared in Spring 22 are viewed as an "outlier" because they declared late in comparison to the rest. However, those students are an important part of the data and should be kept. Figure 1 shows the histogram of the Summer 21 cohort and the rate at which they declared per semester. Some of these declared after being coached and some declared after receiving an email nudge by the advising department encouraging major declaration prior to matriculation.

Figure 2

Time to Declaration for Summer 21 Cohort



Note. A vast majority of students declared by fall when they began classes due to the advising department's intervention.

Table 13

Descriptive Statistics of Dependent Variables

Variable	*n*	Min	Max	*M*	*SD*	Skewness	Kurtosis
Time to declaration Summer 21	827	.00	2.00	.206	.460	2.175	4.058
Time to declaration Summer 22	607	.00	2.00	.290	.564	1.818	2.269
Time to declaration Summer 23	361	.00	2.00	.274	.488	1.509	1.305
Time to graduation Fall 18	304	.00	11	3.62	4.13	.332	–1.756
Time to graduation Fall 19	240	.00	10	3.06	3.82	.475	–1.732
How many changes in major since declaring?	2260	1.00	9	2.06	1.15	1.377	2.675
Number of credits to degree completion	1498	.00	139.00	45.540	31.118	.235	–.810

Note. Min = minimum statistic; Max = maximum statistic.

Hypotheses

Hypothesis 1a: There will be a statistically significant difference between students who received coaching and those who had not on the time they took to declare a major. To test this hypothesis, a hierarchical regression was conducted on the three cohorts who were coached: Those who entered as undeclared in the Summer of 21, in Summer of 22, and in Summer of 23. Because the students from the earlier time period (Fall 2018 and 2019) were not coached, nor were their data regarding declaration being tracked, time to declaration as a dependent variable was only relevant for the three sets of students entering in 21-23. Table 14 shows that in the last step of the hierarchical regression, when all other covariates were considered, coaching made a significant difference in time to declaration for the Summer 21 cohort. However, the B statistic was not negative, indicating that coaching did not shorten immediate time to declaration. This result was consistent for the 22 and 23 cohorts, raising the possibility that the email nudge, which

was so effective in getting students to declare, so that in 2021 nearly 2/3 of the sample declared after receiving it, may have made it seem that coaching students by contrast declared later. However, approximately half the coaching students declared immediately (n = 200), and the remaining majority declared the following semester also affecting time to declaration. These results will be further interpreted in the discussion, but further analyses were warranted in looking at the effects of the email nudge on time to declaration. As shown in the last step of the regression in Tables 15 -17, the email nudge was a significant predictor of time to declaration for the Summer 21 cohort (B = –.603, p < .001) and the Summer 22 cohort (B = –.625, p < .001), but not for Summer 23 cohort (B = –.494, p < .130). No other covariate was a significant predictor of time to declaration for the Summer 21 and 23 cohort; gender was also significant in the 22 cohort (B = .273, p = .012). As a result of these analyses, it was concluded that the alternative hypothesis was not supported as the effects of the email nudge overshadowed the coaching intervention on the mass expediency of major declaration.

Table 14

Results of Hierarchical Regression for Coaching Predicting Time to Declaration for Summer 21 Cohort

Step	Predictor variable	B	SE	*B*	*t*	*p*
1	(Constant)	.099	.034		2.948	.004
	Coached Summer 21	.585	.069	.484	8.521	<.001
2	(Constant)	.193	.074		2.599	.010
	Coached Summer 21	.582	.069	.481	8.476	<.001
	Gender dummy	–.099	.059	–.096	–1.671	.096
	International student dummy	–.138	.168	–.048	–.822	.412
	Main campus dummy	–.053	.074	–.042	–.721	.472
	AC status dummy	.073	.130	.032	.556	.579
3	(Constant)	.181	.089		2.031	.043
	Coached Summer 21	.581	.069	.481	8.450	<.001
	Gender dummy	–.098	.059	–.095	–1.645	.101
	International student dummy	–.127	.175	–044	–.722	.471
	Main campus dummy	–.055	.074	–.044	–.740	.460
	AC status dummy	.074	.131	.033	.564	.573
	Non-Hispanic White dummy	.017	.071	.014	.234	.815
4	(Constant)	–.101	.558		–.181	.856
	Coached Summer 21	.578	.069	.479	8.431	<.001
	Gender dummy	–.077	.060	–.075	–1.286	.200
	International student dummy	–.135	.175	–047	–.769	.443
	Main campus dummy	–.054	.074	–.043	–.731	.465
	AC status dummy	–.024	.141	–.011	–.170	.865
	Non-Hispanic White dummy	.021	.070	.018	.292	.771
	Current GPA of most recent semester attended	–.065	.038	–.106	–1.697	.091
	Age first semester of matriculation	.025	.028	.052	.905	.366

Table 15

Results of Hierarchical Regression for Email Nudge Predicting Time to Declaration for Summer 21 Cohort

