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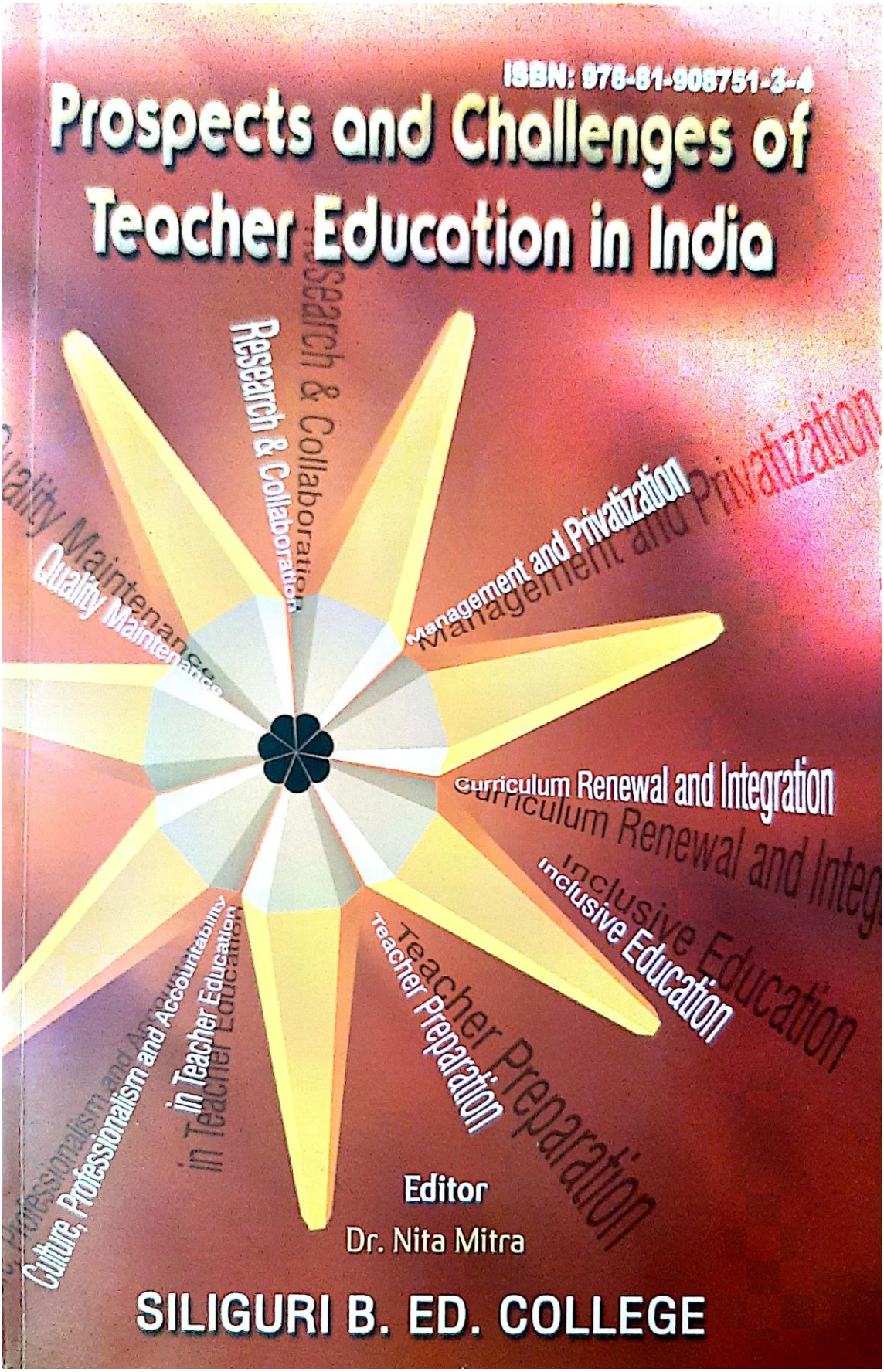

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Prospects and Challenges of Teacher Education in India

(Proceedings of UGC Sponsored National Seminar held on 19th & 20th May, 2015 at Siliguri B. Ed. College, WB in collaboration with Ramakrishna Mission Sikshanamandira, Belur Math, West Bengal)

This Book Belongs to
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Sibmandir, Baramohan Sing Jote, P.O. Kadamtala,
Dist. Darjeeling, Pin-734011, West Bengal, India

Secondary

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18th May, 2015

MESSAGE

It gives me immense pleasure to learn that Siliguri B.Ed. College is organizing a **National Seminar** in collaboration with the **Ramakrishna Mission Sikshanamandira, Belur**. Such seminars in the presence of distinguished persons, I presume, will evaluate the existing education scenario and suggest means for enhancing teaching aptitude and growth-oriented evaluation.

