Students' Reactions to Active Learning Methods in Selected Classrooms of Addis Ababa University

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Abstract: The major purpose of this study was to look into students' preferences of approaches to learning through examining their reactions towards various active learning methods in selected classrooms of Addis Ababa University. Data were collected from two cohorts of evening extension (Business Education and Mathematics) students who took the courses General Methods of Teaching and Curriculum Studies. The major data used for the study were collected during the two courses. Additional data were secured using interview and personal texts. The result indicated that many of the students tended to resist or react negatively to teaching methods that require active engagement with learning tasks. Even though some improvement was noted in the attention the students paid to active learning tasks after the mid-term examination, they continued to worry about getting organized notes to be read for examination. Possible implications of this for classroom action and research in the area have been discussed. It was also suggested that students need to be considered as a key variable in any analysis of the implementation of active learning methods in Ethiopian classrooms.

Introduction

Teaching methods vary with the extent to which they involve the learners or with the roles the students and teachers assume during the teaching-learning process. At one end is the more teacher dominated method which involves the most direct way of transmitting knowledge (like the formal lecture) on to the learners. This is often labelled as the traditional or the teacher-centred method. According to Escandon (2004), this extreme approach to teaching is based on the conception that knowledge is fixed truth out there and teaching is the process of transmitting this truth to students who are there to receive from the master. The other extreme of

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teaching/learning methods is the rather student focused approach where learning is taken as the responsibility of the students. Such approach is often referred to as the active learning the learner-centered method (e.g. students' independent projects). For Escandon (2004) this approach assumes that knowledge is individual and socially constructed, based on personal experiences. Active involvement of learners and meaning making are central to this approach to teaching. In this approach contents are not end in themselves. They are rather the means to construct knowledge (Peirce, 2002). The shift is, therefore, from *covering* content to *using* content.

In traditional instruction, the teacher's primary functions are lecturing, designing assignments and tests, and grading.   In student-centered teaching, the teacher still has these functions but he/she also provides students with opportunities to learn independently and from one another. The teacher also coaches students in the skills they need to do so effectively.
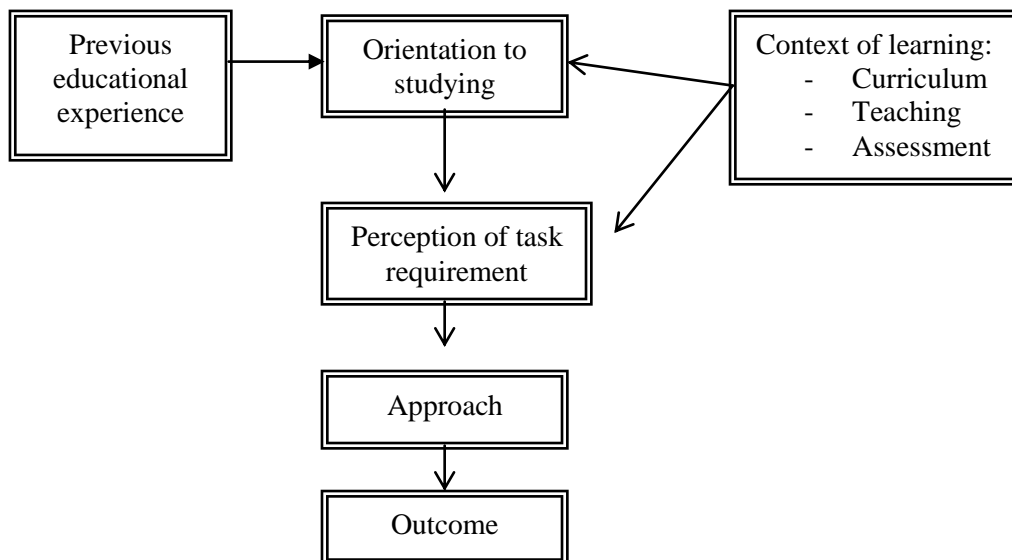
It should be noted at this juncture that the points raised above in connection with the two teaching approaches are only extremes. Reality is less fitted to extreme theoretical descriptions. Therefore, teaching methods can be put along a continuum between the two approaches discussed above. It is, therefore, in relative terms that we talk of teacher –centered and learner –centered methods of teaching or the less active and the active methods of learning. In this article the terms active *learning* and *learner-centered* methods are used interchangeably in the context discussed above.

Review of Related Literature

Approaches to Learning

In his extensive review of research on students learning in the context of higher education, Barlow (1997) underscored that much of the failure in higher education is explainable in terms of the approach students' adapt in their learning. *He wrote, "I*n deciding their approach, students are influenced

both by their own motivation and previous experiences, and (crucially) by what they perceive as being required," P.60. The points of this writer indicate why the students come to the university, the type of learning approach they have been exposed to during their schooling (pre-university) and the requirement of the university or university department. The instructor, as perceived by the students is among the essential considerations in assessing the type of learning approach the students prefer. The following figure presents a diagrammatic representation of how higher education students develop approaches to learning.

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┌─────────────┐      ┌─────────────┐      ┌─────────────────────┐
│  Previous   │─────▶│ Orientation │◀─────│ Context of learning:│
│ educational │      │ to studying │      │   - Curriculum      │
│ experience  │      │             │      │   - Teaching        │
└─────────────┘      └─────────────┘      │   - Assessment      │
                            │             └─────────────────────┘
                            ▼                    ╱
                     ┌─────────────┐            ╱
                     │ Perception  │◀──────────
                     │ of task     │
                     │ requirement │
                     └─────────────┘
                            │
                            ▼
                     ┌─────────────┐
                     │  Approach   │
                     └─────────────┘
                            │
                            ▼
                     ┌─────────────┐
                     │  Outcome    │
                     └─────────────┘
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Source: Barlow (1997, p. 60) adapted from Ramsden (1992, p.83)

By 'orientation to study' the writer refers to the approach an individual student decides to adopt. The context of learning, as indicated in the diagram, includes the design of the curriculum, how students are taught and the assessment methods employed. The writer asserted that there is interplay between all these and the perception of task requirements based upon which students decide their approach.

