



## **Reflective Teaching of Prospective Secondary Teacher in Relation with their Gender, Academic Qualification and Stream of Study**

**Pratibha Tripathi**

Research Scholar,

Faculty of Education (IASE),

Gujarat Vidyapith, Ahmedabad-14

**Prof. Bharat Joshi**

Dean and Head,

Faculty of Education (IASE),

Gujarat Vidyapith, Ahmedabad-14

### **Abstract**

This study was conducted to know the level of reflective teaching of prospective secondary teachers in relation with their gender, stream, and qualification. Prospective secondary teachers were randomly selected as the sample in study. Reflective teaching scale were administered to collect the data. Study showed that the level of reflective teaching of prospective secondary teachers was moderate and there was a significant difference in the level of reflective teaching in the context of their stream differences.

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**Key words:-** Reflective Teaching, Secondary Teacher, Gender, Academic Qualification

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Reflective teaching is considered as an important element to make teacher education programme qualitative. Reflection is a process of thinking, examining and re-organization of own teaching behaviour to make it more meaningful and effective. Reflective teaching is an approach to teaching characterized by thorough understanding of students the way they learn. This may lead to changes and improvements in his/her teaching quality. This term is used to describe the way teachers observe their own works in the context of teaching (Ahmad, 2008, p.428). Through reflective teaching, teachers are regularly engaged to improve their professional practices and outcomes of their teaching and by it, adults come to interpret and create new knowledge and actions from their ordinary and sometimes extraordinary experiences. Critical reflection blends learning through experiences with theoretical and technical learning to form new knowledge constructions and new behaviours or insights (Shandomo, 2010).

Describing the reflective teaching, Shanmugavelu et.al. (2020) wrote, "in the context of education, it is a rigorous thought that enables a teacher to make choices and to make decisions on alternative actions in the classroom. A reflective practice advocates to think about own teaching practices to answer-how well did a lesson go, was it well planned, did it achieved its objectives, how could it be done better". It is a valuable skill that can produce considerably high-level learning and is very important to planning process. Basically, reflective teaching is a cyclic process of thinking about teaching. A cycle of reflective thinking starts with the formation and writing of instructional objective, and it completes its one cycle with the evaluation of the outcomes and the execution of entire teaching process (Dixit, 2017).

### **Signification of the study**

Reflection includes describing, analysing, and evaluating our thought-process, assumptions, beliefs, and actions. It is a significant human activity in which facilitator and practitioner revisit their experience, ponder it, and evaluate it (Gupta, et al, 2019). By reflection on own teaching behaviour a teacher can easily short out the uncertainties, odd situation, and unexpected students' behaviour in the classroom. Because reflection provides a chance to a teacher to be proactive and encourage to critically appraise themselves. Reflection-in-action can reduce the danger of forgetting what happened during the action and so, teachers can improve their teaching in the lesson rather than waiting until a future one (Beck and Kosnik,2001).

Since reflective practice is seen as a complex and intellectually challenging activity, its success is dependent on not only the skills of the reflective practitioner but also the quality of support provided by the learning environment. The quality of the learning environment in which teachers are empowered to reflect on their practice is a vital determinant for reflective practice (Cimer et.al.2013). If reflective teaching is applied and practiced in earnest, it can create an efficient and effective generation of teachers in dealing with the misunderstandings, confusion, and ambiguity that often engulfs teachers in the classroom (Shanmugavelu, et.al. 2020). Considering its important role in teaching learning process, it will be beneficial for education system to aware, motivate, and train to our in-service as well as pre-service teachers to be reflective in their teaching related activity. This holistic work should be started from the pre-service teacher programme. In this context this study was conducted to explore the level of reflective teaching behaviour of prospective secondary teachers.

### **Objectives of the study**

This study was conducted to serve the following objectives-

1. To identify the level of reflective teaching of prospective secondary teachers(PST).
2. To explore the reflective teaching of PSTs in the context of their gender, academic qualifications, and stream of the study.

### **Hypothesis of the study**

Following hypothesis were formulated to achieve the objective of the study-

1. There will be no significant difference between the obtained mean scores of male and female PSTs on reflective teaching scale.
2. There will be no significant difference between the obtained mean scores of Undergraduate (UG) and Postgraduate (PG) PSTs on reflective teaching scale.
3. There will be no significant difference among the obtained mean scores of PSTs of different streams of study.

**Methodology of the study**

This study was quantitative in nature and survey method was used to conduct the study.

