Improving female students' participation and their academic performance: Ethiopian Technical University

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Abstract

This study was conducted with the objective of improving female students' participation and their academic performance of students in Ethiopian Technical University. The researcher selected 22 female students and 6 male teachers through purposive sampling techniques. The data gathering tools were questionnaire and interview; secondary data were collected through document analysis. The quantitative data were analysed using Statistical Package for the Social Sciences and qualitative data were analysed by narration and summarisation. The result indicated that university climate, department choice of students, lack of tutorial classes provided by the university and poor training support for female students to improve academic performance impacted female students' academic performance. In addition, sociocultural factors, female students' background area, educational status of parents and perception towards their academic performance affected the academic achievement of female students. Furthermore, socio-economic factors, economic status of parents, female students living outside university and being non-cafe affected female student's academic performance at the higher education level.

Keywords: Academic performance, factors, female students, participation, Ethiopian Technical University.

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1. Introduction

Before considering the importance of classroom participation, it is first necessary to describe the terms. All students were participating, learning and listening to others' ideas, comments and questions in the classroom discussion. With this definition, it seems that it would still be possible to be passively engaged in the classroom experience. The intention, however, is to somehow force or preferably motivate students to become actively engaged in what is occurring in the classroom (Wade, 1994 as cited in Timothy, 2007). Participation can be seen as an active engagement process which can be sorted into five categories: preparation, contribution to discussion, group skills, communication skills and attendance (Dancer & Kamvounias, 2005 as cited in Rocca, 2010).

All genuine learning is active and not passive. It involves the use of the mind, not just the memory. It is the process of discovery in which 'the student is the main agent, not the teacher'. The challenge for teachers is how do you elicit the type of active participation and healthy exchange of ideas that we expect in a college classroom? This study draws attention to the widely shared view among teachers that students are increasingly less prepared for class. This lack of preparation undoubtedly has negative impacts on the value of classroom discussion (Tai & Thompson, 2000 as cited in Timothy, 2007).

The conditions that influence the improvement of girls' education have been discussed in a number of ways. With particular reference to sub-Saharan Africa, Odaga and Heneveld (1995) discuss factors affecting female education under three categories: socio-economic and sociocultural, factors related to the school environment and political and institutional factors. Hyde (2005, p. 119) summarises the conditions for improving women's education in sub-Saharan Africa from four perspectives: family level, societal level, school level and factors influencing achievement. Shahidul and Zehadul Karim (2015) indicate that some of the critical factors in female dropout include pregnancy, psychological cost of pregnancy, direct cost of schooling, societal perceptions, the labour market, opportunity costs, family poverty, irrelevant curriculum, insecurity, structural attributes and classroom culture. For the sake of convenience, this review summarises the literature under the following categories: economic, cultural, school and societal factors.

As instructors, many of us have had the experience of teaching courses where students participate frequently, the classes flow well and all involved feel like the course was a success. On the other hand, most of us have also had quite the opposite experience, where it is a regular struggle to get students to ask questions and participate in discussions. Student engagement, a broader, more encompassing term, which consists of four factors (skills, participation/interaction, emotional and performance), is becoming increasingly important in higher education (Handelsman, Briggs, Sullivan & Towler, 2005 as quoted in Rocca, 2010).

Sunday (2010) noted that 'class participation ranks among the most complex and subjective academic performances to evaluate'. While the assessment of student interaction may be a useful motivator, it could be argued that this is only true in cases where the instructor clearly defines how such grades will be assigned and according to what criteria. Lyons (1989) warned that objective measurement of classroom participation is difficult. Instructors' own personal biases and opinions may affect how they assess student participation. To avoid the effects of such biases, Armstrong and Boud (1983, as cited in Hill, 2007) suggested that instructors should distribute clear and explicit criteria which will be used to assess participation to students at the beginning of the semester.

The traditional lecture-only format is losing its prevalence in the classroom, as it is replaced with mixed delivery methods which utilise group discussion, dyadic work and peer review, to name a few, all of which minimise lecturing. In-class participation has become increasingly important with millennial generation students who demand more interaction from their classroom experience (Allred & Swenson, 2006; Howe & Strauss, 2000 as quoted in Rocca, 2010).

