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# **RESEARCH ARTICLE**

# QUALITY AND QUANTITY TRADE OFF IN EDUCATION - A MIRAGE IN KENYA

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ARTICLE INFO	ABSTRACT					
Article History: Received 05 <sup>th</sup> December, 2018 Received in revised form 23 <sup>th</sup> January, 2019 Accepted 09 <sup>th</sup> February, 2019 Published online 31 <sup>st</sup> March, 2019	Education policies in Kenya are based on the philosophy spelt out in Sessional Paper No. 10 of 1964 on African Socialism and its Application to Planning in Kenya. The thrust of the Jomtien Conference of 1990 was that all children, young people and adults have the fundamental right to benefit from an education that would meet their basic learning needs. The Dakar Conference in Senegal in 2000 obliged all countries of Africa to achieve education for all by the year 2015. One of its principal goals aimed at improving all aspects of quality of education so that recognized and measurable learning					
<i>Key Words:</i> Quality, Quantity, Performance, Quality Education.	outcomes are achieved by all. To respond to this urge, the growth in the number of schools, colleges and universities, both public and private, has been on the increase to absorb the growing number of learners. In universities evening classes have become a beehive activity similar to tuition in primary and secondary schools. However, many students continue to miss form one and university places in Kenya due to lack of fees and adequate classrooms. Quality education is the degree of achievement in education as evidenced by performance in national examinations, transition from one level of education to the next and retention in the education system. It is influenced by factors such as the quality of student intake, physical facilities, teachers, the curriculum, availability of textbooks, good discipline and the financing of education. Poor performance is a result of low quality of education and has been blamed on poor teaching methods, absenteeism among students and teachers, irrelevance of the curriculum and the inadequacy of the examination system itself. The questions that arise include:					
*Corresponding author: Dr. Julius Otieno Gogo	What is the optimum level of the quality-quantity trade off? Is it achievable in Kenya?					

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## **INTRODUCTION**

The thrust of the Jomtien Conference of 1990 was that all children, young people and adults have the fundamental right to benefit from an education that will meet their basic learning needs. Indeed, one of the principal goals of The Dakar Conference in Senegal in 2000 aimed at improving all aspects of quality of education so that recognized and measurable learning outcomes are achieved by all. In response to this urge Kenya has had an increase in the growth of the number of schools, colleges and universities, both public and private, to absorb the growing number of learners. Vision 2030 recognized five major challenges facing the education sector in Kenya: how to meet the human resource requirements for the rapidly changing and more diverse economy; ensuring that the education provided meets high quality standards with relevant contents to the needs of the economy and society; moving rapidly in raising the standards of the regions that lag behind in enrolment to bring them to par with other areas; improving the overall transition rates, particularly from secondary to tertiary levels; and creating a cohesive society imbued with a culture of hard work and efficiency and one that values transparency and accountability, respects the rule of law, and is concerned about the environment (Republic of Kenya, 2007).

This calls for a number of questions to be asked: What is the optimum level of the quality-quantity trade off? Is it achievable in Kenya?

History of education in Kenya: Historical records reveal that Kenvans had access to education as far back as 1728 with a Swahili manuscript Utendi wa Tambuka (Book of Heraclius) attesting to this. The Christian Missionary Society (CMS) set up one of the earliest mission schools in the country at Rabai in Mombasa in 1846. During the colonial era, the number of Kenyans with exposure to education steadily increased and a good number of them were privileged to proceed abroad for further education. Education policies in Kenya after independence are based on the philosophy spelt out in Sessional Paper No. 10 of 1964 on African Socialism and its Application to Planning in Kenya. This philosophy called for political equity, human dignity, social justice and equal opportunities for all citizens (Okojie et al., 1996). All commissions on education starting with the Ominde Commission of 1965 were geared towards achieving this goal. These have led to reviews of education curriculum to suit the needs of the country.

