

## Improving Student Class Room Participation the Case of Second Year Mathematics Students

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### ABSTRACT

Numerous studies have been conducted on engaging students in classroom participation. The contribution of the classroom participation for successful and effective teaching learning process is not questionable point. However, the scholarly studied approaches or learning methods that enhance classroom participation is largely missing point in this regard. It is obvious that all learning methods do not have equal effect on the level of classroom participation. This research is done in order to address this problem or to identify effective learning methods that can enhance classroom participation. Moreover, the level of classroom participation in the Bonga University is too low. This is due to different factors that hinder student's participation. Based on the study the factors that affecting the participation of students in the classroom were lack of active learning methods, seating arrangement, lack of incentive method, silence and shyness, lack of confidence, socio-cultural background, language barriers, instructor's approach and related factors. Thus, the interventions strategy packages that were taken to tackle the problems were checking seating arrangement, adopting incentive method, practicing clear and friendly communication, establishing positive relationships with students, focusing on student's need, providing These findings illustrate that all stakeholders need to implement active learning methods by minimizing traditional long lecturing trend so that classroom participation can be effective and satisfactory. In general, the research indicates that there is a great change in the behavior of students to actively participate in the classroom.

### 1. Introduction

Education plays a key role for the development of a country. Our country, Ethiopia is now taking different measurements to use education for development. Among the mechanisms to list a few are; expanding the universities up to 45 nationwide and also different university colleges and technical vocational schools, increase the intake capacities of universities 120,000 and above each year, creating a university-industry linkage, making the intake capacity of universities 70% for science and technology and 30% for social science which can support the country for its development in technology, and also introducing active learning methods in all Ethiopian Universities.

To attain quality education, the teaching learning process at all educational institutions should be supported by strong two-way communications (teacher to students or student's to students) meaning active participation had better observed during the whole course provision sessions (Bowell & Eison 1991; Major and Palmer, 2001). Active classroom participation has always been a critical factor in yielding positive learning outcomes for students and further developing their abilities. Participation allows students to build on their knowledge, demonstrate they have understood the curriculum, develop confidence, and apply theory. It teaches students to think critically (Garside, 1996) and engage in dialogue with their colleagues and professors by providing informed arguments based on information retained.

These skills are important for their progression throughout their education and in preparing them for their careers. Rocca (2010) stated that: The more they participate, the less memorization they do, and the more they engage in higher levels of thinking, including interpretation, analysis, and synthesis (Smith, 1977). Students who participate also show improvement in their communication skills (Berdine, 1986; Dancer & Kamvounias, 2005), group interactions (Armstrong and Boud, 1983), and functioning in a democratic society (Girgin &

Stevens, 2005). Even if our government takes different measures to achieve a better goal by the education system; there are different challenges that the education in the universities face. Among them the basic one is our students are not active participant in the classroom. Thus, there is a strong need to create active and responsible citizens that could participate in achieving core objectives. Here, because of this we need to improve the participation of students in the classroom by creating different mechanisms. Therefore, this research is expected to give direction how to upgrade low participation of the students in classroom.

### ***1.1 Objectives***

The general objective of the study is to increase class room participation of students of Second year mathematics department of Bonga University.

*This action research was conducted to address the following specific objectives:*

- *To identify factors that cause low level class participation of students.*
- *To implement strategies that improves low achiever students class participation.*
- *To identify teaching methods which encourage students to participate in the classroom.*
- *To enhance the involvement of students in classroom participation.*

### ***1.2 Significance of the study***

As we all know participation is one of the essential elements in implementing active learning methods which make students active participant in the teaching learning process and help them to learn more. But at Bonga University, department of Mathematics second year students didn't actively participate in the classroom. Even, when the students were given some activities to be done in group, they didn't do it; instead, they waited for lecture from their instructors. This made students always to wait others rather than try to do by their own. Therefore, the main reasons which we initiated to conduct this action research were:

- a. It will contribute in filling the knowledge gap regarding low achiever student's participation in Mathematics class.*
- b. Classroom participation can send positive signals to students about the kind of learning and thinking such as growth in critical thinking, active learning, development of listening, and speaking skills needed for career success, and the ability to join a disciplined conversation.*
- c. When students see that their participation is being graded regularly and consistently, they adjust their study habits accordingly to be prepared for active participation.*

## **2. Literature Review**

Classroom participation has become an increasingly important aspect of engaging students in higher education. Current students in higher education are of the millennial generation and are constantly seeking interaction (Roehling et al., 2011). As educators struggle to find the appropriate mix of strategies in order to raise participation levels in the classroom, it is important to look at existing research in order to gain an

understanding of what defines participation as well as factors that affect participation both directly and indirectly in the classroom.

