

*Full Length Research Paper*

# The contribution of teachers' peer-and self-assessment for the implementation of active learning strategies: Perceptions of Ethiopia Primary School teachers

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The present study tries to investigate the contribution of primary school teachers' peer- and self-assessment for effective implementation of active learning in their actual classrooms. In this study, areas in which self-reflection and peer assessment include three broad categories, such as methods of teaching and learning, instructional resource utilization, and assessment techniques employed by teachers in actual classes. The study was carried out on randomly selected primary school teachers of Bahir Dar town (the Capital City of Amhara Region, Ethiopia). Using multistage sampling, five schools were randomly selected out of 25 government primary schools found in Bahir Dar town, Amhara Region, Ethiopia. And then, 50 of the teachers were randomly selected from a total of 157 teachers found in the five selected primary schools residing in Bahir Dar town. Of these sample teachers, 32 were females and 18 were males. Data collection checklists were employed to gather information from teachers about their state of using peer-and self-assessment as a means for promoting the implementation of active learning in their respective classes. The results indicated that teachers' peer-and self- assessment are insufficient in promoting active learning in primary schools of Bahir Dar town. This study, therefore, proposes means and ways of improving the roles and status of teachers in using active learning in primary schools of Bahir Dar town as suggested in the current ETP (1994) of Ethiopia.

**Key words:** Peer assessment, self reflection, active learning, implementation.

## INTRODUCTION

### Background of the study

Achieving the minimum educational quality level is the outstanding concern of Ethiopia as a nation. This is believed to be realized through the four basic strategies. The strategies, as disclosed in the country's Educational and Training Policy (ETP), include: professional develop-

ment, curriculum development, school management, and program evaluation (ETP, 1994). Of these basic variables, teachers' professional development takes the lion's share in the move towards bringing quality education in this nation (MoE, 2003).

As disclosed in the ETP (1994), education in the nation was highly authoritative, teacher-centered, which

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considered students as mere information recipients. That is, traditional methods of teaching subjects at any level employed a lecture format of instruction in which the majority of students are passively listening to the instructor and jotting down notes. In addition, the educational culture which had been flourished in the previous successive educational systems of Ethiopia was believed to obstruct teachers' practice in conformity with the philosophy of considering learners at the center of instruction.

However, current views of learning and instruction (constructivism) challenge the wisdom of this traditional pedagogic practice by stressing the need for the learner to play an active role in constructing knowledge. This is due to the fact that the main intention of any educational practice is to instill long lasting and authentic behavioral change among learners. To realize this intention utmost, it must be learners who should actively participate and lead themselves towards the required end. This being the case, the ETP has targeted teacher professional development with emphasis on the skill of facilitating students' active learning in all instructional situations.

In line with the current Ethiopian educational policy issues (1994), the Ministry of Education has set Teacher Education System Overhaul (TESO program) that articulates the nature of teacher training at different levels of education (kindergarten all through tertiary education). The main intention of such a program is to improve the quality of education in Ethiopia through boosting up teachers' knowledge, attitude and skills required to effectively and efficiently facilitate active learning in actual classes (MoE, 2003). More specifically, the program aims at helping teachers "use active learning and student centered teaching methods" (MOE, 2003, p. 6) in their actual classrooms. Put in other words, one of the major targets of the program is to develop the skill of teachers in using active learning-teaching strategy that promotes students' active participation in the teaching learning process.

Providing quality primary education for all school going age children by the year 2015 is a commitment of many countries internationally including Ethiopia. To achieve this goal, special emphasis has been given to the question of access in quite many cases. With no doubt, however, the commitment to achieve the goal is not only limited to provision of access but also to quality education provision. The Ethiopian education system with the Education and Training Policy (ETP, 1994) and consecutive Education Sector Development Programs (ESDP I, II III and IV) has made significant efforts to creating access for basic education to thousands of children. Consequently, the primary enrollment has increased dramatically. However, the quality of students' learning has been a challenge. As a result, the problem of quality in primary education has become a serious concern of the government, educators, teachers and interest groups to educational matters.