Students' Reactions to Active Learning Strategies

Active learning is a significant shift in the roles students traditionally used to assume during the classroom teaching learning process. Such shifts are often not enthusiastically accepted by tertiary level students (Felder and Brent, 1996). A study by Weimer, cited in Peirce (2002), identified reasons for students' lack of interest in (or even resisting) active learning approach. These are:

i. Learner-centered approaches are more work. When the teacher does not summarize the important points in the chapter, the students will have to read for themselves.

ii. Learner-centered approaches are more threatening. Students who lack confidence in themselves as learners become filled with anxiety at the prospect of becoming responsible for decisions that might be wrong. Students who are not used to questions with no single, authority-approved right answer are fearful of being wrong.

iii. Learner-centered approaches involve losses. Moving from one stage to another requires a loss of certainty and the comfort that certainty brings.

iv. Learner-centered approaches may be beyond students. Some students' lack of self-confidence or intellectual immaturity may prevent their accepting responsibility for their own learning.

v. Students procrastinate, seek easy options, and prefer extra credit points over deep learning.

A related challenge is that the requirements of active learning do not sometimes match the instructional culture students used to or the teaching-learning approach they are familiar with (Guangwei, 2002). For instance, students whose teachers have been telling them everything they needed to know from the first grade on do not necessarily appreciate having this support suddenly withdrawn. Some students view the approach as a threat or as some kind of game, and a few may become sullen or hostile when they find they have no choice about playing. Under such a situation teachers face the challenges of transforming "passive" students into autonomous learners and ensuring that students take responsibility for their own learning.

Regarding this, Woods, cited in Felder and Brent (1996), observes that students who are forced to take major responsibility for their own learning go through some or the entire steps shown below. Psychologists associate these steps with trauma and grief:

1. **Shock**: when students fail to believe that the given task is all with the teaching/learning procedure.
2. **Denial**: When the students believe that the teacher is not serious, they ignore the tasks given by the teacher.
3. **Strong emotion**: A stage at which students get emotionally charged, like deciding to drop the course.
4. **Resistance and withdrawal**: This is when the students decide to take all the risks of not doing what is required as part of the active learning – like choosing to face failure.
5. **Surrender and acceptance**: This occurs when the students decide to try though they see that the task is unexciting.
6. **Struggle and exploration**: Is a stage at which students decide to try what is said /required as they see the thing worked for others.
7. **Return of confidence**: Is a stage at which students start to feel the enjoyment of doing what is required and start to realize that it can work in their hands.

8. **Integration and success**. This is a stage when students realize the success and start to question why they were disturbed with it earlier or why they saw that it was not something that can be tried out.

Students do not equally experience this grieving situation. Referring to this, Felder and Brent (1996, p. 3) write:

> Just as some people have an easier time than others in getting through the grieving process, some students may immediately take to whichever student-centered instructional method you're using and short-circuit many of the eight steps, while others may have difficulty getting past the negativity of Steps 3 and 4.

When they experience such grieving situations (as in stages 3 and 4) sometimes students tend to resist. When that happens, it likely blocks the normal functioning of the class as a system. The expression of such resistance is then another point of concern. Escandon (2004) identified seven forms of (expression of) pedagogical/curricular resistance. These are:

1. ***Bodily dispositions:*** They either sit in the back of the classroom far from the front as soon as they enter the classroom or in a place far from other students to avoid interpersonal communication with peers. They pretend overworked (they tend to become sleepy and lose motivation), avoid eye contact with the instructor and look away if they think they are to be called on. Some also speak in an inaudible voice.
2. ***Absence:*** perhaps the most obvious positioning of bodies – as a way to express resistance – is to simply not show up for class.
3. ***Not responding and pretending not to know:*** unresponsiveness-they tend to ignore the teacher or they pretend that they do not understand the question or instructions.
4. ***Neglect and forgetfulness:*** studied neglect and overt inattentiveness, forgetting materials (such as pens, notebooks, textbooks, and

dictionaries); forgetting important personal belongings like not wearing glasses. Some also forget assignment deadlines and evaluation days.

5. ***Indifference:*** sleeping in class, daydreaming, not taking notes and not completing assignments.
6. ***Inaccuracy:*** disregarding lecture points, failing exams and handing in appalling term papers and assignments.
7. ***Rudeness:*** incessantly arriving late for class, making noise, chattering, snickering at lecturers, ignoring simple requests or frequent exits from class (including long and non authorized exits).

Such resistances discourage teachers from making use of active learning methods. It is also equally debilitating for students who are early adaptors and who strive to benefit from whatever goes on in the classrooms.

Statement of the Problem

The education system in our country has long been condemned for being teacher dominated and low learner participation in their own learning (Meaza, 1966; MoE, 1972; TGE, 1994). Addressing this has been one of the core areas of emphasis in the recent educational reform of the country. For instance, the 1994 Education and Training Policy underlined "the problem solving" method as the focal approach to teaching and learning in schools. To execute this pedagogical reform, efforts have been made in terms of training teachers and improving the supply of materials and equipments at all levels of the educational ladder. In spite of the efforts and resources expended, numerous Ethiopian teachers and learners do not seem to have gone through any fundamental changes in their utilization of active learning methods. This has been revealed from studies conducted on the situation of active learning in Ethiopian schools/colleges (e.g. Mintesnot, 2006; Tibebu, 2006; Hana, 2007). These studies generally indicated that active learning method has not received widespread support. A host of constraints that have hampered the adoption of active learning methods have been identifying. These constraints include lack of necessary resources, large

class size, limited instructional time ill-prepared textbooks, teachers' lack of language proficiency, and examination pressure.

