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Personality Traits and Learning Styles Among Secondary School Students

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Abstract

This study aimed to determine the personality traits and learning styles of secondary students in the Jankipuram district of Lucknow, UP. The total number of participants was 60, who were in the 8th grade. This study was conducted using the descriptive survey research method. Researchers used a self-made tool to verify the learning style of the secondary students based on VARK model, and a five-point Likert scale was used based on Big Five factor theory to determine the personality traits of the students. The result of this study showed that the most preferred learning style was kinesthetics (33.15%), followed by auditory (26.25%), reading/writing (21.66%), and visual (18.95%) styles. These percentage scores show that students love to do activity-based learning. This study also showed that most of the students chose the conscientiousness personality trait (66%), followed by openness to experience (63%) and agreeableness (61.75%), which indicates that secondary students are mostly well organised, curious, and cooperative. Students also preferred normal presence towards extraversion traits (43%), and less preferred personality traits w ere neuroticism (45.37%). This present study highlights that students improve their academic achievement after identifying their learning style and personality traits. Teachers also conduct teaching learning process easily.

Keywords:
Big Five Factor Theory, Learning Styles, Personality Traits, Secondary School Students, VARK Model

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Introduction

Personality, in the opinion of Allport (1961), is a complex organization within a person, a psychological mechanism that produces the characteristic pattern of behaviour, thought, and feelings of individuals. The most common trait taxonomy in

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personality psychology today is the Big Five or Five-Factor Framework (John & Srivastava, 1999; McCrae & Costa, 1999). These five traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience) have been widely replicated across multiple cultures worldwide (John et al., 2008). Learning is a complex and dynamic process, and many psychologists and behavioural scientists view it differently. According to Ormrod (2012), learning is the means through which we not only acquire skills and information but also values, attitudes, and emotions. The student's learning style and personality are assumed to have a direct effect on their academic achievement. In 1987, educational theorist Neil Fleming introduced the VARK learning styles, which represent Visual, Aural, Read/Write, and Kinesthetics. These styles categorise the different ways in which individuals learn, and process new information based on their personal preferences. According to the VARK model, learners are identified by whether they prefer: Visual learning, Auditory learning, Reading & Writing, kinesthetics learning.

Review of Related Literature

Gangadharan et.al. (2025).

The study titled: "The Relationship Between Preferred Learning Styles and Academic Achievement of Undergraduate Health Sciences Students Compared to Other Disciplines at a Middle Eastern University Utilizing the VARK Instrument" compares learning style preferences of undergraduate health sciences students with other disciplines and explores the relationship between the VARK scores and academic performance. They had a cross-sectional study of 347 undergraduate students. Data were analysed by SPSS version 27, which consisted of descriptive statistics, inferential statistics. In the Results, unimodal preferences were most common, ranging from 47.4% to 51.4% in the College of Health Sciences and 11.8% to 15.0% in the College of Law, respectively. Rare, but more common in Health Sciences and Engineering. Auditory (A) was the most preferred unimodal style, while kinesthetics was the least preferred.

Khoirunisa el.al. (2023).

The research about "Analysis of the eighth-grade students learning styles and personality types in learning English at State Junior High School Muhammadiyah 3 Triyoso" is used to analyse and determine the relationship between learning styles and personality types of the eighth-grade students at SMP Muhammadiyah 3 Triyoso. The method of research is descriptive qualitative, with a sample of 8th-grade students A, amounting to 30 students. The instruments used consisted of questionnaires and interviews. Data collected were analysed descriptively and analyzed by correlation analysis to find patterns of relation between learning styles and personality types. The research results indicate that there is a significant correlation between several learning style dimensions and some personality types, for example, between visual learning style (66%) and auditory learning style (33%) and kinesthetic learning style (6%) and certain personality types, namely Introvert and Extrovert.