I hope that the Seminar will be successful and convey my best wishes are for all the members of the organizing committee, teachers, students and the participants on this glorious occasion.

Somnath Ghosh
18.5.2015

Prof. Somnath Ghosh
Vice-chancellor

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PROSPECTS AND CHALLENGES OF TEACHER EDUCATION IN INDIA ISBN-978-81-908751-3-4
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Key-note Address

Most Respected DR. NITA MITRA, Professor Pradhan, Prof. Chanda, Teachers coming from different higher education institutions, dignitaries and my dear students.

At the outset I express my deep compunction for not being able to be physically present in this UGC sponsored national level Seminar on *PROSPECTS AND CHALLENGESOF TEACHER EDUCATION IN INDIA*, which again is being organized in joint collaboration with our College. Although all along these two days I wish to feel the warmth of the high level discourses from Belur Math.

It is a well-known fact that during 1906-1956, the program of teacher preparation was called teacher training. It prepared teachers as mechanics or technicians. It had narrower goals with its focus being only on skill training. The perspective of teacher education was therefore very narrow and its scope was limited. As W.H. Kilpatrick put it, 'Training is given to animals and circus performers, while education is to human beings.'

Teacher education encompasses teaching skills, sound pedagogical theory and professional skills. Hence, now Teacher Education = Teaching Skills + Pedagogical theory + Professional skills.

Teaching skills would include providing training and practice in the different techniques, approaches and strategies that would help the teachers to plan and impart instruction, provide appropriate reinforcement and conduct effective assessment. It includes effective classroom management skills, preparation and use of instructional materials and communication skills.

Pedagogical theory includes the philosophical, sociological and Psychological considerations that would enable the teachers to have a sound basis for practicing the teaching skills in the classroom. The theory is stage specific and is based on the needs and requirements that are characteristic of that stage.

Professional skills include the techniques, strategies and approaches that would help teachers to grow in the profession and also work towards the growth of the profession. It includes soft skills, counselling skills, interpersonal skills, computer skills, information retrieving and management skills and above all life-long learning skills.

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An amalgamation of teaching skills, pedagogical theory and professional skills would serve to create the right knowledge, attitude and skills in teachers, thus promoting holistic development.

The teacher educations in India today faces the following challenges which in brief, are again the pints which are to be positioned as the priorities.

These are as follows:

1. Professionalism in Teacher Education.
2. Development of Education as a Discipline.
3. Bridging gap between School and Teacher Education Curricula.
4. Continuing Education of Teachers.
5. Inclusive education.
6. Teacher Education for Integral Value Components like physical education, aesthetic education, yoga etc.
7. Philosophy of life integrated with Teacher Education.
8. Common School System.
9. In-service teacher education integrated with pre-service teacher education and
10. Integration of research in Teacher Education.

Thus, the teacher Education is supposed to be intimately integrated with a sound indigenous philosophy of life in the coming days which will be free from ambiguity and which will be made to remain open to addition, alteration, modification and even zero audit and an all-out effort for creating a congenial ambiance for teacher education may kindle hope in the present situation and this new paradigm in the postmodern era may restore to teacher education its rightful place for which we can be proud of.

I pray for this Seminar enable all to take home soothing experience which would augment the teacher education scenario in our country in some way or other.

Thank you.

Swami (Dr.) Tattwasarananda
Principal
Ramakrishna Mission Sikshanamandira
Belur Math, W.B.

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PROSPECTS AND CHALLENGES OF TEACHER EDUCATION IN INDIA
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Secondary School Teachers' Attitude towards Constructivist Approach in Teaching, Teacher Effectiveness and Self-Efficacy

Abhijit Guha[1] and Ujjwal Paul[2]

