



Psychological Factors and Measurement in Education: A Review

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ABSTRACT

The way a person views social things is referred to as their social attitudes. Individual attitudes that are so substantially influenced by group interactions as to become extraordinarily stable and standard within the group are referred to as collective attitudes. Adjustment is the capacity to adapt to changes in one's physical, professional, and social environment. In other words, adjustment is the behaviour of addressing conflicting expectations or wants that are hindered by contextual challenges. Both people and pets adapt to their surroundings. The attitude is initially a trial reaction, which is an interrupted replacement behaviour that appears inside a lacklustre adjustment response, but it has the potential to become the organism's long-term set. The better we treat society and its constituents, the greater response we receive from them, and consequently, the better and more comfortable our social existence becomes. This paper attempts to look into the various dimensions of adjustments and its measurement through Mahalanobis Distance.

Keywords: Educational Psychology, Intelligence, Creativity, Social Adjustment, Mahalanobis Distance

Social Adjustment and its Factors

American Psychological Association (APA) says, 'Social Adjustment' is "accommodation to the demands, restrictions, and mores of society, including the ability to live and work with others harmoniously and to engage in satisfying interactions and relationships." The role of an individual's characteristics (gender, cognitive ability, personality traits etc.), family environment (maternal education, self-reported parenting practises) in social adjustment to school, as reflected in teacher reports, and so on, all play an important role in showcasing social competence and integrating and externalising behaviours. This paper examines two major dimensions, namely intelligence and creativity, in order to comprehend an individual's social adjustment.

Intelligence, Creativity and Social Adjustment

How individuals deal with or handle the requirements and difficulties of daily life is referred to as the psychological process of adjustment. It denotes compliance and is concerned with how an individual adapts to his or her environment and daily demands. Psychological adjustment improves the organism's capacity for handling internal and external wants, desires, and conflicts, as well as external expectations and pressures. Numerous studies have been conducted, and the findings show the existence of social beings capable of adapting to their surroundings and participating in society. According to a survey, there are significant gender differences among secondary school students, but no differences were unearthed in terms of where they live. Gender inequalities are a major issue in all aspects of adjustment, including family, peer, and societal adjustment. To address this, there is a need for improvement in coping mechanisms among secondary school kids (Pramanik, et al. 2014).

Undergraduate students at Sidho-Kanho-Birsha University in India were studied on the basis of adjustment skills of college students in relation to gender, study stream and social intelligence. Results showed that students in the humanities and sciences did not significantly differ in terms of their capacity for adjustment, but did differ in social intelligence compared to one another (Kundu, et al. 2015). Undergraduate students in the Purulia District of West Bengal, India showed no significant differences in attitudes towards social adjustment between male and female, rural and urban, male and urban male, and female and urban female students (Ansary, 2022).

Social scientists have found a substantial correlation between IQ and height, but no significant correlation between BMI or emotion (Karmakar, et al. 2016). A study of upper secondary school students discovered a link between emotional intelligence and adjustment, demonstrating how emotional intelligence influences peer, home, and school adjustment. As a result, students with high emotional intelligence may be able to successfully navigate life's challenges (Kar, et al. 2016). Social scientists and educators have been concerned about leadership styles and adaptability. A study of undergraduate West Bengal students investigated the relationship between leadership style and adjustment ability. The findings revealed a strong relationship between West Bengali undergraduate students' leadership style and their ability to adjust. This demonstrates that more adaptable students may be able to lead more effectively, as leadership requires both teamwork and psychological adjustment with others (Kar & Saha, 2021). A study looked into the personalities and social adjustment of Chinese and European American adolescents. According to the findings of this study, Chinese American and European American adolescents became more similar to each other over time as a result of developmental and acculturative processes (Huntsinger, C. S. & Jose, P. E. 2006).

A study looked at parenting practises and child social adjustment: multiple influence pathways. This study discovered that parenting practises were related to group social behaviour, peer dislike, and child social problem-solving abilities (Domitrovich, C. E. & Bierman, K. L. 2001).