Access to Education in Kenya: There are three reasons for the rise of social demand for education in developing countries

such as Kenya since World War II: the mounting educational aspirations of parents and their children; the stress of public opinion on educational development as a pre-condition for overall national development; and the population explosion that acted as a quantitative multiplier of the social demand. These reasons explain the use of social demand and basic needs approaches to planning of education in Kenya. The costbenefit analysis and manpower requirements have not been used extensively. Increased participation rates in education have been a matter of high priority in Kenya. The gap between the desire for education and school admission has been great. Indeed, the strategies the education system has used to deal with the demand-supply gap are that Kenya has:

- (i) Thrown its doors open and let everyone in as long as they like and go as far as they please. This has been facilitated by the free primary education and the free tuition in secondary schools. It has satisfied social demand for education at the expense of high dropout rates, poor quality and the waste of public resources. Table 1 shows the number of schools and enrolment for 2009 and 2016. From the table the number of schools and enrolment increased tremendously between 2009 and 2016. The highest increase was at the TIVET institutions where there were 117.8% increase in the number of institutions and 150.1% increase in enrolment. The universities followed at 87.1% increase in number and 295.3% increase in enrolment.
- (ii) Given everybody a chance for primary (elementary) education but a severely selective process governs who joins secondary education. This has resulted in the production of educated elite favouring the middle and upper class citizens while the majority poor have been disadvantaged especially at tertiary and university levels. However, the current policy of 100% transition to secondary education will complicate matters in terms of physical, human and financial resources.

In effect, the major factor inhibiting access to education and training in Kenya include inadequate infrastructure and regional and gender disparities. Although primary education is free, challenges exist in form of overcrowded classrooms, especially in rural and ASAL areas and urban informal settlements and a decline on quality. Inadequate water supply and poor sanitation facilities inhibit access in early childhood centres and primary schools. A survey by Allavida Kenya (2012) showed that if the non-formal schools in Kibera slums were fully operational they could take an extra 5017 thereby increasing enrolment in these schools by 44.9%. But due to lack of facilities they could not increase their enrolment. At secondary level, inadequate facilities are a challenge. The problem has increased after the introduction of free tuition secondary education. The other problem is that many schools were set up but they do not have enough number of students to make them economically viable. For example, in 2007 there were 1,180,267 learners in 6485 secondary schools (Republic of Kenya, 2012) giving an average school size of 182 learners per school. This is basically equivalent to one stream which do not benefit from economies of scale. At college and university levels, infrastructure challenges are of a concern especially in newly chartered universities, university constituent colleges and campuses. A number of universities have opened satellite centres in small towns across the country and the issues of facilities and staffing is questionable. In addition, delivery of education and training services in special education is

constrained by high cost of relevant equipment and inadequate teachers.

Quality of Education: According to Downey et al. (1994) quality is a degree of excellence that is defined by the customer, tied to customer needs and expectations, have various dimensions of customer satisfaction with customer needs and expectations changing over time. Quality, therefore, has the ability to satisfy stated or implied needs. Coombs (1968) define quality of education as that education being offered that fits the real needs and values currently and prospectively of a given country. Hence quality education is the degree of achievement in education as evidenced by performance in national examinations, transition from one level of education to the next and retention in the education system. For example, at the secondary level quality education is the result of good performance (or grades) in KCSE examination. The performance at national examinations has been average. Learners have not been performing generally well in all subjects as shown in Table 2 for subjects that had more than one hundred thousand candidates for the years 2009 and 2017. There was a high increase in the number of candidates in 2017 and performance remained low. From Table 2 the sciences and mathematics were very weak. For example, the number of candidates in Biology increased by 82.3% from 299,302 in 2009 to 545,666 in 2017 while the performance went down by 30.4%, from 27.2% to 18.93%. It is expected that an average of 50% and above would be ideal. This is in contrast to subjects that had low enrolments such as German that had a mean of 64.0%, Aviation Technology (61.1%) and Metalwork (60.8%) in 2009 and 57.57%, 63.47% and 57.53% respectively in 2017. In addition, the number of candidates scoring a mean grade of C- and below was 438,914 accounting for 71.9% of the total candidates for 2017 (Kenya National Bureau of Statistics, 2018).

