A young man with short dark hair, wearing a black jacket over a green shirt and a brown backpack, is sitting at a desk. He is looking down at a book or document, with his hands resting on it. He has white earbuds in his ears. The background is a blurred library or study area with bookshelves and lights.

HOLLAND THEORY & THE KUDER SYSTEM

By Ryan McGrew

Executive Summary

The Kuder Career Planning System® (KCPS) enables students to prepare for the world of work in many different capacities. They are able to access information concerning postsecondary preparation, training programs, workforce trends, and occupational descriptions. To fully maximize the utility of this information, it is essential for students to understand themselves. The KCPS includes Kuder Galaxy® (Galaxy) for elementary or primary students, Kuder Navigator® (Navigator) for secondary students, and Kuder Journey® (Journey) for postsecondary students and adults.

The evidence-based assessments at the core of the KCPS (Navigator and Journey) allow students to do so by discovering personal interests, skills, and work values, and allowing them to find alignment and direction when establishing a plan for their professional futures.

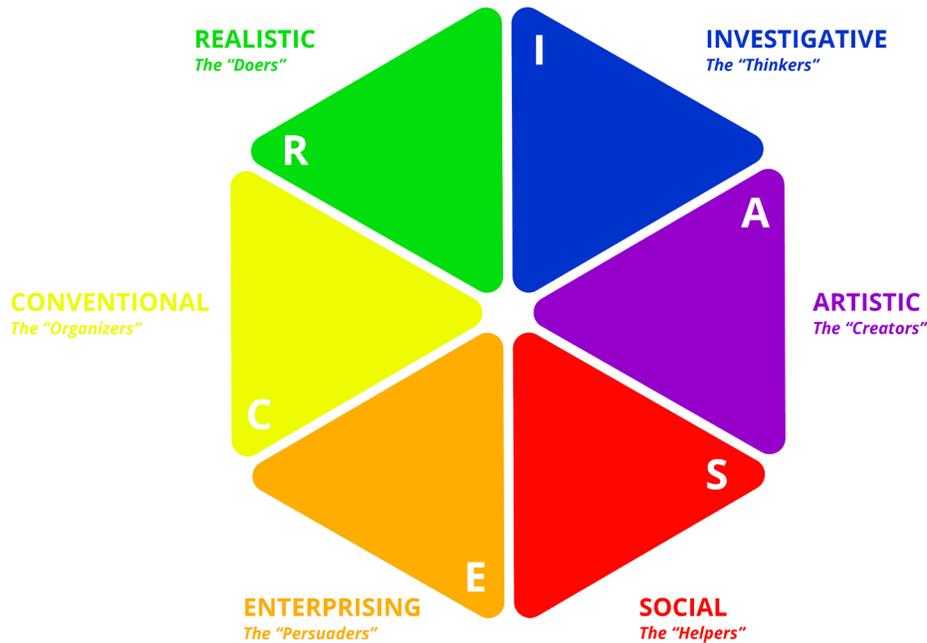
The foundation of interest-based assessments dates back to work by Dr. Frederic Kuder published in 1938. Dr. John Holland later refined and contributed to this work in the development of his own theory of vocational interests. Indeed, Holland relied heavily on Kuder-based assessments as he describes in his (unpublished) autobiography, “My staff and I performed simple cluster analyses of the Kuder profiles . . . we were pleased when

we discovered that these preliminary classifications looked plausible.”

Holland’s principle theory is described in his article, “A Theory of Vocational Choice” (1959). Nauta writes, “The theory’s core idea is that most people resemble a combination of six personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (commonly abbreviated with the acronym RIASEC). Each type is characterized by a constellation of interests, preferred activities, beliefs, abilities, values, and characteristics” (2009).

Through assessment, individuals can find which personality type(s) most accurately describe them. These descriptions, or Holland codes, can then be aligned to various work environments incorporating the key components of the personality types that constitute an individual’s code.

In Galaxy, students gain career awareness, not through formal assessment, but by exploring six planets each aligned to a Holland work environment. Galaxy includes the six planets at each of the seven grade levels (42 total planet experiences) to progress students through developmentally-appropriate content including videos, games, and activities.



Holland Hexagon

Holland Personality Types

Holland personality types, as they relate to one another, can be visualized as sections of a hexagon. The structure or “calculus” of personality types is represented using proximity, where adjacency indicates the greatest level of similarity.

Those scoring across personality types that are adjacent on the hexagon are said to show “consistency,” where tasks/ideas/beliefs are interrelated. The construct of “differentiation” measures the extent to which an individual or work setting is uniquely characterized by one personality/environment type as opposed to multiple types. Lastly, “identity” considers whether an individual (or environment) is distinct and unchanging with respect to the characteristics, interests, and motives that are valued in work.

Holland’s hypothesis with respect to these constructs predicts a greater level of satisfaction and effectiveness for those with high levels of consistency and differentiation. Additionally, workplaces with strong identity are hypothesized to attract and retain these types of individuals (Nauta, 2009).

Using Interest & Self Efficacy to Explore Careers

In taking the assessments at the core of KCPS, students can discover their own Holland personality types. The first step in this process is for students to become

familiarized with their interests as they relate to careers. Interest assessments that measure an individual’s Holland personality type, such as the Kuder Career Interests Assessment® (KCIA), express the interests of an individual using one to three letters. Called a “Holland code,” the letters are drawn from the first letter of each of Holland’s types: R, I, A, S, E, and C.

Drawing from this set of letters, a person’s areas of interest are then represented in rank order, starting with the highest. For example, someone whose highest interest for work activities aligns to the Artistic area, followed by Investigative and then Social would have a Holland code of AIS. According to Holland, the shape of the profile made by the scores on the six types is an important piece of information for career exploration and counseling purposes.