ABSTRACT : Constructivism concentrates on learning how to think and understand which is a set of beliefs provides students autonomy in learning and a model of cognition that leads directly to a method of teaching that, in turn, credits the student with the power to become an active learner. Constructivism, considered in its widest sense, is concerned with more than a theory of learning. Constructivist epistemology is a philosophical approach to investigating the scope, structure and very nature of knowledge which follows a constructivist approach. Constructivist epistemology is a philosophical perspective taken by some philosophers towards the nature of scientific knowledge. Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression. Bandura (1997, p.3) defines self-efficacy as "beliefs in one's capabilities to organise and execute the course of action required to produce given attainments". Self-efficacy therefore influences thought patterns and emotions that enable classroom actions. In the context of education, teacher self efficacy is considered a powerful influence on teachers' overall effectiveness with students. In an era of increasing accountability demands for teachers and students professional development will be the key to success in school reform initiatives as administrators struggle with improving the current teaching force. Research has shown that teacher efficacy is an important variable in teacher effectiveness that is consistently related to teacher behaviours and student outcomes. Teachers' attitude towards constructivist approach in teaching has an effective impact to increase teacher effectiveness and self-efficacy among school teachers. The present study was conducted to inquire the present attitude of school teachers of West Bengal in advocating constructivist approach in their teaching strategy and its impact on teacher effectiveness and self-efficacy. For measuring teachers' attitude towards constructivist approach, teacher effectiveness and self-efficacy, three scales i.e. CASST (Constructivist Attitude scale for School Teacher), Cronbach's Alpha value for reliability of the tool was 0.826, PGTES(Post Graduate Teacher Effectiveness Scale), the coefficient of correlation of the test scale was 0.76 & OSES (Occupational Self-Efficacy Scale), the reliability coefficient of the scale was 0.98 were administered on 216 randomly selected secondary school teachers of West Bengal (W.B). The major findings were that the teachers of W.B. possess a moderately positive attitude towards constructivist approach in classroom teaching situation and location-wise and gender-wise the difference of this attitude is insignificant. Teachers' attitudes towards constructivist approach in teaching, teacher effectiveness and self-efficacy share a significant

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Secondary School Teachers' Attitude towards Constructivist Approach in Teaching, Teacher Effectiveness and Self-Efficacy

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Abstract

Constructivism concentrates on learning how to think and understand which is a set of beliefs provides students autonomy in learning and a model of cognition that leads directly to a method of teaching that, in turn, credits the student with the power to become an active learner. Constructivism, considered in its widest sense, is concerned with more than a theory of learning. Constructivist epistemology is a philosophical approach to investigating the scope, structure and very nature of knowledge which follows a constructivist approach. Constructivist epistemology is a philosophical perspective taken by some philosophers towards the nature of scientific knowledge. Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression. Bandura (1997, p.3) defines self-efficacy as "beliefs in one's capabilities to organise and execute the course of action required to produce given attainments". Self-efficacy therefore influences thought patterns and emotions that enable classroom actions. In the context of education, teacher self efficacy is considered a powerful influence on teachers' overall effectiveness with students. In an era of increasing accountability demands for teachers and students professional development will be the key to success in school reform initiatives as administrators struggle with improving the current teaching force. Research has shown that teacher efficacy is an important variable in teacher effectiveness that is consistently related to teacher behaviours and student outcomes. Teachers' attitude towards constructivist approach in teaching has an effective impact to increase teacher effectiveness and self-efficacy among school teachers. The present study was conducted to inquire the present attitude of school teachers of West Bengal in advocating constructivist approach in their teaching strategy and its impact on

teacher effectiveness and self-efficacy. For measuring teachers' attitude towards constructivist approach, teacher effectiveness and self-efficacy, three scales i.e. CASST (Constructivist Attitude scale for School Teacher), Cronbach's Alpha value for reliability of the tool was 0.826, PGTES(Post Graduate Teacher Effectiveness Scale), the coefficient of correlation of the test scale was 0.76 & OSES (Occupational Self-Efficacy Scale), the reliability coefficient of the scale was 0.98 were administered on 216 randomly selected secondary school teachers of West Bengal (W.B). The major findings were that the teachers of W.B. possess a moderately positive attitude towards constructivist approach in classroom teaching situation and location-wise and gender-wise the difference of this attitude is insignificant. Teachers' attitudes towards constructivist approach in teaching, teacher effectiveness and self-efficacy share a significant moderate positive correlation (r = 0.454 between CASST & PGTES and r = 0.301 between CASST & OSES). A moderate significant positive correlation (r = 0.564) between teachers' effectiveness and teachers' self-efficacy also been reported in the study. The full paper discusses on the concept of teachers attitude towards Constructivist approach in teaching, teacher effectiveness, self-efficacy and empirically explore the relationship among the mentioned variables.

