

## Career Choices and Decision-Making Style, 1

Career Choices and Decision-Making Style:

What's the Connection?

Erin Smith

Department of Psychology

The Ohio State University

Address correspondence to:

Erin Smith

433-D E. Northwood Ave.

Columbus, OH 43201

Phone: 614-506-2628

Email: [smith.4227@osu.edu](mailto:smith.4227@osu.edu)

Abstract

Personality and decision-making styles have a strong impact on the type of work environment in which people thrive. Eighty-eight students at The Ohio State University completed Holland's Self-Directed Search (SDS), the Decision-Making Styles Inventory (DMI), and the Learning Goal Orientation (LGO) task. Results revealed significant positive and negative correlations between scores of specific categories in the Self-Directed Search, Decision-Making Styles Inventory, and Learning Goal Orientation measures. Specifically, positive correlations were also discovered between the categories of Investigative (SDS) and Analytical (DMI), and between Analytical (DMI) and Learning Oriented (LGO). The positive correlation between Investigative (SDS) and Learning Oriented (LGO) was not significant, thus disconfirming the hypothesis.

## Introduction

Throughout the last half of a century, an emphasis on organizational psychology has been implemented on the literature of human behavior. Theories and instruments have been developed to determine the most resourceful applications in the workplace to increase the proficiency of the workers and the overall production of the business.

John L. Holland laid the groundwork for more than thirty years of research when he proposed his theory of personality and occupation characteristics in 1968. The Holland theory outlined the six types of people that would thrive in specific work environments or occupations (Holland, 1968). His work not only identified and defined six personality types, but also six parallel environments and the assumed person-environment correspondence associated when the two coincide. After twenty-five years of theorizing and retesting, the Holland theory is found to provide a “plan for organizing and understanding” the psychological characteristics of people and their interactions with certain environments (Walsh & Holland, 1992).

The six types in Holland’s theory include Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C) (Holland, 1968; 1973; 1997). The connection between personality types and preferred work environments overlapped while the theory was under revision in 1972, such that the highest mean scores for each preferred occupation were found in the corresponding R, I, A, S, E, or C type (Campbell & Holland). Adjacent research found distinct personality similarities among students who preferred the same occupational area (Ziegler, 1973).

More recently, Holland’s research has taken an interest in the lack of congruence between the personality and environment, which leads to dissatisfaction and lowered

performance (Holland, 1996). Previous studies have supported that motivational processes affect learning and performance in an environment, but goal orientation was not discussed in Holland's research (Dweck, 1986). Few studies in the vocational psychology literature have expressed an interest in the goal orientation of achievement situations. Dweck outlined two approaches to work environments: the learning orientation, characterized by a desire to acquire new skills, and the performance orientation, characterized by a desire to prove one's competence to others. A study by Burley, Turner, and Vitulli revealed that those individuals who are learning-oriented exhibit more adaptive achievement-oriented behaviors than those who are performance-oriented (1999). Likewise, small groups, applicable to work environments, were studied through performance and learning goal contexts. Results showed that strict performance goal instructions led to more social facilitation and increased performance than the autonomy-supportive learning goal instruction (Gagne & Zuckerman, 1999). These findings are applicable to the Holland research on personality types and work environments because an individual's goal orientation to a specific task or environment correlates with success. Despite the apparent link between Holland Theory and goal orientation, no research has been conducted to test the significance.

Fortunately, some research has been conducted to study the interaction between Learning Goal Orientation and other surveys. The Decision-Making Styles Inventory (DMI) (Nygren & White, manuscript in preparation) is a measure that elicits three different approaches when making decisions: Analytical, Intuitive, and Regret-Based Emotional. Individuals who score high as Analytical respond highest to statements describing rational, thorough evaluation of all possibilities before making a decision.

High scores as Intuitive come from high evaluations of instinctual or “gut” decision making, while high Regret-Based Emotional scores reflect highest response to statements regarding worrying or rehashing old ideas. An analysis of the Decision-Making Styles Inventory (DMI) and the Learning Goal Orientation task (LGO) (Mirels, unpublished) showed a positive correlation of  $r = .412$  between Analytical decision-making styles and learning goal orientation (Nygren & White, accepted for publication, in-press work). The current work of Nygren & White is reflective of past research on decision-making styles. There is no explicit literature to support a link between Holland’s theory and decision-styles, but it is not improbable to assume that there is some connection between personality types and methods of making decisions; Investigative (I) personality types are described as being rational, cautious, and analytical, so they would likely have characteristics of the analytical decision-making style.

