

Attitude of Teachers towards Culturally Responsive Pedagogy

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Abstract

Culturally Responsive Teaching holds an action-oriented caring stance which uses imaginative strategies and demonstrates high expectations to ensure academic success for ethnically, culturally, and linguistically diverse students. *Culturally Responsive Caring* is a social responsibility, a moral commitment, and a pedagogical obligation. It requires the teachers to use their knowledge understanding and strategic thinking to decide how to act in the best interest of their students. It realizes the connections students have with their society, with their communities, and with each other. A culturally responsive teacher recreates teaching-learning situation such that the students work collaboratively, with their peers as well as teachers, to improve their achievement. Culturally responsive teaching demands diligent efforts and dedication for high level success of diverse students. The purpose of this research was to find out the attitude of teachers towards culturally responsive pedagogy, as their responses would aid the development of a framework for the same. The investigators selected a sample of 200 school-teachers and teacher-educators as the sample for the research. A Self-made attitude scale was used to collect the data and parametric statistics was used to analyse the data. The results of the research reveal that most of the teachers have a positive attitude towards culturally responsive pedagogy and they have shown no differences when we compared this observation based on the parameters of Gender, Category, and Locale.

Key Words: *attitude, teachers, culturally responsive pedagogy*

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1.0 Introduction

Culturally responsive pedagogy is not aligned with *cultural glorification* nor is it about customary ideas around multiculturalism. It includes alternative recognition, respect, and an understanding of differences and its complexities. According to philosophers and sophists, *Culturally Responsive Pedagogy* is comprised of three functional dimensions, which are *institutional*, *personal*, and *instructional*. The *institutional* dimension of culturally responsive pedagogy emphasizes the need to critically examine the organization of schools, school policies, and practices. It refers to the administration and management procedures of school systems that are reflected in the values and culture developed by the school system. It highlights the need to reform the formal processes of schooling which may result in certain patterns of marginalization. The educationists are the stakeholders who need

to think about patterns and systems that should be intentionally interrupted and transformed. The *personal* dimension refers to the teachers and educationists, who need to learn to become culturally responsive in order to support the development of all the students. It encompasses the mindset of culturally responsive education and the practices by which they are not only developed with self-awareness about different cultures but also have an in-depth knowledge and understanding of their students' individual differences and their learning styles. The *instructional* dimension refers to knowing the learners well and considering the classroom practices and challenges associated with implementing cultural responsiveness which result in a culturally responsive classroom. These three dimensions are fundamental to the establishment of an inclusive school environment (Richards, Brown, & Forde, 2006).

According to Gay (2002), *culturally responsive teaching* refers to the use of cultural experiences and perspectives, of culturally diverse students, as a channel for teaching them more efficiently. It is based on the assumption that knowledge construction becomes more meaningful, interesting, and easy, when it is situated within the lived experiences and frames of references of the students. As a consequence, the academic achievements and skills will improve when they are taught through their own cultural and experiential filters (Foster, 1995; Gay, 2000; Horlins, 1996; Kleinfeld, 1975; Ladson-Billings, 1995). Mastery over content knowledge and pedagogical skills is a prerequisite as the competence for effective teaching. The statement, 'We can't teach, what we don't know' (Howard, 1999), applies to the knowledge and understanding of students' cultural differences and subject matter. In our schools, the teachers are not adequately prepared to teach culturally diverse students which, in turn, affects the performance of the students. Culturally responsive teaching argues for the explicit knowledge about cultural diversity in classroom which is imperative to meet the educational needs of culturally diverse students. Knowledge of different cultural norms, values, traditions, customs, communication, learning styles, and relational patterns is particularly important for teachers to have because of its direct implications on teaching and learning (Gay, 2002). Part of this knowledge includes understanding the cultural traits and contributions of different ethnic groups. The teachers need to know about their students' living styles, community preferences, protocols of the communicative norms with adults, and gender role socialization. A majority of teachers and teacher-educationists think that the subjects like maths and science are incompatible with cultural diversity and integrating them is too much of a conceptual and essential stretch for their subjects to maintain disciplinary integrity. This is simply a misconception. There is a considerable place for cultural diversity in every subject taught in schools. These misconceptions lead to the fact that the teachers do not have sufficient knowledge about the contributions made by different ethnic groups to their subject area and are unknown to multicultural education.

Furthermore, there is a fundamental connection between knowledge and curriculum. Curriculum is a means to provide effective teaching-learning experiences. Teachers are not only expected to have a knowledge-base about cultural diversity, but also are required to learn how to convert it into culturally responsive curriculum and instructional techniques. There are three types of curriculum routinely present in the classroom, each of which provides a variety of opportunities for teaching culturally diverse students (Gay, 2002). The first curriculum in this category is formal curricula which has been approved by government policies as well as complemented by adopted textbook and other curriculum guidelines issued by national commission, state education boards, and local schools. Culturally responsive teachers have the capability to identify the multicultural strengths and weaknesses of curriculum and instructional designs. They know how it can be modified and improved in order to make it culturally relevant. Curriculum should be critically analysed, and should focus on accuracy, complexity, purpose, variety, significance of the describe texts, visual illustration, teaching – learning activities, and authorial sources used in the instructional strategy. There are several repeated trends in the curricula of formal schools which avoid controversial issues like equity, equality, gender issues, and focussing on certain prominent individuals recurrently (Webb, et al., 1993;).

