



The Practice and Challenges of Constructivist Teaching Approach in Dangila District Second Cycle Primary Schools, Ethiopia

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Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

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ABSTRACT

The purpose of this study was to assess the current teachers' practice of constructivist teaching approach and the major challenges that hinder its implementation in Dangilla district second cycle primary schools. To attain this purpose descriptive survey method was employed. The subjects of the study were 305 students, 134 teachers, 11 principals and 6 cluster supervisors. Cluster supervisors, teachers, and principals were selected using comprehensive sampling method whereas sample students were selected purposively. Data were collected from school principals, students and teachers by employing questionnaire and from cluster supervisors through interview. Quantitative data obtained through questionnaire were analyzed using mean, standard deviation, percentage and one sample t-test whereas the qualitative data obtained from supervisors through interview was analyzed using narrative descriptions. The result of the study revealed that teachers were not found to play the role of facilitator, reflective practitioner and scaffold of students learning except relationship building role. The effort made by second cycle primary school teachers to apply

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constructivist teaching approach in Dangila district was found to be below what is intended. The study revealed that major challenges that hindered effective implementation of constructivist teaching were teachers' lack of dedication to implement constructivist teaching, large class size, scarcity of allotted time to carry out active learning in greater depth, teachers lack of skill and knowledge to utilize constructivist teaching strategies and scarcity of learning materials especially in natural science department. Based on the finding it can be concluded that even though currently teachers teaching practice seemed to be inclined towards the utilization of constructivist teaching approach, the magnitude of its practice found to be low. Teachers teaching approach in the schools that were included in the study was not found to be basically different from traditional approach in which the classroom instruction were usually dominated by teachers. To promote constructivist teaching approach teachers are expected to update their knowledge and skill through reading, participating in continuous professional development, & sharing experiences.

Keywords: Practice; challenges; constructivist teaching approach; second cycle primary schools.

1. INTRODUCTION

Central to constructivism is the notion that learners play an active role in constructing their own meaning. Knowledge is not seen as fixed and existing independently outside of the learners but rather learning is a process of accommodation or adaptation on new experiences or issues Jenlick and Kinnucan - Welsch [1]. Constructivism is a learner centered educational theory which is a view of learning based on the belief that knowledge is not a thing that can be simply given by teacher. Students are actively engaged in doing something like group work, hands on, talk, project and so on Piaget [2] Borich & Tombari [3] Colbrun [4]. Elloit et al. [5] recommended that a much heralded alternative is to change the focus of classroom from teacher dominated to students centered using constructivist approach.

Teachers' role as facilitator of students learning is to construct their own meaning and understanding by creating conducive learning environment. Teachers continually encourage positive relationship between them and students and role models as reflective practitioner of teaching learning process Collis and Lacey [6]. It is cognizant of the situation that the employment of learner centered pedagogy is emphasized in Ethiopian education and training policy of 1994. The Policy statement refers frequently to the employment of learner Centered approach, active learning and problem solving approach in different contexts. Constructivist approach to teaching is acknowledged by the transitional government of Ethiopia education and training policy MOE [7] theoretically laid its foundation in social constructivism.

National and regional education personnel and literatures are advocating for teachers to facilitate students learning in the classroom that encourage them to be actively engaged in constructing understanding, and meaning making. However, in actual practice Dangila district annual review report indicated as most teachers did not go beyond imparting of knowledge and skills to students. This study attempts to assess second cycle primary school teachers' constructivist teaching practice and to identifying the major challenges that hinder its implementation in Dangila district. Education and training policy of Ethiopia states that teachers should be able to think about effective teaching methods that encourages learners actively involving in teaching learning process MOE [7]. Although constructivist teaching approach has been well documented in literature, investigations regarding teachers teaching approach explain that situations in classroom predominantly goes against the best practices recommended by constructivist.

In the Ethiopian context although students centered approach to teaching has been recommended by the currently working education and training policy, reports regarding teachers teaching approach explain another. For example, Institution for Curriculum Development and research ICDR [8] indicated that instructors in the current teaching institutions use conventional types of teaching methods. Reda Darge [9] also found that teaching learning process in higher education didn't go beyond doing a good lecture. According to his investigation, instructors weren't highly involved in finding out students understanding of concepts before sharing their own understanding of lesson under discussion and did not require elaboration of student's initial response.

Empirical evidence indicated that teachers teaching in primary schools were not that much utilizing constructivist approach in teaching learning process. The approach of teaching in the schools that was included in the study was not found to be different from traditional approach in which classes are usually driven by teachers talk Mulugta, [10]. However, previous studies did not further investigate teachers' utilization of constructivist teaching approach using four dimensions (teachers facilitating, relationship building, reflection and scaffolding roles) in greater depth.

