

Enhancing Active Learning through Self- and- Peer Reflections: The Case of Selected schools in Ethiopia

Daniel Desta and Desalegn Chalchisa
Addis Ababa University, Ethiopia

Yeshitila Mulat and Asmaru Berihun
Ministry of Education, Ethiopia

Adane Tesera
Bahir Dar University, Ethiopia

Abstract

Learning can be enhanced, among other conditions, through teachers' effective design of their classes by taking into consideration peer assessment and self-reflection. In order to introduce this notion and practice, a study that passes through five phases was conducted in three regions of Ethiopia: Addis Ababa, Amhara and Oromia involving eight primary schools. Phase one dealt with introducing the concept of peer and self-reflections in relation to enhancing active learning in primary schools. Thirty two professionals drawn from the three regions' education bureaus, UNESCO, UNICEF and selected NGOs participated in the one day kickoff workshop organized to introduce peer assessment and self-reflections as a method for enhancing active learning in primary schools. The second phase covers developing a training manual on peer assessment and self-reflection for primary school teachers. The manual was prepared in English and translated into two local languages-Amharic and Afan Oromo. In the third phase a one day training of trainers was organized for four key teacher trainers from two teacher education institutes who organize and conduct the classroom observations in Adama, Bahir Dar and Gondar. The fourth phase of the project was organizing a training workshop for school teachers. The fifth phase dealt with peer assessment and reflections by observing the classes of teachers who participated in the training workshop while they are teaching. The result showed that peer assessment and self-reflections were positively perceived by the teachers and school principals. The results further showed that peer assessment and self-reflections are useful strategies in enhancing active learning among students.

Introduction

Peer assessment and self-reflections which is synonymous with the Japanese lesson study is designed for teacher professional development by exploring their chosen goals and addressing student needs through their examination of practices (Chokshi & Fernandez 2008). These strategies are widely used in a lesson study practices in connection to

teacher professional development initiatives. According to Watanabe (2003), successful lesson study requires collaboration among the participants. Fernandez, Cannon, & Chokshi (2003), made strong claims about the potential of lesson study, a Japanese form of professional development in which teachers collaboratively plan and examine actual lessons.

Lewis and Hurd (2004) have identified a long list of benefits that underlie a lesson study approach. According to these writers lesson study is rich in possibilities for improving current mathematics and science instruction. Citing results from a successful teacher-led lesson study initiative, the authors show how teachers can benefit from increased knowledge of subject matter, increased knowledge of instruction, increased ability to observe students, stronger collegial networks, stronger connection of daily practice to long-term goals, stronger motivation and sense of efficacy, and improved quality of available lesson plans. The authors conclude that lesson study goes far beyond simply improving a lesson—it challenges teachers to improve their classroom instruction.

Hill et al. (1993) developed model sought to identify characteristics of effective schools and develop a model of teacher and school effectiveness and found that the key to improved educational outcomes is teacher effectiveness. Artzt (1996) described how the framework was used as a basis for activities in which pre-service teachers engaged in structured reflection on their teaching as a means towards their professional growth. The approach required student teachers to engage in both pre-lesson and post-lesson reflective activities. It was demonstrated that this approach can facilitate the progression of pre-service teachers' pedagogical techniques and conceptions. Fernández (2005) used "micro-teaching lesson study" that engaged the pre-service teachers in three cycles of planning, teaching, analyzing and revising a mathematics lesson. This includes, first, documenting pre-lesson thoughts, analysis of the lesson and revisions of the lesson plan, the second teaching analysis and revisions, and the third teaching analysis and final revisions. Lee (2005) also involved her pre-service teachers in an iterative planning–experience–reflection cycle to allow them to critically reflect upon and improve their practice.

Similarly, Lewis (2003) noted that interest in the peer assessment and self-reflections has been growing with the recognition that it encompasses many of the qualities of effective professional development as it is collaborative, teacher-led, and focused on specific tasks of teaching. As Glasgow and Hicks (2002) explained reflecting on not just the lesson but on all aspect of their teaching, teachers can create classes where their students are engaged, feel supported and are successful. Taking a few minutes after a lesson to reflect and then record the aspects of the day that were successful or need improvement can be valuable experience. MacDonald (2005) concluded that integrating active learning, facilitated by collaborative interactions and expert guidance, will result in learning that promotes individual development and provides the unique cognitive skills necessary to meet the challenges of a rapidly changing and increasingly complex joint operational environment.