Keywords: *Constructivist Approach, Teachers' Attitude, Teacher Effectiveness, Self-Efficacy, Secondary school teacher*

Introduction:

Constructivism concentrates on learning how to think and understand which is a set of beliefs provides students autonomy in learning and a model of cognition that leads directly to a method of teaching that, in turn, credits the student with the power to become an active learner. Modern theories of learning claim the construction of knowledge occurs as students build understanding in light of experiences occurring in the world. Experience can occur within the context of various pedagogic modes within a classroom setting; moreover, the development of deep conceptual understanding of content and the processes of science – as informed by constructivist models of learning – stress the active participation of students in the process of constructing knowledge. This can occur when students are engaged in learning tasks which tacitly or explicitly make them aware of this construction with deference to prior knowledge structures. In their words, "though we may more or less share one reality, each of us conceives of it in different ways based on our prior experiences, belief structures and perspective. From this view, interpretation constructivism

can include different types of knowledge construction than rote memorization of factual knowledge or procedures. The goal for the learner is to build, or re-invent knowledge" (p.92). According to Von Glasersfield (1995a) as cited in Allus & Bruce (2008), "Constructivism as a set of beliefs provides a model of cognition that leads directly to a method of teaching that, in turn, credits the student with the power to become an active learner. Teaching aims at enabling students to generate activities out of the understanding of why they should be performed and the explanation that they lead to desired results"(p.90)

Constructivism concentrates on learning how to think and understand. This learning is transferable. This situation gives students ownership (stake holder) what they learn, since learning is based on students' questions and explorations. Students in constructivist classrooms learn to question things and to apply their natural curiosity to the world. In a democratic teaching-learning environment teachers' role, their effectiveness and their attitude in the classroom to transmit knowledge is a crucial factor. The principal investigator of Biological science curriculum studies (BSCS), Roger Bybee(?) developed an instructional model for constructivist, as cited in Ahmed (2009), which was called the 'Five Es' and were indicated as follows:

1. **Engage:** The student's first encounter and identity the instructional task.
2. **Explore:** Learning get directly involved with the phenomena and materials.
3. **Explain:** At this stage explanation is multidirectional.
4. **Elaborate:** Students apply their understanding to the world around them, which they had learned in the past.
5. **Evaluate:** This is an ongoing diagnostic process.

So, in a constructivist pedagogy learning would take place in authentic and real- world environments that should involve social negotiation and mediation (pp.85-86).

In a democratic teaching-learning environment teachers' role, their effectiveness and their attitude in the classroom to transmit knowledge is a crucial factor. The teacher effectiveness is directly correlated to specific teaching strategy (Pigge and Marso, 1990) and it has been equalized to student achievement (Stronge, 2010, as cited in Munoz, Prather & Stronge, 2011). The attitude of teachers determines his behavior of teaching and guides him to adopt constructivist approach as teaching strategy which might help in students' achievement and make the sense of positive influence of teacher effectiveness. Thus the teachers' attitude towards constructivist approach and its relationship with teacher effectiveness was felt necessary to inquire about in Indian perspective especially in West Bengal.

In a democratic teaching-learning environment teachers' role, their self efficacy and their attitude in the classroom to transmit knowledge is a crucial factor. In order to identify pre-service teachers self-efficacy toward the constructivist approach, a study employed a scale on self-efficacy toward application of the constructivist approach, a quantitative data collection instrument, as a result of that study, the self efficacy belief levels of pre-service teachers about constructivist approach application were found generally highly positive. In addition to this, for the sub-dimensions of the scale, the analyses revealed the highest mean value belongs to "the self-efficacy belief in creating democratic learning environments" (Evrekli et al. 2010). The

teachers practicing learner-centered approaches use their self-efficacy in order to be effective in teaching; and the role of Teacher efficacy and Characteristics on Teaching Effectiveness, Performance, and use of Learner-Centered Practices are highly correlated. (Magno and Sembrano, 2010). The attitude of teachers determines his behavior of teaching and guides him to adopt constructivist approach as teaching strategy which might help in students' achievement and make the sense of positive influence of teacher self-efficacy. Thus the teachers' attitude towards constructivist approach and its relationship with teacher effectiveness and self efficacy were felt necessary to inquire about in Indian perspective especially in West Bengal.

Objectives of the study

Following major objectives were identified for the present study:

1. To study the attitude towards constructivist approach of the Secondary school teachers in teaching-learning process under different categorical variables.

2. To compare the teachers' attitude towards constructivist approach under different categorical variables like gender, location of school.

3. To study the relationship between teachers' attitude towards constructivist approach in teaching and teacher effectiveness.

4. To study the relationship between teachers' attitude towards constructivist approach in teaching and teacher self-efficacy.

5. To study the relationship between teachers' effectiveness and teachers' self efficacy.

Hypotheses

H_o1: There would be no significant difference in attitude towards constructivist approach in teaching between the teachers of rural school and urban school.

H_o2: There would be no significant difference in attitude towards constructivist approach in teaching between the male and female teachers.

H_o3: There would be no significant relationship between teachers' attitude towards constructivist approach in teaching and teacher effectiveness.

