EVALUATING BIG FIVE PERSONALITY TRAITS AND LEARNING STYLES OF ARTS AND SCIENCE COLLEGE STUDENTS

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Abstract

Objective: The purpose of this research is to determine the important association between personality traits and learning styles among Arts and Science College students. The study's overall population consists of 100 undergraduate students chosen at random from CMS College of Science and Commerce in Coimbatore, Tamil Nadu.

Methods: The research tools were the Memletic® Accelerated Learning Style Inventory (Version 1.2) and the Neo-Big Five Personality Inventory. Constant measurements of Descriptive statistics, Chi-square test, T-Test, and ANOVA were used to assess participants' personality traits, learning style dispersion levels, and the correlations between these two variables.

Results: The cluster analysis results indicated two distinct personality profiles, and the subjects appeared to be evenly divided between these two groups. The findings demonstrated a link between learning styles and personality traits.

Conclusion: To observe and conclude the area of research to find out the maximum of the arts students are female categories with extraversion personality and maximum of the students using are logical learning style and minimum of respondents are solitary learning style.

Keywords: Learning style, Personality, Arts & Science Students, Memletic Learning Style Inventory, Neo-Big Five Personality Inventory

Introduction

The quality of a student's thinking is important for learning and may influence their educational outcomes. The ways in which arts and science college students receive, encode, recall, organize, and apply the knowledge they acquire differ; some are conscientious learners, while others process material more superficially. Are there distinctions in preferred learning modes and learning personality features in arts and science students? The relationship between personality traits and learning styles in arts and science students. The big five personality traits and learning styles are both likely to have a substantial impact on

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the education of Arts and Science students. The big five personality traits are one of the best accepted and most commonly used models of personality in academic education field. The big five come from the statistical study of responses to personality items.

Evidence also suggests correlation between learning styles and big five personality traits in arts and science college students. For instance, relative to shallow processors, deep processors are more likely to use appropriate study methods, draw conclusions effectively, and have a stronger internal locus of control. Deep processors are also more likely to be conscientiousness, intellectually curious, extraverted and emotionally stable. Thus, learning styles and personality traits appear to be connected, although how they jointly influence the arts and science college students. Personality is defined as an inborn temperament and features arising in different situations and a combination of the characteristics of a person which separate him/her from other people (Phares, 1991). According to another definition, personality is the unique features of every human being; exhibition of characteristic adaptations; unique identifications towards life and a set of cultural differences (Hogan, Hogan & Roberts, 1996; McAdams & Pals, 2006). As can be understood from the definitions, personality is discussed in terms of specific traits and factors. The personality traits which were put forward by Eysenck (1967) on the basis of biological stimuli are classified as follows: extraversion, neuroticism, and psychosis. According to Eysenck, being open to stimulation levels in people bring out different strategies. For example, those with high extraversion personality trait look for an environment with continuous stimuli; they try to keep stimuli trends higher. Consequently, they carry talkative, sociable, active, friendly qualities. On the other hand, people with high neurotic personality trait show intense emotional reactions; they are worried, anxious, shy, nervous, depressed and they tend to distrust other people even in normal times. In addition, psychotic personality traits are considered to be associated with the androgen hormone.

Review of literature

Material for the review was explored from the databases like Elsevier, Eric, Sociological Abstracts, PSYC INFO, EBSCO Host and Medline. Though many thinkers have been doing research on learning styles for years, the American psychologist, Witkin (1962), was the pioneer of the concept of field-dependency and field-independency. Since then, many scholars came out with different style dimensions.

Ehrman and Oxford (2010) discussed 9 major style dimensions appropriate to L2 acquisition. Among these, perceptual (sensory or physiological) preferences consist of visual, auditory, kinesthetic and tactile dimensions are closely related to the learning environment. Visual learners rely on their sight to gather information. They categorize knowledge in terms of spatial interrelationships among ideas and

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accumulate it graphically. Learners who prefer auditory style learn through listening to lectures. They learn well when they are able to hear themselves express ideas.

