Bridging the Undecided Gap:
Guiding Students to Self-Confidence and Career Decision-Making
Self-Efficacy through the use of
Critical Assessments and Adlerian Concepts
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Abstract

A significant number of students enter college as ‘undecided’, and an even larger number of students change majors at least one time before graduation. This data demonstrates that college major selection has serious implications for all students, not only the undecided students. Even the ‘decided’ students are not always basing their college major decision on an understanding of their personality, goals and values. Additionally, young adults are now marrying later than ever before in history, postponing starting families until their mid- to late-twenties and spending more time in educational pursuits and job change and exploration during their late teens and early twenties, as they move between jobs to find work that is more personally fulfilling. This research represents an investigation into how to best help young adults between the ages of 18-21 bridge the “undecided” gap between high school and early college. Thorough research into the developmental needs of this age group will help me hone in on the best assessments to use to increase their self confidence and promote career decision-making self-efficacy in their college major and career decision-making process. Critical career assessments and application of Adlerian concepts can help students find a career that aligns with their personality, gain self- and other-awareness, develop greater social interest and find their value in the world.
Table of Contents

Abstract..............................................................................................................Error! Bookmark not defined.

Introduction......................................................................................................Error! Bookmark not defined.

Developmental Stage of Young Adults 18-21 ...................................................... 7
  Identity vs. Role Confusion.............................................................................. 7
  Emerging Adulthood...................................................................................... 10

Career Assessments .......................................................................................... 12
  Self-Directed Search®: Holland’s Theory of Person-Environment (RIASEC) ..... 12
  Strong Interest Inventory ............................................................................. 17
  Myers-Briggs Type Indicator® ..................................................................... 19
  Holland’s Self Directed Search®, Strong Interest Inventory® and Myers-Briggs Type
  Indicator® Combined .................................................................................. 22

Adlerian Concepts.............................................................................................. 24
  Belonging and Significance .......................................................................... 25
  Three Tasks of Life: Work, Community and Love ...................................... 26

Conclusion .......................................................................................................... 31

References.......................................................................................................... 34
Bridging the Undecided Gap: Guiding Students to Self-Confidence and Career Decision-Making Self-Efficacy through the use of Critical Assessments and Adlerian Concepts

A significant number of college students enter college without a clearly defined major. In 2010, 80% of freshman at Penn State, including those who had declared a major, reported being “uncertain about their major” (Simon, 2012) and half of the freshman class will change their major, some more than once. The undecided college student is not a new phenomenon, but there are several relatively new factors contributing to students’ indecision. More students are attending four-year institutions than in years past; the National Center for Education Statistics reports almost 500,000 more undergraduate degrees were conferred in 2012 than in 2002 (“Undergraduate Degree Fields,” April 2014). Colleges are now offering more major choices; 355 additional academic programs were added to the Department of Education in the decade from 2001 – 2010, totaling more than 1500 options (Simon, 2012).

In addition, young adults are marrying later than they did even 20 years ago, leaving more time for educational pursuits and job change and exploration. Arnett (2004) introduced the idea of a new stage of life, referred to as “emerging adulthood”, spanning the ages of 18-29. It has become a recognized new developmental stage in industrialized societies, acknowledging that it is taking longer for young adults of this generation to become self-sufficient and enter full time employment than the previous generation.

Delaying marriage and parenthood is a major contributing factor behind this shift; the median age of marriage in 1960 was 20 for women and 22 for men, compared with age 27 and 29 respectively today (Arnett & Fishel, 2013, p. 2). Economic changes account for part of this shift; jobs moved from manufacturing to information, technology, and services, which required
BRIDGING THE UNDECIDED GAP

more education and training, which then delayed marriage and parenthood. Arnett and Fishel (2013, p. 3) also credit societal attitudes, values and expectations as having a part in this shift. During the ‘60s and ‘70s, the Sexual Revolution and the Women’s Movement were instrumental in changing societal views on premarital sex, cohabitation and birth control, as well as broadening career, educational and athletic options for women and girls. Women became aware of life options other than wife, mother, nurse or secretary and with these expanded career options and sexual freedom, women became less dependent upon marriage and a husband for their financial support. The 1964 Civil Rights Act resulted in the creation of the Equal Employment Opportunity Commission; 1972’s Title IX mandated equal access to higher education and athletics, and Roe v. Wade legalized abortion in the United States in 1973 (PBS: Sisters of ’77, n.d.). During this time, married women were also granted rights to obtain a credit card in their own name. The National Organization of Women was formed in 1966 and brought women’s rights to the forefront, causing an explosion of local organizations and grassroots movements still in force today.

As women began to experience more reproductive and educational freedom, college enrollment numbers for women increased. In 1960, 37.9% of female high school graduates enrolled in college; by 1998, the number had increased to 69.1% (“College Enrollment Rates,” n.d.). Only 33% of young adults attended college in 1960, the majority of them were male. Today, the number of women entering college immediately after high school has risen to 71%. Female college enrollment is outpacing that of males; only 61% of males enter college immediately after completing high school (Lopez & Gonzalez-Barrera, 2014). Another factor behind the increase in age for first marriages is that the average college student now takes at least 6 years to complete a four-year degree. Overall, at flagship universities, only 36% of students are
completing their degrees within six years; reasons cited are increased unnecessary degree 
requirements and remedial courses, plus the increased financial burden, which leaves students 
with the choice of working more hours to pay for college or taking on additional student loan 
debt (Douglas-Gabriel, 2014). Additionally, today’s average worker stays at their job for 4.4 
years; however, millennials (those born between 1977-1997) expect to stay at a job less than 
three years, which would mean they will have between 15-20 jobs in their lifetime (Meister, 
2012). This fact alone emphasizes the critical need for young adults to make more informed and 
intentional college major selections.