The problems in quality could be related to input factors like student-teacher ratio, student-textbook ratio, and teachers' qualification. However, of the most important factors that may be responsible to learning quality could relate to factors such as the way the teaching-learning process occurs, the extent to which teachers examine their own practice of teaching, how much school supervision is directed towards helping them improve instruction and making the learning process active and learner-centered. Accordingly, the quality of the teaching learning process can be improved by a multiple of interventions. That is, teachers can be assisted to improve their practices through school-based collegial and collaborative supervision (providing teachers to frequently assess their colleagues teaching practice). Involving teachers in action oriented research (a research and action directed towards improving, changing or better understanding their respective practice) can also be another important means of improving teaching and learning. In this respect, teachers can also be supported through peer assessment based feedback. Most important complementary move to peer-assessment is self-reflection of one's practice as a measure of improving the quality of teaching and learning. This is based on the assumption that the more teachers make their classrooms and their teaching practices open to self reflection and peer observation/assessment, the better the lesson they obtain to improve their practice and thus, improved students' learning. Student-centered learning would encourage active participation in their lessons which in turn would have positive contributions to develop abilities for creative thinking, problem solving and relating learning to real life experiences and thereby achieving the envisaged EFA goals of schooling. This can be more consolidated when a teacher is ready to engage in a continuous professional reflection on his/her own practice. Moreover, peer assessment would further enhance the professional development of teachers, which has an immense contribution to promoting active learning and quality education (Schon, 1987).

The present study, therefore, focuses on investigating how far teachers' employ peer- and personal assessment in their respective lessons with the intention of enhancing active learning during instructional sessions.

### **Statement of the problem**

Currently, educational institutions are being urged to prepare students to meet the challenges of a changing global world. This implies that schools are required to respond to the changes of emphasizing teacher directed instructional strategies to learner centered instructional strategies by changing the way they have historically operated in designing and implementing innovations for the teaching learning process. Such kinds of changes are presumed to involve the changes from philosophical

perspectives schools adapted to the changes in the actual practice in the classroom. To realize this core intention of the twenty first century, corresponding changes in relation to professional development is highly demanding.

Research (Fullan and Hargreaves, 1996) suggests that there had never been recognition of the importance of professional development in the history of education before. Nowadays, however, several educators have identified the professional development of teachers as a major component of school reform that is necessary to provide students with the best educational practices for the years ahead. Professional development is critical to systemic educational reform and school improvement that is designed to enhance the teaching learning process (Fullan and Hargreaves, 1996). To this point, Guskey (1986) asserted that the purpose of professional development is to bring about changes in the beliefs, attitudes, and classroom practices of teachers with the ultimate goal being changes in students' outcomes.

Despite the strong criticisms (considering teachers as authority figures, and students as passive beings, its being one way information recording, etc.) on the conventional teacher-centered instructional approach, however, the teaching learning process in most schools in Ethiopia has persisted to be teacher dominated (MoE, 2003). Most classes are characterized by a situation where students are made to listen to their teachers and copy notes from the blackboard. Learning by doing, problem solving, cooperative learning and group approaches are limited in primary schools of Ethiopia and if used, they do not serve their very purpose (MoE, 2003). But, literature from the psychology of learning disclosed that true and long lasting learning occurs not through pouring of information from a classroom teacher to students but by the real engagement of learners in the process of teaching and learning.

Consequently, there is a widely shared concern that the quality of learning especially in primary schools is very low. The Ethiopian Education Sector Development Program III (2005), for instance, underlines that the education system faces serious problems pertaining to teacher qualification, shortage of textbooks, and high student-teacher ratio. The dropout rate has been high. The retention rate at grade 5 is only about 55 per cent. In addition to this, there is a wide gender gap of 18% favoring boys (ESDP III, 2005). Moreover, research findings (Pauline et al., 1997; a study by Women's Affairs Department, 2000 cited in MoE Task Force, 2007) indicate lower participation of girls in class activities. Studies also indicate that teachers do not encourage girls' participation in their classes. These situations have led to a serious concern among educators and the Ethiopia Ministry of Education about quality of education and further triggered them to find appropriate ways and means of boosting up teachers competency of managing diversities in the classroom.

The Ethiopian Ministry of Education has reacted to this

situation in different ways. The Ministry in its Education Sector Development Program III (ESDP III 2005/2006-2010/2011) document indicates the following main points as part of quality enhancement endeavors:

1. In the School Improvement Program, among the major focus areas, emphasis will be given to student-centered learning, professional development and collaboration and quality of instructional program.
2. Improving teachers' professional capability through continuous professional development.
3. Strengthening cluster based (refers to two or more school staffs sharing experiences related to their practice) local in-service training, which mainly focus on active learning methodology, action research, peer-reflection, self-reflection and the like.
4. Strengthening in-school-supervision so that experienced, skilled and innovative teachers can share their experiences and coach the inexperienced teachers. It further indicates that the content of pre-service and in-service teacher training programs will be revised to enable teachers acquire and develop appropriate pedagogical skills that are academically sound, child friendly, and gender sensitive.

