How to improve the self-confidence of students in presentation: in the case of Mathematics students of Adigrat University, Ethiopia

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Abstract: The objective of the study was to improve the self-confidence of mathematics students in Adigrat University. The study also sought to determine the factors affecting self-confidence of mathematics students in presentation. In order to conduct the study an approach was employed on graduate (3rd-year) batches of mathematics students of Adigrat University. As we know self-confidence can develop with practices in many activities (such as group and individual). Adigrat University is one of the public and known universities in Ethiopia. Besides different activities like research and community services, currently the university has a view and mainly working on the improvement of mathematics students in presentation. Therefore, this study tries to improve awareness on the gender difference, roll of the teacher, students background and knowledge on the self-confidence of mathematics students in presentation. In this research the methods of data analysis are both descriptive and inferential statistics. The results were displayed using graphs, tables and percentage. Based on the data analysis and conclusion the researcher identifies the factors to improve self-confidence of mathematics students presentation are identified.

Keywords: Improving, Self-confidence, Presentation, Practice.

1. INTRODUCTION
Schools, colleges and universities have no worth without student. Students are most essential asset for any educational institute. The social and economic development of the country is directly linked with student academic performance. The students’ performance (academic achievement) plays an important role in producing the best quality graduates who will become great leader and manpower for the country thus responsible for the country’s economic and social development (Ali et al., 2009). It is challenging aspects of academic literature, and science student performance is affected due to social, psychological, economic, environmental and personal factors. These factors strongly influence on the student performance, but these factors vary from person to person, from one setting to another setting and country to country. Consequently the poor academic performance of students, fear and lack of self-esteem of the student, teachers approach to the presenter and students approach to the presenter have significant effect on the poor confidence of the student in the presentation.
Most of the students in the presentation have not good confidence and they are not good presenters, this might be due to lack of knowledge about a given activity, experience on presentation, lack of communication skill, and they have imperfect knowledge of their own abilities in many of the tasks they face. We therefore study decision–making by an agent (students) who face uncertainty about their self confidence from pursuing a certain course of action. The unknown variable could be a characteristic of the students, such as their talent of the specific task at hand (long–run return, how difficult or enjoyable it is to complete, etc.). Students who have poor confidence in presentation may be related with their back ground or if their parents did not give any freedom to express their ideas and feelings and this has an effect on student’s self-confidence in presentation.

Generally it is impossible to estimate the fear and lack of self-confidence of students. All the students with whom we work express their lack of faith in themselves in some form or other in that they are not enough confident in the presentations. So the researchers are interested to know the factors improving fear and lack of confidence in presentation and to make an action on the students to improve the students’ confidence by giving psychological makeup and motivation for the students.

Student motivation is an essential element that is necessary for quality presentation. How do we know when students are motivated? They pay attention, they begin working on tasks immediately, they ask questions and volunteer answers, and they appear to be happy and eager (Palmer, 2007). Basically, very little if any learning can occur unless students are motivated on a consistent basis. The five key ingredients impacting student motivation are: student, teacher, content, method/process, and environment. The environment needs to be accessible, safe, positive, personalized as much as possible, and empowering. Motivation is optimized when students are exposed to a large number of these motivating experiences and variables on a regular basis. That is, students ideally should have many sources of motivation in their learning experience in each class. (Palmer, 2007; Debnath, 2005; D’Souza and Maheshwari, 2010).

1.1. Statement of the problem

Self-confidence is the main critical thing to invest every one’s knowledge efficiently at the required time and place for the required purpose, especially for students it is important to contribute their knowledge, experience and skill for their country. As compared to the rest part of the world, students in Africa have poor self-confidence in other hand their participation and their role in the development of the region is unbalanced. In Ethiopia also, due to different factors the students have poor self-confidence and they are not effective in presentation. Even if they have enough knowledge, they encounter difficulties to make presentations. Consequently this problem affects the country, the university and the students themselves, by causing other problems such as economic, social and political instability.

