

**A Comparative Study of Students' Achievement in the Previous and Current  
Curriculum: the Case of St. Mary's College  
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*Abstract*

*This study has been initiated with the understanding that analysis of students' achievement has broad implications in assessing the condition of educational achievement and in formulating and evaluating designed curriculum. Though the link between trends in test scores and the curriculum in concern is far less straightforward than many people assume, trends in average test scores have become common criteria for gauging the effectiveness of educational programs.*

*The major objective of this research project is answering the research question: Is there a difference in achievement of students from the current and the previous curriculum? In order to address this research questions the study has identified two groups of population. These are groups of students enrolled in degree program which joins the college through on an advance standing program on the one hand and those finishing their preparatory education and join the college on the other. Accordingly, samples of 133 students are randomly selected taking St. Mary's College as a case. Questionnaire has been designed and administered to these sample populations as to gather information on other major intervening variables (socio, demographic, and economic variables).*

*The result obtained has demonstrated that there is a difference in test score (which is a proxy variable used here in measuring achievement) of students from the current and the previous curriculum. Accordingly students in the old curriculum were found to be better off in there mean cumulative GPA on general, major and language (English) subjects in particular. The study recommends the need to have a through evaluative research considering the out put of the new educational reform.*

## **1. INTRODUCTION**

The social development of Ethiopia in general and the education sector in particular is characterized by poor performance. By the Sub-Saharan standard the country's educational system is said to provide the lowest quality and access to education . For instance, only 51 percent of the school age population attends primary school, whilst secondary education is accessible to only 10 percent of the age group. Furthermore, the education has witnessed a significant decline at quality in various levels.

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It is now more than a century since modern education was introduced in Ethiopia. So far in response to the strategic problems the education faced and according to Seyoum (1996) as to meet its goal the system undergone new changes along with the political changes. In spite of all these, the educational reform is in short of attaining intended results (Seleshi: 2001).

### **What is Educational Reform?**

The history of education is a story of change. Many African higher education institutions are undergoing various reforms to face the challenging of a world which is constantly changing (Yawson: 1998). In doing all these, the ethics of curriculum change have to be considered. In relation to this Neary (2002:51) stated the following:

*To change the curriculum (or some aspect of it) is to experiment. Experiments do not always work. Educational experiments involve learners who will only pass our way once. Learners can be harmed (perhaps for life) if an experiment fails in what it set out to do or if an experiment or innovation results in learners receiving a widely differing experience from that of their contemporaries or predecessors. Change again therefore has a great responsibility to clarify their aims, to make value judgments explicit, to gain the consent of others involved and to monitor and evaluate the changes.*

Educational reform has been conducted to achieve certain goal. Bucher (1998) noted that the objective of these reforms is to produce more of a known quantity or quality; in most cases the objective is to reduce diversity; to bring learning closer to the specified standard.

The introduction of a new curriculum, text book, development or renewal, decisions to design and implement a new syllabus, changes in forms and procedures of assessment, the substitution of new methods for old, the provision of new equipment are all aspects of reform innovation or change (White:1988).

Changes in educational system would emerge from technological change, social changes, demands from individuals/ individual need, recommendations made as a result of research studies are some of the reasons for educational reform. Furthermore, the process of change/reform should embody the practitioners willing instead of relying on political ideology and financial resources (Nearly: 2002).

In short, educational reforms could largely be influenced by three forces – research output, social change and technological innovations.

Effective educational reform should be client – centered, purposive and evolutionary (Lewin and Stuart, 1991). Further stated that the reform is for the benefit of the clients of education systems (Students, parents, employers, Communities) and those who work in them (teachers, administrators, planners and policy makers).

The most appropriate ways of ensuring client –centered innovation is by valuing participation, consultation and negotiation of meanings rather than prescription autocracy and imposition of solutions to problems that are not grounded in the needs of clients (Lewin and Stuart, 1991).

