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The Influence of Single-gender Schooling on Students’ Attitude, Motivation and Academic Performance. The Study of Second and Third Year Female Sociology Students at Mizan-Tepi University

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Abstract

This study is primarily concerned with examining the effect of single- gender class schooling on students’ attitude, achievement motivation and academic performance of third and second year female sociology students in Mizan-Tepi University. It emphasizes on how the state of being in female only class has influenced students’ attitude, motivation and, largely their academic achievement.

A cross sectional study of both qualitative and quantitative methods was employed in order to attain objectives of the study. The qualitative data has been collected (using in-depth interviews and focus group discussions) involving a total of 33 in-depth interview informants, 4 focus group discussions constituting 6 individuals in each group selected through purposive sampling from both batches. On the other hand, the quantitative materials have been gathered through employing survey involving a total 52 respondents. Besides, Likert scale has been used to determine the attitude of students regarding the single-sex schooling. Furthermore, achievement motivation inventory was administered in order to describe the degree of motivation among female only class students.

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In scene of the research outcomes, it has been revealed that students of both year levels has strong negative attitude about being in single sex class since their maximum score for attitude towards being in single sex class is 55. Concerning their achievement motivation, the data explicitly indicated that students have awfully lower level of achievement motivation. In other words, they are not only dissatisfied with their class setting but rather they have also shoddier level of need for achievement.

They study also discovered that the previous graduates who were in co-educational arrangement performed significantly better than second and third year students who learning in female only classes. This fundamentally entails the fact that female only class scenery has influenced students' academic performance in detrimental manner.

Keywords: single-gender schooling; attitude; motivation; academic performance; co-educational setting

1. Introduction

Ensuring the full integration of women in socio-economic development can be measured, conceivably, by examining their educational level [8, 11]. Education enhances the social status and self-image of women, boosts their ability to question the status quo, enables them to make decisions for themselves, and helps them to contribute their part for the well being the society [3, 4]. Conversely, girls and women at various corners of developing world are deprived of education at different levels [7, 10]

In Ethiopia, in the vein of others, the role of women has been lessened based on a long tradition of their segregation from education and development .Their involvement in the economic, social, political and cultural sectors of the country is gravely affected by cultural barriers and low expectations females [1, 12]. The enrolment ratio in Ethiopia is more than three times lower than some sub-Sahara countries [2].

As reaction to these many-sided problems of women, present government has integrated gender issues to various policy documents. Thus, within the constitutional framework, the New Education and Training Policy further articulated the need to address the longstanding inequity and discrimination suffered by Ethiopian women. In doing so, special attention will be given to women and to those students who did not get educational opportunities in the preparation, distribution, and use of educational support input [5,6].

Mizan-Tepi University is, being new establishment, could be a classic higher educational institution with poor facility, a low number of female students compared with male students, and a female population which lacks confidence and assertiveness.

In attempting to improve female students' status at the university, it is critical to remember that not all reforms lead to meaningful gains for students. Such an effort has resulted on change in particular— sex-segregated class— more than ever in the department of sociology. Though it was unintended, it has brought a different teaching–learning environment as well as outcomes that necessitate exceptional attention. The students in the department are well thought-out to have low-self esteem, poor class involvement and low academic performance in general.

It has been argued by students and instructors in the department that having single sex (only females) class both in the third and second year students, perhaps, principal source of weak academic performance and high attrition rate as compared to their senior batch of coeducational graduates. For instance, 75% of the second year sociology students (2012) are situated at the status of warning even this semester. Therefore, it is highly demanding to systematically look at the status and provide momentary remedies, for the most part, to second year students. More importantly, the study will offer its own insights on the contentious debate on the virtues and demerits of single-sex versus coeducational system at policy level in our country context.

2. Materials and Methods

2.1 Research design

In order to meet the objectives outlined, cross sectional study design will be employed to gather information on effect of single-sex class on achievement motivation, attitude and achievement of students in Mizan-Tepi university (MTU) using quantitative and qualitative methods.