Lee (2005) suggested a six phases of problem-solving in mathematics in pre-service

teacher education: Solving problem and discussion with peers, planning for work with students, experience with students, reflection and planning, experience with students, and final reflection. Lee contended that the results could contribute to the development of learning for pre-service teachers. In addition, the iterative cycle, planning-experience-reflection, could help to shift pre-service teachers' egocentric focus on their actions to the focus on understanding students' work.

The factors examined in this study, i.e., peer assessment and teacher self-reflection fall in the broad frame of teacher professional development which presumes the need for continued improvement of knowledge and skills of the teachers in order to effectively facilitate students' learning. Peer assessment and self reflection practices are among important strategies that enhance teacher professional development. This research looks particularly into the benefits of these two strategies in relation to improving teachers' effectiveness in view of promoting active learning.

Advocates of constructivist perspective in education, claim learning takes place best in a situation where students are encouraged to construct their own knowledge instead of having someone construct it for them. This perspective encourages students' autonomy and initiative to engage in critical thinking and inquiry through application of cognitive strategies of analysis, synthesis, evaluation and prediction. Active learning neither takes place in a vacuum nor is it automatic. It cannot be forced upon anyone; neither can it take place on command. Students must be willing to learn and they must be prepared to take the initiative. This "do-it-yourself" principle implies that the more active the students are in their learning, that is the increasing number of different activities they undertake in mastering a skill, the better the result will be (Open Universiteit Nederland 2007). There are, however, arguments that challenge the supremacy of the constructivist approach over behavioral approach. The critic says the former approach is elitist suiting only fortunate students that have outstanding teachers, committed parents, and rich home environments. It is argued that disadvantaged children, lacking such resources, benefit more from more explicit instruction (Smith 1999).

For long the teaching-learning process in the Ethiopian education system has been teacher dominated to the extent it appeared no learning takes place in the absence of a teacher talk and his/her writing. This proposition holds true at least in lower grades where children need more and close assistance of teachers to engage in successful learning of the contents of the formal curriculum. In the dominant tradition the teaching-learning processes followed behaviorist perspective where the teacher takes more of a directive position disseminating information to students who are considered recipients of knowledge. Class discipline with silence, obedience, convergent thinking has been thought as the best way to teach children (Daniel 2007).

The Education and Training Policy of Ethiopia stipulates the need to focus on problem-solving approach and student-centered teaching in order to improve the quality of education and tackle the old-age teacher-centered approach (TGE 1994). Improving the quality of education through continuous in-service and short-term training of teachers is

also given due attention by the Federal Democratic Republic of Ethiopia (MOI 2002).

Despite the 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. Most classes are characterized by a situation where students are made to listen to their teachers and copy notes from the blackboard. Despite policy provisions and some practical endeavors to move towards learner-centered approach, learning by doing, problem solving, cooperative learning and group approaches are generally limited. Consequently, there is a widely shared concern that the quality of learning in schools is poor.

In this context the ministry of education (MOE 2002, p.8) stated that “the long standing problems associated with the Ethiopian education system were essentially limited and inequitable access, lack of quality and relevance, and continuous decline in quality and standard”.

In response to this situation the education policy of the Ethiopia underlined the need for shifting to student-centered approach (TGE 1994). The same has been reflected in the five year Education Sector Development Plans (ESDP I, II and III of the country). Subsequently, efforts are being made at school and regional levels to organize short-term trainings and encourage teachers to use student centered approach in the teaching learning process. Cluster resource centers are set up for teachers in schools with a close catchment areas to share experiences and to jointly organize short term training that helps teachers replace the old-teacher centered approach with student-centered approach (MOE 2002).

Nonetheless, strategies such as peer assessment and self-reflections are not tried in Ethiopian schools. The present study, therefore, aims at examining viability of lesson study approach to improve teaching and learning in primary schools in Ethiopia. The study looks particularly in to a possibility of introducing teachers’ peer assessment and self-reflection strategies for enhancing students’ active learning. The study attempts to answer the following key research questions

- How do teachers see the role of peer assessment and self-reflections in schools?
- Do teachers welcome their peers to observe their classroom and reflect on their strengths and weaknesses?
- Is peer assessment and self-reflection viable methodology in the Ethiopian primary schools context in enhancing active learning?

An Overview of Policy Perspectives and Trends

The Ethiopian education system appears to operate quite well in terms of access, particularly in the last few years. In 2004-05 the total enrollment in primary schools in the regular and evening programs was 11,448,641 (79.8%) out of the estimated primary school age population of 14,342,358 in the same year. Nonetheless, quality indicators show poor performance of the education system. The notion of quality of education

and the mechanisms employed to ensure it lack clarity among teachers- key actors in education. Teachers are generally considered agents for transmitting knowledge to students.

