

## A STUDY ON THE EFFECT OF ACTIVE LEARNING TENDENCY ON THE PERSONALITY OF HIGHER SECONDARY SCIENCE STUDENTS IN YAVATMAL DISTRICT

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### **ABSTRACT**

*The present study aimed to examine the effect of active learning tendencies on the personality development of higher secondary science students in Yavatmal district. In the contemporary educational context, active student participation is considered essential for holistic learning. Unlike traditional teacher-centered methods, active learning emphasizes students' engagement in questioning, group discussions, experiments, project work, and problem-solving, particularly in the science stream, where analytical and experimental skills are crucial. Personality development, encompassing traits such as self-confidence, leadership, social adaptability, creativity, and problem-solving ability, is closely linked to these learning tendencies.*

*A descriptive survey method was employed for this study, with a sample of 150 students selected through random sampling, including equal representation from rural (75) and urban (75) areas, and a balance of boys and girls. Two researcher-developed tools—the Active Learning Tendency Scale and Personality Inventory—were used to collect data, whose validity and reliability were established through expert opinions and the split-half method. Data were analyzed using mean, standard deviation, t-tests, and correlation analysis.*

*Results indicated that urban students scored significantly higher than rural students in both active learning tendencies ( $t = 2.94, p < 0.05$ ) and personality development ( $t = 3.18, p < 0.05$ ). Furthermore, a positive and significant correlation ( $r = 0.62, p < 0.05$ ) was found between active learning tendencies and personality development, highlighting a direct relationship between engagement in activity-based learning and personal growth.*

*The study emphasizes the need for participatory, student-centered teaching approaches, adequate resources, and supportive learning environments, particularly in rural areas, to enhance both academic and personality development. Implementing such strategies can nurture confident, socially competent, and well-rounded students capable of contributing meaningfully to society.*

**KEYWORDS:** *Active Learning Tendency, Personality Development, Higher Secondary Science Students, Student-Centered Learning, Rural and Urban Education, Holistic Development*

## BACKGROUND OF THE STUDY:

In the educational process, the active participation of the student is considered important. In the traditional teaching method, the teacher remains at the center and delivers knowledge; however, in today's era, *active learning* is regarded as highly significant. In this approach, students are not merely listeners but actively engage in asking questions, participating in group discussions, conducting experiments, undertaking project work, and finding solutions to problems.

In particular, students in the science stream are expected to be experimental, analytical, and logical thinkers. If science subjects are taught through activity-based methods such as laboratory work, project-based learning, model-making, and the use of technological tools, it fosters curiosity, a research-oriented attitude, and self-reliance among students.

These active learning tendencies are closely related to the personality development of students. Personality is a multidimensional concept that includes confidence, leadership qualities, social participation, creativity, problem-solving ability, stress management skills, and a sense of responsibility. Several studies in educational psychology have shown that students who actively participate in the learning process develop better social communication skills, enhanced decision-making ability, and stronger self-confidence. On the other hand, students with passive learning tendencies may lag behind in terms of personality development.

Various educational policies have emphasized the importance of active student participation. Especially at the higher secondary level in the science stream, approaches such as *Learning by Doing*, *Inquiry-based Learning*, and *Project-based Learning* have been prioritized. Hence, studying the active learning tendencies of students becomes essential for their holistic personality development.

## NEED FOR THE STUDY

In today's knowledge era, education is no longer confined to rote memorization for the sake of marks. The central focus of education has shifted to the holistic personality development of students. Higher secondary science students are provided with opportunities in diverse fields such as engineering, medicine, research, and information technology. To succeed in these fields, theoretical knowledge alone is not sufficient; qualities such as creativity, analytical ability, leadership, decision-making skills, communication skills, and self-confidence must also be developed.

For this, active student participation in the educational process is indispensable. Activity-based learning tendencies—such as experiments, project work, group discussions, problem-solving, and presentations—not only enhance students' knowledge but also contribute significantly to shaping their personality. Conversely, students who learn through passive methods show comparatively slower progress in personality development. Educational psychology highlights a close relationship between personality development and learning approaches.