Arnett and Fishel (2013) theorize that the youth movements of the 1960s were the main 
reason young adults put off their actual move to adulthood; adulthood here is defined as self-
supporting with a full-time job. The youth movements made the value of youth rise, and the 
value of adulthood decline. Youth implies freedom from the burden of adult responsibilities, as 
well as freedom from the stagnation that accompanies the stability offered by marriage, 
parenthood, home-ownership and full time employment. Today’s society offers more 
educational, career, and experiential choices to youth than at any other time in history. Another 
facet of Arnett and Fishel’s (2013) theory behind the delayed move to adulthood is that today’s 
youth are faced with too many post-secondary choices.

College major choice is also a factor in academic persistence, with undecided students 
ranking lower both in academic performance and persistence. Leppel (2001) established a 
connection between the impact of college major choice and the rate of persistence for college 
students moving from their first to second year of post-secondary education. Leppel (2001) 
found that undecided students had both low academic performance and low rates of persistence 
when compared with the students who had selected a major (p. 340).
Developmental Stage of Young Adults Age 18-21

Both cognitive processing and the emotional regulation of adolescents moving into young adulthood become more sophisticated during this developmental stage. Simpson (2008) notes that in young adulthood, the brain undergoes many changes, with full brain development not happening until the mid-20s. Simpson (2008) found the brain changes during young adulthood are mostly in the prefrontal cortex, the area associated with planning, problem solving and related tasks, and also:

At the same time, the prefrontal cortex communicates more fully and effectively with other parts of the brain, including those that are particularly associated with emotion and impulses, so that all areas of the brain can be better involved in planning and problem solving. (Simpson, 2008, para. 4)

There are psychosocial developmental changes happening in the brains of young adults as well. Two theories in particular, Erikson’s (1968) life-span theory of human development and Arnett’s (2004) theory of emerging adulthood, align with the post-secondary stage of young adulthood.

Identity vs. Role Confusion

According to Erikson’s (1968) life-span theory of human development, as individuals mature they move through eight distinct stages of psychosocial development, beginning in infancy and ending with old age. A positive psychosocial outcome at each of the stages is a necessary step in healthy psychological development. Erikson’s stages begin in infancy, defined as a time when infants learn to either trust or mistrust, with the expectation that their needs will be consistently, predictably and reliably met by their caregiver. An infant whose needs are not met in this way will develop anxiety, heightened insecurities and mistrust. The next stage,
autonomy vs. shame, takes place during the toddler years, where toddlers learn that they have their own will and emerge from this stage feeling proud rather than ashamed if their caregiver has encouraged and supported their efforts at independence. The next psychosocial stage, initiative vs. guilt, occurs during the later preschool years until a child’s entry into kindergarten and is the stage where children are encouraged to learn through cooperative play and initiating activities with others. The flip side of this stage is a child whose sense of initiative has been squelched, through criticism or control; the child is then fearful and hangs at the edges of a group, unwilling to join and remaining very dependent upon adults. Erikson’s fourth stage, industry vs. inferiority, occurs during grade school to the beginning of middle school. In this stage, a child who has grown up trusting, autonomous and full of initiative learns to follow rules, such as doing homework, and develops self discipline. The child who has learned to mistrust and is filled with guilt and shame will have doubts about the future and suffers from feelings of inferiority. The fifth stage, identity vs. role confusion (also referred to as identity diffusion), occurs from around 13 or 14 years of age until around the age of 20. Teenagers in this psychosocial stage learn to answer the question “Who am I?”, acquire self certainty, and experiment with different roles. Teenagers on the latter edge of this age spectrum are looking for someone to lead and inspire them as they are developing a set of ideals and figuring out the role they will occupy as adults. Teenagers struggling with role confusion tend to either adopt a negative identity and act out in rebellion or delinquency or become paralyzed by feelings of inferiority.

Young adults choosing a college, major, field of study or job align with the latter period of Erikson’s fifth stage of psychosocial development. Teenagers and young adults are struggling to commit to an identity at the same time they are required to choose a field of study or a career.
Gati and Saka’s (2001) study identified three main areas behind career decision-making difficulties of young adults in high school; the first of which may arise during the period of time before the career decision-making process begins. The category of difficulty in the pre-stage of career decision-making was defined as lack of readiness due to lack of motivation, indecisiveness or dysfunctional beliefs (p. 332). The second of the three areas of career-decision making difficulties was defined as lack of information about self, occupations, ways of obtaining information and the career decision-making process itself (p. 332). This study clearly supports Erikson’s theory of psychosocial developmental stages; students are trying hard to gain self-knowledge, a necessary part of the college major and career decision-making process.

Additionally, according to Shearer’s (2009) research, self-knowledge is more closely related to career planning than any of the other multiple intelligence scales, including those relating to academic success (p. 58). Students with low scores in intrapersonal intelligence tended to have flatter scores on all of the multiple intelligence scales when compared to students with greater self-knowledge. This leaves the students with less self-knowledge also without a distinct area of intellectual skill to help them to hone in on an area of career interest. Shearer (2009) notes, “The challenge in helping these students is to increase awareness of and appreciation for their unique strengths, regardless of their standing in comparison to others” (p. 58).

Another point of view regarding identity development has been advanced by Burrow, O’Dell, and Hill (Burrow et al., 2010). As young adults are navigating the chasm between high school and their next step, finding their purpose is a major contribution to their identity development. Burrow et al. (2010) found a close relationship between identity and purpose development among adolescents, adding to growing evidence that “for many youth, the
processes of exploring and committing to a purpose have important implications for identity development and their well-being” (p. 1272). Burrow et al. (2010) also found that “a principal benefit of identifying a purpose during adolescence may be its promotion of efficacious identities that help adolescents transition to adulthood in positive ways” (p. 1266). Identifying a purpose aids in the development of self, which increases self confidence and career decision-making self-efficacy as students prepare to move into the stage of career exploration and selection.