Step	Predictor variable	B	SE	*B*	*t*	*p*
1	(Constant)	.653	.050		13.043	<.001
	Declared through email nudge Summer 21	–.605	.060	–.545	-9.998	<.001
2	(Constant)	.746	.081		9.246	<.001
	Declared through email nudge Summer 21	–.607	.060	–.547	–10.054	<.001
	Gender dummy	–.095	.057	–.093	–1.689	.093
	International student dummy	–.246	.161	–.086	–1.527	.128
	Main campus dummy	–.048	.071	–.038	–.676	.499
	AC status dummy	.067	.125	.030	.541	.589
3	(Constant)	.723	.094		7.713	<.001
	Declared through email nudge Summer 21	–.607	.060	–.547	–10.038	<.001
	Gender dummy	–.093	.057	–.091	–1.644	.102
	International student dummy	–.223	.168	–.078	–1.328	.186
	Main campus dummy	–.052	.071	–.041	–.725	.469
	AC status dummy	.070	.125	.031	.560	.576
	Non-Hispanic White dummy	.033	.067	.028	.489	.625
4	(Constant)	.515	.533		.967	.334
	Declared through email nudge Summer 21	–.603	.060	-.544	–10.008	<.001
	Gender dummy	–074	.057	–.072	–1.290	.198
	International student dummy	–.228	.168	–.080	–1.361	.175
	Main campus dummy	–.051	.071	–.041	–.724	.470
	AC status dummy	–.025	.135	–.011	–.188	.851
	Non-Hispanic White dummy	.036	.067	.031	.539	.590
	Current GPA of most recent semester attended	–.064	.037	–.105	–1.749	.082
	Age first semester of matriculation	.021	.027	.044	.788	.432

Table 16

Results of Hierarchical Regression for Email Nudge Predicting Time to Declaration for Summer 22 Cohort

Step	Predictor variable	B	SE	*B*	*t*	*p*
1	(Constant)	.767	.090		8.514	<.001
	Declared through email nudge Summer 22	–.648	.106	–.513	–6.095	<.001
2	(Constant)	.618	.158		3.909	<.001
	Declared through email nudge Summer 22	–.652	.107	–.516	–6.073	<.001
	Gender dummy	.216	.102	.180	2.123	.036
	International student dummy	.100	.206	.044	.485	.628
	Main campus dummy	.010	.132	.007	.074	.941
	AC status dummy	–.215	.299	–.063	–.719	.474
3	(Constant)	.629	.164		3.848	<.001
	Declared through email nudge Summer 22	-.649	.108	–.514	–5.985	<.001
	Gender dummy	.221	.104	.184	2.130	.036
	International student dummy	.090	.210	.039	.431	.667
	Main campus dummy	.018	.136	.013	.135	.893
	AC status dummy	–.212	.300	v.062	–.704	.483
	Non-Hispanic White dummy	–.032	.114	–.025	–.280	.780
4	(Constant)	.723	.813		.889	.376
	Declared through email nudge Summer 22	–.625	.109	–.495	–5.751	<.001
	Gender dummy	.273	.107	.227	2.561	.012
	International student dummy	.037	.210	.016	.178	.859
	Main campus dummy	.019	.135	.013	.138	.891
	AC status dummy	–.189	.298	–.055	–.634	.527
	Non-Hispanic White dummy	–.070	.116	–.056	–.599	.550
	Current GPA of most recent semester attended	.015	.041	.031	.363	.717
	Age first semester of matriculation	–.119	.065	–.162	–1.835	.070

Table 17

Results of Hierarchical Regression for Email Nudge Predicting Time to Declaration for Summer 23 Cohort

Step	Predictor variable	B	SE	*B*	*t*	*p*
1	(Constant)	.667	.176		3.780	<.001
	Declared through email nudge Summer 23	–.479	.220	–.413	–2.174	.040
2	(Constant)	.456	.404		1.130	.273
	Declared through email nudge Summer 23	–.462	.251	–.398	–1.838	.082
	Gender dummy	–.126	.260	–.112	–.485	.633
	International student dummy	–.222	.321	–.160	–.693	.497
	Main campus dummy	.375	.423	.219	.886	.387
	AC status dummy	–.195	.432	–.095	–.452	.656
3	(Constant)	.505	.462		1.093	.289
	Declared through email nudge Summer 23	–.495	.292	–.426	–1.692	.108
	Gender dummy	–.128	.267	–.114	–.482	.636
	International student dummy	–.224	.329	–.161	–.681	.505
	Main campus dummy	.410	.458	.239	.896	.382
	AC status dummy	–.245	.488	–.119	–.501	.622
	Non-Hispanic White dummy	–.079	.328	–.066	–.240	.813
4	(Constant)	.538	3.230		.167	.870
	Declared through email nudge Summer 23	–.494	.309	–.426	–1.598	.130
	Gender dummy	–.073	.314	–.065	–.234	.818
	International student dummy	–.247	.353	–.178	–.701	.493
	Main campus dummy	.364	.515	.212	.707	.490
	AC status dummy	–.367	.600	–.179	–.613	.549
	Non-Hispanic White dummy	–.071	.346	–.060	–.205	.840
	Current GPA of most recent semester attended	.012	.165	.017	.076	.941
	Age first semester of matriculation	–.077	.194	–.120	–.398	.696

Hypothesis 2a: There will be a statistically significant difference between students who have received coaching and those who have not on progress toward completing their degree. For this hypothesis, the dependent variable was the number of credits left to graduate. A hierarchical regression was conducted for all the cohorts in the study to determine the effect of coaching on degree completion. This analysis was conducted with only students who were still here. The results of the hierarchical analysis showed that coaching was not a significant predictor of number of credits left to graduate for Summer 21 (B = –3.047, p = .345), 22 (B = –3.201, p = .533), and 23 cohorts, (B = –6.521 p = .675). It was likely that declaring early for so many uncoached students may have unexpectedly affected results. To detect the influence of the email nudge, hierarchical regressions were performed with all three cohorts. Results were insignificant for 21 (B = –3.201, p = .533), 22 (B = –3.099, p = .530), and 23 (B = 8.729, p = .600). Finally, to determine the effect of coaching alone on this dependent variable, t tests were performed for all three summer cohorts on progress toward degree completion. Results showed significant differences between coached and uncoached on progress to degree completion for Summer of 21, t(522 = –1.672, p = .048) and 23, t(450 = –.159, p = .034), but not for 22, t(320) = –1.829, p = .440). Table 18 shows the results of the t tests conducted for the three summer cohorts. The alternative hypothesis was mostly supported: Coaching had a significant effect on progress toward degree completion in two of the cohorts studied.