This implies that there is a high wastage rate in secondary education. At the university level there has been an outcry on the level of performance of students. A research by Mottanya (2013) noted that employers were more interested in graduates from private universities than those from public universities. The former appeared more competent and exuded high personal confidence. This is because private universities are more in touch with what employers need and prepare the students accordingly. Employers are looking for graduates that exhibit self-drive, creativity and innovation, ability to think and solve problems, leadership and willingness to continue to learn on the job. According to the researcher the challenge is that students are spoon-fed at universities and they do little on their own. With the high level of unemployment, we need graduates who are job creators and not job seekers. In a study by Gogo (2014) among students in a privateuniversity, the students recommended that lecturers improve their class attendance, involve students in class, have more evaluation in class instead of relying on CATs, know the level of understanding of students before starting to teach, use technology, use local books and examples that are relevant, and give adequate assignments. These would improve performance of students. The transition rate from one level of education to another is below expectations and many learners are forced to drop out of the way. For example, the transition rate from primary to secondary for the years 2005 to 2010 is shown in Figure 1. From the figure there has been a consistent increase in the transition rate though quite a big percentage of learners are still locked out of secondary education.

	2009	2016	% Increase	2009	2016	% Increase
	Number of Schools			Student Enrolment		, o mer cuse
Primary	22,876	33,442	46.2	8,986,400	10,285,388	14.5
Secondary	5,639	9,942	98.1	1,472,634	2,723,688	84.9
Teacher Training	179	283	43.3	26,324	41,707	58.4
TIVET Institutions	597	1300	117.8	80,981	202,556	150.1
University	31	58	87.1	142,789	564,507	295.3

Table 1. Number of Education Institutions and Enrolment in Kenya, 2009 and 2016

Source: Statistical Abstract, 2013 and 2018

Table 2. Performance per Sub	iect in KCSE in	2009 and 2017
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	2009		2017	
Subject	Number	Mean (%)	Number	Mean (%)
English	334,883	39.3	610,841	37.36
Kiswahili	334,822	38.6	610,393	34.72
Mathematics	335,014	21.1	609,523	24.48
Biology	299,302	27.2	545,666	18.93
Physics	104,188	31.3	160,186	35.05
Chemistry	328,922	19.1	606,518	24.05
History & Government	210,622	45.9	421,316	40.84
Geography	112,446	38.9	156,063	44.76
Christian Religious Education	217,404	42.8	473,944	38.07
Agriculture	137,217	38.8	247,270	23.38
Business Studies	146,959	35.4	270,754	31

Source: Statistical Abstracts, 2011 and 2018

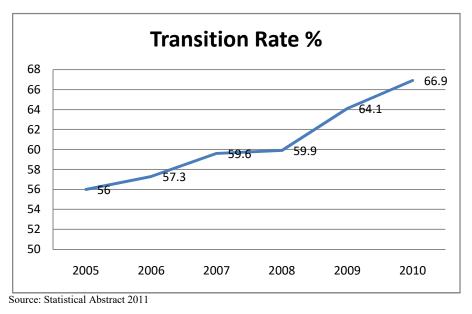


Figure 1. Transition Rate from Primary to Secondary in Kenya (2005 - 2010)

Similar situations are prevalent at higher education where only a small fraction makes it to the university.

#### Factors influencing quality of education in Kenya

(i) Quality of incoming students: The characteristics of the students (i.e. background) admitted largely determine the school's output. Difference in attainment in national examinations result in the difference in the intake abilities of students coupled with their level of socio-economic backgrounds. Pupils with lower qualifications do poorly and are susceptible to dropout. The quality of schooling tends to vary directly with the propensity of the district and the income level of the parents (Ghai *et al.*, 1979). This explains why access to education is unevenly distributed in Kenya. Most communities in rural areas and urban slums are poor. This has an effect on the level of attainment of their children which is generally low. These learners often go to low quality schools. In higher education the quality of students depends in the first place on the aptitudes and motivations of those leaving

secondary education and wishing to pursue studies at the higher level. But many students find themselves in programmes that they did not apply for; this is in itself a negative motivator to learning and performance. Perhaps those who join private universities perform better because they have the opportunity to select the programmes they are interested in even though some are forced by parents and sponsors to take courses they do not want.