**Emerging Adulthood**

Arnett’s life stage descriptor, “emerging adulthood” (Arnett & Fishel, 2013, p. vi) encompasses the age from 18-29 years. Arnett and Fishel (pp. 9-11) identified five features that describe this new life stage: identity explorations, instability, self-focus, feeling in-between, and sense of possibilities. Arnett and Fishel (p. 9) define identity explorations much like Erikson. Emerging adults are exploring their identity options, asking themselves ‘Who am I?’, ‘What do I really want out of life?’, and ‘How do I fit into the world around me?’ Identity explorations involve trying out different possibilities in both love and work. It can be a time of great motivation or a time of great stress, as the trial and error process of life, loves and roles are explored. This time of exploration can look like aimless wandering; the term ‘failure to launch’ has been used to describe the young adult who has ‘failed’ to leave the parental home and become self-supporting.

The instability that young adults experience during emerging adulthood is evident as emerging adults change their college major, jobs, living arrangements and partners. Instability is an essential part of emerging adulthood, as young adults try different roles and identities and discard those that don’t fit. They discover what jobs and academic subjects interest them and just as important, what kind of work is not interesting to them. Emerging adulthood is also a time of
intense self-focus, which can be misinterpreted as selfishness by outsiders. Young adults have fewer outside obligations and responsibilities at this time, which allows them the space to be self-focused, a necessary and critical component of emerging adulthood as they figure out how and where to get education and training for their future full-time employment.

Emerging adults experience ‘feeling in-between’ as they transition from teenager to adult. They are stuck in the space of feeling not quite a teen, not quite an adult, with ambivalent feelings about the stability of the end goal; full-time career, partnership, children and adult responsibilities. The final feature of emerging adulthood described by Arnett and Fishel (2013) is a sense of possibilities. Through the haze of identity exploration, transition and ambivalence about taking on adult responsibilities, 90% of emerging adults remain hopefully optimistic about their future, agreeing that “I am confident that eventually I will get what I want out of life”, and that “I will find my soul mate” (Arnett & Fishel, 2013, p 11).

Arnett and Fishel (2013) further define three stages of emerging adulthood: launching (age 18-22), exploring (age 22-26), and landing (age 26-29). Students leaving high school are launching into their first experience of a life of their own choosing. Exploration is a necessary part of this launching process, as students are trying on new identities in their academic, personal and work lives. Instrumental in this stage of emerging adulthood is the development of autonomy which involves casting off parental ideals, separating from their parents and forming their own identities.

Young adults in the exploration stage have learned important lessons about decision-making and have become more autonomous; some may be financially independent. Young adults are now searching for their ‘soul mate’ and are trying out various job roles. Many work in careers unrelated to their college major; a recent survey showed 47% of college graduates did not
find a first job related to their major and 1/3 of college educated workers “wished they had picked a different major” (O’Shaughnessy, 2013). Other students are choosing to return to school once they have a clearer picture of the field that interests them most. The final stage of emerging adulthood is the landing stage; emerging adults have found their life partner and have settled upon a career, ready to make major life decisions and take on adult responsibilities. Arnett and Fishel (2013) note that the age spans of these three stages are an approximation; there is a wide variation in the timing of each phase. Some emerging adults move through each stage quickly, some move right from launching to landing, because of the certainty of their career decisions or partner.

**Career Assessments**

As young adults in the 18-21 age group are leaving high school, exploring their identities and launching into their adult lives, critical career assessments can be an extremely useful tool in helping students decide whether to attend college or technical school, or guide their college major or career path selection. The Self Directed Search® (Holland, 1990), Strong Interest Inventory® (Strong, Donnay, Morris, Schaubhut, & Thompson, 2004), and the Myers- Briggs Type Indicator® (Briggs-Myers & Briggs, 1985) are widely used in career counseling and can be particularly useful to undecided college students or students who are re-deciding on a major. All three assessments can be instrumental in helping students answer the “Who am I?”, ‘What do I really want out of life?’ and ‘How do I fit into the world around me?’ questions of identity exploration.

**Self-Directed Search®: Holland’s Theory of Person-Environment (RIASEC)**

Vocational psychologist John Holland spent over a decade developing, testing and revising a typology of vocational personalities and work environments. Holland was an Army
classification interviewer during World War II and “noticed that during interviews his pen was
checking off answers ahead of the interviewee, and when he wondered why, he was led to the
concept of types” (Figler & Bolles, 2007, p. 60). This research became the template for the Self
Directed Search®, designed so that individuals could assume direction of their own career
exploration. Holland (1974) designed the instrument to be “vocational guidance for everyone”
(p. 9). The Self Directed Search® instrument first appeared in 1971 and is designed as a self-
assessment to help individuals assess their “preferences, activities, competencies and self-
estimates” (Gottfredson & Johnstun, 2009, p. 100). Holland’s theory links personality with
sociological environmental factors (i.e., characteristics of academic environments), creating a
theoretical framework of person-environment fit that helps to clarify students’ choice of
academic major, and their socialization and success during college (Pike, 2006). In further
support of the benefit of helping a young adult find their person-environment fit, Pike (2006)
found that “vocational environments represent potentially powerful agents of socialization that
can independently contribute to the development of individuals’ attitudes and values” (p. 817).

The basic premise of Holland’s theory of person-environment (Holland, 1966, 1985) is
that human behavior results from the interaction between individuals and their environments.
Work and other environments differ and can be categorized as a typology of environments;
environment here refers to specific occupations, jobs, colleges, college majors, clubs or other
places. Differences among individuals can be categorized as a typology of persons; individuals
are better suited to some environments than others. Holland (1985) believed that an individual’s
interests and approach to life determine personality and theorized there are six categories of
personality types. Holland’s (1985) research showed a high degree of congruence, or fit, between
the work environment and the individual resulting in higher satisfaction, stability, performance
and lower stress among workers. Alternatively, a low degree of congruence between the individual and their work environment resulted in higher stress, and lower satisfaction, stability and performance (Holland, 1985). Schneider (as cited in Thomas, Buboltz, & Winkelspecht, 2004) found that “If the position fits for both the individuals and the organizations, they will become/remain a part of the company, while if the position does not fit the person will leave” (p. 207).