### ***2.1 Defining Participation***

Participation has been defined in a number of ways including “the number of unsolicited responses volunteered” (Burchfield & Sappington, 1999), the “extent of participation in class discussion” (Weaver & Qi, 2005), and “any comments or questions that students offered or raised in class” (Fassinger, 2000).

Participation can also be viewed as part of an overall student engagement process as defined by Dancer and Kamvounias (2005) who divided this process into five separate categories: preparation, contribution to discussion, group skills, communication skills, and attendance (p. 448).

This definition is more holistic as it includes the quality of discussion as well as respect within the group which Weaver and Qi (2005) indicated was a direct factor that affected levels of class participation.

### ***2.2 Factors affecting classroom participation***

There are many factors that can influence the participation of students in the classroom. In fact, some factors are internal and others are external. Some students are also assertive, active and confident enough. On the other hand, there are some students who are bashful and passive. The main reason for this disparity may be socio-cultural values that oriented towards gender differences.

### ***2.3. Importance of student’s class participation***

Students are more motivated, learn better; become better critical thinkers, and have self-reported gains in character when they are prepared for class and participate in discussions. The more they participate, the less memorization they do, and the more they engage in higher levels of thinking, including interpretation, analysis, and synthesis.

Students who participate also show improvement in their communication skills, group interactions, and functioning in a democratic society

## **3. Research Methodology**

**Location:** Bonga University is one of the public higher education institutions in Ethiopia. It is found in south western part of Ethiopia, in the Southern nations, nationalities and people (SNNP) region. It is located in Bonga town, the capital of Kaffa zone, which far about 460km away from capital city of Ethiopia, Addis Ababa ([www.bonga.edu.et](http://www.bonga.edu.et)).

**Target Group:** The target groups of this action research are second year Mathematics students which are 27 in number, out of these 18 and 9 were males and females respectively. Second year students were selected because, they are more benefited from the result of the research and they are better suited for our action research project because in the movement we are teaching second year students in different courses.

The overall data and practice were carried out in Mathematics subject sessions.

### **3.1 Research Approach**

The study of this action research is both qualitative and quantitative type of research. Questionnaires, focus group discussions and observations were primary sources of information while secondary sources of data were obtained from academic articles, reports and magazines.

### **3.2 Data Collection**

As the purpose of the study is to improve participation of students in Mathematics class, at Bonga University and to take action we use primary sources of information (questionnaires, focus group discussions and observations). Questionnaires were distributed for all 27 students. For observation, the researchers themselves are instructors of Mathematics students so that they have observed in their normal teaching learning sessions.

### **3.3 Data Analysis and Interpretation**

The data gathered via questionnaire, interview and class observation revealed that students' participation in class room was very low. The respondents reported that limited participation of students' in the class room was due to instructor's approach, lack of confidence, lack of incentive method, silence and shyness, seating arrangement, language barrier, their socio-cultural background and lack of active learning methods. Therefore, it was concluded that, students' participation in the class room was very low in the selected case study. The finding indicated that more than 75% of the total respondents are not joined to the department by their choice so that this is main cause for low participation of students' in the class room. From our observation we have witnessed that the role students in class room activities are very limited. Majority of students had problem related to express them, share their experience, generate new ideas and some of them could not understand the subject matter.