Creativity is no longer a biological constant. Creativity is the most coveted quality of the human intellect (Saha & Maji, 2013). It is regarded as a 'variant' that is constantly influenced by environmental, socioeconomic, and cultural factors. Finding and developing a child's creative potential in the classroom has become increasingly important as psychologists and educators have recognised the importance of creativity in human development. The concept of 'creativity' is becoming more widely accepted, and everyone is creative to some extent. A variety of techniques can be used to see and accurately measure these. This ability can be fostered by programming and structuring an educational environment that encourages the development and expression of creativity. Thus, educators have both the opportunity and the difficult responsibility of discovering and nurturing children's creativity. In reality, a school is a place where concerted efforts can be made to lay the groundwork for developing in children the fundamental abilities, skills, attitudes, and motivations required for self-realization and creative life achievements (Saha, 2012).

Being aware of issues such as problems, deficiencies, knowledge gaps, missing components, disharmonies, and so on is an essential step in the creative process. Identifying the problem, looking for solutions, speculating or formulating hypotheses about the inadequacies, testing and retesting these hypotheses, possibly redrafting them, and communicating the results are also steps (Saha, 2013). According to one study, boys are more creative than girls, and there is no discernible difference between students in rural and urban areas. There is also no discernible relationship between residence and gender in terms of creativity (Paul, et al. 2017). Another study was conducted in Birbhum District, West Bengal, to compare and provide data on the socioeconomic status, environmental awareness, and creative abilities of higher secondary school students aged 16 and older. A random data collection was conducted on 300 students from eight higher secondary schools in the Birbhum District. The findings revealed that there are no discernible differences in socioeconomic status (SES), environmental awareness, or creativity between male and female students (Saha, et al. 2012).

Mahalanobis Distance in Education: A Measurement between two Data Sets with several variables

These works have been studied in order to comprehend the significance and necessity of such a strong measure, which compares a number of variables between two groups by calculating a single dimensionless number.

Ahmed et al. (2020) in his *Application of Mahalanobis A_2 on Achievement Tests on Mathematics: A Study on Higher Secondary Level Students* talks about the nature of mathematical achievement for two groups of higher secondary level pupils is the subject of a study project. This study aimed to determine the differences in math achievement for various students in various grades at the higher secondary level in Assam, India. Data was collected from two sets of data and the final results of an achievement test for 11th grade were analyzed by Stratified Random Sampling. The findings show that mathematical achievement is declining similarly for two groups of students from different colleges.

Sen & Pal (2020) in their *Mahalanobis Distance: A Study on Achievement of Science and Mathematics* talks about another piece of research that examines how achievement-related problems can be analysed using the Mahalanobis Distance method, was recognised. The subject area of the study is evaluation in education. Two sets of data were prepared for calculating the distance, one for the learners of seventh grade and the other for the eighth grade, Stratified Random Sampling. The issue is the achievement of two student groups, seventh and eighth graders from three different types of schools, in mathematics, physical science, and life science. Mahalanobis Distance is a test of the dynamical nature of student achievement in three subjects for two groups of learners. It was discovered that there are significant differences in the nature of achievement for the group of subjects between the various student groups in the majority of cases.

Mahato & Sen (2021) in their research work *Application of Mahalanobis Distance to Determine the Dynamical Nature of Academic Stress, Self-efficacy in Mathematics and Anxiety in Mathematics* Mahalanobis Distance is used to measure the difference between two dependent variables: Academic Stress, Self-efficacy in Mathematics and Anxiety in Mathematics using Stratified Random Sampling. The study focused on educational psychology and found that the dynamical nature of the three dependent variables for various groups of independent variables was not significantly different.