**Population of the study**

PSTs who were pursuing their formal teacher-training in different colleges of Gandhinagar and Mahesana districts, associated with Kadi Sarw Vishwa Vidyalaya, were the population of the present study.

**Sampling method**

Random sampling method was used to select the sample. Total 289 prospective secondary teachers of three colleges, were selected in the sample through cluster sampling technique. There were 197 female and 92 male prospective secondary teachers in the sample. Out of 289 participants there were 150, 19, 80, and 40 prospective secondary teachers from Math-Science, Commerce, Language and Social science streams respectively.

**Tool**

To know the Reflective teaching of prospective secondary teachers, reflective teaching scale (RTS) was used. This scale was constructed and validated by researcher. There were 48 items in the scale. The split-half reliability of the scale was 0.87 and the Cronback Alpha reliability value was 0.87. The reliability value showed that tool was reliable. Content validity of RTS was established.

**Collection of the data**

Researcher visited the colleges with the prior permission of the principals of randomly selected three education colleges. After giving the necessary information with example about how to respond on scale, prospective secondary teachers were requested to give their response on the RTS. Responded scale sheets were collected and data sheet was created with the help of Libre office by researcher.

**Analysis and interpretation of the data**

Descriptive and inferential statistical techniques were used to analyse the data. Range of the scores, mean, median, mode, S.D., values were calculated in descriptive statistics. To test the hypothesis, t-test and F-test were employed. Hypotheses were tested at 0.05 level of significance. All calculations were conducted with the help of JASP. There were two hypotheses tested in the study. According to the objectives of the study, data analysis and interpretation are given as follows-

The first objective of the study was to find out the level of reflective teaching of prospective secondary teachers. To serve this purpose the RTS was administered to the sample. The responses of participants were obtained on five points of RTS, e. i. Strongly agree, agree,

cannot say, disagree, and strongly disagree, that assigned with the score of 5, 4, 3, 2, and 1, respectively. There were 48 items in the scale and the maximum score for each item was five. It was possible to score 1 to 240, and 120 could be the average score for each respondent on RTS.

The result of the study showed that the range of achieved score on RTS by prospective secondary teachers was 145 to 240. Which showed that all prospective secondary teachers achieved more than 50% (120) marks on RTS. The descriptive details are given in table-1.

Table 1: Descriptive detail about the data

Details	Value
Total Participants	289
Mean	210.3
Median	212
Mode	217
Std. Deviation	16.32
Skewness	-0.72
Std. Error of Skewness	0.14
Kurtosis	0.88
Std. Error of Kurtosis	0.29
Minimum	145
Maximum	240
Range	95

The Mean and SD of the score obtained by PSTs on RTS were 210.3 and 16.32 respectively. The value of skewness and kurtosis were -0.72 and 0.89 respectively. The value of skewness was showing negative skewness of the data, means the number of higher scorer PSTs were more than low score achiever in respect of mean score of the data on RTS. Above description can be seen in figure 1 too.

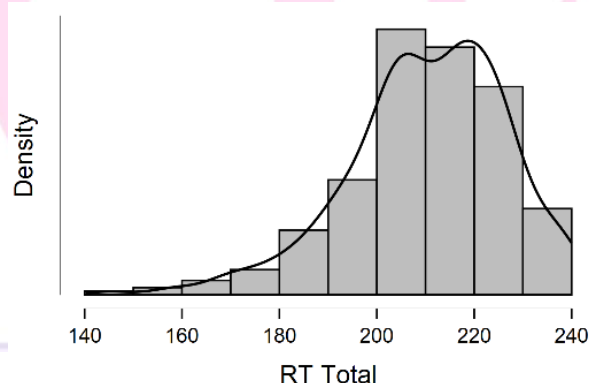


Figure 1: Frequency histogram for Reflective teaching

PSTs were categorised in three categories i.e., low, moderate, and high-level reflective teachers. Categorization were made based on the value of  $\text{Mean} \pm 1\text{SD}$ . Participants who achieved equal or less scores than 193.98 ( $\text{Mean} - 1\text{SD} = 210.3 - 16.32 = 193.98$ ) on RTS were

consider as the low-level reflective teachers. Scores achieved equal or more than 226.32 (Mean + 1SD=210.3+16.32= 226.32)by participant were considered as the high-level reflective teachers and participants who achieved scores in between 193.98 to 226.32 were considered as the moderate level of reflective teachers. The total percentage of participants among 289 PSTs related with low, moderate, and high-level of reflective teaching were 13.8%, 72.7% and 13.5% respectively. Result of the study showed that majority of the PSTs were showing moderate level of reflective teaching.

