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SCIENTIFIC ATTITUDE OF B.ED. STUDENT TEACHERS

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Abstract

The present study aimed to assess the Scientific Attitude of B.Ed. student teachers and to examine differences with respect to gender, locality, and type of management. The normative survey method was adopted for the study. Data were collected using a standardized Scientific Attitude Scale and analyzed through appropriate statistical techniques. The findings revealed no significant differences in Scientific Attitude based on gender and type of management. However, a significant difference was observed with respect to locality, indicating that urban student teachers possessed a higher Scientific Attitude than rural student teachers. The study emphasizes the need to strengthen scientific temper among prospective teachers, particularly in rural areas.

Keywords: *Scientific Attitude, B.Ed. Student Teachers, Gender, Locality, Management.*

Introduction

Scientific attitude is considered a fundamental disposition in the field of education, especially for teacher trainees who are expected to nurture rational thinking among future generations. It refers to a way of thinking that is based on curiosity, objectivity, open-mindedness, critical analysis, and a willingness to verify facts through evidence. In the context of education, a scientific attitude enables learners to approach problems systematically, avoid blind beliefs, and develop a habit of logical reasoning. For B.Ed. student teachers, this attitude is highly significant as they are future educators responsible for shaping the cognitive and intellectual development of school students. In the present educational scenario, the role of teachers is not limited to delivering content but extends to developing scientific temper among learners as emphasized in educational policies. B.Ed. student teachers, during their training period, are expected to acquire and demonstrate scientific attitude in their academic and professional activities such as lesson planning, classroom teaching, and problem-solving. Their level of scientific attitude influences their

teaching effectiveness, decision-making ability, and classroom interaction. Therefore, understanding the scientific attitude of B.Ed. student teachers is essential to ensure quality teacher education and to promote a generation of scientifically oriented learners.

Need and Significance of the Present Study

Scientific attitude is a vital quality for effective teaching and meaningful learning in the present educational system. It enables individuals to think logically, question assumptions, verify facts through evidence, and adopt an objective approach in dealing with academic and real-life situations. For B.Ed. student teachers, who are future educators, the development of scientific attitude is highly essential as it directly influences their teaching practices, classroom behavior, and ability to promote scientific temper among school students. In the contemporary era of rapid scientific and technological advancement, education demands teachers who can encourage inquiry-based learning and critical thinking among learners. However, the level of scientific attitude may vary among student teachers depending on their training, academic background, and exposure to scientific thinking. Hence, it becomes necessary to examine the scientific attitude of B.Ed. student teachers to understand their readiness to adopt scientific approaches in teaching. The significance of this study lies in its potential to provide valuable insights to teacher education institutions for improving training programmes. The findings may help curriculum planners and teacher educators to design appropriate strategies that enhance scientific thinking, rationality, and problem-solving abilities among student teachers. Ultimately, this study contributes to improving the quality of teacher education and fostering scientifically oriented future citizens.

Review of Related Literature

Sahayamary and Paulraj (2012) reported that scientific attitude plays a key role in developing inquiry-based learning among students. The study emphasized that teacher trainees with higher scientific attitude are more effective in classroom teaching.

Geetha and Arunchalam (2013**)** revealed that scientific attitude among B.Ed. student teachers is influenced by academic environment and training exposure. They found that activity-based learning improves scientific attitude significantly.

Rao (2014) observed that teacher education institutions have a strong role in developing scientific attitude among B.Ed. student teachers. The study suggested improving laboratory and experiential learning methods.

Gokul Raj (2015) found that B.Ed. student teachers generally possess a moderate level of scientific attitude. The study also reported that demographic variables show mixed influence on scientific attitude.

Title of the Study

"*Scientific Attitude of B.Ed. Student Teachers*"

Objectives

- To study the Scientific Attitude of B.Ed. student teachers with respect to gender**.**
- To study the Scientific Attitude of B.Ed. student teachers with respect to locality.
- To study the Scientific Attitude of B.Ed. student teachers with respect to their management.

Hypotheses

- There is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to gender.
- There is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to locality.
- There is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to management.