Concerning active learning, the extent teachers understand the concept and the skills they have to implement it are essential conditions. Moreover, the quality and amount of feed-back teachers get on their own teaching, the extent of their readiness to accept constructive comments of their peers on their teaching are issues that are subject for investigation. Moreover, the practice of self reflection and making continuous effort to improve one's own work (teaching) is at its infant state at schools (MoE, Task Force, 2007). Hence, this study is designed to assess the extent of teachers' peer-assessment and self-reflection practiced to enhance active learning in primary schools of Bahir Dar town by proposing the following leading questions:

1. To what extent are teachers' peer- and self- assessment used to promote active learning strategies in primary schools of Bahir Dar town?
2. What kind of relationship does exist between teachers' peer- and self- assessment?
3. Is there any difference in teachers' peer- and self- assessment by experience, gender and age of participants?

### **Purpose of the study**

The purpose of this study includes:

1. Examining the extent of teachers' peer-assessment and self-reflection implementation for promoting active learning strategies in primary schools of Bahir Dar town.
2. Indicating the relationship that exists between

teachers' peer assessment and self reflection.

3. Showing whether there is difference in teachers' peer assessment and self reflection by experience, gender and age of participants.

### Significance of the study

As it is pointed out in the literature, the School Improvement Program (SIP) was developed to meet the identified needs of school teachers. It was believed to provide teachers with a practical experience to implement active learning strategies in their teaching. As it is indicated elsewhere in the literature, the successful implementation of any training for teachers largely depends on the extent to which it considers their needs and concerns for the kind of training they want to take (Solomon and Alemayehu, 2007). Hence, this study is significant in that the results will help Amhara Region Education Bureau in particular or the Ethiopia MoE in general to reconsider the ways and means of implementing SIP for primary school teachers in Bahir Dar town vis-à-vis the feedback obtained in this study. It also helps primary school teachers in Bahir Dar town to see where they are in terms of using self reflection and peer assessment as a means of professional development directed towards justifying their day to day practice in the schools.

In general, in the previous educational systems of Ethiopia, as the researcher's school experience and/or readings proved, the teaching learning process was totally considered as a secrete activity behind classroom doors, that is, it is left to a teacher and the respective classroom students. No colleague was invited to observe teacher's instructional acts.

The results of this study, therefore, are believed to further strengthen the Education and Training Policy's attempt to make teaching and learning public and thereby promote a collaborative and self-reflective instructional environment in Ethiopian schools.

### Delimitation

This study would have been complete had it been made by soliciting data from different sources (students, principals, parents, teachers) and using different methods (such as Focus Group Discussion (FGD), interview, observation, questionnaire, and content analysis). But due to time inconvenience and budget constraints, the study is delimited to teachers as the only source of information, and peer-and self-assessment checklists developed by the researcher referring to the review of the related literature, the Ethiopian MOE Task Force (2007) peer- and self- assessment suggestions, and the researchers long years of educational experience at schools, Bureaus and universities as the only instruments for collecting data.

### Definition of important terms

**Peer-assessment:** refers to colleagues' actual classroom observation feedback given to the respective classroom teacher about his/her teaching with emphasis to promoting active learning in methods of teaching and learning, instructional resource utilization, assessment techniques employed by teachers in the teaching-learning process.

**Self-reflection:** refers to the teacher's retrospective thinking and decision making about his/her teaching practice with emphasis on promoting active learning in actual instructional sessions based on the feedback obtained thereof.

**State:** current status of teachers in using peer- and self-assessment about their teaching practice in schools.

### METHODOLOGY AND DESIGN OF THE STUDY

As it is stated earlier, the purpose of this descriptive study was to assess the state of teachers' peer-assessment and self-reflection in the respective instructional delivery. Hence, to meet its goal effectively, the following elements were designed accordingly.

#### Population and samples of the study

The population of this study includes all government primary school teachers (364 males and 422 females with a total of 786 teachers) found in Bahir Dar town. The total number of government primary schools was 25. The samples of this study were teachers in randomly selected five primary schools from the population of this study who were assigned to teach students of grades 1 through eight in 2009/2010 academic year. Teachers who were assigned to facilitate activities of the schools other than teaching like the director, vice-director and the administrative staff of the school were excluded out of the study. In other words, of the total 157 (84 females and 73 males) teachers of the selected schools, 50 (32 females and 18 males) of them were assumed as samples of the study.