2.2 Tools of data collection

The following methods will be used in order to obtain necessary materials

A) Survey

Data will be collected by means of semi structured questionnaire from both students and instructors in the department. All second and third year students in the department of sociology will be considered as total size of respondents. Besides, to determine the attitude of students regarding the single-sex schooling, the Likert scale will be employed. The questionnaire will be prepared in Amharic. In addition, achievement motivation inventory will be administered to 2nd and 3rd year sociology students

B) Focus group discussion (FGD)

Focus group discussion will be conducted among students as well as instructors. It will comprise 6 people in each group who are willing to take part in the study. A group discussion will be apprehended in permissive environment in order to uncover opinions, share ideas and perceptions with the participants.

C) In-depth interview

This will be carried out with students and teachers based on seniority and willingness in order to triangulate data gained through above data collection tools. The size of in-depth interview informants will not predetermined. It will directed by theoretical sampling. Theoretical sampling is the principle of grounded theory which dictates continuous process of dealing with the study subjects until the data collected becomes sufficient to respond to the stated research objectives. In view of that, the researchers will continue to interview informants until the information collected is saturated

2.3 Method of data analysis

The qualitative information collected through qualitative data collection tools will be analyzed manually through careful interpretation of meanings and contents, organizing and transcribing and summarizing in accordance with the issue under investigation. All the data, which will be collected in the local language, will be directly translated into English by the researchers. Effort will be also made to maintain the originality and clarity of information while translating it into English and transcribing it to text form. The quantitative data obtained through semi structured questionnaire will be analyzed by using various statistical tools and interpreted vigilantly in line with the qualitative materials.

3. Results and discussions

The purpose of this study was to examine the effect of single-gender class schooling on students’ achievement motivation, attitude and academic performance of third and second year female sociology students in Mizan-Tepi University. Students in second year (n=30) and third year (n=22), participated in a survey that contained attitudinal statements about female only class, achievement motivation and its association with academic performance. Students expressed agreement or disagreement with the statements on Cronbach's Alpha value of 11 items used for measuring students’ attitude toward being in female only class and that of achievement motivation inventory scale. The students were asked to write responses to a series self administered questions associated with single gender class and it’s encouraging as well as gloomy implications.

The reliability of measuring instruments for both attitude scales and achievement motivation scale is analyzed using Cronbach's Alpha test and the obtained result is shown in table 1.

Table 1 Items Reliability Statistics

Scales	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
Attitude scale	.587	.594	11
Achievement motivation scale	.710	.738	28

As observed from table 1, the Cronbach's Alpha value of 11 items used for measuring students’ attitude toward being in female only class is 0.587 and that of achievement motivation scale is 0.710. The results of inter item total correlations for both scales are indicated in the appendix’s section at the back.

STUDENTS’ ATTITUDE TOWARDS BEING IN FEMALE ONLY CLASS

As it has been cited in the first chapter, examining the attitude and achievement motivation of students in female only class is critical interest of the research. In order to measure the attitude of students, Cronbach's Alpha value of 11 items used for measuring students’ attitude toward being in female only class and achievement motivation

inventory scale was employed to determine students' motivation. Regarding the overall descriptive statistics about the attitude and achievement motivation for both year levels, the next table (table 2) reveals as follows.

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error
year level	52	2.00	3.00	2.4038	.06871	.49545	.404	.330
Attitude about single sex class	52	19.00	55.00	34.6731	.93721	6.75835	.331	.330
Achievement motivation	52	28.00	60.00	41.3077	1.33622	9.63559	-.191	.330
Valid N (listwise)	52							

As observed from the table the maximum score for attitude toward being in single sex class is 55 which mean that all students have strong negative attitude about being in single sex class. The mean score of 52 students about attitude toward being in female only class is 34.6731. This implies that many students are dissatisfied with being in female only class. Regarding the students' achievement motivation, out of the highest possible score of 140, the maximum score is 60.00 and the mean score for 52 students is 41.3077. The data reveals that students have extremely lower level of achievement motivation. The fact that they are females only in class room forbade them not to engage in their education actively.