Methodology

The present study employed the survey method of research. The sample consisted of 300 B.Ed. student teachers drawn from various colleges in Chittoor District, Andhra Pradesh. A stratified random sampling technique was used to select the participants, ensuring adequate representation of different strata within the population and enhancing the reliability of the findings. The Scientific Attitude Scale by Dr. J.K. Sood and R.P. Sandhya (1993) was used to measure the scientific attitude of student teachers. It consists of 36 statements on a five-point Likert scale ranging from strongly agree to strongly disagree. The scale measures dimensions such as curiosity, objectivity, critical thinking, open-mindedness, and rational thinking. Scoring is done from 5 to 1 for positive statements and reverse scoring for negative statements**,** with higher scores indicating higher scientific attitude. The scale has a test-retest reliability of 0.79

Statistical Techniques Used

The data collected for the present investigation were analyzed using appropriate statistical techniques, namely Mean, Standard Deviation, and Critical Ratio .

Analysis of Data

Table 1: Gender-wise Comparison of Scientific Attitude of B.Ed. Student Teachers

Variable	Sample	N	Mean	S.D.	C.R.
Gender	Male	150	145.63	12.86	0.53 #
	Female	150	146.45	13.57	

#Significant at 0.05 level

The obtained C.R. value (0.53) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is accepted. There is no significant difference in Scientific Attitude between male and female B.Ed. student teachers

Table 2: Locality-wise Comparison of Scientific Attitude of B.Ed. Student Teachers

Variable	Sample	N	Mean	S.D.	C.R.
Locality	Rural	150	141.38	13.97	2.48*
	Urban	150	145.51	14.75	

*Significant at 0 .05 level

The obtained C.R. value (2.48) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is rejected. This indicates that there is a significant difference in the scientific attitude of B.Ed. student teachers with respect to locality. Therefore, urban B.Ed. student teachers possess a higher level of scientific attitude than their rural counterparts.

Table 3: Management-wise Comparison of Scientific Attitude of B.Ed. Student Teachers

Variable	Sample	N	Mean	S.D.	C.R.
Management	Govt	150	146.41	14.43	1.72#
	Private	150	143.62	13.64	

Not Significant at 0 .05 level

The obtained C.R. value (1.72) is less than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is accepted. There is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to the type of management.

Major Findings

- There is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to gender.
- There is a significant difference in the Scientific Attitude of B.Ed. student teachers with respect to locality. Urban student teachers have a higher Scientific Attitude than rural student teachers.
- There is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to the type of management.

Educational Implications

The findings reveal that there is no significant difference in the Scientific Attitude of B.Ed. student teachers with respect to gender. This indicates that both male and female student teachers possess similar levels of scientific attitude. Therefore, teacher education institutions should provide equal learning opportunities and encourage all student teachers to develop scientific thinking, critical inquiry, and problem-solving skills without any gender bias. The study also shows a significant difference in Scientific Attitude with respect to locality, with urban student teachers exhibiting a higher level of Scientific Attitude than rural student teachers. This suggests the need to strengthen science-related learning experiences in rural institutions. Providing adequate laboratory facilities, access to scientific resources, innovative teaching strategies, and participation in science-based activities can help enhance the Scientific Attitude of rural student teachers. The absence of a significant difference in Scientific Attitude with respect to the type of management indicates that both government and private institutions are equally effective in promoting scientific attitude among student teachers. Hence, all teacher education institutions should continue to organize seminars, workshops, projects, and research-oriented activities that foster scientific temper and encourage evidence-based thinking among future teachers.

References

Best, J. W., & Kahn, J. V. (2016). Research in Education (10th ed.). New Delhi: Pearson Education.

Bhatia, K. K., & Safaya, R. N. (2012). Educational Psychology and Guidance. New Delhi: Kalyani Publishers.

Garrett, H. E. (2008). Statistics in Psychology and Education. New Delhi: Paragon International Publishers.

Geetha, R., & Arunchalam, M. (2013). A study on scientific attitude of student teachers in Erode district of Tamil Nadu. M.Ed. Dissertation, Vellalar College of Education, Erode, India.

Gokul Raj, R. (2015). A study on scientific attitude among pre-service teachers. Research Journal of Recent Sciences, 4(IYSC–2015), 196–198.

Rao, K. (2014). Scientific attitude and teacher education practices. Journal of Teacher Education Research, 5(2), 45–50.

Sahayamary, R., & Paulraj, I. (2012). Scientific attitude of upper primary students towards science learning. Journal of Educational Research, 29–31.

Sharma, R. A. (2011). Fundamentals of Educational Research. Meerut: R. Lall Book Depot.

Singh, Y. K. (2012). Educational Research. New Delhi: APH Publishing Corporation.