#### Sampling technique

Out of 25 government primary schools found in Bahir Dar town, five of them were selected using random sampling technique from their list available in the Bahir Dar Special Zone Education Office. Then, 32 females and 18 male primary school teachers were selected using second round random sampling technique out of a total of 157 teachers found in the five selected schools. This sampling technique was used because the researcher found it more convenient, impartial and appropriate to take representative sample for the total population of the study.

#### Methods of data gathering

To gather reliable and valid data from the selected primary schoolteachers, the researcher has developed peer-assessment and self-reflection checklists through consulting the relevant literature, MoE Task Force (2007) suggestions of peer-assessment and self-reflection checklists, and his long years of educational experience at schools, bureaus, and higher learning institutes. These checklists prepared were filled in by teachers in the respective schools.

The peer assessment checklist was applied to see the state of peer observation practiced in selected primary school classes. To apply this technique, the researcher tried to modify certain criteria suggested by the Task Force based on the information from the review of the related literature and consulting the researcher's long time pedagogical background know-how. To this end, fifteen criteria were employed for assessing the status of peer-assessment implementation in primary schools of Bahir Dar town. Each item has three levels of frequency designated by 0,1,2, for *not at all, sometimes, and often employed*, respectively.

The other data gathering instrument used was self-reflection, which was conducted using self reflection checklist that has also fifteen items. Each item has three levels of frequency designated by 0,1,2, for *not at all, sometimes, and often used*, respectively. This reflection checklist was used to assess the respective teacher's state of retrospective thinking and decision making over his/her instructional practice with the intention of justifying it in latter sessions. The items of the checklist were developed by the researcher based on the information from the review of the related literature and consulting the researcher's long time pedagogical background know-how.

#### Data gathering procedures

Peer-observation and self-reflection checklists were given to colleagues who have long years of experience in teaching at primary schools so as to critically assess the relevance, comprehensiveness, and adequacy of those checklists in assessing the state of teachers peer-assessment and self-reflection. Before collecting data using the checklists, an attempt was also being made to see whether the checklists mean the same thing to different readers or not. To this end, the checklists were given to language editors for necessary modification. The language editors comments endorsed were in such a way that the researcher's intent of communication could better understood by the respondents of the study. Then as part of the pilot study, the checklists were filled in by seven primary school teachers who were selected arbitrarily in the mentioned population of this study. The respective checklists were collected from the seven teachers, and thereby content analysis was made by the researcher in such a way that it enables him to make relevant adjustments to the final draft of the checklists.

Finally, the checklists were distributed to sample teachers. Each sample teacher was required to fill in both the self-reflection and peer assessment checklists. The return rate of the filled-in checklists was 95 percent.

#### Data analysis technique

Results obtained from the peer assessment and self-reflection checklists were analyzed using Pearson correlation, t-test and Chi-square test. The t-test analysis technique was employed for the purpose of checking the difference that exists between teachers' state of using self-reflection and peer-assessment as means to enhance the implementation of active learning in actual instructional delivery, whereas the Pearson correlation analysis helps the researcher to see the relationship between teachers' state of using peer-assessment and self-reflection as means for promoting active learning. The third analysis technique used in this paper helped the researcher to see the extent of use of peer- and self- assessment as practice based strategies of promoting the effective implementation of active learning in primary schools of Bahir Dar town.

### PRESENTATION AND ANALYSIS OF DATA

This part of the study tries to present and analyze the

data collected from teachers' state of practicing peer assessment and self reflection as a means to promote active learning in actual classrooms. To this end, as mentioned in the methodology section, the data collected by the checklists were analyzed using Chi-square tests, t-test and Pearson correlation coefficient.

#### The State of Self-reflection among Primary School Teachers of Bahir Dar Town

Table 1 shows that the frequency of using method related self reflection techniques in actual teaching-learning process is much insufficient. The residual for "never used" and "often used" method related self-reflection techniques as a technique to foster learner-centered teaching-learning strategies were by far different from the expected number of participants. That is, more respondents (114) put that they never used such a technique as part of their teaching-learning process whereas lesser respondents (63) than the expected number of participants (83) declared that they often used method related self reflection techniques as a strategy for promoting active learning in their respective classroom instructions. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers were unable to practice method related self-reflection techniques as a means for enhancing active learning in their respective classroom instructions.

Table 2 shows that the frequency of using resource utilization related self-reflection techniques in the teaching-learning process was insufficient. The residual for "never used" and "often used" resource utilization related self-reflection techniques as a means of fostering learner-centered learning strategies was by far different from the expected number of participants. That is, more respondents (138) put that they never used such a technique as part of their teaching-learning process whereas lesser respondents (43) than the expected number of participants (83) declared that they often used resource utilization related self-reflection techniques as a strategy for promoting active learning in their actual sessions. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers were unable to practice resource utilization related self-reflection techniques as a means for enhancing active learning in their respective classroom instructions.