Most of the studies referred to above concerned themselves with finding out if teachers applied active learning strategies, and if they did, to determine the availability of necessary conditions (e.g. teaching materials and equipments) for the implementation of active learning strategies in the research sits considered in their studies. The studies did not consider learner related factors as an important issue in the context of their discussion of active learning.

A study by Firdissa (2005) assessed students' preferences of methods of teaching in the context of higher education (Addis Ababa University). Yet, this study was also based on data secured using questionnaire distributed to students. It was not based on observation of what actually goes on in the classroom. The present study basically assessed how students actually react to active learning methods and the reasons for their reactions in two classrooms of Addis Ababa University.

Based on Barlow's 1997 orientation, (see figure 1) the study was designed to achieve the following major objectives:
  i.   to identify students' reaction to active learning methods; and
  ii. to sort out if there is any association between students' reaction to active learning and exam type.

Method of the Study

The data used for the study was largely collected in a semester I taught two education courses (*Curriculum Studies* (TECS 211) to mathematics education students and *General Methods of Teaching* (TECS 212) to Business Education students in the extension program in 2005/06 academic year. The main data for the study was collected through my observation of students' reaction to the changes in the teaching methodology during the courses. In other words, Action Research approach was the technique used

for data collection. This process is related to Barlow's (1997) description of arranging/changing the context of learning (curriculum, teaching and assessment), as one major determinant of students' perception of task requirements or expectation (see figure 1). Interview and personal texts have also been used to augment the data collected using observation.

The following steps were involved in the data collection process:

1) Dividing the courses (TECS 211 & TECS 212) into 36 lessons based on the units and sub-units in the course outlines, where each lesson lasted for 50 minutes.

2) Identifying key methods to be applied in handling each of the lessons based on the objectives of each unit and sub-unit. This has been done with due awareness of the fact that there is a need and a possibility as well as an advantage to apply multiple methods to handle a course unit or sub-unit. The methods had a proper mix of lecture and active learning methods (small group discussion, debate and seminar).

3) Discussing with the students at the beginning of the courses specific methods intended to be used during the courses.

4) Informing the students about what the next day's task would be so that they could come to classroom with some psychological preparations. I always used to come to class earlier to get time to observe their reactions from the very beginning of the class. The contents of observation had been shaped by what Escandon (2004) identified as *the seven forms of (expression of) pedagogical/curricular resistance*.

5) The course semester was divided into two: before and after the mid-term examination. In both courses 18 lessons were covered before the mid term exam. Accordingly, in both courses four focused observations of students' reactions were made. This means that four classroom observations were made in both courses before and after the mid-term examination. That means, about 22.22% of the lessons were observed and noted in each course.

6) The mid-term examination was carefully prepared so that half of the test items could be answered through reasoning and critical thinking, and the other half, through sheer memory of facts delivered in the form of notes (lectures). The portions covered in the students' presentations, small group discussions and debates were also included in the test. Input regarding the content validity of both the mid-term and the final, examination has been collected from two staff members who taught the same courses.

7) Discussion of exam items: the mid-term exam was corrected before the beginning of the 2nd half of the session. Discussion of the exam items was also held with students. This was done to sensitize the students on the fact that examination items were fairly from all the portions, irrespective of the methods used to handle the portions.

8) Interview was held with students selected from among the course participants. Participants in the interview were selected based on the differences observed in the reaction of the students to the teaching methods. This was possible after the third observation when three groups appeared: the active participants, the note takers and the disinterested. Interviewees were selected from each of these groups. Three students were interviewed from each group a few days before the end of the semester. The issues raised in the interview focused on how the students viewed active learning tasks and the importance they attached to different active learning strategies. The interview was conducted by some one who the interviewees thought, had no relation with me. The interviewer obtained the consent of the students before interviewing them. I did not want to conduct the interview myself to widen the interviewees' opportunities to react to the teaching methods and tasks used during lessons.

9) Personal text: one day before the end of the semester, the students were asked to write their overall opinions on the methods of teaching applied. This has been done to secure information on the meaning the learners developed (constructed) from the experiences they had during the semester. The students' opinions or personal texts were based on five pre-identified guiding questions.

10) Final examination: the items included in the exam and the areas focused on were similar to the mid-term exam. This facilitated the comparison made between the results of the exam.

11) Student' assessment was based on the two tests (the mid-semester test and final examination). This was done because I thought that if presentations and other classroom activities were marked (valued) students might appear to develop contrived interest to win the marks.

Results and Discussions

Results

a) Students' Reactions before the Mid-term Examination

As mentioned earlier in this report, a total of 8 observations were carried out before the mid-term examination (4 on active learning and another 4 on more teacher dominated method). A brief outline of what has been noted is presented here.

i. Observations on TECS 211 lessons
  Observation 1.1
   Lesson No: *3*
   Lesson Topic: *The Purpose of Education*
   Dominant Teaching method: *Lecture*

Students rushed in to get space on or near the first row. Two students were absent and no one came late. Nearly all students attentively followed the lecture and took notes. It seemed that they wanted to note every word spoken by me. Three students asked questions from the lecture given. The remaining students carefully followed the responses to the questions. However, none of the students attempted to answer the question raised by the students. The questions asked by the students were simple ones which sought clarification from me on the contents presented. They were not meant to take a different perspective or to initiate further thinking. The communication was one directional – from the teacher to the students.