Students, on the other hand, are considered passive recipients of what the teacher has to give. This situation has adversely affected the quality of education and performance of the learners at all levels of education. In views of teachers, the quality of the Ethiopian education has been notably poor. According to (MOE 2008), teachers who were certified to teach at the second cycle primary school in 2006/7 were 53.4%. This means about 47% of the teachers do not qualify to teach at this level. Pupil-Teacher Ratio (PTR) at national level is 62 for the first cycle primary and 52 for the second cycle primary in 2006/7. This is in contrast to the national standards of pupil-teacher ratio which is 50 and 40 for the primary and secondary respectively.

Other quality indicators such as repetition rate and drop out rate have not yet been reduced at the required level. Repetition rate at the primary school level in 2006/7 was 6.1%. The drop out rate at the same level for the same year was 12.4%. The survival rate to grade 5 for the year 2006/7 was 56.4% at national level. This implies that about 45% of the pupils could not continue their education at second cycle of the primary level (grades 5-8). The coefficient of efficiencies for grade 5 and 8 (proportion of students who complete grade 5 and 8) in 2006/07 were 62.2% and 41.7% indicating inefficiency of the educational system. In other words, the proportion of grade one students who complete grade eight is less than about 42%.

The Ministry of Education has recognized the overall problem related to quality of education in the country. The ministry, in its Education Sector Development Program III (ESDP/III 2005/2006/- 2010/2011), considers student-centered learning, continuous professional development of teachers, cluster based local in-service training, school-based supervision and revising the content of pre-service and in-service teachers training programs as major areas of focus in education quality improvement program(MOE 2005). Moreover, the Education and Training Policy/strategy requires teachers to employ learner-centered approach in their classes.

The results of a study on teachers' perspective on active learning (Daniel 2007) showed that learner-centered approach and active learning enhance quality of education-successful teaching and learning. A summary of primary school teachers' views on these issues are presented below.

- Active learning leads to improved quality and success in education.
- "Active participation of students" in a class is an indicator of successful teaching
- Good teaching involves students as participants. It provides an opportunity to extend learners' horizon of thinking. It encourages learners to generate their own ideas. This type of teaching and learning arrangement brings in ideas and knowledge, which could be new even to the teacher. Teachers are encouraging student's active participation in their classes.

- In the past, students were generally passive. They were not given enough opportunity for talking in class. The class used to be teacher dominated. Now, after introduction of the learner-center approach, students have enough opportunities to talk and to argue in a class. This situation results in improved learning.
- Learner centered approach allows students to learn through exploration and problem solving methodology where students are actively engaged and work hard. The teacher-centered approach, on the other hand, emphasizes teacher's activities and learning heavily depends on what he/she does in contrast to what students do.
- Students are encouraged to learn from each other through group work.

Nonetheless, teachers face obstacles in their efforts to encourage students' active learning. Daniel's study (2007) revealed the following obstacles along this line.

- Shortage of textbooks and other teaching materials/aids in classrooms;
- Large class size (about 70 students in a class);
- Lack of adequate desks for students;
- Lack of adequate effort on the part of parents and the community to support education of their children;
- Poor living conditions of parents that affect children's interest in education; and
- Low salary of teachers that does not match with the cost of living.

In general, learner-centered approach is a process of implementation in primary schools in Ethiopia. Teachers viewed it as the highly suitable approach to raise quality of education. However, there are a number of obstacles that need attention in enhancing active learning in primary schools in Ethiopia. This piece of research attempts to address an issue of quality issue in primary schools. It is designed in such a way that peer and self-reflections are used as strategies to improve teachers' effectiveness thereby enhancing students' active participation in the teaching learning process.

Method of the Study

This is a project primarily trying to introduce two practices i.e., peer assessment and self-reflection as strategies to enhance active learning in selected primary schools in Ethiopia on pilot bases. The project is designed in a way that it follows five interrelated phases.

The *first phase* dealt with introducing the central idea of peer assessment and self-reflections particularly in relation to enhancing active learning in primary schools. A workshop involving over 32 participants drawn from education bureaus of three regional states-Addis Ababa, Amhara and Oromia was conducted for one day. In this workshop

the concepts of peer assessment and self-reflections were discussed in relation to their role in enhancing active learning on the part of students. Moreover, related experiences of selected Asian countries-Japan and Indonesia were presented and discussed in relation to their importance in enhancing active learning.

The *second phase* covered developing training materials on peer assessment, self-reflections and active learning for primary school teachers. Seventy pages training material was developed in English and later translated into two local languages - Amharic and Afan Oromo. The contents of the material focused on the three basic topics- active learning, peer assessment and self-reflection.

