



RESEARCH PAPER

Effect of Personality Traits on Collaborative and Competitive Learning Styles at University Level

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ABSTRACT

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The present research aims to investigate the impact of personality features on collaborative and competitive learning. The Big Five Theory used to examine the impact of personality traits on learning styles. Four hundred students were randomly selected using the non-probability (convenience) sampling technique for this descriptive research design. Large-scale inventory and Gasha-Riechman student learning skills scales were used after translation in the national language. Cronbach Alpha assured the validity of the instrument by offering expert opinion and pilot testing as reliability where all reliability of the questionnaire was established ($\alpha = 0.92$). Resultantly, students' personality traits were more inclined toward collaborative style rather than the competitive style of learning, and correlation was found strongly significant between five factors and learning styles. Teaching style in accordance with individual differences and learning styles may strengthen students. Students' social training, academic adjustment, and collaborative opportunities rooted personality traits and learning.

Introduction

Individual differences explain how every individual is unique in his/her views, backgrounds, acceptance, like and dislikes, physical and cognitive development, personality, and learning styles. These attributes affect every learner in terms of learning and personality development. Our inborn temperament developed in different situation and environment. These features and distinctive characteristics separate one individual to other (Khan, 2018; Joyce, 2020). In collective, these features, characteristics, and temperaments build personality. The association of personality (traits) and other elements as job performance, academic achievements, and learning examined in studies (Blickle, 1998; Busato et al., 1998;

Chamorro Premuzic & Furnham, 2008; Chioqueta & Stiles 2005; Joyce, 2020; Molleman, 2005). The coordination of learning and personality characteristics directly and indirectly influences students' performance. Stable characteristics among students express individual personality traits, specifically in actions, views, perception, and feelings. Furthermore, these characteristics categorized in different dimensions. Theorists break down these attributes, characteristics, and pattern of actions into sub aspects, such as openness to experience. Additionally, every individual has his or her own personality traits that affect their learning (McAdams & Pals, 2006). The interaction of personality traits of students and learning styles is familiar in educational psychology. The decisive impact of personality traits on performance on academic performance is accepted in many studies (Kamarulzaman, 2012; Rashid et al., 2012). Therefore, personality traits perform a pivotal role in achieving desired objectives and specific situations (Caligiuri, 2000). In other words, it can be said that personality traits provide facilitating learning behavior and stimulate the individual, which helps him to carry on or give up the task (Blickle, 1998). However, these studies are limited to associative level only. Considering this relationship, the interface of these traits also affects individuals' behavior. Although, there is no agreed and universal definition of personality traits, but it is understood in certain conceptualization (Halder et al., 2010; Khan, 2018). A universal concept of personality traits in broader consensus emerged in five-factor or big-five theory. These five factors are: extraversion, agreeableness, conscientiousness, and neuroticism. Personality traits formed into these big-five aspects. According to psychologists, individual's personality can be measured through big-five factors (inventory). Though there are studies that investigate combination and mediation of personality traits and learning styles. Noticeably, those studies are done in foreign population setting (Joyce, 2020). The exploration and other distinctive features related to personality traits and its effect on learning in Pakistan. Therefore, the current study is designed to examine the effects of personality traits on collaborative and competitive learning styles of students.

Review of Literature

With regard to the review of literature, the personality trait approach has been proven to have a strong impact on ideas such as education efficiency, citizenship structure, work coordination, work values, entrepreneurship, depression, tension, happiness, the participation in process or learning ideas, such as educational action (Organ & Lingl, 1995; Miller, 1991; Berings, De Fruyt & Bouwen, 2004; Barrick & Mount, 1993; Chioqueta & Stiles 2005; Erdheim, Wang & Zickar, 2006; Blickle, 1998; Molleman, 2005; Chamorro-Premuzic & Furnham, 2008; Busato et al., 1998). While many studies explore the relationship between personality and several different theories, studies of the correlation between learning and personality styles are less extensive. The association between learning and personality styles is, however, widely recognized. This is a general belief that only commitment can be inadequate to know effectively. Instead of

wasting over-time on a single topic in particular, the task can be made more realistic by behaving in compliance with different forms of learning. Therefore, individuals may be encouraged to be more intellectual motivation by following different learning styles, and to respond more effectively to the learning process. Interruption of personality traits are relatively abstract thing which will affect the learning attitudes and learning styles which come out as habits considerably.

Therefore, personality traits perform a pivotal role in achieving desired objectives and specific situations (Caligiuri, 2000). The personality traits, in other words can be said to promote learning behavior and motivate an individual that can help to carry out or abandon the activity (Blickle, 1998). No doubt learning is an informational process which consists on memory, attention, perception, and thinking. On the contrary, learning is the systematic arrangement to stimuli of mental reactions. Personality features often are involved and working as an agent through this process. Hence, learning attitudes are effected by them (De Raad & Schouwenburg, 1998). Throughout this way, personality traits tend to have some effect on learning styles and the relationship between personality traits and learning styles appears to be solid.