(Nilson, 2013) has suggested that Tactile and kinesthetic styles may seem to be same but there is a subtle difference between them. While Kinesthetic deals with the movement of the whole physique, tactile deals with touching and using the objects. For example, tactile learners like to do projects, experiments etc., But kinesthetic learners like to involve in classroom experiences such as role – play and group discussion. Learners, who prefer working in a group, learn from their peers.

Afzaal et al., (2019) has showed that openness and agreeableness was the dominant personality trait. In addition, the extraversion personality trait has no relationship with any of the learning styles. On the other hand, a strong correlation exists between both openness to experience and the agreeableness personality trait with kinesthetic learning style that further suggests that students who are more open and accept discussions are ready to learn when it involves teaching/learning based on a hands-on practical approach and as such learn by doing. Similarly, students with a conscientiousness personality have reading as their dominant learning style.

Barron et al. (1998) has measured that the research on Project-Based intervention on the sixth graders. The result exposed that the scores of the students on the Standard Geometry test stepped up by approximately 10% points. Their performance increase when they share their ideas. Individual learners dislike working in groups. They may not be able to collaborate with their peers. They achieve better if they do not mingle with others.

Research Problem

The present research aims to study the significant relationship between personality traits and learning styles of Arts and Science College students in Coimbatore city, Tamilnadu.

Objectives of the study

1. To investigate the socioeconomic situation of Arts and Science College students.

2. To determine the sort of learning style preference that influences personality features in Arts and Science College students.

Hypotheses

- * There will be a substantial relationship between the respondent's gender and personality traits.
- There will be a significant relationship between the respondent's gender and learning style; and
- There will be a significant relationship between the respondent's department and learning style preferences.

Research Methods

The study's population is drawn from CMS College of Science and Commerce in Coimbatore, Tamil Nadu. CMS College of Science and Commerce has 2550 students (2021-2022). The researcher picked 100 sample respondents from the overall sample. Researchers chose two distinct streams: arts and science. The sample of 100 students was stratified randomly selected and consisted of 50 Arts and 50 Science students. The sample respondents were chosen using a convenient sampling procedure.

The current study used a 'descriptive' research design. Because the study attempted to explain the existence of learning styles preferences influencing the personality variables of arts and science college students in Coimbatore. This study's descriptive portion has its own aims and pre-planned technique to meet those objectives.

The study necessitates the collection of both primary and secondary data. A questionnaire was used to obtain primary data. Secondary data were gathered from both published and unpublished sources, including theses, dissertations, e-journals, and magazines.

Tools

Memletic Learning Style Inventory

Memletic® Accelerated Learning Style Inventory (Version 1.2) was created in 2003 by Memletic. This questionnaire is made up of 70 items or statements. Participants are asked to circle their preferred replies on a Likert-scale where 0 means the description sounds nothing like them. 1= the description sounds a little bit like you. 2= the description accurately describes you. This tool addresses seven aspects of learning style. These dimensions are followed by visual, aural, verbal, physical, logical, social, and solitary.

Neo-Big Five Personality Inventory

The Costa and McCrae (1992) generated this inventory. There were 60 items or statements in this questionnaire. The student responds on a five-point Likhert scale ranging from 'Strongly Disagree' to 'Strongly Agree', with five items assessed in reverse order. This questionnaire assesses five personality dimensions: extraversion, neuroticism, openness to expression, agreeableness, and conscientiousness. The 44 statements measure Extraversion, Neuroticism, Openness to Experience, Conscientiousness, and Agreeableness. This five-factor model of personality represents a strong paradigm in personality research and is widely acknowledged as the primary taxonomy for defining intellectual traits of personality.