(ii) Teacher qualifications and workload: Teacher qualifications, experience and amount of education and knowledge are positively related to student achievement. However, qualitative deficiencies arise because inadequate resources are put into training and equipping teachers and ensuring adequate performance on their part. For example, in primary TTCs trainee teachers do all subjects and are expected to teach them even if they failed those subjects themselves. The teacher should have been exposed to methods of teaching their subject areas (i.e. pedagogy or professional training). This is seriously lacking at the university level. The motivational level of the teacher is very important. It is impossible for education to match competitive salaries attractive to top-flight personnel. This has been seen in strikes that are persistent in the country over salaries and allowances. For instance, the negotiated 1997 pay package for primary and secondary school teachers haunts the government to date. Our lecturers in public universities are in similar situations while their counterparts in private universities are quietly grumbling. The other issue is teacher shortage at all levels of education. We currently have a shortage of about 40,000 teachers in primary schools and about 20,000 in secondary schools (Republic of Kenya, 2012). This has resulted in a low teacher/pupil ratio. For example, in 2009 the teacher/pupil ratio was 1:45 in primary schools. In some counties such as the ASAL regions the situation is worse. The issue of teacher workload is serious. With the high number of learners in a class the teachers are faced with heavy workloads. At the primary school level teachers have no free time. For example, you may even find seven teachers including the head teacher in a school that has classes one to eight. The number of lessons for secondary school teachers has gone up to over 30 in a week. This has resulted in teachers teaching for examinations because they cannot cope. Hence tuition (where they can make an extra coin) is prevalent in primary and secondary schools. At the university, moonlighting is a common feature and there is nothing to hide about it. Instead of the normal nine hours per week lecturers find themselves doing up to 15 or 18 hours. The end result of all this is that teachers and lecturers become so exhausted that their output is questionable.

(iii) Quality physical facilities: For any given subject or course unit there is need for the relevant equipment such as laboratory equipment and materials for sciences, teaching aids, proper teaching methods and learning materials. In addition, classrooms, workshops, teachers' houses, libraries, and recreational facilities are very important in education. The availability and adequacy of these materials are important for enhancing quality teaching. In Kenya the responsibility for the provision of physical facilities in primary and secondary schools lies with the parents and the community. This has led to poor facilities because the parents are not able to finance the requirements of the schools. It is a fact that we have children learning under trees in many parts of the country. Physical facilities in universities are not adequate either; many universities are grappling with small classrooms occupied by large number of students. There are times when lecturers have no space for standing. With the double intake in the September 2013 semester, a number of universities have been forced to put up makeshift structures such as tents to be able to cope. In addition, the many campuses and satellite centres have inadequate facilities for learning.

(iv) Curriculum and curriculum diversification: Kenya inherited a high-quality elitist education system from the colonialists at independence and this type of education has divorced the nation from real needs, conditions and aspirations of its society. Hence there is need for diversification of the curriculum. According to (Psacharopoulos and Woodhall, 1985) the broad objectives of curriculum diversification should include meeting the manpower demand, rectifying academic bias to make the curriculum more relevant to the needs of the labour market, and improving the overall quality of secondary education and the employment of school leavers. However, what is ailing our education system at all levels of education is that programmes are started at the whims of the administration or faculty without careful evaluation of the effects on educational outputs and outcomes and the effects on costs. For example, 8-4-4 education system was politically instigated and was expected to be terminal at the end of each cycle. Unfortunately, it failed to make this possible and learners continue to yearn for further education. In universities we have the same courses being taken in all institutions. In this age and time there is need for individual universities to specialize in specific courses. For example, University of Nairobi is known for engineering and medicine, Daystar University for communication, Strathmore for commerce, Egerton for agriculture and Kenyatta University for education. It would be interesting for Pwani to champion hospitality courses and Maseno or Jaramogi Oginga Odinga to have fisheries. This kind of arrangement would encourage research in these fields much better than doing all courses in all institutions.