H_o4: There would be no significant relationship between teachers' attitude towards constructivist approach in teaching and teachers' self-efficacy.

H_o5: There would be no significant relationship between teachers' attitude towards teacher effectiveness and teachers' self efficacy.

Methodology of the study

The present study was made through descriptive survey study and was a quantitative study. School teachers' attitude towards constructivist approach in teaching and their teaching

effectiveness as well as self efficacy had been analyzed quantitatively. Survey research design was employed under descriptive design.

Sample for teachers

All the teachers of secondary schools in West Bengal were the population in the study. 216 school teachers of secondary level schools were selected randomly from four districts of West Bengal as sample for this study.

Table- 1.1. Sample Frame_locality wise

URBAN. (N=132)		RURAL. (N=84)		TOTAL
Male	Female	Male	Female	216
90	42	45	39	

Table- 1.2. Sample Frame_gender wise

MALE (N= 135)		FEMALE. (N=81)		TOTAL
urban	Rural	urban	Rural	216
90	45	42	39	

Tools of the study

Present researchers had used three types of tools; one was self made attitude scale to measure the teacher's attitude towards constructivist approach (CASST). Second scale was teacher effectiveness scale (PGTES) a standardized scale which was constructed and validated by Dr.

Shallu Puri, Dept. of Education, Punjab Unversity and Dr. S. C. Gakhar, Dept. of Education, Punjab Unversity. Third scale was Occupational Self Efficacy Scale (OSES) a standardized scale which was constructed and validated by Sanjyot Pethe, Sushama Chaudhari and Upinder Dhar of National Psychology Corporation, Agra, India.

Description of Constructivist Attitude Scale for School Teacher (CASST)

Scale was consisted of 28 items; Content validity was judged by the expert rating of items by two experts. The inter-rating agreement model was used (Gregory, 2005) to see reliability of the raters. The coefficient of content validity was found 0.92. The reliability of the scale was computed by using Cronbach's Alpha and was found 0.826.The scale has a good alpha value and it was acceptable. The categories of responses were 'strongly agree', 'agree', 'undecided', 'disagree', 'strongly disagree' and '5', '4', '3', '2', '1' were the respective scores awarded for the responses. Some items were negative in nature and the scoring was done in reverse order i.e. '1', '2', '3', 4'', '5'.

Description of Post Graduate Teacher Effectiveness Scale (PGTES)

Validity-

The scale was validated against the criterion of "Content Validity". The content validity is concerned with the adequacy of sampling of a specified universe of content. To determine content validity, the scale items and a list of outcomes were given to the panel consisting of seven experts. The panel was asked to identify which test items corresponded to which outcomes. The experts agreed 92% with the investigator on the assignment of scale items. This concurrence was taken as evidence of content validity.

Reliability-

The test-retest reliability study of the scale was conducted. The coefficient of correlation between two tests was found to be 0.76 and is significant at 0.01 level of significance and testifies the scale to be a reliable one.

Scoring-

Award scores as following: Strongly Agree - 5, Agree - 4, undecided - 3, Disagree - 2 and Strongly Disagree - 1. Total score of an individual on 68 items may range from 68 to 340.

Description of Occupational Self-Efficacy Scale (OSES)

The scale was constructed by Sanjyot Pethe, Sushama Chaudhari and Upinder Dhar of National Psychology Corporation, Agra, India. It is a standardized scale having 19 items. A panel of 50 judges with postgraduate education and more than ten years of experience in their various fields was prepared. The cards were placed before each judge who was contacted individually. The items which were chosen 75% or more times were spotted out. The final form of the scale constituted nineteen items. The scale was administered on 220 subjects and the scores obtained were subjected to factor analysis and six factors were identified. These are confidence, command, adaptability, personal effectiveness, positive attitude and individuality. Confidence was dependence on one's own abilities.

Validity-

Besides face validity, as all items in the scale are concerned with the variable under focus, the scale has high content validity. It is evident from the assessment of judges/experts that items of the scale are directly related to the concept of self efficacy. In order to find out the validity from the coefficient of reliability (Garrett, 1981), the reliability index was calculated. The later has indicated high validity on account of being 0.99.

Reliability-

The odd-even reliability of the scale was determined by calculating reliability coefficient, corrected for full length for a sample of 220 subjects. The reliability coefficient of the scale is 0.98

Procedure of Data collection

For conducting the research, data had been collected in one phase. 22 schools were selected conveniently from the district of North 24 Parganas, Hooghly, South 24 parganas and Howrah. Three scales were administered to 216 teachers from those schools chosen under study and asked to reply according to their own belief and thought without any consultation with another teacher and to submit the responded scale by putting it into an envelope to sustain confidentiality.