Lhafra and Abdoun (2025)

"Comparative Study of Learning Style Model Using Machine Learning for an Adaptive E-Learning" proposed an approach to identify learners' learning preferences by integrating the K-means clustering algorithm with the Felder–Silverman Learning Style Model (FSLSM). The study compared four learning style models: Honey-Mumford model, Kolb model, VARK model and FSLSM. The proposed approach was applied to an e-learning platform used by 30 students of the second grade of primary school in a public school in Morocco. Learners' preferences were identified through platform interaction data, including activity choices, participation frequency, time spent on activities and performance in diagnostic activities. The learners participated in two scenarios: an adaptive learning scenario depending on their learning style and a non-adaptive learning scenario. The findings indicated that the academic performance and engagement in the adaptive learning condition were better than the non-adaptive condition, as the average score in the adaptive learning condition was 94.76% while the average score in the non-adaptive condition was 60.94%. The authors suggested that the approach should be tested with larger and

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more varied bodies of learners.

Significance of The Study

The purpose of the present study was to analyse the preferences of Learning Style and Personality Trait of secondary school students. This study described the importance of learning style on students' academic success. This study helps to know the most preferred learning style of secondary students and also assists in knowing the personality traits of students. After defining the learning style of the students, teaching will be easier for teachers. Students also gain knowledge about their personality traits, and they will try to develop their personality for educational purposes.

Objectives of This Study

1. To analyse the preferences of learning styles of secondary school students.
2. To analyse the preferences of the personality traits of secondary school students.

Research Methodology

In this study, the Descriptive survey method was used. All the students of Class VIII in the Lucknow district of Uttar Pradesh comprised the population of this study. A total of 60 students comprised the sample of this study. The researcher selected the number of Schools randomly through Simple Random Sampling; then the researcher selected 60 students through simple random sampling.

Statistical techniques

To analyse the data and draw meaningful inferences, the following statistical techniques were employed: Frequency and percentage analysis. The researcher used a self-prepared questionnaire to conduct this study. VARK learning style questionnaires were used to assess learning preferences, and a five-point Likert scale was used to measure the personality of students.

Data Analysis and Interpretation

Objective 1: To analyse the preferences of learning styles of secondary school students.

Frequency score distribution of learning styles among students-

Visual Style Learners: Very few students scored high in this category; visual learners process information efficiently through diagrams, charts, and visual aids. The frequency of visual style learners' scores is the lowest, with a total score of 182.

Reading Style learners: Students scoring well in this category prefer reading and reflecting on information; they have a note-taking habit, are linguistically strong, and showcase strong analytical and comprehension skills. The total frequency score of students is 208, suggesting that a notable portion of students prefer text-based and analytical learning.

Auditory Style Learners: The total score is 252 for auditory style learners, which shows a strong favour for listening and discussion-based learning. These individuals are good at recalling names and different phone numbers they heard aloud. They often explain ideas out loud, read materials aloud, and sometimes whisper to themselves to process information.

Kinesthetic Learners: These Students prefer hands-on learning and practical experiences, which help them to retain information better through physical engagement. These types of students perform movements while studying, such as pacing or standing at a desk or taking a walk around the classroom; they take frequent, short breaks between long study sessions. The highest total score of kinesthetic learning style students is 317.

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Fig 1.1- Frequency score distribution graph of learning styles

Percentage Distribution of learning style among students-

Kinesthetic Style: It is the most preferred learning style among students, scoring 33.15%. Those students who prefer the kinesthetic learning style learn through hands-on activities.

Auditory Style: The preferred auditory learning style among students is 26.25.

Reading Style: 21.66%; these students like reading written information and typically engage in self-study to improve their performance.

Visual Style is the least preferred learning style among students, with a percentage of 18.95, indicating that fewer students rely on visual learning aids.