(v) Provision of Textbooks: Textbooks are essential and contribute substantially to the learning-teaching process and by extension the learner's performance. Students who are exposed to textbooks can do well even where teachers are not available. There is a consistent relationship between pupil achievement and the availability of textbooks. Many schools in Kenya lack the required textbooks and the level of performance tend to lag behind those schools that are well equipped with class textbooks and reference books. Many schools rely on parents through the PTAs for textbooks. This implies that where parents are not able to procure enough textbooks the students suffer. In higher education the use of the library become even more critical. Many libraries have inadequate reference books and sitting space making it difficult for students who would wish to do research to access the materials. Computer services in libraries are wanting yet all knowledge is now on the web.

(vi) Teaching-Learning Process: According to Henard and Roseveare (2012) quality teaching is the use of pedagogical techniques to produce learning outcomes for students. Itinvolves several dimensions, including the effective design of curriculum and course content, a variety of learning contexts (including guided independent study, project-based learning, collaborative learning, experimentation, etc.), soliciting and using feedback, and effective assessment of learning outcomes. Italso involves well-adapted learning environments and student support services. Policies regarding quality education are raising awareness of quality teaching, developing excellent teachers, engaging students, building organization for change and teaching leadership, aligning institutional policies to foster quality teaching, highlighting innovation as a driver for change and assessing impacts (Henard and Roseveare, 2012). Class size can affect learning. We have classesthat are too big making individual attention impossible. This is particularly serious in public universities where microphones have to be used in some cases to reach the students. No one cares about the attendance and as such the grades given do not reflect the capacity of the students. Even though the bigger the school size, the lower are the overheads per child or student very large classes and schools create administrative problems that may lead to indiscipline cases. Distance learning method of teaching reaches learners in isolated regions and cost-effective. The popular methods of distance learning are by correspondence, radio and the use of the television. It requires no space preservation and no engagement of full-time lecturers. Distance learning has not been introduced in our schools. In addition, e-learning would be useful in reducing costs and the need for classroom spaces. At the university level both distance learning and e-learning have not taken proper root.

(vii) The Examinations and Selection Procedures: Examinations provide the means for assessing the degree of past achievement of the learning objectives and, in the process, serve to stimulate the learner to put the necessary effort into learning. Examination results are used to monitor schools' performance and to provide information that will enable teachers to improve their pupils' performance. However, the pressure to pass examinations and to acquire good academic certificates has led to too much competition among schools. Schools that concentrate largely on preparing students to pass examinations adversely affect the implementation of the total curriculum and the full development of students (Republic of Kenya, 1988). Certificate of Primary Education examinations was criticized on three grounds: examination questions tested abilities related to cognitive learning and encouraged memorization, it failed to serve the terminal function as subjects like agriculture did not prepare pupils for life in the rural areas and the examinations favoured urban students thereby making its validity questionable. For quality of education to be achieved it is necessary to balance education and training to ensure effective implementation of the total curriculum to provide an all-round development of the students. Examinations have been used for selection of pupils and students to the next grade. Examinations that determine pupils' chances of proceeding from primary to secondary, or that determine which types of institutions or streams they will enter, have a decisive effect on measures of output from primary schools. This has led to repetition and dropouts and for every repeater a potential new student is displaced. Repetition is still practiced in many Kenyan primary and secondary schools especially those in the rural areas. Private schools do not allow weak learners to enroll for examinations in their schools; those that do not repeat enroll in other schools. Examinations may be inefficient for selection purposes, since they may fail to measure skills, knowledge and ability accurately or may fail to predict future levels of achievement. They may also distort the curriculum and teaching methods as both teachers and pupils become dominated by the examination and lose sight of the wider educational objectives. The implication is that the teacher-learner relationship involves a narrating subject (the teacher) and patient, listening object (the learner). Both parents and learners are keen on the certificate rather than the content of what is taught; they prepare for examinations and not the world of work. The certificate tends to dominate what happens in the classroom to the extent that often little else matters. The certificate gained by a learner may have little direct relevance to the kind of job one is seeking; the knowledge and skills required for most employment is largely acquired on-the-job. The certificate is a mere screening tool used by employers to sort out the applicants. The result is the intensification of competition of places in secondary and higher education and drive learners, staff and parents to value only the certificate obtained. Modern sector employers place more value on the certificate for recruitment and promotion of their personnel. This has led to many employees to go back for further education. Our universities are a burse with learners in the evening; indeed, the universities rake in more income from these learners than the regular learners for they spend very little on them. Efforts should be made to make the examination system more efficient and equitable so as to emphasize relevance and discriminate more effectively between the most able and least able learner.