Results

Analysis and Interpretations

TABLE 1

SOCIO – ECONOMIC PROFILE

S.N	Sources	Variables	Frequency	Percentage		
1.	Gender	Male	40	40.0		
		Female	60	60.0		
		Total	Total 100			
2.	Department	Arts	50	50.0		
		Science	50	50.0		
		Total	100	100.0		
3.	Age	17-21	89	89.0		
		22-25	11	11.0		
		Total	Total 100			
4.	Year of the study	First year	29	29.0		
		Second Year	45	45.0		
		Third Year	26	26.0		
		Total	100	100.0		
5.	Family Type	Joint family	40	40.0		
		Nuclear Family	60	60.0		
		Total	100	100.0		
6.	Area of Residence	Urban (City)	44	44.0		
		Rural (Village)	56	56.0		
		Total	100	100.0		
7.	Learning Style	Visual	16	16.0		
		Verbal	10	10.0		
		Aural	16	16.0		
		Physical	12	12.0		
		Logical	22	22.0		
		Social	18	18.0		
		Solitary	6	6.0		
		Total	100	100.0		

8.	Personality	Openness	22	22.0
		Conscientiousness	28	28.0
		Extraversion	17	17.0
		Agreeableness	22	22.0
		Neuroticism	11	11.0
		Total	100	100.0
9.	Sports Students	Yes	20	20.0
		No	80	80.0
		Total	100	100.0
10.	Extracurricular Activities	NCC	13	13.0
		NSS	43	43.0
		Red cross	22	22.0
		Not interested	22	22.0
		Total	100	100.0

Source: *Primary data*

Gender of the respondent was explained in the preceding table. It was discovered that 40 respondents (40%) are male and 60 responders (60%) are female. The majority of responses (60%) are female.

Department's strength was disclosed in the table above. It is discovered that 50 respondents (50%) are students of the arts and 50 respondents (50%) are students of science. A maximum of two departments equals student respondents.

Age of the respondents: It was discovered that 89 respondents (89%) are between the ages of 17 and 21, while the remaining 11 respondents (11%) are between the ages of 22 and 25. The majority of respondents (89% are between the ages of 17 and 21).

Year of the study: It was discovered that 29 respondents (29%) are in their first year, 45 respondents (45%) are in their second year, and the rest (26%) are in their third year. Second-year students account for the majority of respondents (45%).

Family Type: It was discovered that 40 respondents (40%) are joint families, while the remaining 60 respondents (60%) are nuclear families. The majority of respondents (60% are nuclear families).

Area of Residence: That area of habitation was measured in the table above. It was discovered that 44 respondents (44%) are urban (city) and the remaining (56%) are rural (village). Villagers account up the majority of responses (56%).

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Learning Style: It was discovered that 16 respondents have a visual learning style, 10 have a verbal learning style, 16 have an aural learning style, 12 have a physical learning style, 22 have a logical learning style, 18 have a social learning style, and 6 have a solitary learning style. The majority of respondents (22%) have a rational learning approach. Solitary (6% of responses) is the lowest level of learning style.

Personality: There are 22 Openness respondents, 28 Conscientiousness respondents, 17 Extraversion respondents, 22 Agreeableness respondents, and 11 Neuroticism respondents. The majority of respondents (28%) have a conscientiousness personality, while the minorities (11%) have a neuroticism personality.

Sports Students: The preceding table revealed that student's sports category. It was discovered that 20 percent of the pupils are in the athletics category, while the remaining 80 percent are not. The majority of students (80%) do not participate in sports.

Extracurricular Activities: It was discovered that 20 percent of the pupils are in the athletics category, while the remaining 80 percent are not. The majority of students (80%) do not participate in sports. It was discovered that 13 respondents are NCC, 43 are NSS, 22 are Red Cross, and the remaining 22 are not interested in extracurricular activities. The majority of responses (80%) are NSS volunteers, whereas the minorities (13%) are NCC students.

TABLE 2

GENDER WITH PERSONALITY TRAITS

Ho: There is no significant relationship between gender of the respondent and personality traits

]		Chi-					
Gender		Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Total	square Value	df	Sig.
Male	Ν	8	10	5	12	5	40			
	%	8.0%	10.0%	5.0%	12.0%	5.0%	40.0%			
Female	Ν	14	12	18	10	6	60	12 205	4	002
	%	14.0%	12.0%	18.0%	10.0%	6.0%	60.0%	15.205	4	.002
Total	Ν	22	22	23	22	11	100			
	%	22.0%	22.0%	23.0%	22.0%	11.0%	100.0%			

Source: Primary data

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The preceding table demonstrated the relationship between gender and personality attributes. A total of 40% of responses are male, with a maximum of 10% having a conscientious personality. 60% of respondents are female, with the highest proportion (18%) belonging to the Extraversion category. The chi-square test result (13.205) at a low p-value of (0.002) shows that the null hypothesis was rejected at the 5% level of significance. As a result, it is possible to conclude that there is a strong association between responder gender and personality features.

