

CRITICAL REVIEW ON AFFECT OF PERSONALITY ON LEARNING STYLES

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ABSTRACT

This paper is intended to review the affect of personality on learning styles. Costa and McCrae's Five-Factor Model of Personality (The Big 5) is explored against Kolb Learning Styles. The Big 5 factors are extraversion, neuroticism, openness, agreeableness and conscientiousness, whereas Kolb Learning Styles are divergers, assimilators, convergers, and accommodators. Discussion includes descriptions of the Big 5 factors and Kolb Learning Styles, issues relating to personality and learning styles, and critical review of affect of the Big 5 factors and Kolb Learning Styles. It is concluded that personality does has an affect towards learning styles when it comes to the Big 5 factors and Kolb Learning Styles. Future research is recommended to test the hypothesis found in this review. Pertinent information is repeated in the summary section for readers' convenience.

Keywords: Kolb Learning Styles, learning styles, neuroticism, personality, the Big 5,

1. INTRODUCTION

Learning styles is defined as the process that the learners use to sort and process information (Cano, Garton & Raven, 1992). Individuals have the basic capability to learn, however, they are not able to learn and effectively in the same exact way (Gregorc, 1979). Garger and Guild (1994) described learning styles as the characteristics of individuals which are stable and pervasive that is expressed through the interaction of one's behaviour and personality when he/she approaches a learning task.

Eysenck (1978), who developed the personality theories of Extraversion (E), Neuroticism (N), and Psychoticism (P), noted that personality and learning are closely related. He extended that individuals who scores high in E tend to socialize and lack concentration, and thus distracted from academic work whereas individuals who scores high in N tends to let their emotions interfere with their work. Furthermore, it was also found that there is a large overlap between personality and learning styles (Jackson & Lawty-Jones, 1996). Jackson and Lawty-Jones (1996) also suggested that learning style is a sub-set of personality and must not be measured independently.

However, a study done by Duff, Boyle, Dunleavy and Ferguson (2004) found that individual's learning orientation and approach to learning, is partially determined by their personality.

Therefore, since the findings are contradictory, the aim of this paper is to critically review the affect of personality on learning styles. The author is interested to review the Big 5 personality trait developed by McCrae and Costa (1983), against the Kolb learning theory (1984).

2. GENERAL OVERVIEW OF THE BIG 5 PERSONALITY TRAITS

McCrae and Costa (1983) suggested that personality of a person can be described in 5 factors and most people score near the middle of each trait with only a few people scoring at the extremes. Below is the summary of the Big 5.

Table 1: McCrae and Costa Five-Factor Model of Personality (adopted from Feist and Feist, 2009)

	<u>High Scores</u>	<u>Low Scores</u>
Extraversion	Affectionate Joiner Talkative Fun loving Active Passionate	Reserved Loner Quite Sober Passive Unfeeling
Neuroticism	Anxious Temperamental Self-pitying Self-conscious Emotional Vulnerable	Calm Even-tempered Self-satisfied Comfortable Unemotional; Hardy
Openness	Imaginative Creative Original Prefers variety Curious Liberal	Down-to earth Uncreative Conventional Prefers routine Uncurious Conservative
Agreeableness	Soft-hearted Trusting Generous Acquiescent Lenient Good-natured	Ruthless Suspicious Stingy Antagonistic Critical Irritable
Conscientiousness	Conscientious Hardworking Well-organized Punctual Ambitious Persevering	Negligent Lazy Disorganized Late Aimless Quitting

People who score high on extraversion tend to be affectionate, jovial, talkative, joiners, and fun-loving. In contrast, low E scorers are likely to be loner, sober and passive.

People who score high on neuroticism tend to be emotional, easily embarrassed, pessimistic and vulnerable to stress-related disorders, while those who score low on N are usually comfortable, calm and unemotional (Zhang, 2002).

Openness to experience distinguishes people who prefer variety in their lives. They are imaginative, and creative. By contrast, people who score low in openness tend to be conservative; they like routine and are uncreative.