Holland’s model of personality-environment fit describes six personality types and congruent environments that align with academic disciplines: Realistic, Investigative, Artistic, Social, Enterprising and Conventional; collectively also known as the RIASEC model. Holland proposed a hexagonal model structure with similarity among types reflecting proximity within the hexagon. Each of the six personality types can be described thusly: Realistic types prefer practical, hands-on activities that involve working with animals or manipulating tools or machinery. They tend to dislike Social or educational activities, such as informing, teaching or healing others. Academic disciplines associated with Realistic environments are electrical or mechanical engineering, military science and carpentry. Investigative types prefer exploration, analyzing, solving problems and predicting. They tend to avoid Enterprising situations involving leading, persuading or selling. Associated Investigative disciplines are biology, mathematics, business statistics, management information systems and civil engineering. Artistic types prefer artistic, musical or literary activities. They prefer to avoid Conventional activities such as highly ordered or repetitive activities, adherence to rules or conforming. Artistic environments involve creative activities in unstructured settings, such as art, English, theater, architecture or music. Social types prefer to teach or help others through personal interaction. They tend to avoid Realistic activities involving mechanical or technical tasks to achieve a goal. The academic
disciplines associated with a Social environment are philosophy, special education, teaching, social work and psychology. Enterprising types prefer to lead, influence, manage, or persuade others for organizational goals or economic gain, where self-confidence and aggressiveness are rewarded. They tend to avoid Investigative activities that involve careful observation and scientific, analytical thinking. Enterprising academic disciplines include computer science, business and journalism. Conventional types prefer to organize and manipulate data or work with numbers, records or machines in an orderly way and carry out tasks in detail. They tend to avoid Artistic tasks that are ambiguous or unstructured activities. Conventional academic disciplines include accounting, clerical work and data processing.

Holland (1985) theorized that an environment rewards the competencies and encourages the values of the environmental model it most resembles. Therefore, an environment will be most attractive to congruent personality types; e.g., an individual with a Conventional personality will feel most at home working in a Conventional environment.

Additionally, Holland’s RIASEC themes are generally presented in a circumplex hexagonal shape, with their order following the RIASEC acronym. Themes adjacent to each other on the hexagon (i.e., Realistic and Investigative) are more related than categories that lie further apart, and categories lying in opposite positions on the axes are negatively related. For instance, an individual exhibiting strong interest in an Artistic personality and environment would show very little interest in the Conventional theme or environment, but may show interest in the Social or Investigative theme or environment. Individuals with a Realistic personality would prefer to work with things and would not generally be interested in the Social theme or in working with people.
Tracey’s (2008) study followed 283 college students enrolled in a career development course with curriculum that included the circumplex RIASEC model and found that as students become more familiar with the RIASEC model, they begin making more effective career choices. Tracey (2008) tested students on their circumplex adherence, career decision-making self-efficacy, career certainty and interest-occupation congruence before and after completing the career development course and found “direct instruction of RIASEC content and structure in the career course was related to changes in circumplex adherence” (p.154). Additionally, a positive correlation was found between adherence to the circumplex RIASEC model and students’ career decision-making self-efficacy, career certainty, and interest-occupation congruence and a negative correlation between adherence and career indecision. Tracey’s (2008) interpretation was that adherence to the circumplex RIASEC model in thinking about careers was related to students choosing careers that more closely matched their interests.

Porter and Umbac’s (2006) study advances the notion that “personality, as represented by the Holland categories, was extremely predictive of student major choice” (p. 445), and their research supports a “growing body of evidence that students in particular majors have very similar political views and personalities” (p. 445). For instance, students with high Investigative scores are less likely to choose a non-science major, while students scoring high on the Artistic scale are more likely to choose an artistic or interdisciplinary major. Porter and Umbac (2006) further recommend that all college personnel responsible for “guiding students through the college experience should seek to understand individual students’ personality, values, and beliefs as they advise them on their academic major” (p. 445).
Strong Interest Inventory

The Strong Interest Inventory® measures career and leisure interests, not aptitudes nor abilities. Originally published in 1927 by E.K. Strong, Jr., the since re-named Strong Interest Inventory® was aimed at assisting servicemen returning from WWI find suitable employment. It has been revised numerous times since 1927, and is one of the most widely used instruments to aid individuals in educational and occupational decision-making. The most recent revision of the Strong Interest Inventory® (Donnay et al., 2005) has been updated to reflect current occupations and a more racially diverse representative sample. It consists of 291 questions, measuring interest in four main categories: General Occupational Themes, Basic Interest Scales, Occupational Scales and Personal Style Scales. Individual results provide assessment takers with their 2- or 3-letter Holland code as a means to show related interest between job categories, interest clusters or work personality environments. Like the Myers-Briggs Type Indicator®, the Strong Interest Inventory® assessment results are shared with participants during an interpretation session, which is facilitated by a professional who holds the proper educational credentials.

The General Occupational Themes measure an individual’s overall interest orientation, such as work and leisure activities, self-concept and value, environments and potential competencies. The General Occupational Themes have their root in Holland’s person-environment theory (specifically the six person-environment RIASEC categories). The main purpose of the 30 Basic Interest Scales is to further support the information provided by the General Occupational Themes and the Occupational Scales, reporting consistency of interest or disinterest in specific areas, such as art, athletics or science. For example the Investigative
General Occupational Theme includes Basic Interest Scales for science, research and mathematics.

