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The Relationship Between Personality Traits, Vocational Interest Themes, and College Major Satisfaction

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I am submitting herewith a dissertation written by Christen Tomlinson Logue entitled "The Relationship Between Personality Traits, Vocational Interest Themes, and College Major Satisfaction." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

John W. Lounsbury, Major Professor

We have read this dissertation and recommend its acceptance:

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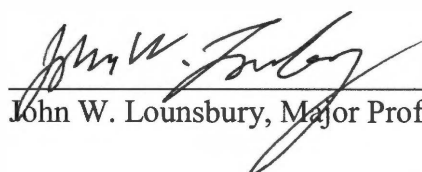
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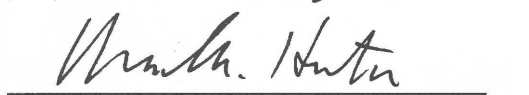
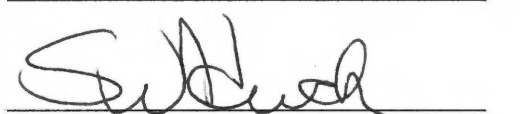
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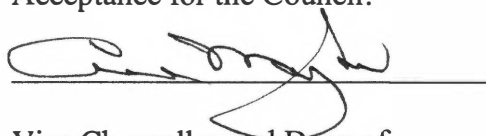
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John W. Lounsbury, Major Professor

We have read this dissertation and
recommend its acceptance:

Acceptance for the Council:


Vice Chancellor and Dean of
Graduate Studies

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS,
VOCATIONAL INTEREST THEMES, AND COLLEGE MAJOR SATISFACTION

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Christen Tomlinson Logue
August 2005

ABSTRACT

Utilizing a sample of college students who completed the Personal Style Inventory for College Students (Lounsbury & Gibson, 2004), the Strong Interest Inventory (Harmon, Hansen, Borgen, & Hammer, 1994), and a Quality of Life Scale, specific relations between Five Factor Model personality traits, a set of work based narrow personality traits, and Holland's (1997) RIASEC model of vocational interest themes were hypothesized and examined. All but one of the hypothesized correlations were found to be significant at the .05 level. This study also investigated whether personality traits, vocational interest themes, or a combination of the two models were better predictors of satisfaction with college business major. Regression analysis revealed that a model including Optimism, the Realistic vocational interest theme, the Artistic vocational interest theme, and Extraversion was the strongest predictor of satisfaction, accounting for 19.8% ($p < .05$) of the variance as compared to 14.7% and 9.9%, respectively, when using personality or vocational interest alone. Results are discussed in terms of career and academic counseling implications.

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CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

Overview

The relationship between personality and vocational interest has been studied extensively for decades. The importance of this relationship can be seen in the diverse areas in which it has been studied, including career counseling, vocational satisfaction, personnel selection, professional development, and employee assistance. The most widely studied model of personality has been the five-factor model (FFM) (Costa & McCrae, 1992), while the most commonly utilized model of vocational interest has been Holland's (1997) Realistic, Investigative, Artistic, Social, Enterprising, Conventional model (RIASEC).

Each model is designed to assess different constructs; however, they both represent important domains of behavior and they are regarded as potentially overlapping. For example, Barrick, Mount, and Gupta (2003) contend that:

Both models share the common goal of attempting to predict and explain individuals' work behaviors. However, they are different in that FFM personality dimensions focus on individuals' characteristic ways of acting, thinking, and feeling, whereas RIASEC types focus on individuals' interests and preferences. (p. 63)

Others, (Holland, 1999; Martin & Bartol, 1986; Tokar & Swanson, 1995; Utz & Korben, 1976) while acknowledging the basic differences, have also pointed to the apparent overlap between personality and vocational interest. In fact, Holland's

taxonomy has been considered by some to be a personality taxonomy (Tokar & Swanson, 1995). Holland has clearly delineated various personality traits that accompany each of his six vocational interest themes, and these associations have been repeatedly supported in the literature (Holland, 1999; Martin & Bartol, 1986; Utz & Korben, 1976). However, even though Holland's model explicitly recognizes the role of personality in vocational interest, specific questions such as which factors are related and to what degree remain largely unanswered. Results of studies designed to address these issues have often been inconsistent (Super, 1957), contradictory (Barrick et al., 2003), only partially successful (Costa, McCrae, & Holland, 1984), or too weak to suggest that either form of assessment is a dependable substitution for the other (Gottfredson, Jones, & Holland, 1993). Therefore, further investigation is needed to clarify the relationship between the important constructs of personality and interest within the contexts of vocational behavior and career decision-making.

Researchers have offered various reasons for the importance of understanding this relationship, such as the complementary perspectives afforded by the two approaches (Hogan & Blake, 1999) and how they may jointly contribute to our understanding of vocational outcomes (De Fruyt & Mervielde, 1999). By way of example, Hogan and Blake have offered evidence for a fundamental set of links between measures of personality and vocational interests. They view vocational interest and personality as related constructs that are drawn from differing perspectives. Specifically, personality assessment reflects the individual viewed from the perspective of an outside observer while vocational interest reflects the perspective of the individual. Therefore, according

to Hogan and Blake, the combination of both types of information may be useful in predicting an individual's success in achieving vocational status or satisfaction.

Other authors have contributed to this dual perspective approach by delineating the differences in perspective as related to employment. De Fruyt and Mervielde (1999) reported that Holland's RIASEC model was found to be more employee-driven and better at predicting the nature of employment than personality measures. In contrast, they reported that the FFM is more employer-oriented and demonstrated greater validity in evaluating the employability and employment status of applicants. Because both types of information--personality and interest--have been found to be helpful for individuals participating in career planning or vocational decision making, and potentially important for a comprehensive and realistic assessment of one's best career options, the relationship between these constructs is an important topic for research. By gaining a greater understanding of what portion of variance in interest pattern can be explained by personality and vice versa, researchers and practitioners alike will be able to clarify the validity of each type of assessment and perhaps enhance predictive validity by using both types of measures (De Fruyt & Mervielde, 1997).

The Five Factor Model of Personality

Based on the extensive factor-analyses of the past 40 years, five factors of personality (Agreeableness/Teamwork, Conscientiousness, Emotional Stability/Neuroticism, Extraversion, and Openness, also known as the "Big Five") have emerged as the most prominent model of normal personality (De Raad, 2000; Digman, 1989; Digman, 1990; Lounsbury, Tatum, Chambers, Owens, & Gibson 1999). The

history of the FFM dates back to the mid 1900s with the pioneering work of scientists such as Cattell (1943) and Eysenck (1947). The FFM became widely accepted in the late 1980's as a parsimonious framework for normal personality (Brand & Egan, 1989; Costa & McCrae, 1988; McCrae & Costa, 1987; McCrae, 1989). It has enjoyed increasing consensus since the early 1990s when two influential reviews were published (i.e., Digman, 1990; Goldberg, 1993). In addition, two meta-analyses (i.e., Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991) demonstrated the validity of the FFM in applied settings and helped launch the widespread acceptance and application of the five factor model.

The individual constructs (i.e., Agreeableness/Teamwork, Conscientiousness, Emotional Stability/Neuroticism, Extraversion, and Openness) as well as the overall structure of the model have been supported in a variety of settings with a wide range of populations (Costa & McCrae, 1992; De Raad, 2000; Digman, 1989; Digman, 1990). Furthermore, the model has been found to be consistent over time (Costa & McCrae, 1994; Digman, 1989) and significantly related to a wide range of criteria such as job performance (Salgado, 2003), risky behavior in adolescent girls (Markey, Markey, and Tinsley, 2003), and military leadership effectiveness (McCormack & Mellor, 2002). The FFM has also been considered universal in that the factor names and characteristics have been observed in diverse languages and cultures such as Chinese and German (Digman, 1989; McCrae & Costa, 1997). Digman (1989) has even suggested that the FFM applies to children as well as adults and can be identified as early as elementary school. Furthermore, he contends that traits identified early in childhood are already solidified

such that childhood observations can be used to predict significant outcomes in adolescence and adulthood.

Lounsbury and colleagues have conducted extensive research utilizing the FFM. Over the course of several studies, they have demonstrated a relationship between the FFM and career satisfaction (Lounsbury, Loveland, Sundstrom, Gibson, Drost, & Hamrick, 2003), performance in both school and work settings (Lounsbury, Gibson, Sundstrom, Wilburn, & Loveland, 2004), academic performance of adolescents (Lounsbury, Sundstrom, Loveland, & Gibson, 2002), college course grade (Lounsbury, Sundstrom, Loveland, & Gibson, 2003), life satisfaction and career decidedness (Lounsbury et al., 1999), psychological sense of community (Lounsbury, Loveland, & Gibson, 2003), and adolescent school absenteeism (Lounsbury, Steel, Loveland, & Gibson, 2004). The FFM has become a well established model of normal personality from which a variety of career and non-career related criteria may be investigated.

It should be noted that while names of the FFM traits have not always been consistent throughout the years since its inception, the basic meanings associated with each construct have remained compatible and complementary to the original five personality traits (Ridgell & Lounsbury, 2004). Descriptions of each of the five factors will be summarized below.

Conscientiousness

Barrick et al. (2003) have used descriptors such as “dependable, organized, persistent” to describe Conscientiousness (p. 47). This trait has often been associated with individuals who are detail oriented, hard working, and attentive to rules and responsibility. Loyalty, dedication, and reliability are also characteristics of

conscientious individuals (Lounsbury & Gibson, 2004). Because of its direct conceptual linkages to task completion and performance-related behaviors, Conscientiousness has been one of the most widely studied traits in the FFM, especially as it relates to performance outcome measures (Barrick, Mount, & Judge, 2001). For example, De Fruyt and Mervielde (1996) found Conscientiousness to be a valid predictor of academic success within a college sample. In work-related settings, Lounsbury and Gibson have reported productivity, quality, dependability, attendance, safety, and overall job performance as being significantly related to Conscientiousness. Because of the strength of evidence in the literature regarding the validity of Conscientiousness in relation to performance, some researchers (Fritzsche, McIntire, & Yost, 2002) have suggested that it "...is the one global factor of personality that is important [as a predictor of job performance] across all jobs." (p. 423). Barrick et al. (2003) asserted, "These traits [traits associated with Conscientiousness] have been shown to be related to performance in virtually all jobs (e.g., Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001) regardless of job content." (p. 50)

Emotional Stability/Neuroticism

The trait, Neuroticism, or more specifically, its inverse--Emotional Stability--refers to one's tendency to face difficulty and stress with calmness, resolve, and security versus emotionality, anxiety, frustration, or distress. Barrick et al. (2003) used the words, "calm, secure, unemotional" to describe an individual with high levels of Emotional Stability (p. 47). Neuroticism, the opposite of Emotional Stability, was part of the original FFM nomenclature, but has more recently been replaced with the term Emotional Stability by some researchers and scale developers (Lounsbury & Gibson, 2004).

