

Art or Science? A Comparative Study of Professional Commitment Among B.Ed. Teacher Trainees in Mysuru

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Abstract:

This study comparatively analyzes the professional commitment of B.Ed. teacher trainees in the Arts and Science streams across various colleges in Mysuru affiliated with the University of Mysore. Employing a descriptive survey method, the research evaluates a random sample of 442 trainees (234 Arts and 208 Science) using the standardized Professional Commitment Scale by Kaur, Ranu, and Brar. The investigation specifically assesses five critical dimensions: commitment to the learner, society, profession, excellence, and basic human values. Results indicate that teacher trainees in both disciplines possess a moderate or "average" level of professional commitment. Furthermore, the findings reveal no statistically significant difference between Arts and Science trainees across any of the dimensions studied. The results show that both Arts and Science students have a similar professional outlook. This highlights the need for teacher training programs to better motivate and prepare future teachers for the challenges of modern classrooms.

Keywords: Professional Commitment, Teacher Trainees, B.Ed. Students, Comparative Study, Arts and Science Streams, Teacher Education, Mysuru.

I. INTRODUCTION:

Education is the most powerful catalyst for social transformation, and the efficacy of any educational system is fundamentally determined by the quality and dedication of its teachers. Professional commitment defined as the psychological attachment and sense of loyalty an individual feels toward their calling is a critical determinant of a teacher's effectiveness and longevity in the field. For B.Ed. teacher trainees, this commitment represents more than just job satisfaction; it reflects their internal drive to foster student growth and uphold ethical standards before they even enter a permanent classroom.

In the culturally and educationally vibrant city of Mysuru, the preparation of secondary school teachers involves diverse cohorts from both Arts and Science backgrounds. However, the academic rigor and pedagogical approaches inherent to these two streams often cultivate different professional outlooks. While Science trainees might focus on empirical methodologies and technical precision, Arts trainees often emphasize social narratives and holistic communication. This divergence raises a significant question: does the nature of one's academic discipline influence their level of professional dedication?

This research paper presents a comparative study designed to measure and analyze the professional commitment of B.Ed. trainees in Mysuru across these two streams. By investigating demographic variables and disciplinary influences, the study aims to provide insights into how teacher education programs can better nurture vocational identity. Ensuring high levels of commitment during the pre-service phase is essential for producing educators who are resilient, motivated, and capable of navigating the complexities of modern Indian classrooms.

II. LITERATURE REVIEW:

Gajjar (2015) evaluated the professional commitment of B.Ed. trainees, finding that while gender and habitat had no significant impact, post-graduate students exhibited higher levels of dedication than

graduates. The study underscores commitment as a fundamental predictor of teaching effectiveness and future job satisfaction. Ultimately, it suggests that teacher training programs must prioritize professional growth and feedback to cultivate a more motivated workforce.

Islam and Das (2018) examined the professional commitment of 120 B.Ed. teacher educators in Malda, West Bengal, finding significant gender-based differences in overall commitment levels, with female educators scoring higher than their male counterparts. The study emphasizes that while specific dimensions like commitment to learners or society showed no significant gender variation, fostering overall professional dedication is essential for the qualitative improvement of teacher education.

Bashir (2019) examined the relationship between professional commitment and teaching effectiveness among secondary school teachers, finding a significant positive correlation between the two variables. The study concludes that highly committed teachers demonstrate superior instructional quality, suggesting that enhancing professional dedication is vital for improving overall educational outcomes.

Modi (2019) evaluated the professional commitment of B.Ed. teacher trainees, revealing that while gender and stream of study did not cause significant differences, habitat played a role in commitment levels. The study emphasizes that fostering professional dedication during training is essential for developing high-quality, motivated educators for the future.

Ahammad (2020) investigated the professional commitment of teacher educators in West Bengal, finding no significant differences based on gender or stream of study but noting a distinct variation based on locality. The study concludes that fostering professional commitment is essential for improving the overall quality of teacher education regardless of demographic backgrounds.

Bhowmik and Sharma (2020) examined the professional commitment of government school teachers in East Sikkim, identifying that factors like gender and school level did not significantly impact commitment levels. The study emphasizes that high teacher commitment is fundamental to educational success and recommends targeted professional development to maintain these standards.