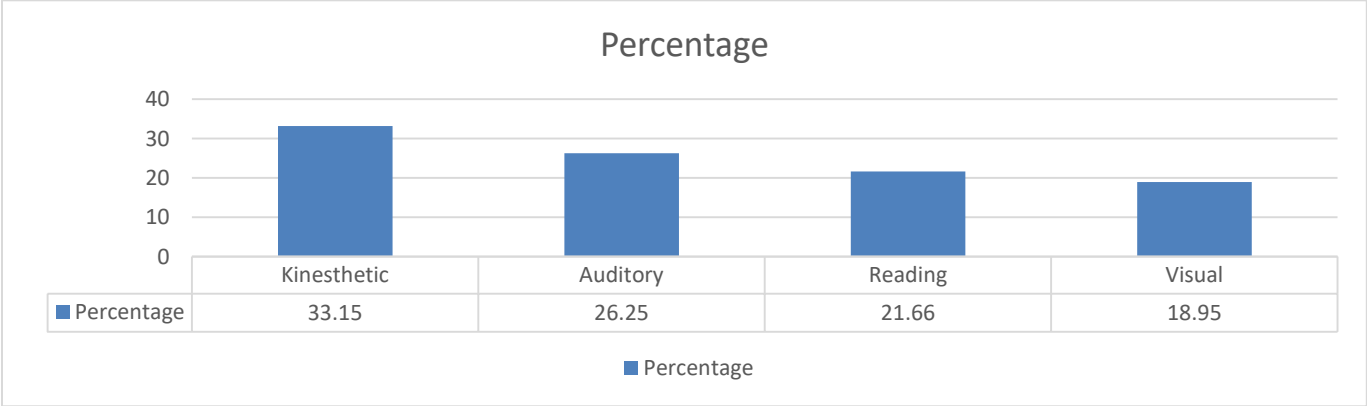


Fig. 1.2- Percentage distribution of learning style among students

Objective 2: To analyse the preferences of the personality traits of secondary school students.

Frequency scores of personality traits of students -

Conscientiousness: This personality trait scores the highest score of 1584; students with this personality are disciplined, dedicated towards their goals, responsible, organized, and hard-working towards their dreams and academics.

Openness: Students with this personality are curious, imaginative, and open to exploring new ideas and experiences. Total score is 1512, suggesting that many students exhibit curiosity, creativity, and willingness to explore new ideas.

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Agreeableness: The total score of students possessing this is 1482, reflecting that these students are cooperative, empathetic, and prefer harmonious interactions with others; they are typically polite, kind, and altruistic. They favour collaboration and possess harmony rather than discord.

Extraversion: This personality scores moderate numbers compared to others; students having this type of personality trait are outgoing, energetic, expressive and socially active. The total score is 1032.

Neuroticism: This is the personality trait with the lowest score; these students exhibit emotional instability frequently in their day-to-day life; they feel anxiety and face moodiness. The lowest total score is 1089.