Generally, poor self-confidence have different causes for the students, consequently the researchers were interested to study how we can improve students confidence in presentation and giving solutions for the problems.
1.2. Objective of the study

- To investigate how can improve the student’s self-confidence during presentation
- To improve students self-confidence
- To describe the role that the teachers play to improve students self-confidence.
- To identify factors that hamper students self-confidence, while presentation
- To identify the extent whether students’ background has an influence on students’ self-confidence.

1.3. Significance of the study

- It helps for the students to take some actions to eliminate causes of poor self-confidence and to rebuild their confidence to be effective.
- It helps for the university to take similar actions for the future to make the students effective.
- It helps for the researchers to improve habit of conducting good research to solve different problems.
- It helps as a base line for other researchers to conduct a research on factors affecting students’ confidence during presentation.

2. LITERATURE REVIEW

- Students are asked to solve problems everyday in math class as well as other classes. Most times, these problems are computational rather than conceptual. Students should be allowed to make the subject problematic. "Allowing the subject to be problematic means allowing students to wonder why things are, to inquire, to search for solutions, and to resolve incongruities" (Hiebert, Carpenter, Fennema, Fuson, Human, Murray, Olivier, & Wearne, 1996, p. 12). Allow students to work through problems gives them problem solving skills they will use throughout their lives. "Students should have frequent opportunities to formulate, grapple with, and solve complex problems that require a significant amount of effort and should then be encouraged to reflect on their thinking" (NTCM, 2000, p. 52). Giving students opportunities to solve problems increases their understanding and comprehension of topics.

NTCM (2000) defines problem solving as a "means of engaging in a task for which the solution method is not known in advance" (p. 52). In the past, students have traditionally been given the skills needed to complete a task and then asked to do it. The conceptions of problem solving have been colored by a distinction between acquiring knowledge and applying it. "The distinctions suggest that computation procedures should be acquired first and then applied to solve problems" (Hiebert et al, 1997, p. 13). When giving students all the skills they need to solve problems we do not allow them time to formulate their own strategies. "By working through problematic situations, students learn how to construct strategies and how to adjust strategies to solve new kinds of problems" (Hiebert et al, 1997, p. 17). When confronted with different problems in different situations, students who have been given the opportunity to develop their problem solving skills are more likely to be able to work through a new problem effectively and efficiently.
Hiebert et al (1996) suggests strategies for solving problems. "One is the particular procedures that can be used for solving particular problems. The second is the general approach or ways of thought that are needed to construct the procedures" (Hiebert et al, 1996, p. 17).

Giving students several strategies to use helps them determine what will be most affect to solve problems. "Students should acquire ways of thinking, habits of persistence and curiosity, and confidence in unfamiliar situations that will serve them well outside the statistics classroom" (NTCM, 2000, p. 52). Students are not only able to solve mathematical problems; they are able to work through all types of problems.

- "Learning with understanding can be further enhanced by classroom interactions, as students propose mathematical ideas and conjectures, learn to evaluate their own thinking and that of others, and develop mathematical reasoning skills" (NTCM, 2000, p. 21). Many students look to the teachers to have all the answers. Many students do not see the great wealth of knowledge among peers. Students must begin to understand their peers, and what their peers know, can transform their learning experiences. Blumenfeld (1996) states peer learning is a way to improve attitudes toward school, foster achievement, develop thinking skills, and promote interpersonal and intergroup relations. Students can benefit in many ways using peer learning. Blumenfeld also feels "peer interactions can promote (a) student exchanges that enhance reasoning and higher-order thinking; (b) cognitive processing such as rehearsing, organizing, and integrating to others’ ideas; and (c) perspective and encouragement among those involved with work" (p. 38). Many others have seen the benefits of peer interaction. Lampert (1986) stated social interaction can be used to promote the recognition of connections among ideas and the reorganization of knowledge. She continues to say by having students talk about their informal strategies, teachers can help them become aware of, and build on, their implicit informal knowledge (Lampert, 1996). Teachers must be aware of what they are asking their students to do. "Cooperative learning has been consistently found on such diverse outcomes as students' self-esteem, intergroup relations, acceptance of academically handicapped students, attitudes toward school, and ability to work cooperatively" (Manswell Butty, 2001, p. 22). Fostering student interactions can benefit students in many ways.