Tamirie (2009) stated that girls get better grades in school than boys and in most developed countries more women than men go to university. But in most developing countries, like Ethiopia, girls do not get better grades in school than boys. Except in families of relatively better socio-economic status (e.g., better parental support), girls' grades seem to be lower than boys even in early primary grades. The gap becomes wider as the grade level increases.

In Ethiopia, there are different levels of educational institutions. Despite this, most of the female students have low results due to different university-related, sociocultural and socio-economic factors. In addition, as one of the Ethiopian higher education institutions, Ethiopian Technical University is not engaged in effectiveness and practicing of tutorial delivery for female students due to teachers' and students' lack of awareness about the extent of tutorial support to improve female student's academic performance. However, little emphasis seems to have been given to such issues that the problems are continuing and female students to such behaviour are left untreated. These gaps also increase in Ethiopian Technical University, specifically in second-year students. Based on our teaching experiences, almost all female students do not compete with male students in classroom participation and in their academic achievements. So, the researcher becomes initiated to identify the main factors of low participation of female students and to solve these problems. So, improving female students' classroom participation and their academic performance of second-year students in Ethiopian Technical University was guided by the following basic research questions:

− What are the factors that influence female students' active participation in the class?
− What are the important ways that would enable female students' participation in the classroom?
− How can we improve the academic performance of female students?

2. Research methods and materials

2.1. Research design

The main objective of the study was to improve the level of female students' classroom participation and their academic performance with reference to second-year Ethiopian Technical University students. Both quantitative and qualitative approaches were used. In order to achieve this objective, the descriptive research design was employed to identify female students' classroom participation and their academic performance of second-year students in the university as it exists at present.

2.2. Sources of data

In this study, both primary and secondary data were required to generate and extract all necessary information to the research. Primary data were gathered from target students and from teachers about female student's classroom participation during teaching–learning processes. Secondary data were gathered from teachers who are teaching different courses of psychology in Ethiopian Technical University and also used different documents about academic performances of female students from the department.

2.3. Data gathering tools/procedures

The instruments used for the study were such as classroom observation, open and closed-ended questionnaires, unstructured interviews and different document analyses (tests and exams) to collect information related with female students' classroom participation and their academic achievements. Therefore, for the primary information questionnaires and unstructured interview were used to gather data about the factors that hinder their classroom participation and academic performance. A self-administered questionnaire was the major instrument that was used in data collection. The researcher designed the questionnaires by reviewing the literature through 5-point Likert-type

questionnaires and items used to generate data about factors that hinder their classroom participation and academic performance. Qualitative data were collected through interviews to identify information about female students' classroom participation and their academic performance. Classroom observation during the teaching learning process and performance test (i.e., after giving special class for female students) were also used to collect information about the upgrading of female students' classroom participation and their improvements of the academic performance to ensure the reliability and validity of information that were collected from different sources provided in the literature review.

In addition to the above, the researcher used different strategies to improve female student's classroom participation and their academic performances such as changing the teaching style, initiating the students to participate through different mechanisms, giving tutorial classes only for female students and giving different advice about the overall activity of the students.

After getting a co-operation letter from the department of vocational pedagogy, the researcher presented it to the concerned bodies. Then, the researcher asked for their willingness to participate in the study. Having received their consent, the tools were administered to female students. The data were collected after a clear explanation on the purpose of the study by the investigator himself.

2.4. Target population

The students and teachers involved in this research come from different socio-economic statuses, races and gender. Therefore, the target participants for this research were second-year Ethiopian Technical University students and teachers because researchers have exposure to year level and also second-year female students are relatively poor in classroom participation and academic performances in the university.

2.5. Sampling technique and sample size

To meet this objective, the researcher drew 22 female students and 6 male teachers in the department. Out of 42 students, 22 female students were selected; purposive (non-probability) sampling was adopted to select samples from students in a class and staff members. Also, six male teachers in the department were used in this study as sources of information.

2.6. Methods of data analysis

Finally, the data collected through primary and secondary data were analysed through quantitative and qualitative methods. Quantitative approach was used for the purpose of using numeric explanations to describe respondents' responses (female and male students' responses on the questionnaires). Students' grades were analysed to verify the validity of whether conceptual change and literacy strategies have a significant impact on students' conceptual understanding of the content. Therefore, quantitative data were analysed using Statistical Package for the Social Sciences and qualitative data were analysed by narration and summarisation.