Hatim and Shakir (2020) identified a significant positive correlation between self-esteem and professional commitment among secondary school teachers, while finding no significant differences based on gender or length of service. The study suggests that enhancing teachers' self-worth is a critical factor in fostering higher levels of dedication and professional stability within the educational system.

Maity (2021) examined the professional commitment of teacher educators in West Bengal, finding a significant positive relationship between their commitment levels and perceived job values. The study concludes that fostering a value-oriented work environment is essential for enhancing the dedication and effectiveness of educators within teacher training institutions.

Mahajan and Kauts (2022) examined the professional commitment of secondary school teachers in Punjab, finding that teachers in government schools exhibited significantly higher commitment levels compared to those in private schools. The study underscores the influence of institutional environments on teacher dedication and recommends policy interventions to bridge the commitment gap across different school types.

Kumar and Bala (2024) investigated the professional commitment of teacher educators, identifying that while gender did not significantly influence dedication, factors such as work environment and institutional support remained crucial. The study highlights that maintaining high levels of professional commitment among educators is fundamental to the qualitative improvement of the entire teacher education system.

III. OBJECTIVES:

The present study was undertaken to achieve the following objectives:

1. To study the level of Professional Commitment among Arts and Science B.Ed. Teacher Trainees.
2. To compare the Arts and Science B.Ed. Teacher Trainees on various dimensions of Professional Commitment.

IV. HYPOTHESES:

1. There is no significant difference between Arts and Science B.Ed. Teacher Trainees on various dimensions of Professional Commitment.

V. METHODOLOGY:

The proposed study was carried on by quantitative research method. The population of the present study confined to as the B.Ed. teacher trainees in various B.Ed. colleges of Mysuru affiliated to University of Mysore. Seven B.Ed. colleges of Mysuru were randomly selected. There were total 442 B.Ed. teacher trainees as sample (234 Arts and 208 Science). A Professional Commitment Scale for teachers (PCST) which was constructed and standardized by Dr. Ravinder Kaur, Dr. Sarbjit Kaur Ranu and Mrs. Sarvjeet Kaur Brar, has been used to collect data. It consists of 45 items according to their area of Professional Commitment. The scale measures five dimensions of Professional Commitment -

(i) Commitment to the Learner, (ii) Commitment to the Society, (iii) Commitment to the Profession, (iv) Commitment to Achieve Excellence (v) Commitment to Basic Human Values

The reliability coefficient is 0.76 (Significant at 0.01 level). In this study, The raw data was subjected to percentage, mean, S.D. and t-test for statistical treatment. The following table shows the statistical analysis of the data. t-test was used to compare the various dimensions of Professional Commitment of Arts and Science B.Ed. teacher trainees.

VI. STATISTICAL ANALYSIS AND INTERPRETATION:

The raw data was subjected to percentage, mean, S.D. and t-test for statistical treatment. The following table shows the statistical analysis of the data.

SECTION 'A'-DESCRIPTIVE ANALYSIS:

Percentage computation of Arts and Science B.Ed. Teacher Trainees on Professional Commitment.

Table 1.1: Percentage Distribution of Professional Commitment Levels Among B.Ed. Teacher Trainees

Level of Professional Commitment	N	Percentage
Extremely High Professional Commitment	7	1.58
High Professional Commitment	51	11.54
Above Average Professional Commitment	151	34.16
Average Professional Commitment	159	35.97
Below Average Professional Commitment	48	10.86
Low Professional Commitment	20	4.53
Extremely Low Professional Commitment	6	1.36
Total	442	100.00
Mean Score	171.88	

The comprehensive assessment of Professional Commitment among Arts and Science B.Ed. teacher trainees reveals a predominantly moderate trend. According to the data, only a marginal fraction of the cohort 1.58% and 11.54 exhibit "Extremely High" and "High" levels of commitment, respectively. The majority of trainees are concentrated in the mid-range, with 34.16% scoring "Above Average" and 35.97% falling within the "Average" category. Conversely, a smaller segment of the population demonstrates "Below Average" (10.86%), "Low" (4.53%), or "Extremely Low" (1.36%) commitment levels. With an aggregate

mean score of 171.88, the findings suggest that Arts and Science B.Ed. teacher trainees in Mysuru generally possess an Average level of professional Commitment, indicating a stable but improvable vocational identity.

