The personality and learning styles of Coastal Carolina Business students.

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Abstract

This paper will examine the learning styles and personality types of Coastal Carolina University business students and give recommendations as to an andragogy (Knowles, 1977) that will enhance delivery of college of business courses. Students at Coastal Carolina University have different feelings about teaching and learning, different reactions to classroom environments, and different levels of motivation in regards to their education (Felder & Brent, 2005). The more instructors understand these differences the easier it will be for them to meet the diverse educational needs of students. Two factors which have demonstrated importance in teaching and learning are students learning style and personality (Carrell & Monroe, 1993).

INTRODUCTION

Bokoros, Goldstein and Sweeney (1992) designed a study to determine the common factors in five measures of cognitive style. The five measures that were used were Jung's model of personality, the Gregorc style indicator, decision style inventory, Kolb's learning style inventory, and Lifescripts. The study consisted of 143 students and faculty members aged 17 to 72 years. They completed all five measures and a factor analysis was completed on the results.

The theory of personality developed by Jung (1923, 1971) focuses on three distinct dimensions; the judging dimension, the attentional dimensions, and the perceiving dimension

(Bokoros, Goldstein, & Sweeney, 1992). His theory is the foundation for the Myers-Briggs Type Indicator (MBTI) which is used by many in counseling and educational settings.

The Gregorc Style Indicator is a measure of four different learning styles categories. These are based on the crossing of sequential or random processing (dimension one) with abstract or concrete date (dimension two) (Gregorc, 1982). Gregorc's theory defines concrete as the experience of any new information, while abstract refers to the mental version of this experience. As a result there are four kinds of learners defined:

Concrete sequential learner: this learner is structures, predictable, and thorough

Abstract sequential learner: this learner is logical, analytical, and conceptual

Abstract random learner: this learner is sensitive, sociable, and expressive

Concrete random learner: this learner is original, intuitive, and investigative

Although there have not been any studies directly comparing these two measures, there have been similarities found between the results of both tests (Kirton, 1976).

The Decision Style Inventory (DSI) is based on the earlier work of Driver (Driver & Rowe, 1979). His model examines the dimensions of cognitive complexity; which is a person's tolerance for ambiguity and environmental complexity; which measures a persons concern for people or task oriented work. There are four styles determined by this measure. These are Conceptual, Behavioral, Analytical, and Directive. They are described as:

Conceptual: creative, insightful, and intuitive

Behavioral: supportive, receptive, and people-oriented

Analytical: task-oriented, logical, and abstract thinkers

Directive: present-oriented approach and practical, prefer structure

Kolb's Learning Style Inventory is a based on Kolb's learning cycle model (Kolb, 1984). His cycle is another way to classify cognitive processing. His theory has an abstract and a concrete dimension. A person with abstract conceptualization focuses on using logic and concepts. They are more focused on thinking. Someone with concrete conceptualization focuses

on experiences and personal communication. Their emphasis is on feeling rather than thinking. Kolb also examines active and reflective experimentation. He describes active experimentation as grasping information by either a concrete experience or an abstract conceptualization. He describes reflective experimentation as transforming information through active manipulation or internal reflection. His four styles are defined by the intersection of the two dimensions.

Christensen's (1980) Lifescripts measure was designed to be used in management consulting. The four scales defined by the measure are Analyzer, Controller, Supporter, and Promoter. These are related to social interaction and not cognitive styles like the other measures. He defines the scales as follows: Controllers are looking for results. They are task oriented and will ensure the job gets done. They are good at making decisions, like to be in control, and are extraverted minded. Analyzers are introverted and reserved. They like things to be logical. They are friendly, sympathetic and enjoy people. Promoters are very outgoing and socially skilled. They want harmony and are loyal. Supporters are also loyal and prefer to avoid drama. They are idealistic as well. The activating function would determine the general focus of attention and coordinate the expression of style in close relationships. The results demonstrated that the executive cognitive function would control cognitive operations and arriving at decisions. The receiving function would determine the general focus of attention and coordinate the expression of style in close relationships. Therefore, learning style and personality are associated.