- Many things influence the attitudes of students. If one asks students to explain why they do or do not like statistics, some will say they are just not good at it and others will say they are not confident. One factor that can affect student attitudes is experiences they had when they were younger. "Early experiences with statistics, here defined as school experiences at the primary level, and parental attitudes towards the subject may have had a strong influence on the self-concept profiles" (Relich, 1996, p. 191). All of these attitudes affect the performance of students. Another affect on students’ attitudes can depend on their gender. "There is considerable evidence that males are more positive about personal aptitudes in statistics when compared to females, despite the fact that similar performance differences are not substantial by research evidence" (Relich, 1996, p. 179). Girls feel they are not as knowledgeable when asked about statistics. "Girls tended to attribute their failure to lack of ability, whereas the boys blamed their failure on lack of effort" (Jones, 1995, p. 160). Boys feel that they can do the statistics if they try. "The greatest difference between boys and girls can be found in their attitudes to and self-confidence in statistics.
rather than in actual achievement" (Relich, 1996, p. 180). The self-confidence of students can be seen in the classroom.

"Teachers’ attitudes in statistics may have an influence on how students perceive their own abilities to deal with statistics" (Relich, 1996, p. 180). Teachers can show students that they are able to solve problems and have mathematical ability. "When students work hard to solve a difficult problem or to understand a complex idea, they experience a very special feeling of accomplishment, which in turn leads to a willingness to continue and extend their engagement with statistics. Students learn more and learn better when they can take control of their learning by defining their goals and monitoring their progress" (NTCM, 2000, p 21). When teachers have a positive attitude students are more likely to have a positive attitude.

- Teachers want to have every student completely understand the conceptual ideas presented to them in our statistics classrooms. Many times students want a formula or process to follow without caring about the reasons why a particular formula or process is appropriate. Increasing students’ knowledge and conceptual understanding is very difficult. "In recent decades, psychological and educational research on the learning of complex subjects such as statistics has solidly established the important role of conceptual understanding in knowledge" (NTCM, 2000, p. 20). Teachers must stress to students that conceptual learning is important.

Manswell Butty (2001) states students must first be provided with opportunities, encouragement, and assistance before they can engage in thinking, reasoning, and sense making in statistics. Consistent engagement in such thinking practices should lead to a deeper understanding of statistics as well as increased ability to demonstrate complex problem solving, reasoning, and communication skills upon assessment of learning outcomes. (Manswell Butty, 2001, p. 23) One way to acquire this conceptual understanding is the use of real-life situations. Hiebert (1996) states statistics acquired in realistic situations will be perceived by students as being useful, rather than acquiring knowledge that is isolated from real situations, students will acquire knowledge that is connected to such situations, and they will be able to apply this knowledge to a range of real-life problems.

A second way to help with conceptual understanding is to require students to engage in testing. "Testing has a powerful positive effect on future retention. If students are tested on material and successfully recall or recognize it, they will remember it better in the future than if they had not been tested" (Roediger, 2006, p. 249). Students that are required to understand a topic because they will be tested on it are more likely to work hard and gain conceptual understanding.

