

A Study of the Religious Influences on the Scientific Temper of Pupil Teachers

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ABSTRACT

In 2014, India's government announced "National Science Day" to foster scientific temper in public to change people's narrow mindset. Despite our best efforts, we have not been able to inculcate scientific view in our people. The explanation for this could be due to more unscientific religious influences on people's mindset. Hence the researcher opted to investigate scientific temper of pupil teachers on the basis of their religion.

The findings of the present study revealed that pupil teachers of Hindu & Muslim and Muslim & Other religious students have quite different scientific temperaments. Other religious pupil teacher's scientific temper is higher, followed by Hindu and Muslim religious pupil teacher's scientific temper.

Key words: Scientific temper, pupil teachers, religious influences

Introduction:

"Believe nothing simply because it has been told to you; or because it is traditional; or because you have imagined it; Do not believe what your teacher tells you merely out of respect for the teacher; but whatever you find to be conducive to the good, the benefit, and the welfare of all beings, that doctrine believes and clings to, and take it as your guide," *Lord Buddha*.

One of the goals of the Teacher Education programme, according to the National Council of Teacher Education, is to "cultivate rational thinking and scientific temper." (N.C.T.E., page 20, 1996-97). The government of India declared 'National Science Day' in 2014 to promote scientific temper. The major goal of this initiative is to raise public awareness about scientific temper in order to modify people's restricted mindsets.

Despite all of our efforts, we have not been successful in instilling a scientific mindset in the majority of Indian population. The reason could be different religious practices followed in our country. Some followers of different religion leave unscientific customs and tradition and some

remains stick to that under the name of religion. These unscientific practices are not only followed at home but also carried out in educational institutions also. As part of our educational system, I believe the roots of these issues may be found in our country's traditional rote memory teaching system.

The only way to remedy this situation is for a teacher to step in. Instead of blindly accepting everything, he or she can develop the habit of reasoning, critical and reasonable thinking, and finding truth. The success of a school's science reform is highly dependent on the school's teacher (Darling-Hammond, 1996). It should begin at the primary level of our educational system, so that future generations are instilled with a strong scientific temperament.

It is vital for the instructor to possess these qualities in order to foster these attributes in students. Teachers who are well informed in scientific knowledge and temper must be prepared by teacher training institutes of education (D.El.Ed.). Keeping all of the foregoing in mind, the researcher opted to investigate scientific temper of pupil teachers on the basis of their religion.

Statement of the Problem:

The problem selected by researcher is ‘A study of the religious influences on the scientific temper of pupil teachers.’

Operational Definition:

1. **Scientific temper-** Scientific temper is a psychological trait associated with rational thinking, decision-making, problem-solving, antipathy to superstition, and attitudes toward science and science-related issues around the world in future primary teachers.
2. **Pupil teachers** –Pupil teachers are the students pursuing diploma in elementary education in the teacher training colleges of Mumbai city.

Aim of the Study:

The broad aim of the study is to identify scientific temper of pupil teachers on the basis of their religion of D.El.Ed. colleges in the Mumbai region.

Objectives of the Study:

1. To find out religious difference in scientific temper among pupil teachers.
2. To find out difference in scientific temperament among Hindu and Muslim pupil teachers.
3. To find out difference in scientific temperament among Hindu and Other religious pupil teachers.
4. To find out difference in scientific temperament among Muslim and Other religious pupil teachers.

Hypothesis of the Study:

1. There is no significant difference in scientific temper among pupil teachers on the basis of their religion.

(a). Hindu(b). Muslim(c.) Other

2. There is no significant difference in the scientific temper of Hindu and Muslim pupil teachers.

3. There is no significant difference in the scientific temper of Hindu and Other religious pupil teachers.

4. There is no significant difference in the scientific temper of Muslim and Other religious pupil teachers.

DESIGN OF THE STUDY:

Methodology of the study

The researcher proposes to investigate the scientific temperament of pupil teachers from D.El.Ed. colleges in this study. As a result, the descriptive method is used in this case. The researcher employed the causal-comparative technique in this study to compare scientific temper among pupil teachers based on their religion.

Sample of the study

The present study's sampling frame is the NCTE-affiliated D.El.Ed. colleges in the Mumbai region. The participants in this study are 235 pupil teachers from 08 NCTE-affiliated D.El.Ed. colleges in the Mumbai region.