In the *third phase*, a one day training of trainers was organized for four key teacher trainers from two teacher education institutes namely Adama and Gondar. The material developed in the three languages was used in the training of the trainers.

The *fourth phase* of the project was organizing training workshop for school teachers. A total of 40 teachers drawn from eight primary schools in three regional states (Amhara, Oromia and Addis Ababa) participated in a two days training (March 24 and 25, 2007). The training was organized in order to introduce the concepts of active learning, peer assessment and self-reflections as a prerequisite for initiating the intervention activities in selected schools. The training was designed to ensure teachers' readiness to promote peer assessment and self-reflection practices in their respective schools and make arrangements to conduct peer observations in their own classes.

The participant schools were selected in such a way that the researchers do both their regular teaching and the research work side by side. This arrangement created conducive situation for both researchers and teachers to work together without much affecting their day to day teaching and other regular duties at their respective institutions.

The participant teachers were selected based on recommendations of school principals and subsequent interest the teachers showed to participate in the project. Teachers who participated in the training were those who were willing to be observed or observe classes while a lesson is being conducted. A total of thirty two teachers and eight principals volunteered to participate in the training workshop. Each of the selected school was represented by four teachers and the principal.

The *fifth phase* dealt with observing the classes of teachers while they are teaching. A class of grade 4 environmental sciences was selected for this purpose. Teachers who were willing to be observed while teaching were involved. Subsequently, class observations were conducted particularly in two of the eight schools. The two schools involved in the fifth phase were from Addis Ababa. The data from the remaining the schools (from Oromia and Amhara regional states) are not included due to irregularities in implementing the pilot project. A total of 3-4 teachers were involved as observers in each school. Sessions for discussion and reflections were organized in each school before and after class observations. This was done for three rounds in each school. The data obtained from the three rounds of observations were analyzed qualitatively.

Three lesson observations were conducted at Tsehay Chora Primary School and in

Dagmawi Minilik II Primary School in May and June 2007. The procedure adopted was conducting pre-observation conference followed by actual classroom lesson observation which culminates with post classroom lesson observation conference.

In each pre-observation conference a brief discussion was made on the purpose of the lesson observation, the objectives, contents and methods of the lesson to be presented. Each observation lasted for 40 minutes. The focus of the observation included teacher activities, students, activities and the material and methods used in the class. At the post lesson observation conference, peer observers and researchers give constructive comments about the strengths and weaknesses of the lesson they observed, and how the lesson by the teacher could have been presented. Here, discussion takes place between the teacher and the observers on strengths and weaknesses observed and suggestions were put forward for improvement.

Results of the Study

This section presents the results of the pilot lesson study project with a focus on pre-lesson observation, actual lesson observation and post lesson observation records and their analysis. The presentation is done in two parts. The first part presents results of the lesson study exercise at Tsehay Chora Primary School whereas the second part presents results of similar exercise at Dagmawi Minilik Primary School.

Lesson observations at Tsehay Chora Primary School

(1) First lesson observation

Among the three teachers who participated in the conference (one female and two male teachers) one of them (the female teacher) volunteered to be observed. The subject she taught was grade-four Environmental Science. The topic of the first lesson was “Countries that have common borders with Ethiopia.” On the pre-observation conference of the first lesson, the teacher’s lesson plan was given to the observers. The teacher to be observed reflected on the lesson plan. The other teachers provided feedback on the lesson plan. They found the lesson plan concise and precise. It contained lesson objectives, contents, methods of presentation and evaluation procedures.

In the first lesson observation, on the strength side, it was observed that the classroom set up was good. The teacher started the lesson using songs related to the topic to motivate the learners. She used practical examples in order to make the lesson relevant to the students’ life. She was asking the class to clap their hands repeatedly contingent to the students’ correct responses. She was observed calling students by their names which indicates that she knew all her students by their names. Another quality she demonstrated was caring and motherly approach. She formed groups and gave a name for each. Students were encouraged to present their group reports which were discussed and further enriched by the whole class. Before finishing her class, the teacher presented summary of

the lesson at the end and introduced the topic of the next lesson.

On the weak side of the lesson, it was observed that the lesson was dominated by the teacher. Student participation, particularly in answering questions, was dominated by only few students. A single student who was courageous was repeatedly given a chance to respond. Female students were less active compared to male students. It was observed that some students were not following the lesson and the teacher did not pay attention to them. Although groups were formed, the teacher failed to give group work. There were no teaching aids such as map that shows the countries that border Ethiopia which of the topic of the lesson for the day. It was further observed that despite sufficient space, some teaching aids were placed on the wall where they could not be seen by all students.