Table 18

Results of t tests for Coaching Predicting Progress Towards Degree Completion

Progress towards degree completion*	Coached			Not Coached					
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*d*
Summer 21									
Number of credits left to degree completion*	129	25.155	18.918	395	28.562	20.456	–1.672	.048	–.170
Summer 22									
Number of credits left to degree completion	150	49.400	18.781	302	49.705	21.101	–.159	.440	–.015
Summer 23									
Number of credits left to degree completion	116	76.865	25.742	206	81.939	22.791	–1.829	.034	–.212

Note. d = Cohen's *d*; * Fewer number of credits towards degree completion = greater progress towards degree completion.

To determine whether declaring early would have a significant effect on progress toward degree completion, *t* tests were performed on all three cohorts using the email nudge as grouping variable. With the exception of the Summer 23 cohort, whose email nudge students had more units left to complete their degree than those who did not declare as a result of the email nudge, the results were insignificant, indicating that declaring early without the benefit of coaching did not have a significant effect on progress toward degree completion.

Hypothesis 3a: There will be a statistically significant difference between students who have received coaching and those who have not on the number of changes in major since declaration. To test this hypothesis, a hierarchical regression was conducted with the number of changes in major since declaration as the dependent variable and coaching as the main independent variable, along with the demographic covariates of the study. For this hypothesis, the entire sample was used for analysis. The data of three outlier cases were removed due to data entry errors, and findings showed that those who received coaching made significantly fewer changes in majors than ones who did not receive coaching, when considering the demographic

covariates in the study (B = –.193, p = .036). Moreover, three other covariates were also significant. Those students who were ethnic minorities (B = –.122, p = .008), those who were older in age when they entered (B = 4.051, p <.001), and those with higher GPAs made more changes in majors. The null hypothesis was rejected in favor of the alternative hypothesis that coaching would lead to students making fewer changes in majors after declaring their major.

Table 19

Results of Hierarchical Regression for Coaching Predicting Fewer Number of Changes in Major

Step	Predictor variable	B	SE	*B*	*t*	*p*
1	(Constant)	2.394	.064		37.490	<.001
	Coaching dummy	–.221	.091	–.087	–.2.430	.015
2	(Constant)	2.511	.119		21.061	<.001
	Coaching dummy	–.217	.092	–.086	–.2.352	.019
	Gender dummy	–.312	.259	–.045	–.1.205	.229
	International student dummy	–.122	.119	–.038	–.1.023	.306
	Main campus dummy	–.129	.172	–.027	–.750	.453
	AC status dummy	2.394	.064		37.490	<.001
3	(Constant)	2.408	.142		16.929	<.001
	Coaching dummy	-.208	.092	–.082	–.2.250	.025
	Gender dummy	-.240	.265	–.034	–.905	.366
	International student dummy	-.140	.120	–.043	–.1.167	.243
	Main campus dummy	-.116	.172	–.024	–.674	.500
	AC status dummy	.145	.110	.049	1.316	.189
	Non-Hispanic White dummy	2.408	.142		16.929	<.001
4	(Constant)	4.051	.904		4.481	<.001
	Coaching dummy	–.193	.092	–.076	–.2.096	.036
	Gender dummy	–.229	.262	–.033	–.874	.382
	International student dummy	–.190	.119	–.059	–.1.604	.109
	Main campus dummy	.107	.179	.023	.601	.548
	AC status dummy	.118	.109	.040	1.080	.280
	Non-Hispanic White dummy	–.122	.046	–.096	–.2.660	.008
	Current GPA of most recent semester attended	.211	.060	.132	3.507	<.001
	Age first semester of matriculation	4.051	.904		4.481	<.001

Chapter Five: Conclusions

Overview

This study investigated whether pre-major coaching in the form of solution-focused brief therapy combined with motivational interviewing can influence a first-year student's ability to persist by shortening their time to declaration of a major and graduation. This study examined the impact of coaching on time to declaration of major, progress to degree completion, and number of changes in major after declaring. Universities consider retention to be one of their primary goals, and they invest substantial resources in retaining vulnerable populations (Black, 2018; Boyd et al., 2020; Saunders-Scott et al., 2018; Thomas et al., 2021). These populations include students from low SES backgrounds (Avery, 2010), first-generation students (Radunzel, 2018), students belonging to racial or ethnic minority groups (Museus et al., 2018), and those who may need additional academic support (Markell, 2020). The premise of this study was that students who enter college without a major are part of this vulnerable population due to their risk of dropping out and that assisting them early on in declaring a major will increase their retention rates. Noel-Levitz (2008) emphasized that “programs targeted specifically for undecided students have proven to significantly reduce attrition rates (p. 12). Early researchers have established academic advising as a key component in a strong retention model (Braun & Zolfagharian,2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Vianden & Barlow, 2015). Research shows that highlighting students' strengths can enhance their self-awareness and academic self-efficacy (Soria & Stubblefield, 2015). In addition, a strengths-based education approach has proven to be beneficial for students in terms of career exploration and goal achievement (Seemiller & Clayton, 2019). To increase engagement, students must identify their strengths and their purpose (Tinto, 1987; Xerri et al., 2018).