**Table 1:** Questionnaires that fulfilled by students

S/No	Reasons why students do not participate in the class	Yes	No
1	I don't know the language very well	72.3%	27.7%
2	Lack of confidence	62%	38%
4	Socio-cultural background	41%	59%

5	The department in which we are currently enrolled is totally not our choice.	75%	25%
6	The instructors don't use active teaching methods	37%	63%
7	I can't easily understand what the teacher is teaching	11%	89%
8	I have not good approach with Instructor's	40%	60%
9	The teacher doesn't give me an opportunity to talk	15%	85%
10	I fear teacher's face when he looks at me	20%	80%
11	Seating arrangement is not suitable	30%	70%

Table 1 revealed that, about 75% of students showed limited participation in the class room activities caused by the department in which they are currently enrolled is totally not their choice as explained by the respondents. This shows that most students are not interested in their current department. Similarly, the respondents said that Instructor's approach, language barriers, socio-cultural background (some families socialize their children as shyness and silence are good personalities.), students' seating arrangement in the classroom (the manner they sit interrupts their level of participation and even feeling part of the class during the lesson) covers 40%, 72.3%, 41% and 30% respectively, was the factor that affects students' classroom participation. Moreover, 62% of students showed limited participation in the class room activities caused by lack of confidence (they afraid they might ask wrong question or give wrong answer) as explained by the respondents.

### **3.4 Actions taken**

There are so many students who are not active participant in the class. Thus, there is a need to take an action. To improve students' participation in class, so many action strategies were taken. The following are among the action strategies taken:

### *Planning*

In a discussion course, assign students some of the responsibility for increasing participation by all. On the first day of class, tell students the goals of classroom participation and ask them to come up with a list of guidelines that will help the class reach this goal. Typically, they will generate excellent guidelines such as do not interrupt others when they are talking and critique the ideas; don't criticize the person.

1. Advising the students to speak whatever comes to their mind without any fear.
2. Asking questions from simple to complex because:

Simple questions engage student thinking, and activate memory and opinions.

Simple questions build a fact base student can build on to argue more complex questions.

Correctly answering simple questions builds student confidence and increases the likelihood they will attempt harder questions.

*Given enough time for students, this is because:*

The length and correctness of student responses increases.

Think about the question and to supply an answer.

The number of I don't know and no answer responses decreases.

The number of volunteered, correct answers increases.

By applying the above actions in the classroom and by the results obtained from the observation an average 3 students were participated in the first day. Among this on average almost all of them are Males and Females are not participated. From this we can understand by applying the above action strategies to our students' inactivity was more or less changed but there exists a need more action undertakes.

- The seating arrangement of the student's was exchanged depending on the nature of the problem this can be done by arranging their one-five in a way they can rotate with in some interval of days.
- Establishing positive relationships with students and instructors, and giving an advice to look their instructors as fatherly and brotherly. This relationship reduces the approach gap between them.

By applying the above actions in the classroom and by the results obtained from the observation an average 10 students were participated in the second day. Among this on average almost all of them are Males and 2 Females are participated. From this we can understand by applying the above action strategies to our students' inactivity was more or less changed but there exists a need more action undertakes.

#### *a. Break up lectures*

1. Students are only going to listen to an instructor speaks for up to 15 up to 30 minutes. Breaking up lectures with activities, interactive questions and other ways to keep the



student engaged will not only increase classroom participation but also motivate students and help them focus attention.

b. Ask for new hands or for some new people to speak, ask students on opinion questions learn students' names and call them by their names, ask students. Meaningful questions, and finally control the students who are over participators in Mathematics second year students. By applying the above actions in the classroom and by the results obtained from the observation an average 22 students were participated in the second day. Among this on average almost all of them are Males and 6 Females are participated. From this we can understand by applying the above action strategies to our students' inactivity was more or less changed but there exists a need more action undertakes.



#### 4. Conclusions

In this study, the researcher found different factors that are directly related to the low classroom participation. As we have seen in the data presentation and analysis part of this study, most of our students

are not participated in class. Based on this problem and the objective improving classroom participation the researcher had been proposed different action strategies/interventions were taken like; changing the seating arrangement, creating positive relationships with students and instructors, advising the students to speak whatever comes to their mind without any fears and using active teaching methods etc... The outcome this action creates for students to have good motivation for participation so as to achieve their own goal.

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