In a similar vein to the above data, interview with students identified that they are discouraged with being in female only class. Such a negative sentiment is due to the fact that, for almost all students, it is bizarre learning environment which they are hardly come through. One in-depth informant indicated her situation when she begun to attend female only class as:

“For me, it was entirely frustrating incident when I found myself in single gender class. I had been learning in coeducational class which I was delighted with, but here I lost my enthusiasm to learn, vigorously take part in discussions and even to perform well academically. I have, beyond doubt, depressing feelings for being in this peculiar teaching and learning scenery and could fiddle with myself to it.”

In the same way, the following statement from the FGD reveals how much students are dissatisfied with their class of single sex.

“I, every so often, feel mortified to be in our class since we all excessively passive and inert. In all class, whether it is a question of memory or be it conceptual, we are utterly not responding. I think this is due to the fact that we lack confidence and drive to compete with each other which markedly tied to being in female class.”

And I discern that many of my class mates communicate their uneasiness in different ways that went to a level to falter not to attend class.”

It has also been pointed out in the interview that students’ achievement motivation is tremendously low which is decidedly associated to their single gender class setting. A second year student recited her experience in this regard as follows;

‘I have witnessed flashy decline in my engagement to achieve and perform better in class. At times, I feel like I turn out to be a different person. I think about how dynamic I was, for the most part, in high school. I have never had the difficulty of participation and I was fully motivated to attain good status. However, here it is absolutely unusual and I have gone astray of my passion which I reckon it will, in no way, be regained.”

The above cases noticeably reinforced the fact that the students have a gloomy sentiment about the single gender class veracity they have been experiencing and it has awfully worsen their keenness to achieve good grades.

Table 3: Attitude and achievement motivation of students in relation to year level

Group Statistics					
	year level	N	Mean	Std. Deviation	Std. Error Mean
Attitude about single sex class	second year	30	32.8667	5.67957	1.03694
	third year	22	37.1364	7.44053	1.58633
	Second year	30	41.2667	10.26522	1.87416
	Third year	22	41.3636	8.94185	1.90641
Achievement motivation					

From table 3; one can see that the mean score of third year($\bar{x}=37.1364$) is greater than that of second year($\bar{x}=32.867$) on the attitude toward being in female only class. This means that third year students responded more negatively for being in female only class. On the other hand, the mean of achievement motivation for both year level is approximately the same ($\mu = 41.2667$ and $\mu= 41.3636$ for both 2nd year and 3rd year respectively). Third year students react more negatively about being in female only class compared to second year students. This is may be because it was only exclusive to third year students to be in female only class in the record of the Department as well as the College of Social Science and Humanities. Whereas, second year students has come through the course of third year students whom they consider them as a model. It has also be underscored that third year students are not only found themselves in strange learning scenery rather they are made to be taught in atmosphere where other students in a range of departments learning in coeducational arrangement.

In discussing about this, interviewees draw round corresponding statement which uncovers their experiences. Third year student explains her experience in this regard as follows;

“We came across some humiliating occasions where we were being seen as less competent and pathetic by other department students due to the conventional perception tied to low of view girls which stems from the culture of our society. Besides, it is, to a certain extent, for the reason that we were the first batch in this regard.”

The above facts, without a doubt, signify that third year students has extremely negative attitude towards being in female only class largely due to the fact they were first to be such different learning situation where as almost all other department students are in coeducational setting. Hence, this made them prone to various offensive verbal abuse and foul languages which adversely affected their attitude.

Table 4: the relationship between students’ attitude toward being in female only class and achievement motivation

Correlations			
		Attitude about single sex class	Achievement motivation
Attitude about single sex class	Pearson Correlation	r= 1	r= 0.138
	Sig. (2-tailed)		.329
	Sum of Squares and Cross-products	2329.442	458.231
	Covariance	45.675	8.985
	N	52	52
Achievement motivation	Pearson Correlation	r= 0.138	r= 1
	Sig. (2-tailed)	.329	
	Sum of Squares and Cross-products	458.231	4735.077
	Covariance	8.985	92.845
	N	52	52

The result in the table 4 clearly shows that the Pearson’s r coefficient, **r= 0.538 implies that** there is a moderate relationship between attitude toward being in female only class and students’ achievement motivation. To put differently, students are not only dissatisfied with their being in female only class but also they have lower level of need for achievement. From this result we can infer that lack of male students in the class room affects students’ interest in putting maximum effort for their academic success. This implies that being in a mixed sex class has motivation function for learners while being in a single sex class discourage learners’ achievement motivation table 5.