Each person in the classroom has a responsibility. The teacher’s role is that of a leader. "The teacher’s actions are what encourage students to think, questions, solve problems, and discuss their ideas, strategies, and solutions" (NTCM, 2000, p. 18). Teachers need to take the time to teach the students how to work in groups and how to communicate their ideas. "Students may not know how to help effectively and may require special training to learn how to elaborate their thinking" (Blumenfeld, 1997, p. 38). Hiebert (1996) explains the role of the teacher and students share the responsibility for developing a social community of students problematizes statistics and shares in searching for solutions. "It is the teacher responsibility to select and present tasks and it is the students’ responsibility to share the results of their inquiries and for explaining and justifying their method" (Hiebert et al., 1997, p. 16).
Students are more likely to be engaged in an activity if the class had established a culture in which students knew they had the freedom and responsibility to develop their own methods of solutions.

- NTCM (2000) states "communication is an essential part of statistics and statistics education. It is a way of sharing ideas and clarifying understanding" (p. 60).

Students need to be given an opportunity to express what they have learned and communicate how they have completed a problem to their peers. Adler (1999) found pupil verbalization in the statistics classroom is a resource. "Verbalization is a tool of thinking and a display of mathematical knowledge. If pupils could clearly say what they were thinking, then they knew the statistics under consideration" (Adler, 1999, p. 54). Requiring students to verbalize what they have learned can be a powerful tool for understanding. "Teachers have found that being explicit about mathematical language benefited all pupils in their statistics classes" (p. 48). Teacher must model what they expect of their students. "Students gain insight into their thinking when they present their methods for solving problems, when they justify their reasoning to a classmate or teacher, or when they formulate a question about something that is puzzling to them" (NTCM, 2000, pp. 60-61). When students must communicate what they have learned or ask a question they must be able to express to others what they specifically need.

Communication of mathematical ideas not only benefits the speaker but also the listener. The person listening forces the student speaking to be concise and clear. Listening to others’ explanations gives students opportunity to develop their own understanding. "Collaboration is a key to help students construct knowledge and to introduce them to disciplinary language, values and ways of knowing" (Blumenfeld, 1996, p. 39). Requiring students to learn from each other forces them to be explicit about what they are learning. "Students who have the opportunities, encouragement, and support for speaking, writing, reading, and listening in statistics classes reap dual benefits: they communicate to learn statistics, and they learn to communicate mathematically" (NTCM, 2000, p. 60). Students and teachers can now communicate within the same context.

Helping students to understand how to communicate mathematically is something we as teachers must do. Giving students opportunities to show what they know and how they achieved their answers is important. Teachers are obligated to create learning environments that allow students who may not have confidence to participate and excel. Teachers must show all students the answer is not always the most important thing and how we solve a problem is helpful. Lastly, we are required to show students we are not the only experts in the classroom and they can turn to their peers for help when needed. Achieving all this will not happen in one day, but taking time to look at your classroom can help to increase these activities.

3. METHODOLOGY OF THE STUDY

This study was done on the 3rd year mathematics students of Adigrat University from the period of February – May by applying and following the procedural mechanisms to conduct action research.

3.1. Method of data collection

In this study the researchers used the primary data collection method which is collecting the data from primary sources using questionnaire and observation.
3.1.1. Sampling technique

In this study the researchers used simple random sampling (lottery) method, which is by taking numbers from the sampling frame (list of the students) by using random generator table and by distributing the questionnaire for those who have selected, and collecting the questionnaire after they have fill it.

3.1.2. Sample size determination

This research study only mathematics 3rd year students and the researchers were distributed the questionnaire for the selected students based on some characteristics for determination of sample size from the population (Mathematics students). In this research the researchers used simple random sampling for all of the population, and then using sampling technique of proportional allocation. So based on the level of precision, the level of confidence interval and the degree of variability, the sample size was determined.

3.2. Method of Data Analysis

In this research the researchers manipulate the data based on the two methods of analysis which are the descriptive and inferential statistics. The results were displayed using graphs, tables and percentage.

4. Results and findings

This deals with the analysis and interpretation of data that are collected from students and findings about 3rd year Mathematics students' lack of confidence in presentation at Adigrat University. Questionnaire were prepared and distributed for 37 students and the data were collected properly.