Table 3 shows that the frequency of using assessment related self reflection techniques in the teaching-learning process was deficient. The residual for "never used" and "often used" assessment related self reflection techniques as a means of fostering learner-centered learning strategies was by far different from the expected number of participants. That is, more respondents (100) put that they never used such a technique as part of their teaching learning process whereas lesser respondents (63) than the expected number of participants (83) declared

**Table 1.** The state of primary school teachers' practice of method related self-reflection techniques.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	114	83.3	30.7	17.528	2	.000
some times	73	83.3	-10.3			
often	63	83.3	-20.3			
<b>Total</b>	<b>250</b>					

**Table 2.** The state of primary school teachers' practice of resource utilization related self-reflection techniques.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	138	83.3	54.7	57.848	2	.000
some times	69	83.3	-14.3			
often	43	83.3	-40.3			
<b>Total</b>	<b>250</b>					

**Table 3.** The state of primary school teachers' practice of assessment related self-reflection techniques.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	100	83.3	16.7	8.456	2	.015
some times	87	83.3	3.7			
often	63	83.3	-20.3			
<b>Total</b>	<b>250</b>					

**Table 4.** The state of primary school teachers' self-reflection in all focal areas of their lesson.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	352	250.0	102.0	69.624	2	.000
some times	229	250.0	-21.0			
often	169	250.0	-81.0			
<b>Total</b>	<b>750</b>					

that they often used assessment related self reflection techniques as a strategy for promoting active learning in their actual sessions. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers were unable to practice assessment related self-reflection techniques as a means for enhancing active learning in their respective classroom instructions.

Table 4 shows that the frequency of using self reflection in the teaching-learning process is much inadequate. The residual for "never used" and "often used" self-assessment techniques as a strategy to foster learner-centered instruction was by far different from the expected number of participants. That is, more respondents (352) put that they never used such a technique as part of their teaching-learning process whereas lesser respondents (169) than the expected number of partici-

pants declared that they often used self-assessment technique as a strategy for promoting active learning in their actual sessions. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers failed to use self-reflection as a strategy for enhancing active learning in their respective instructions.

#### **The state of peer assessment among primary school teachers of Bahir Dar Town**

Table 5 shows that the frequency of using method related peer assessment technique in the teaching-learning process is much insufficient. The residual for "never used" and "often used" method related peer-assessment techniques as a means of fostering learner-centered

**Table 5.** The state of primary school teachers' implementation of method related peer assessment technique.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	113	83.3	29.7	19.016	2	.000
some times	80	83.3	-3.3			
often	57	83.3	-26.3			
<b>Total</b>	<b>250</b>					

**Table 6.** The state of primary school teachers' resource utilization related peer-assessment techniques.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	158	83.3	74.7	103.256	2	.000
some times	57	83.3	-26.3			
often	35	83.3	-48.3			
<b>Total</b>	<b>250</b>					

**Table 7.** The state of primary school teachers' assessment related peer-assessment techniques.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	105	83.3	21.7	11.096	2	.004
some times	83	83.3	-.3			
often	62	83.3	-21.3			
<b>Total</b>	<b>250</b>					

learning strategies were by far different from the expected number of participants. That is, more respondents (113) put that they never used such a technique as part of their respective process but lesser respondents (57) than the expected number of participants (83) declared that they often used method related peer assessment techniques as a strategy for promoting active learning in their actual sessions. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers were deficient in implementing method related peer-assessment as a strategy for enhancing active learning in their respective classroom instructions.

Table 6 shows that the frequency of using resource utilization related peer assessment technique in the teaching-learning process is much inadequate. The residual for "never used" and "often used" resource utilization related peer assessment technique as a means of fostering learner-centered learning strategies were by far different from the expected number of participants. That is, more respondents (158) put that they never used such a technique as part of their teaching learning process whereas lesser respondents (35) than the expected number of respondents (83) declared that they often used resource utilization related peer assessment technique as a strategy for promoting active learning during instruction. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of

primary school teachers were deficient in implementing resource utilization related peer-assessment as a strategy for enhancing active learning in their respective classroom instructions.