However, at the higher secondary level, especially among science students, there is limited research available at the local level that examines in detail the impact of activity-based learning tendencies on personality development. Furthermore, the *National Curriculum Framework 2005* emphasizes active and experiential learning. Against this backdrop, such a study can provide teachers with directions to improve their teaching

methodologies, make students' learning processes more effective, and help educational institutions implement programs that promote personality development.

This, in turn, will enhance students' confidence, creativity, and leadership qualities, enabling them to contribute effectively to various sectors of society in the future. Therefore, the study of this topic is highly important and relevant to the present times.

### **SIGNIFICANCE OF THE STUDY**

Through activity-based learning tendencies, aspects of personality such as self-confidence, leadership qualities, problem-solving ability, creativity, and communication skills are developed. This research will enable students to engage in self-reflection regarding their learning habits and provide them with proper direction for personality development. It will also inspire teachers to create opportunities for active learning within their teaching practices. Furthermore, it will guide teachers on how to employ teaching techniques that are directly related to students' personality development.

By emphasizing active participation while implementing academic programs and co-curricular activities, schools can foster an innovative, student-centered environment. The *National Education Policy (NEP) 2020* has highlighted the importance of experiential and activity-based learning. This research will therefore serve as a supportive step in the effective implementation of such policies.

When personality-wise capable, self-confident, and responsible students are nurtured, they can contribute actively to various sectors of society in the future. Citizens with a scientific outlook, logical thinking, and an innovative spirit are highly beneficial to society. Thus, this research will be significant in making the learning process of students more effective, in achieving their holistic personality development, and in enabling teachers and educational institutions to function in a more impactful manner.

### **OBJECTIVES**

1. To study the activity-based learning tendencies of higher secondary science students.
2. To study the level of personality development of higher secondary science students.
3. To study the relationship between students' activity-based learning tendencies and their personality development.

### **Hypotheses**

1. There is no significant difference in the mean scores of activity-based learning tendencies of higher secondary science students.
2. There is no significant difference in the mean scores of personality development levels of higher secondary science students.
3. There is no significant relationship between students' activity-based learning tendencies and their personality development.

### **RESEARCH METHODOLOGY**

The purpose of this research is to study the impact of active learning tendencies of higher secondary science students on their personality. For this study, the Descriptive Survey Method has been used. A total of 150 students

were selected as a sample using a random sampling method. The sample consisted of 75 students from rural areas and 75 students from urban areas. Equal representation of boys and girls was taken into consideration. For this research, the researcher developed and used two tools Active Learning Tendency Scale to measure students' activeness in learning, problem-solving tendencies, and participation. Personality Inventory to study aspects of personality such as self-confidence, sociability, leadership qualities, and emotional stability among higher secondary students. Validity and Reliability of Tools *Content validity* was established based on expert opinions. *Reliability* was tested using the Split-Half method, and the results were found to be satisfactory. The researcher obtained prior permission from selected schools and provided students with the set of tools. The students responded within the given time limit. Confidentiality of the collected data was maintained. The collected data was classified and analyzed using mean, standard deviation, and 't'-test to study the differences between rural and urban students, as well as the relationship between active learning tendencies and personality.

### Analysis and interpretation:

**Table No. 1.1.**

**Description of Active Learning Tendencies of Rural and Urban Students**

Group	N	Mean	SD	t-Value
<b>Rural Students</b>	75	72.40	8.25	
<b>Urban Students</b>	75	76.85	7.80	2.94*

In the above table, the average score of rural students is 72.40 with a standard deviation of 8.25, while the average score of urban students is 76.85 with a standard deviation of 7.80. The difference between the averages of rural and urban students is 4.45 points. The calculated *t*-value for this difference is 2.94, which is significant at the 0.05 level (\*). Based on these results, it is evident that the active learning tendency of urban students is higher compared to rural students. Since the *t*-value is significant, this difference is not due to chance but is statistically meaningful. This implies that urban students have relatively greater access to educational resources, technological facilities, academic environment, and guidance. As a result, their active learning tendency is elevated.