Discussion

The purpose of the study was to examine the impact of pre-major coaching on time to declaration of major, progress to degree completion, and number of changes in major after declaring. This study used archival data from the university that the researcher is affiliated with to explore the influence of independent variables (coaching) on dependent variables (time to declaration, progress to degree completion, number of changes in major since declaration) to address the research questions. The results of the analyses will be discussed according to the research question they address, beginning with a brief discussion of the preliminary analyses, including a description of the sample, the means and standard deviations of the independent variables on the dependent variables, and the results of the *t* tests that were conducted to compare differences within the demographic variables on the dependent variables of this study.

Descriptive Statistics

Descriptive statistics were used to describe the population and understand the influence of other variables, such as demographic covariates, on the dependent variables.

Attributes of Undecided Students

The demographic characteristics of the sample served to describe the undecided population on the campus in which data were collected. Demographic variables were included to investigate other factors that could be contributing to the undecided status. Data were examined to see if there were any patterns that emerged to point toward other risk factors in undecided students (besides their being undeclared). The sample included an equal representation of gender (49% males and 51% females). Eight ethnicities were self-reported with 25% self-identifying as ethnic minorities and 75% White. Three-fourths of the sample was White, and 8% did not

specify their ethnicity. Ethnic minorities identified were African American (5%), followed by Asian (4%), Hispanic/Latino 4%, with Puerto Ricans, Pacific Islanders, American Indians representing 1% of the total population through Fall of 18 and 19 and the Summer 21-23 cohorts. Ages upon entering the university ranged from 15 to 25, with a mean of age of 18.68. Approximately 82% were between 18-19 years old. International students were only 2% (n = 41) and were tracked because they may encounter challenges to wellbeing due to factors, such as adjusting to a new culture, customs, language barriers, and homesickness. Approximately 85% were living on campus the first semester, which makes it more likely students will have a sense of belonging versus those who commute. Living on campus can have a positive affect with getting acclimated to college life. However, this variable was not shown to be a significant factor in the hypothesis testing in the study. Data related to the location of on-campus housing were also collected because there is a difference in price structure, location, and age of the buildings, and therefore, there might be differences in the students inhabiting that housing. The earlier a student completes financial check-in, the sooner they can choose their housing tier. One might think that if a student does not choose a major before arriving on campus, they may not be as quick to complete enrollment and secure "top tier housing," yet 80% of the students managed to acquire housing on the main campus, which is central to classrooms and activities, with almost 50% living in the most expensive housing tier.

Academic caution is an important variable for a university to track because a student accepted into the university with a low high school GPA, or a low SAT/ACT score is considered to be an at-risk student. These students can only take a lower credit load and are automatically enrolled in an academic success course. This could contribute to lower motivation or lack of

engagement. In this sample, only 7% (n = 160) entered on AC status as an undecided student. AC status was not a significant variable in the hypothesis testing.

Finally, low socioeconomic status (SES) is an important variable to track because they are also considered to be at risk for dropping out and in need of support. In this study, data were collected on students who were awarded federal Pell grants, which are awarded to undergraduate students who display exceptional financial need as defined by the U.S. Department of Education's need-based methodology and who have not previously earned a bachelor's, graduate, or professional degree (U.S. Department of Education, 2024). In our undecided sample, only 10% (n = 230) received a Pell grant. One might speculate that this risk factor contributes to a lack of support or resources for college preparation. However, SES was not a variable included in the statistical analyses because the data were collected after the analyses of the study had been conducted.

Differences in AC Status, Gender, and Ethnicity

In the major analyses of this study, AC status, main campus "yes or no," on campus first semester, and international student status were not significant variables on any of the dependent variables. Therefore, the descriptive statistics included comparisons between those who were AC status and not, females and males, and non-Hispanic Whites and ethnic minorities. Whereas AC status was not a significant variable on the dependent variables, displaying the disparities of AC status does help to show a trend towards closing this disparity gap through coaching.

AC Status. Students entering the university in the Fall of 2018 with AC status attempted more credits ($p < .011$), had fewer changes in majors ($p < .037$), and lower GPA ($p < .001$) than students without AC status. In Fall 19, GPA ($p < .001$) was significant, with those who entered

with non-AC status having higher GPAs. While it is difficult to account for what was occurring in these cohorts in earlier years, none who entered in the Fall of 2018 or 2019 were coached, and the data may reflect students who dropped out, which would account for fewer changes in majors. Moreover, the data regarding progress to degree completion is least reliable for these two sets of cohorts. The fact that those in 2018 attempted more credits could show that they were floundering. Among students who received coaching beginning in 2021, it may be possible to detect the influence of coaching on AC status. Of those who entered from Summer 2021-23 on AC status, GPA (Years 21 and 22) was significantly lower, they made less progress toward degree completion (Years 21 and 22), had attempted a greater number of credits (Year 21), and fewer number of changes after declaring their major (marginally significant Year 22). By the 2023 cohort, the third year in which students were coached with motivational interviewing, there were fewer significant differences in AC status among these variables (with the exception of GPA), which may show that coaching helped to narrow this gap. This could mean that the advisors became more effective with their coaching over time.

Gender and Ethnicity. Regarding gender, in Fall 2018, males attempted significantly more credits than female ($p = .029$), females were younger ($p = .017$), and their GPA was higher ($p < .001$) than males. In Fall of 2019, females also had significantly higher GPAs than males ($p = .012$). Whereas no significant differences were detected between non-Hispanic Whites and students who identified as ethnic minorities in the incoming class in Fall 2018, non-Hispanic Whites who entered in Fall 2019 were significantly younger ($p = .033$), had higher GPAs ($p =$

.039), and were enrolled in the university from which the data were collected for more total semesters ($p = .049$).