Based on the previous research and its assumptions of decision-making and career preferences, this study sought to examine the relationship between personality, decision-making styles, and learning orientation. Analysis of the ratings on the Holland Self-Directed Search (SDS), Decision-Making Styles Inventory (DMI), and Learning Goal Orientation task (LGO) are anticipated to show a positive correlation between similar personality types and decision-making styles, such that a subject who scored highly as Investigative (Holland) and Analytical (DMI) will also score highly as Learning Goal Oriented.

## Method

### Participants

Eighty-eight introductory psychology students at The Ohio State University participated in this study. Forty males and forty-eight females completed the experiment. Participant ages ranged from 18 to 32 with a mean age of 20.15. All participants received credit toward the Research Experience Program requirement stipulated to all introductory psychology students, even though five subjects did not complete the surveys in their entirety. Participants chose the present research from a variety of other available studies.

### Design

The present research is a survey based within-subjects design. The independent variables are the three surveys: the Holland Self-Directed Search (SDS), the Decision-Making Styles Inventory (DMI), and the Learning Goal Orientation task (LGO). The dependent variables are the responses on the surveys, ranging from the binary of “yes or no” to six degrees of agreement, “strongly disagree” to “strongly agree.” To empirically code the responses, “strongly disagree” and “strongly agree” and the degrees in between are labeled “1” through “6,” respectively. A second dependent variable of the present research is the Pearson correlation coefficient between responses on the SDS, DMI, and LGO.

### Materials

The materials used for this study included a demographic questionnaire, the Holland Self-Directed Search survey (SDS), Decision-Making Styles Inventory (DMI), and Learning Goal Orientation task (LGO). All of the questionnaires and surveys were

completed with paper and pencil. The demographic questionnaire elicited the participant's age, gender, academic rank, and declared major or field of study.

The Self-Directed Search is comprised of six sections of explicit responses, including Occupational Daydreams, Activities, Competencies, Occupations, Self-Estimates, and Summary Code Occupations. In the Occupational Daydreams section, participants write down previous daydreams or occupations they would like to pursue. The Activities, Competencies, and Occupations sections use "yes or no" or "like or dislike" to respond to various skills and jobs. The Self-Estimates section uses a 1 to 7 scale, marked low to high, respectively. Each of the sections contains questions designed to identify the Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C) components of the Holland hexagonal theory. After adding up each "yes," "like," and Self-Estimate, the subject is given a three-letter Summary Code comprised of the three highest scored categories. The corresponding occupations finder allows subjects to pick occupations from their specific Summary Code, suggesting personal success and satisfaction in that particular occupation. The SDS comprises questions such as "I can make a scale drawing" (Realistic) and "I find it easy to talk with all kinds of people" (Social) (Holland, 1997).

The Decision-Making Styles Inventory (DMI) is a forty-five-item questionnaire of Analytical, Intuitive, and Regret-Based Emotional decision statements. The DMI uses six agreement ratings, ranging from strongly disagree to strongly agree. Positive ratings on statements such as "I generally rely on careful reasoning in making up my mind (ANA)," "My first reaction to a decision situation usually turns out to be the best one (INT)," and "I tend to be someone who worries a lot over decisions I've made (REG)"

discriminate between the three DMI components (Nygren & White, manuscript in preparation). Each of the three DMI components is equally represented in the survey with fifteen statements.

The Learning Goal Orientation task (LGO) contains twenty-six statements designed to identify a participant's desired mental workload. Like the Decision-Making Styles Inventory (DMI), the LGO results are broken down into six responses ranging from strongly disagree to strongly agree. Strong agreement on statements such as "I prefer to work on tasks that force me to learn new things" and "The opportunity to extend the range of my abilities is important to me" identify a participant's Learning Goal Orientation. In contrast, strong agreement on statements such as "I feel smart when I do something better than most other people" and "I prefer to do things that I can do well rather than things that I do poorly" identify an inclination toward Performance Goal Orientation. (Dweck, 1986; Mirels, unpublished). Thirteen Learning Goal Orientation statements and thirteen Performance Goal Orientation statements equally represent the survey.