In constructivist approach teachers are expected to facilitate active learning methods by motivating students to construct their own meaning and understanding. However, Dangila district educational official report indicated as most teachers did not properly practice the approach. Most teachers did not playing as facilitator, organizer and consultant of students learning. Thus, the purpose of this study was to find out through substantial study whether second cycle primary school teachers properly applying constructivist teaching approach in the instructional process or not and to identify the major challenges that hinder its implementation.

This study was intended to answer the following research questions:

1. How do second cycle primary school teachers practice constructivist teaching approach?
2. What are the major challenges faced in practicing constructivist teaching approach?

The general objective of this study was to examine the current practice of constructivist teaching approach and to find out the major challenges that hinder its effective implementation in Dangila district second cycle primary schools. Specifically, the study is carried out to assess the current practice of constructivist teaching approach in Dangila district second cycle primary school teachers and to identify the major challenges faced in practicing constructivist teaching approach in Dangila district second cycle primary schools.

1.1 Limitation of the Study

Any research activity requires availability of sufficient time & accessibility of the relevant and related materials to carry out the study. The

researcher did not find his work free from this problem.

This study could have been current with more objectives & comprehensive and had wider coverage of the study population. But the following problems encountered the study. Among these Challenges the most critical limiting problems were;

- Since the problem was the new issue, the lack of reference materials and information about the study was the most challenging and the limiting factor of the study.
- The researcher encountered serious problems of language application for the study.

2. MATERIALS AND METHODS

The purpose of this study was to assess the efforts made by teachers to practice dimension of constructivist approach in classroom teaching and learning process and to investigate the major challenges they encounter. To realize these objectives descriptive survey was undertaken. This method was used to gather data from large size population and it was important to assess the current situation of efforts made by second cycle primary school teachers to practice the dimension of constructivist teaching approach in classroom teaching learning process.

2.1 Sources of Data

Dangila second cycle primary school teachers, students, principals and supervisors were primary sources of data used in this study.

2.2 Sample Size and Sampling Techniques

By using simple random sampling techniques, six cluster centers were selected and eleven second cycle primary schools found within sample cluster centers were selected by using cluster sampling techniques. Then, by using comprehensive sampling techniques total 11 principals, 6 cluster supervisors and 134 teachers (M 65 F 69) found within sample schools were direct participant of the study. In each 61 section of grade level of second cycle primary schools, the 305 top five students were selected purposively. This is because these students were already assigned to monitor and evaluate teaching learning process deliberately

Table 1. Sample size in each sample school

No.	School name	Teachers			Principals			Grade Section	Students			Total student population		
		M	F	T	M	F	T		Sample students					
												M	F	T
1	Gisa	7	19	26	1		1	8	26	14	40	67		
2	Singure	3	9	12	1		1	5	18	7	25	38		
3	Chara	5	10	15	1		1	6	19	11	30	46		
4	Bata	4	6	10		1	1	5	16	9	25	36		
5	Abadira	9	4	13	1		1	5	19	6	25	39		
6	Amen	6	5	11	1		1	5	15	10	25	37		
7	Ziguda	7	5	12	1		1	7	23	12	35	48		
8	Bacha	2	3	5	1		1	5	14	11	25	31		
9	Dangia	7	3	10	1		1	5	16	9	25	36		
10	Dube	8	3	11	1		1	5	18	7	25	37		
11	Jibana	7	2	9	1		1	5	15	10	25	35		
Total		65	69	134	10	1	11	61	199	106	305	450		

Source: Dangila district education office (2008)

in each school. Hence, they are well informants about teachers teaching practice than academically low achieving students of the same grade level and early graded students. The author believed that, consulting with the learners can contribute much to enable him to make more sensible judgments about teachers teaching practice.

As Table 1 above indicates, 11 schools were participated by using simple random sampling technique in the district. Therefore, the highlight part of table is simply name of the schools.

2.3 Total Population of Sample Teachers, Students and Supervisors in Each School

Using simple random sampling techniques six cluster centers were selected and all eleven second cycle primary schools found within sample cluster centers were selected by using cluster sampling techniques. Then using comprehensive sampling techniques all 11 principals, 6 cluster supervisors and 134 teachers (M 65 F 69) found within sample schools were direct participant of the study.

2.4 Data Gathering Instruments

The main focus of the study was to examine the efforts made by teachers to practice dimension of constructivist approach in classroom teaching and learning process and to investigate the major challenges they encounter. Hence, data pertinent to the study were obtained using both quantitative and qualitative data gathering tools of questionnaire and interview respectively.