The Occupational Scales provide the most precise information related to occupational interests, measuring the extent to which an individual’s interest aligns with the interests of people of the same gender working in 130 diverse occupations, such as accountant, career counselor, speech pathologist or engineer. The Personal Style Scales help define preference in work style, learning environment, leadership style, risk taking and team orientation. In addition to the four categories described here, the Strong Interest Inventory® also includes an administrative typicality index to aid in identifying inconsistent or unusual profiles for special attention in the interpretation process.

Case and Blackwell’s (2008) review of the most recent version of the Strong Interest Inventory® found that “the Strong continues to set the standard for vocational interest inventories. It has proven reliability and validity properties” (pp. 125-126).

Further research by Rottinghaus, Gaffey, Borgen and Ralston (2006) supports the value of the General Occupational Theme and Basic Interest Scale categories on the Strong Interest Inventory®. Recognizing that psychology, like the field of medicine, is a field representing a variety of career pathways, their study concentrated on 254 psychology students nearing graduation, organized by career intention or occupational goals, i.e. psychological research, law or psychotherapy (Rottinghaus et al., 2006). The students all completed the Strong Interest Inventory®, along with an assessment measuring their career intention. The results of their study showed that psychology students in each intention group showed a mean Holland code (or three letter General Occupational Theme), which varied between intention groups, e.g., psychological research (Investigative/Social/Artistic), psychological practice (Social/Artistic/Enterprising),
education (Social/Artistic/Enterprising), business (Enterprising/Social/Conventional), law (Artistic/Enterprising/Conventional), medicine (Social/Investigative/Artistic) and military/law enforcement (Realistic/Social/Enterprising). For the Investigative General Occupational Theme, the psychological research group scored significantly higher than the education and business groups. This study offers further evidence that the Strong Interest Inventory® can be a useful tool in guiding college major selection and further honing career choice with a student who shows certainty on a major field of interest but lacks clarity on their path within the major.

**Myers-Briggs Type Indicator®**

The Myers-Briggs Type Indicator® is another beneficial assessment to use when working with young adults, since a key component of the career counseling process involves self-understanding. The Myers-Briggs Type Indicator® assessment is a psychometric questionnaire designed to measure psychological preferences regarding perception and decision-making, based on Jung’s (1923) theory of psychological types. Jung’s (1923) theory is based on the idea that individuals have a psychological preference for performing certain tasks, much like a physical preference for hand or eye dominance. The Myers-Briggs Type Indicator® instrument was developed during World War II by Katharine Briggs and her daughter, Isabel Briggs Myers, as a way to help guide women who were entering the industrial workforce for the first time identify the war-time jobs in which they would feel most comfortable and effective. According to Jung’s (1923) theory of psychological types, people can be characterized by their preference for general attitude; extraverted (E) or introverted (I), their preference for a function of perception; sensing (S) or intuition (N), and their preference for a function of judging; thinking (T) or feeling (F). Jung (1923) also proposed that in an individual, one of the four functions (sensing, intuition, thinking, or feeling) is dominant, either a function of perception or a function of judging. Isabel
Briggs Myers proposed the fourth dichotomous function pair influencing personality type as judging (J) or perceiving (P); exhibited through an individual’s preferred orientation with the world. Though individuals use all eight preferences, generally one type from each of the dichotomous pairs is intrinsically preferred over the other. The Myers-Briggs Type Indicator® instrument identifies an individual’s four basic preferences from among each of the four dichotomies specified in Jung’s (1923) theory, as well as provide descriptions of all of the 16 different personality types that result from the interactions between the four dichotomous preference pairs. The Extraversion vs. Introversion dichotomy refers to how an individual gets their energy and motivation. The energy of extraverts is outwardly directed, towards people, activity and things; they get their motivation from others and enjoy working with other people. Conversely, the energy of introverts is inwardly directed, towards concepts and ideas; they need little external stimulation and may prefer to work alone. The dichotomous pair of Sensing vs. Intuition refers to how an individual attends to and makes meaning from information. Sensing individuals trust immediate data that comes to them from the use of their five senses, as well as information from direct experience, usually limiting their attention to facts and solid data. Their focus is on what is immediate, practical and real. Individuals with a preference for intuition tend to process data more deeply and will trust their intuition or ‘sixth sense’. They like ideas and inspiration and are good at spotting patterns, with a tendency to focus on the future possibilities. The Thinking vs. Feeling preference refers to how individuals make decisions from the information they have taken in. Thinking individuals make decisions based primarily on logic, exhibiting a tendency to see the world as black and white and be more task-oriented. Feeling individuals decide based primarily on social considerations, listening to their heart and considering the feelings of others. They tend to value harmony and are tactful in their
communication with others; they are usually social and people-oriented. The fourth dichotomous pair of Judging vs. Perceiving refers to an individual’s way of orienting themselves to the world. Judging individuals approach life in a structured way, with a tendency to create plans and organize their life in order to meet goals in a predictable way. They are self-disciplined and decisive and are specific when asking for things. Individuals with a preference for perceiving find structure to be limiting and prefer to keep their options open, to adjust for any changes that may present. Perceivers tend to be curious, flexible, adaptable and tolerant of others’ differences.

Myers (as cited in Kennedy & Kennedy, 2004) noted that the Myers-Briggs Type Indicator® can help young adults “better understand themselves; their motivations, natural strengths and potential for growth” (p. 39). Hirsh (as cited in Kennedy & Kennedy, 2004) offered an opinion supporting the Myers-Briggs Type Indicator’s® impact on both self- and other-awareness; “knowledge of psychological preferences enables individuals to look at themselves in relation to others, to their work and their overall environment” (p. 39). Knowledge obtained from the Myers-Briggs Type Indicator® instrument empowers individuals with an awareness of what energizes them, how they take in information and make decisions about it and how they prefer to organize and orient themselves to the world.