In a culturally diverse country, these broad-based analyses are significant to do instructional justice to the intricacy, power, and potentiality of ethnic and cultural diversity. Culturally Responsive Pedagogy is concerned directly with controversy, exploring a wide range of culturally diverse groups. It also recognizes and contextualizes issues within class, religion, cast, and gender, and includes

multiple kinds of knowledge and perspectives. Teachers are the real curriculum transformers of the school curriculum, as they counter culturally diverse students in their classrooms. The in-service and pre-service teachers should be provided with opportunities to practice cultural analysis of textbooks and instruction materials under guided supervision. It would be helpful to understand existing barriers and difficulties in addition to culturally responsive pedagogy. Symbolic curriculum is another type of curriculum which focuses on images, symbols, icons, awards, and other products that are used to teach knowledge, morals, skills, and values to students.

Culturally responsive pedagogy can be comprehensively defined with the work of Gay (2002), Nieto, et al. (2008), and Ladson–Billings (1995). According to Ladson – Billings (1995), culturally responsive pedagogy is specifically devoted to both individual and collective acknowledgement. She explained three components required for *Culturally Responsive Pedagogy*, namely - academic success, development or maintenance of cultural competence, and development of an attitude to critically challenge the society in which they live. Culturally responsive pedagogy is ‘just good teaching’ and a culturally responsive teacher should be assessed on the basis of their way of teaching and teaching learning outcomes (Billings 1995).

2.0 Rationale of Research

Researchers have found that most research on *Culturally Responsive Pedagogy* has been conducted to assess the perception of teachers and provide a conceptual backdrop of the culturally responsive pedagogy. Few studies were conducted on the influence of culturally relevant teaching on racial socialization in schools (Aronson et al., 2016; Morrison et al., 2008; Aldana and Byrd, 2015). Some researches were conducted on culturally relevant teaching, critical consciousness, and academic achievement, such as Christianakis (2011), Rodriguez et al. (2004), Epstein, Mayorga, & Nelson (2011), Martell (2013), Stovall (2006), Laughter & Adams (2012). Some of the researchers explored the attitude of teachers towards culturally responsive pedagogy such as Aldana et al. (2012), Brozo et al. (1996), Dessel et al. (2006), Spencer et al. (2008), Thomas et al. (2008).

Various studies were also conducted on the relationship of culture and learning in order to explore how cultures impact the students’ abilities to participate and learn (Boykin et.al., 2005; Charlesworth, 2008; Tsou, 2005). It was evident from the reviews of related literature that no study was found regarding the researchers’ knowledge on developing a framework for *Culturally Responsive Pedagogy* in the Indian context. The primary and crucial reason to select this study has been the absence and lack of even a single research, so far, which addresses the issues related to the attitude of teachers for implementing culturally responsive pedagogy in classrooms.

3.0 Research Objectives

The following are the specific research objectives to address the research issues stated above:

- To explore the attitudes of teachers towards Culturally Responsive Pedagogy (CRP).
- To compare mean attitude scores of male and female teachers towards Culturally Responsive Pedagogy (CRP).
- To compare mean attitude scores of rural and urban teachers towards Culturally Responsive Pedagogy (CRP).
- To compare mean attitude scores based on caste-categories such as Schedule Caste/ Schedules Tribe (SC/ST), Other Backward Class (OBC), and General category teachers towards Culturally Responsive Pedagogy (CRP).

4.0 Research Design

As the present research has been carried out on a large sample, the researchers have adopted a descriptive survey method as the research design for the purpose of studying the attitude of teachers and teacher-educators towards culturally responsive pedagogy (CRP).

5.0 Sample

Since the present research is quantitative in nature and a descriptive survey method has been used to conduct the study, a sample of total 200 school-teachers (including 20 teacher-educators) were selected through convenient sampling technique. For selecting the sample, three districts of Maharashtra (Wardha, Nagpur, and Gadchiroli) as well as four districts of eastern Uttar Pradesh (Jaunpur, Varanasi, Ambedkar Nagar, and Azamgarh) were picked out conveniently because of the time sensitivity of the research project. The population comprised of all the secondary school-teachers and students belonging to the aforementioned districts: 26 secondary and senior secondary schools were singled out to conduct the study. From these 26 schools, a total of 200 school-teachers were selected in order to study their attitudes towards culturally responsive pedagogy.

6.0 Tool Used

To study the attitude of teachers towards culturally responsive pedagogy, a five-point Likert’s Scale has been developed by the investigators. This attitude scale contains 76 items distributed under nine different dimensions. These nine dimensions have been identified by exploring the relevant literature available on culturally responsive pedagogy.

Internal Consistency of the attitude scale was established by using Cronbach’s Alpha and Table 1 shows the reliability index that is .845, which is considered as a high reliability index.

Table 1. Reliability Index of Attitude Scale.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.845	.875	76

7.0 Data Analysis and Interpretation

The analysis and interpretation of the results based on the research objectives are as follows:

7.1. Attitude of Teachers towards Culturally Responsive Pedagogy.

The first objective of the study was to find out the attitude of teachers towards *Culturally Responsive Pedagogy*. The Attitude scale having 76 items distributed in 10 different dimensions was administered on a sample of 200 teachers from 26 different schools. The data was further categorised and analysed according to overall attitude and dimension-wise attitude towards culturally responsive pedagogy. The Mean Attitude scores towards culturally responsive pedagogy were further analysed on the basis of gender, category, and Locale by using various statistical techniques.

7.1.1 Overall Attitude of Teachers towards Culturally Responsive Pedagogy.

To assess the overall attitude of teachers towards culturally responsive pedagogy, item-wise responses of teachers are presented in Table 2, along with item-wise total score.

The item-wise average scores were analyzed with the help of mean, standard deviation, and coefficient of variance. The results are shown in the Table 2.