Observation 1.2
Lesson No: *5*
Lesson Topic: *Curriculum - Meaning and Nature*
Dominant Teaching Method: *Small group discussion*

There were six absentees and four students came late by about 4-6 minutes. There were some students (2-3 from each group) who seemed business minded. They were busy giving ideas, asking questions, and trying to initiate discussion. These students generally seemed interested in the discussion. They were active contributors to the smooth functioning of the discussion groups. All the group reporters were among those active ones. There were many more students who were observed writing whatever was raised or said on the topic during the group discussion. Their contribution to the discussion was very much limited. There were few who did nothing worthwhile during the discussion. They were more like spectators than partakers. Examination of the group reports revealed that there were no contradictory results or differences in views. The group members seemed to have agreed on all major points of the discussion. An attempt has been made to conduct some kind of whole class discussion after the groups presented/reported the findings of their groups' discussion. Unfortunately, it was not as effective as expected for only few students tried to participate by giving answers and asking questions. To be precise, only two questions were asked and three students tried to answer the questions. Most students focused more on taking notes than contributing to the whole-class discussion. After the session ended, a few students followed me and asked if there were any note on the topics covered during the session so that they could photocopy them.

Observation 1.3
Lesson No: 9
Lesson Topics: *Curriculum Development Models – the Objective Model*
Dominant Teaching Method: *Seminar*

Students had no much concern about sitting position in the class. They sat wherever they got seat. Many students seemed to prefer the back seats which I labelled as the 'spectators' seats. Five students were absent and three came late (5 – 10 minutes after the class started). There were key questions to be answered from the presentation. All students copied down the questions. While the presentation was going on, the majority of the students seemed to be listening; only few were found writing notes. There were a few students who looked out through the windows. These students were also observed looking at their watches, talking, to someone beside them and showing similar acts which can be taken as signs of inattention or disinterest or resistance. After the group presentation was over, the class was asked to answer the key questions. Even though the key questions were addressed through the group presentations, only seven students from a class of 47 could raise their hands to answer what they learned about the questions. Apart from this, only four students asked questions and the questions raised were not as such very important. Two students asked for an excuse and left the classroom because they were sick. Before I left the class a student raised his hand and asked for a handout on the topic of the lesson for the day.

Observation 1.4
Lesson No: 15
Lesson Topic: *Formulation of Educational Aims*
Dominant Teaching method: *Lecture*

Two students were absent. No one came late. Students were eager to take the first row or near the front row except very few students who usually sit at the back. Almost all students were busy taking notes. They tried their level best to note every point spoken by me. The direction of communication seemed from me to the students (i.e., unidirectional). No question was asked from the students. Only four students attempted my occasional questions. The remaining ones readily expected to note the next word to be spoken, just note!

From the four observations it was possible to note that the students seemed most attentive (active) during the lecture time. This has been noted from the reduced number of absentees and late comers as well as the competition to get the proper seat not to miss points from the lecture. Almost all students were 'active' note takers during the lecture; whereas a significant proportion of the group members were not "with the group" during the group discussions. The students seemed to give less value to what they would hear from their classmates as compared to the words of the teacher. Only very few students seemed to have used their classmates' presentations as a learning opportunity. This has been noted from the reduced number of note takers during the small group presentations. The fact that students finally repeatedly asked for notes to be photocopied indicates that the students paid more emphasis to taking *organized* notes to be read for final examination.

ii. Observations on TECS 212 lessons
Observation 1.5
Lesson No: 2
Lesson Topic: *Characteristics of a Profession*
Dominant Teaching Method: *Small group discussion*

There was no hustle to take the front seat. For many of the students things were very calm. During the session three students were absent from class and five came 5 - 10 minutes late after the class started. During the first five minutes the groups seemed confused about what to do, though they were given general orientation. Therefore, I had to go around as quickly as possible to help the discussion start moving. There were students who did not participate and who sat like someone who is invited to 'passively observe.' As the discussion progressed, a sudden laughter was heard from one group which may be taken as a sign of digressed joke. It seemed a digressed joke because two students who did not as such take part in the discussion seemed to be at the core of the joke. Almost all the group members looked at them when they laughed. A student, who himself was not an active participant, was seen talking to a student from a different group that discussed a different issue. This student was not expected to do so because such acts disturb the other group. There were students who were active contributors to each group, there were also active listeners and note takers. As noted above, there were the 'spectators'. Even after the group discussion started, some students called on me and asked questions in search of answers to the questions they were supposed to discuss.

Observation 1.6
Lesson No: 6
Lesson topics: *Lecture – Teacher as Authority vs Teacher as Facilitator*
Dominant Teaching Method: *Debate*

Six students were absent from class, and four students came about five to seven minutes late. It was possible to note that the students had the interest to become a victor over the opponent group. On the other hand, effort to catch the substance of the session seemed missing. This was noted in the participations they had in the follow up whole-class discussion. Only a few students were able to display that they had noted the key issues in teachers' varying roles, the assumptions behind such varied roles and its impact on students' independence. Therefore, it appeared that there was more focus on winning the opponent than on the substance of the session. Before the end of the session one student went out complaining that he had a problem with his stomach. Two students were found reading some other materials which were not related to the subject of the session. During the debate some students happened to show the usual signs of disinterest like sleeping on the arm-chair, looking at their watch, looking outside through the windows, etc. Immediately at the end of the debate one student raised his hand and jokingly asked me "who will handover the medal to the winners?" This may be taken as evidence of the student's lack of interest in the lesson.

Observation 1.7
Lesson No: 9
Lesson Topic: *Discussion as a method of teaching*
Dominant Teaching method: *Lecture*

Most of the students rushed in to take the first row in the classroom. Only one student was absent and no one came late. All students concentrated on taking note of whatever was spoken, as usual. Two students asked questions immediately after I finished a sub-topic. The questions were only to get clarification on what had been presented. The two questions were not thought-provoking when seen in terms of the objectives of the lesson. Three students volunteered to answer my questions during the lesson. No one wanted to attempt to answer questions asked by fellow classmates, though I gave them the chance.