2.5 Data Analysis Techniques

In this study quantitative data were analyzed using t- test, mean, standard deviation and percentage where as the qualitative data were through theme and categories. The completed sets of questionnaire data obtained from 295 students (10 questionnaires are not returned) and 11 principals concerning teachers' utilization of constructivist teaching approach were analyzed using one sample t-test, mean and standard deviation. One sample t-test was used to determine whether there is statistically significant difference between expected and observed mean or not. If observed mean is above the expected mean, it is significant level of difference which indicates the presence of constructivist teaching practice and if observed mean is below the expected mean, it is significant difference which shows the level of practice is low.

The completed sets of questionnaire data obtained from 11 school principals and 134 teachers regarding the challenges faced in actual implementation of constructivist teaching approach were also analyzed using mean and percentage. The writer attempted to show the total respondents and percentage in each items as shown from the tables and analyzed by adding total number of respondents who rated 1(not serious) and 2 (serious) which implies as it was not challenge; and those who rated 4(extremely serious) and 3(very serious) implies as it was the most serious challenges. However, the data obtained from six cluster supervisors through unstructured interview were analyzed qualitatively using narrative description.

3. RESULTS

3.1 Teachers' Facilitating Role

As shown from the Table 2, the status of teachers' facilitating role of students learning was examined using one sample t-test. The result obtained from students showed that there was statistically significant difference between the observed mean (13.901) and expected mean (15) on teachers facilitating role ($t=-6.186$, $p < 0.05$). Similarly, the data obtained from school principals' showed that there was statistically significant difference between the observed mean (13.181) and expected mean (15) on teachers facilitating role ($t=-2.390$, $p < 0.05$). The result implies that teachers were not playing facilitating role of students learning. This means teachers practice the facilitating role descriptors below what is expected from them.

3.2 Teachers' Relationship Building Role

As shown from the Table 3, the data obtained from students' and principals concerning the role played teachers to make relationship effective in classroom learning was examined using one sample t-test. The result obtained from students indicated that there was statistically significant difference between the observed mean (16.589) and expected mean (15) on teachers relationship building role ($t=9.684$; $p < 0.05$). Similarly, the result obtained from principals showed that there was statistically significant difference between the observed mean (17.36) and expected mean (15) on teachers relationship building role ($t=6.500$; $p < 0.05$). This shows that teachers were playing their relationship building role properly. This means teachers practice the relationship building role descriptors above what is expected from them. However, the descriptor teachers are familiar with the interest, like and dislike of the learners was practiced below the mean score as perceived by principals.

3.3 Teachers' Scaffolding Role

From the Table 4, students' one sample t-test result showed that there was statistically significant difference between the observed mean (16.69) and expected mean (17.5) on teachers scaffolding role ($t=-5.687$; $p < 0.05$). The t-test result obtained from school principals also showed that there was significant difference between the observed mean (14.87) and expected mean (17.5) on teachers scaffolding

role ($t=-6.138$; $p < 0.05$). The t-test result obtained from both students and principals implies teachers were not playing their scaffolding role properly to improve students' learning competence. This means teachers practice these scaffolding role descriptors below what is expected from them. However, the descriptor, teachers' structure learning from mistakes was practiced above from the average score as perceived by students.

3.4 Teacher's Reflection Role

The data obtained from students and principals concerning the reflection role of the teachers were examined using one sample t-test. The students t-test result from Table 5, showed that there was statistically significant difference between the observed mean (13.91) and expected mean (15) on teachers reflection role ($t=-5.618$; $p < 0.05$). Similarly, the principals t-test result showed that there was statistically significant difference between the observed mean (13.00) and expected mean (15) on teachers reflection role ($t=-2.375$; $p < 0.05$). The t-test result obtained from students and principals showed that teachers were not playing their reflection role properly in the classroom learning. As shown from the Table 5 teachers practice all reflection role descriptors below the mean score.

3.5 Utilization of Dimension of Constructivist Teaching as Whole

As shown from the Table 6, students' one sample t-test result concerning the role played teachers to carry out dimension of constructivist teaching approach (facilitating, relationship building, reflection and scaffolding roles) showed that there was statistically significant difference between the observed mean (61.09) and expected mean (62.5) on dimension of constructivist teaching ($t=-3.532$; $p < 0.05$). Similarly, the overall one sample t-test result of the school principals also imply that there was statistically significant difference between the observed mean (58.411) and expected mean (62.5) on teachers role ($t=-3.649$; $p < 0.05$). From the Table 6, students and principals t-test result showed that the level of teachers constructivist teaching practice in second cycle primary schools was below the expected. However, even though role played by teachers' as a whole found to be low, the effort made to build effective relationship between them and students and among students themselves was high (above from the average).