Table: 2 Descriptive Statistics of Attitude Score

	N	Minimum	Maximum	Mean	Std. Deviation	Coefficient of variance
Mean	76	1.91	4.28	3.5837	.531	14.82
Valid N	76					

From Table 2, it can be seen that the mean attitude scores of teachers towards culturally responsive pedagogy were found to be 3.583 on a seven-point scaler, which reflects that favourable reaction of teachers towards culturally responsive pedagogy. Further, the standard deviation is 0.531, which shows relatively small variation, and the coefficient of variance is 14.82 %, which is quite low

and, thus, indicates that group reaction towards culturally responsive pedagogy was almost invariant and, thereby, suggested strongly favourable reactions.

7.2. Comparison of Attitude of Teachers towards Culturally Responsive Pedagogy on the basis of Gender, Category, and Locality

Parametric tests are based on the assumption that the data should have normal distribution or a Gaussian distribution. The frequency distribution (histogram), stem-and-leaf plot, boxplot, P-P plot (probability- probability plot), and Q-Q plot (quantile-quantile plot) are used to check normality visually, but statistical tests for normality are more precise since actual probabilities are calculated. The tests for normality calculate the probability that the sample has been drawn out from a normal population. The Null hypotheses used is:

Ho: The sample data do not significantly deviate from normality.

The table 3 show descriptive statistic and statistical test of normality at different levels.

Testing and Interpretation of Normality Hypothesis: Attitude of Male and Female Teachers towards Culturally Responsive Pedagogy after Winsorization.

In case of data which is not normally distributed, a technique called Winsorization is followed/ adopted for outlier management. Winsorization is one of the techniques of outlier of data management for data transformation. This technique was given by a statistician of Princeton University, Charles P. Winsor. In this technique, the outlier data is not excluded, but converted to just after/just before score of its closest undoubtful score. The notion behind this process is that, sometimes, minor outlier in scores is possible, but serious or exceptional outliers are sometimes generated due to measurement errors of human errors. Therefore, their corrections are essential. We have also used same process for our data management and in following table 3, we have presented the result after Winsorization of data.

Table 3. Tests of Normality: Kolmogorov-Smirnov

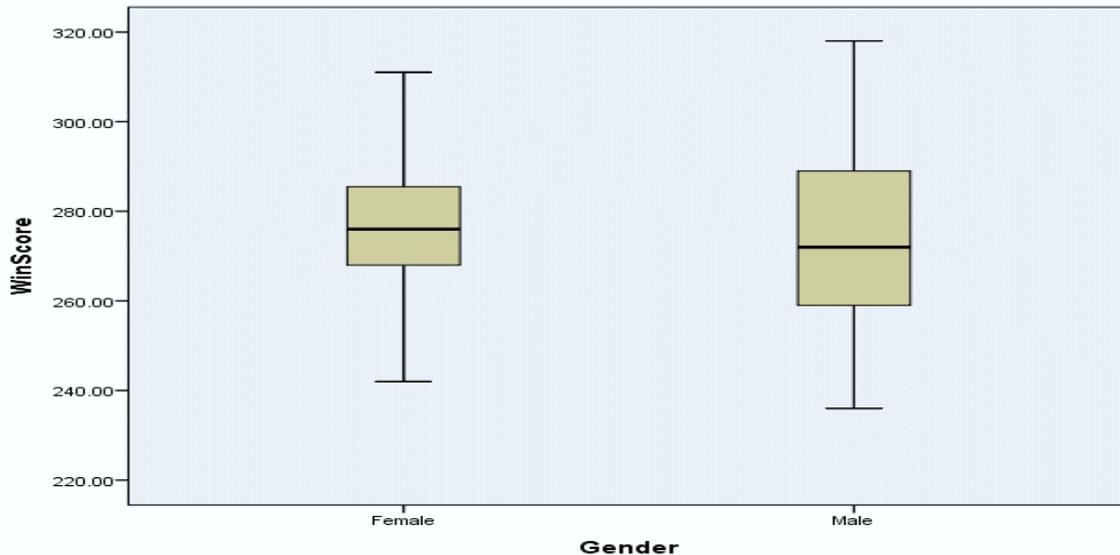
	Gender	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Win Score	Female	.072	115	.199	.969	115	.008
	Male	.093	85	.066	.957	85	.006

From Table 3, it is evident that the statistical value of Kolmogorov-Smirnov test of the attitude scores of female teachers towards culturally responsive pedagogy is .072 whose probability of significance at df (115) is .199, which is more than 0.01 level of significance. Hence, it is not significant at 0.01. In this perspective, the null hypothesis “the given distribution of the attitude scores of female teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal distribution of attitude scores.” is not rejected. Therefore, it can be concluded that the assumption of normality of attitude scores of female teachers towards culturally responsive pedagogy is fulfilled.

It is also observed from the above table 3, that the statistical value of Kolmogorov-Smirnov test of the attitude scores of male teachers towards Culturally Responsive Pedagogy is .093, whose probability of significance at df (85) is .066, which is more than 0.01 level of significance. Hence, it is not significant at 0.01. In this perspective, the null hypothesis “the given distribution of the attitude scores of female teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal distribution of attitude scores.” is not rejected. Therefore, it can be concluded that the assumption of normality of attitude scores of male teachers towards culturally responsive pedagogy is fulfilled.

Graph 1. Normal Boxplot distribution of attitude scores among male and female teachers towards culturally responsive pedagogy.

Attitude of Teachers towards Culturally Responsive Pedagogy



From Graph 1, it is observed that both the whiskers of the box plot of attitude scores of male and female teachers are at the same distance and “there is no outlier above/ over the upper whiskers and below of the lower whisker. Besides, the median line is almost in the middle of IQR (Inter Quartile Range). Hence, it is clear from the interpretation, that the attitude scores of male and female teachers are normality distributed.

Testing and Interpretation of Normality Hypothesis: Attitude Scores of SC/ST, OBC and General Teachers towards Culturally Responsive Pedagogy after Winsorization.