From table 5, there is statistically significant difference in attitude between second year and third year students. The sig 0.023 implies that $t_{(df, 50)} < 0.05$. The mean attitude score of 37.1364 with standard deviation of 7.44 by third year students is significantly different from that of second year students whose mean is 32.87 with

standard deviation of 5.68. The result express that third year students are highly dissatisfied with being in females only class than second year students do.

Table 5: Independent Samples Test; Whether there is difference in attitude toward single sex class between second year and third year students; independent sample t-test was computed and the obtained result is given in statistically significant

		Levene's Test for Equality of Variances		t-test for Equality of Means							
										95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Attitude about single sex class	Equal variances assumed	1.398	.243	-2.348	50	.023	-4.26970	1.81825	-7.92176	-.61764	
	Equal variances not assumed			-2.253	37.785	.030	-4.26970	1.89517	-8.10699	-.43240	

In correspondence to the above data, during the interview it was possible to identify some degree of variation among the attitude of the two batches. The following statement from interview with the second year student strengthens this fact;

“At the beginning I was very much depressed and felt dejected when I found that all my class mate students were girls. Nevertheless, when I discovered that our senior batch too is female only I got relieved and start to consider it is normal despite the fact that I am not by its side. I contemplate that, to some extent, it made us to think that we can succeeded and go through their way. However, in any way such an arrangement should be evaded.”

As can be observed from t-table, there is no statistically significant difference between second year and third year females only class students in achievement motivation ($p.972 > 0.05$). This implies that year level has no considerable influence on students’ academic motivation as the mean score of the achievement motivation measure for both groups is almost same; 31.2667 and 31.3636 respectively.

Table 6. Whether there is significant difference between second year and third year students in achievement motivation, independent sample t- test was run and the result is as in the following

Table 6: Independent Samples Test for year level and achievement motivation											
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Achievement Motivation	Equal variances assumed	.968	.330	-.036	50	.972	-.09697	2.73151	-5.58337	5.38943	
	Equal			-.036	48.441	.971	-.09697	2.67337	-.036	48.441	

$p > 0.05$ is not significant as $t(df, 50, 0.972 > 0.05)$.

As can be observed from t-table, there is no statistically significant difference between second year and third year females only class students in achievement motivation ($p.972 > 0.05$). This implies that year level has no considerable influence on students' academic motivation as the mean score of the achievement motivation measure for both groups is almost same; 31.2667 and 31.3636 respectively.

It possible to find that with variation in the year level students' motivation to achievement good grade remains unchanged due to the fact that there prevails nothing which helps them to cope up with their new and strange

learning scenario. In connection this fact, the following statement from FGD discussant strengthens the argument that students' motivation is unaffected despite their move in year level.

“I am, by now, a graduating student and working to complete my study here. When I look back my educational achievement, I felt that I did not exert my full potential that could be easily seen from my records. In my view, I was too flaccid and lack curiosity that could predominantly the reason for my poor performance which by extension tied to our class setting. In all my way through, what derives me is that I only yearn to be graduated and make my family happy. That is the only source of enthusiasm for me. Any ways, I hope I am done now.”

To examine the impact of single sex class on students' academic performance the CPGA of three groups such as second year and third year females and the previous graduate batch of mixed sex class was compared. To detect the difference among three batches one way ANOVA was computed and the obtained result is shown in table 7 and 8 below.