Table 2. Teachers' facilitating role and its one sample T-test result as perceived by students and principals

Facilitating role descriptors	Respondents	Obs. mean	Exp. mean	Std	t	Df	2 tailed
Teachers negotiate with their students on what and how to learn	Student	2.42	2.5	1.062	-1.343	294	.180
	Principal	2.09	2.5	.944	-1.437	10	.181
Teachers encourage and accept students autonomy and initiatives	Student	2.36	2.5	1.040	-2.324	294	.021
	Principal	2.18	2.5	.982	-1.075	10	.308
Teachers ask thought provoking open ended questions	Student	2.28	2.5	1.016	-3.755	294	.000
	Principal	2.36	2.5	.809	-5.559	10	.588
Teachers have an internalized flexible knowledge of learning sequence	Student	2.32	2.5	1.006	-3.153	294	.000
	Principal	2.09	2.5	.701	-1.936	10	.082
Teachers make the classroom set up conducive to facilitate collaborative learning	Student	2.28	2.5	1.059	-3.546	294	.000
	Principal	2.45	2.5	.934	-.161	10	.875
Teachers serve in the role of guide, monitor, coach, tutor and facilitator of students learning	Student	2.25	2.5	.982	-4.358	294	.000
	Principal	2.00	2.5	.894	-1.854	10	.093
Facilitating role as whole	Student	13.901	15	3.049	-6.186	294	.000
	Principal	13.181	15	2.522	-2.390	10	.038

*P<0.05***Table 3. Teachers' relationship building role and its one sample T-test result as perceived by students and principals**

Relationship building role descriptors	Respondents	Obs. mean	Exp. mean	Std	T	df	2 tailed
Teachers positively value all learners and what they are doing.	Students	2.81	2.5	0.984	5.472	294	.000
	principals	3.45	2.5	.688	4.605	10	.001
Teachers encourage democratic relationship in the class room.	Students	2.77	2.5	0.996	4.705	294	.000
	principals	2.91	2.5	.831	1.632	10	.134
Teachers encourage students to work in cooperation.	Students	2.90	2.5	.981	6.973	294	.000
	principals	3.0	2.5	.894	1.854	10	.093
Teachers engage students in dialogue both with him/her and with other.	Students	2.78	2.5	1.026	4.627	294	.000
	Principals	3.0	2.5	1.183	1.402	10	.191
Teachers develop shared understanding with students.	Students	2.76	2.5	1.047	4.198	294	.000
	Principals	2.73	2.5	.905	.833	10	.424
Teachers are familiar with the interest ,like and dislike of the learners.	Students	2.57	2.5	.987	1.268	294	.206
	Principals	2.27	2.5	1.009	-.747	10	.472
Relationship building role as whole	Students	16.589	15	2.819	9.684	294	.000
	Principals	17.36	15	1.206	6.500	10	.000

P<0.05

Beside to the questionnaire data obtained from principals and students, the second source of data gathering technique used to determine the current status teachers teaching practice was interview. Six cluster supervisors were asked to explain the current status of constructivist teaching practice in second cycle primary schools. The result obtained from interview from supervisors presented as follows:

For the first question regarding the role played by teachers to facilitate students learning most school supervisors explained similar idea of which teachers facilitating role by encouraging students to construct their own knowledge depend on their experience were low. According to them teachers dominantly use the teaching learning

process which is applying few active learning strategies. However, two supervisors explained as teachers role as facilitator and uses different constructivist teaching strategies to enable students to construct their own meaning and understanding. According to them, the effort made by the teachers to facilitate students learning is encouraged but student's motivation to discover their own knowledge is low.

Concerning the relationship between teachers with students and students themselves to carry out effective instruction all supervisors explained similar ideas. Their explanation indicates the interaction is democratic of which students can ask and free relationship without fear with teachers and there is brother hood relationship

among students. Teachers encourage students to develop mutual respect among them and sometimes when unexpected behaviors are created teachers resolve it immediately.

Concerning the effort made by the teachers to scaffold students learning, four cluster supervisors explained that as teachers don't assist students learning as expected. According to their explanation, teachers don't continuously reassure students learning progress using

authentic assessment strategies. Use locally available resources, give a lot of preparation for next lesson and scaffold slow learners properly. However, the rest two supervisors stated as second cycle primary teachers provide instructional support especially for slow learners to improve their learning competence, and this is because according to them teachers' performance continuously evaluated in relation to their students learning progress.