Table 4. Tests of Normality: Kolmogorov-Smirnov^a

Criterion Variable: Attitude towards Culturally Responsive Pedagogy							
	Category	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Win Score	SC/ST	.129	26	.200*	.924	26	.055
	OBC	.073	102	.200*	.976	102	.055
	GENERAL	.088	72	.200*	.955	72	.011

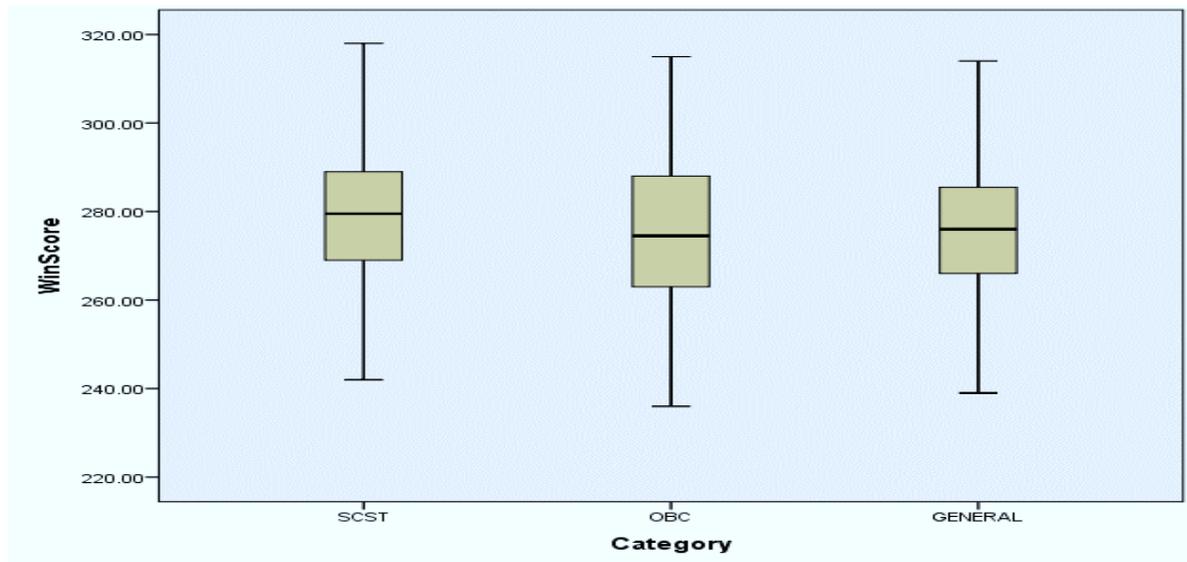
From the above Table 4, it is evident that the statistical value of Shapiro-Wilk ^{test} of the attitude scores of SC/ST teachers towards culturally responsive pedagogy is .924, whose probability of significance at df (26) is .055, which is more than 0.01 level of significance. Hence, it is not significant at 0.01. In this perspective, the null hypothesis “the given distribution of the attitude scores of SC/ST teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal distribution of attitude scores.” is not rejected. Therefore, it can be concluded that the assumption of normality of attitude scores of SC/ST teachers towards culturally responsive pedagogy is fulfilled.

It is also observed from Table 4, that the statistical value of Kolmogorov-Smirnov ^{test} of the attitude scores of OBC teachers towards culturally responsive pedagogy is .073, whose probability of significance at df (102) is .200, which is more than 0.01 level of significance. Hence, it is not significant at 0.01. In this perspective, the null hypothesis “the given distribution of the attitude scores of OBC teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal

distribution of attitude scores.” is not rejected. Therefore, it can be concluded that the assumption of normality of attitude scores of OBC teachers towards culturally responsive pedagogy is fulfilled

It is also observed from the table.4, that the statistical value of Kolmogorov-Smirnov test of the attitude scores of general teachers towards culturally responsive pedagogy is .088, whose probability of significance at df (72) is .200, which is more than 0.01 level of significance. Hence, it is significant at 0.01. In this perspective, the null hypothesis “the given distribution of the attitude scores of general teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal distribution of attitude scores.” is retained. Therefore, it can be concluded that the assumption of normality of attitude scores of general teachers towards Culturally Responsive Pedagogy is fulfilled.

Graph 2. Normal Boxplot distribution of attitude scores among SC/ST, OBC and General teachers towards culturally responsive pedagogy



From Graph 2, it is observed that all the whiskers of the box plot of cultural intelligence scores of SC/ST, OBC, and General teachers are at the same distance and there is no outlier above/ over the upper whiskers and below of the lower whisker. Besides, the median line is almost in the middle of IQR (Inter Quartile Range). Hence, it is clear from the interpretation that the cultural intelligence scores of SC/ST, OBC, and General teachers are normality distributed.

Testing and Interpretation of Normality Hypothesis: Attitude Scores of Rural and Urban Teachers towards Culturally Responsive Pedagogy after Winsorization.