Personality

The indigenous characteristic and temperament of an individual and combining characteristics that distinguishes him / her from other persons in different circumstances is called Personality (Phares, 1991). The distinguishing feature of each human person, characteristic adaptation, distinctive identification with life and a set of cultural variations, is defined according to another definition (Hogan, Hogan & Roberts, 1996; McAdams & friends, 2006). The personality is defined in terms of different characteristics and factors from various meanings. The personality traits which J Eysenck (1967) implied is defined as extraversion, neuroticism and paranoia with respect to the concept of biological stimuli. As per H. J. Eysenck, various techniques have been employed to open up human stimulation levels. For example, individuals with high personality characteristics of extraversion seek an environment of continuous stimuli; they aim to sustain patterns in stimuli and keep them high. They are therefore talking-oriented, emotional, active, and polite. On the flip side, people seem to be extremely emotional with a higher neurotic personality; they are tentative, upset, insecure, anxious, distressed, and even under normal situations they seem to mistrust people. In addition, androgenic hormones are highly associated with psychotic personality traits. A connection has therefore been discovered between personality and other variables including attention, learning, and therefore the exciting level of memory. Furthermore, in addition, these stimuli were found to have overwhelmed various factors (Daderman, 1999; Erdheim, Wang & Zickar, 2006). While the concept of personality traits is not entirely accepted, there is a broad agreement on five commonly applicable factors which define personality traits taking into account different factors (Goldberg, 1990; Digman, 1990; Costa &

McCrae, 1995, 1997; Ackerman & Heggstad, 1997; Busato et al. 1998; McCrae & Costa, 2005).

The Big-Five Personality Traits

Increased personalism analysis resulted in the development of a measuring tool called Five-Factor Model (FFM) through victimization problem analysis supported adjective-driven queries. The results were found in the analysis of a number of cases. Such stock consists of five factors, particularly extraversion, conscientiousness, agreeableness, openness, and neuroticism/emotional stability (McCrae & John, 1992; Barrick and Mount, 1993; Busato et al., 1998; Heller, decide & Watson, 2002; Burke & Witt, 2004; Harris & Lee, 2004).

Agreeableness

On one side there are stereotypical traits such as kindness, care, self-sacrifice, emotional support and sympathy; on the other hand there are gifts as indifference, aggression, self-concern and envy (Erdheim, Wang & Zickar, 2006; Barrick & Mount, 2001). Persons who are highly friendly in personality are trustworthy, quick, modest, self-sacrificing, while those with little regard exhibit aggressive, competitive, unreliable, stubborn, uncomfortable and suspicious characteristics (Bono, Boles, decide & Lauver, 2002; Graziano, Jensen-Campbell & Hair, 1996).

Conscientiousness

This trait is mostly associated with labor, success-orientation, heed fullness and tenacity (Barrick & Mount, 2001; Erdheim, Wang & Zickar, 2006). The connection of this personality is linked to accountability, organization and performance. Whereas people with a high level of responsibility are committed, optimistic and efficient, people of lower obligations are seemed to be undisciplined, unplanned, inclined to procrastinating and thoughtless (Costa & McCrae, 1995).

Openness

Personals like science and ingenuous creative thought, creativity, divergent thinking, originality, a clear sense of surprise, and sophistication, all include openness (Barrick & Mount, 2001; Erdheim, Wang & Zickar, 2006). Of the five broad traits of personality, this characteristic has the best psychological dimension in this respect: imaginative, innovative, swaggering, ambitious, original and self-reflecting people with a high degree of openness to creation, conservative and ancient people who are considered uncaring (Costa & McCrae, 1995; Bond et al., 2002).

Extraversion

This is based on one of the five factor personality characteristics which includes self-assurance, social will, communicativeness, aggression, and the love of ambition (Barrick & Mount, 2001). Individually people with a high degree of socialization are favorably, emotionally, enthusiastically, dominantly, assertively and caring for others, whereas people with a poor amount of socialization are viewed as introspired, timid, relaxed and generally isolated individuals (Bond et al, 2002).

Neuroticism

Neuroticism can indeed be characterized as a state of agitation, rage, emotion and mistrust (Barrick & Mount, 2001). In adverse emotions such as fault, irritability, disappointment, and fear neurotic people tend to measure. In this sense, highly affected people are nervous, abductees, anxious and disturbed. At the other end, people with low rates of mental disharmony are optimistic and relaxed (Costa & McCrae, 1995).