Observation 1.8
Lesson No: *15*
Lesson Topics: *Teaching Strategies Appropriate for Large Groups*
Dominant Teaching Method: *Lecture*

Two students were absent and no one came late. Most of the students rushed in to take the first row in the classroom. Everybody was striving to take note, during the session. It was a very silent class where only my voice was heard. No one volunteered to answer the few questions I asked. Therefore, I had to answer my own questions, which were also points of note for the students. Towards the end, a student asked a clarification question. The question was "why don't we reduce the number of students per class instead of trying to fit their number our methods?" Though I re-directed the question to the class, no one tried to give an answer.

Once again looking at these four observations it was possible to note that the students were very "active" (at least in taking notes) during the lecture or teacher's presentation sessions as compared to the sessions that were designed to make them active learners. The number of late comers, absentees and those who requested permission to leave the class is less on days allocated for lecture. The observation in this course (TECS 212) seems generally consistent with what has been observed in the other course (TECS 211).

b) The Mid-term Examinations
The mid-term examination contained 15 items that were needed to test the students' ability to remember learned facts (knowledge questions). Another 15 items in the examination were designed to test the students' reasoning abilities. The mid-term examination papers were corrected before the beginning of the second half of the lesson session. When the marked papers were returned, the classes were made to discuss the exam questions. This was done to assist the students to become aware of the fact that the items were drawn from all the lessons covered during the half term. The result of the two groups of items was separately recorded. From the result it was possible to note that the students scored higher on the factual (knowledge) items.

c) Students' Reactions after the Mid-term Examination
As noted in the section on 'methods of the study,' eight observations were made after the mid-term examination (4 on active learning and another 4 on more teacher dominated methods). The observations are presented as follows.

iii. Observations on TECS 211 lessons
Observation 2.1
Lesson No: *20*
Lesson Topic: *Learning Experience*
Dominant Teaching Method: *Lecture*

Absence was minimal: only one student was absent and another one came late 3 minutes after class started. Students rushed in to take the front rows, as usual. It was an attentive class where everybody strived to take note of whatever was spoken by me. It was a disciplined class where the communication was one directional - from me to the students. However, a different thing observed this time was that the number of questions asked increased. Six students raised their hands when the class was given the opportunity to ask question. Five students also showed some interest to answer the questions raised by students.

Observation 2.2
Lesson No: 24
Lesson topic: *Implementation of the Curriculum - Challenges*
Dominant teaching Method: *Small group discussion*

Students seemed to have bothered not much about where to sit. Absence was not different from the other days (lecture days) - one student was absent and no one came late. The first two groups (the active participant and the note takers) behaviour showed not much change. On the other hand, some of the students who tended to be disinterested were seen trying to take some notes. For instance, two students who usually tended to joke or make others laugh during group discussions were among the ones that seemed to have changed. The discussion seemed better organized and orderly this time. No one complained of feeling sick or other problems to go out (or no one requested for permission). Nevertheless, there were a number of students in the groups who sat as spectators (non-participants).

Observation 2.3
Lesson No: 28
Lesson Topic: *Evaluation of Curriculum - What and Why*
Dominant Teaching Method: *Seminar*

The students did not as such pay attention to where to sit in class. Four students were absent and four came late. Not much difference was noted regarding attention to the classmates' presentations. Some students who were usually inattentive to such activities were still not so attentive. However, a difference was noted during the whole-class discussions of the key questions identified earlier whereby the number of volunteer students increased (about 11 hands were raised to answer the first key question). It was also noted that almost all students were found noting the answers given to the key questions.

Observation 2.4
Lesson No: 34
Lesson Topic: *The Modern Education Curriculum - the American period*
Dominant Teaching Method: *Lecture*

Students, as it is usually the case with lecture sessions, rushed in to take the front seats. The number of absentees was minimal - only two students were absent and no one came late. Focus on note taking was as usual. The number of volunteers to answer questions increased. For instance, seven student raised hand to answer the first question I asked.. Three students asked questions and some six students raised their hands to answer the questions. Nevertheless, the nature of the questions asked showed no major change – they were information focused and were not thought provoking or they did not need much thinking to frame them.

As can be noted, some improvements were observed in terms of the attention the students paid to class interaction – reduced number of absentees and late comers, attending to questions by fellow students, volunteering to respond to questions, asking questions, etc. Improvement was also seen on some students who were totally disinterested in active learning activities. Yet the students seemed to lack confidence in their fellow classmates because their reactions to seminar did not show much improvement from what it had been before the mid-term examination.

iv. Observations on TECS 212 lessons

Observation 2.5
Lesson No: 20
Lesson Topic: *Instructional Planning – definition and importance*
Dominant Teaching method: *Lecture*

Similar responses as that observed in earlier lecture-based lessons were noted in terms of seat preference, minimal absence (only one student did not show up) and concern over note taking. However, improvement was seen in terms of i) the number of students who volunteered to respond to questions. Ten students raised their hands to answer questions posed by me while the lecture was going on and ii) the number of students who asked clarification questions also showed improvement; about six students asked questions that required further explanation from me. Three students showed interest to answer their classmates' questions.

Observation 2.6
Lesson No: 22
Lesson Topic: *Instructional Planning – types and steps*
Dominant teaching method: *Lecture*

Almost similar to the situation noted earlier for the lecture session such as preference to sit towards the front row, no absentee, no late comer, and focus on note taking was seen. The improvements noted this time included i) increased number of questions from the students. The good thing is that two of the questions that required explanations from me were asked by students labelled as disinterested for participatory learning. ii) The number of volunteers to answer questions raised by the students and by myself increased. For instance, nine students raised hands to answer the first question. The nature of the questions raised by the students also showed some improvement where three of the questions involved relatively higher order thinking.