Regarding the Emotional Stability scale of one instrument, the Personal Style Inventory, Lounsbury and Gibson reported, “People scoring high on this scale are more even-tempered, emotionally stable, secure, and resilient.” (p. 10) A high score on an Emotional Stability scale may indicate that an individual can handle stressful environments on an ongoing basis.

Extraversion

Extraversion, has been one of the most widely utilized personality constructs, appearing on a variety assessment instruments such as the Myers-Briggs Type Indicator (Myers & McCaulley, 1985) and the NEO-PI-R (Costa & McCrae, 1992). Lounsbury and Gibson (2004) described Extraversion as the, “...tendency to be sociable, outgoing, gregarious, warmhearted, congenial, and affiliative; attentive to and energized by other people and social/interpersonal cues...” (p. 4) Individuals who score low on Extraversion scales (i.e., individuals who are more introverted) tend to be more internally focused and prefer time alone to time spent with others. They may find that their energy levels are rapidly depleted when interacting with others. Conversely, individuals scoring high on Extraversion are energized by being with and interacting among other people.

Openness

The construct of Openness addresses an individual’s disposition to embrace change, accept new tasks, and seek novel experiences. Individuals scoring high on Openness scales are typically open to innovation and new learning. Barrick et al. (2003) listed, “imaginative, intellectual, artistically sensitive” as primary descriptors of this construct. (p. 47) In a work related application, Lounsbury and Gibson (2004) described individual characteristics of Openness as: “People scoring high on this scale tend to be

more comfortable with organization change and to be more interested in job rotation, relocation, continuing education, professional development, and company-sponsored job training programs.” (p. 9) Low scores on Openness have been related to those who prefer not to try new things, but instead follow older, established, or conventional ways of acting or approaching a situation.

Agreeableness/Teamwork

Agreeableness/Teamwork has been described as “cooperative, considerate, trusting” (Barrick et al., 2003, p. 47) as well as “...being cooperative, agreeable, and participative; and contributing to interdependence and cohesion in a work group.” (Lounsbury & Gibson, 2004, p. 4) Individuals scoring high on Agreeableness are typically those perceived by peers as being good team members, easy to get along with, and inclined to strive for interpersonal accord and group harmony. In contrast, individuals scoring lower on Agreeableness are more likely to be seen as argumentative, critical, fractious, quarrelsome, and difficult to get along with in group settings. While Agreeableness has been a commonly used term to describe this construct, the closely related construct of Teamwork has been employed by some researchers (Lounsbury & Gibson, 2004) and in this study to emphasize the more work-based elements of the Agreeableness construct.

The Five Factor Model and Career

The FFM has been used extensively in several studies focused on career-related variables. In a meta-analytic study utilizing a European sample, Salgado (1997) reported that the FFM traits, Conscientiousness and Emotional Stability were valid predictors of performance across job criteria and occupational groups. He has also asserted that the

remaining factors of the FFM, Openness, Agreeableness, and Extraversion, were valid predictors, but only across some of the job criteria and occupational groups. Also, Judge, Higgins, Thorensen, and Barrick (1999) examined the relationship between FFM personality traits and both intrinsic and extrinsic career success. They found that Conscientiousness positively predicted intrinsic and extrinsic career success, while Neuroticism negatively predicted extrinsic success. Judge et al. concluded that personality, as measured through the FFM, contributed unique variance in explaining success in one's career.

Seibert and Kramer (2001) also explored the FFM in relation to career-related variables such as salary level and career satisfaction. They reported positive relationships between Extraversion and salary level, promotions, and career satisfaction. In addition, they found negative relationships between Neuroticism as well as Agreeableness and career satisfaction, along with Openness and salary level.

Broad Versus Narrow Trait Debate

A debate has evolved in the literature as to whether the FFM is an adequate and sufficient description of personality or whether more narrow traits might add significant validity beyond that accounted for by the Big Five traits. Within this paper, the term "broad" will be applied to distinguish between the more global, general, or higher order factors and those factors that are more specific, fine-grained, or lower-level, which will be referred to as "narrow" traits. While different names and terms have been applied to describe the differences between the two camps of personality factors, the distinction between broad and narrow traits has been maintained in the empirical literature (Ashton,

1998; Digman, 1997; Judge, Erez, Bono, & Thorensen, 2002; Ones & Viswesvaran, 1996; Ridgell & Lounsbury, 2004). Some researchers have argued that the Big Five factors (Ones and Viswesvaran, 1996) or perhaps even broader composites of the Big Five factors (Ones and Viswesvaran, 2001) are the best predictors of work-related criteria such as performance and counter-productive behavior. They contend that narrow traits do not add to the validity established by the Big Five traits. In contrast, others have suggested that narrow personality traits can add incremental validity beyond the Big Five, when applied to the prediction of criterion-related behavior (Ashton, 1998; Paunonen, Rothstein, & Jackson, 1999; Schneider, Hough, & Dunnette, 1996).

Recent studies have demonstrated that narrow personality traits can add significant validity to the Big Five in predicting criteria such as academic performance (Lounsbury et al., 2002; Paunonen et al., 1999). Other researchers have reported that narrow traits, such as Modesty and Self-Discipline, added significant variance beyond the Big Five when predicting a variety of criteria, such as grade point average and traffic violations (Paunonen & Nicol, 2001). Paunonen and Nicol contend that the use of more narrow personality variables, as opposed to the FFM only, can add an explanatory advantage in addition to a predictive advantage. The increased predictive validity of narrow traits has been demonstrated utilizing culturally significant behaviors such as alcohol consumption across a culturally diverse sample (Paunonen, Haddock, Forsterling, & Keinonen, 2003). Paunonen et al. reported that the narrow traits used in their study (Conventionality, Seductiveness, Manipulativeness, Thriftiness, Humorousness, Integrity, Femininity, Religiosity, Risk Taking, and Egotism) were able to explain more variance in criterion behaviors such as alcohol consumption, smoking, participation in

sports, ability to play a musical instrument, grade point average, medication usage, and traffic violations than the broad factors encompassing those traits. Furthermore, they concluded that their results contradict the recent trend toward utilizing only a few broad personality factors in the prediction of complex behavior.

Since both broad and narrow traits may jointly contribute to validity in different settings, several authors (Lounsbury et al., 2002; Paunonen & Nicol, 2001) have recommended that researchers consider using “multidimensional composites” comprised of both broad and narrow personality measures to maximize the predictive validity of complex criteria. The present study utilized an assessment, the Personal Style Inventory for College Students (PSI), that assesses narrow personality traits in addition to the FFM in an attempt to better understand the relationship between personality and vocational interest. The narrow traits assessed by the PSI are discussed below.

Tough-Mindedness

Tough-Mindedness describes one’s typical method of evaluating information and coming to a decision. Those with high scores on Tough-Mindedness are more likely to utilize logic, rules, and facts, whereas those with low scores on Tough-Mindedness are more comfortable processing information through feelings and values. Intuition may also be cited as an important decision making factor by those with low scores on Tough-Mindedness (Lounsbury et al., 2002). Lounsbury and Gibson (2004) reported that Tough-Mindedness is the tendency toward, “...appraising information and making work decisions based on logic, facts, and data; being analytical, realistic, objective, and unsentimental when making judgments and drawing conclusions about what needs to be done.” (p. 5) In regard to career manifestations of this construct, researchers have

asserted that Tough-Minded individuals prefer physically demanding work (Lounsbury & Gibson).

Optimism

Optimism has been described as a "...disposition to be optimistic and hopeful in outlook, especially about problems, people, and the future." (Lounsbury & Gibson, 2004, p. 5) Optimistic people may display a general tendency toward expecting positive outcomes. Individuals who score lower on Optimism are more pessimistic and more attuned to what could go wrong or more apt to search for possible problems rather than potential successes (Lounsbury & Gibson). Optimism has been successfully linked to a variety of academic and career related criteria such as job performance (Lounsbury, Loveland, & Gibson, 2001), middle and high school G.P.A. (Lounsbury et al., 2002), and college G.P.A. (Stoecker, 1999).

Work Drive

The construct Work Drive refers to one's propensity toward hard work, determination, and tenacity in task accomplishment. Lounsbury and Gibson (2004) described Work Drive as, "...investment of one's time and energy into job and career, and being motivated to extend oneself, if necessary, to finish projects, meet deadlines, attain quotas, and achieve job success." (p. 4) This personality construct has been described as the single best predictor of performance in manufacturing settings (Lounsbury, Gibson, & Hamrick, 2004), a valid predictor of college course grade (Lounsbury, Sundstrom et al., 2003), and a valid predictor of middle and high school grade point average (Lounsbury et al., 2002). Work drive has also been shown to add

incremental validity above both Big Five traits and cognitive ability in the prediction of job performance (Lounsbury, Gibson, & Hamrick, 2004).

Visionary-Operational

Individuals who are highly Visionary tend to see the big picture. They are more apt to think conceptually, envision possibilities, and engage in long-range planning. Also, they may be perceived as dreamers, goal setters, or leaders. Individuals scoring lower on this dimension (i.e. Operational) tend to focus on immediate priorities, practical details, and short term accomplishments. These individuals may be more likely to focus on small tasks that lead toward a larger goal (Lounsbury & Gibson, 2004).

Assertiveness

Assertiveness addresses one's propensity to state opinions and stand firm in the face of disagreement. This trait may include taking charge of situations, speaking up, or defending one's beliefs. Individuals scoring high on Assertiveness may be more likely to be forceful, taking leadership roles in situations and often imposing their will on others. Low scores on Assertiveness are indicative of passivity, not speaking one's mind, shying away from confrontations, and backing down in arguments (Lounsbury & Gibson, 2004).

RIASEC Model of Vocational Interest

The concept of matching one's vocational interests to the specific factors of a given career or job dates back to Parsons' pioneering Vocational Guidance Movement in the early 1900s. Parsons was one of the first practitioners to assess an individual's traits and interests in the hopes of helping that person choose the best suited work path (Zytowski & Swanson, 1994). Many other theories of career development and vocational

decision making followed, each with distinct theoretical roots and differing ideas as to how career satisfaction and fit could be maximized (Ginzberg, Ginsburg, Axelrad, & Herma, 1951; Gottfredson, 1981; Osipow, 1983; Roe, 1956; Super, 1957). However, none of these theories have reached the prominence and wide spread application of Holland's (1997) theory of vocational interest.