Table 4.1. sex of respondents

<table>
<thead>
<tr>
<th>sex</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>23</td>
<td>62.2</td>
<td>62.2</td>
<td>62.2</td>
</tr>
<tr>
<td>female</td>
<td>14</td>
<td>37.8</td>
<td>37.8</td>
<td>37.8</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The above table indicates that most of the respondents (62.2%) are males and few of them are females.

Table 4.2: experience of presentation of students

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>30</td>
<td>81.1</td>
<td>81.1</td>
<td></td>
</tr>
<tr>
<td>no</td>
<td>7</td>
<td>18.9</td>
<td>18.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
The above table indicates that 81.1% of the students have an experience to present any presentation and the rest are not. This is to mean, most of the students are affected by lack of experience to present any presentation confidentially.

**Table 4.3: practice of presentation of respondents in their university life**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>only once</td>
<td>5</td>
<td>13.5</td>
<td>13.5</td>
</tr>
<tr>
<td>2-5</td>
<td>22</td>
<td>59.5</td>
<td>59.5</td>
</tr>
<tr>
<td>5-10</td>
<td>3</td>
<td>8.1</td>
<td>8.1</td>
</tr>
<tr>
<td>Valid &gt;10</td>
<td>4</td>
<td>10.8</td>
<td>10.8</td>
</tr>
<tr>
<td>never at all</td>
<td>3</td>
<td>8.1</td>
<td>8.1</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.3 shows that more than half of the respondents (59.5%) responded that their practice of presentation is between 2 and 5, 13.5% presented once only, 10.8% presented more than 10 times, 8.1% presented between 5 and 10 and the other 8.1% did not present any presentation at all.

**Table 4.4: Feeling of fear or lack of confidence of respondents**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>22</td>
<td>59.5</td>
<td>59.5</td>
</tr>
<tr>
<td>Valid no</td>
<td>15</td>
<td>40.5</td>
<td>40.5</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The table above shows that 59.5% of the respondents have feeling of fear and 40.5% have no feeling of fear during presentation.
The above table indicates that 10.8% of the students believed that feeling of fear or lack of confidence comes from lack of knowledge; 62.2% believed that it’s from lack of skill of presentation; 2.7% believed that it’s from teacher’s poor approach; 5.4% believed that it’s from student’s approach to the presenter; 2.7% believed that it’s from wideness of the class room; 13.5% believed that it’s from student’s background and the rest are believed that it’s from lack of interest. As we can understand most of the students believed that confidence in presentation is affected by lack of skill of presentation or lack of practice. But a few of them are believed that teacher’s approach and lack of interest influence confidence in presentation. We can also see these from the following graph where the variables are as shown in the above table, respectively.
As we can see from the above table most of the students (40.5%) responded that they got positive responses only, 29.7% got constructive feedback, 10.8% got negative responses only and the rest of them (18.9%) got nothing at all from their teacher and colleagues after presentation.

5. Conclusion and Recommendation

- Based on the data analyses and evaluation the researcher conclude the following factors which make students to lack confidence in any presentation: Absence of experience (practice) or lack of skill of presentation, Lack of interest, Shortage of advice not to fear, Teachers bad approach, Students background, Students approach to the presenter, Type of comments before and after presentation.

- When come to our evolution, developing confidence in presentation through practice is the corner stone for implementation action change. So in order to create a new change there must be new system. The college should have to give financial and psychological support for the students. The teacher should have to give motivation for the students who present in the class confidently by giving reward and prize and also has to incite the rest of the students who are not present confidentially. The students should have to evaluate and
assess themselves before and after presentation. This helps to the students to become confident in any presentation. When the teacher is in teaching learning process he should has to tell them how to be confident in presentation fully for students. The teachers should have to give constructive advice for the students who mainly affected by feeling of fear and communicate with their students why the reason they were fear and try to solve the problems accordingly.

- Finally other investigators and organization should undertake further research study covering wider population.

6. References