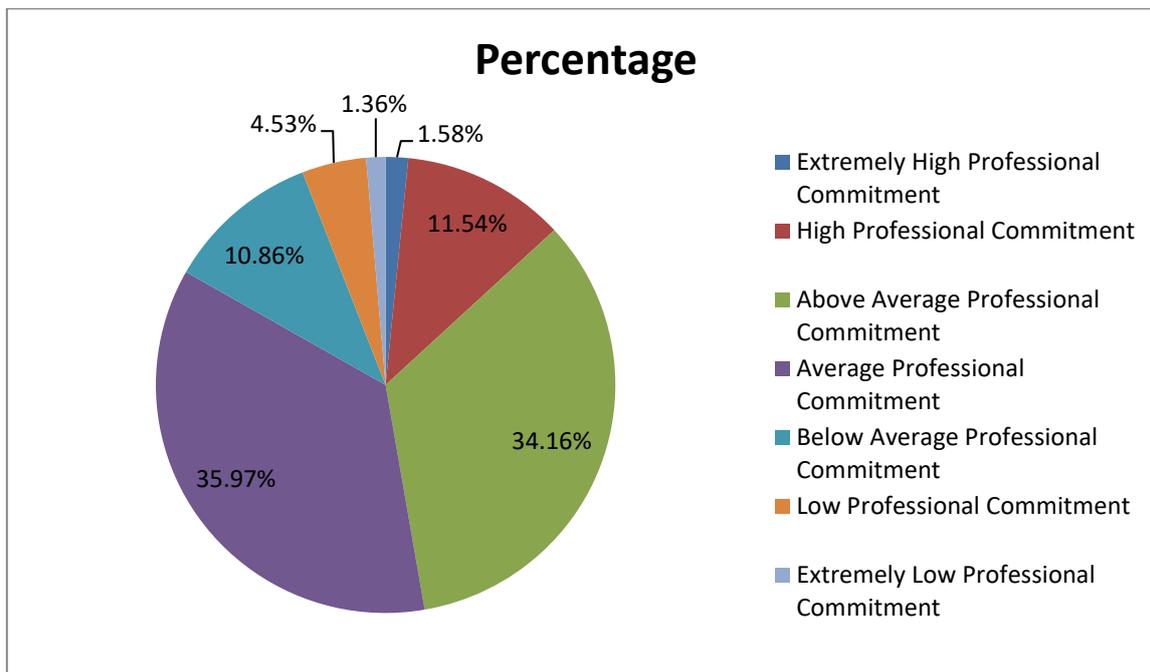


Fig. 1.1: Percentage Distribution of Professional Commitment Levels Among B.Ed. Teacher Trainees

Table 1.2: Comparative Distribution of Professional Commitment Levels by Academic Stream

Levels of Professional Commitment	Arts B.Ed. Teacher Trainees		Science B.Ed. Teacher Trainees	
	N	Percentage	N	Percentage
Extremely High Professional Commitment	2	0.85	5	2.40
High Professional Commitment	22	9.40	29	13.94
Above Average Professional Commitment	76	32.48	75	36.06
Average Professional Commitment	91	38.89	68	32.69
Below Average Professional Commitment	28	11.96	20	9.62
Low Professional Commitment	12	5.13	8	3.85
Extremely Low Professional Commitment	3	1.29	3	1.44
Total	234	100.00	208	100.00

The table 1.2 presents a comparative study of 234 Arts trainees and 208 Science trainees. The data reveals that the majority of trainees in both streams fall within the "Average" to "Above Average" categories of professional commitment, though there are notable differences in the high and low extremes.