Table 4. Teachers' scaffolding role and its t-test result as perceived by students and principals

Scaffolding role descriptors	Respondents	Obs. mean	Exp. mean	Std	T	Df	2 tailed
Teachers' high light crucial features (i.e. important aspect of the task).	Students	2.42	2.5	1.033	-1.381	294	0.168
	principals	2.09	2.5	.831	-1.63	10	.134
Teachers taught the new lesson by joining with previous experiences.	Students	2.32	2.5	1.036	-3.062	294	0.002
	principals	2.09	2.5	.701	-1.936	10	.082
Teachers continuously reassure students learning progress through authentic assessment.	Students	2.31	2.5	1.468	-2.202	294	.028
	principals	2.09	2.5	.701	-1.936	10	.082
Teachers provide enough time for activities.	Students	2.31	2.5	1.012	-3.192	294	.002
	principals	2.00	2.5	.894	-1.854	10	.093
Teachers relate the class room activities with real experience.	Students	2.40	2.5	1.083	-1.640	294	0.102
	Principals	2.18	2.5	.751	-1.406	10	.190
Teachers structure learning from mistakes	Students	2.58	2.5	.987	1.296	294	0.051
	Principals	2.27	2.5	1.00	-.747	10	.472
Teachers provide instructional support for learners to accomplish their task effectively.	Students	2.35	2.5	1.051	-2.521	294	0.120
	Principals	2.15	2.5	1.036	-.147	10	.887
Teachers scaffolding role as a whole	Students	16.69	17.5	3.250	-5.687	294	000
	principals	14.87	17.5	2.284	-6.138	10	.000

P<0.05

Table 5. Teachers' reflection role and its one sample t-test result as perceived by students and principals

Descriptors of teachers' reflection role	Respondents	Obs. mean	Exp. mean	Std	T	df	2 tailed
Teachers encourage students to reflect on teaching and learning process.	Student	2.29	2.5	1.096	-3.213	294	.001
	Principal	2.18	2.5	1.168	-.904	10	.387
Teachers are open minded, wholehearted and responsible for students learning.	Student	2.32	2.5	1.043	-2.985	294	.003
	Principal	2.27	2.5	.905	-.833	10	.424
Teachers monitor evaluate and revise their teaching practice continuously.	Student	2.27	2.5	1.073	-3.664	294	0.00
	Principal	2.27	2.5	1.104	-.683	10	0.510
Teachers allow students to play with ideas and explore issues.	Student	2.33	2.5	1.048	-2.805	294	.005
	Principal	2.18	2.5	.874	-1.208	10	.255
Te Teachers make students to present their ideas first before sharing his/her ideas	Student	2.35	2.5	1.035	-2.503	294	.013
	Principal	2.09	2.5	.701	-1.908	10	.082
Teachers make students to reflect on other ideas.	Student	2.35	2.5	1.055	-2.457	294	.015
	Principal	2.00	2.5	.894	-1.854	10	.093
Reflection role as a whole	Student	13.91	15	3.326	-5.618	294	.000
	Principal	13.00	15	2.792	-2.375	10	0.039

p<0.05

Table 6. Teachers' utilization of dimension of constructivist teaching as whole and its one sample T-test result perceived by students and school principals

Teachers' role	Respondents	Obs. mean	Exp. mean	Std	T	df	2 tailed
Facilitating role	Students	13.901	15	3.049	-6.186	294	.000
	Principals	13.181	15	2.522	-2.390	10	0.038
Relation building role	Students	16.589	15	2.819	9.684	294	.000
	Principals	17.36	15	1.206	6.500	10	.000
Scaffolding role	Students	16.69	17.5	3.250	-5.687	294	.000
	principals	14.87	17.5	2.284	-6.138	10	.000
Reflection role	Students	13.91	15	3.326	-5.618	294	0.00
	principals	13.00	15	2.792	-2.375	10	0.039
Teachers role as whole	Students	61.09	62.5	7.975	-3.532	294	.000
	principals	58.411	62.5	4.337	-3.649	10	.004

$p < 0.05$

Concerning reflection role of the teachers, most school supervisors assured as they do have great problem to reflect their teaching practice. They explained as teachers' interest and commitment responsibility to improve their teaching profession with the changing needs of the learning environment using in service training continuous professional development was low. According to them, teachers habit to monitor, evaluate and revise their own teaching practice together with their colleagues, students, principals and parents was very low. This implies that teachers were not engaging themselves and students in reflection process so as to meet students learning needs.

3.6 Major Challenges in Implementing Constructivist Teaching Approach

This study was aimed at investigating the major challenges that faced teachers to applying constructivist teaching approach in Dangila district second cycle primary schools. To identify the prominent challenges that adversely affecting effective implementation of constructivist teaching approach list of 12 challenges of the questionnaire was collected and analyzed using percentage and mean value. The writer attempted to show the total respondents, percentage and mean value in each items as shown from Table 7 and analyzed by adding total number of respondents who rated 1 (not serious) and 2 (serious) which implies as it was not challenge; and most respondents who rated 4 (extremely serious) and 3 (very serious) implies as it was the most serious challenges. Similarly, to identify the significant difference the observed and expected mean value of the students and principals were presented in each item. If the grand mean is greater than the expected mean it

implies as it was the most serious challenge and if the grand mean is less than the expected mean implies as it was not a challenge. The result of data obtained from 11 school principals and 134 teachers were presented and analyzed in the first section and then the interview results obtained from supervisors were followed.