Learning Styles

It is quite hard to return to a consensus on interpretations of concepts specifically related to the general public in broader perspective. Every time learning is characterized, the cruel essence of the unconscious becomes much harder to come up with a concept that is widely agreed (Shuell, 1986). That being said, the claims that tend to characterize human learning have common ground. First and foremost, learning requires certain behavioral changes resulting through observations (Taylor & Mac Kenney, 2008) that take place across time (Schunk, 2012). Lafrancois (2000) has restricted the definition by stating that learning should be addressed if a fairly permanent transition is not the result of ripening, exhaustion, medications and injuries of physical nature. Through these entirely opposing viewpoints, we could infer that learning may be a reasonably persistent shift in human actions happening across time, as a result of normal interactions that people encounter in general. Learning is considered a form of thinking and understanding in the literature concerned. Learning method consist of procedures such as shallow or intense data processing, systematic and serial information management, comprehensive collection, preservation and systemic retrieval (Busato et al., 1998).

The way people go in the steps of knowledge and information gained and interpreted may be found in learning styles (Ekici, 2013). As a result, the most common styles of education are divided into 3 categories; deep knowledge and information processing, acquisition and simplistic information. As a result, the most common styles of education are divided into 3 categories; deep knowledge and information processing, acquisition and simplistic information. Students who possess extensive performance orientated attitude towards data collection are materialistically guided by the gift that can benefit from a high output in terms of learning behaviors. Ultimately, students who follow synthetic styles emphasize the least amount of effort required to ensure success.

Styles of learning have indeed been characterized as various forms of thought and information handling Wilsfok (2009). There are different working forms and styles like group work and personal work. The teacher preparation can be achieved through worksheets and firm instructions, or through research projects which are inspired by themselves. Individual learning happens when each student is alone and isolated from other students and means knowledge and advantages that the instructor will pass to the student. Teacher emphasis is this kind of learning, as teachers provide the majority of information sources, encouragement, suggestion and reviews. Students should work independently and have accessibility to materials and services. Evaluation is typically measured on the basis of a variety of factors and learning is advantageous individually. Collaborative learning takes place when learners collaborate to accomplish a shared objective, where they function in small groups or strata and communicate with one another. Collaborative learning is a group work strategy, reducing the frequency of such stressful circumstances and enhancing the awareness and fulfillment that comes and results from working with a high-performing team. The efficient collaboration of higher education has been confirmed by a large and rapidly growing body of investigation (Felder, 2006).

Material and Methods

Quantitative approach was used on the current research for the investigation of the effect of personality traits in styles of learning. For the purpose of data collection and study population of 400 students were chosen from GC University of Faisalabad regardless of their programs and gender with the use and help of convenience sampling technique.

Instrumentation

To gather the students' opinion on the effects of personality traits on learning styles, the instrumentation was used in Big Five Inventory scale and in Grasha-Riechmann Student Learning Styles Scales. Furthermore it was translated into Urdu to get opinions in true spirit by ensuring its validity and reliability.

Validity and Reliability

With the help of expert's opinion, the authenticity of questionnaire was confirmed. In order to deduce the reliability of data to respondents, 30 students, who were not included in the study, were used for the pilot testing. The value of 0.92 was observed for reliability.

Data Collecting Procedure

Researcher himself travelled to GCUF for collecting data. Researcher distributed the survey scale among the students and provided necessary

instructions for filling-up scale in the presence of their teachers. After 40 minutes, scale was collected from the students.

Results and Discussion

Data of 400 students were entered in the SPSS file. First of all, exploratory factor analysis was run to make factors of the scale. Scale was divided into 7 sub-scales (5 sub-scales for personality and 2 for learning styles) comprising of 64 items. All statements demonstrated more than 0.40 factors loading, KMO value was 0.84 and reliability was found 0.92. In addition, descriptive (mean and standard deviation) and inferential (correlation and multiple regression) statistics were applied in the analysis of the results.

Table 1
Central tendency and Standard Deviation of respondents regarding effect of personality traits on collaborative and competitive learning styles

Factors	N	Mean	S.D
Extraversion	400	2.9191	1.26156
Agreeableness	400	2.9575	1.23623
Conscientiousness	400	3.3525	1.26814
Neuroticism	400	3.3971	1.40962
Openness	400	3.3690	1.30697
Collaborative	400	3.5059	1.27852
Competitive	400	2.7584	1.49174

The wise mean and standard component deviations of responses are indicated in Table 1. The central point is 3.00 below 3 middle values which indicate a trend of disparity among respondents and 3 middle values which reflect a trend towards agreement. Furthermore, collaborative learning style's mean value (3.5059) is greater than the mean value (2.7584) of competitive learning style.