The Myers-Briggs Type Indicator® also offers the insight of strengthening interpersonal relationships, by providing an objective view of how each type deals with the stress of emotionally charged situations and how each type works to meet objectives. Knowledge of one’s type and the characteristics and traits of the 15 other preferences can lead to a greater understanding and acceptance of differences. Kummerow and Maguire (2010), note that “in an atmosphere of encouragement and mutual respect, psychological type will also lead to appreciating the contributions of others so that all can make constructive use of any personality
differences” (p. 192). The non-preferred preferences of psychological type are suggested areas of individual development. This personal insight also translates to a greater understanding of what type of work would be most satisfying, even within a specific field of study. For example, an individual with a Myers-Briggs Type Indicator® preference for introversion who is interested in the field of medicine may find more personal fulfillment performing research and writing an article on their findings than interacting directly with patients or delivering a presentation on their findings to a large group at a medical conference. A key part of the theory behind the Myers-Briggs Type Indicator® is that an individual will be energized and feel most comfortable while utilizing their preferred preferences, though during the interpretation process there is also emphasis that every individual has the ability to develop their non-preferred preferences. Miller (1988) cites data from the Myers-Briggs Type Indicator® table that shows careers attract all 16 types; however, the data also show that certain types gravitate more towards work environment demands that more closely match the personality preference. For instance, “science is particularly interesting to introverts with thinking and intuition; engineering to thinking types; the arts and humanities to intuitives, particularly to NF [intuitive feeling] types, production management to tough-minded and practical sensing [S] types” (Miller, 1988, p. 52).

**Holland’s Self Directed Search®, Strong Interest Inventory® and Myers-Briggs Type Indicator® Combined**

The use of the Myers-Briggs Type Indicator® and the Self Directed Search®, or the Myers-Briggs Type Indicator® and the Strong Interest Inventory® can complement each other in career counseling. Holland’s typology, found in both the Self Directed Search® and the Strong Interest Inventory®, is useful in identifying specific careers to consider, while the overlay of the Myers-Briggs Type Indicator® preferences can help individuals understand more fully why
specific careers are appealing with regard to their personality and lifestyle and help them find the more granular area of interest within a broader career category. For instance, an individual showing great interest in Social, Artistic and Investigative (SAI) themes who is also an Introverted, Intuitive, Feeling, Perceiver (INFP) may be more interested in working in a setting where they would mainly facilitate one-on-one interaction with others in a helping field than an Extraverted individual, who may show interest in Social, Artistic and Enterprising (SAE) interests, yet have the same personality preference for Intuition, Feeling and Perceiving (ENFP). The Extravert may feel more comfortable in a teaching or training role within a helping field, finding a better fit in an environment where they are able to help others by leading or persuading.

Research associating Holland’s theory of person-environment fit, which has been incorporated into both the Self Directed Search® and the Strong Interest Inventory®, with Jung’s (1923) typologies (incorporated into the Myers-Briggs Type Indicator®) has demonstrated a strong correlation. Nordvik (1996) drew a parallel between the dichotomous preferences of Extraversion-Introversion, Sensing-Intuition, and Thinking-Feeling, as measured by the Myers-Briggs Type Indicator®, and Holland’s Enterprising-Investigative, Conventional-Artistic, and Realistic-Social categories, respectively. Nordvik (1996) discovered in his studies that Holland’s concept of Conventional or Artistic correlated to Jung’s Sensing, i.e., attention to facts and what is given, or Intuition, i.e., attention to implications and possibilities. The dichotomous pair of Thinking or Feeling relates to Holland’s Realistic, i.e., hands-on manipulation of things, versus Social, i.e. helping and relating to people. The Holland codes of Enterprising and Investigative are associated with Extraversion, i.e., focusing on external activity of the outer world, or Introversion, focusing on the inner world of ideas (p. 272).
Nordvik’s (1996) findings supported earlier research by Dillon and Weissman (1987), which also found a high correlation when examining the relationship between Jungian types, as measured by the Myers-Briggs Type Indicator®, and Holland’s personality types, as measured by the Strong-Campbell Interest Inventory®, an earlier version of the Strong Interest Inventory®. The findings were similar to Nordvik’s (1996) across the dichotomous Myers-Briggs Type Indicator® pairs and the bipolar hexagonal Holland themes.

Furthermore, Chauvin, Miller, Godfrey and Thomas (2010) found a “high degree of similarity between a MBTI® [Myers-Briggs Type Indicator®] code of ENFP [Extravert/Intuitive/Feeling/Perceiving] and a SDS [Self Directed Search®] code of SIA [Social/Investigative/Artistic]” (p. 61), during a case study with a 22-year old African American female student. Chauvin et al. (2010) promoted the complementary use of the Myers-Briggs Type Indicator® with either the Self Directed Search® or the Strong Interest Inventory® thusly:

As career clients begin to understand why certain occupations are more appealing to them, they become increasingly motivated to begin the task of gathering relevant formal and informal pieces of occupational information. Clearly both typologies can be used together to mutually enhance each other’s interpretation and usefulness. (p. 64)

Miller (1992) gave credence to the benefit of using both the Strong Interest Inventory® for careers of specific interest and the Myers-Briggs Type Indicator® for self-understanding in career counseling, mentioning it helped move clients into an “appropriate introspective mode” (p. 57).

**Adlerian Concepts**

Adler’s theory of individual psychology is holistic and focuses on the goals and purposes of individual behavior, the interconnectedness of all living things and their natural proclivity
towards cooperation. Adler “envisioned human beings as capable of profound cooperation in living together and striving for self-improvement, self-fulfillment and contribution to the common welfare” (Stein & Edwards, 1998). The main concept of Adlerian theory is Gemeinschaftsgefühl, loosely translated from German to mean social interest, or community feeling (Ansbacher & Ansbacher, 1956, p. 134). The measure of an individual’s psychological health is directly correlated to their measure of social interest, as defined by an individual’s empathy for others, their resiliency, other-connectedness and their holistic interconnectedness with humanity. Adler saw this sense of connectedness reaching beyond friends, family, and community to include plants, animals and the entire cosmos. This sense of connectedness is essential for all individuals to thrive, from infancy onward. Adler believed that each individual is faced with the question of whether their contribution to society, by way of their behavior, was ‘useful’ or ‘useless’. Individuals operating on the useful side of life cooperate with society, and advance themselves and society towards an improved adaptation. Individuals operating on the useless side of life function in ways antithetical to society’s well being, constantly trying to exploit society for their own prestige or gain.