As it is shown from Table 7, for item no.1, 59 percent of teachers and 63 percent of principals (59.2 of the total respondents) agreed up on large class size was the most serious challenge. Similarly, the grand mean is greater than the expected mean (2.84 > 2.5). For item no.2 the finding revealed that 59.7 percent of teachers and 63.6 percent of principals (59.8 percent of the total respondents) confirmed that scarcity of learning resources (laboratory and pedagogical materials text books etc) was not a major challenge. Similarly, the grand mean is less than the expected mean (2.33 < 2.5). With respect to item no. 3, 59 percent of the teachers and 81.8 percent of principals revealed that curriculum materials (text book) are not prepared in way they can facilitate constructivist approach was not a challenge. Similarly, the grand mean is less than expected mean (2.09 < 2.5).

Regarding School leaders' weakness to coordinate supervises and evaluates instructional process continuously, 52.5 percent of the teacher and 72.7 percent of the principals (52.9 percent of the total respondents) reflected as it was not serious challenge. It is the same that the mean value indicated as there was significant difference (2.38 < 2.5).

For item no. 5 the finding revealed that 63.5 percent of the teachers and 45.5 percent of principals (61.9 percent of the total) agreed that

teachers less confidentiality in their mastery of the subject matter were not serious challenge. Similarly, the mean value indicated as there was significant difference ($2.34 < 2.5$). Concerning teachers' lack of knowledge and skill to carry out constructivist approach to teaching most teacher respondents (55.3 percent) revealed as it was

not serious challenge and reversely 63.7 percent school principals confirmed as teachers lack of knowledge and skill was most serious challenge. However, since the grand mean is greater than expected mean ($2.61 > 2.5$) teachers lack knowledge and skill to carry out constructivist teaching was the most serious challenge.

Table 7. The major challenges that hinder the practice of constructivist teaching approach as perceived by principals (no =11) and teachers (n =134)

No.	The major challenges	Respondents	Extremely serious		Very serious		Serious		Not serious		Mean	
			N	%	N	%	N	%	N	%	Obse.	Exp
1	Large class size.	Teacher	39	29.1	40	29.9	28	20.9	27	20.1	2.68	2.5
		Principal	4	36.4	3	27.3	4	36.4	-	-	3.0	2.5
		Total	43	29.6	43	29.6	32	22	27	18.6	2.84	2.5
2	Scarcity of learning resource (laboratory and pedagogical materials text books etc).	Teacher	27	20.1	27	20.1	41	30.6	39	29.1	2.31	2.5
		Principal	1	9.1	3	27.3	6	54.5	1	9.1	2.36	2.5
		Total	28	19.2	30	20.6	47	32.3	40	27.5	2.33	2.5
3	Curriculum materials (text book) are not prepared in way they can facilitate constructivist approach.	Teacher	23	17.2	32	23.9	39	29.1	40	29.9	2.28	2.5
		Principal	-	-	2	18.2	6	54.5	3	27.3	1.91	2.5
		Total	23	17.2	34	23.4	45	31	43	29.6	2.09	2.5
4	School leaders' weakness to coordinate, supervises and evaluate instructional process continuously.	Teacher	30	22.4	35	26.1	40	29.9	29	21.6	2.49	2.5
		Principal	1	9.1	2	18.2	7	63.6	1	9.1	2.27	2.5
		Total	31	21.3	37	25.4	47	32.3	30	20.6	2.38	2.5
5	Teachers less confidentiality in their mastery of the subject matter.	Teacher	22	16.4	27	20.1	45	33.6	40	29.9	2.23	2.5
		Principal	1	9.1	5	45.5	3	27.3	2	18.2	2.45	2.5
		Total	23	15.8	32	22	48	33.0	42	28.9	2.34	2.5
6	Teachers lack of knowledge and skill of constructivist approach to teaching.	Teacher	23	17.2	37	27.6	34	25.4	40	29.9	2.32	2.5
		Principal	3	27.3	4	36.4	4	36.4	-	-	2.91	2.5
		Total	26	17.9	41	28.2	38	26.1	40	29.9	2.61	2.5
7	Teachers lack of dedication to implement constructivist approach to teaching.	Teacher	46	34.3	39	29.1	30	22.4	19	14.2	2.84	2.5
		Principal	7	63.6	1	9.1	2	18.2	1	9.1	3.27	2.5
		Total	53	36.5	40	29.9	32	22	20	13.7	3.05	2.5
8	Teacher pedagogical preference (i.e. lecture methods)	Teacher	20	14.9	32	23.9	41	30.6	41	30.6	2.23	2.5
		Principal	1	9.1	1	9.1	7	63.6	2	18.2	2.09	2.5
		Total	21	14.4	33	22.7	48	33.0	43	29.6	2.16	2.5
9	Students un willingness to learn cooperatively.	Teacher	23	17.1	32	23.8	37	27.6	42	34.3	2.64	2.5
		Principal	-	-	3	27.3	5	45.5	3	27.3	2.0	2.5
		Total	23	17.1	35	24.1	42	28.9	45	33.5	2.32	2.5
10	Lack of students' pre request knowledge.	Teacher	26	19.4	35	26.1	41	30.6	32	23.9	2.41	2.5
		Principal	2	18.2	2	18.2	3	27.3	4	36.4	2.18	2.5
		Total	28	19.2	37	25.4	44	30.3	36	24.8	2.29	2.5
11	Social distance between students and teachers	Teacher	23	17.2	35	26.1	36	26.9	40	29.9	2.31	2.5
		Principal	2	18.2	3	27.3	4	36.4	2	18.2	2.45	2.5
		Total	24	16.5	38	26.1	40	27.5	42	28.9	2.38	2.5
12	Scarcity of allotted time to carry out active learning in greater depth	Teacher	46	34.3	33	24.6	29	21.6	26	19.4	2.74	2.5
		Principal	5	45.5	2	18.2	3	27.3	1	9.1	3.0	2.5
		Total	51	35.1	35	24.1	32	22	27	18	2.87	2.5