Holland (1997) viewed vocational interest as an important expression of one's personality. An important facet of Holland's theory is that people search for and select environments in which they can express their interests. Therefore, finding a match between one's vocational interests and the work environment that one chooses is crucial to job satisfaction and career stability. To delineate his theory, Holland created the RIASEC hexagon as a model by which the world of work and corresponding vocational interests could be represented (Cole, Whitney, & Holland, 1971). The RIASEC hexagon (Figure 1) consists of six unique vocational interest themes: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional, with location on the hexagon representing relative similarity or dissimilarity.

In Holland's model, themes that are closer together on the hexagon are more similar, while themes that are farther apart or opposite each other on the hexagon are more dissimilar. While not without its critics (Tinsley, 2000), the hexagonal RIASEC model's reliability and validity in representing a universal set of vocational interests has been largely supported in the literature (Anderson, Tracey, & Rounds, 1997; Brown, 1987; Day & Rounds, 1998; Day, Rounds, & Swaney, 1998; Osipow, 1983; Prediger, 2000; Rounds, Tracey, & Hubert, 1992; Spokane, 1985; Tracey & Rounds, 1993).

Furthermore, Gottfredson et al. (1993) reported both convergent and discriminant validity for Holland's six types as compared to the related construct of personality.

The RIASEC model has been studied extensively in relation to a wide variety of constructs such as birth order (Leong, Hartung, Goh, & Gaylor, 2001), interpersonal behavior (Schneider, Ryan, Tracey, & Rounds, 1996), ability to benefit from self-help treatments for depression (Mahalik & Kivlighan, 1988), and sex-role orientation (Miller, Knippers, Burley, & Tobacyk, 1993). Replications of Holland's model abound in career development materials, websites, assessments, and programming, lending support to the applicability and practicality of his theory. Descriptions of each of Holland's vocational interest themes are provided below.

Realistic

The Realistic vocational interest theme describes individuals who like to work with their hands. The interests in this category typically involve physical work, perhaps with equipment or outdoors. There is also an emphasis on the concrete application of skills and knowledge. Barrick et al. (2003) explained, "The realistic person prefers activities involving the systematic manipulation of machinery, tools, or animals." (p. 47)

Investigative

The Investigative vocational interest theme centers on abstract reasoning. Investigative individuals are typically interested in working independently to observe, analyze, learn, or solve problems. High scores on Investigative may indicate a preference for analytical, scientific, mathematical, or medical work. Fritzche et al. (2002) explained, "Investigative types prefer settings in which they can observe and systematically examine

physical, biological, or cultural phenomena, and they tend to avoid environments that require a good deal of persuasive activities.” (p. 424)

Artistic

Individuals scoring high on Artistic tend to be interested in creative activities. While this creativity may embody a variety of outlets such as music, art, writing, cooking, or drama, Artistic types are typically focused on originality and expressiveness. Artistic people also tend to be nonconforming and introspective (Barrick et al., 2003). “Artistic types prefer ambiguous unstructured activities that allow them to create art from physical, verbal, or human materials, and they tend to avoid environments that require clerical and computational activities.” (Fritzche et al., 2002, p. 424)

Social

The Social vocational interest theme describes individuals who enjoy working with people. Social types typically avoid structure and systematic activities, but prefer activities involving interactions with groups or relationship building of some kind. Helping others is also a characteristic of the Social theme. Those who score high on this scale may enjoy informing, enlightening, training, developing, or teaching others. “The social environment demands the ability to interpret and modify human behavior and an interest in caring for and dealing with others. The work requires frequent and prolonged personal relationships.” (Isaacson & Brown, 2000, p. 25)

Enterprising

Enterprising individuals are persuaders who enjoy leading, managing, or influencing others. While there is a strong emphasis placed on interactions with people, the flavor of the relationship changes from personal, as in Social, to more of a business

relationship. Barrick et al. (2003) explained, “Enterprising individuals enjoy those activities that entail persuading and leading others to attain organizational goals or economic gain, but they tend to avoid symbolic and systematic activities.” (p. 47)

Conventional

“The conventional environment involves systematic, concrete, routine processing of verbal and mathematical information...Minimal skill in interpersonal relations is required, since the work is mostly with office equipment and materials.” (Isaacson & Brown, 2000, p. 25). The Conventional theme typically describes individuals who are detail oriented, organized, orderly, and self-controlled. Conventional types may avoid activities that require creativity or prolonged human interaction (Barrick et al., 2003).

Intersection of Personality and Vocational Interest

As early as 1945, researchers began exploring the relationship between personality and vocational interest factors (Tyler, 1945). Since that time, many studies have utilized a variety of personality constructs and assessments such as the Edwards Personal Preference Schedule (Jin, 1991), the Multidimensional Personality Questionnaire (Larson & Borgen, 2002), the Myers-Briggs Type Indicator (Martin & Bartol, 1986), the 16-PF (Montag & Schwimmer, 1990; Ward, Cunningham, & Wakefield, 1976), and the Eysenck Personality Questionnaire (Goh & Leong, 1993) to analyze the relationship between personality and vocational interest. More specific to the FFM, the availability of the NEO-PI-R (Costa & McCrae, 1992) and interest in the construct validity of the Big Five traits, coupled with the acceptance of the RIASEC constructs, has enabled researchers to examine the relationship between the two sets of

constructs more fully (e.g., Holland, Johnston, & Asama, 1994; Larson, Rottinghaus, & Borgen, 2002). Even Holland (1996) himself has asserted that the RIASEC model shares some relationship to at least four of the FFM traits. Based on theory, empirical data, and the availability of reliable and valid instruments, several researchers have begun to reexamine the links between the FFM personality variables and Holland's (1997) RIASEC model. This relationship has been approached from a variety of unique perspectives such as gender difference (Schinka, Dye, & Curtiss, 1997; Tokar & Fischer, 1998; Tokar & Swanson, 1995; Tokar, Vaux, & Swanson, 1995), broad versus narrow personality factors (Staggs, Larson, & Borgen, 2003), and career counseling applications (Miller, 1988).

More specifically, several studies have reported evidence of significant relationships between the personality trait of Extraversion and the Social and Enterprising vocational interest themes (Costa, McCrae, & Holland, 1984; Holland et al., 1994; Tokar et al., 1995; Tokar & Swanson, 1995). These same researchers also reported relationships between Openness and the vocational interest themes of Artistic and Social (Costa et al.; Holland et al.; Tokar et al.; Tokar & Swanson). Similarly, Gottfredson et al. (1993) found Extraversion to be significantly correlated with Social and Enterprising, Openness significantly correlated with Investigative and Artistic, and Conscientiousness significantly correlated with Conventional. From their analysis of last year college students enrolled in a variety of different majors, De Fruyt and Mervielde (1997) concluded that all of the FFM traits were significantly related to at least one of the RIASEC themes; however, not all of the RIASEC themes (i.e., Realistic and Investigative) showed a significant relationship to the FFM traits.

Larson et al. (2002) conducted a meta-analysis investigating the FFM and Holland's RIASEC themes. Utilizing 24 samples that each reported relationships between FFM traits and RIASEC themes, they have observed that the strongest relationships are between the trait of Openness and both Artistic and Investigative interest themes, the trait of Extraversion and both Enterprising and Social interest themes, as well as the trait of Agreeableness and the Social interest theme. Because no correlation was above .58, Larson et al. concluded that most vocational interest traits are distinct from personality; however, they also asserted that some significant overlap does exist between the two models.

In a related meta-analytic investigation, Barrick et al. (2003) analyzed the relationship between the FFM and RIASEC in 21 studies. The authors reported the strongest relationships to be between both Extraversion and Openness in the realm of personality and Enterprising and Artistic in the realm of vocational interest. These relationships were described as "moderate." Barrick et al. have also suggested that the Realistic vocational interest theme is not significantly related to any of the FFM personality traits. Based on their findings, they concluded that while FFM personality traits and RIASEC themes share some common variance, the overlap is not strong enough to suggest that the two models are measuring the same constructs or that the two can be used interchangeably for each other. This conclusion has also been drawn by other researchers addressing the same set of relationships between the FFM and the RIASEC (De Fruyt & Mervielde, 1997; Gottfredson et al., 1993)

Based on such empirical evidence, many authors have begun to suggest that the constructs of vocational interest and personality may overlap to a greater degree or in

differing ways than previously thought (Ackerman & Heggestad, 1997; Blake & Sackett, 1999; Holland, 1999; Prediger, 1999). Furthermore, because of the continued lack of uncertainty surrounding the degree and structure of any overlap, more distinctions must be made as to which traits and themes within the models are related and which are not (Larson et al., 2002).

College Major

One of the most relevant criteria to both personality and vocational interest within a career counseling context has been that of college major. Because this factor has important implications for career planning and educational decision making, many researchers have sought to utilize personality and vocational interest to predict and thus more fully understand the selection of and satisfaction with one's college major. One's college major is not only an important academic decision with significant implications within the academic career, but it is also influential in determining the careers that one is able to pursue after college (DeVoge, 1975). Therefore, beyond exploring the relationship between these two constructs (i.e, personality and vocational interest), researchers have attempted to demonstrate the usefulness of both as predictors of a variety of factors related to academic and career decision making such as career and job satisfaction (Lounsbury, Loveland, Sundstrom et al., 2003) and college major selection (Hansen & Tan, 1992).

Personality and College Major

The relationship between personality and one's choice of a college major has been explored from a variety of different perspectives. As early as 1975, DeVoge reported that

college seniors' personality, as measured by the 16PF, was significantly related to their choice of college major, which was also significantly related to later employment. Utilizing the Myers-Briggs Type Indicator, other studies have found significant personality differences between differing majors such as English and marketing/management, again indicating a relationship between personality and selection of major (Tobacyk & Cieslicka, 2000). Researchers have even demonstrated significant personality differences between specific fields such as marketing, accounting, and management information systems within the broader area of business (Noel, Michaels, & Levas, 2003).

Another approach has been to analyze personality as an intervening variable in the selection of a major. For example, Wallace and Walker (1990), focusing on both personality and interest, reported that the personality construct, self-concept, mediated whether or not one chose a major congruent with his or her vocational interests. For example, students with high self-concepts showed a significantly greater degree of correspondence between their vocational interest profiles and their chosen majors. Students with low self-concepts demonstrated a lack of congruence between their vocational interest profiles and their academic major. The authors concluded that personality factors such as self-concept may actually determine whether or not one chooses a major that fits his or her vocational interest themes (Wallace & Walker).