Observation 2.7
Lesson No: 26
Lesson Topic: *Utilization of Instructional Materials – the Ethiopian situation*
Dominant Teaching method: *Small Group Discussion*

As usual, the group discussions started after I gave a brief orientation on what each group is expected to do. Interesting enough, this time one of the eight groups unusually elected a student I knew as disinterested and resistant to active learning methods to serve as a reporter. The student was very serious about his activities and in noting the outputs of the group discussion to be reported to the whole class. Apart from this specific observation, it was generally noted that the group discussion was more attractive and seemed fruitful. Nevertheless, there were the usual note takers, the most active participants and the disinterested or the non-participants in the group.

Observation 2.8
Lesson No: 32
Lesson Topic: *The Recent Concept of Discipline*
Dominant Teaching Method: *Seminar*

As it has been the case with seminar sessions, the class started after I wrote the key questions for the whole-class discussion to take place after the presentation by the group. During the group's presentation, except that there were some students other than the usual group members who attempted to take notes, there was no much difference from the seminar sessions that took place earlier in terms of students' reaction. About three students asked questions. Only two students volunteered to answer questions asked by their classmates (the presenters). About 12 students volunteered to attempt the key question identified to guide the class activities, though none of them cited the presenters in their responses. Those students who asked questions said, "My question goes more to our instructor…"when they asked the questions. Three students followed me and asked me for note or if it was necessary to have a Xerox copy of the papers presented by the presenters (the assigned class mates).

Similar improvement as in the case of the other course (TECS 211) was noted after the mid-term examination in terms of students' attendance and participation in classroom activities (through asking and answering questions as well as contributing to small group tasks). However, the usual focus on note taking and dependence on the teacher has been observed. As evidenced from the seminar sessions, students were less likely to trust the ideas of fellow presenters or students.

d) Result of the Interview

Students drawn from the three groups (the active participants, the note takers and the disinterested) were asked 'what they felt when active learning methods were used' have replied as follows:

> *I personally have doubt if at all what students present can be relied upon. That is why I am not interested to attend to students' presentations. The other is that I do not understand why we sit together to discuss issues which the instructor himself can easily lecture in a few minutes. This should not be like our workplace where we daily waste time to discuss and decide things in the form of meetings. This is a classroom where we have the teacher to teach us, I am sorry if you are his friend or relative (*student **E** from BuEd group).

> *We were simply shouting. Surely we have learned nothing because he was occasionally lecturing. He also used to ask some questions which he says were key questions. But, for me nearly half of the time was wasted on group discussions and like activities. He could have covered more content had he focused more on explaining things for us rather than bothering us with his group discussion and like things. (*Student **H** from the Maths group).

From the points stressed by these students one can note that they were disinterested in or even devalued active-interactive learning. They also showed lack of confidence in their fellow classmates and tended to depend on the teacher as the source of knowledge; an expert they wanted to hear from.

Here are also other responses related to how the students viewed the use of active learning/student-centred methods:

> *We are coming after so many troubles. You know the problem of transport (I mean taxi). We pass the whole day busily occupied by our office routines. We come here to get something from him that would help us on the examination. On group discussion or presentation days most of the time is wasted by attending to fellow students. On such days the instructor gives few points often at the beginning and towards the end of the sessions. For me that is not enough to prepare us for the examination (*student **D** from the BuEd group).

> *In fact we have learned some thing. That is very good. But, I do not know what to study for the examination on some of the topics covered in class because the teacher neither gave us a note nor some kind of textbook or handout from which we can get our note. For instance, I tried to take some note from the discussions and the answers to the questions. But it is still not well organized. It needs me to read other references which may help me further. That will be time consuming. Even if I get relevant reference I am not sure whether that comes on examination (*student **A** from the maths group).

These students, though tended to give some value for the active learning tasks, seemed to have focused on getting thick note which they were to read for the examination. This may imply that the whole focus of these students seemed to be on passing examination as a way towards securing their diploma. They feel that the active learning used is not enough to prepare them for the examination.

There were other group of respondents who had more desirable views on the application of active learning methods. Consider the following:

*It is good to discuss or learn to present things because it makes us to think much more than studying for examination. You also develop your language skills in such activities. However, it is better if the teacher gives handouts because we need some notes to be read besides the brief points we get from him on those issues that are discussed among students or presented by fellow classmates (*student *F* from the BuEd group).

I feel I learned quite a lot even though it is difficult for me to quantify how much I learned. The question is "don't we need to study for examination on those parts of the lesson covered through group discussion or what is called seminar?" For the mid-term examination there were many questions that were drawn from the classroom activities. I expect the same for the final. For me, though useful, this course took much more of my time as compared to the other courses which were covered by simple lecture (student **C** from the Maths group)

These two students recognized the instructional values and relevance of the active learning approaches. However, they were equally concerned about note to be read for examination and the time demanding nature of the approach.

It was possible to learn from the interview that respondents from the three groups tended to have different concerns though they also happened to share some points. For instance, not all were concerned with examination or about having notes to be read for examination. They also tended to be concerned with time pressure – which may be experienced as they engaged in active learning strategies. Nevertheless, the three groups were different because the ones labelled the disinterested (the first two) tended to totally reject the educational value of classroom interactions among students and considered the times as sheer wastage. A lack of confidence in fellow students' ability to contribute something worthwhile to the class was also noted. The second group (the note takers, i.e. the middle two) tended to

principally focus on having organized note to be read for examination. Therefore, this group seemed to have in their mind a type of examination to be passed through sheer memorization of facts. The third group (the active participants) were those who seemed to have double concerns: learning as much as possible from whatever goes on in the classroom while at the sometime they were also concerned about examination. This group realized the instructional values of active learning strategies beyond preparing them for examinations. It is not difficult to relate these concerns of the students to the behaviours observed from the different groups in the classrooms.

e) Result of the Personal Texts

At the end of the semester the students were requested to give their opinion (in writing) on the overall course work with a focus on the teaching/learning strategies. Each student was given five questions that required their opinion. The opinion was confidential, this means, the text had no clear identification of the respondents. The key questions were:

i. How do you evaluate the teaching-learning process in general?
ii. Do you think you got enough of what you needed from the course?
iii. Was there any change in your involvement in the class activities since the mid-term examination?
iv. Is there anything you would regret about what you could have got from the course?
v. If there is anything to be improved? What do you suggest as a strategy for improvement?