Table 7 shows that the frequency of using assessment related peer assessment techniques in the teaching-learning process is far behind the expected. The residual for "never used" and "often used" assessment related peer assessment technique as a means of fostering learner-centered learning strategies were by far different from the expected number of participants. That is, more respondents (105) put that they never used such a technique as part of the teaching-learning process whereas lesser respondents (62) than the expected number of participants (83) declared that they "often used" assessment related peer assessment techniques as a strategy for promoting active learning during classroom instruction. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers were deficient in implementing assessment related peer-assessment as a strategy for enhancing active learning in their respective classroom instructions.

Table 8 shows that the frequency of using peer assessment in the teaching-learning process is much inadequate. The residual for "never used" and "often used" peer-assessment techniques as a means of fostering

**Table 8.** The state of primary school teachers' peer-assessment in all focal areas of classroom instruction.

Frequency	Observed N	Expected N	Residual	Chi-square(a)	df	Asymp. Sig.
never	376	250.0	126.0	103.968	2	.000
some times	220	250.0	-30.0			
often	154	250.0	-96.0			
Total	750					

**Table 9.** The correlation between teachers' peer-assessment and self-reflection.

		Frequency of self reflection	frequency of peer assessment
Frequency of self reflection participants	Pearson Correlation	1	.727(**)
	Sig. (2-tailed)	.	.000
	N	50	50
Frequency of peer assessment participants	Pearson Correlation	.727(**)	1
	Sig. (2-tailed)	.000	.
	N	50	50

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

**Table 10.** Paired samples t-test analysis of teachers' peer assessment and self-reflection.

		Paired differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. error mean	95% confidence interval of the Difference				
					Lower	Upper			
Pair 1	frequency of self reflection - frequency of peer assessment	.06202	.19478	.03795	-.01609	-.14013	1.634	49	.115

learner-centered learning strategies was by far different from the expected number of participants. That is, more respondents (376) put that they "never used" such a technique as part of their respective instructional process but lesser respondents (154) than the expected number of participants (250) declared that they often used peer-assessment technique as a strategy for promoting active learning in their respective classroom instruction. This variation is significant at  $\alpha = 0.01$  level. The finding implies that a significant number of primary school teachers failed to use peer-assessment as a strategy for enhancing active learning in their respective instructions.

### The relationship between teachers' peer assessment and self-reflection

Table 9 discloses the fact that there is a strong correlation between primary school teachers peer-assessment

and self-reflection practices in primary schools of Bahir Dar town, which is significant at  $\alpha = 0.01$  level in a 2-tailed test. That is, teachers who usually implement self-reflection as a means to justify their teaching are also open to colleague criticism of their teaching practice which is a viable means of developing teachers' competence of implementing active learning during the teaching-learning process.

Table 10 indicates the fact that t-calculated is out of the 95% confidence interval of the difference (-0.01609\_0.14013). That is, the t-calculated value(1.634) is within the rejected region. This farther implies that there is no difference between the frequency of teachers practice of self-reflection and peer assessment done to better implement active learning in their respective classrooms. This is also confirmed by Table 9, which indicates the presence of strong relationship between teachers peer assessment and self-reflection.

Table 11 indicates that there is mean frequency

**Table 11.** Teachers' peer-assessment and self-reflection vis-à-vis age, experience and gender.

Factors		Mean frequency
Participants' Age	Above 40 years	2.10
	30____40 years	2.00
	20____30 years	1.60
Participants' Experience	Above 20 years	2.22
	10____20 years	1.80
	Below 10 years	1.36
Participants' Gender	Male	1.60
	Female	2.00

difference in teachers peer assessment and self-reflection in terms of variation in experience, age and gender of the participants. That is, as teachers' age and teaching experience increase there is a slight increase in the mean frequency of practicing peer-assessment and self-reflection attempts made for the purpose of justifying their own teaching. Moreover, the table indicates that female teachers out-perform males in terms of frequency of applying peer-assessment and self-reflection during the instructional process as a means to better manage active learning sessions. In relation to this point, Robertson cited in Anna (2000) asserted that due to the attempts made to make issues gender neutral, females are also doing best in peer-assessment and self reflection attempts made to justify their teaching and better manage active learning in the teaching-learning.

## DISCUSSION OF THE FINDINGS

### The extent of teachers' peer assessment and self reflection in primary schools of Bahir Dar town

The research findings in this study show that the frequency of using peer-assessment and self-reflection in the teaching-learning process is much behind the expectation of the ministry of education. That is, the residual for the frequencies for "never used" and "often used" peer-assessment and self-reflection techniques as a means of fostering learner-centered learning strategies were far from the expected number of participants. That is, more respondents asserted that they "never used" such a technique as part of their teaching-learning process whereas very less respondents as compared to the expected number of participants declared that they often used peer-assessment and self-reflection techniques as strategies for promoting active learning in their actual sessions. These variations were found very much significant at  $\alpha = 0.01$  level.