Vocational Interest and College Major

Because of the widespread use of the RIASEC model in educational institutions and because of the demonstrated links between school and work (Lounsbury, Gibson, Sundstrom et al., 2004), as well as between major and career (DeVoge, 1975), vocational

interest themes are often used for academic as well as career planning. Specifically, Rosen, Holmberg, and Holland (1997) created a listing of academic programs of study organized by Holland code. This listing, called The Educational Opportunities Finder, was originally designed to be used in conjunction with the Self-Directed Search or the Vocational Preferences Inventory; however, it can also be used with any other assessment that yields a Holland code. After taking a Holland-based assessment and receiving a vocational interest theme code, students are able to search for possible majors under each of the six RIASEC vocational interest themes. The assumption made in this practice is that if RIASEC themes can be used to select careers that match one's interests, and thus provide satisfaction, RIASEC themes can also be used to select majors in the same manner. By way of illustration, Rosen et al. (1997) listed general business as an Enterprising program of study. In this case, a student scoring high on the Enterprising vocational interest theme, a result that suggests the student would enjoy careers that involve persuading, selling, leading, or managing, would find general business listed as a major that corresponds to his or her vocational interests.

Indeed, at least one study has demonstrated that vocational interest themes are valid predictors of major selection (Hansen & Tan, 1992) and that significant differences exist between majors in terms of RIASEC interests (De Fruyt & Mervielde, 1996). For example, utilizing both the Campbell Interest and Skill Survey as well as the SII, Hansen and Neuman (1999) found a significant relation between interests and selected college major for both men and women. This relation between vocational interest and one's chosen major has also been demonstrated for a variety of unique populations such as female athletes (Hansen and Sackett, 1993), female business, math, music, and social

work students (Miller, Heck, & Prior, 1988), and students with high self-concepts (Wallace & Walker, 1990). In addition to the relationship with the actual major chosen, interest patterns have also been found to relate to the process of choosing a major. Students with less differentiated interest patterns were found to have the most difficulty in selecting a major in college (Sackett & Hansen, 1995).

Satisfaction With College Major

While there is general research support to the proposition that vocational interest is a valid predictor of major selection, the idea that satisfaction with one's major is as simple as matching vocational interest themes to the academic environment has not been supported (Feldman, Ethington, & Smart, 2001; Hansen & Tan, 1992; Latona, 1989; Tranberg, Slane, & Ekeberg, 1993). Tranberg et al. performed a meta-analysis on 27 studies reporting a relation between interest congruence (i.e., the match between one's interests and the environment) and academic or job satisfaction. From this analysis, they reported that the overall correlation between interest congruence and satisfaction was not significant. In another analysis focused on the similarity between vocational interest and college major selection, Hansen and Tan included an exploration of satisfaction with chosen major. Even though their findings were based on a sample in which only 4 of the 120 subjects reported to be dissatisfied with their major, Hansen and Tan still concluded that vocational interest, as measured by the SII, did not adequately predict satisfaction with major. Latona reported that in contrast to theoretical expectations, she found no difference in students' persistence within a particular major based on the consistency between their interests and the academic environment. If a match between interests and academic major could predict satisfaction, then one might expect to find students with

greater congruence persisting more within a particular major. However, Latona's findings again underscore the weakness of the relation between RIASEC interest themes and satisfaction with major. Feldman, Smart, & Ethington (1999) originally found significant differences in student achievement between those students whose vocational interests were congruent with their choice of major and those that were incongruent; however, more recently, Feldman, Ethington et al. have posited that students gained equally in terms of interest and skill relevant to their major regardless of whether their vocational interests were congruent with the academic environment.

Therefore, if vocational interest themes are not adequate predictors of major satisfaction, then it becomes important to ask the question "What is?" Perhaps the answer lies within the studies that have successfully linked a related model, the FFM, to career satisfaction. By way of example, in their analysis of 5,932 individuals in a variety of occupations, Lounsbury, Loveland, Sundstrom et al. (2003) reported that the Big Five personality traits, Conscientiousness, Extraversion, and Openness were significant predictors of career satisfaction. In another study of 496 employees in a broad base of occupations, Seibert and Kramer (2001) found Extraversion to be positively related to career satisfaction. They also reported a negative relationship between Neuroticism and career satisfaction. In yet another study, Boudreau, Boswell, and Judge (2001) reported significant, negative relationships between Neuroticism and career satisfaction and significant positive relationships between Extraversion and career satisfaction within a sample of European executives. Based on the success of personality traits in the prediction of career satisfaction, the ability of personality traits to predict college major

satisfaction should also be analyzed and compared with that of vocational interest themes to do the same.

Conclusion

In conclusion, a review of the literature regarding personality, vocational interest, and college major satisfaction has revealed extensive research on the relationship between personality and vocational interest; however, most of the studies investigating this relationship have utilized typical measures of normal personality, not assessments tailored specifically to a work setting. Furthermore, no studies on this topic could be found that utilized a personality assessment designed to measure narrow traits in addition to the FFM all within a work context. Therefore, while these same relationships have been addressed in the past, I sought to investigate personality and vocational interest issues from a fresh perspective. In addition, while the concepts of career satisfaction and college major selection have been analyzed many times, very little work has addressed college major satisfaction. Given the extensive literature on career satisfaction and the link between major and career, it is important to analyze college major satisfaction as it is related to both personality traits and vocational interests.

CHAPTER II

EXAMINATION OF PERSONALITY TRAITS, RIASEC VOCATIONAL INTEREST THEMES, AND THE PREDICTION OF SATISFACTION WITH COLLEGE MAJOR

Objectives

While Holland (1997) has been clear in his assertion that vocational interests are expressions of personality, it remains unclear as to how these expressions of personality relate to well-established personality constructs, especially narrow personality traits assessed through items with work-related content. Furthermore, it remains unclear as to how well either of these constructs (personality traits and vocational interests) predict related criteria such as satisfaction with college business major. Therefore, the purpose of the present study was two-fold. The first purpose was to increase the understanding of the relationship between personality traits and vocational interest themes in an original way by employing the PSI for personality assessment. The second purpose was to determine the relative predictive validity of personality traits and vocational interests in relation to satisfaction with college major.

Related to these purposes, the current study has addressed two specific objectives. The first objective was to test a set of established hypotheses regarding logically consistent relationships between FFM personality traits and the RIASEC vocational interest themes, as well as between narrow personality traits and the RIASEC vocational interest themes. Several of these hypotheses replicate hypotheses tested by Barrick et al. (2003), while others have been derived using deductive reasoning as described by Barrick et al. A second objective was to determine the unique and joint contributions of

personality traits and vocational interest themes in predicting satisfaction with college major.

Hypotheses

The following hypotheses have been derived from Barrick et al.'s (2003) meta-analytic investigation of the relationship between personality and vocational interest. For consistency, all hypotheses have been stated in terms of the personality construct involved. In addition, all personality traits refer to the scale by the same name as assessed by the PSI, and all vocational interest themes refer to the scale by the same name as assessed by the SII.

- Hypothesis 1: Extraversion will be positively related to the Enterprising and Social vocational interest themes.
- Hypothesis 2: Agreeableness/Teamwork will be positively related to the Social vocational interest theme.
- Hypothesis 3: Conscientiousness will be positively related to the Conventional vocational interest theme.
- Hypothesis 4: Openness will be positively related to the Artistic and Investigative vocational interest themes.

In contrast to Barrick et al.'s (2003) analysis of the broad FFM traits, the following hypotheses focus on relationships between narrow personality traits and vocational interest themes. The content of each of the personality and vocational interest constructs is clearly defined. Therefore, hypotheses can be generated through the same

deductive reasoning cited by Barrick et al. and overlap between the two content domains can be assessed.

- Hypothesis 5: Tough-Mindedness will be positively related to the Realistic and Investigative vocational interest themes.

Tough-Mindedness is centrally related to one's tendency to utilize logic, rules, and facts when making decisions. Individuals who score high on Tough-Mindedness are more comfortable processing information analytically rather than emotionally or relationally (Lounsbury et al., 2002). This suggests that Tough-Mindedness will be related to both the Realistic and Investigative type, as both are oriented more toward logic and analysis rather than emotion or relationships. Realistic types enjoy concrete tasks, often physical in nature, while Investigative types are scientific, often focused on objective problem solving or analysis (Barrick et al., 2003).

- Hypothesis 6: Optimism will be positively related to the Enterprising vocational interest theme.

Optimism is related to one's tendency to be positive and have a hopeful outlook, especially toward problems and people (Lounsbury & Gibson, 2004). Enterprising types are also often attuned to possibilities; they are visionary leaders focused on selling their ideas and persuading others (Isaacson & Brown, 2000). Because of this emphasis on visionary leadership, management of people, and persuasion, it follows that an emphasis on possibilities, rather than problems, positives rather than negatives would be a logical personality fit.

- Hypothesis 7: Assertiveness will be positively related to the Enterprising vocational interest theme.

Assertiveness refers to one's propensity to take charge, speak up, and stand firm against opposition. Lounsbury and Gibson (2004) reported that assertive individuals are more likely to take leadership roles and be comfortable imposing their will on others. This propensity toward leadership and being in charge relates logically to the emphasis on leadership, management, persuasion, and executive decision-making embodied by the Enterprising type.

- Hypothesis 8: Assertiveness will be negatively related to the Conventional vocational interest theme.

Just as the link between Assertiveness and Enterprising is logical based on the shared emphases on leadership and management, it also follows that individuals who are less assertive (i.e., those that are passive and that shy away from confrontations) would enjoy the behind the scenes, detail work associated with the Conventional type. Therefore, the negative relationship has been hypothesized to reflect the proposition that individuals scoring high on Assertiveness are likely to be disinterested in, or even dislike, vocational tasks involving organization and data management.

The following research questions have been generated in order to explore the relative ability of personality traits and vocational interest themes to predict satisfaction with college business major.

- Which personality traits, as measured by the PSI, contribute unique variance to the prediction of satisfaction with college business major?
- Which vocational interest themes, as measured by the SII, contribute unique variance to the prediction of satisfaction with college business major?

- When regressed all together, which personality traits and which vocational interest themes uniquely predict satisfaction with college business major?