Among those who entered in Summer 2021, females had significantly fewer credits left to complete their degree ($p < .001$), and more changes in major since declaration of major ($p < .001$), had a higher GPA ($p < .001$) and were younger ($p = .004$) than males. In Summer 2022, females had more changes in major since declaration ($p = .005$) and were younger than males ($p = .009$). In Summer 2023, only age and GPA showed disparities in gender, with females being younger ($p < .001$) and having a higher GPA ($p < .001$) than males. It may be that coaching since 21 may have had an influence in minimizing disparities between gender. Regarding, ethnicity, ethnic minorities who entered in Summer 2021 attempted significantly more credits ($p = .004$). In Summer 2022, they tended to be significantly younger ($p = .008$), and in Summer 23, they had a lower GPA ($p = .050$) than non-Hispanic White students**.**

Persistence

This study analyzed archival data to determine the impact of pre-major coaching on retention. The following areas were explored through hypothesis testing:

- Does it shorten the time to declaration for students with an undecided status?
- Does pre-major coaching increase students' progress to graduation compared to those without pre-major coaching?
- Is there a significant difference in the number of times students change majors between students who utilize pre-major coaching and those who do not?

Because dropout is an indicator of persistence, to supplement the hypothesis testing, descriptive statistics were performed to examine how the coaching variables and the dependent

variables interacted with dropout rates. Therefore, a *t* test was performed on those who dropped out and those who did not on the dependent variables of this study, including other variables that may have influenced student persistence at the university. The results of the *t* test showed significant differences between those who dropped out and those who did not on GPA ($p < .001$), number of changes in major after declaration ($p < .001$), and marginally significant differences in progress towards degree completion ($p = .097$). With regard to the number of changes in major after declaration variable, the researcher expected to see that coaching would decrease the number of times a student would adopt a wrong fit major. The premise of using this variable was that students who were coached would be more likely to find a right fit major sooner, and therefore would need to change majors fewer times. Thus, this variable had some unexpected results in analyses conducted among all students, especially uncoached students, which can be seen in the total sample. For example, the students would be likely to have more changes in majors even with high GPAs without coaching. In the drop out analysis, which included all students, those who dropped out had fewer changes in majors than those who did not drop out. The analysis for this variable was for both coached and uncoached students and we do not know how long it took for them to declare. Therefore, declaring late and then dropping out would lead to fewer changes in majors in those who dropped out.

In the descriptive statistics section of the results, students who terminated their enrollment without receiving any coaching were tracked in tabular form (see Table 10). In looking at 5 years of data, among students who enrolled in the Fall of 2018, 42 % dropped out, and 100% were not coached. Among those who entered in the Fall of 2019, 39% dropped out, and 100% were not coached. For those entering in 2021, 36% dropped out of which 74% were not coached, and in 2022, 24% terminated, of which 74% were not coached. Finally, in 2023,

11% dropped out of which 58% were not coached. It is clear that the dropout rate declined with the increase in the rate of students who received coaching in these cohorts and that the majority of those who dropped out had never received the coaching intervention.

Without proper guidance and clarity on degree plans prior to entering college, these students are in jeopardy of wasting time, money, and energy as they accumulate unnecessary credits toward a wrong-fit major. The fact that those who dropped out made less progress to degree completion, this lack of guidance can also hinder retention or graduation within the time limits granted by financial aid restrictions (McFarland et al., 2017). According to D'Amico and Fruiht (2020), supportive relationships with faculty, staff, and advisors through mentoring and coaching-based programs increase students' abilities to persist. Working closely with an invested adult through mentoring can build social, mental, and academic support in the hopes of retaining the student and, in so doing, enhancing their well-being and sense of accomplishment (D'Amico & Fruiht, 2020). Not only can supportive relationships promote success, but they can also build hope as another way to increase student persistence and achievement.

Researcher Versus Other Advisors

Coaching was a significant variable in progress towards degree completion and the number of changes in major since declaring one's major, and it was important to determine whether the researcher's coaching style was unique or whether other advisors could utilize it equally well and yield the same significant effects. Therefore, analyses were conducted between the researcher's coaching and the other advisor's coaching (who were trained to use the same method) on the dependent variables of the study. The researcher coached all the students in the Summer 21 cohort (n = 201), and nearly twice as many in 22 (374 versus 208 who were coached by other advisors), and over double that of other advisors in 23 (243 versus 105). In the analyses

conducted, the other advisors had great success in shortening the time to declaration (p = .001 for both years); however, the researcher's students made greater progress towards degree completion (p = .084 for 22, p = .001 for 23). Whereas the advisors had been utilizing this technique for less time than the researcher, these results show that pre-major coaching can be effective with students finding their major early when used with coaches and counselors who have been trained.

Research Question 1

Research Question 1 asked, "Does pre-major coaching in the form of motivational interviewing/solution-focused brief therapy [advising] shorten the time to declaration for undeclared students?" To address this research question, Hypothesis 1 was tested: There will be a statistically significant difference between students who have received coaching and those who have not on the time they take to declare a major. For this hypothesis, the dependent variable was time to declaration. The data provided four sets of students: those who registered as undeclared on their application in Summer of 21, in Summer of 22; Summer of 23, and those who registered in Fall of 2018 and 2019. Because the students from the earlier time period (Fall 2018 and 2019) were not coached, nor were their data regarding declaration being tracked, time to declaration as a dependent variable was only relevant for the three sets of students entering in 2021-2023. Results of the hierarchical regression showed that the coaching variable was significant; however, the uncoached students (who declared after receiving the email nudge) had a shorter time to declaration than the coached students. The reason for this outcome was due to a majority of students in all three cohorts (n = 553 [69%] for 21; n = 357 [59%] for 22; and n = 194 [54%] for 23) declaring before they ever arrived on campus as a result of a positive response to an email nudge urging them to declare before they start college. This meant that many of the noncoached

students (who responded due to the email nudge) declared before the coached students. The email nudge is a behavioral intervention to encourage and create movement in decision-making (Löfgren, Å., & Nordblom, K., 2020). In this case, it was used as an intrusive and resourceful email to influence students and parents to engage in a more focused game plan prior to the start of the student's college journey. The goal of the email nudge is to change the choice of entering the university with a proactive, exploring mindset.