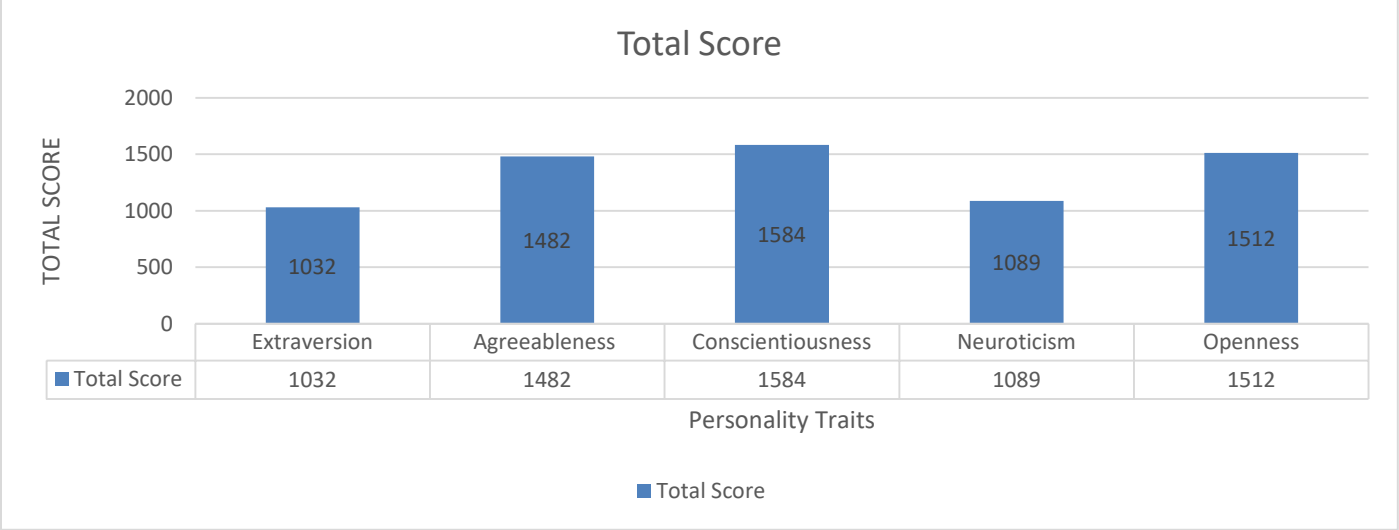


Fig. 2.1- Frequency score distribution of personality traits among students

Percentage distribution of personality traits among students-

Conscientiousness 66% is the most prevalent trait, indicating that most students are disciplined and goal oriented.

Openness is 63%, suggesting that these students exhibit curiosity, creativity, and a willingness to explore new ideas. They show Eagerness to try new activities in their daily life and break routines.

Agreeableness scores 61.75%, which is also prominent, showing that a significant portion of the students are cooperative, empathetic, and socially adaptable in behaviour.

Extraversion scores 43%; thus, these students appear moderately high, indicating that many students display outgoing and energetic behaviour.

Neuroticism personality trait is the least dominant, at 45.37%, which indicates that fewer students display emotional instability; these students usually suffer from anxiety.

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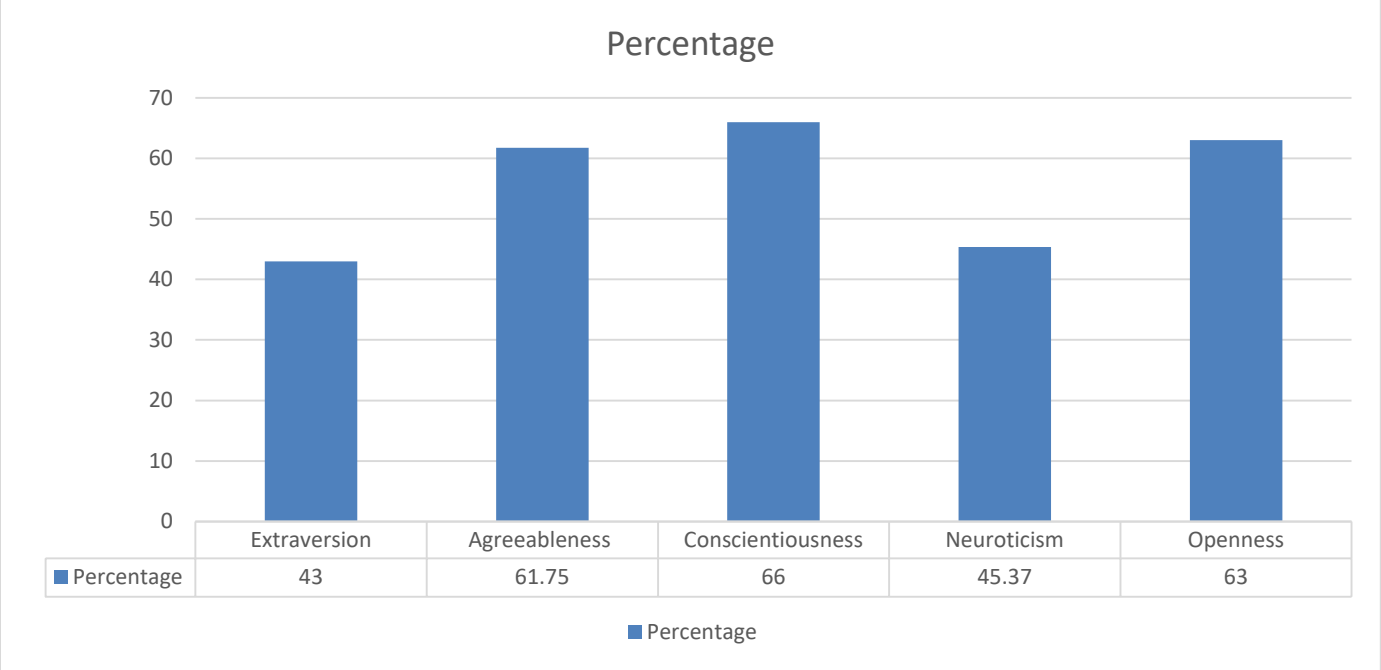