Method

This study utilized a correlational field design (Gelso & Fretz, 2001). Gelso and Fretz have defined the correlational field study as research that "...aims to look at relationships between and among variables as they occur naturally." (p. 70) In other words, variables in this type of study have not been manipulated and there has been no attempt to randomly assign participants into treatment and control groups. According to Gelso and Fretz, correlational field designs have been frequently employed in the realm of vocational psychology to search for correlational relationships between personal characteristics and a variety of career related constructs such as satisfaction, indecision, and stability. Based on the strong tradition of career related correlational field studies, the present study was designed to measure specific correlational relationships between three groups of variables utilizing a college student sample at a large southeastern university. The variables included FFM personality traits, narrow personality traits, and RIASEC vocational interest themes. The study was also designed to assess the ability of each variable to predict self-reported satisfaction with college major.

Participants

The participants in this study were approximately 347 undergraduate students at a large southeastern university, 50% female and 50% male. Approximately 39% of the participants were in the 18-19 age group, 48% were in the 20-21 age group, 11% were in

the 21-25 age group, and 2% were over 25. The sample included students from all four classifications (13% freshman, 54% sophomore, 27% junior, and 6% senior).

Each student took both the PSI and the SII online. They also completed a paper and pencil questionnaire that addressed satisfaction with college major. At the time of administration, the students were enrolled in either a Business Administration class or an Exploring Majors and Careers class. Both instruments were required class assignments for all students in their respective courses; however, participation in the study and completion of the questionnaire were completely voluntary. Students were given no incentive or reward for their participation. Data were collected by the author/primary investigator under Institutional Review Board approval # 6281B. Data collection began in the fall of 2002 and continued throughout the summer session of 2003. After collection was complete, data were coded and entered into electronic storage by an employee of Resource Associates, Inc. These data are currently held as archival data by Resource Associates, Inc. No identifying information is available for any individual record.

Because the participants in the study were students in either a Business Administration course or an Exploring Majors and Careers course, the only major represented well enough to be included in the analysis regarding satisfaction with major was business. Approximately 164 students listed business as their major and were thus included in the analysis. Within this smaller sample, 42% of the students were female and 58% male. Approximately 30% of the participants were in the 18-19 age group, 55% were in the 20-21 age group, 12% were in the 21-25 age group, and 3% were over 25. This smaller sample included no freshmen, but did include students from the remaining

three classifications (66% sophomore, 32% junior, and 2% senior). While other majors, including undecided, were represented in the larger sample of 347, there were not enough participants in any other major to analyze the ability of either predictor variable to significantly predict satisfaction with other college majors besides business.

Measures

Personal Style Inventory for College Students. The Personal Style Inventory for College Students is a collegiate version of the Personal Style Inventory (PSI) developed by Lounsbury and Gibson (2004) to measure normal personality in the context of work. This 136-item inventory of general personality is based on the well established FFM traits, Conscientiousness, Emotional Stability, Extraversion, Openness, and Agreeableness/Teamwork, as well as narrow personality traits, including in this case, Tough-Mindedness, Optimism, Work Drive, Visionary-Operational, and Assertiveness. Items are placed on a five-point Likert scale with “Strongly Disagree” and “Strongly Agree” at each anchor. The following Conscientiousness scale item exemplifies the work-based wording used throughout the assessment: I like to keep my work neat and organized, but not if it means getting behind schedule.

These scales have been shown to be valid and reliable in the measurement of normal personality (Lounsbury & Gibson, 2004) and significantly related to other measures of personality (Lounsbury et al., 1999) as well as important criteria such as career satisfaction (Lounsbury, Loveland, Sundstrom et al., 2003). Furthermore, the scales of the PSI have been successfully utilized in a variety of studies that have explored the relationship between personality and other work related constructs such as career decidedness (Lounsbury et al., 1999), job performance (Lounsbury, Gibson, Sundstrom et

al., 2004), job satisfaction (Lounsbury, Loveland, Sundstrom et al., 2003), and collegiate academic success (Lounsbury, Sundstrom et al., 2003; Ridgell & Lounsbury, 2004). This use of this inventory as a measure of personality has contributed to the uniqueness of this study by allowing for a more tailored analysis of personality traits than that afforded by the traditional instruments used to assess the FFM such as the NEO-PI-R (Costa & McCrae, 1992).

In addition to providing an analysis of more narrow personality traits than the traditional FFM instruments, the PSI uses items that are primarily work-related in content and thus are more relevant to an investigation of personality and vocational interest than general personality scales that are not contextualized to any one domain of life (i.e., NEO-PI-R, 16PF, or Myers-Briggs Type Indicator). It has been suggested that the use of work-related wording in scale items can improve the validity of personality measures used for career related assessment purposes (Schmit, Ryan, Stierwalt, & Powell, 1995). This reasoning has been successfully applied by other researchers attempting to assess personality for career related purposes (Lounsbury et al., 1999; Lounsbury, Loveland, Sundstrom et al., 2003). The distinction of context between general and work-related is important due to the critical intersection of the constructs of personality and vocational interest within the world of work (De Fruyt & Mervielde, 1999; Hogan & Blake, 1999). Furthermore, because the purpose of this line of inquiry is to better understand these constructs (personality and vocational interest) and their effects on vocational issues such as career decision making and college major satisfaction, it follows that an instrument tailored to the assessment of personality within a work context is better suited to address these questions.

Strong Interest Inventory. The vocational interest theme measure used in this study was the SII (Harmon et al., 1994). The SII is a 317-item assessment administered, in this case, on-line. Respondents are asked to indicate whether they like, dislike, or are neutral toward a variety of occupations, school subjects, activities, and types of people. Also assessed are respondents' preferences between several pairs of personal characteristics.

The SII was originally known as the Strong Vocational Interest Blanks and was based on the work of E.K. Strong in 1927. Holland's typology was added in 1974 after Campbell and Holland (1972) proposed that the RIASEC model become the organizing structure underlying the SII. The entire instrument was extensively revised and updated in 1994 (Harmon et al., 1994).

The SII has been one of the most commonly utilized instruments for measuring vocational interests and delineating the Holland code (Anderson et al., 1997; Fouad, 2002; Fouad, Harmon, & Borgen, 1997; Gore & Leuwerke, 2000). The SII has also been one of the most widely used career assessments by practitioners in a variety of settings such as high schools, private practices, and college counseling and/or career centers (Donnay, 1997; Harmon et al., 1994). Larson et al. (2002) listed the SII as one of the three main instruments used to measure Holland's hexagon.

In addition to Holland's six general occupational themes, the newest version of the SII also measures 25 basic interest scales, 207 occupational scales, and 4 personal style scales (Harmon et al., 1994). While the validity of older versions of the SII has been questioned, especially in regard to use with minority populations (Carter & Swanson, 1990), the updated version has been shown to be a generally valid and reliable

assessment of vocational interest with a general adult population (Donnay & Borgen, 1996; Harmon et al., 1994), racial and ethnic minorities (Lattimore & Borgen, 1999), and individuals who have disabilities (DeWitt, 1994).

Satisfaction with college major. Students who volunteered to have their assessment results used in the study were asked to sign an informed consent form and complete a brief packet containing demographic information and additional scales (see Appendix B). The attached scales included a Quality of Life Scale and a Career Decidedness Scale. One item within the Quality of Life Scale asked students to rate their level of satisfaction with their academic major as very dissatisfied, dissatisfied, slightly dissatisfied, neutral, slightly satisfied, satisfied, or very satisfied. These responses were coded and used to evaluate the ability of personality traits and vocational interest themes to predict satisfaction with college major.

CHAPTER III

RESULTS

Overview

The present investigation examined specific, correlational relationships among study variables: personality traits and vocational interest themes. The results of these correlational analyses are provided in Table 1 and Table 2, and all tables are included in Appendix A. The results of correlational analyses for personality traits and satisfaction with major are provided in Table 3; the results of correlational analyses for vocational interest themes and satisfaction with major are provide in Table 4. Next, stepwise multiple regression analyses were performed to analyze how the personality trait and vocational interest measures jointly and uniquely contributed to the prediction of satisfaction with college business major. Three different stepwise regressions were performed including personality traits, vocational interest themes, and all variables combined in order to determine the best model for predicting satisfaction with college business major. A summary of the regression analysis for personality traits is provided in Table 5. A summary of the regression analysis for vocational interest themes is shown in Table 6, and a summary of the regression analysis for both personality traits and vocational interest themes together is provided in Table 7.

Hypothesized Relations Between Study Variables

Hypothesis 1

Table 2 reports the findings for the relation between Extraversion and Enterprising and Social. This analysis revealed a significant positive relationship between Extraversion and the Enterprising vocational interest theme ($r = .209, p < .01$). However, the relationship between Extraversion and the Social vocational interest theme was not significant ($r = .045, n.s.$). Thus, hypothesis 1 was partially supported in that a significant relationship was found between Extraversion and Enterprising and partially unsupported in that no significant relationship was found between Extraversion and Social.

Hypothesis 2

As can be seen in Table 2, there was a significant, positive relationship between Agreeableness/Teamwork and the Social vocational interest theme ($r = .125, p < .05$). Thus, hypothesis 2 was supported.

Hypothesis 3

Table 2 reports the results of hypothesis 3. This analysis revealed a significant, positive relationship between Conscientiousness and the Conventional vocational interest theme ($r = .223, p < .01$). Again, the hypothesis was supported.

Hypothesis 4

As can be seen in Table 1, there was a significant, positive relationship between Openness and the Artistic vocational interest theme ($r = .180, p < .01$). Also, Openness was significantly, positively related to the Investigative vocational interest theme ($r = .178, p < .01$). Thus, both elements of hypothesis 4 were supported.

Hypothesis 5

As can also be seen in Table 1, there was a significant, positive relationship between Tough-Mindedness and the Realistic vocational interest theme ($r = .340, p < .01$). Furthermore, there was also a significant, positive relationship between Tough-Mindedness and the Investigative vocational interest theme ($r = .246, p < .01$).

Therefore, both aspects of this hypothesis were supported.

Hypothesis 6

The results of the correlation of Optimism and the Enterprising vocational interest theme, reported in Table 2, revealed a significant, positive relationship between these two variables ($r = .211, p < .01$), supporting hypothesis 6.

Hypothesis 7

As hypothesized, Assertiveness and the Enterprising vocational interest theme were positively and significantly related ($r = .157, p < .01$).

Hypothesis 8

Finally, as can be seen in Table 2, Assertiveness was negatively and significantly related to the Conventional vocational interest theme, ($r = -.171, p < .01$). Thus, hypothesis 8 was supported.