Table 5. Test of Normality- Kolmogorov-Smirnov^a

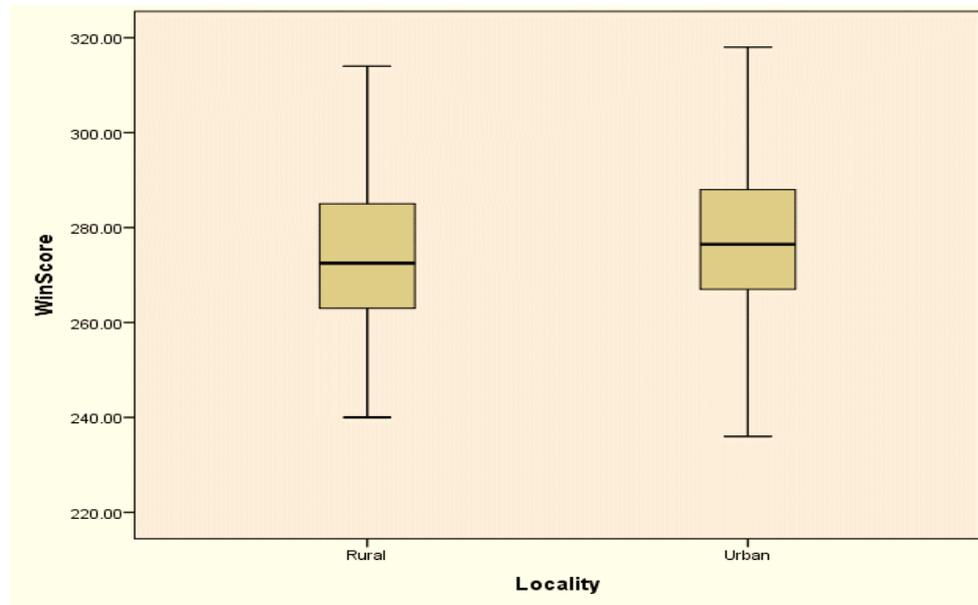
	Locality	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Win Score	Rural	.088	74	.200*	.963	74	.028
	Urban	.068	126	.200*	.972	126	.010

From Table 5, it is evident that the statistical value of Kolmogorov-Smirnov test of the attitude scores of rural teachers towards culturally responsive pedagogy is .088, whose probability of significance at df (74) is .200, which is more than 0.01 level of significance. Hence, it is not significant at 0.01. In this perspective, the null hypothesis “the given distribution of the attitude scores of rural teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal

distribution of attitude scores.” is not rejected. Therefore, it can be concluded that the assumption of normality of attitude scores of rural teachers towards culturally responsive pedagogy is fulfilled.

It is also observed from Table 5, that the statistical value of Kolmogorov-Smirnov test of the attitude scores of urban teachers towards culturally responsive pedagogy is .068, whose probability of significance at df (126) is .200, which is more than 0.01 level of significance. Hence, it is not significant at 0.01. In this perspective the null hypothesis “the given distribution of the attitude scores of urban teachers towards Culturally Responsive Pedagogy is not differ significantly from the normal distribution of attitude scores.” is not rejected. Therefore, it can be concluded that the assumption of normality of attitude scores of urban teachers towards culturally responsive pedagogy is fulfilled.

Graph 3. Normal Boxplot distribution of attitude scores among Rural and Urban teachers towards Culturally Responsive Pedagogy



From Graph 3, it is observed that both the whiskers of the box plot of attitude scores of rural and urban teachers are at same distance and there is no of outlier on over of the upper whiskers and below of the lower whisker. Besides, the median line is almost in the middle of IQR (Inter Quartile Range). Hence, it is clear from the interpretation that the attitude scores of rural and urban teachers are normality distributed.

Since our data fulfilled the conditions of normal distribution, the investigators employed t- test and ANOVA for further analysis.

7.2.1. Comparison of Mean Attitude Scores of Male and Female Teachers towards Culturally Responsive Pedagogy.

The second objective of the investigation was to compare mean attitude scores of male and female school teachers towards culturally responsive pedagogy. For comparison of mean attitude scores of male and female teachers, the data was analysed with the help of independent sample t- test. The results are given in the Table 6 and Table 7 as follows:

Table 6. Group Statistics

Criterion Variable: Attitude towards Culturally Responsive Pedagogy					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Attitude Score	Female	115	276.8609	16.26906	1.51710

	Male	85	273.4706	23.24332	2.52109
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Table 7. Summary of Independent sample t-test of teacher’s attitude towards Culturally Responsive Pedagogy

Criterion Variable: Attitude towards Culturally Responsive Pedagogy						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Attitude Scores	Equal variances assumed	14.666	.000	1.213	198	.226
	Equal variances not assumed			1.152	142.119	.251

Table 6 shows that the standard deviation of distribution of attitude scores of male teachers towards culturally responsive pedagogy is 23.24, which is greater than distribution of attitude scores of female teachers that is 16.26. However, the variance of male group is $23.24/16.26 = 1.43$ times of female group, which is less than two times the value of it. Since this value is less than two times the value, it can be concluded that assumptions of homogeneity of variance between male and female teachers’ group is not violated.

Since the greater value of standard deviation of male group is less than the two times of standard deviation value of female group, it can be concluded that there is no significant difference in homogeneity of variance of male and female group teachers. Further it can be observed from table no 7, that statistic of Leven’s test for equality of variance ($F= 14.66, P= .000 < .01$) is significant at the .01 level of significance. Therefore, the null hypothesis “There is no significant difference in homogeneity of variance of male and female teachers’ group” is rejected. Hence, the assumption of homogeneity of variance is not fulfilled here. In this situation, p value of lower row (Equal variance not assumed) for t- test for equality of means, would be considered to match the results. Table 7 shows that t- value for gender is 1.15 whose probability of significance (at $df = 142.12$) is .251, which is greater than 0.05. Hence, it is not significant at 0.05. It indicates that the mean attitude scores of male and female teachers towards culturally responsive pedagogy do not differ significantly. Therefore, the null hypothesis “there is no significant differences in mean attitude scores of male and female teachers towards Culturally Responsive Pedagogy” is retained. It may, therefore, be concluded that attitude of male and female teachers towards culturally responsive pedagogy is found to be equally positive.