Jung's theory is the foundation for the Myers-Briggs Type Indicator (MBTI) (Myers & McCaulley, 1985), an instrument widely used in educational and counseling settings. The MBTI attempts to identify an individual's preference and habitual use of perception and judgment (Carrell & Monroe, 1993). The theory of personality developed by Jung (1923, 1971) focuses on two general areas; mental activity and mental processes (Borg & Shapiro, 1996). Jung divided mental activity into two distinct dimensions; perception which includes sensing and intuition and judgmental which includes thinking and feeling. Mental processes included the extroversion and introversion dimensions (Bokoros, Goldstein, & Sweeney, 1992). the judging dimension, the

attentional dimensions, and the perceiving dimension (Bokoros, Goldstein, & Sweeney, 1992). The fourth scale used in the MBTI was added later. This is the style of dealing with the world (Carrell & Monroe, 1993). The two ends of this fourth scale are judging and perceiving.

Each of the four scales (E/I, S/N, T/F, and J/P) represents opposites. The theory behind the instrument assumes that every person uses both of the opposite poles of each scale, but their responses on the instrument indicate their preference. The attentional dimension defines ones preferences for internal versus external forces. The attentional dimension is broken into two opposing preferences; extravert or introvert. Someone who is an extravert focus on the external forces in their life. Someone who is an introvert focuses on their internal mental processes. The perceiving dimension is associated with how we initially process information. On one end of this scale is Sensation and on the other end is Intuition. Sensing individuals are practical and realistic. They prefer details, facts, and structure. Intuitive types are imaginative and look for relationships in information. The judging dimension is associated with decision-making. This is either accomplished by Thinking or Feeling. Thinking is defined as the use of objective, logic-oriented evaluation. Feeling is defined as a personal and value-oriented evaluation. People on this end of the range prefer collaborative efforts.

Felder and Silverman (1988) conducted a study to examine the dimensions of various learning styles and what techniques teachers can use to address these styles. Students learn in so many ways; hearing, seeing, reflecting, acting, visually and otherwise. Teachers use various methods to present information for their students to learn. It is obvious there is a mismatch between the common learning styles and the traditional teaching styles. This leads to some large problems for a teacher when trying to ensure that all students learn and comprehend the information they are presenting.

Learning is a two-step process: reception and processing of information. In reception external information it is observed through the senses and internal information arises from introspection. This is where a student decides what information to process and what to ignore.

The learning-style model classifies students based on where they fit on a scale related to how they receive and process information.   There is a model that coincides with the students learning process is the teaching-style model. This rates instructional methods based on how they address the various styles of learning.

Felder and Solomon's (n.d.) Index of Learning Style Questionnaire is a 44-item survey that can be completed and scored on the Web. This instrument is based on the learning-style model which classifies students based on four scales (Felder & Silverman, 1988). These scales measure the way an individual receives and processes information. The four scales are active versus reflective learners, sensing versus intuitive learners, visual and verbal learners, and sequential and global learners. Some individuals score at one end or the other on any of these scales; however a balance between the two ends is preferable.

Active learners tend to like group work and reflective workers prefer working alone (Felder & Silverman, 1988). Active learners prefer to try and discuss, apply, or explain what they are learning and reflective learners prefer to think about it first. However, sitting through a class and only taking notes is hard from both learning styles, but is particularly hard for active learners.

Sensing learners (sensors) like facts and intuitive learners (intuitors) prefer possibilities (Felder & Silverman, 2005). Sensing learners like using established methods to solve problems and intuitive learners like new ideas. Sensing learners are good with details and memorizing and intuitive learners are good at understanding new ideas and abstract concepts. Sensors do best in classes that are tied to the real world. Unlike intuitors, they do not do well in classes where there is a lot of memorization and routine work.

Visual learners perform better when they can see pictures, diagrams, and timelines (Felder & Silverman, 2005). Verbal learners perform better when they are using written and spoken words. College classes where lectures are used and little visual presentations are utilized are challenging for visual learners. Most college classes rely on lectures and unfortunately most people are visual learners (Felder & Silverman, 2005).