3. Results and discussions

3.1. Background information of the respondents

From 22 questionnaires distributed, all were completed. The completed questionnaires were from 22 female students and 6 male teachers. The analysis of data showed that there are different factors affecting the academic performance of female students at higher education. These are categorised by two major categories: university-related and socio-economic.

3.2. Socio-economic factors

According to respondents' responses, socio-economic factors such as economic status of parents, female students living outside university and being non-café and level of parental education affected female students' academic performance at higher education level (Table 1).

The problem faced by female students was found to be an economic constraint. Economic constraints seriously affect female students' academic performance, which spans from the very limitation of purchasing the necessary educational materials to those affecting their health. Students from poor families failed to fulfil necessities such as education materials, cosmetics, recreation etc. As a result, to get away from such traps they may be engaged in different immoral and risky engagements, such as sexual affairs and exposing themselves to irreversible problems including HIV/AIDS and unwanted pregnancies, and consequently they drop out of university and have extended consequences in their future life. The report from interviewed teachers confirmed that some students (mostly of rural origin) are exposed to such risky situations. On the contrary, females who are from poor economic background parents have low self-esteem as well as feel inferiority.

Table 1. Socio-economic factors affecting female students' academic performance

	Rating scale				
	VS	S	ST	R	NA
Economic status of parents affects female academic performance	9 (40.9%)	5 (22.73%)	5 (22.73%)	2 (9.09%)	1 (4.54 %)
Presence of chat shops around the university negatively affect females' academic performance	-	-	2 (9.09%)	3 (13.63%)	17 (77.27%)
Presence of night clubs/bars/around the university affects academic performance of females	--	-	-	-	22 (100%)
Level of parental education	15 (68.18%)	5 (22.73%)	2 (9.09%)	-	-
Female students living outside the university	-	-	-	-	22 (100%)

Educated parents would perceive the need for female education in a better way than those who are uneducated. Educated parents might also facilitate the girls to learn at home, encourage continuous follow-up and motivate them to score better academically. The analysis of data here in this study further confirms this as seen in Table 1. The lion shares of respondents (68.18% who were in agreement) indicated that the level of parental education highly affects the academic performance of female students. Arias (2007) suggested that female education is more strongly and adversely affected by parents who are illiterates than literates. This indicated that most of the female students need financial and educational support from the university.

After a dig out of the main socio-economic factors affecting female students' academic performance, the researcher provides actions against those factors to improve the academic performance of the female students in a number of ways including: providing short notes on the white/green board, supporting morally, providing supportive measures like tutorials, remedial actions, providing office guidance for students in general and female students in particular. From these listed factors, moral support is very important. These ways are crucial for female students to improve their academic performance of the subjects and they showed a little bit of improvement in their academic achievement.

3.3. University-related factors

Universities play an important role in raising the academic attitude of a student by providing a stimulating, motivating and encouraging environment which indirectly results in good and higher academic achievement (MOE, 2004).

Besides the provision of guidance and counselling, tutorial classes and different training, student–teacher relationships also play significant roles in female students' academic performance. Teachers play a significant role in students' learning. Particularly, if teachers have positive attitudes towards female students and are gender sensitive in the classroom, female students will be encouraged to learn. Provision of guidance and counselling service for students in the university is very crucial for their success in their academic and non-academic endeavours as university female students are new to the environment, free from family control and they face a number of problems that are economic, social, academic and personal.

University and department placement of students play a key role in their future life adjustment and their success in a given field of study. In most cases, if students are placed based on their interest in the university and department, they can be successful in academic endeavours in particular and in their future life in general, and vice versa. Students placed without their choice face problems such as lack of interest in the university's environment and this makes them reluctant to attend their lesson and since they are placed too far from their parents, they are suffering from home seeking of their families (particularly when they were freshman students).

In this regard, the interview results also asserted that if female students participate in different training, they can develop self-confidence and will be well aware of how to manage them in a new environment.