Post-lesson observation conference

On the post-observation conference the strengths and weakness of the teacher were discussed openly. All the observers commented that the teacher was self-confident. The lesson in general was very good. One observer commented that “I learned a lot from her lesson. Student participation was high although dominated by males. The class was enthusiastic.” During the post-observation conference, the teacher was hesitant even feeling angry with feedback of the observers, although the feedback was only meant to enhance active learning by improving teacher effectiveness. In response to the hostile reaction of the teacher, observers explained that the comments were not evaluative but rather aimed at helping the teacher improve her lesson presentation and students’ participation.

(2) Second lesson observation

The second lesson observation was conducted a week latter on the same class, i.e. grade four environmental science taught by the same teacher. The topic was “*The people of Ethiopia*”. During the pre-observation conference, similar discussion as in the first observation was conducted. Objectives, contents and methods to be followed by the teacher were discussed by referring to the daily lesson plan.

In the second lesson observation, it was observed that some of the weaknesses observed in first lesson were improved. After the introduction of the topic and formation of groups, the teacher played the role of a facilitator by dividing students for discussion on four groups of the people of Ethiopia: The Cushitic, the Semetic, the Omotic and the Nilotic. Each group discussed the topics given and reported through group representatives. Finally, the students summarized the major points using appropriate teaching aids.

Post-lesson observation conference

On the post lesson conference, the lesson observers’ comments were positive in most cases. One observer mentioned “Today’s lesson was fantastic. I observed a great change. The major actors were students. They were freely discussing. It is a big lesson for me as it makes me believe that students learn better when they are involved than

when a teacher instructs them.” Another observer commented that “I observed the teacher implementing all the comments given on the first lesson. It inspired me. The second time, female students’ participation was very high. All students were given attention.”

On the second lesson observation the teacher appreciated that the comments helped her to shape and reorganize her lessons so that students’ participation is optimum. As it was the case in the first lesson, she was not offended by the feedback of the observers; instead she recognized the importance of the exercise and welcomed the comments in order to improve the next lesson. In this regard she said “I found the comments very useful. I will be one of the advocators of this method. It helped me a lot to work hard and think about how to make the lesson learner-centered. I thank you.”

The observers also had reflections on future directions. Although it was observed that the teacher showed marked progress, there were factual and conceptual mistakes that need to be corrected. The concentration of the teacher was on students’ involvement rather than on the outcome of the lesson.

(3) Third lesson observation

The third observation was conducted a week after the second lesson observation. Similar to the previous lesson observations, the pre-observation conference was conducted on the lesson to be presented. The observers were aware of the topic, the objectives, the methods, and evaluation mechanisms of the lesson planned for the day. The lesson plan contained student’s tasks and her own activities. The topic of the lesson was “Harmful traditional practices in Ethiopia”. The subject was again Environmental Sciences for grade four.

The teacher presented a brief introduction of the lesson and then the lesson was presented through drama. The drama was written by one of the students, a girl. She wrote a nice short drama on harmful practices, treatments and their consequences in Ethiopia. At the end, the teacher gave a short summary of the lesson.

Post-lesson observation conference

During the post-lesson conference, the observers expressed their satisfaction with their observations of the three consecutive lessons. For instance, one observer commented as below and similar comments were also forwarded from other teachers:

The teacher who was observed is a model teacher. From the beginning she showed interest in participating in the lesson observation. I observed significant and consistent changes from the first up to the last lesson. The teacher was open and hard working. She was able to improve teaching and learning in her class based on comments from peers. We have witnessed changes. In the future we would make the necessary arrangements to implement this method in our respective classes.

The observed teacher commented the following.

I found that enhancing active learning through peer observation and self-reflection can work. Since I volunteered to involve in the lesson plan, I accepted comments from peers and made all the necessary efforts to make improvements in my lessons. I learned a lot from the post-observation conferences. However, as I have experienced during the last three lessons, it is very difficult to implement this method in the self-contained classrooms as the teacher in such classes teaches at least four subjects which makes the preparations and necessary arrangements of lessons very difficult for the teacher.

In summary, it was learned that the method of enhancing active learning through peer observation and self-reflection is useful strategy in improving teachers' effectiveness and students active learning. It appears, the method can be implemented at larger scale given that more work is done to convince teachers, principals and the ministry of education. A lot of advocacy and policy support is needed in order to scale-up the pilot project to involve more schools and more teachers. Efforts should be made to make it part of a comprehensive and on going institutional plan otherwise it may not be implemented beyond the pilot project level.