A bottom up reform -a participatory approach is more effective than a top down reform. Through the user is the practitioner and would fully accept the reforms in concern. Bucher (1998) further added that the prime reason why innovations and reforms fail to achieve their potential is that they do not receive adequate support or if they do not command the support of implementers. Involvements ensure a sense of ownership (Bucher, 1998). Mc Avoy (1996) as cited by Hancock (2001) noted that if it is change upon change without any consultation; the government is about to reform its own reforms.

The other salient feature of effective educational reform is its purposive ness. Lewin and Stuart (1991) have stated that purposive change is the soul of policy-making systems and the source of professional satisfaction.

Lewin and Stuart (1992) opt on saying that recognizing evolutionary change rather than revolutionary change as the third major factor for effective educational reform. Evolutionary reform means change built on the existing practice, values and needs perceived by clients.

If these all are not so, educational reform would face resistance from both the practitioners and the community as well. Educational reform may be inevitable but is not always for the better (Neary : 2003). This might be one of the reasons for the existence of resistance and failure.

### **Curriculum Changes**

Education reform is viewed as a means of setting more appropriate targets for students, focusing staff development efforts for teachers, improving instruction and instructional materials and encouraging curriculum reform.

The contemporary political economy look for a curriculum change that allows the transformation production of a workforce of highly but narrowly skilled to broad based curriculum that needs workforce to be both academically and technologically competent and versatile, in line with the rapid technologically advances(Brown and lauder:1992).

In fact, in order to realize curriculum change and meet the objectives of education outlined in the reform policy, the change should take into account the larger socio-cultural context. Furthermore, it should also not abandon the structural contexts of the educational system (Cornbleth: 1990). Change in curriculum would be in term with established norms if it is followed by the corresponding reforms in other related sectors of an educational system (Shiundu & Omulando: 1992).

Policymakers hope that changes in curriculum will cause teachers and schools to do things differently. In this atmosphere of reform, student performance and achievement is the centerpiece of many educational improvement efforts.

As a component of curriculum planning and development, in order to measure the effectiveness of educational reform in general and curriculum change in particular an assessment of inputs, processes, outputs and results of the programs is imperative. So far, in the history of the modern education of Ethiopia, including the recent one, five important reforms were made and accompanied by evaluative studies as to gauge their effectiveness.

### **1.3. Major Educational Reforms in Ethiopian Education**

#### **The Evaluation of the Long Term Planning**

This was the first reform on Ethiopian education under the auspices of **UNESCO** in 1953. It aimed to examine the social contradictions that the educational system had. In order to come up with strategic recommendations an evaluation process has been made on the existing school system, scheme of work and academic standards at all levels. Based on the findings of the study the following recommendation has been forwarded on:

- I. The introduction of community school for basic education.
- II. Controlled expansion of the existing primary, middle, academic, secondary, technical and commercial secondary schools.
- III. Introduce technical institutions and college of engineering, and
- IV. Teaching training and mechanisms of financing.

### **2 The Education Sector Review**

This could be taken as a major attempt to reform the education sector. The reform has been based on a study taking the main objectives of analyzing the education and training system of Ethiopia and its capacity of promoting economic and social and cultural developments, suggesting ways on improving and expanding the system and formulating the aims and objectives of Ethiopian education. Findings from this study indicated that Ethiopian education had no clearly stated objectives, and inadequate to the country's reality.

### **3 Evaluative Researches on the General Education System of Ethiopia**

This reform has been based on the study that was conducted in the 1980's focusing on general education from the primary to the secondary level in the area of curriculum development, educational administration, structure and planning and educational logistic, supportive services and manpower training. As to the findings of the study there were expansions in the education service but low quality.

### **4 The Evaluative Study of the General Polytechnic Education**

This evaluative study was carried out in 1983 (Marew: 2000) to examine the strength and weakness of the general Polytechnic Education for the sake of further improvement and development. Based on the recommendations the general Polytechnic education was experimented in selected sample schools. The system use Amharic as a medium of instruction for the experimental purpose at grades 1-8. In this process, the quality of the implementation of the experimental program was compared working with the ordinary program, which was with the so-called transitional curriculum. With the end of the Cold War and the declaration of the Mixed economic Policy the former government abandoned the program.