Second objective of the study was to find out the reflective teaching of PSTs in relation with their gender, academic qualification, and stream differences. To serve this purpose of the study, three null hypotheses ( $H_{01}$ ,  $H_{02}$  and  $H_{03}$ ) were tested at .05 level of significance.

**$H_{01}$ :**The detail of the testing of the  $H_{01}$  is given in table 2.

**Table 2: Significance of the mean differences of the obtained scores of female and male prospective secondary teachers on RTS**

Gender	Number of Participants	Degree of freedom	Mean	S.D.	t-ratio	P-value	Significance at 0.05 level
Female	197		210.2	17.36			Not significant
Male	92	287	210.5	13.91	0.175	0.861	significant

Table2 showed that the t-value was calculated to test the hypothesis. The value of t-test( $t=0.175$ ;  $p=0.861$ ;  $df=287$ ) showed that there were no significant difference between mean scores of female(Mean=210.2, SD=17.36) and male(Mean=210.5,SD=13.91)PSTs. These things can be seen in figure-2 too.

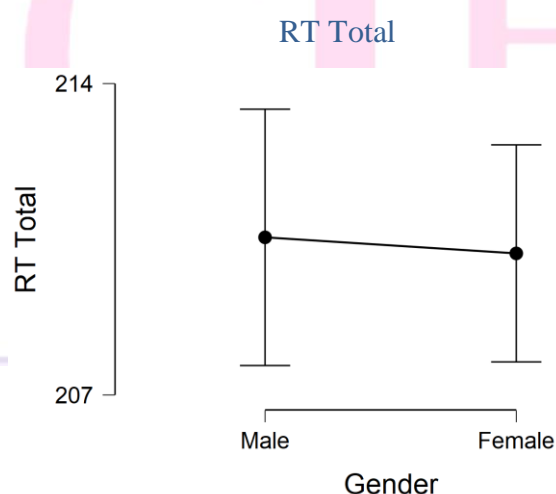


Figure-2: Mean scores of female and male PSTs on RTS



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**Ho<sub>2</sub>:**To know the difference between reflective teaching of PSTs on the ground of their academic qualifications, Ho<sub>2</sub> was tested at 0.05 level of significance. The detail of the testing of the hypothesis is given in table 3.

**Table 3: Significance of the mean differences of the obtained scores of PG and UG PSTs on RTS**

Academic qualification	Number of Participants	Degree of freedom	Mean	S.D.	t-ratio	P-value	Significance at 0.05 level
PG	58		211.2	16.69			Not
UG	231	287	210.1	14.86	0.465	0.642	significant

Table 3 showed that the value of t-test ( $t=0.456$ ;  $p=0.642$ ;  $df=287$ ) was not significant. Therefore, null hypothesis was not rejected, and it was concluded that there was no significant difference between (Mean=211.2, SD=16.69) and UG (Mean=210.1, SD=14.86) PSTs. This thing can be seen in figure-3 too.

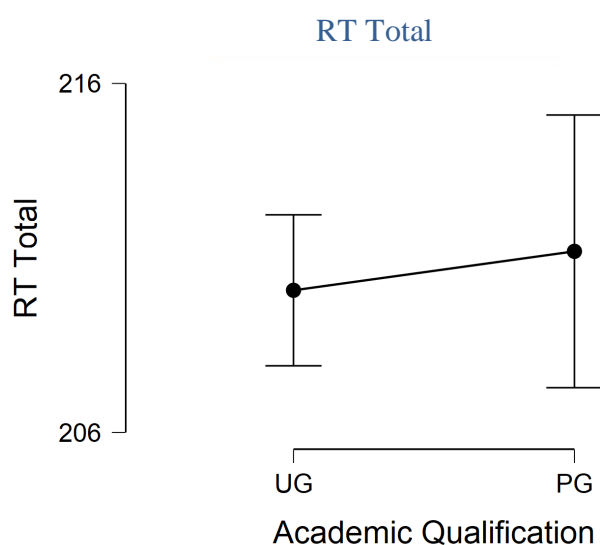


Figure-3: Mean scores of PG and UG prospective secondary teachers on RTS

**Ho<sub>3</sub>:** Null hypothesis 3 was tested to know the reflective teaching of prospective secondary teachers in the context of their stream differences. In this concern *F*-test was employed to test the hypothesis. Descriptive details about the groups are given in table 4.