However, due to the likelihood that the email nudge was significantly effective in shortening the time to declaration for a preponderance of students, three hierarchical analyses were conducted with the email nudge as the independent variable and time to declaration as the dependent variable. Results indicated that the email nudge was effective in shortening time to declaration for students of two of the cohorts. Although more research is needed to determine the effects on persistence of declaring one's major early, based on these results, universities should consider sending an email nudge out to students who register as undecided in the summer before they are due to enter college. This intervention turned out to be significantly successful in urging students to declare early on.

Research Question 2

Research Question 2 asked, "Does pre-major coaching in the form of motivational interviewing/solution-focused brief therapy [advising] increase undeclared students' progress to graduation compared to those without pre-major coaching?" To address this research question, the following hypothesis was tested: There will be a statistically significant difference between students who have received coaching and those who have not on progress toward completing their degree. For this hypothesis, the dependent variable was the number of credits left to graduate. A hierarchical regression was conducted with each of the three cohorts in the study

who received coaching to determine the effect of coaching on degree completion. The results of the analyses were insignificant. To determine whether students declaring early influenced the results of the coaching, hierarchical regressions were performed with students who declared as a result of receiving the email nudge. Those results too were insignificant. Although more research is needed on the effects of declaring early on progress toward degree completion, it is likely that its influence may have affected the ability to determine the true effect of the coaching variable on progress toward degree completion. In other words, the hierarchical regression was an inadequate test to determine the effects of coaching alone on progress to degree completion. The results of the *t* tests showed that coaching made a significant difference on progress toward degree completion in the Summer 21 and 23 cohorts. To determine the effects of the email nudge alone on progress to degree completion, *t* tests were performed with just the email nudge. These findings were also not significant, indicating that coaching is more effective in enabling a student to make progress toward degree completion than simply declaring early without being coached. An email nudge that motivated a student to declare early would not be as effective in shorting the time to graduation as coaching because the student who declares after receiving an email nudge did not participate in a collaborative process by which they are enabled to discover their strengths and passions, which would lead to their finding a right fit major earlier.

Without support, many students do not know how to make decisions that will have long-lasting effects on their lives, such as choosing a major that will lead to a satisfying career. Students do not always know how to apply logical steps in decision-making, which means personality characteristics may take over their ability to use discernment in making these consequential choices (Shen et al., 2021). Costly decision-making with long-term ramifications can be highly challenging, and students may be naturally reluctant to engage in it. This leaves

some students with heightened emotions that may diminish their cognitive decision-making capacity (Peterson et al., 1991). Their ability to cope also may be limited by a lack of prior experience with loss, failure, or decision-making (Barclay, 2017; Dann-Messier et al., 2014). Therefore, effective strategies are needed to help students make these decisions related to their major and future careers in ways that will keep them on track.

One of the most unacknowledged components of a successful college experience (Elliott, 2020) is competent advising. Advisors can fulfill a parental role (Stage & Dannells, 2012; Filson & Whittington, 2013) and empower students to make decisions by facilitating, enabling, helping, encouraging, inspiring, and motivating (Larson et al., 2018). Importantly, this study was interested in determining the effects of pre-major coaching in the form of motivational interviewing, which is a solution-focused brief therapy intervention, to help students discover their strengths, passions, and the right fit major. In addition, it is important to eliminate what will not work, including aptitude, which many students and parents are unwilling to face. However, this knowledge is an important ingredient for a student's purpose and well-being. Self-knowledge/core self-evaluation is defined as being in touch with one's strengths, emotional state, personality traits, and behavioral patterns, which all contribute toward the ability to make decisions (Shen et al., 2021). Students flounder without a purpose, especially in college, as it is such a formative time of life.

Having an intentional method of guidance, such as a solution-focused brief therapy approach to academic advising, can help improve advising experiences with the undecided population, leading to retention and improved student success (Braun & Zolfagharian, 2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Vianden & Barlow, 2015). It can play a large role in a student's motivational level, social and academic

success, and tremendously impact their desire to continue in their college endeavor (Young-Jones et al., 2013). In this study, pre-major coaching also influenced their ability to stay on track to degree completion, which minimizes the feeling of floundering and boosts persistence.

Research Question 3

Research Question 3 asked, "Is there a significant difference in the number of times students change majors between students who utilize pre-major coaching and those who do not?" In order to determine whether differences existed between students who were coached and students who were not coached on the number of times students changed majors, Hypothesis 3 was tested: There will be a statistically significant difference between students who have received coaching and those who have not on number of changes in major since declaration. A hierarchical regression with number of changes in major since declaration as the dependent variable was conducted with coaching as the main independent variable along with the demographic covariates of the study. Findings showed a significant difference between those who received coaching and those who did not regarding the number of times they changed majors, with the ones who received coaching changing majors fewer times, $p = .036$. Coaching had a direct significant effect on this variable even when the influence of other variables were introduced into the model. There is limited prior research on this subject, but it is likely that students changed majors fewer times when coached because they were matched up with their vision and strengths from the beginning of their college experience and did not have to try majors that were poor fits. When students select a major to explore from the beginning they are compelled to focus on the task at hand, requiring their full attention. If the plan does not work, they can change the plan and keep the goal. Research on goal attainment has shown that choosing a goal and having a high level of commitment to that goal can greatly impact the

likelihood of achieving it (Ajzen, 1985; Bandura, 1997; Carver & Scheier, 1998; Locke & Latham, 2006). Moreover, studies have shown that implementation of intentions (plans) can significantly aid students in bridging the gap between goal-setting and goal-attainment (Gollwitzer & Oettinger, 2011).