Fig. 2.2- percentage distribution graph of personality trait among students

Findings and Discussion

The results showed that Kinesthetics learning style was the most preferred learning style among students, with 33.15% of the total sample preferring this learning style. This indicates that a significant percentage of students require the aid of movement, physical activity, real-life scenarios, and practical experiences. According to Hawk and Shah (2007), kinesthetic learners prefer hands-on approaches, practical demonstrations, real-life examples, and learning through physical activities. The second most common learning style was auditory learning style accounted for 26.14% of the students. These learners are inclined toward listening-based learning. They learn best from discussions, lectures, oral presentations and verbal directions (Hawk & Shah, 2007). Reading/Writer learning style made up 21.66% of student preferences. Students who liked this style were better at learning with written material, note-taking, reading and structuring material in written form. They are usually text-driven and independent learners (Hawk & Shah, 2007). The least preferred mode was visual learning, with only 18.95% of the students declaring it as their dominant mode. These learners like diagrams, charts, mind maps, and visual aids (Hawk & Shah, 2007). This is the smallest group but has specific learning needs and requires visual representation to learn.

The most frequently observed personality trait was conscientiousness (66% high). These learners generally are organized, responsible, disciplined and goal oriented. They show a lot of responsibility and are typically motivated and determined learners. According to McCrae and John (1992), conscientiousness represents one of the five major dimensions of personality and is associated with organised and responsible behaviour. Openness to Experience was also very common, with 63% of students having scores that were significantly high. This means that pupils are inquisitive, creative and willing to try out new activities and ideas. Are generally flexible thinkers and open to alternative ideas. In terms of agreeableness, 61.75% of the participants were observed, indicating that many students have traits such as empathy, cooperation, kindness, and harmony in a group. These characteristics are consistent with the conceptualisation of agreeableness as a personality dimension associated with cooperative and compassionate behaviour (McCrae & John, 1992) The proportion of students with extraversion was 43%, indicating that the sample had moderate sociability, enthusiasm and outgoing behaviour. These students are probably more suited to group or cooperative learning. The

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least dominant personality type among the students was the neurotic personality 45.37% of students showed signs of emotional instability (McCrae & John, 1992). This indicates that most of the students in the sample were emotionally balanced and a smaller proportion were characterized by anxiety, moodiness, and irritability.

Conclusions

The purpose of the present study was aimed at exploring learning styles and personality traits of secondary school students and their possible association. The results have yielded some significant observations that further the understanding of student learning and student personality. The results revealed that the Kinesthetic learning style is the most dominant among the participants, meaning that most of the students are the ones who like learning by moving and doing activities. It shows that there is a definite demand to integrate more forms of experiential learning into the classroom. The Auditory and Reading/Writing styles were next in preference, and the Visual learning style was the least preferred of the group. Personality dimensions showed that the most common traits were Conscientiousness, Openness to Experience and Agreeableness, indicating that the majority of students were organised, curious and cooperative. Extraversion and Neuroticism were found in moderate to low degrees, which indicated that these students were mostly emotionally stable and moderately extraverted.

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