TABLE 3

GENDER AND LEARNING STYLE

Learning Style Chi-Gender Total square df Sig. Aural Physical Logical Social Solitary Verbal Visual Value Ν 7 4 5 Male 4 6 8 6 40 % 7.0% 4.0% 4.0% 6.0% 8.0% 6.0% 5.0% 40.0% Ν Female 9 6 12 6 14 12 1 60 17.243 6 .009 % 9.0% 6.0% 12.0% 14.0% 12.0% 1.0% 60.0% 6.0% Total Ν 16 10 16 22 6 100 12 18 % 16.0% 10.0% 16.0% 12.0% 22.0% 18.0% 6.0% 100.0%

Ho: There is no significant relationship between gender of the respondent and learning style

Source: Primary data

Gender and learning style were shown in the preceding table. A total of 40% of respondents are male, with a maximum of 8% having a logical learning style and a minimum of 4% having verbal and aural learning styles. Out of 60% of female responders, the majority (14%) have a rational learning style, whereas the minority (1% have a solitary learning style).

The chi-square test result (17.243) with a low p-value of (0.009) shows that the null hypothesis was rejected at the 5% level of significance. As a result, there may be a strong association between gender and learning style preferences.

TABLE 4

		Learning Style							Chi-			
Department		Visual	Verbal	Aural	Physical	Logical	Social	Solitary	Total	square Value	df	Sig.
Arts	N	8	5	8	6	11	9	3	50			
	%	8.0%	5.0%	8.0%	6.0%	11.0%	9.0%	3.0%	50.0%			
Science	N	6	3	9	11	8	5	8	50	12.41 6	6	039
	%	6.0%	3.0%	9.0%	11.0%	8.0%	5.0%	8.0%	50.0%		.057	
Total	N	14	8	17	17	19	14	11	100			
	%	14.0%	8.0%	17.0%	17.0%	19.0%	14.0%	11.0%	100.0%			

DEPARTMENT AND LEARNING STYLE

Ho: There is no significant relationship between department and learning style preferences

Source: Primary data

That department and learning style were revealed in the table above. 50% of respondents are from the arts department, with a maximum of 11% having a logical learning style and a minimum of 3% having a solitary learning style. A total of 50% of respondents are from the science department, with the majority (11%) having a physical learning style and the minority (3% having a verbal learning style). The chi-square test result (12.41) at a low p-value of (0.039) shows that the null hypothesis was rejected at the 5% level of significance. As a result, it is possible to conclude that there is a substantial association between department and learning style.

Suggestions

The Majority of respondents are female category. The respondents are 17-21 age group (89%). The second year students (45%) are willing to performance in academic. The major students are Nuclear family and we are brought up from the village. In generally maximum of students are using logical learning style and at the same time very minimum using the learning style is solitary. The majority of the respondents are logical learning style (22%). The low level of learning style respondents is solitary (6%). The maximum personality of students was conscientiousness and very low of neuroticism personality. The maximum of respondent are NSS volunteers in we are secured marks in academic performance of 50-59 ranges.

Conclusion

The researcher to find out the conclusion of the study is very important to the core area. In my research to observe and conclude the area of research to find out the maximum of the Arts students are

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female categories with extraversion personality and maximum of the the students using are logical learning style and minimum of respondents are solitary learning style. The chi-square value measured the 95% of significant relationship between the gender and personality traits. The science department students are maximum openness personality implied and also there is a significant relationship between department and personality traits. The respondents are 22-25 age group of students are majority in under graduate of the study we are used to agreeableness personality and minimum of respondents are conscientiousness and neuroticism personality. The science department students are willing to participate the extracurricular activities i.e., NSS and other academic programmers. It academic performances of secured marks in comparatively science department students are get the minimum of first class marks.

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