Lesson observation at Menilik II Primary School

(4) First lesson observation.

Two lesson observations were conducted at Menilik II Primary School in May and June, 2007. The observers included two researchers and two peer teachers from the school and on the second observation the school principal joined the observation group.

In the pre-observation conference the teacher to be observed and the peers referred as observers discussed about the purpose of the lesson observation. The post observation conference focused on general observation during the lesson, activities that need corrections, observed teacher's strengths and weaknesses and followed by suggestions on what should be done for the next lesson. Here, the peers and researchers forwarded constructive comments as feedback to the observed teacher. The feedback provided by researchers and peer teachers was constructive aiming at improving the observed teachers' professional competence and skills. The observed teacher in turn, reacted to the questions and comments by peers and explained why she acted the way she did. The dialogue was found to be important as stepping stone for further improvements.

At the beginning, three teachers (peers) were selected and volunteered to be core participants in the lesson study initiative. Out of the three, one was a female teacher and the remaining two were male teachers teaching grade four environmental science. The female teacher volunteered to be observed and the two male teachers volunteered to be observers with the researchers.

The topic of the first lesson was "*Countries that have Common Borders with Ethiopia*" the observed teacher had well prepared annual plan, weekly lesson plan,

attendance book and students' mark sheet, which were part of her daily routine work. During the lesson observation, the observers had time to review the lesson plan and confirm that it contains main topic, detail contents, teaching methods, evaluation techniques and method to stabilize the lesson.

The class was relatively large enough having desks for all students and with enough light. The lesson observed was relatively interactive. Regarding students' participation, out of 45 students in the class only six were very interactive, and the rest were generally passive just following their teacher. The teacher used a map and explained to students which countries are bordering Ethiopia. Next, she asked students to identify border countries to Ethiopia from east, west, north and south. It was observed that only six students were actively raising their hands and answering teacher's questions through out the period.

The teacher's class management was good. She tried to draw attention of the class. The class room atmosphere was also good. All students had their own text books and were using them.

Before the class ended, the teacher asked the students to summarize what they have learned during the lesson. The students presented the summary as per the teachers' requirements. The teacher added the missing points in the students' summary. It was observed that students were given more share in summarizing and stabilizing the lesson.

Post-lesson observation conference

The observers (peer teachers and researchers) put forward their observations. The comments were generally positive and constructive. At the beginning, one of the peers assumed the assessment targeted on finding out weakness of the teacher and might have an influence on evaluation of the teacher. He reflected negative opinion about the practice of peer assessment and self reflection practices. Another peer observer was not happy on the comments given by researchers defending the observed teacher. He noted that she did her best. This was a misconception of the purpose of the exercise. However, he was latter convinced that the exercise had nothing to do with the regular teacher evaluation. Hence, he was able to engage in forwarding constructive comments.

It was learnt that the observed teacher had important strong sides. The observed teacher had an attendance sheet with her and used it at the beginning of the lesson. It was observed that the teacher knew her students by name; her interaction with students was good and she was able to capture attention of the class; her knowledge of the subject matter was also good; she was highly confident throughout the whole lesson.

On the other hand, there were weaknesses that were observed during the lesson observation. The focus of the teacher was on few active students and unable to initiate and involve most of the students to participate in class activities. Moreover, although the lesson was suitable for group work, no group work was organized by the teacher.

The observed teacher was hostile and was not welcoming peer comments particularly at the initial stage of the post class observation conference. The teacher

understood the comments as an evaluative rather than an exercise meant to enhance students' active learning through peer and self reflections. However, attempts were made to clarify that the objective of the lesson study exercise was mainly for improvement of teacher's effectiveness and students' participation in the teaching learning process.

(5) Second lesson Observation

The second lesson observation was conducted on two weeks after the first class observation. The topic of the lesson was "*The Structure of Ethiopian Parliament.*" As she did before, the teacher had all the relevant documents such as attendance sheet, mark sheet, annual plan and weekly lesson plan at the pre-observation conference. The teacher used a chart showing various sections of parliament and their functions.

This time lesson was more interactive than the previous one. More students were active in the second class and the teacher gave more focus to those students who were passive by calling their names. She came up with a new approach where the teacher asks one student to respond to a question she asks and another student to correct or confirm the answer. She used more questions to encourage students' participation. In the middle of period the teacher changed her approach to competition among students sitting in row. This strategy increased students' participation because students worked as a team and helped each other.

This time, it was found that the class room was neat and well organized. The blackboard and text books were utilized more effectively. It was further observed that girls were also encouraged to participate in class activities.