As the findings of this research imply, changing teachers' instructional practice requires changing the

deep-rooted traditional philosophy they adhered to, the culture, norms and school ethos. However, it takes a long instructional time to bring the required change in these respects. In support of this point, the MoE (2003) disclosed the fact that though there exists strong criticisms on the conventional teacher based approach in education, the teaching-learning process in most schools in Ethiopia has persisted to be teacher dominated and actual classes were dictated by direct instruction which leads teaching and learning towards pouring of inert information from the classroom teacher to students. That is, most classes are characterized by a situation where students are made to listen to their teachers and copy notes from the blackboard. Learning by doing, problem solving, cooperative learning and group approaches are limited and if used, they are used haphazardly and as a result they do not serve their very purpose (MoE Task Force, 2007).

Therefore, the MoE and its attendant implementers, interest groups, users of different educational programs should work towards realizing a strong school culture which is guided by the constructivist philosophical underpinning. Here, it requires us to define what it means by strong and weak school culture. The *strength* of culture is generally defined as "a combination of the extent to which norms and values are clearly defined and the extent to which they are rigorously enforced" (Cox, 1993, p.162). Cultural strength, therefore, refers to the extent to which the behaviour of school staff is actually influenced or determined by the assumptions, values, norms and artefacts that are shared in school or recommended by the education system to practitioners in schools. Weak cultures do not informally put great pressure on school members to behave in certain ways, but simply offer a guideline for their behaviour instead. As Kilmann et al. (1985) put it, "culture only mildly suggests that they behave in certain ways" (p.4). Stated otherwise, weak cultures do not prescribe how staff *must* behave, but rather how they *might* behave.

Generally, strong school culture in line with this philosophical foundation can be realised using frequent

training and retraining of the school community, especially teachers and students. But the training should be based upon information about individual stages of concern and levels of program use of teachers (Solomon and Alemayehu, 2007). At the same time, the training usually needs to be organized in schools as supports to the current and largely used strategies of professional development, that is, teachers' peer-assessment and self-reflection.

### **The relationship between teachers' peer assessment and self reflection in primary schools of Bahir Dar town**

Research findings of the current study discloses the fact that there is a strong correlation between primary school teachers peer assessment and self-reflection practiced in Bahir Dar town, which is significant at  $\alpha = 0.01$  level in a 2-tailed test. That is, teachers who usually implement self-reflection as a means to justify their teaching are also open to colleague criticism of their teaching practice which is a viable means of developing teachers' competence in managing active learning during the teaching-learning process.

This research further confirmed that there is no difference between the frequency of teachers' practice of self-reflection and peer-assessment done to better implement active learning in their respective classrooms. The critical self-reflection of teachers would be enhanced by peer-observation and reflection. Conducting observations on peer classes and engaging in critical conversations is another important tool in promoting active learning. Discussing events teachers have experienced, and colleagues' description of what has happened benefits the teacher being observed; and at the same time they examine their own experiences and check, reframe, and broaden their own theories of practice (MoE Task Force, 2007).

Other scholars have further suggested that formative peer-assessment, a process in which work collaboratively to assess each others' teaching and to assist one another in efforts to strengthen teaching, be developed and implemented as a supplement to self-reflection in professional development endeavors. Collaborative peer-assessment probably should include opportunities to teachers to learn how to teach more effectively, to practice new teaching techniques and approaches, to get regular feedback on their classroom performance, and to receive coaching from colleagues (Menges, 1985 cited in MoE Task Force, 2007).

### **Difference in teachers' peer-assessment and self-reflection by experience, gender and age of participants**

The results in the current study also indicated the fact

that there is mean frequency difference in teachers' peer-assessment and self-reflection vis-à-vis experience, age and gender of the participants. That is, as teachers' age and teaching experience increase, there is a slight increase in the mean frequency of practicing peer-assessment and self-reflection done for the purpose of justifying their own teaching. Moreover, it is indicated that female teachers out-perform males in terms of frequency of applying peer-assessment and self-reflection during the instructional process as a means to better manage active teaching-learning process.