Analysis and interpretation of data

The results of the study are presented in the following tables

Table 1.3: Test of Normality of data-

Scale	Shapiro-Wilk		
	Statistic	df	Sig.
CASST	.992	216	.242
PGTES	.990	216	.155
OSES	.989	216	.086

CASST= Constructivist Attitude Scale for School Teacher, PGTES= Post Graduate Teacher Effectiveness Scale, OSES= Occupational Self Efficacy Scale.

If the sample size is less than 2000 then through 'Shapiro-Wilk test' the normality of data can be tested (http://en.wikipedia.org/wiki/Shapiro%E2%80%93Wilk_test). The table no. 1.3 shows that the p value of Shapiro-Wilk test (sample size <2000) in case of Attitude towards constructivist approach is 0.242, (p>.05), in case of Teacher effectiveness p = 0.155, (p>.05) and in case of Teacher self efficacy, p = 0.086 (p>.05). Hence, data are normally distributed in both cases and there is an plenty chance to test the hypotheses with parametric statistics.

Objective wise Analysis of Data

Objective no.1

O_1: To study the attitude towards constructivist approach of the Secondary school teachers in teaching-learning process under different categorical variables.

Table: 1.4:Group Statistics of CASST_location of school			
Location Of School	Mean	N	Std. Deviation
Urban	101.2348	132	8.82905
Rural	102.6429	84	8.43493
Total	101.7824	216	8.68540

(CASST = Constructivist Attitude Scale for School Teacher)

Table: 1.5: Group Statistics of CASST_gender				
	Gender	N	Mean	Std. Deviation
Attitude Towards Constructivist Approach	Male	135	101.7630	8.79128
	Female	81	101.8148	8.56024
Total		216	101.78	8.67

While estimating the mean value of CASST from the data that collected from the school teachers at location wise of the schools, it was originated 101.78 (table: 1.4) and in case of gender wise the CASST mean value was 101.78 (table: 1.5). In CASST scale a respondent can score 84 to 140. So, it can be said that, schools teachers of West Bengal posses a moderate positive attitude towards constructivist approach in their teaching state.

Objective no.2

O_2: To compare the teachers' attitude towards constructivist approach under different categorical variables like gender, location of school.

To fulfill this objective, two null hypotheses were formulated and tested which were as follows:

H_o1: There would be no significant difference in attitude towards constructivist approach between the teachers of rural school and urban school.

H_o2: There would be no significant difference in attitude towards constructivist approach between the male and female teachers.

Testing of Null Hypotheses

To test the Ho1 and H_o2 descriptive and inferential statistics were computed. The results are given below:

Testing of Ho1:

Groups: Teachers of urban schools and rural schools

Table- 1.6: Group Statistics of CASST_location of school

	Location of school	N	Mean	Std. Deviation	Std. Error Mean
Attitude Towards Constructivist Approach	Urban	132	101.2348	8.82905	.76847
	Rural	84	102.6429	8.43493	.92033

Table- 1.7: Independent samples test of CASST_urban vs. rural

Sub-scale	Levene's Test for Equality of Variances			t- test for equality of means		
CASST	Equal variances assumed	F	Sig.	t	df	Sig. (2 tailed)
		1.135	.288	-1.162**	214	.246
(**not significant at 0.05 level of significance)						

Interpretation:-

From the analyses in Table 1.7 it is seen that in case of Levene's Test for equality of variances the p value is 0.288 (p>.05) so, equal variances can be assumed. Table 1.7 also shows that in case of teachers attitude towards Constructivist Approach between urban and rural schools the calculated $\mathbf{t_{(214)}}$ value is 1.162 and 'p' value is 0.246 (p> .05). Hence, t is not significant at 0.05 level. So, $\mathbf{H_o1}$ is not rejected and it can be safely said that urban teachers are not significantly different from the rural teachers in respect to their attitude towards Constructivist Approach in teaching situation.