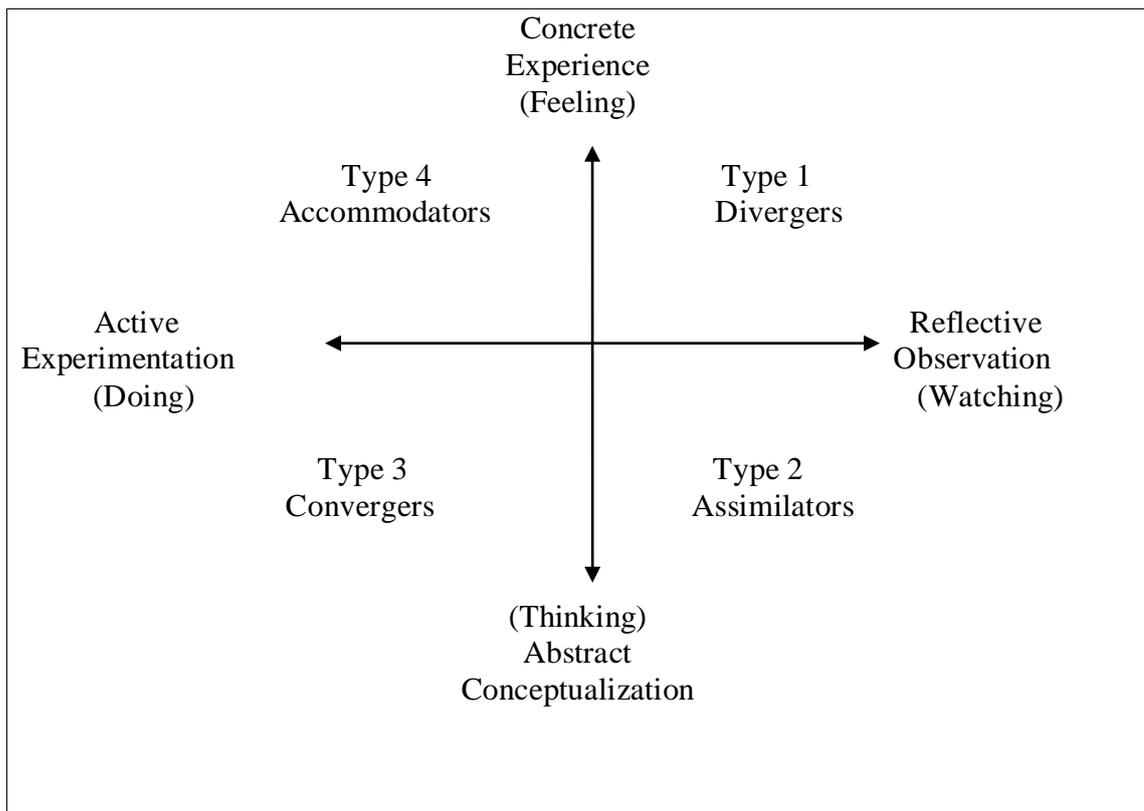
The agreeableness scale distinguishes soft-hearted people from ruthless ones. People who score in the direction of agreeableness tend to be generous, lenient, and good-natured, whereas those who go the opposite direction tend to be stingy, irritable and critical of other people.

Finally, conscientiousness describes people who are ordered, organized, hardworking and ambitious. In contrast, people who score low on C are usually disorganized, lazy, negligent and aimless (Zhang, 2002)

3. GENERAL OVERVIEW OF KOLB LEARNING STYLES

David Kolb's four learning styles are based on the ways people perceive and process information as illustrated below:

Figure 1: Kolb Learning Style (adopted from Sharp, Harb and Terry, 1997)



The vertical and horizontal lines show the learning modes in Kolb's learning styles. The vertical line in Figure 1 represents how an individual perceives information, with one extreme being concrete experience and the other being abstract conceptualization. The horizontal line, furthermore, represents how an individual processes information, with one extreme being reflective observation, and the other being active experimentation (Sharp, Harb & Terry, 1997).

The concrete experience (CE) mode describes people who feel more than they think. Individuals in this mode tend to be very good at relating to others and tend to be intuitive decision-makers. The reflective observation (RO) mode describes people would rather watch and observe others than be active participants. Individuals in this mode tend to appreciate exposure to differing points of view. The abstract conceptualization (AC) mode describes people who think more than they feel. Such people tend to have a scientific approach to problem solving as opposed to an artistic approach. Finally, the active experimentation (AE) mode describes individuals who take an active role in influencing others as well as situations. These people welcome practical applications rather than reflective understanding as well as actively participating rather than observing (Hein & Budny, 2003).