Post-lesson observation conference

After the lesson, the observed teacher and the observers sat together and continued their discussion on the lesson conducted. The observers reflected that the second lesson was much better than the first one. During the second lesson, the teacher considered all the feedback given on the first class Performance. It was noted that there was increased class interaction involving more students and improvement in sequence of presenting lesson activities (such as introduction, presentation, stabilization and evaluation and feedback). The peer observed further noted that students' questions were accepted and the teacher used various means to motivate and mobilize students who were passive during the first lesson. However, it was observed that the teacher still gives more chance for students who repeatedly raise their hands.

The dialogue on the post-lesson conference was more interesting than the first one. The peer teachers were free to give comments; previously they seemed to be reserved. The school principal was transparent in giving comments. The observed teacher felt more confident and was happy with the comments forwarded by researchers and peers. She witnessed that the comments given to her were very important and added more value to her daily work.

Discussion

Discussion of the results is organized and presented along four guiding issues of the pilot project i.e., pre-observation training and conferences, critical self reflections upon once own practice, critical peer reflections, and actual improvement in the activities of learners.

Pre-observation training and conferences

The teachers that were observed and peer observers were introduced to the lesson study model of teacher professional development and to the concepts of self and peer reflections through training and pre-lesson observation conferences. This helped both groups to develop interest in the new exercise and get involved in the lesson study groups formed in their respective schools. However, it was observed that both the observed teachers and peer observers did not have clear and sufficient understanding on purpose of the project. This situation was reflected in the tendencies of resistance and defensive attitudes both groups showed in response to the critic forwarded on the teaching-learning process in the observed classes. Although the resistance reflected during the post lesson observation conference was not desirable, its manifestation could not be taken as a surprise as the practice of peer reflections on teachers' performance is totally new.

Critical self reflections upon once own practice

As noted by Glasgow and Hicks (2002), it is important that teachers take time to reflect on their teaching effectiveness which among other conditions is demonstrated by their ability to facilitate active learning on the part of their students. Such a practice highly valued as it contributes to self-initiated teacher professional development. Teachers in both schools were moved developing deeper insight in the benefits of the lesson study model. They were able to effectively engage in the analysis of their own action. This was demonstrated by the consistent efforts they made in improving their lesson plans and lesson delivery strategies

Critical peer reflections upon colleague's performance

During the first phase peer observations and the feedback they give were not welcomed. The lesson study practice was perceived as a threat to teachers. But teachers were gradually convinced and started to develop confidence on peer assessors. Ultimately, teachers' peer assessment and self-reflections were perceived as valuable methods that can help teachers to improve their teaching and enhance active learning among their students. It was observed that peer reflections on the observed classes were focused on making constructive comments to improve teacher presentation of lessons and to increase students' active involvements in the teaching-learning process. The peers showed increasingly relaxed and more open type of approach in giving feed back to the teachers that were observed. This situation, on the other hand, was in response to an accepting type

of attitudes that the observed teachers showed towards comments by their peers.

Actual improvement in the activities of learners

According to MacDonald (2005) integrating active learning, facilitated by collaborative interactions and expert guidance, results in learning that promotes individual development and provides the unique cognitive skills necessary to meet the challenges of a rapidly changing and increasingly complex joint operational environment. The classes that were dominated by few active students showed gradual improvement involving more number of students. The number of girls that actively participate in class activities increased following improvement in the strategies used by the teachers.

Conclusions

Peer observation and assessment, though not new in other parts of the world, is totally new in the context of the Ethiopian schools. Moreover, the role of such practices in promoting teacher professional development is not yet understood and appreciated in the Ethiopian context. This piece of research has made an attempt to find out and explain to what extent the active learning and student-centered approaches currently employed in the Ethiopian schools can be enhanced through systematic application of teachers' peer assessment and self reflection. The pilot work carried out in this project involved various stakeholders. It involved researchers from higher education institutions teaming up with the experts from the ministry of education. It also involved teachers from teacher education colleges and education officers from regional education offices. More importantly, the study involved primary school teachers and principals as active and key participants in implementing the pilot project. It is assumed that all the participants have gained valuable experience from discussions in the series of workshops, training programs and class observations and reflection practices. Although the process has been challenging, it was equally educative and fascinating.

The research team has drawn the following conclusions based on the results of the lesson study practices in the selected schools.