### Procedure

Participants received operational instructions with a brief overview of the response instructions to properly mark the preferred level of agreement on the surveys. They were instructed to follow the directions as listed on the surveys, especially the self-scoring and Summary code addition on the Self-Directed Search (SDS). Participants were reminded that they could leave at any time without penalty and were encouraged to ask questions and familiarize themselves with the survey formats.



The study began by completing the demographic questionnaire, followed by successively completing the Decision-Making Styles Inventory (DMI), the Learning Goal Orientation task (LGO), and the Holland Self-Directed Search (SDS). Each subject was given a debriefing handout, informing the subject of the investigator's statistical expectations and interest in the field. Participants were encouraged to finish within one half hour, but were permitted extra time without penalty when necessary.

## Results

The hypothesis for the present research states that analysis of the scores on the Self-Directed Search (SDS), Decision-Making Styles Inventory (DMI), and Learning Goal Orientation task (LGO) are anticipated to show a positive correlation between similar personality types and decision-making styles. Specifically, there will be a positive correlation between subjects' scores as Investigative (SDS), Analytical (DMI), and Learning oriented (LGO).

### Statistics

Pearson Correlation Results. High scores (5 or 6) in response to the DMI and LGO represent a moderate or strong agreement with the statement, therefore implicating a salient mapping of the decision-making style and goal orientation associated with the item. Mean scores of  $x = 4.5$  or higher on grouped items (i.e. Analytical statements) implicate an overall strong correspondence with that variable.

A Pearson correlation was performed on the rated agreement (1 to 6) between the predetermined groupings with the Summary Code of the Self-Directed Search to test the

hypothesis. Each survey has been validated with subsequent assessments: the SDS has six (RIASEC theory), the DMI has three (Analytical, Investigative, Regret-Based Emotional), and the LGO has two (Learning Goal Oriented and Performance Goal Oriented).

In response to the specific hypothesis, a statistically significant correlation of  $r = 0.25$  was revealed between mean scores of Investigative (SDS) and Analytical (DMI). A significant correlation of  $r = 0.39$  was revealed between mean scores of Analytical (DMI) and Learning oriented (LGO). A correlation of  $r = 0.10$  was revealed between Investigative (SDS) and Learning oriented (LGO); it was not significant.

Although not specifically predicted by the hypothesis, the strongest correlations were found in the following pairings: Regret (DMI) and Learning oriented (LGO)  $r = 0.49$ ; Regret (DMI) and Performance oriented (LGO)  $r = -0.42$ ; and Investigative (SDS) and Performance oriented (LGO)  $r = 0.49$ .

Statistically significant correlations above  $r = 0.3$  were as follows: Intuitive (DMI) and Realistic (SDS)  $r = 0.36$ ; Enterprising (SDS) and Performance oriented (LGO)  $r = 0.37$ ; Conventional (SDS) and Analytical (DMI)  $r = 0.34$ ; and Intuitive (DMI) and Performance oriented (LGO)  $r = 0.36$ .

Within the Decision-Making Styles Inventory (DMI), significant correlations were found with between the Analytical, Intuitive, and Regret-Based Emotional categories: Intuitive (DMI) and Regret (DMI)  $r = -0.32$ ; and Analytical (DMI) and Regret (DMI)  $r = 0.32$ .

## Discussion

The results did not support the hypothesis that there is a positive correlation between high scores for Investigative (SDS), Analytical (DMI), and Learning oriented (LGO). Two of the three pairings were significant, but the Investigative (SDS) and Learning oriented (LGO) were not. However, the correlation was positive, as predicted. The study may be lacking another statistical or theoretical facet needed to strengthen the correlation into a significant level.

The hypothesis only sought one particular pairing between aspects of the three inventories. However, based on the theory and description behind each categories in the surveys, other significant results are not a surprise. Learning orientation (LGO) and Performance orientation (LGO) are considered opposites to some degree; an individual can be high on both, but data suggest that people tend to be high on one and significantly lower on the other. When paired with Regret (DMI), Learning orientation (LGO) was strongly positive and Performance orientation (LGO) was strongly negative. The results suggest that those who regret and worry over decisions also place an emphasis on personal enrichment and learning.