Gorain, et al. (2021) in their paper *A Study on Internet Dependency, Social Isolation and Personality Using Mahalanobis Distance* Social Isolation is an important factor in the development of the internet in the 21st century, as it has a negative impact on human personality and can lead to people withdrawing from society. Mahalanobis Distance is used to compare the psychological features of postgraduate students, taking into account factors such as Internet Dependency, Social Isolation, and five Personality Factors. Social Isolation is an important factor in the study of 250 PG students from Sidho-Kanho-Birsha University. It is divided into two independent variables: sex (male and female) and stream (arts and science). The findings of the study show that there are no appreciable disparities in the dynamical nature of male and female students, as well as students studying the arts and sciences.

Ahmed, et al. (2021) studies on *Comparison of Achievement of Higher Secondary Subjects Among Tribal and Non-Tribal Students of Bodoland Territorial Region, Assam, India Using Mahalanobis Distance*. This investigation compared performance in four distinct disciplines: Bodoland Territorial Region (BTR), Assam, India students from two groups competing in biology, physics, chemistry, and mathematics. The study evaluated the three categories: males against girls, tribal versus non-tribal, and rural versus urban. Data was collected using a random sampling technique and 894 Tribal and 684 non-Tribal students were selected from BTR to pass higher secondary in 2020. The Mahalanobis Distance is used to compare the dynamic character of achievement between two groups of students in four topics. The study's findings revealed that there is no discernible variation in the dynamical character of achievement for all of the aforementioned groups.

Ahmed, et al. (2022a) in their paper *A Comparative Study on Academic Achievement of Mathematics and English with Other Subjects of Secondary Level in BTR of Assam, India, Using Mahalanobis Distance deals with* a current study comparing the academic performance of two student groups in the

Bodoland Territorial Region (BTR), Assam, India, in four different subject areas: mathematics, english, general sciences and social studies. The subject area of the study is evaluation in education for boys and girls from different secondary and higher schools. Mahalanobis Distance (MD) was used to compare the dynamic character of success between two groups of students in four disciplines. The findings showed that there was no significant difference between males and girls when students from rural and urban schools, tribal and non-tribal communities, tribal boys and relations, and nontribal girls were taken into account.

Ahmed, et al. (2022) in their research work *Comparison of Scholastic Attainment in English and Math amongst Other Studies at the Higher Secondary Level: A Study using Mahalanobis Distance* shows an investigation on how the Mahalanobis Distance (MD) is used to compare the academic performance of two groups of higher secondary students in the Bodoland Territorial Region (BTR) regions of the Indian state of Assam in five different subject areas, including mathematics, english, biology, physics, and chemistry. The study focuses on the five main groupings of students from tribal and non-tribal origins: boys and girls, urban and rural, urban boys and rural boys, and urban girls and rural girls. The Subject area of the study is evaluation in education, using the MD to calculate the variance in student achievement. This study examined the achievement of 1504 class XII students from tribal and non-tribal backgrounds, as well as boys and girls from rural and urban areas, who took English, Mathematics, Biology, Chemistry, and Physics subjects and passed in the year 2020. 32 higher secondary schools, junior colleges, and colleges were chosen using a stratified random sampling technique. The results showed that urban students had superior conditions than rural students, but there was no significant difference in terms of achievement. This effect is applied to both urban and rural girls and boys. There is no significant difference between boys and girls, or between tribal and non-tribal students.

Conclusion

Social attitudes pertain to an individual's perceptions of social items. Collective attitudes are described as individual attitudes that are so strongly shaped by group interactions as to become incredibly standardised and constant within the group. The ability to adjust to changes in one's physical and social surroundings is referred to as adjustment. To put it another way, adjustment is the behavioural process of addressing incongruent expectations or needs that are inhibited by environmental difficulties. Both intelligence and creativity are major dimensions of adjustment and hence play a crucial role in human lives. The researcher's goal in writing this essay solely focused on the many facets of social beings and how they adapt to various contexts while expressing their social viewpoints and the probable measurement through Mahalanobis Distance.

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