For item no.7, most of respondents that is 63.4 percent of teachers and 72.7 percent of principals (65.4 percent of the total) agreed teachers' lack of dedication to implement constructivist approach to teaching was the most serious challenge. Similarly, the mean value indicated as there was significant difference ($3.05 > 2.5$). Concerning teachers' pedagogical preference (i.e. lecture methods) 61.2 percent of teachers and 71.8 percent of principals respondents (62.6 percent of the total) confirmed as its level challenge was low. Similarly, the mean value indicated as there was significant difference ($2.16 < 2.5$).

For item no.9 most respondents 61.9 percent of teachers and 72.8 percent of principals (62.4 percent of total respondents) confirmed students unwillingness to learn cooperatively was not a most serious challenge to carry out constructivist teaching approach. Similarly, the mean value indicated as there was statistically significant difference ($2.32 < 2.5$).

Concerning lack of students' pre-request knowledge, 54.5 percent of teachers and 64.7 percent of principals (55.1 percent of the total) respondents assured as it was not a challenge. Similarly, the mean value implies the same ($2.29 < 2.5$). Most respondents of teachers (56.6 percent) and principals (54.6 percent) revealed social distance between teachers and students was not serious challenge. Moreover, the mean value indicated as there was statistically significant difference ($2.38 < 2.5$). Finally, both respondents that is 58.9 percent of teachers and 63.7 percent of principals (59.2 percent of the total respondents) confirmed scarcity of time to carry out active learning in greater depth was the most serious challenge. The mean value implies the same of which the observed mean was greater than expected value ($2.87 > 2.5$).

Beside to the questionnaire, 6 cluster supervisors was asked to explain the major challenges faced in implementation of constructivist teaching approach. The result obtained from interview presented in the following:

Most cluster supervisors explained that teachers lack willingness to accept new and modern teaching practices was the most serious challenge to carry out constructivist teaching approach. According to them, most teachers are not positively accept and immediately apply the new and best practices. According most supervisors idea presence of large number of students in the class was also a great challenge

to assess each students learning progress properly and continuously, to give constructive feedback for each individual's and make the classroom management difficult due to the existence of large number of students in a class.

Another challenge identified by supervisors was scarcity of allotted period. They explained allotted periods starting from grade 5-8 are 40 minute and these affect teachers not to use different active learning strategies intensively. Shortage of teachers' knowledge and skill to apply constructivist teaching strategies effectively were also the major challenges identified. According to their explanation, even though the problem starts from during pr-service training program, teacher's motivation to update their knowledge and skill through in-service training program was low. Finally, according to most cluster supervisors' explanation shortage of available learning materials specially teaching materials in natural science department (chemical, science kit, equipments etc) was the main challenge in natural science departments.

4. DISCUSSION

4.1 Teachers' Facilitating Role

One of the roles of teachers in constructivist teaching perspective was to guide and facilitate students learning in the classroom. However, the one sample t-test and interview result indicated that teachers in the study area of second cycle primary schools were not playing as facilitator of students learning. Based on the result we can conclude that teachers' role dominantly in instructional process which inclined towards knowledge transmission than construction of meaning and understanding by student themselves. If students were not actively engaged in learning, creative innovative problem solver and competent citizens may not be created as desired from the schools.