Furthermore, there are four types of learning styles which are divergers (type 1), assimilators (type 2), convergers (type 3), and accommodators (type 4).

Table 2: The Quadrants of the Kolb Learning Cycle-Learner Characteristics (adopted from Hein & Budny, 2003).

<p>Accommodators (Type 4)</p> <ul style="list-style-type: none"> • Likes problem solving • Enjoys taking risks • Prefers to learn through exploration • Can synthesize information easily • Communicators of concepts to others • Creators of new things 	<p>Divergers (Type 1)</p> <ul style="list-style-type: none"> • Big picture people • Relies on feelings • Prefers personal interaction • Learns by discussion (likes group work) • Good at generating ideas • Enjoys peer reviews • Uses emotions when making decision
<p>Convergers (Type 3)</p> <ul style="list-style-type: none"> • Quickly cuts to the chase • Likes to discover, test, and try new things • Does not like lectures • Quick at making decision • Searches for one correct answer • Does not prefer group work 	<p>Assimilators (Type 2)</p> <ul style="list-style-type: none"> • Comprehension is critical • Strength in analyzing, organizing and sorting • Likes to evaluate pros and cons • Enjoys lectures • Likes order • Uses logical and detailed thinking

4. PERSONALITY AND LEARNING STYLES

A number of researches were done to examine the correlation between personality and learning styles. According to de Raad and Schouwenburg (1996), extraversion, conscientiousness and openness are educationally relevant. Busato, Prins, Elshout and Hamaker (1999) suggested that extraversion people are using critical and concrete processing when making decisions, are self-regulating learners, and able to make construction of knowledge. Conscientiousness and openness furthermore are also processing the knowledge in critical and concrete ways and likes to relate and structure the information in hand. However, they found that neuroticism people are lacking in self-regulation, but cooperative

and ambivalent, whereas agreeableness seemed to correlate with memorizing, and needs external force to regulate them.

Zhang (2002) found that people who are high in neuroticism tend to be emotionally unstable therefore would be the ones who are more comfortable in learning highly structured situations, preferring being told what to do and carry out tasks by adhering to existing rules. Moreover, in a study done by Duff, Boyle, Dunleavy and Ferguson (2003), they found that there are three types of approaches to study that are correlated with the Big 5 Personality traits. Those approaches are deep approach (I'm not prepared just to accept things I'm told; I have to think them out for myself), surface approach (I often have trouble making sense of the things I have to remember, and strategic approach (I know what I want to get out of this course and I'm determined to achieve it. They stated that deep approach was positively related with extraversion and openness to experience. Surface approach was positively related to neuroticism and agreeableness, while strategic approach of learning correlated positively with extraversion and conscientiousness and negatively related to neuroticism.

Towler and Dipboye (2007) suggested that learning styles orientation is bridging the gap between personality and cognition. They found that extraversion is correlated with being experiential, observational, likes to work in group, and explore new things, and makes decisions based on the feelings. Conscientiousness is related to being observational, structured, making decision based on information and likes to experiment. Openness to experience are the people who likes to discover new things, they make decisions based on thinking and not feeling. Agreeableness is correlated with being observational whereas neuroticism is related to being highly structured.

5. CRITICAL REVIEW AND DISCUSSION

From all the literatures above, it is critically found that personality does affect the learning styles. An extrovert, who is talkative, active and fun-loving, and use deep and strategic approach in learning, is placed between concrete experience and active experimentation. The accommodation type of learning style is found to correlate best with this type of personality.