Implications

Based on its results, this study has several recommendations to students, parents, and institutions that want to encourage college success and persistence.

Implications for Students

The research findings may benefit college and university student affairs to better assist students with discovering the right fit major to improve persistence, retention, and graduation rates. By coaching the undecided at pre-matriculation (before they step foot on campus), in addition to giving them an email nudge, the number of undecided students drops dramatically as we saw in this study. In three successive years, 21, 22, and 23, students declared by Spring. After receiving the intervention of the email nudge and coaching in the summer, 75 % of students, on average, had declared before the Fall semester started, 84% before the Spring semester started, and with a few exceptions, the entire cohorts had declared before the end of Spring semester.

Coaching students potentially empowers undecided students by providing a method to strengthen their decision-making so they can attain their goal of a college degree in a timely manner (Braun & Zolfagharian, 2016; Christian & Sprinkle, 2013; Kuh, 2008; Paul & Fitzpatrick, 2015; Rattin, 2017; Soppe et al., 2019; Vianden & Barlow, 2015). Students can become overwhelmed with too many choices in majors. Their natural reaction is to freeze up and move toward ambivalence. An ineffective question for an overwhelmed student is, “What are

you interested in or what do you want to do with your life?" Solution-focused brief therapy [advising] pinpoints the questions that regularly contribute to client progress and solutions. Questions and strategies that do not affect growth and problem-solving are eliminated (de Shazer et al., 2021). A solution-focused approach focuses on the present and preferred future and fosters positive change by approaching each problem through small solutions that can be acted upon now (Kollar, 2011). In the context of professional advising, the goal is to explore degree plans to find the right-fit major. Pre-major coaching using solution-focused techniques is a collaborative process based on the premise that the student is the one who has the solution. The process is characterized (as illustrated in Figure 1) as directing and guiding, which indicates how the interviewer proceeds by initiating questions but following where the student takes them (Miller & Rollnick, 2013). This partnership with the student focuses on the student's strengths, qualities, and abilities, which fits well with both a counseling and professional advising model. It may be especially effective in assisting with this crucial choice early on, leading to greater progress towards graduation, fewer changes in major after declaration, and restoration of a sense of purpose. This method of coaching is a service that can assist in creating a clear path toward goals and finding purpose in the college experience.

Implications for Parents

Prior to entering college, students and parents spend a great deal of time researching ***where*** to go to college and ***how*** to finance one of the costliest endeavors of their lives. They often prioritize the act of obtaining a college degree without giving as much consideration to ***what*** they are spending their money on (Selingo, 2015) and what is required to achieve degree completion (Bailey et al., 2015) and timely graduation. Merely enrolling in college is not

sufficient to facilitate vision when it comes to a student's academic journey. Studies indicate that deliberate intervention is required for meaningful progress forward (Kuh, 2008).

Parents need updated information on current education trends and policies. Well-meaning parents often offer obsolete guidance based on their own college experience. The higher education world is constantly evolving, and parents may be unaware of their child's specific institutional components, such as prerequisites, Fall-only/Spring-only classes, and course sequencing, which affect progress toward degree completion (Musoba et al., 2018). Students and parents are frequently mistaken regarding the path to timely graduation, as it requires a strategic sequence of classes required for majors, which varies at each university (NSSE, 2014, 2016). Parents also may be unaware of the right fit major for their child.

The dual enrollment movement has grown exponentially in the last 10 years (Loveland, 2017). This can seem appealing to parents due to the cost-effectiveness and the ability for students to take college-level general education courses while still in high school. A possible risk is that students begin to create a college transcript, and in so doing harm potential scholarships and other financial aid if it reflects a poor performance (Loveland, 2017). Another potential detriment to these programs is that credits taken through these programs do not apply equally to degree plans. Math and science requirements, for example, are fully dependent upon the major, and some of the other general education categories are major-specific. In these programs, students may haphazardly take courses that do not apply to their future degree plans and accumulate excessive and unnecessary credits. Whereas parents are led to believe that these courses could reduce a year or two from an undergraduate degree (Complete College America (2018); Harrington & Orosz, 2018), parents need to use this opportunity to have their student

explore introductory-level courses in a major and/or explore the reality of their child's aptitude for majors that require rigorous math and science courses.

Parents need to be aware of the benefits of coaching before students enter college. Coaching was shown in this study to dramatically reduce the number of times they declare a wrong fit major and increase their progress to timely degree completion, which in the long run with save them money and likely increase their child's sense of purpose and wellbeing.

Implications to Institutions

Success rates in higher education institutions are typically measured by a student's persistence, academic engagement, degree completion, and graduation rate (Gilson, 2018). It is in the institutions' best interest to support vulnerable populations who may be at risk of not graduating (Black, 2018; Boyd et al., 2020; Saunders-Scott et al., 2018; Thomas et al., 2021) These populations include low SES backgrounds, first-generation students, students belonging to racial or ethnic minority groups, and those who may need additional academic support due to entering on AC status (Markell, 2020). Undeclared students are often not included as part of this vulnerable population and, therefore, not given the same support measures. However, undecided students are one of the rapidly increasing groups in higher education and are less likely to continue their studies than those who decide early (Mangan, 2011; Reynolds et al., 2010; Spight, 2020).