Other pairings were not so explicit. When correlated with Investigative (SDS), Learning orientation (LGO) was positively weak while Performance orientation (LGO) was positively very strong. This suggests that Investigative (SDS) personality types may have variety in both Learning and Performance orientation (LGO).

Other correlations, although not predicted, are explained through hindsight. Enterprising (SDS) individuals are defined as strong leaders and good public speakers, preferring careers such as sales representatives and lawyers. Enterprising (SDS)

individuals were significantly correlated with Performance orientation (LGO), characterized by a desire to prove oneself to others. Successful salespeople and attorneys need to consistently monitor their performance compared to others; an attorney who was only concerned with his or her own personal enrichment from the case would not be very successful at appearing more competent than the other attorney.

Likewise, Conventional (SDS) individuals are described as liking words and numbers and prefer careers such as accountant and bookkeeper. Analytical (DMI) individuals make decisions based on rational information and efficient strategies to study the available information. Conventional (SDS) individuals were significantly correlated with Analytical (DMI) decision makers. Accountants and budget analysts would not be successful by managing and investing money based on a “gut feeling” or “hunch.”

These correlations reinforce Holland’s occupational theory: the individual’s characteristics select for the work environment, but the work environment also selects for the individual. Conventional (SDS) individuals may choose conventional careers, but the work environment will also select whom it hires. Conventional people that lack analytical decision-making abilities may be turned down, despite their overall potential for success in that occupation.

The main theoretical question to address in further research is the intrinsic overlap of these surveys. Each of the three surveys has been validated and is viewed in the psychological community as an expert in its area of study. Each seeks to describe the underlying reason an individual would score high on specific measures, but lacks the ability to describe other personality and decision-making factors that may contribute to the theory. Because the results are correlational, we cannot infer causation between the

surveys. However, based on the results of this study, it would be difficult to deny some link between personality type, decision-making styles, and goal orientation that needs to be addressed in future research.

References

- Burley, Rosalynn C.; Turner, Lisa A.; Vitulli, William F. (1999). The Relationship Between Goal Orientation and Age Among Adolescents and Adults. *Journal of Genetic Psychology, 160(1)*. 84-88.
- Campbell, David P.; Holland, John L. (1972). A merger in Vocational Interest Research: Applying Holland's Theory to Strong's Data. *Journal of Vocational Behavior, 2(4)*. 353-376.
- Dweck, Carol S. (1986). Motivational Processes Affecting Learning. *American Psychologist, 41(10)*. 1040-1048.
- Epstein, S., Pacini, R. Denes-Raj, V., & Heier, H. (1996). Individual differences in intuitive-experiential and analytical-rational thinking style. *Journal of Personality & Social Psychology, 71*. 390-405.
- Gagne, Marylene; Zuckerman, Miron. (1999). Performance and Learning Goal Orientations as moderators of Social Loafing and Social Facilitation. *Small Group Research 30(5)*. 524-541.
- Holland, John L. (1968). Explorations of a Theory of Vocational Choice: VI. A Longitudinal Study Using a Sample of Typical College Students. *Journal of Applied Psychology, 52*. 1-37.
- Holland, John L. (1973). Applying an occupational classification to a representative sample of work histories. *Journal of Applied Psychology, 58*. 34-41.
- Holland, John L. (1979). New Edition of the Self-Directed Search. *Catalog of Selected Documents in Psychology, 8*. 73.

Holland, John L. (1996). Exploring careers with a typology: What we have learned and some new directions. *American Psychologist*, 52(4). 397-406.

Holland, John L. (1997). *Making Vocational Choices Third Edition*. Odessa, Florida: Psychological Assessment Resources, Inc.

Walsh, Bruce W., & Holland, John L. (1992). *Person-environment psychology: Models and Perspectives*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Ziegler, Daniel J. (1973). Distinctive Self and Occupational Member Concepts in Different Occupational Preference Groups. *Journal of Vocational Behavior*, 3(1). 53-60.