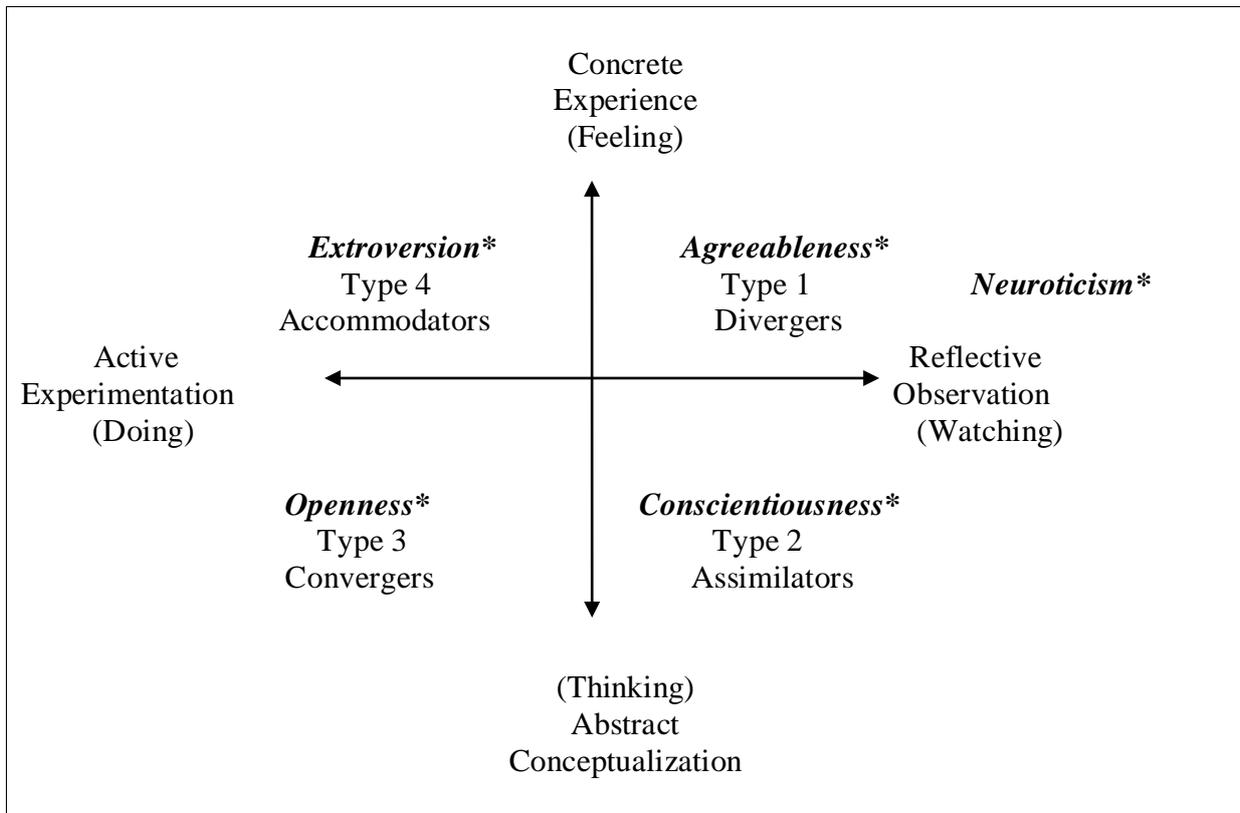
Furthermore, a person who is open to experiences, imaginative, creative, and prefers variety, and also use deep approach of learning, is seen to be between active experimentation and abstract conceptualization. The convergent type of learning style is closely linked to him/her. Besides that, assimilators are high in conscientiousness, and are strategic in learning. Being hardworking, well-organized and ambitious, these people seemed to like observing than participating, and use thinking more than feelings.

Moreover, agreeableness is critically found to link closely with divergent type of learning style as this type of a person is soft-hearted, lenient, and generous, and who uses surface approach to learning, where he/she relies more of feelings, likes peers reviews and prefers observation than active participation in groups activities.

Finally, a person who is high in neuroticism is found to be partially correlate to divergent type of learning style since this kind of person is emotional and likes being told of what to do. However, what makes neuroticism is partially irrelevant to divergers because this type of person does not like to generate new ideas and more towards being alone than being with others.

The Figure 2 below summarizes the hypothesis from the critical review made in this research in the form of conceptual framework of affects of The Big 5 Personality Traits on Kolb Learning styles.

Figure 2: Conceptual Framework Theory of the Big 5 Personality Traits and Kolb Learning Style



*Big 5 Personality Traits

6. LIMITATIONS AND RECOMMENDATIONS

Some limitations are found throughout the study and recommendations for future researches are as follows to better outcomes.

Firstly, the few numbers literature reviews made may lead to a weak framework. Therefore it is suggested that for future researches, more literatures to be gathered in order to produce a stronger framework.

Secondly, the critical review made cannot be used as empirical evidence unless it is tested statistically. Hence it is recommended to do a quantitative study on the above framework to gain the correlation values.

Finally, the use of only one theory for each variable is quite subtle, and for that reason, more than one personality theories is advisable to be used against a few other numbers of learning styles theories.

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