Table 2. University-related factors affecting female students' academic performance

Factors	Rating scale				
	VS	S	ST	R	NA
University academic rules and regulations	1 (4.54%)	2 (9.09%)	6 (27.27%)	2 (9.09%)	11 (50%)
Effect of university climate on female academic performance	11 (50%)	-	9 (40.9%)	-	2 (9.09%)
Effect of student to teacher relationship on female academic performance	-	-	-	4 (18.18%)	18 (81.82%)
Lack of guidance and counselling services	14 (63.64%)	7 (31.82%)	1 (4.54 %)	-	-
Department choice of students	9 (40.9%)	6 (27.27%)	4 (18.18%)	3 (13.63%)	-
Lack of female role model teachers	-	-	5 (22.73%)	2 (9.09%)	15 (68.18%)
Lack of tutorial classes provided by the university	22 (100%)	-	-	-	-
poor trainings support for female students to improve academic performance	19 (86.36%)	1 (4.54%)	2 (9.09%)	-	-
Lack of security in dorms	-	-	-	-	22 (100%)
Lack of facilities (materials, water, medical, recreation etc.)	13 (50.09%)	4 (18.18%)	2 (9.09%)	3 (13.63%)	-

Table 2 indicates that majority of the factors that affects the academic performance of the students are effect of university climate on female academic performance (50%), department choice of students (40.9%), lack of tutorial classes provided by the university (100%) and poor training support for female students to improve academic performance (50%).

So, by understanding the main university-related problems of female students affecting their academic performances, the researcher tried to reduce these problems through different methods. A previous study conducted by Shahidul and Zehadul Karim (2015) indicated that some of the critical factors in female dropout include pregnancy, psychological cost of pregnancy, direct cost of schooling, societal perceptions, the labour market, opportunity costs, family poverty, irrelevant curriculum, insecurity, structural attributes and classroom culture.

3.4. Factors that affect female students' classroom participation

Based on the response provided by the sample students, the level of participation of female students in the class during the teaching learning process is generally low among the female students in the university. Among those factors that hinder active participation of students in class as responded by students include female students' attitude towards themselves and lack of confidence (86.36%), educational background of students (72.73%), lack of support from teachers (54.55%), teaching styles (68.18%) and student–teacher ratio (27.27%).

Table 3. Factors that affect female students' classroom participation

Factors	Rating scale				
	VS	S	ST	R	NA
Educational background of students	16 (72.73%)	5 (22.73%)	1 (4.54%)	-	-
Teaching styles	15 (68.18%)	6 (27.27%)	-	1 (4.54%)	-
Lack of supportive materials like reading reference	2 (9.09%)	19 (86.36%)	1 (4.54%)	-	-
Lack of support from teachers	12 (54.55%)	6 (27.27%)	2 (9.09%)	1 (4.54%)	1 (4.54%)
Student–teacher ratio	6 (27.27%)	9 (40.9%)	2 (9.09%)	3 (13.63%)	2 (9.09%)
Rules and regulations of the institutions	-	-	3 (13.63%)	17 (77.27%)	2 (9.09%)
Influence of male students	-	-	-	4 (18.18%)	18 (81.82%)
Absence of family support (materially, economically, morally…)	5 (22.73%)	3 (13.63%)	8 (36.36%)	1 (4.54%)	5 (22.73%)
Female students attitude towards themselves and lack of confidence	19 (86.36%)	2 (9.09%)	-	1 (4.54%)	-

Girls' expectations of their school performance and career prospects play significant roles in their persistence at school. Female students' self-perception on their academic performance is lower and they perceive themselves as academically weak and they believe that 'we cannot'. Due to this, they cannot use their effort as well as develop dependency on others. As demonstrated in Table 3, the majority of respondents, which accounts for 86.36%, agreed on the effect of female student's self-perception on their academic performance. Previous studies indicated that Sunday (2010) noted that 'class participation ranks among the most complex and subjective academic performances to evaluate'.

3.5. Gender difference in academic performance and classroom participation

According to the interview response, (instructors) key informants of both instructors and students both believe the existence of the variation in academic performance as well as classroom participation during different courses periods. Additionally, based on the experiences of the researchers, there is a clear difference in the classroom participation and academic achievement among the second-year students in the university. There are various influential factors for the existence of the gender difference among the target students.

Based on the key informants, these differences may be due to the following reasons: low classroom participation, students do not pay attention during the lecturing time, academic background of all students, economic factors, absence of support from their parents, absence of counselling and guidance in the institution, student's attitude towards some subjects, sociocultural factors such as female students' background area, educational status of parents, the perception towards their academic performance influencing factor and how these affect the academic achievement of female students.