1. High Commitment Levels

Science trainees show a higher tendency toward superior commitment compared to their Arts counterparts:

- **Extremely High:** Only 0.85% of Arts trainees reached this level, whereas 2.40% of Science trainees did.
- **High:** 13.94% of Science trainees are highly committed, compared to 9.40% in the Arts stream.
- **Combined:** Nearly 16% of Science trainees exhibit high or extremely high commitment, while Arts trainees trail at approximately 10%.

2. The Majority (Average & Above Average)

This is where the bulk of the population resides:

- **Arts Stream:** The largest group is found at the Average level (38.89%).

- **Science Stream:** The largest group is found at the Above Average level (36.06%).
- Interestingly, while Arts trainees have a higher percentage of "Average" commitment, Science trainees are more concentrated in the "Above Average" bracket.

3. Low Commitment Levels

Arts trainees demonstrate a slightly higher prevalence of lower commitment levels:

- **Below Average & Low:** Together, these categories account for 17.09% of Arts trainees, compared to 13.47% of Science trainees.
- **Extremely Low:** Both groups show very low figures here, with Arts at 1.29% and Science at 1.44%.

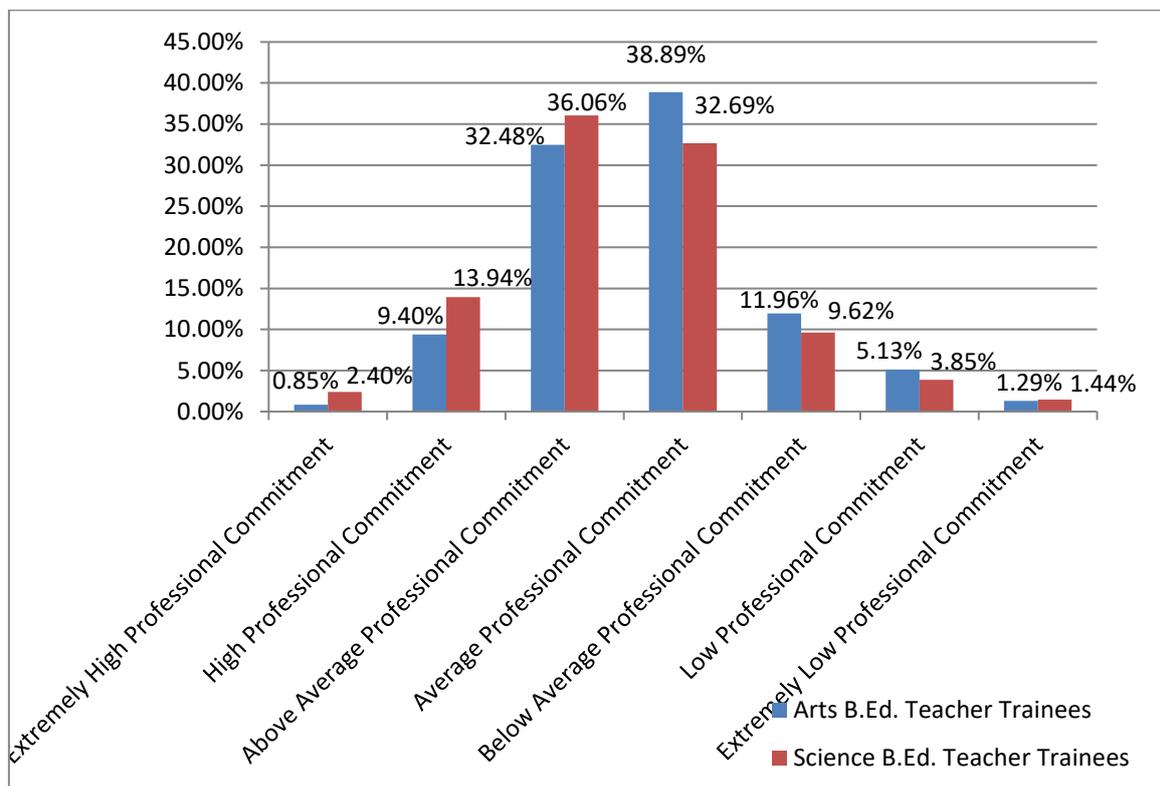


Fig. 1.2: Comparative Percentage Distribution of Professional Commitment Levels by Academic Stream

SECTION ‘B’-COMPARTIVE ANALYSIS

Comparative analysis of Arts and Science B.Ed. teacher trainees on various dimensions of Professional Commitment.