Satisfaction with College Major

To address the issue of satisfaction with college business major, three separate stepwise multiple regression analyses were conducted. First, each of the personality traits were allowed to enter a regression model in a stepwise fashion in order to determine which of them were the best predictors of satisfaction with major. The results of this

analysis, shown in Table 5, indicated that a model containing Optimism, Conscientiousness, and Extraversion was the best predictor. Optimism entered the model first and accounted for 8% of the variance in satisfaction with major ($R^2\Delta = .080, p < .01$). Next, Conscientiousness entered and added an additional 3.5% of unique variance above that explained by Optimism ($R^2\Delta = .035, p < .05$). Finally, Extraversion added another 3.2% of unique variance above Conscientiousness and Optimism ($R^2\Delta = .032, p < .05$). Together, these three personality variables accounted for 14.7% of the variance in satisfaction with major.

The second regression analysis, summarized in Table 6, was conducted using vocational interest themes as predictors of satisfaction with college business major. Again, all of the themes were allowed to enter the regression model in a stepwise fashion in order to determine their relative ability to predict satisfaction with major. Only one of the vocational interest themes, Realistic, was found to be a significant predictor of the dependent variable. The Realistic vocational interest theme accounted for 9.9% of the variance in satisfaction with college business major ($R^2\Delta = .099, p < .01$). Therefore, the entire set of vocational interest themes, accounted for slightly less than 10% of the total variance.

Finally, both sets of variables, personality traits and vocational interest themes, were allowed to enter the equation in a stepwise manner (see Table 7). Optimism entered the model first and accounted for 8% of the variance ($R^2\Delta = .080, p < .01$). Next, the Realistic vocational interest theme entered and explained an additional 6.5% of the variance ($R^2\Delta = .065, p < .01$). The Artistic vocational interest theme accounted for an additional 2.7% of unique variance ($R^2\Delta = .027, p < .05$). Finally, Extraversion entered

as the last significant predictor variable and explained 2.6% of the variance beyond that already accounted for by Optimism, the Realistic vocational interest theme, and the Artistic vocational interest theme ($R^2\Delta = .026, p < .05$).

CHAPTER IV

CONCLUSION

Discussion

The present study evaluated eight hypotheses regarding specific relationships between personality traits and vocational interest themes. All of the hypotheses were at least partially supported, which supports Barrick et al.'s (2003) contention that although the FFM and RIASEC models are different, significant overlap between the two would still be expected. Moreover, it should be noted that the current study extended prior research using more context-free personality measures to a work-based measure of normal personality. Therefore, a robustness of the relationships is indicated in that they stand whether assessed with a general measure of normal personality or one that is more tailored to work purposes.

On the other hand, it is important to note that although almost all of the hypotheses were statistically supported, the relations between the FFM personality traits and vocational interest themes were weak to moderate. While difficult to translate into real life applicability, this type of statistical finding is in keeping with the majority of research that has been done on these two models. In fact, because of the inability of the personality traits to account for a large amount of variance in the vocational interest themes and vice versa, the position of several researchers such as Barrick et al. (2003) and Larson et al. (2002) remains supported that while these two models are related, they are not substitutes for each other and in fact, they tap into different constructs.

Turning to the results for the individual hypotheses, hypothesis 1 was the only hypothesis to be partially supported and partially rejected. While the results of the present investigation indicated a significant, positive relationship between Extraversion and Enterprising, a significant relationship between Extraversion and Social was not found. This finding is consistent with Larson et al.'s (2002) and Barrick et al.'s (2003) meta-analytical assertions that Extraversion is related to the Enterprising vocational interest theme; however, it contradicts both studies' findings relating Extraversion and the Social vocational interest theme. The link between Extraversion and the Enterprising vocational interest theme is fitting in that individuals with gregarious, outgoing, and externally focused personalities might be interested in work activities including selling, leading, managing, and persuading. However, the failure of the present study to support the link between Extraversion and the Social vocational interest theme is more difficult to explain. One potential explanation is that the Social vocational interest theme, while tapping into activities related to social interaction, may better describe those who express their preferences through being cooperative, helpful, and understanding of others. Although these behaviors encompass interaction with people, they fit the Agreeableness/Teamwork construct better than the Extraversion construct. In fact, this issue was addressed by hypothesis 2; Agreeableness/Teamwork was, indeed, significantly related to the Social vocational interest theme. This relationship may account for the lack of a relationship between Extraversion and the Social vocational interest theme in that a social environment is preferred by both Social and Enterprising types; however, the specific application of the social activities may differ. In other words, Social types may emphasize the more cooperative aspects of people interaction over the purely outgoing

aspects. Therefore, as indicated by the results of this study, Social individuals, while interested in relationships with people, may express those interests through personality traits more focused on cooperation and teamwork (Agreeableness/Teamwork) than sociability (Extraversion).

The relation between Conscientiousness and the Conventional vocational interest theme, as stated in hypothesis 3, was also supported. This finding mirrors the findings of Barrick et al. (2003) and provides strong evidence for a link between the attention to detail and rule orientation of the Conscientiousness personality trait and the Conventional vocational interest theme that encompasses detail oriented careers such as accountant and actuary. While the two constructs are not simply substitutes for one another, a significant correlation between the two is logical and consistent with the meanings of both constructs.

Both relations described in hypothesis 4, Openness with the Artistic vocational interest theme and Openness with the Investigative vocational interest theme, were supported. These findings support the previous assertions of both Larson et al. (2002) and Barrick et al. (2003) and are again intuitive relationships. Openness, a tendency to seek new experiences and to be receptive to new ideas, seems like a logical match with the creative nature of the Artistic vocational interest theme. In fact, Artistic careers such as chef or writer are great examples of careers in which interests are manifested through behaviors linked to new experiences and a desire for novelty. Investigative types, while seemingly less free-spirited and spontaneous than Artistic types, are also interested in creativity and innovation. They simply manifest these interests in slightly more structured, scientific ways. Therefore, while the link between Openness and the Artistic

vocational interest theme is one of creative expressiveness, the link between Openness and the Investigative vocational interest theme is just as centered on freshness of ideas, but in more scientific or research oriented settings. This differentiation between the various ways in which a tendency toward Openness could manifest itself (i.e., creatively or scientifically) explains how both the Artistic and Investigative vocational interest themes are related to Openness. This finding also underscores Holland's (1997) adjacent positioning of Artistic and Investigative on the hexagon in that by demonstrating a significant link to a common variable, Openness, a similarity has been shown to exist between the two vocational interest themes.

Hypothesis 5 addressed the relation between Tough-Mindedness and the Realistic vocational interest theme. Given the concrete, physical focus of the Realistic vocational interest theme, it follows that a personality trait encompassing the tendency to be analytical and objective would relate to it. Tough-Mindedness has been described as an emphasis on processing information based on logic, facts, and data and on being unsentimental when making decisions. These characteristics are conceptually related to the systematic manipulation of equipment and the physical nature of the work typically involved in the Realistic vocational interest theme. Furthermore, some researchers have even asserted that Tough-Minded individuals prefer physically demanding work, (Lounsbury & Gibson, 2004) a defining characteristic of the Realistic vocational interest theme.

The results of this study not only support this position, but also provide new information regarding the link between the Realistic vocational interest theme and any of the personality traits. Several researchers have been unable to find a significant

correlation between the Realistic vocational interest theme and any of the FFM traits (Ackerman & Heggestad, 1997; Barrick et al., 2003; De Fruyt & Mervielde, 1997). Therefore, it is important to note that the present investigation not only identified a significant link between the Realistic vocational interest theme and a personality trait, Tough-Mindedness, but that the relationship was the strongest correlation between any of the personality variables and RIASEC themes analyzed. Within the context of the recent broad versus narrow trait debate, this finding is important in that it lends support to the assertion made by some researchers (Lounsbury et al., 2002; Paunonen et al., 1999; Paunonen & Nicol, 2001) that narrow personality traits may actually provide significant descriptive and predictive validity above that provided by the broader, FFM.

The positive relationship between Optimism and the Enterprising vocational interest theme, as stated in Hypothesis 6, was also supported. Because Optimism embodies characteristics such as a positive attitude and the ability to look for potential good in a situation, it follows that this personality trait would correlate well with Enterprising vocational interests such as persuading and leading. In fact, Enterprising types such as visionary leaders and charismatic managers might also be those whose personalities are focused on possibilities, potential, and positive outcomes. Therefore, while intuitively expected, this finding is again important in that it links a RIASEC theme to a personality trait more narrowly defined than the FFM traits.

In support of hypothesis 7, Assertiveness was positively related to the Enterprising vocational interest theme and negatively related to the Conventional vocational interest theme, which supports hypothesis 8. The fact that assertive individuals would be interested in Enterprising work activities such as leadership or

management is logical given the assertiveness required in most of these positions. Furthermore, the finding that less assertive individuals would have more Conventional work interests such as organizing details and managing data is also consistent with the more accommodating nature of such jobs. Therefore, the important element in this finding is the distinction that Assertiveness provides between the two business oriented vocational interest themes, Enterprising and Conventional. While the two themes clearly address different vocational interests, they also share the important commonality of focusing on the business world. Often, individuals with a desire to pursue business oriented careers may be unable to decide exactly which realm of business might be the best fit for them. Perhaps, based on these findings, those who are more assertive would find their business work interests best pursued in the Enterprising realm, while those who are less assertive may find the Conventional manifestation to be the best fit. This is not to suggest that Assertiveness alone is a significant predictor of satisfaction with careers or majors within the business realm in that this was not indicated by the results. However, it may be that level of Assertiveness is an important distinguishing factor between the two adjacent vocational interest themes, Enterprising and Conventional. Taken together, the present findings suggest that while the FFM traits were moderately related to the RIASEC themes, narrow traits enhanced the relationship between personality traits and vocational interest themes.

The findings of this study also support previous research demonstrating the importance of narrow traits in the study of work related behavior (Paunonen et al., 1999; Schneider et al., 1996). More specifically, the results of this study support Lounsbury, Loveland, Sundstrom et al.'s (2003) assertion that Assertiveness is a significant predictor

of career satisfaction. The construct of Assertiveness may be a crucial factor in career success when someone has both Enterprising and Conventional vocational interests and is considering related careers such as those in the business realm. Furthermore, because of the ability of a personality trait to potentially distinguish between related vocational interests, career counselors and others who provide career guidance should assist clients in assessing both personality and vocational interest, a point that will be developed in greater detail in the next section.