- a) At the beginning the teachers were suspicious and not really happy with the new lesson study exercise. However, through training and further discussions, they were able to appreciate and, in fact, practice the lesson study in their schools.
- b) The fact that teachers volunteered to invite their peers to their classes for observation and comments was a notable change in their attitudes towards comments by their peers. Moreover, the pilot study showed that teachers developed trust in the constructive comments of their peers.
- c) The teachers who volunteered to be observed while teaching showed remarkable improvement in their teaching methods, particularly in encouraging students' active involvement in the teaching-learning process.

- d) The results of the pilot project further revealed that teachers' tendency to engage in open and transparent comments on classes of their peers improved significantly as they practiced more and more observations and reflections.
- e) The observed teachers and the observers (peers) mentioned that peer assessment and self-reflections method is valuable and contributes to the improvement of quality of teaching and learning.

References

- Artzt, A. (1999). A structure to enable pre-service teachers of mathematics to reflect on their teaching. *Journal of Mathematics Teacher Education*, 2(2), 143-166.
- Chokshi, S. & Fernandez, C. (2008). *Challenges to Importing Japanese Lesson Study. Concerns, Misconceptions, and Nuances*.
[<http://www.pdkintl.org/kappan/k0403cho.htm>] (November 30, 2008)
- Daniel, D. D. (2007). Quality of Teaching and Learning in Selected Primary Schools in Ethiopia: Perceptions, Practices and Prospects.
[<http://home.hiroshima-u.ac.jp/cice/paper68.pdf>]
- Fernandez, C., Cannon, J. & Chokshi, S. (2003). A U.S.-Japan lesson study collaboration reveals critical lenses for examining practice. *Teaching and Teacher Education*, 19(2), 171-185.
- Fernández, M. L. (2005). Exploring “lesson study” in teacher preparation. In H. L. Chick & J. L. Vincent (Eds.), *Proceedings of the 29th PME International Conference* (Vol. 2, pp. 305-310). Melbourne.
- Fuller, B. (1986). *Raising School Quality in Developing Countries: What Investments Boost Learning*. Discussion Paper No. 2. Washington, D.C.: The World Bank.
- Glasgow, N. A. & Hicks, C. D. (2002). *What successful teachers do: Research based strategies for new and veteran teachers*: California: Crown press.
- Hill, P. (1993). A Study of School and Teacher Effectiveness: Results from the First Phase of the Victorian Quality Schools Project.
[<http://www.ou.nl/eCache/DEF/22/873.html>] (November 28, 2006)
- Lee, H. S. (2005). Facilitating students' problem solving in a technological context: Prospective teachers' learning trajectory. *Journal of Mathematics Teacher Education*, 8, 223-254.
- Lewis, C. (2003). The essential elements of lesson study. *Northwest Teacher*, 4(3).
[<http://www.nwrel.org/msec/nwteacher/spring2003/elements.html>] (November 30, 2008)
- Lewis, C., Perry, R. & Hurd, J. (2004). A deeper look at lesson study. *Educational Leadership*, 61(5), 6-11.
- MacDonald, J. (2005). *Rules of Engagement: Fostering Active Learning for Performance Improvement*. Intelligent Decision Systems, Inc. Pensacola, Florid. Paper No. 2139, 3- 9.
- MOE (2002). *The Education and Training Policy and Its Implementation*. Addis Ababa: Ministry of Education.
- MOE (2005). *The Federal Democratic Republic of Ethiopia Education Sector Development*

- Program III (ESDP-III)*. Addis Ababa: Ministry of Education.
- MOE (2006). *Education Statistics Annual Abstract 2006/7*. Issue No.14. Addis Ababa: Ministry of Education.
- MOI (2002). *The Federal Democratic Republic of Ethiopia Capacity Building Strategies and Programs* (in Amharic). Addis Ababa: Ministry of Information.
- Open Universiteit Nederland (2007). *MSc Active Learning*.
[<http://www.ou.nl/eCache/DEF/22/873.html>] (June 20, 2007)
- Oromia Region Education Bureau (2005). *Education Information Management System 20004/05*. Addis Ababa: Oromia Education Bureau.
- Serebssa, D. D. (2006). Quality of Teaching and Learning in Ethiopian Primary Schools: Tension between Traditional and Innovative teaching-learning Approaches. *Journal of International Cooperation in Education*, 9(1), 123-140.
- Smith, M. K. (1999). *Learning Theory, the encyclopedia of informal education*.
[<http://www.infed.org/biblio/b-learn.htm>] (November 20, 2007)
- TGE (Transitional Government of Ethiopia) (1994). *Education and Training Policy*. Addis Ababa: Berhanina Selam Printing Press.
- Watanabe, T. (2003). Lesson study: A new model of collaboration. *Academic Exchange Quarterly*, 7(4).