Table 2.1: Comparison of Professional Commitment (Commitment to the Learner) Between Arts and Science B.Ed. Teacher Trainees

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Significance
Commitment to the Learner	Arts	234	36.40	4.39	0.0103	**
	Science	208	37.53	4.84		

**= not significant at 0.05

Descriptive Statistics: The Mean score for Science teacher trainees (M = 37.53) is slightly higher than that of Arts teacher trainees (M = 36.40). Additionally, the Science group showed slightly more variability in their responses, with a Standard Deviation of 4.84 compared to 4.39 in the Arts group.

Inferential Statistics: To test the significance of the mean difference, a t-test was employed. The calculated t-value is 0.0103.

Significance Level: The obtained t-value is significantly lower than the critical value required for significance at the 0.05 level. The difference is not statistically significant.

Table 2.2: Comparison of Professional Commitment (Commitment to the Society) Between Arts and Science B.Ed. Teacher Trainees

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Significance
Commitment to the Society	Arts	234	34.13	4.11	0.0018	**
	Science	208	35.32	3.83		

**= not significant at 0.05

Descriptive Statistics: The Science group recorded a slightly higher mean score (M = 35.32) compared to the Arts group (M = 34.13). The standard deviation for the Arts group (SD = 4.11) indicates a slightly higher variance in scores compared to the Science group (SD = 3.83).

Inferential Statistics: The calculated t-value is 0.0018. This value is extremely low, falling well below the critical value required for statistical significance.

Significance Level: the mean difference between the two groups is not significant at the 0.05 level.

Table 2.3: Comparison of Professional Commitment (Commitment to the Profession) Between Arts and Science B.Ed. Teacher Trainees

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Significance
Commitment to the Profession	Arts	234	32.77	4.60	0.6016	**
	Science	208	33.00	4.49		

**= not significant at 0.05

Descriptive Analysis: The Science stream trainees reported a mean score of 33.00, while the Arts stream trainees reported a nearly identical mean of 32.77. The dispersion of scores was also similar, with standard deviations of 4.49 for Science and 4.60 for Arts.

Inferential Analysis: A t-test was conducted to determine if the slight mean difference was statistically relevant. The resulting t-value is 0.6016.

Statistical Significance: The calculated t-value does not reach the required threshold for significance at the 0.05 level. Consequently, the null hypothesis stating that there is no significant difference between the groups is accepted.

Table 2.4: Comparison of Professional Commitment (Commitment to Achieve Excellence) Between Arts and Science B.Ed. Teacher Trainees

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Significance
Commitment to Achieve Excellence	Arts	234	31.82	3.95	0.0045	**
	Science	208	32.94	4.25		

**= not significant at 0.05

Descriptive Comparison: The Mean score for Science teacher trainees (M = 32.94) is marginally higher than that of their counterparts in the Arts stream (M = 31.82). The Science group also exhibited slightly higher variability in their responses (SD = 4.25) compared to the Arts group (SD = 3.95).

Inferential Analysis: To examine whether the observed mean difference was statistically meaningful, a t-test was utilized. The resulting t-value is 0.0045.

Significance Level: The result is not significant at the 0.05 level. The calculated t-value falls significantly short of the critical threshold required to reject the null hypothesis.

Table 2.5: Comparison of Professional Commitment (Commitment to Basic Human Values) Between Arts and Science B.Ed. Teacher Trainees

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Significance
Commitment to Basic Human Values	Arts	234	35.09	3.34	0.6628	**
	Science	208	34.95	3.50		

**= not significant at 0.05

Descriptive Comparison: The mean score for the Arts group ($M = 35.09$) is marginally higher than that of the Science group ($M = 34.95$). The variability in scores is comparable across both groups, with standard deviations of 3.34 and 3.50, respectively.

Inferential Analysis: A t-test was conducted to evaluate the significance of the mean difference. The resulting t-value is 0.6028.

Significance Level: As indicated by the double asterisk (**), the result is not significant at the 0.05 level. This suggests that any observed difference between the groups is statistically negligible.