### **5 Education Reform of the 1990's**

The new Education and Training Policy has been formulated on the understanding that the former educational system of the country was suffering from multifaceted problems such as the problem of relevance, quality, accessibility, equity, mode of delivery, inadequate facilities, insufficiently trained teachers, and shortages of books and other teaching materials (M.O.E., 1994).

In response to these challenges, the recent reform proposed responses by recommending changes in the school curriculum, language of instruction, teacher education programs and the examination system.

These reforms were supposed necessary strategies for making education more responsive to the reform objectives which included: greater emphasis upon problem solving at all levels, increasing the numbers of teachers needed for greatly increasing demands, wiser use of resources, increasing democratic culture, more efficient dissemination of science and technology, and making education more responsive to societal needs.

As a result the education sector have shown reform through the changes in the school curriculum, the decentralization of education, the use of regional languages for instruction , and multiple perspectives in addressing diversity issues in education.

In the course of implementing the new reform some challenges appear to be emerging regarding the compatibility of the decentralized curricula, use of regional languages, teacher education, and the administration of the national examination.

Quality improvement in the overall education system of the country is still impeded by wastage in the form of drop-outs, absence of relevant and adequate educational materials, the poor learning environment, and shortage of qualified educational personnel, coupled with acute financial constraints.

## **1.4 Statement of the Problem**

Assessing of the prevailing reform efforts and the emerging areas of challenges in the Ethiopian educational system is vital to better understanding the problem and for the identification of possible coping strategies.

Curriculum and instruction make significant contributions to academic success for students. This study is a modest attempt to initiate others by bringing an important but controversial issue in the plat form. It begins through on the assumption that there is a link in test scores and the curriculum in concern. Test scores have become criteria for gauging the effectiveness of educational programs.

## **1.5. Objective of the Study**

The Major objective of this study is to answer the research question: is there a difference in achievement of students from the current and the previous curriculum? The answer to this question have been believed to initiate further studies that evaluate curriculum change based on information on achievement in relation to the working curriculum while other confounding factors are treated.

## 2. Methodology

This study is an explanatory research which aims at identifying the existing dimensions of difference in achievement between groups of student that are enrolled in the new and old curriculum.

The following assumptions have been made in conceptualizing the research question:-

1. Individual difference (Cognitive skills, health, prior experience etc...) is randomly distributed across the sample population.
2. Educational Programs and services are similar across the institution.
3. The system of evaluation of the college is similar.
4. Teacher characteristics are randomly distributed.

The study was conducted at St. Mary's College by considering the group of students, who have joined in the degree program, entered the college attending in the new or old curriculum a prior. The sample size to the study has been determined from the following statistical formula:

$$\text{Sample Size (n)} = \frac{(Z_{\alpha/2})^* (Z_{\alpha/2})^* (\alpha)^* (\alpha)}{(\text{Error term})^2}$$

Accordingly at 9% percent error term, 133 students were found to be representative and these numbers of them were considered in the study. This sample population has been selected from both groups of students which are enrolled in the old (65) and new curriculum (68). In order to determine the sample size taken from each group proportional sampling technique has been employed. This report, like many other studies of education, focuses on students' test scores as a measure of student success. Thus, the independent variable in which achievement is measured is taken from students' general,



language and major subject test results for two semesters. On the other hand, to control for some of the confounding demographic and socioeconomic variables, a 17-item questionnaire has been administered.

To assess the effect of an explanatory categorical variable—old and new curriculum—on a continuous variable, which is the tested results of the students, Analysis of Variance (ANOVA) has been employed and the t-statistic is computed to answer the research question: is there a difference in achievement of students from the current and the previous curriculum?

Data from both primary and secondary sources has been entered and analyzed through a Statistical Package for the Social Science (SPSS).

### **3 Results and Discussion**

To observe the achievement differences in a group of students which are enrolled in the new and old curriculum, t-test was used in this exploratory study. Accordingly, a comparison of mean cumulative GPA for general, major and language subjects has been made. Furthermore, the comparison has been made across the different levels of student's performance.

In the analysis process we model the differences in students' test scores across the two groups—Old versus New Curriculum.