The results in the current study also indicated the fact that there exists mean differences among teachers teaching experience in using self-assessment and peer-reflection as a way out for easier management of active learning in the instructional process. A stock of research findings suggested in the literature support the current finding. In this line, Marso and Pigge (1994) cited in Solomon and Alemayehu (2007), for example, surveyed approximately 300 pre-service and in-service teachers in various stages of their career. Four career periods were identified: pre-service teachers, teachers with 5-19 years of experience, teachers with 20-29 years of experience, and teachers with 30+ years of teaching. Lower levels of concerns about the task of teaching were reported by pre-service teachers compared to the in-service teachers, though in-service teachers were not significantly different from one another. Late-career teachers did, however, report lower concerns about self-survival than did mid-career teachers. Pre-service teachers also reported significantly lower levels of concern for impact on pupils than in-service teachers, and again the in-service teacher groups were not significantly different from one another. On a similar basis, Fuller (1969) revealed patterns in teacher concerns that correlated with maturity and teaching experience. Of particular importance to this study are findings that show pre-service and beginning teachers have different concerns to experienced teachers, and that pre-service teacher education courses should take cognizance of the characteristics typical of teachers at an initial stage of development.

Some other research findings suggested in the literature, however, contradict the current finding. In this line, a review made into the related literature depicted the fact that one cannot assume that an instructor's years of experience are directly related to the teacher's Developmental stage, as individual teachers move through these stages at different rates. It is also extremely important to recognize that teachers do not pass through these stages independent of the other conditions of one's life. Depending upon changing personal and professional factors, it is likely that the teachers will fluctuate among the stages. For example, if a teacher goes through a major life crisis, such as the death of a parent, it is likely that he or she will drop to a lower developmental stage while coping with this traumatic event. Also, if an experienced teacher moves to a new school district, he or she is likely to begin the first year at a survival stage of

development. Of course, this stage may pass quickly as the teacher draws on past knowledge to begin to function within the new context. However, it is important to recognize that this is likely to occur. A change from a suburban to an urban setting may also result in an experienced teacher moving to a lower stage of development, and as such, they may need assistance with strategies that will help them become successful in this new context (Fullan and Hargreaves, 1996).

Even though some of the available literature about the correlation between the use of self-assessment and peer-reflection with teaching experience uncovered inconsistent relationship, the results in this study, however, revealed the reverse. That is, the mean difference among teachers with different ranges of teaching experience is found to be related to the frequency of using self-reflection and peer-assessment as techniques for effective and efficient implementation of active learning. To see greater magnitude of relationship, however, requires support by continuous and relevant training in schools.

Participants' age may also be related to their teaching experience. It might be as a result of this that teachers' age seems related to the frequency of using peer-assessment and self-reflection. From another point of argument, one can put that our competency in using peer-assessment and self-reflection may be more justified as we get older and older due to the increase of the horizon of our life exposure. Of course, it needs extensive research in the area.

## Conclusion

Notwithstanding the government's relentless effort made to bring real change in schools, however, the schools observed showed little improvement in using self-reflection and peer assessment as a tool to manage active learning in the classroom teaching-learning process. But, teachers who employ self-reflection were found better performed in terms of letting colleagues to observe their instructional practice and thereby get relevant feedback that enable them to better facilitate active teaching-learning processes. Though it is a slight difference, it is found out that experience, age, and gender of participants matter their use of those techniques in classroom instructions. The researcher found out strong support in the relevant literature about the effect of experience in using innovations, but the effect of age and gender equivocal, thus these situations require further research to affirm.

## RECOMMENDATION

Based on the above concluding remarks, the following points are proposed:

1. Classroom teachers' performance is basically

influenced by different factors that undergo/ interact in the school as well as outside the school setting such as school principals, administrators, colleagues, students, parents, etc/. That is, boosting up teachers' commitment and competence to perform self-reflection and peer assessment depends upon changes made both in school culture as well as the attitudes of people outside the school setting who put significant influence upon schooling practices. Therefore, the Bahir Dar Special Zone Education Office personnel and its attendant education administrators should provide repeated orientations to the above mentioned stakeholders on the value of using peer assessment and self-reflection strategies in fostering active learning in the classroom teaching-learning processes.

2. Individuals' competency of making self-reflection is found to have a strong correlation with their openness for peer-assessment. Therefore, to flourish better peer-assessment among staff members, school principals/ department heads should motivate teachers on individual basis so that they will be highly committed for self-reflection strategy as a way out for better manages active teaching-learning processes.

3. In addition to other criteria, teachers should get promoted to the higher professional ladder mainly on the bases of their valid participation in peer-assessment and self-reflection. It is hoped that considering these performances as criteria for career development boost-up teachers' practice of peer-assessment and self-reflection as tools to increase active learning in the teaching-learning process. To this end, there is a need to have a very orderly documentation of the everyday performance of teachers. This implies that there should be trained personnel in authentic record keeping.

## Conflict of Interests

The author have not declared any conflict of interests.

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