Belonging and Significance

Adlerian individual psychology is based on the theory that each individual throughout life has one basic desire or goal: to belong and feel significant. Personality develops as children begin to attribute meaning to their experiences. Beginning in infancy, children become aware of felt insufficiencies in the face of normal tasks, when comparing themselves against older children and/or their parents. Adler named these felt insufficiencies ‘inferiority feelings’, a normal reaction to not being able to function in the way one thinks one should. Adler’s term for this is a ‘minus situation’. Every individual has inferiority feelings, thus every individual is
perpetually striving to move from a ‘minus situation’ to a ‘plus situation’. To Adler, life is persistent striving towards something more: to develop, to achieve, and to compensate for inferiority feelings. Adler believed that all individuals are striving towards a ‘fictional final goal’, that is neither guided by nor rooted in reality, but instead is what the individual believes to be true; an imagined ideal situation of achievement, superiority or overcoming. In an individual with strong social interest, this striving towards a fictional final goal will be continuous life movement towards optimal development, with the rational realization that full development is not possible, much like Maslow’s theory of self-actualization (Maslow, 1970).

Three Tasks of Life: Work, Community and Love

Dealing with inferiority feeling and moving towards a final goal involves individual success in the three tasks of life: Work, community and love. Erikson’s theory of developmental life stages aligns with Adler’s theory that with proper support and encouragement, children and young adults are able to develop the courage to be imperfect, grow, and contribute to society. Without proper encouragement and support, feelings of inferiority are heightened and children and young adults become discouraged. Instead of courageously developing themselves, they may adopt a fictional final goal to compensate for their inferiority feelings. They strive for a final goal of imagined superiority, and as such, never have to pass any real tests of themselves. Individuals who move forward on the useful side of life, striving for greater social interest and allowing themselves the courage to be imperfect, have self-confidence and as such, are able to see other options when they encounter an obstacle in their path to their goal. For discouraged individuals living on the useless side of life, they are unable to see options. Adler’s term for this is ‘style of life’, referring to the way in which individuals either approach or avoid the three main tasks of life and try to realize their fictional final goal.
Adler considered the first five years of life a critical time in development. During those years, adults “will win children’s cooperation, helping them to develop a sense of significance through contributing to others, minimizing their inferiority feelings, stimulating their courage, guiding them to be active, and helping them feel a part of the whole” (Stein & Edwards, 1998, para. 24). This guidance in the formative years is essential for children’s development in order for them to become cooperative, productive, satisfied adults. They will use their feelings of inferiority as a way to spur further growth and develop greater social interest.

Adler’s belief that all individuals share the same basic goal, the need to belong, is supported by Holland’s person-environment theory; that people feel most satisfied and fulfilled when working in an environment congruent with their personality and with people who have similar personalities. Guiding young adults’ career choice through the use of the Self Directed Search® or the Strong Interest Inventory® can help them feel more confident about exploring their own interests, and help them to select a work environment in which they can feel a sense of belonging. Further information offered by Amundson et al., (2010) suggests that “a sense of belonging is integral to decisions to join or remain in a particular workplace” and that “deciders navigated career decisions through the feeling of belongingness and inclusion in a social network” (p. 346). Career deciders in Amundson’s (2010) study also “highlighted the negative emotions and decisional difficulties associated with a lack of a sense of belonging” (p. 346). Holland’s person-environment fit theory, as well as Jungian typology, is based on the idea that individuals feel the greatest sense of belonging when working with people with similar personality types and congruent work environments.

The benefits of the Self-Directed Search®, the Strong Interest Inventory® and the Myers-Briggs Type Indicator® extend beyond career choice for students and young adults; these
instruments also offer guidance regarding campus or extracurricular clubs or activities that young adults may find to be congruent with their interests. For example, an engineering student with an Investigative Holland code would have a higher probability of being Introverted, as measured by the Myers-Briggs Type Indicator®. A student with these interests may find it more difficult to meet others and feel ‘significance and belonging’, but joining a robotics club or team would immerse the student in an environment congruent with their interests and they would be surrounded by students with interests and personalities similar to their own. Further supporting the idea of the person-environment correlation with the Adlerian concept of significance and belonging, Astin’s (1999) theory of student involvement presents an input - perceived environment - outcome correlation as a predictor of student retention. Astin (1999) posits that “the greater the student’s involvement in college, the greater will be the amount of learning and personal development” (pp. 528-529), and the more likely they are to continue their education.

Astin’s (1999) theory of student involvement is rooted in his earlier longitudinal study of college dropouts (Astin, 1975). Astin’s (1975) earlier study found enhanced rates of retention for students who lived on campus or participated in extracurricular activities, such as fraternities, sororities, clubs, intercollegiate athletics, or part-time work on campus. Living on campus increases students’ rate of academic persistence substantially, as does frequent faculty interaction. Astin (1999) cites “the concept of involvement as a critical element in the learning process” (p. 526), noting that time-on-task and effort are key determinants of cognitive learning outcomes. Astin (1999) recommended that colleges pay more attention to the passive, unprepared or reticent students, all qualities that may denote lack of involvement. The results of his study strengthened the concept that instructors should pay more attention to student motivation and outcomes, and focus less on teaching techniques and processes. When students
form relationships with fellow students and faculty and become involved on campus, their sense of belonging and significance increases, which increases their other-directedness, or social interest.