3.6. Methods of improving female student's classroom participation

As suggested by different instructors of the courses of these target students, there are many ways of improving the participation of female students during the teaching–learning process as well as their academic performance in the university in general and at the department of psychology in particular. Additionally, some of the sampled students also provide clues for improving the participation and academic performance of students' female in the class. Among these ways, the major ones are providing continuous tutorial programme, strengthening the cooperative working with other students, effectively controlling the 1:5 structure, providing various materials, moral support, economical support, encouragement, assigning female students to perform different activities and present in class, creating awareness among the male students to change their perception they do have towards female students and creating awareness for some female students to change their perception they do have towards themselves.

In addition to the above, instructors do their best to improve the participation as well as academic performance of female students via applying different methods. Currently, they provide tutorials for those who achieve below the average mark and for all female students. Not only these but also providing materials, moral encouragement to read, providing the way how to read are also among major methods provided by the instructors to improve the academic performance and classroom participation of the students in general and female students in particular.

4. Intervention outcomes

Female students developed self-confidence in different aspects such as:

– They showed some progress in classroom participation.
– There were some changes in academic performance, i.e., their test results had improved.
– They developed relationships with male students and teachers.
– Female students also actively participated in cooperative learning and in group work.

5. Conclusion

The purpose of this study was to assess factors affecting classroom participation and academic performance of female students at the higher education level and to suggest possible solutions that may help to promote female students' academic performance.

The research has tried to identify and analyse university-related, sociocultural and socio-economic factors that affect female students' academic performance. University-related factors such as university climate, university academic and administrative rules and regulations, student–teacher relationship, peer pressure, tutorial classes provided by the university, different supportive/co-curricular/ trainings provided by the university to female students (assertiveness, life skills, gender issues, HIV/AIDS and reproductive health), department choice of students, provision of guidance and counselling services and lack of female role model teachers affect female students' academic performance.

Sociocultural factors which affect female students' academic performance include female students' self-esteem/perception of their academic performance, and family background of female students. Furthermore, socio-economic factors such as economic status of parents, limited employment opportunities and female students living outside the university and becoming non-café are affecting female students' academic performance.

The attrition rate of psychology department female students was high in a decreasing rate over the last 3 years due to different causes of failure, such as unplanned pregnancy, no supportive training provided by the university, fear of failure, female students' self-perception on their academic performance, lack of self-confidence and community attitude towards female student's performance. Even if the trend of female students' attrition rate in Ethiopian technical universities is decreasing from time to time, still female students' attrition rate is present in the department and further studies need to be carried out in this area.

Acknowledgements

References

Adeyemo, S. A. (2010). The relationship between students' participation in school based extracurricular activities and their achievement in physics. *International Journal of Science and Technology Education Research, 1*(6), 111–117. Retrieved from http://www.academicjournals.org/.

Andualem, T. (2009). *Trend analysis of males' and females' education in different school levels and school types in Addis Ababa*. Proceedings of the 16th International Conference of Ethiopian Studies. Addis Ababa, Ethiopia: Addis Ababa University.

Dagoberto, A. (2007). *The effect of conceptual change and literacy strategies on students in high school science classes.* Northridge, CA: California State University.

Hill, T. M. (2007). *Classroom participation.* New York, NY: United States Military Academy.

Hyde, K. (2005). *Taking stock of girls' education in Ethiopia: preparing for ESDP III*. Addis Ababa, Ethiopia: UNICEF.

MOE, (2004). *A study of gender gap in enrolment, retention and performance in primary schools of five regions*. Addis Ababa, Ethiopia: WAD.

Odaga, A. & Heneveld, W. (1995). *Girls schools in sub-Saharan Africa*. Washington, DC: The World Bank.

Rocca, K. A. (2010). Student participation in the college classroom: an extended multidisciplinary literature review. *Communication Education, 59*, 185–213.

Shahidul, S. M. & Zehadul Karim, A. H. M. (2015). Factors contributing to school dropout among the girls: a review of literatures. *European Journal of Research and Reflection in Educational Sciences, 3*(2), 25–36. Retrieved from www.idpublications.org

Lyons, P. R. (1989). Assessing classroom participation. *College Teaching, 37*, 36–38.