Table 2
Pearson's Correlation among the five factors of personality traits with the collaborative and competitive learning styles

Factors	A	B	C	D	E	F	E
Extraversion	1						
Agreeableness	.98**						
Conscientiousness	.96**	.96**					
Neuroticism	.98**	.97**	.95**				
Openness	.96**	.94**	.95**	.98**			
Collaborative	.95**	.92**	.96**	.96**	.98**		
Competitive	.94**	.95**	.90**	.91**	.86**	.85**	1

** . At the level of 0.01 the Correlation is significant (2-tailed). A = Extraversion, B = Agreeableness, C = Conscientiousness, D = Neuroticism, E = Openness, F = Collaborative

To measure the correlation among the aspects of Agreeableness, Extraversion, Neuroticism, Conscientiousness, Openness, Collaborative and Competitive a Pearson's r was computed. At the level of $p < .001$ which is significant there was a solid constructive correlation between variables. Overall, the relationship among these factors of personality traits and collaborative, personality traits and competitive learning styles was found significantly strong.

Table 3
Multiple Regressions predicting the effect of personality traits on Collaborative learning style

Factors	B	t-value	p-value
Extraversion	.313	5.990***	.000
Agreeableness	-.560	-11.484***	.000
Conscientiousness	.516	15.991***	.000
Neuroticism	.065	1.145	.253
Openness	.623	13.567***	.000
*** $p < .001$, ** $p < .01$, * $p < .05$		R ² = .983	F = 4442.145***

Multiple regression was run to check the effect of personality traits on collaborative learning style and the results included with $F = 4442.145$, $P = .000$, $df = 5, 394$ and $R^2 = .983$. It was observed that personality traits had positive strong effect on collaborative learning style and that was statistically significant $P = .000$, except Neuroticism which is found $B = .072$ insignificant $P = .253$ and Agreeableness with $B = -.541$ which is significant.

Table 4
Multiple regressions predicting the effect of personality traits on Competitive learning style

Factors	B	t-value	p-value
Extraversion	.787	7.139***	.000
Agreeableness	.984	9.571***	.000
Conscientiousness	-.060	-.876	.381
Neuroticism	.116	.971	.332
Openness	-.691	-7.132***	.000
*** $p < .001$, ** $p < .01$, * $p < .05$		R ² = .943	F = 1305.838***

Table 4 indicates that check the effect of personality traits on competitive learning style and the results included with $F = 1305.838$, $P = .000$, $df = 5, 394$ and $R^2 = .943$. It is observed that personality traits have positive strong effect on competitive learning style and that this is statistically significant $P = .000$, except conscientiousness $B = -.876$ and openness which is found $B = -7.132$ significant.

Conclusion and Discussion

Our study establishes interesting results regarding the impacts of personality traits on collaborative and competitive styles of learning. Component

wise mean and standard deviation of responses reflect that collaborative learning style's mean value is greater than the Competitive learning style's mean value which shows that students are keenly interested in collaborative learning style having the personality traits of this learning style. Cooperation also facilitates relationships between individuals, increases social support, and enhances self-esteem (Prince, 2004). The Pearson Correlation has been measured and a significant relationship has been established in order to explain the dynamic relationship between personalities and learning styles. Furthermore, Multiple Regression showed that Factors of Personality traits like agreeableness, extraversion, conscientiousness and openness are contributing their part in effecting collaborative learning style except neuroticism, while in competitive learning two factors, conscientiousness is not effecting personality traits significantly.

Our results make an important contribution by revealing the fact that students of G.C. University Faisalabad are less interested in competitive learning style as compare to collaborative learning style. Good Social behavior enhances students' academic achievements (Albert, 2009). In GC university students have strong positive social behaviors which have proved with the conduction of this study. Students of this University possess less traits of competitive learning style like consistent, careless, detach and reserved. Moreover Johnson, Johnson and Smith (1998) explored that cooperation improved students learning outcomes relative to individual work across the board. The study concluded that no significant gender-based differences in responses were found. Furthermore, correlation between five factors of personality traits and two learning styles was found strongly significant which indicates that personality traits do effect on learning styles of students. Furthermore, there has been a clear association between five personality factors and two types of learning, which suggests that personality characteristics influence students' types of learning. While, students of GCUF having personality traits like inventive, efficient, friendly, energetic ,confident are more inclined towards collaborative learning, on the contrary, those who possess personality traits like consistent ,careless ,reserved ,detached and nervous show their more trend towards competitive learning style as compare to collaborative learning style.

Recommendations

1. Collaborative opportunities of work should be provided to student's at large extent to flourish and strengthen cooperative personality traits.
2. Group activities must be assigned to learners.
3. Policy makers should develop curriculum according to the personality traits, trends and inclination of the students' minds.
4. Social training of students must be focused for better adjustment in society.
5. Organizational and managerial skills should be established among students for personality development.
6. Lectures of the teachers must be informative and effective to improve students' learning.

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