**Table4: The mean and SD of the obtained scores of different streams' prospective secondary teachers on RTS**

Stream	Numberof participants	Mean	SD
Math-Science	150	215.4	12.19
Commerce	19	204.4	21.87
Languages	80	210.5	16.36
Social Science	40	193.5	15.14

Table 4 showed that there were 150, 19, 80 and 40PSTs of Math-Science, commerce, language, andsocial science streams' respectively. The mean values of obtained scores on RTS scale of science-math, commers, language, and social science streams' PSTs were 212.3, 204.4, 210.5 and 205.3 respectively. The values of SD of obtained scores on RTS of science-math, commers, language, and social science streams' PSTs were 14.35, 21.87, 16.36, and 18.95 respectively. Detail about the F-ratio calculationis given in table 5.

**Table-5: Significance of the difference of mean values of different streams' primary studentteachers' obtained scores on RTS**

Source of Variance	Sum of squares	Df	Mean squares	F-ratio	Significance level
Between the streams(SSbgs)	15828	3	5275.9	24.71	significant at 0.01 level
Within the groups (SSwgs)	60853	285	213.5		
Total	76680	289			

Table 5 shows that the value of F-ratio( $F= 24.71; df=3,285; p<0.01$ ) was significant at 0.01 level. So null hypothesis was not accepted, and it was established that there was a significant difference between the reflective teaching of different streams' PSTs.Post Hoc calculation was calculated to know the difference between groups. The turkey's values were calculated with the help of JASP. The details are given in table 6.



**Table 6: Post Hoc Comparisons between groups**

		Mean Difference	SE	t	p tukey
Science-Math	Commerce	10.986	3.558	3.087	0.012
	Language	4.907	2.023	2.425	0.075
	Social Sciences	21.882	2.600	8.415	< .001
Commerce Language	Social Sciences	-6.079	3.729	-1.630	0.363
	Social Sciences	10.896	4.071	2.676	0.039
Language	Social Sciences	16.975	2.830	5.999	< .001

Table 6 shows that Science-Math streams' PSTs were showing significantly higher reflective teaching than commerce and social science stream's PSTs. It was also revealed that commerce and language streams' PSTs were showing significantly high reflective teaching than social-science streams PSTs. There was no significant difference between the mean scores of PSTs of commerce and language streams. These things can be seen in figure 4.

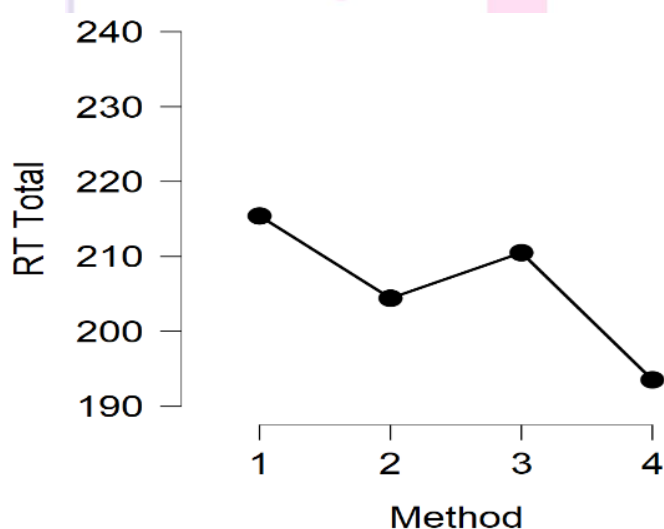


Figure 4: Level of reflective teaching of different streams' PSTs

Note: 1=Math-Science, 2=Commerce, 3=Language and 4=Social Science

### Conclusion

This study was conducted to know the reflective teaching of PSTs in relation with their gender, academic differences, and stream. Descriptive analysis of the data shown that PSTs were showing moderate level of reflective teaching. In relation to the second objective of the study it was revealed that there was no difference in the level of reflective teaching of PSTs on the ground of their gender and academic qualifications differences. Though significant difference was found in the level reflective teaching of PSTs in relation with their stream's differences. Math-Science streams' PSTs were showing significantly high level of reflective teaching than commerce, language, and social science related PSTs. Social-science stream related PSTs were showing significantly low level of reflective teaching than other streams' PSTs. On the light of above finding, it is clearly revealed that there are lots of dissimilarity in the reflective teaching among different streams PSTs. Therefore, it is urgent task for teacher educators and planner to revise the teacher curriculum and organized orientation program to make aware and train them for high level of reflective teaching practices.

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