As the results of the study show, early support in the form of pre-major coaching for undecided students can assist in discovering the right fit major and foster the persistence needed for degree completion and decrease the number of times students need to change majors. With every change in major, students start over with major courses in making progress toward degree

completion. Institutions should incorporate solution-focused motivational interviewing for these students prior to entering the university or shortly thereafter.

In addition, undecided students should be given assessments, such as the Clifton Strengths Finder, by the advising department. This assessment helps to sheds light and provide new vocabulary that allows students to engage in more introspective reflection regarding their own strengths. In addition, as shown in this study, email nudges are highly effective in encouraging students to declare early; however, coaching is also needed to reap the full effects of declaring early on with both degree completion and number of changes in major after declaration. Implementing these recommendations, especially offering skilled pre-major coaching into their advising practices, could have a significant impact on retention.

Moreover, institutions may want to consider changing the name of the undeclared status from “Undecided/Unknown” to “Exploring Student.” The former appellation perpetuates passivity and dawdling and removes the positive pressure of having to make a timely and cost-effective decision. The latter creates an expectation to be proactive and engaged in the process of finding the right fit major. Positive terminology celebrates resiliency and normalizes change. For this reason, using the word “Exploring Student” enhances forward movement.

Another intervention universities could consider would be to implement the Purpose Center, which would be a branch where the existing advising and academic success center resides. The Purpose Center would serve a three-fold purpose: strengthen undecided students’ decision-making and purpose in discovering the right fit-major; assist current students in need of changing majors but also needing direction; and allow declared students to double-verify if they are in the right fit major. First-Year Experience (FYE) seminar programs have also been found to be critical in helping students declare a major early on, primarily when taught by advisors who

can offer steady academic support more consistently (Ellis & Rangel, 2018). FYE seminars can help new students transition to their university by teaching them effective study skills and time management. In addition, they can guide students in finding the right fit major with a clearly defined plan and provide small group support systems (Harrington & Orosz, 2018). This also creates an opportunity for frequent interaction with faculty and staff to help meet students' individual needs (Freer, 2016).

Finally, institutions must track all variables that affect persistence diligently and accurately. The data must be reliable, and that can only occur when institutions are putting time and resources into collecting and examining the data.

Limitations

Limitations of this study include the fact that the email nudge interfered with the effects of coaching on time to declaration. The email nudge was highly effective in getting students to declare before they ever entered the campus in the fall. However, it was so effective that its effects overshadowed the effects of coaching on this variable. Another limitation was the reliability of the data collected on the Fall 2018 and 2019 cohorts on progress to degree completion. Moreover, SES was unable to be included in hypothesis testing because of a lack of timely data collection. Another limitation was missing data on change of major. Future research should replicate the findings of this study.

Recommendations for Future Research

The findings of this study provided the foundation for examining coaching on time to declaration, progress to degree completion, and the number of changes in majors after declaration. These variables were used to measure persistence in this study. The email nudge proved to be highly effective in getting students to declare their major early even without the

benefits of coaching. However, coaching proved to be more effective in shortening their path to degree completion. Moreover, coaching was effective in reducing the number of times students needed to change majors to find the right fit. Future research is needed to extend these findings. Other institutions that implement coaching in the form of motivational interviewing could test these variables to determine whether these results are replicable.

Moreover, the research design focused exclusively on archival data and lacked qualitative data collected through student surveys, interviews, and focus groups. This qualitative information is crucial towards understanding the full context of retention and what students struggle with in deciding on a college major. For future research, a combination of quantitative and qualitative data must be used to tell the complete story. In addition, a qualitative collective comparative case study would also be useful in learning more about the benefits of coaching, connecting with their strengths early on, and declaring before they even enter school. In addition, the effects of early declaration on dependent variables measuring persistence need to be the subject of future research. A longitudinal study may be warranted to track and compare students who declare early as a result of the email nudge but who were never coached and students who were coached and declared and make comparisons on these students every year for 5 years. More research is needed to determine the effects of declaring early alone and the effects of coaching and declaring early. Institutions are recommended to track these variables and conduct research on their effects.

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APPENDIX A: DATA ACCESS APPROVAL

December 15, 2023

[redacted]
Dean, College of Applied Studies and Academic Success
Liberty University

Dear Lisa Wycoff,

After a careful review of your research proposal entitled From Doom to Bloom: The Effects of Pre-Major Coaching on Undecided Student Persistence I have decided to grant you permission to [receive and utilize data related to new, first-year students with an undecided major declaration for your research study].

Check the following boxes or remove as applicable:

☐ [The requested data WILL BE STRIPPED of all identifying information before it is provided to the researcher.]

x The requested data WILL NOT BE STRIPPED of identifying information before it is provided to the researcher to ensure accuracy of the data but will be scrubbed before the analysis of the data.

x I am requesting a copy of the results upon study completion and/or publication.

Sincerely,

[redacted]

[redacted]

Vice Provost for Residential Programs and Dean of CASAS

Liberty University

APPENDIX B: IRB APPROVAL LETTER

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

December 27, 2023

Lisa Wycoff
Richard Green

Re: IRB Exemption - IRB-FY23-24-1089 From Doom to Bloom: The Effects of Pre-Major Coaching on Undecided Student Persistence.

Dear Lisa Wycoff, Richard Green,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

(4) Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met: (ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects.

For a PDF of your exemption letter, click on your study number in the My Studies card on your Cayuse dashboard.

Next, click the Submissions bar beside the Study Details bar on the Study details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page. Your information sheet and final versions of your study documents can also be found on the same page under the Attachments tab.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office