As young adults are making the choice to enter post-secondary education, or choose a college major or career path, they are in the process of striving to operate on the useful side of life and develop greater social interest. The study by Burrow et al., (2010) on adolescents and purpose found that “clusters of youth characterized by higher levels of purpose commitment reported greater identity commitment, hope and positive affect” and that “for many youth, the processes of exploring and committing to a purpose have important implications for identity development and their well being” (p. 1272). Purpose and social interest are inextricably linked. Young adults need to develop a sense of purpose in their crucial process of identity development, in order to avoid living on the useless side of life. Assessments such as the Myers-Briggs Type Indicator®, Strong Interest Inventory® and the Self Directed Search® can help guide young adults to greater self-awareness and social interest, helping them recognize their strengths and interests, in which passion and purpose take root.

As young adults’ awareness of their own and others’ personality preferences grows, so does their acceptance of individual differences. Ferguson (as cited in Kummerow & Maguire, 2010) discussed the benefits of understanding individual differences, citing enhanced teamwork and increased social interest: “Group processes that involve cooperation, trust, respect for the individual, equality of worth, and that foster shared decision-making and sharing of consequences are the kind of processes that most likely will stimulate the growth of social interest” (p. 193).
Of the three Adlerian life tasks of community, love and work, work “is said to be the most important for the maintenance of life and non-fulfillment of its almost imperial existence” (Dreikurs, 1950, p. 91). Dik et al. (1999) found that the work orientation of those who report a calling orientation is influential on an individual’s social interest. A calling orientation refers to working for the sense of meaning or purpose that the work provides rather than for financial gain or advancement. Wrzesniewski et al. (1997) found that workers with a calling orientation report higher work and life satisfaction than those with a job or career orientation, whereby satisfaction comes from pay or advancement and whose life satisfaction is related to hobbies and pastimes outside the domain of work.

To best help young adults with their Adlerian mission of continuing their social interest development and striving to live on the useful side of life, career assessments, as well as encouragement from parents, peers, career counselors, school faculty and personnel can aid the students with their self confidence, and give them the courage to be imperfect with regard to their career exploration. Dik et al. (2009) advanced the idea that “research demonstrates ‘other-oriented’ motives predict a range of well-being variables for employees”, further noting:

Counselors are advised to explore person-environment fit broadly, incorporating both personal and social aspects of fit, with the goal of helping clients pursue work that promotes personal fulfillment and optimizes their potential while simultaneously addressing (directly or indirectly) salient social needs. (p. 629)

The overlay of the Myers-Briggs Type Indicator can help young adults realize the ‘why’ behind what makes work important to them or their attraction to a field. An individual with a preference for Intuition and Feeling may feel a sense of satisfaction from helping others grow and develop, such as a career in the counseling field, while an individual with a preference for
Sensing and Judging may feel a sense of personal fulfillment from helping make sure that societal rules and regulations are followed, such as a career in law enforcement (Tieger & Barron-Tieger, 2001).

**Conclusion**

Young adults involved in the serious task of figuring out their identity and subsequent career path can be helped substantially through the use of critical career assessments. The career assessments addressed in this research are widely used and have been tested repeatedly, with demonstrated validity and test re-test reliability (Case & Blackwell, 2008; O’Connell & Sedlacek, 1971; Capraro & Capraro, 2002). The combined use of either the Self Directed Search® or the Strong Interest Inventory®, along with the Myers-Briggs Type Indicator® helps to give young adults the ‘why’ behind their attraction to a certain career path. For undecided or re-deciding students, the vocational assessments can help direct them towards a field of study, and the personality assessment can help direct them towards an area within their field within an environment that would most closely align with their personality preferences and contribute to their sense of Adlerian significance and belonging.

The use of the Self Directed Search® or the Strong Interest Inventory® gives young adults background knowledge of Holland’s (1985) RIASEC personality and environment types. Tracey’s (2008) research showed that knowledge of the RIASEC circumplex model increased adherence to the RIASEC, and also increased students’ career decision-making self-efficacy as they were able to focus more on career selections that more closely matched their interests and personality. Isik (2013) studied two groups of students that had taken an interest inventory; one group received feedback during two interpretation sessions and a control group received no
feedback. The results showed that “the feedback given after the completion of an interest inventory was effective in increasing undergraduate student self-efficacy” (p. 1439).

The Myers-Briggs Type Indicator provides young adults with information to better understand themselves, with its focus on individual strengths and motivations. This empowering self-understanding can increase students’ self-confidence regarding the natural strengths they can use in their career exploration. For example, an individual with a preference for introverted intuition and perceiving will have a natural strength for undertaking career-related research but may struggle with completing tasks on their career to-do list or making a final career decision, while an extravert with a preference for sensing and judging will have a natural strength for gathering facts and information through networking, and find satisfaction from checking off tasks on a career to-do list and have more certainty on a final decision. Conversely, both preferences gain the awareness that in order to increase their self-efficacy, they need to challenge themselves by developing their non-preferred preference. So, an intuitive, perceiving introvert can focus on gaining networking skills and creating tangible check-off items on a career task list, while a sensing, judging extravert may need to schedule time on their calendar for researching careers in order to open up the possibilities available to them.

Furthermore, the combination of career assessments and the subsequent interpretation in the career counseling process helps young adults with their self-concept development, and helps them with identifying their passion or calling orientation to their work life. Dik et al. (1999) found that a calling orientation is influential on an individual’s social interest, creating greater interconnectedness with society. The benefit of helping a young adult find their passion through the use of the career assessments is the enhancement of their self-awareness and self-concept. Empowered by these strengths-based assessments, their interest in career exploration and the
world of work is piqued. Increased knowledge and exposure to the world of work further increases young adults’ self-confidence, which then drives their career decision-making self-efficacy. The greater a young adults’ self-confidence and career decision-making self-efficacy, the greater their interconnection with society through the work life task, exhibiting a high degree of social interest.
References