Testing of Ho2:

Groups: Male and female teacher

Table- 1.8: Group Statistics of CASST_gender

Sub- scale	Gender	N	Mean	Std. Deviation	Std. Error Mean

CASST	Male	135	101.7630	8.79128	.75663
	Female	81	101.8148	8.56024	.95114

Table- 1.9: Independent samples test of CASST_male vs. female

Sub-scale	Levene's Test for Equality of Variances			t- test for equality of means		
CASST	Equal variances assumed	F	Sig.	t	df	Sig. (2 tailed)
		0.002	0.969	-.042**	214	0.966

(**not significant at 0.05 level of significance)

Interpretation:-

It is seen from the analyses of Table 1.9 that in case of Levene's Test for equality of variances the p value is 0.969 (p>.05) so, equal variances can be assumed. Table 1.9 also shows that in case of teachers attitude towards Constructivist approach between male and female teachers the calculated $\mathbf{t_{(214)}}$ value is 0.042 and 'p' value is 0.966 (p> .05). Hence, t is not significant at 0.05 level and $\mathbf{H_o2}$ is not rejected. So, male teachers are not significantly different from the female teachers in respect to their attitude towards Constructivist Approach.

Objective no.3

$\mathbf{O_3}$: To study the relationship between teachers' attitude towards constructivist approach in teaching and teacher effectiveness.

To fulfill this objective, one null hypothesis was formulated and tested which was as follows:

$\mathbf{H_o3}$: There would be no significant relationship between teachers' attitude towards constructivist approach and teacher effectiveness.

Testing of Ho3:

Groups: Attitude towards constructivist approach and Teacher effectiveness

Table 1.10: Correlations matrix of CASST & PGTES

		CASST	PGTES
CASST	Pearson Correlation	1	.454*
	Sig. (2-tailed)		.000
	N	216	216
PGTES	Pearson Correlation	.454*	1
	Sig. (2-tailed)	.000	
	N	216	216

* Correlation is significant at the 0.01 level (2-tailed).

(CASST = Constructivist Attitude Scale for School Teacher, PGTES= Post Graduate Teacher Effectiveness Scale).

Interpretation:-

The analysis in table 1.10 shows that, correlation coefficient i.e. 'r' between score of CASST and PGTES is 0.454 and p value is 0.000($p<0.01$) which is significant at the 0.01 level. Hence, $\mathbf{H_0 3}$ is rejected. So, it can be said that there exists a significant positive correlation between teachers' attitude towards constructivist approach and teacher effectiveness to a moderate extent.

Objective no.4

O_4: To study the relationship between teachers' attitude towards constructivist approach in teaching and teacher self-efficacy.

To fulfill this objective, one null hypothesis was formulated and tested which was as follows:

$H_0 4$: There would be no significant relationship between teachers' attitude towards constructivist approach in teaching and teachers' self-efficacy.

Testing of Ho4:

Groups: Attitude towards constructivist approach and self efficacy

Table 1.11: Correlations matrix of CASST & OSES

		CASST	OSES
CASST	Pearson Correlation	1	.301**
	Sig. (2-tailed)		.000
	N	216	216
OSES	Pearson Correlation	.301**	1
	Sig. (2-tailed)	.000	
	N	216	216

** Correlation is significant at the 0.01 level (2-tailed).

(CASST = Constructivist Attitude Scale for School Teacher, OSES = Occupational Self Efficacy Scale)

Interpretation:-

While to find the relationship between teachers' attitude towards constructivist approach and teachers' self efficacy it has found from analysis in table 1.11 that, correlation coefficient i.e. 'r' between score of CASST and OESES is 0.301 and p value is 0.000($p<0.05$) which is significant at the 0.01 level. Hence, $\mathbf{H_0 4}$ is rejected. So, it can be interpreted that there is a moderate positive correlation between teachers' attitude towards constructivist approach and teachers' self efficacy.

Objective no.5

O_5: To study the relationship between teachers' effectiveness and teachers' self efficacy.

To fulfill this objective, one null hypothesis was formulated and tested which was as follows:

$H_o 5$: There would be no significant relationship between teachers' attitude towards teacher effectiveness and teachers' self efficacy.

Testing of Ho5:

Groups: teacher effectiveness and teacher self efficacy

Table 1.12: Correlations matrix of PGTES & OSES

		PGTES	OSES
PGTES	Pearson Correlation	1	.564**
	Sig. (2-tailed)		.000
	N	216	216
OSES	Pearson Correlation	.564**	1
	Sig. (2-tailed)	.000	
	N	216	216

** Correlation is significant at the 0.01 level (2-tailed).

(PGTES= Post Graduate Teacher Effectiveness Scale, OSES = Occupational Self Efficacy Scale)

Interpretation:-

The analysis in table **1.12** shows that, correlation coefficient i.e. 'r' between score of PGTES and OESES is 0.564 and p value is 0.000($p<0.05$) which is significant at the 0.01 level. Hence, $\mathbf{H_0 5}$ is rejected. So, it can be interpreted that there is a moderate positive correlation between teachers' effectiveness and teachers' self efficacy.