Here are brief outlines of the **most repeated** responses to each of these questions:

i. How do you evaluate the teaching-learning process in general?
   ▪ *It was good, but tiresome.*
   ▪ *I enjoyed it and learned quite a lot.*
   ▪ *It made us quite busy but left us with very few to be read.*
   ▪ *Part of the time was wasted.*
   ▪ *The teacher was relaxed and we were having a tight schedule.*

- *Partly good, partly bad. Particularly the so called group discussion and presentation were not good for they made us quite busy for a three – credit course.*

From these responses it is possible to note that the respondents differed in their views of the teaching-learning process. Some students emphasized lack of notes; others were worried about the extent to which they were made busy during the course; and still others showed concern related to their lack of confidence in their follow classmates' contribution to the teaching-learning process.

ii. Do you think you have got enough of what you needed from the course?
- *I feel I have gotten more than enough from the course because I could go further to read additional references,*
- *I think I learned to be independent from the teacher as he gave us all the opportunity to think our own way. However, I still bother about the examination.*
- *I got some but it could have been possible to learn more had the teacher focused more on organized lecture,*
- *I am not satisfied with what I got from this course because my note book which I could use for future reference is incomplete.*
- *I learned from the few lectures given by the teacher. My question is "was it not possible to give us such lectures on all the other topics instead of bothering us with assignments, presentations and group discussions?"*

The respondents' opinions varied on this item too. Where there are few students who valued the approaches used in the course both in terms of the content covered and the learning/thinking skills acquired the majority seemed to be less satisfied with some of the approaches used. The majority were worried about the time wasted by those participatory methods and felt a missed opportunity for the teachers' failure to lecture. Therefore, the majority of the students insisted that they could have learned more if the course had followed the usual formal lecture format.

iii. Was there any change in your involvement in the class activities since the mid-term examination?

- *Yes, because some of the questions included in the mid-term examination were drawn from what had been discussed during such activities.*
- *No, because it was sheer waste of time.*

Except some nine students, almost all students from the two classes indicated that the attention they paid to the classroom activities increased after the mid-term examination. The nine students who reported no change indicated that the activities were totally waste of time. The fact that most of the students reported change in their attention to active learning tasks indicates that the type of questions we ask dictates the kind of learning approach our students adapt. On the other hand we have to also note that there could be some students on whom the traumatic experience is so intense that they fail to adapt to the expectations.

Is there any thing you would regret regarding what you could have gotten from the course offered?

- *Yes, I could have been more satisfied had the instructor at least given as notes or some kind of handout on those portions handled using participatory methods,*
- *Yes, what he called discussions and debates are useless for us. We could have benefited if he lectured us like any other teacher. I could not understand why he wanted to make it special.*

These responses have been given by almost all students. In general, the students' feedback on the personal texts show a clear relation to the ideas expressed in the interview and the behaviours observed in class: more resistance to active learning with a major concern over examination and the time consuming nature of the participatory activities. More of the improvements noted after the mid-term examinations were the result of a concern over passing examinations than they were the result of the students' accepting of the inherent value of the active learning activities used during lesson sessions.

f) Final Examinations

The final examinations contained items which are comparable to the mid-term examination items in terms of number and kind of questions. There were memory items and there were also items that required reasoning abilities. The examinations were conducted three days after the classes ended. The result has been compared against the mid-term examinations to see if there was any improvement in students' overall performances as well as in those items that involved reasoning skills (see Table 1).

Table 1: Paired Comparison of Students' Performances on Mid-term and Final Examinations

Group	Exam results compared	N	Mean	SD	t
Business Education	Mid – memory items (part I)	53	15.53	2.14	
	Mid – reasoning items (Part II)	53	10.94	2.94	10.67*
	Final – memory items (Part I)	53	17.98	2.71	
	Final – reasoning items (part II)	53	15.49	3.87	5.25*
	Mid – Memory items (Part I)	53	15.53	2.14	
	Final – memory items (Part I)	53	17.98	2.71	7.06*
	Mid – reasoning items (Part II)	53	10.94	2.94	
	Final – reasoning items (Part II)	53	15.49	3.89	11.63*
Mathematics Education	Mid – memory items (part I)	47	18.21	2.92	
	Mid – reasoning items (part II)	47	11.39	2.11	18.39*
	Final – memory items (part I)	47	20.34	2.79	
	Final – reasoning items (part II)	47	16.42	2.19	17.56*
	Mid – Memory items (part I)	47	18.21	2.92	
	Final – memory items (part I)	47	20.33	2.79	7.34*
	Mid – reasoning items (part II)	47	11.4	2.11	
	Final – reasoning items (part II)	47	16.42	2.19	17.97*

$P < 0.01$

A look at the mid-term and final examination results seems to indicate that the students' performance significantly increased during the final examination on both memory and reasoning tests. In terms of item types, the students generally performed less in the reasoning test compared to their performance in the memory questions in both the mid-term and final examinations. The differences were statistically significant for all mean

comparisons. The students generally improved more in parts of the examination that involved reasoning ability when the improvement over the mid-term result is separately considered for memory and reasoning items.