Tool of the research

The scientific temper of pupil teachers at D.El.Ed. institutes connected with the NCTE of Mumbai region was measured using a readymade tool termed the "scientific temper scale." Pradhan, L., prepared the tool (1996). There are 30 items on the scale.

Scope and Delimitation of the Study

- Rather than using a qualitative approach to research methodology, the current study used a quantitative approach.
- The research is delimited to examining the scientific temperament of pupil teachers based on their religious beliefs.
- The research is delimited to pupil teachers' scientific temper as measured by a readymade scientific temper tool.

ANALYSIS AND INTERPRETATION:

Testing of Hypothesis 1:

There is no significant difference in scientific temper among pupil teachers on the basis of religion.

(a). Hindu(b). Muslim(c.) Other

The statistical techniques used to test this hypothesis is ANOVA'

The following table shows the relevant statistics for scientific temper among prospective primary teachers on the basis of religion

Table 1- Relevant statistics for Scientific Temper among pupil teachers on the basis of Religion.

Source of Variance	SS	Df	MS	'F' value	Table Value		I.o.s.
					0.05	0.01	
Between group variance	302.0778	2	151.0389	5.74	S	S	S
Within group variance	6106.0924	232	26.3194				

(SS – Sum of squares; MS – Mean of square; S – Significant)

Tabulated 'F' for df (2, 232) = 3.03 at 0.05 level

= 4.68 at 0.01 level

At the 0.01 level of significance, the obtained 'F' = 5.74 is higher than the calculated F. As a result, the null hypothesis is rejected. On the basis of religion, there is a significant difference in scientific temper among pupil teachers.

Testing of Hypothesis 2, 3 and 4 –

2. There is no significant difference in the scientific temper of Hindu and Muslim pupil teachers.
3. There is no significant difference in the scientific temper of Hindu and Other religious pupil teachers.
4. There is no significant difference in the scientific temper of Muslim and Other religious pupil teachers.

The statistical hypothesis used to test this hypothesis is 't' test.

The relevant statistics regarding the mean difference in the scientific temper of pupil teachers based on their religion are shown in the table below.

Table 2- Difference in mean score of Scientific Temper of pupil teachers on the basis of Religion

Group	N	Mean	SD	't' value	I.o.s.	
					0.05	0.01
Hindu	131	72.54	5.41	3.10	1.97	2.60
Muslim	66	70.06	5.24			
Hindu	131	72.54	5.41	0.22	1.97	2.60
Other	38	72.71	3.73			
Muslim	66	70.06	5.24	2.99	1.98	2.62
Other	38	72.71	3.73			

Interpretation of 't':

For Hindu and Muslim pupil teachers, the derived value of 't' is 3.10, which is higher than the table value. At the 0.01 level, 't' is thus significant. This shows that the scientific temper of Hindu and Muslim pupil teachers differs significantly.

For Hindu and Other religious pupil teachers, the obtained value of 't' is 0.22, which is lower than the table value of 1.97. As a result, at the 0.05 level, 't' is insignificant. This suggests that there is no significant difference in the scientific temperament of Hindu and Other religious pupil teachers.

For Muslim and Other religious pupil teachers, the derived value of 't' is 2.99, which is higher than the table value. At the 0.01 level, 't' is thus significant. This suggests that Muslim and Other religious pupil teachers have quite different scientific temperament.

Conclusion of the study:

The scientific temperaments of Hindu & Muslim and Muslim & Other Religious pupil teachers differ significantly. Other religious pupil teachers have a higher scientific temper, followed by Hindu and Muslim religious pupil teachers, who have the lowest scientific temper.

Discussion:

When compared to pupil teachers from the Muslim religion, other religions (mainly Buddhist and Christian) have a more scientific temperament. Most Muslim girls participating in higher education, such as the D.El.Ed. programme, are first-generation female students of their religion. As a result, there's a more chances that these female students' thinking and behaviour are influenced by religious and superstitious beliefs. It has also been observed that first-generation female students are rarely involved in decision-making processes and are completely reliant on their families for little daily living problems or life decisions. As a result of all of these circumstances, pupil teachers of the Muslim faith have a lower scientific temper than pupil teachers of other minority religions and Hindu religions.

The findings are similar to those of R. Gupta (2019). A study comparing Hindu and Muslim students' scientific attitudes. Students of Hindu faith have a higher level of scientific temper than students of Muslim religion, according to the findings of the study. These two groups differ significantly on various aspects of scientific temperament, including value viewpoint, antipathy to superstition, attitude toward science, and world view perspective.

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