4.2 Teachers' Relationship Building Role

The one sample t-test and interview result indicated that the effort made by second cycle primary school teachers to make the relationship effective in classroom learning was above what is expected from them. As the result of this, it is possible to conclude that the current status of social interaction between teachers and students is encouraged able that was a good opportunity for students to learn in autonomous learning environment.

4.3 Teachers' Scaffolding Role

The role of teachers in constructivist teaching perspective was to provide instructional support to students learning in the classroom to improve their learning competence; however in actual practice the one sample t-test and interview result indicated that teachers in the schools were not playing as scaffold of students learning. As result of this we can conclude that teachers were not providing instructional support properly for students based on learners' ability and needs to accomplish the tasks effectively. In this case the educators needs to try and understand what happens in the learner's mind and scaffolding is therefore one teaching strategy which can be used to help the teacher to understand the ways of thinking of the learner Killen [11].

4.4 Teachers' Refection Role

Dewey [12] acknowledges as the initiator of the concept of reflective and he identified attitudes as pre requisites for reflective teaching. The role of teachers in constructivist teaching perspective was to engage themselves and students to reflect the teaching learning progress continuously. However, in actual practice the finding indicated second cycle primary school teachers in Dangila district were not playing their reflection role properly. In line with this, Elloit et al. [5] indicated that a significant number of teachers are not teaching as reflective manner. As the result of this, we can conclude that teachers were not responsible to engage themselves and students in reflection process so as to improve students' learning competence.

5. CONCLUSION

Effective teaching and learning requires the use of learner focused constructivist teaching approach to meet the demand of the current generation of students, new technology and ever changing learning environment. Based on the findings of the study, it can be concluded that even though currently teachers teaching practice seemed to be inclined towards the utilization of constructivist teaching approach, the magnitude of its practice found to be low. Teachers' teaching approach in the schools that were included in the study was not found to be basically different from traditional approach in which the classroom instructions are usually dominated by teacher. The actual implementation of constructivist teaching approach was found to be low due to teachers

and other related challenges. It was found that currently teachers' dedication and pedagogical knowledge and skill were not adequate to implement constructivist approach. Moreover, large class size, shortage of allotted time to carry out active learning in greater depth and scarcity of learning materials especially in natural science department were other challenges that adversely affecting teachers utilization of constructivist teaching approach in Dangila district second cycle primary schools.

6. RECOMMENDATIONS

In light of the finding of the study and conclusion made the following recommendation was given:

1. Quality of education depends on quality of teachers that teach in the classroom. To be effective in the classroom, teachers' adequate pedagogical knowledge is crucial to use different active learning strategies properly. To improve their pedagogical knowledge teachers should update themselves by reading different related review literatures in the area; participating in educational workshops, seminars; in service training and through peer supervision. Teachers should also accept the new and modern teaching strategies whole heartedly above all else and should take more responsibility for shaping their teaching practice personally and with their students school principals, colleagues and others.
2. To enhance effective implementation of learner focused constructivist teaching approach, educational experts (district educational officers, supervisors and principals) should, provide well organized training work shop in each cluster centers for teachers to develop clear concept about the meaning and ways of utilizing constructivist teaching methods in their school context; encourage classroom supervision and exchange best teaching practice or experiences between schools.; strengthening in service training program of continuous professional development by evaluating its progress in relation to teaching practice and students learning competence and they should apply different encouraging systems for those teachers who are effective in their teaching so as to raise their internal motivation.
3. Nowadays, Ethiopia ministry of education has given great attention for natural

science education to enhance science and technology in a country. This is being effective when students learn the theory with practice by using laboratory equipments instruments and other materials. These teaching materials are the most crucial to make teaching learning easy and concrete. To minimize scarcity of teaching materials teachers should utilize locally available materials properly and school administrators have to give special attention or priority to purchase natural science teaching materials (chemicals, equipments, science kits and a like).

4. Learning occurs when students get enough time to construct their own meaning and understanding by themselves under teachers' guidance. To this effect the curriculum developers should revise the width and depth of the text books in relation to allotted periods in a week. Moreover teachers are expected to properly manage the allotted time in each instructional process to avoid unnecessary wastage Therefore availability of ample time is suitable to cover the curriculum more intensively or in greater depth and this enhanced students learning.
5. Large number students in a class were the most serious challenge to assess each students learning progress and to provide immediate and constructive feedback for each individuals, and makes classroom management difficult. To minimize this challenge teachers have to develop their awareness by reading related literatures and sharing experience regarding how to manage or teach large class size. Moreover school principals, supervisors; parent teacher association and Keble education and training board should plan and work cooperatively to build extra class rooms and schools by mobilizing the surrounding community.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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