Table 2.6: Comparison of Overall Professional Commitment Between Arts and Science B.Ed. Teacher Trainees

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Significance
Professional Commitment	Arts	234	170.22	15.61	0.0209	**
	Science	208	173.74	16.27		

**= not significant at 0.05

Descriptive Analysis: The Science stream trainees achieved a slightly higher aggregate mean score ($M = 173.74$) compared to the Arts stream trainees ($M = 170.22$). The standard deviation for the Science group ($SD = 16.27$) suggests a slightly broader distribution of scores than the Arts group ($SD = 15.61$).

Inferential Analysis: A t-test was performed to assess the significance of the difference between these two aggregate means. The calculated t-value is 0.0209.

Statistical Significance: Consistent with the individual dimensions analyzed in previous tables, the aggregate t-value does not reach the critical threshold for significance at the 0.05 level. The result is labeled as not significant.

VII. DISSCUSSION:

The primary objective of this study was to evaluate and compare the professional commitment of B.Ed. teacher trainees in Mysuru across the Arts and Science streams. The descriptive analysis revealed that a vast majority of the trainees (approximately 70%) fall within the "Average" to "Above Average" categories of professional commitment. This suggests that the pre-service teachers in Mysuru possess a stable foundation of vocational identity, though there is significant room for growth to reach "High" or "Extremely High" levels of dedication.

Interestingly, the percentage-wise comparison (Table 1.2) showed that Science trainees lean more toward the "Above Average" and "High", while Arts trainees are more concentrated in the "Average" category. This could be attributed to the rigorous, objective-oriented nature of science education, which might slightly influence the trainees' approach to professional excellence and precision.

However, the inferential analysis (t-tests) across all five dimensions such as Commitment to the Learner, Society, Profession, Excellence, and Basic Human Values consistently showed no statistically significant differences between the two groups. Whether looking at the t-value for Commitment to the Learner (0.0103) or Overall Professional Commitment (0.0209), the results were well below the critical threshold for significance at the 0.05 level.

This finding implies that the academic discipline (Arts vs. Science) does not fundamentally alter the professional spirit of the trainees. The shared B.Ed. curriculum, common pedagogical training, and the universal nature of the teaching vocation in India appear to homogenize the professional outlook of these pre-service teachers, transcending their diverse academic backgrounds.

VIII. CONCLUSION:

The study concludes that B.Ed. teacher trainees in Mysuru, regardless of their specialization in Arts or Science, demonstrate an average level of professional commitment. The null hypothesis, which stated that there is no significant difference between Arts and Science trainees on various dimensions of professional commitment, is accepted.

The lack of significant difference indicates that both streams are equally receptive to the values and ethical standards imparted during the B.Ed. program. While the Science stream showed a marginal descriptive lead in mean scores, it was not statistically robust enough to suggest a disciplinary advantage.

To elevate these "Average" levels to "High" levels of commitment, teacher education programs should:

- Integrate more immersive field experiences that strengthen the Commitment to the Learner and Society.
- Focus on workshops that move beyond pedagogical theory to foster a deep-seated Commitment to the Profession.

Encourage reflective practices that align personal values with the Basic Human Values essential for the teaching profession.

IX. DELIMITATIONS OF THE STUDY:

The study is delimited to B.Ed. teacher-trainees undergoing 2 years B.Ed. course from Mysuru affiliated to University of Mysore.

1. **Geographical Scope:** The study was strictly confined to B.Ed. colleges located in Mysuru city that are affiliated with the University of Mysore. Therefore, the results may not be generalized to the entire state of Karnataka or other parts of India.
2. **Sample Characteristics:** The study focused exclusively on Arts and Science stream trainees; other streams like Commerce or Physical Education were not included.
3. **Methodological Constraint:** The research employed a Descriptive Survey Method using a self-reporting standardized tool. The responses may be subject to social desirability bias, where trainees might answer in a way they perceive as "professionally correct."
4. **Variable Scope:** The study only considered Professional Commitment and its five dimensions, other influential factors like socio-economic status, age, or previous teaching experience were not analyzed.

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