Table 7: Descriptive statistics for CGPA of the three groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Second	30	2.0000	.78784	.14384	1.7058	2.2942	1.00	4.00
Third	22	2.1364	.88884	.18950	1.7423	2.5305	1.00	5.00
previous graduate	35	2.7143	.92582	.15649	2.3963	3.0323	2.00	5.00
Total	87	2.3218	.92125	.09877	2.1255	2.5182	1.00	5.00

From the table one can observe that the mean CGPA for 2nd year, 3rd year, and previous graduate is 2.00, 2.14, and 2.72 respectively. Whether there is statistically significant difference in CGPA among the three groups, the ANOVA test result is as following table.

Table 8: one way ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.255	2	4.627	6.099	.003
Within Groups	63.734	84	.759		
Total	72.989	86			

As indicated in ANOVA summary table there is statistically significant difference in CGPA among the **three** groups, $F_{(df, 84)}$, sig 0.003 is <0.05 . Furthermore, to identify where the difference lies Post Hoc Tests for multiple comparisons was run and the result is shown in table 9.

Table 9: Tukey’s Post Hoc Tests for Multiple Comparisons

(I) level	(J) level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Scnd	Third	-.13636	.24450	.843	-.7197	.4470
	previous graduate	-.71429*	.21672	.004	-1.2314	-.1972
Third	Scnd	.13636	.24450	.843	-.4470	.7197
	previous graduate	-.57792*	.23699	.044	-1.1434	-.0125
previous graduate	Scnd	.71429*	.21672	.004	.1972	1.2314
	Third	.57792*	.23699	.044	.0125	1.1434

*. The mean difference is significant at the 0.05 level.

As observed from the table, there is significant difference in academic performance between second year and previous graduates, as sig 0.004 is <0.05. Similarly, the mean CGPA difference is significant between third year and previous graduates as sig 0.044 is <0.05. However, there is no statistically significant difference in the mean CGPA between second year and third year students. From the result we can infer that previous graduates who were in mixed sex class performed significantly better than second year and third year students who are learning in female only classes. This implies that being in female only class has affected students’ performance very in a subdued manner.

Table 10 The relationship between achievement motivation and CGPA/ academic performance for both second year and third year students was computed using Pearson product moment correlation coefficient and the obtained result is shown in table below.

Correlations			
		Achievement motivation	CGPA
Achievement motivation	Pearson Correlation	1	-.010
	Sig. (2-tailed)		.946
	N	52	52
CGPA	Pearson Correlation	-.010	1
	Sig. (2-tailed)	.946	
	N	52	52

The result of Pearson correlation between achievement motivation and CGPA revealed that there is almost no relationship between the two variables. As can be observed from the table, $r = -0.010$ means students achievement motivation and their CGPA are seldom related. From the obtained result we can say that there is no

variability in achievement motivation among students as almost all of them score low. The result reveals that even though there is students' poor level of motivation, their average CGPA score for both 2nd year and 3rd year is in pass status. Nevertheless, if the mean is affected by extreme score such as the difference between grade of 3.80 and 1.90, the obtained result may not be valid.

4. Conclusion and recommendation

4.1 Conclusions

In looking at the data analysis and interpretation, the following conclusions were drawn:

1. Students in both batches have tremendously lower level of achievement motivation.
2. students has extremely negative attitude towards being in female only class largely due to the fact they were first to be such in different learning situation
3. It possible to find that with variation in the year level students' motivation to achievement good grade remains unchanged due to the fact that there prevails nothing which helps them to cope up with their new and strange learning scenario.
4. Previous graduates who were in mixed sex class performed significantly better than second year and third year students who are learning in female only classes
5. Being in female only class has affected students' performance very in adverse manner.

4.2 Recommendations

Based on the discussions and conclusions made, the subsequent recommendations are forwarded:

1. A different pedagogical tools have to be adopted from the experience of single-gender schools in Addis Ababa and other parts of the country
2. Enhancing the motivation of students through smooth class room environment and mounting their self-esteem
3. Due attention has to be given such unprecedented teaching-learning environment as once it happens in order to deal with the challenges posed by it
4. Special support through tutorial services, Academic advising and counseling and other sorts of assistance have to be provided to the students
5. The teachers of students has to change their view of female girls which basically emanates from the society and enormously affects teacher-student relation, by extension, the whole performance of students

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