In addressing the final three research questions, personality traits, vocational interest themes, and a combination of the two models were all analyzed to determine their relative ability to predict satisfaction with college major, in this case, business. In keeping with research that has found personality traits to be valid predictors of career satisfaction (Boudreau et al., 2001; Lounsbury, Loveland, Sundstrom et al., 2003; Seibert & Kramer, 2001), the results of this study indicated that three of the personality traits, Optimism, Conscientiousness, and Extraversion all added unique, significant variance to satisfaction with college business major. These same traits are also some of the traits cited by previous researchers as those that predict satisfaction with career. For example, Lounsbury, Loveland, Sundstrom et al. (2003) reported Conscientiousness and Extraversion to be two of the significant predictors of career satisfaction. In addition, Seibert and Kramer (2001) and Boudreau et al. (2001) both found Extraversion to be positively related to career satisfaction. Therefore, the results of this study support the contention that personality may be just as important in the prediction of satisfaction with major as it has been in the prediction of satisfaction with career. More research is needed

in understanding the importance of these traits and perhaps developing ways to foster or increase their existence in individuals.

On the other hand, the RIASEC themes were not as successful in predicting major satisfaction. In fact, only one theme, Realistic, was able to add any unique variance to the regression model. Furthermore, the relationship was negative, meaning that the lower one scored on the Realistic scale, the more likely he or she was to be satisfied with his or her business major. Surprisingly, the vocational interest theme that has been most typically related to business occupations, Enterprising, did not enter the equation as a significant predictor of business major satisfaction. This finding is somewhat surprising when one considers how closely related the Enterprising vocational interest theme is to primary business activities such as management, marketing, finance, and sales. In fact, general business, has been listed by Rosen et al. (1997) in their Educational Opportunities Finder as an Enterprising program of study; however, in the present study, the Enterprising vocational interest theme failed to predict satisfaction with business major. While contrary to the suggestions of Rosen et al. who assert that vocational interest themes can be used to select a college major with which one might be satisfied, these findings do support the research of others who have maintained that major satisfaction is not as simple as matching RIASEC themes to related majors (Hansen & Tan, 1992; Latona, 1989; Tranberg et al., 1993).

Finally, when both personality traits and vocational interest themes were allowed to enter the regression equation together, the most successful model yet was found. The results of this analysis indicated that a mixture of personality traits and vocational interest themes was actually the best model for predicting satisfaction with college business

major. Optimism, the Realistic vocational interest theme, the Artistic vocational interest theme, and Extraversion all emerged as significant predictors of satisfaction with college business major. This finding underscores the importance of utilizing both personality and vocational interests in educational and career decision making.

While the inability of the RIASEC themes to predict satisfaction with major has been previously asserted by other researchers, the results of this study place special emphasis on the RIASEC model's failure to predict satisfaction with a particular major (i.e., business) using the theme code under which that major is listed, Enterprising. Furthermore, these results have also demonstrated the relative success of personality traits in predicting satisfaction with major and the even greater success of a combination model in the same task. Career counselors and other guidance professionals should consider reevaluating the traditional focus on the RIASEC vocational interest themes and search for ways to incorporate personality assessment into their programs. It is no longer advisable to suggest academic program selection based solely on one's Holland code. Rather, students and other clients must be urged to broaden their perspectives and assess a variety of both interest and personality constructs when making career and academic decisions.

Limitations

While the present investigation has contributed significantly to the body of knowledge regarding personality traits, vocational interest themes, their relationships to each other, and their ability to predict satisfaction with major, there were several limitations that must be considered. One limitation of the present investigation was the

size and homogeneity of the sample utilized for testing the relationships between personality and interest as well as satisfaction with major. Participants were taken from two undergraduate courses at a large southeastern university with a racially homogeneous, mostly Caucasian, population. Furthermore, the courses from which the sample was taken were courses designed for specific populations: undecided students and business administration students. Therefore, future research should attempt to replicate these findings utilizing a more racially and academically diverse sample, perhaps taken from different universities in different locations across the United States and in other countries. Also, inclusion of different minority groups into a study in this area could add to the generalizability of these results to non-white populations. Finally, efforts should be made to replicate these results with a sample larger than the 347 participants available for the present investigation.

Another limitation of the present investigation was the inclusion of only business majors in the analysis regarding satisfaction with major. Again, because the sample was taken from only two courses, a career exploration course for undecided students and a business administration course, no other major besides business was represented well enough to be included in the analysis. Therefore, while other majors were represented in the larger sample, they were not included in the investigation of satisfaction with major. Future research should focus on replicating these results with a variety of different majors and academic interest areas. This line of inquiry could also be expanded to address satisfaction with professional and academic training outside of the traditional college major such as trade school training (i.e., cosmetology, massage therapy, plumbing) or

technical school programs (i.e., certificate programs in computer programming or office administration).

A final limitation regarding the satisfaction with major analysis was the single item utilized to determine satisfaction with major. This item was originally included as part of a broader life satisfaction scale and was extracted from that scale to represent students' self-reported satisfaction with major. Although Scarpello and Campbell (1983) found that such global single-item indices of satisfaction can be more valid than multi-item measures of specific facets, it would be desirable to investigate the present hypotheses utilizing a multi-item measure of major satisfaction. Perhaps, a multi-item scale that addressed several components of satisfaction with major, including satisfaction with courses within major, satisfaction with professors within major, and satisfaction with academic material covered within major courses, could provide a broader analysis of the construct. Also, some researchers (Dawis, 1991; Prediger, 2000) have suggested that satisfaction with major and career should be refined into measures of internal satisfaction and external satisfaction. The present investigation did not make such a distinction and did not specify to which type of satisfaction the single scale item referred. Future research should focus on developing a multi-item scale that delineates between external and internal satisfaction. A multi-item scale could then be analyzed in terms of the ability of a variety of constructs such as personality and vocational interest to predict satisfaction with major.

Implications for Future Research

While several implications for future research have been mentioned above, the results of this study have suggested other interesting areas that warrant further exploration. First, based on the link between personality traits and vocational interest themes demonstrated by the present investigation, more research is needed to understand how practitioners can best utilize these constructs in conjunction with each other. Outcome studies could explore differences in career counseling when counselors focus on and assess both personality and vocational interest compared with the traditional focus on interest only. Because the overlap between the two models has been well researched and demonstrated utilizing a variety of populations and instruments, researchers should now focus on the practical application of this knowledge and the improvement of career counseling and assessments. For example, based on the demonstrated relations between both personality and vocational interest, new assessments could be developed that combine both personality and vocational interest when providing career related results. Then, satisfaction with choices made based on assessment results could be compared for students utilizing only vocational interest information, versus those utilizing both personality and vocational interest.

Vocational interest themes have long been utilized by career planning counselors in a variety of settings to assist students in making both educational and career related decisions. However, based on previous research as well as the results of the present investigation, it has become apparent that Holland's vocational interest themes alone are not the best predictors of satisfaction with major. Personality traits in conjunction with vocational interest themes were better predictors of satisfaction with a business major

than vocational interest themes alone. The relationship between personality and major satisfaction needs to be understood more fully, perhaps even focusing on ways to modify personality to experience maximum satisfaction.

While this study has demonstrated that personality traits along with vocational interest themes can significantly predict major satisfaction, other potentially relevant variables should also be examined as potential moderators; these include cognitive ability, grade point average, previous academic training and experiences, demographic variables such as gender or race, and self-efficacy beliefs. Because the link between vocational interest themes and major satisfaction is not strong, career counselors and other professionals should proceed with caution when utilizing vocational interest assessments to assist clients with academic decision making.

A final area for future investigation should include the listing of college majors by personality traits. This type of schema has already been created for vocational interest themes and majors (Rosen et al., 1997). However, as demonstrated here, selecting a major because it coincides with one's interest themes is not a statistically valid method by which to achieve satisfaction with that major. Therefore, students should be able to access a listing of personality traits and the majors to which they correspond most closely for use in conjunction with the existing list of vocational interest themes and corresponding majors.

Summary

In relation to prior research, the present study provided corroborative evidence for overlap between FFM traits, narrow personality traits, and vocational interest themes.

While this relationship has been meta-analytically demonstrated elsewhere (Barrick et al., 2003; Larson et al., 2002), the present investigation was the first to utilize a work-based personality assessment, while also taking narrow personality traits into account. The results not only confirmed the well-established relationships between the FFM and the RIASEC codes, but also demonstrated that more narrow personality traits are related to vocational interests measured under the RIASEC model. Even though significant correlations were found, the variables did not account for a great deal of variance between the models. Therefore, while the links between the models are evident, the two are not similar enough to be considered substitutes for each other or models of the same construct. This position was further supported by the relative inability of vocational interest themes to predict satisfaction with the college major, business. Although the Enterprising vocational interest theme should have been a key theme corresponding to satisfaction with business major (Rosen et al., 1997), it was not significantly related to business major satisfaction. In fact, the model best able to predict satisfaction with business major contained both personality and vocational interest themes. Specifically, Optimism, the Realistic and Artistic vocational interest themes, and Extraversion were the best predictors of satisfaction with business major, indicating that researchers and practitioners alike should begin utilizing and considering both models equally when assisting students with career and educational planning.

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APPENDICES

APPENDIX A

Table 1

Intercorrelations Between Personality Traits and Realistic, Investigative, and Artistic

Vocational Interest Themes (N = 347)

Personality Traits	Vocational Interest Themes		
	Realistic	Investigative	Artistic
Conscientiousness	-.140**	-.074	-.226**
Emotional Stability	.003	-.030	-.202**
Extraversion	-.087	-.171**	-.049
Openness	.138**	.178**	.180**
Agreeableness/Teamwork	-.010	-.094	-.079
Tough-Mindedness	.340**	.246**	-.260**
Optimism	.009	-.047	-.131*
Work Drive	.018	.020	-.117*
Visionary	.069	-.028	.213**
Assertiveness	-.013	-.093	-.027

* $p < .05$. ** $p < .01$. 2-tailed.

Table 2

*Intercorrelations Between Personality Traits and Social, Enterprising, and Conventional**Vocational Interest Themes (N = 347)*

<u>Personality Traits</u>	<u>Vocational Interest Themes</u>		
	<u>Social</u>	<u>Enterprising</u>	<u>Conventional</u>
Conscientiousness	-.115*	.089	.223**
Emotional Stability	-.175**	.118*	-.088
Extraversion	.045	.209**	-.232**
Openness	.047	.144**	-.080
Agreeableness/Teamwork	.125*	.202**	-.126*
Tough-Mindedness	-.481**	-.053	.296**
Optimism	-.047	.211**	-.067
Work Drive	-.051	.139**	.170**
Visionary	.106*	.043	-.343**
Assertiveness	-.104	.157**	-.171**

* $p < .05$. ** $p < .01$. 2-tailed.