The data available for this study provides an opportunity to estimate the relative importance of other social and demographic characteristics of the students in determining the test scores and the procedure allows us to take account of the fixed characteristics of students, schools, and parents that might confound the analysis.

To see whether the groups of students which are enrolled in the old and new curriculum differ on general tested achievement, their mean CGPA (Cumulative Grade Point Average) for two semesters was compared (see table 1).

**Table 1 T- Test Values, Means and SDs (Standard Deviation) of CGPA (For Two Semesters) For Students enroll In Old and New Curriculum**

Enrollment of the respondents	Law		Accounting		Management		Marketing		Merged	
	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd
New (n=68)	2.4505	.4941	2.4038	.4927	2.5227	.6622	2.2755	.6399	2.4160	.5403
Old (n=65)	2.5035	.4176	2.4454	.6167	2.6236	.5552	2.5683	.5942	2.5067	.5379
<b>t-test</b>	2.231*		2.167**		3.497*		3.561**		<b>2.431*</b>	

\*p<0.05, \*\*P<0.01

Student's general tested achievement result during two semester stay at St. Mary's College have shown a significantly variation in relation to their enrollment (in the new or old curriculum). According to the findings shown above (Table 1) students in the old curriculum have achieved a higher CGPA compared to the students' achievement which is enrolled in the new curriculum. This is true across all departments. Overall, the differences in achievement between the two groups are substantial and statistically significant.

**Table 2 T- Test Values, Means and SDs of Cumulative GPA at different level of performance for Students enrolled in Old and New Curriculum.**

Enrollment of the respondents	Level of performance					
	high		average		low	
	Mean	SD	Mean	SD	Mean	SD
New	2.533	2.511	2.310	2.289	2.242	2.222
Old	2.641	2.524	2.445	2.413	2.105	2.153
<b>t-test</b>	<b>3.167**</b>		<b>2.824*</b>		<b>2.45**</b>	

\*p<0.01 \*\*p<0.05

Furthermore, on the bases of the classification of the entry behavior the study has compared the variation of student’s tested result across the different level of performance (High, Average and Low) and the above fact has been replicated. As shown in table 2, the difference in the Cumulative Grade Point Average among the two categories is significant and those students enrolled in the old curriculum have shown a significantly higher result compared to those students in the new curriculum in all level of performance (high, average, and low).

According to the new curriculum the medium of instruction at the primary level has become the local language(s) that each regional/zonal council approves. The working language for the federal government, Amharic, is introduced as a subject at a grade three in schools located where Amharic is not a national language, while English is used as a medium of instruction from secondary education onwards. On the basis of this curriculum structure there is a widely spread impression about the learner’s competence and mastery of English language.

**Table 3** A Comparison of Mean Difference on language (English) achievement.

<b>Enrollment of the respondents</b>	<b>Mean</b>	<b>SD</b>
New (n=68)	1.9118	.61657
Old (n=65)	2.6615	.73478
<b>t-test</b>	<b>3.583*</b>	

\*p<0.01

This study has also attempted to see a difference in language competence among students which are enrolled either in the old or new curriculum. This has been shown in the above table (table 3) and a similar pattern has been evident as underlined before. Accordingly, students which joins the college after completing in the old curriculum are found to be better off in there language competence. This statistically verified to be significant as well.

#### **4. Conclusion**

Overall, the comparison in achievement between the two groups of students, which is in the old versus new curriculum, has shown a difference and this is substantial and statistically significant. Specifically, attempts to verify the relative difference in achievement between groups of students enrolled in new or old curriculum come up with students from the old curriculum have achieved a better grade during their stay in the college. This is evident both in the comparison of mean CGPA in general, major and language (English) subjects.

The result in the examination of the difference in achievement between the different socio demographic variables such as age, sex, marital status, type of school and parent's education and socialization are quite small, and there is no consistent pattern over the groups.

To reach in to a secure remark on the link between achievement and the curriculum in concern and to measure the effectiveness of the new educational reform there is a need to have a through and inclusive evaluative research considering at the out put level.

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