Once determined, students can compare their interest results to those of the Kuder Skills Confidence Assessment® (KSCA). This assessment measures an individual’s level of confidence in completing tasks associated with each environment.

In considering the results of both assessments, students can determine areas where their interests and skills confidence may not align. Using the informational resources within the KCPS, the student can then research training programs, educational institutions, and other postsecondary options that can help them raise knowledge and skills and close the gap between what they would like to do and what they feel confident in doing.

More broadly, students can explore tasks that are associated with occupations that align to their assessment results, the level of demand for skills associated with certain jobs, and other valuable career planning information. Additionally, through its Occupation Information Network (O*NET), the U.S. Department of Labor provides Holland codes for nearly all occupation areas in their database to aid students in their research.

Students who lack the information needed to make academic and career planning decisions often incur unwanted costs associated with shifting academic focus, as indecisiveness with respect to chosen field or educational path remains a problem among postsecondary students in the United States. The National Center for Education Statistics (NCES) indicates approximately 28 percent of those in associate degree programs and one-third of those pursuing a bachelor's degree change majors within three years of initial enrollment (NCES, 2017). Furthermore, those unable to complete postsecondary degrees in a timely manner make up a majority of students at public institutions.

NCES shows that nearly 60 percent of students seeking to complete a bachelor's degree did so in six years (NCES, 2018). Below, we will examine student outcomes in past research pertaining to academic success at the postsecondary level and the effectiveness of Holland theory in predicting entry-level employment.

Holland Theory Application & Outcomes in Prior Research

Research exemplifying the use and validity of Holland theory is abundant. Feldman, Smart, and Ethington write that the theory, "is one of the most frequently cited contributions to the social science research literature and the validity of its basic tenets is supported by the findings of literally hundreds of studies" (2008). In observing outcomes associated with the application of Holland theory, a key point of focus has been congruence or "the degree of fit between an individual's personality type and the work environment type" (Nauta, 2009).

The congruence assumption of Holland's theory states that "vocational and educational stability, satisfaction, and achievement are a function of the "fit" or congruence between individuals and their environments" (Feldman et al, 2008).

A study testing this assumption examined congruency with respect to academic success of postsecondary students. Researchers collected information using surveys that asked college students to "rate themselves compared with the average person their age on 12 different abilities (e.g., mathematical ability, social

self-confidence, etc.)" on a five-point scale. They were subsequently asked to "indicate the importance of 18 general goals and values (e.g., creating artistic work, being very well-off financially, etc.)"

Through the tracking of students' chosen fields of study, results indicated those that chose academic environments congruent with their dominant personality types experienced increases in both their interests and abilities relating to that type. Alternately, abilities and interests of those choosing an incongruent academic environment were stagnant or declining over time. This pattern was consistent and statistically significant across all personality types. These findings and others support the conclusion that "academic environments (disciplines) are a primary influence on "the extent and direction of student progress in college" (Feldman et al, 2008).

A second study followed students longitudinally to measure the degree to which Holland's personality types could be used to predict entry level employment one year after students were assessed. In surveying students, researchers found a significant trend in which their work environments incorporated characteristics resembling their dominant personality trait.

"Inspection of the RIASEC person-environment correlations confirms [the congruence assumption], showing the highest positive correlation coefficients between identical person and environment types." Additionally, surveys found "a gradual and significant decrease of the averaged correlations from identical to alternate RIASEC person-environment pairs." The researchers conclude that "These relationships corroborate the validity of Holland's theory of congruency and its calculus assumptions" (De Fruyt & Mervielde, 1999).

Conclusion

In considering Holland personality types when making career decisions, existing literature indicates students have significantly improved chances of succeeding academically and finding fulfillment in the world of work. The KCPS provides a wealth of information for students to learn about occupations and the steps that can be taken to prepare for the world of work. To do so efficiently, it is important that they first develop an understanding of their own personal interests, skills, and values to help guide them.

In taking the Kuder assessments and discovering their Holland codes, students can understand which work environments "permit them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles" (Nauta, 2009; Holland, 1997).

References

Feldman, K. A., Smart, J. C., & Ethington, C.A. (2008). Using Holland's Theory to Study Patterns of College Student Success: The Impact of Major Fields on Students. 329–380. Retrieved from https://link.springer.com/chapter/10.1007%2F978-1-4020-6959-8_11

Fruyt, F., & Mervielde, I. (1999). RIASEC Types and Big Five Traits as Predictors of Employment Status and Nature of Employment. *Personnel Psychology*, 52(3), 701–727.

Holland, J. (1997). *Making Vocational Choices* (3rd ed.). Odesa, FL: Psychological Assessment Resources, Inc.

National Center for Education Statistics (NCES). (2017). Percentage of 2011–12 First Time Postsecondary Students Who Change Their Majors Within 3 Years of Enrollment: 2014. Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved from <https://nces.ed.gov/datapoints/2018434.asp>.

Nauta, M. (2010). The Development, Evolution, and Status of Holland's Theory of Vocational Personalities: Reflections and Future Directions for Counseling Psychology. *Journal of Counseling Psychology*, 57(1), 2010, 11–22.

Rounds, J., Smith, T., Hubert, L., Lewis, P., & Rivkin, D. (1999). Development of Occupational Interest Profiles for O*NET. National Center for O*NET Development. Retrieved from https://www.onetcenter.org/dl_files/OIP.pdf.

U.S. Department of Education, National Center for Education Statistics. (2018). *The Condition of Education 2018* (NCES 2018-144), Undergraduate Retention and Graduation Rates.