Discussion

From the data presented in the preceding sub-sections it was generally learned that most of the students were not supportive of active learning strategies. This has consistently been noted from classroom observations, the interviews and the personal texts. The students' reactions to the active learning strategies were also not the same. It was possible to relate their reactions to the various stages of traumatic experiences as described by Woods (cited in Felder and Brent, 1996). Firstly, there were students whose reaction happened to match the first stage – *shock*. These included students who followed me after class to ask if I could give them any note or handout on the portions covered through the various active learning strategies. They tended to think that the activities done in the active learning tasks were all in the particular portions of the course work. Such students used to devote most of their time to noting everything spoken – whether in lecture, small group discussion, seminar or debates. Their focus seemed to be much more on having something to be noted so that it is possible for them to prepare for examination. Secondly, there were also students who ignore the whole task and engage in some other duties. The situation of such students seemed to match what happens at the *resistance* and *withdrawal* stage of the trauma. Such students were found to be the most resistant during classroom activities. They displayed some of the symptoms of adverse reactions towards active learning, as described by Escandon (2004). Among these are abstaining from coming to class, late coming, looking out through the windows, looking at their watches (as sign of boredom), sitting improperly, not asking or responding to questions and joking in the midst of discussions. They appeared determined to pay every price required for ill-attention. Thirdly, there were also students who seemed to be at the stage of "surrender and acceptance" along the continuum of traumatic experiences described by Escandon (2004). They try whatever is required of them though

they consistently worried about the time consuming nature of the tasks and their failure to get notes to be studied for examination. This group of students was seen trying to adapt the active learning approaches, though members of such a group were relatively few.

Irrespective of such differences, almost all the students tended to pay more attention to examination, with the assumption that there would be an examination on the parts drawn from a note given by a teacher or read from teacher-specified materials or handouts. The learners seemed to consider learning as largely what they get from the teacher. Such assumption values memorization and knowledge-centred paper-and-pencil tests over deep learning which active learning strategies promote. A look at some research works on Ethiopian education (e.g., Meaza, 1966; MoE, 1972; Firdissa, 2005; Tibebu, 2006; and Mintesinot, 2006), in one way or the other, reveals that this has been the conception of teaching/learning and students' assessment that seemed to have dominated educational practice in Ethiopia. I may say it is indicative of the instructional culture prevailing in the country. Therefore, it is not surprising that the students hold such conception of teaching/learning as well as evaluation. Where the students are used to mechanical learning throughout their schooling years, it appears obvious that they get frustrated when they are exposed to a system of instruction that demands intelligent and independent learning. The students may lack the skill to engage in activities that require thinking on the spot. In the traditional (lecture) method much of critical thinking is postponed (if at all it is involved) for some future time. They feel that they lack enough skills with the instructional requirements. Because of this they lose confidence in themselves. Under such situation they may not allow themselves to stay in the territory of insecurity. This creates tension which is most probably expressed in some kind of resistance. Therefore, student resistance, besides other factors already identified to be the possible curbs to the effective application of active learning in Ethiopian classrooms, needs to be considered.

Some improvements have been noted in the students' reactions to active learning tasks after the mid-term examinations. This could most probably be due to the fact that students had time to review the sources of the mid-term exam items and the information needed to attempt. Through such reviews, hopefully, students could come to realize that portions covered through active learning methods were equally important as those covered using lectures. This could contribute to the increased attention many students gave to active learning tasks after the mid-term examination. If this conclusion is acceptable, it indicates that the students are still examination – oriented. In other words, the reason behind the increased attention of the students to active learning tasks after the mid-term exam could be the need to pass the next exam, rather than the understanding of the inherent value that actively engaging in one's learning brings.

Examination generally communicates to the learner what is expected to successfully accomplish the educational program. Hence, in Barlow's (1997) synthesis of determinants of learning approaches students adapt, we can see the essential role of examinations. At the centre of the various characteristics of examination is the type of items encompassed in school examination. Does the exam expect/require students to just remember facts covered in the course work or are students required to deeply engage with reasoning and critical thinking? This in turn has clear implication for the type of learning approach students adapt in preparing for the exam. The fact that in the present study students lagged behind in parts of the exam that involved reasoning items (higher order thinking) may indicate that the students are not used to such items. Or it might show that the earlier academic requirements/expectations did not as such involve students in this type of mental activity. Improvement has been seen in students' performances in the final examination. This indirectly indicates that students were striving to adapt the active learning methods. This observation matches the theoretical framework in the sense that, as noted above, where exams set expectations (or the task requirements), the students are likely to adapt an appropriate approach. When this happens it can be said that students' performance on exams that involve reasoning skills might improve.

Implications

The study reported here is limited in scope. It is an action research in approach and, as a result, generalization to larger scale appears difficult. However, the following implications can be deduced for classroom action and research in the area.

i)   It is said that students depend on the teacher and what the teacher does determines the kind of students' reactions.Yet, it is also important to note that looking at every thing from the vantage point of the teacher alone is rather misdirected and misleading. The present study demonstrated that we need to include students in the decision we make to determine the teaching/learning models to be adopted.

ii) There is no major alternative to practicing active learning to change the instructional culture at Addis Ababa University. It is possible to help students learn about active learning by learning through it.

iii) Parallel to this, it is commendable for teachers to discuss with students (may be in the form of individual or group consultation) the way the students can learn how to learn. Effort has to be made to reduce students' dependency on teachers and to make them rely on themselves.

iv) Desired changes in our instructional culture cannot come about by the efforts of a single teacher. There is a need for concerted effort by all teachers. When that happens students may start to think that engaging in active learning is a normal part of learning at the university.

v)   It is also reasonable to consider whether university instructors have the competence (knowledge, desirable attitudes and skills) to make use of active learning methods in their classrooms. Persistent commitment of a competent instructor is a useful tool to overcome students' resistance to active learning. This implies that university instructors have to be given training in how to make active learning the centre of their classroom approaches. This needs to be done with due consideration of felt needs, and not the same-medicine-for-all type approach.

vi) The present study seems to imply that there is a need to conduct further and large-scale research in the area of students' reactions to active learning and the determinants of learning approaches students adapt in the context of higher education in Ethiopia.

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