Discussion:

Within the realm of learning theory, the constructivist movement probably has the most understandable title. As the name suggests, the theory draws a picture of knowledge and understanding being slowly constructed. Each of us will build an idiosyncratic version of reality based partly on identical experiences but shaped by individual experience and, importantly, upon an individual's prior knowledge, understanding and experience Pritchard and Woollard (2010).

While to search and compare the present scenario of constructivist approach that adapted by school teacher of West Bengal (W.B.) under different categorical variables it has been found from this study that teachers' attitude towards constructivist approach in teaching is moderately positive. Thus, the schools teachers in urban setting are not significantly different from rural school of W.B. though, rural school teachers are slightly better than urban schools' teacher.

Uredi (2012) studied on the effect of classroom teachers' attitudes toward constructivist approach. This study aimed to determine the attitudes of classroom teachers towards constructivist approach and to analyze the effect of their attitudes towards constructivist approach on their level of creating a constructivist learning environment. At the end of the research, it was determined according to the views of most classroom teachers that attitudes towards the constructivist approach were positive; they created constructivist learning environment at medium level; that result support the present result of the study.

So, it may be concluded that, the location of school or school infrastructural facilities are not the main factors rather teachers' own aspiration and teaching effectiveness is the crucial factors for adopting constructivist approach in their daily teaching process in school level education system. In the same way, the present study also indicates that gender does not play any crucial role in construction of teachers' attitude towards constructivist approach in teaching process. Jadallah (1996) found that the pre-service teachers engaged in reflection (constructivist process) were more mindful of their teacher mediation in their school settings and more insightful about their decisions than the pre-service teachers who were not engaged in the reflective process that result support the findings of present study.

This study again shows a moderate positive correlation between teacher effectiveness and teachers' attitude towards constructivist approach in teaching in school situation. That means there remains a possibility that if the effectiveness of school teacher is increased then the positive attitude towards constructivist approach in teaching will be increased and vice-versa.

While to search and compare the present scenario of constructivist approach that adapted by school teacher of West Bengal (W.B.) under different categorical variables it has been found from this study that teachers' attitude towards constructivist approach in teaching is moderately positive. Uredi (2012) studied on the effect of classroom teachers' attitudes toward constructivist approach. This study aimed to determine the attitudes of classroom teachers towards constructivist approach and to analyze the effect of their attitudes towards constructivist approach on their level of creating a constructivist learning environment. At the end of the research, it was determined according to the views of most classroom teachers that attitudes towards the constructivist approach were positive; they created constructivist learning environment at medium level; that result support the present result of the study.

Teachers with a high level of teacher self-efficacy have been shown to be more resilient in their teaching and likely to try harder to help all students to reach their potential and it is main factor for a novice teacher's greater understanding of the complexity of the teaching process.

The study also reveals that there is a statistical significant moderate positive correlation between teachers' attitude towards constructivist approach in teaching and teacher self efficacy that means high self efficacy level is one of the crucial factor for construction of positive teachers' attitude towards constructivist approach in teaching process which support the findings of Evrekli et al. (2010) and the findings of that study indicated that in pre-service teachers' self

efficacy belief level about constructivist approach is high. The study also reveals that there is a moderate positive correlation between teacher effectiveness and self-efficacy.

The reason of such advocacy of the constructivist approach was proved to be showing a better ways of teaching and learning in the West and the researchers as well as teachers noted persistent shortfalls in learners' understanding and of passive way of learning across all ages and grades in the traditional paradigm of teaching.

The most interesting point amongst the above findings is the use of the term 'moderately' which stands for the antonym of 'extremely' which shows that the teachers though being theoretically well adept in constructivism are yet to take firm position for translating constructivist vision into practice in real classroom situation. Hence, in conclusion it may be suggested that teachers, educators and researchers are to be jointly and actively engaged and put hands together for exploring modus operandi so that constructivist approach can be made a real success in teaching-learning for maximizing the learning outcomes of the learners.

Limitations of the study

No study is flawless. This study has its limitations. The present study had some limitations which were as follows:

i. For reviewing the implication of constructivist approach in school, the books and journals were consulted as far as possible in respect to its availability.
ii. The selection of schools for this study was not selected only from four districts.
iii. The schools were selected mainly from southern part of West Bengal.
iv. The number of schools teachers might be increased by taking more schools under the study.
v. The sample of this study was selected only from the Govt. aided Bengali medium schools of WBBSE. It would be much better if the sample could be selected from Govt. schools and English medium schools of WBBSE also.
vi. The data collection through CASST, PGTES & OSES was self reported by teachers at one point of time. Triangulations were not done to estimate the consistency of teachers' self reported data.

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