7.2.2. Comparison of Mean Attitude Scores of Rural and Urban Teachers Towards Culturally Responsive Pedagogy.

The second sub-objective of the study was to compare mean attitude scores of rural and urban school-teachers towards culturally responsive pedagogy. For comparing mean attitude scores of rural and urban teachers the data was analysed with the help of independent sample t- test. The results are given in the Tables 8 and 9 respectively, as presented below:

Table 8. Group Statistics

	Locality	N	Mean	Std. Deviation	Std. Error Mean
Attitude Scores	Rural	74	272.89	19.79	2.30
	Urban	126	276.90	19.33	1.72

Table 9. Summary of Independent sample t-test of teacher’s attitude towards Culturally Responsive Pedagogy on the basis of Locale

		Levene’s Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T	df	Sig. (2-tailed)
Attitude Scores	Equal variances assumed	.330	.566	-1.404	198	.162
	Equal variances not assumed			-1.396	150.186	.165

Table 8 shows that standard deviation of distribution of attitude scores of rural teachers towards culturally responsive pedagogy is 19.79, which is greater than the distribution of attitude scores of urban teachers, that is 19.33, which is almost equal in both the groups. Therefore, it can be concluded that assumptions of homogeneity of variance between rural and urban teachers’ group is not violated.

Since the greater value of standard deviation of rural group is less than the two times of standard deviation value of urban group, it can be concluded that there is no significant difference in homogeneity of variance of male and female group teachers. Further, it can be observed from Table 9, that statistic of Leven’s test for equality of variance ($F = .330, P = .566 > .01$) is not significant at .01. Therefore, the null hypothesis “There is no significant difference in homogeneity of variance of male and female teachers’ group” is accepted. Hence, the assumption of homogeneity of variance is satisfied here. In this situation, p value of upper group (Equal variance assumed) for t- test for equality of means would be considered to match the results. Table.8 shows that t- value is 1.404 whose probability of significance (df /198) is .162, which is greater than 0.05, hence not significant at 0.05 level. It indicates that the mean attitude scores of teachers towards culturally responsive pedagogy do not differ significantly. Hence, the null hypothesis “there is no significant differences mean attitude scores of rural and urban teachers towards Culturally Responsive Pedagogy” is retained. It may, therefore, be concluded that the attitude of rural and urban teachers towards culturally responsive pedagogy is found to be equally positive.

7.2.3 Comparison of Mean Attitude Scores of SC/ST, OBC, and GENERAL Teachers Towards Culturally Responsive Pedagogy.

The third objective of the study was to compare mean attitude scores of SC/ST, OBC, and General school teachers towards culturally responsive pedagogy. For comparing mean attitude scores of SC/ST, OBC, and General teachers the data was analysed with the help of one-way ANOVA. The results are given in the Table.10 below:

Table 10. Descriptive Statistics of Groups

Criterion Variable: Attitude towards Culturally Responsive Pedagogy				
	N	Mean	Std. Deviation	Std. Error
SC/ST	26	277.84	22.58	4.42
OBC	102	273.65	19.10	1.89
GENERAL	72	277.04	19.07	2.24

Table 10 shows that standard deviation of distribution of attitude scores of SC/SC teachers towards culturally responsive pedagogy is 22.58, which is greater than distribution of attitude scores of OBC teachers, which is 19.10, and that of General Teachers, which is 19.07. Thus, it is almost equal in all the groups, and, therefore, it can be concluded that the assumption of homogeneity of variance between SC/ST, OBC, and General teachers is not violated.

Table 11. Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
.234	2	197	.792

Furthermore, it can be observed from Table 11, that statistic of Leven’s test for equality of variance ($F= .234, P= .792 > .01$) is not significant at the .01 level of significance. Therefore, the null hypothesis “There is no significant difference in homogeneity of variance of the SC/ST, OBC, and General teachers’ group” is accepted. Hence, the assumption of homogeneity of variance is fulfilled here. In this situation, p value of traditional ANOVA would be considered to match the results.

Table 12. Summary of One-Way ANOVA of teacher’s attitude towards Culturally Responsive Pedagogy on the basis of Category

Criterion Variable: Attitude towards Culturally Responsive Pedagogy					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	659.470	2	329.735	.861	.424
Within Groups	75457.250	197	383.032		
Total	76116.720	199			

Table 13. Robust Tests of Equality of Means

Robust Tests of Equality of Means				
	Statistic	df1	df2	Sig.
Welch	.834	2	66.075	.439

Brown-Forsythe	.771	2	81.694	.466
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Table 12 shows that f-value is .861, whose probability of significance (df = 2, 197) is 0.424, which is greater than 0.05, thereby, not significant at 0.05 level. This indicates that the mean attitude scores of the SC/ST, OBC, and General teachers towards culturally responsive pedagogy do not differ significantly. Hence, the null hypothesis, “there is no significant differences in mean attitude scores of SC/ST, OBC and General teachers towards culturally responsive pedagogy”, is not rejected. It may, therefore, be concluded that the attitude of the SC/ST, OBC, and General teachers towards culturally responsive pedagogy is found to be equally positive.