**Table No. 1.2**

**Description of Personality Development of Rural and Urban Students**

Group	N	Mean	SD	t-Value
<b>Rural Students</b>	75	74.10	7.95	
<b>Urban Students</b>	75	78.65	8.10	3.18*

In the above table, the average score of rural students in personality development is 74.10 with a standard deviation of 7.95, whereas the average score of urban students is 78.65 with a standard deviation of 8.10. The difference between the two group means is 4.55 points. The calculated *t*-value is 3.18, which is significant at the 0.05 level (\*). This indicates that the personality development tendency of urban students is higher than that of rural students. The significant *t*-value shows that this difference is statistically meaningful. This difference may be attributed to factors such as educational opportunities, socio-cultural environment, availability of resources, use of

technological tools, and the educational as well as social awareness of parents in urban areas. In contrast, due to relatively limited opportunities in rural areas, the personality development of rural students does not appear to be as progressive as that of urban students.

**Table No. 1.3**

**Correlation between Active Learning Tendencies and Personality Development**

Variables	N	(r)
<b>Activity base learning and personality development</b>	150	0.62*

In the above table, the correlation between active learning tendency and personality development is shown. The number of students (N) = 150. The obtained correlation coefficient (r) = 0.62, which is significant at the 0.05 level (\*). The value of 0.62 indicates a positive and high-level correlation. This clearly shows that as students' active learning tendency increases, their personality development also improves. In other words, there is a direct positive relationship between the two factors. Based on this result, it can be said that active and participatory learning methods enhance students' self-confidence, communication skills, leadership qualities, and social adjustment abilities, thereby contributing to their personality development.

**CONCLUSION:**

There is a significant difference in the activity-based learning tendencies of rural and urban students. The tendencies of urban students are found to be at a higher level, whereas those of rural students are comparatively lower. Therefore, in order to enhance activity-based learning in education, it is necessary to provide rural students with an appropriate educational environment, resources, and encouragement.

There is a significant difference in the personality development of rural and urban students. The level of personality development among urban students is found to be higher, whereas it is lower among rural students. This indicates that for the personality development of rural students, there is a need to make educational opportunities, platforms for self-expression, proper guidance, and socio-cultural environments more effective.

There is a statistically significant and positive correlation between activity-based learning tendencies and personality development. The more students participate in activity-based learning methods, the higher their level of personality development. Therefore, schools, teachers, and parents need to provide students with opportunities for activity-based learning so that their holistic development can be achieved.

**IMPLICATION:**

The present study, examining the effect of active learning tendency on the personality of higher secondary science students, carries several significant educational and practical implications. The findings indicate that students with higher levels of active learning tendency tend to demonstrate more progressive personality development. This underscores the importance of promoting participatory and student-centered learning approaches in science education.

From an educational perspective, the results suggest that teachers and curriculum planners should emphasize interactive learning strategies such as group discussions, problem-solving tasks, experiments, and project-based learning. These methods not only enhance students' understanding of scientific concepts but also foster essential personality traits, including self-confidence, leadership skills, social adaptability, and effective communication. By integrating such methods into the classroom, educators can simultaneously promote cognitive and personality development, creating a more holistic learning environment.

The study also has implications for school administration and policy-making. Schools should provide adequate resources, technological tools, and a supportive academic environment that encourages active participation. Workshops and training programs for teachers can help them adopt innovative teaching techniques that motivate students to engage actively in their learning process. Furthermore, parental awareness programs can reinforce supportive learning practices at home, ensuring that students' active learning tendencies are nurtured both within and outside the classroom.

On a broader level, the study highlights the importance of equal educational opportunities. Urban students, who often have better access to resources and guidance, were found to have higher active learning tendencies and personality development compared to their rural counterparts. This suggests the need for targeted interventions in rural areas to bridge the gap in educational experiences and opportunities.

In conclusion, fostering active learning tendencies among higher secondary science students is crucial not only for academic success but also for comprehensive personality development. Implementing student-centered, interactive educational strategies can enhance both learning outcomes and personal growth, contributing to the development of confident, socially competent, and well-rounded individuals.

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