Table 3

Correlations Between Personality Traits and Satisfaction with Major (N = 164)

Personality Traits	Satisfaction with Major
Conscientiousness	.238**
Emotional Stability	.213**
Extraversion	.272**
Openness	.111
Agreeableness/Teamwork	.041
Tough-Mindedness	-.017
Optimism	.283**
Work Drive	.184*
Visionary	-.094
Assertiveness	.240**

* $p < .05$. ** $p < .01$. 2-tailed.

Table 4

Correlations Between Vocational Interest Themes and Satisfaction with Major (N = 164)

<u>Vocational Interest Themes</u>	<u>Satisfaction with Major</u>
Realistic	-.260**
Investigative	-.158*
Artistic	-.180*
Social	-.131
Enterprising	-.009
Conventional	.031

* $p < .05$. ** $p < .01$. 2-tailed.

Table 5

Summary of Stepwise Multiple Regression Analysis for Personality Traits Predicting Satisfaction with Major (N = 164)

	Multiple R	R ²	R ² Change
Optimism	.283**	.080**	.080**
Conscientiousness	.340*	.116*	.035*
Extraversion	.348*	.148*	.032*

* $p < .05$. ** $p < .01$.

Table 6

*Summary of Stepwise Multiple Regression Analysis for Vocational Interest Themes**Predicting Satisfaction with Major ($N = 164$)*

	Multiple R	R^2	R^2 Change
Realistic	.315**	.099**	.099**

* $p < .05$. ** $p < .01$.

Table 7

Summary of Stepwise Multiple Regression Analysis for Personality Traits and Vocational Interest Themes Predicting Satisfaction with Major (N = 164)

	Multiple R	R^2	R^2 Change
Optimism	.283**	.080**	.080**
Realistic	.381**	.145**	.065**
Artistic	.410*	.168*	.027*
Extraversion	.441*	.194*	.026*

* $p < .05$. ** $p < .01$.

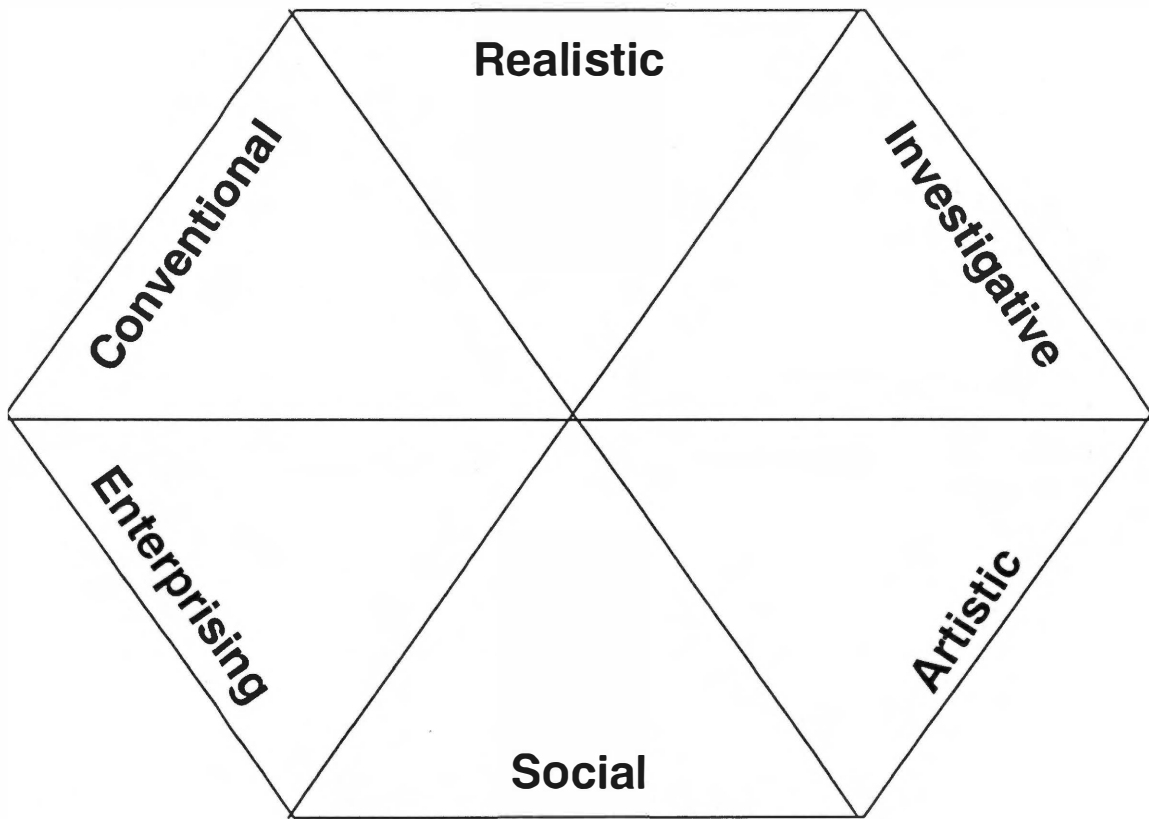


Figure 1

Holland's Hexagonal RIASEC Model

APPENDIX B

Appendix B

INFORMED CONSENT

Title of Project: An Investigation of Personality Traits, Career Interests, Career Decidedness and Quality of Life

The objective of this project is to investigate relationships between normal personality traits and career interests among college students.

Your participation in this study involves three parts:

- 1) Gaining your informed consent to analyze your Strong Interest Inventory and College to Career Fit Assessment results.
- 2) Completion of two scales: Career Decidedness Scale and Quality of Life Scale.
- 3) Completion of demographic information.

Your participation in this study entails no unusual risks or discomforts. A research paper based on this research will be prepared. The knowledge gained from this research may be presented to others through published works and/or presentations.

The only potential risk of participation in this study is your identification. No stresses or dangers to participants are anticipated. Your scores on the assessments will be available to the instructor of CECF 205 and BA 201 regardless of participation in the research project. Therefore, by volunteering to participate, you assume no greater risk to confidentiality than you would already bear as a student in the course. Student names will be included on the scales for matching purposes; however, the names will be deleted immediately after the data have matched and merged. Only the principal investigator and faculty advisor will have access to the merged data.

The informed consent statements will be retained in a private access file cabinet for three years on the campus of the University of Tennessee, Knoxville. Every precaution will be made to insure confidentiality of records.

I have read the above statement and agree to participate in the research. In addition, I am aware that:

1. I am entitled to have any further inquiries answered regarding the procedures.
2. No royalties are due to me for any subsequent publication.
3. Participation is voluntary and I may withdraw my consent and discontinue my participation at any time and for any reason without penalty.

For further information about this study or your role in it, contact:

Principal Investigator:
Christen Tomlinson Logue, M.S.

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Signature _____ Date _____

Printed Name _____

QUALITY OF LIFE SCALE

Using the scale below, indicate how satisfied you are with various aspects of your life.
Leave the item blank if it is not applicable.

VD = Very Dissatisfied
D = Dissatisfied
SD = Slightly Dissatisfied
N = Neutral
SS = Slightly Satisfied
S = Satisfied
VS = Very Satisfied

a. Yourself.....	VD	D	SD	N	SS	S	VS
b. How much fun you are having.....	VD	D	SD	N	SS	S	VS
c. The amount of free time you have.....	VD	D	SD	N	SS	S	VS
d. Your own health and physical condition.....	VD	D	SD	N	SS	S	VS
e. Your friends	VD	D	SD	N	SS	S	VS
f. Your social life.....	VD	D	SD	N	SS	S	VS
g. Your academic major.....	VD	D	SD	N	SS	S	VS
h. Your GPA.....	VD	D	SD	N	SS	S	VS
i. Your job (if applicable).....	VD	D	SD	N	SS	S	VS
j. Your future career prospects.....	VD	D	SD	N	SS	S	VS
k. YOUR LIFE AS A WHOLE.....	VD	D	SD	N	SS	S	VS

CAREER DECIDEDNESS SCALE

1. I have not made a definite decision about a career for myself.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I have made a definite decision about a career for myself.
2. I am having a difficult time deciding among careers.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am not having any problem deciding among careers.
3. I'm still thinking about the kind of job I want in the future.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I know with certainty what kind of job I want in the future.
4. I am currently considering several different career paths.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am currently focused on one career path.
5. I am sure about what I eventually want to do for a living.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am not sure about what I eventually want to do for a living.
6. I am experiencing difficulty choosing a career which is best for me.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am not experiencing difficulty choosing a career which is best for me.
7. I have a lot of doubts about what occupational field I will go into.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I don't have any doubts about what occupational field I will go into.
8. I go back and forth on what career to choose.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am unwavering in my career choice.
9. I have a very clear career focus.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I don't have a very clear career focus.

BACKGROUND INFORMATION

- Are you: ☐ Male ☐ Female (Check one)
- How old are you: ☐ 18-19 ☐ 20-21 ☐ 21-25
☐ 25+ (Check one)
- Are you: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior
☐ Grad Student ☐ Non-degree (Check one)
- What is your overall GPA in college? (Check one):
☐ less than 1.5 ☐ 1.5-2.0 ☐ 2.0-2.49 ☐ 2.50-2.99
☐ 3.00-3.49 ☐ 3.50-3.99 ☐ 4.00

5. Do you have a major? _____ Yes _____ No (Check one)

5A. If yes, what is your major? _____

6. What are your future career plans?: _____

7. Are you currently working? _____ Yes _____ No (Check one)

If yes, are you working full or part-time? _____

VITA

Christen Tomlinson Logue was born in Rome, GA on August 21, 1974, and was raised in Cartersville, GA. She attended Cartersville public schools and later, Cumberland College in Williamsburg, KY. After graduating from Cumberland College in 1997 with a B.A. in political science, she attended Lee University in Cleveland, TN. While at Lee, Christen obtained an M.S. degree in counseling psychology and completed her counseling internship at Tennessee Wesleyan College in Athens, TN.

Christen has spent the past three years pursuing the Ph.D. degree in counseling psychology at The University of Tennessee. During that time, she was also employed as a graduate assistant career planning counselor with Career Services. Christen is currently completing a pre-doctoral internship with the Student Counseling Services Center at The University of Tennessee. After finishing her degree, she hopes to pursue a career in student affairs or teaching at the college level.