8.0 Findings and Discussion

The results of this investigation, along with their interpretations, have been presented in the preceding section. From these results, the following findings have emerged and are discussed as under:

8.1 Findings

The following are the findings of the present research:

1. The mean scores of the attitude of teachers towards *Culturally Responsive Pedagogy* are found to be favourable. Further, the standard deviation shows relatively small variations and coefficient of variance is quite low, and indicates that the group reaction towards culturally responsive pedagogy was almost invariant as well as the reactions were strongly favourable towards culturally responsive pedagogy.
2. The mean attitude scores of teachers towards culturally responsive pedagogy do not differ significantly when compared on the basis of gender. Hence, the null hypothesis, “there is no significant differences in mean attitude scores of male and female teachers towards culturally responsive pedagogy”, is not rejected. It may, therefore, be concluded that attitude of both male and female teachers, towards culturally responsive pedagogy, is found to be equally positive.
3. The mean attitude scores of teachers towards culturally responsive pedagogy are not found to differ significantly when compared on the basis of locale. Hence, the null hypothesis, “there is no significant differences mean attitude scores of rural and urban teachers towards culturally responsive pedagogy”, is not rejected. It may, therefore, be concluded that the attitude of rural and urban teachers, towards culturally responsive pedagogy, is found to be equally positive.
4. The mean attitude scores of the SC/ST, OBC, and General teachers towards culturally responsive pedagogy do not differ significantly. It may, therefore, be concluded that the attitude of the SC/ST, OBC, and General teachers, towards culturally responsive pedagogy, is found to be equally positive.

8.2 Discussion of Findings

The objective-wise findings of the present study have been discussed below:

It is clear, from the results, that the attitude of teachers towards *Culturally Responsive Pedagogy* is found to be favourable. This is a positive finding. This finding is supported by Kim & Connelly (2019), Frye et al. (2010), Columna, Foley & Lytle (2010), Barnes (2006), Hynds et al. (2016). It was found, from the review of previous research, that there were only few research works where the attitude of teachers towards culturally responsive pedagogy was assessed and most of this research, based on culturally responsive pedagogy, was undertaken outside India . So, the findings have been supported on the basis of these few research works.

Furthermore, it is clear from the findings that the attitude of both male and female teachers was found to be equally positive when compared on the basis of gender. These findings reflect that both male and female teachers possess the mental competence that enables them to work creatively and effectively to support all students in diverse settings. They are free from gender biases, cultural prejudice, and preconceived notions of socio-cultural differences. Hence, it can be concluded, on the basis of the current findings, that gender does not play any significant role in developing an attitude

towards culturally responsive pedagogy. However, these above stated findings are not supported by the research of Columna, Foley, & Lytle (2010), wherein it was proposed that attitude of females was more positive than that of males.

From the results, it was also found that the mean attitude scores of rural and urban teachers were not found to differ significantly, which means, the attitude of both rural and urban teachers was found to be equally positive. The reasons behind this finding may be for the reason that both urban and rural teachers show almost same knowledge and understanding towards culturally responsive pedagogy. Although, rural teachers may not be more culturally intelligent than urban teachers, but rural teachers equally demonstrate the attitude and multicultural awareness needed to teach in a multicultural classroom. The findings also reflect that rural teachers might be equally efficient to adopt a variety of instructional strategies in order to address the needs and capabilities of diverse students.

Furthermore, the findings indicated that the social category does not affect the attitude of teachers towards culturally responsive pedagogy. It reflects that the teachers from different social categories (SC/ST, OBC, and General) are also free from cultural biases. They might be able understand the students' perspectives and their cultural identities as well as be able to integrate content and examples of different socio-cultural backgrounds into the curriculum. The findings also revealed that all the teachers belonging to different social categories might **endorse** equity pedagogy and prejudice reduction

References

1. Aceves, T. C., & Orosco, M. J. (2014). Culturally Responsive Teaching - CEEDAR (Document No. IC2). Retrieved from *University of Florida, Collaboration for Effective Educator, Development, Accountability, and Reform Center*, 1-37. <http://ceedar.education.ufl.edu/tools/innovation-configurations>.
2. Aldana, A., & Byrd, C. M. (2015). School ethnic-racial socialization: Learning about race and ethnicity among African American students. *The Urban Review, (Research Gate)*. 47(3), 563-576. <https://www.researchgate.net/publication/281443634>
3. Aldana, A., Rowley, S. J., Checkoway, B., & Richards-Schuster, K. (2012). Raising ethnic-racial consciousness: The relationship between intergroup dialogues and adolescents' ethnic racial identity and racism awareness. *Equity & Excellence in Education*, 45, 120-137.
4. Ancis, J. R., Sedlacek, W. E., & Mohr, J. J. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling & Development*, 78(2), 180-185.
5. Aronson, B., Amatullah, T., & Laughter, J. (2016). Culturally relevant education: Extending the conversation to religious diversity. *Multicultural Perspectives*, 18(3), 140-149.
6. Aronsan, B. & Laughter, J. (2016). The theory and practice of culturally relevant education: A synthesis of research across content areas. *Review of Educational Research*, 86(1), 163-206.
7. Barnes, C. J. (2006). Preparing preservice teachers to teach in a culturally responsive way. *Negro Educational Review*, 57, 85-100.
8. Boykin, A. W., Albury, A., Tyler, K. M., Hurley, E. A., Bailey, C. T., & Miller, O. A. (2005). Culture-based perceptions of academic achievement among low-income elementary students. *Cultural Diversity and Ethnic Minority Psychology*, 11(4), 339-350.
9. Brozo, W. G., Valerio, P. C. & Salazar, M. M. (1996). A walk-through Gracie's garden: Literacy and cultural explorations in a Mexican American junior high school. *Journal of Adolescent & Adult Literacy*, 40(3). <https://www.jstor.org/stable/40012125>
10. Burton, L. J., & Mazerolle, S. M. (2011). Survey instrument validity part I: Principles of survey instrument development and validation in athletic training education research. *Athletic Training Education Journal*, 6(1), 27-35.
11. Charlesworth, S. (2008). Claiming discrimination, complaints of sex and gender discrimination in employment under the Victorian equal opportunity act 1995. *The Centre for Applied Social Research School of Global Studies, Social Science and Planning (Research Gate)*, 2-23.