Sequential learners like to learn by following the logical steps in a process and global learners like to absorb large amounts of material without any apparent connections (Felder & Silverman, 2005). Sequential learners need to follow steps to reach a solution and take their time. Global learners on the other hand tend to jump to a conclusion or solution quickly. Most students are sequential learners (Felder & Silverman, 2005) and having an instructor who moves around from topic to topic in no logical order presents a challenging learning environment. Fortunately, most college classes are taught sequentially (Felder & Silverman, 2005).

Students have very different levels of motivation, and different attitudes and responses to teaching styles as well as classroom environments (Felder & Brent, 2005). As a result college students have very diverse learning needs. Instructors need to be aware of this diversity and find ways to teach them.

METHODS

Business students at Coastal Carolina University completed a modified Myers-Briggs Type Indicator (MBTI) test and a Learning Style Indicator Questionnaire (Soloman & Felder, n.d.). The results of these two measures were then analyzed.

Participants – Sophomore, junior and senior college of business students sampled. They were students in organizational behavior and theory classes and a section of Decision Analysis. Three classes were sampled with a total of 91 students responding out of 107 for an 85% response rate.

Measures

A 70 item modified version of the MBTI was administered as part of the course. The version was adapted from the entrance examination at McNeese State University. The E/I dimension consisted of a set of ten items whereas the other 3 dimensions of S/N, T/F, and J/P consisted of 20 items each. The MBTI was administered in class and the scoring results were logged by the students and the scoring sheets were turned in to the professor. The participants were then directed to take a learning styles survey online. As part of the learning styles online survey a results sheet was generated and turned in to the professor.

The students were directed to write a three page paper with at least two scholarly sources comparing their individual results of the MBTI and Learning Styles Inventory. The student papers were graded for a potion of their grade in the course. The results are presented in table form below.

RESULTS

The results of the MBTI show that the vast majority of students heavily favored the E, S, T, and J dimensions. The results of the learning styles show a bias towards the active, sensing, visual, and sequential learning styles.

MBTI Results

Analytical Thinking		Systemic Thinking	
E	**545**	I	365
S	**1114**	N	706
T	**1006**	F	814
J	**1134**	P	686

Learning Styles Results

Analytical Thinking		Systemic Thinking	
Active	**96**	Reflective	24
Sensing	**72**	Intuitive	17
Visual	**64**	Verbal	16
Sequential	**54**	Global	33

DISCUSSION

Understanding the personality and learning styles of our students is very important. Professors want to create the best learning classroom environment for all of their students. However, it is hard to design a classroom environment to match each students learning style. Therefore, understanding your students will make this process easier.

Knowing the personality and learning styles of the students in a course can give the professor an indication of what delivery system may be best for adult learning to take place. The left hand sides of the MBTI and Learning Styles surveys are indicative of an analytical style of thinking. An analytical style is evidenced by very linear, visual, cognitive, cause and effect manner of understanding. The right hand sides of the MBTI and Learning Styles surveys are more indicative of a relational style of thinking. Relational thinking is very systems oriented and non-linear, intuitive, and affective. That the majority of this sample is ENTJ and Act, Sen, Vis, and Seq indicate that the students would be well suited to a simple teach and test pedagogy rather than an open researching style of andragogy.

Another major area where the University classroom (as differentiated from a K-12 classroom) can benefit from using the personality and learning styles of students is through a model of andragogy vice pedagogy. Andragogy is the art and science of teaching adults (Forrest & Peterson, 2006). Andragogy includes basic assumptions that are concerned with learning instead of a pedagogical emphasis on teaching (Forrest & Peterson, 2006; Knowles, 1977). Adult types of learning use self-directed learning, experiential learning, and performance centered learning, and the most important assumption is a willingness to learn (Forrest & Peterson, 2006).

LIMITATIONS

These are self-reporting preliminary data and as such are susceptible to inflation due to social desirability. The data are cross sectional and cannot be used to make and inference as to causality. The delivery style is very sensitive to the subjects to which the style is directed. Students may be introverted in personality and have a reflective learning style which may indicate to the professor that an open self-directed style of classroom activities would be warranted, yet the students may be time pressed and under pressure to get this course "out of the way" in order to graduate a semester early. Even introverted and reflective students would not necessarily respond to the indicated classroom environment.

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