12. Charlesworth, Z. M. (2008). Learning styles across cultures: Suggestions for educators. *Education and Training*, 50(2), 115–127. <https://s3.amazonaws.com/academia.Edu.Documents/44390711>
13. Christianakis, M. (2011). Parents as “help labor”: Inner-city teachers' narratives of parent involvement. *Teacher Education Quarterly*, 38(4), 157-178.
14. Columna, L., Foley, J. T., & Lytle, R. K. (2010). Physical education teachers' and teacher candidates' attitudes toward cultural pluralism. *Journal of Teaching in Physical Education*, 29(3), 295-311.
15. Dessel, A., Rogge, M., & Garlington, S. (2006). Using intergroup dialogue to promote social justice and change. *Social Work*, 51(4), 303-315. <http://www.jstor.org/stable/23721215>
16. Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford University Press.
17. Epstein, T., Mayorga, E., & Nelson, J. (2011). Teaching about race in an urban history class: The effects of culturally responsive teaching. *Journal of Social Studies Research*, 35(1), 2-21.
18. Freire, P (1998). *Pedagogy of freedom: Ethics, democracy, and civic courage* Oxford, UK Rowman & Littlefield
19. Frye, B., Button, L., Kelly, C., & Button, G. (2010). Preservice teachers' self-perceptions and attitudes toward culturally responsive teaching. *Journal of Praxis in Multicultural Education*, 5(1), 5-21.
20. Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53(2), 106-116.
21. Gay, G., & Kirkland, K. (2003). Developing cultural critical consciousness and self-reflection in preservice teacher education. *Theory into Practice*, 42(3), 181–187.
22. Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-Type Scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, The Ohio State University, Columbus, October 8-10.
23. Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American educational research journal*, 32(3), 465-491.
24. Huh, H. K., Choi, S. W., & Jun, J. (2015). Relationships among multicultural sensitivity, multicultural education awareness, and level of multicultural education practice of South Korean teachers. *KEDI Journal of Educational Policy*, 12(1), 107-126.
25. Hynds, A. S., Hindle, R., Savage, C., Meyer, L. H., Penetito, W., & Sleeter, C. (2016). The impact of teacher professional development to reposition pedagogy for Indigenous students in mainstream schools. *The Teacher Educator*, 51(3), 230-249.
26. Kang, H. S. T., Kim, E. J., & Park, S. (2019). Multicultural teaching efficacy and cultural intelligence of teachers. *International Journal of Educational Management*, 33(2), 265-275.
27. Kim, H., & Connelly, J. (2019). Preservice teachers' multicultural attitudes, intercultural sensitivity, and their multicultural teaching efficacy. *Educational Research Quarterly*, 42(4), 3-20.
28. Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American educational research journal*, 32(3), 465-491.
29. Laughter, J. C. & Adams, A. D. (2012). Culturally relevant science teaching in middle school. *Urban Education (SAGE)*, 47(6), 1106 –1134.
30. Martell, C. C. (2014). Teaching about race in a multicultural setting: Culturally relevant pedagogy and the U.S. history classroom. Paper Presented at the Annual Meeting of the American Educational Research Association Philadelphia, Pennsylvania. <https://eric.ed.gov/?id=ED545385>
31. Morrison, J., Osrin, D., Shrestha, B., Tumbahangphe, K. M., Tamang, S., Shrestha, D., & Costello, A. (2008). How did formative research inform the development of a women's group intervention in rural Nepal?. *Journal of perinatology*, 28(2), 14-22.

32. Nieto, S., Bode, P., Kang, E., & Raible, J. (2008). Identity, community, and diversity: Rethorizing multicultural curriculum for the postmodern era. *The Sage handbook of curriculum and instruction*, 176-197.
33. Petrović, D. S. (2011). How do teachers perceive their cultural intelligence? *Procedia-Social and Behavioural Sciences*, 11, 276-280.
34. Rodriguez, J. L., Jones, E. B., Pang, V. O., & Park, C. D. (2004). Promoting academic achievement and identity development among diverse high school students. *The High School Journal*, 87(3). <https://www.jstor.org/stable/40364295>
35. Samuels, A. J., Samuels, G. L., & Cook, T. M. (2017). Examining perceptions of culturally responsive pedagogy in teacher preparation and teacher leadership candidates. *SRATE Journal*, 26(2), 50-60.
36. Savage, C., Hindle, R., Meyer, L. H., Hynds, A., Penetito, W., & Sleeter, C. E. (2011). Culturally responsive pedagogies in the classroom: Indigenous student experiences across the curriculum. *Asia-Pacific Journal of Teacher Education*, 39(3), 183-198.
37. Spencer, M. S., Brown, M., Griffin, S., & Abdullah, S. (2008). Outcome evaluation of the intergroup project. *Small Group Research*, 39, 82-103. DOI:10.1177/1046496407313416
38. Staires, A. J. (2007). Culturally responsive teaching: The Harlem renaissance in an urban English class. *The English Journal*, 96(6), 37-42. <https://www.Jstor.org/stable/30046750>
39. Stovall, D. (2006). We can relate: Hip-hop culture, critical pedagogy, and the secondary classroom. *Urban Education*, 41, 585- 602. DOI:10.1177/0042085906292 513
40. Thomas, O., Davidson, W., & McAdoo, H. (2008). An evaluation studies of the Young Empowered Sisters (YES!) Programme: Promoting cultural assets among African American adolescent girls through a culturally relevant school-based intervention. *Journal of Black Psychology*, 34, 281-308. DOI:10.1177/00957984 08 314136
41. Tsou, W. (2005). The effects of cultural instruction on foreign language learning. *Regional Language Centre Journal*, 36(1), 39-57.
42. Webb, J., Wilson, B., Corbett, D., & Mordecai, R. (1993). Understanding caring in context: Negotiating borders and barriers. *The Urban Review*, 25(1), 25-45.