(viii) Research in Institutions of Higher Education: The Government's long-term policy for the period 2005 to 2010

was to provide a framework for sustainable, competitive and autonomous national university system. Such a policy objective was to take into account the comparative strengths of public and private institutions, and thus reduce wastage. It was also seeking to lead to the development of a diversified financial base and provide for operational independence while at the same time paying attention to issues of relevance, and responsiveness to the market and to national priorities. University education and training, therefore, need to be demand-driven. of high quality, gender sensitive. technologically informed, research supported, democratically managed and globally marketable. However, when private universities depend on learners for finances, they are limited to being tuition-based institutions that offer little breadth for research leading to advanced degrees such as doctoral studies; serious research cannot flourish. These goals could be achieved through the provision of adequate support for scholarships and research at university level; creating incentives for increased investments in university education, training and research; ensuring integration of attachment internship into the training system to enhance relevance and productivity; supporting affirmative action to ensure equitable access to university education; work with universities to develop and implement capacity building programmes for academics and university managers; coordinate, through the Commission for University Education (CUE), a national accreditation system for all tertiary institutions and universities as a means of guaranteeing quality education and training; requiring each university to maintain a record of academic productivity including publications, awards, funds from third parties, and patents and royalties. Each university should work out a mechanism for this purpose and maintain an inventory of short- and medium-term national skills needed. Universities are considered as centres of knowledge production and generation and are therefore expected to play a pivotal role in national research output (Li et al, 2008). Indeed, research is an important indicator of a university's performance. There is also a link between research productivity and the reputation of a university and is one of the criteria for ranking universities globally (Oladipo and Bowen, 2013). However, researches in sub-Saharan Africa are at 0.7% of the world's output and are low in quality. Africa is said to be producing 27,000 papers per year which is equal to what Netherlands produce alone. No African country (except South Africa) or Asian country is represented among the top 20 journals, ranked by the average number of citations in every published paper. The challenges to research are that governments devote little of their budgets to research. Access to journals, books and other published materials is another obstacle.

The tragedy of the failure of Kenyan education system plays out in research, both in universities and public research institutions. In addition, Kenyan-based scientists, without Western collaborators, seldom publish in high impact peerreviewed journals. It is helpful to note that Kenya has long recognized that a critical mass of entrepreneurial researchers is required to sustain research and encourage innovation. According to Gogo (2014) the major drawback to research in private universities is lack of time for lecturers and finance. Only 33.3% of the lecturers who participated in this survey had papers at various stages of publication, most of these were out of master's and doctorate dissertations. Ngure (2013) emphasizes the issue of excess workload in private universities. He noted that most universities require lecturers to teach 15 hours per week in addition to mentoring students. In addition, lecturers take three to ten extra hours within and outside their campuses. Part-time teaching involves a lot of travelling, consumes time and energy such that the lecturer has no time left to invest in research; they look at research as a potential for loss of income. Indeed, lecturers who do research are self-driven and do not rely on support from their institutions. They are placed better in the classroom as they remain abreast with new developments in their fields of study. Oladipo (2012) quoted in Daystar University (2013), noted that 74.6% of the lecturers in the study had not published a book, 57.1% had not published in a journal while 77% had not attended a conference in the last two years. The challenges facing lecturers are low funding, balancing time for teaching and research, lack of materials, lack of institutional support and lack of guidance and mentors. She added that 50.8% of the institutions visited did not emphasize research, 84.6% had inadequate research infrastructure and 47.6% had no support to attend conferences despite the fact that 77.8% of the institutions had developed research policies. This is a sorry state for knowledge generation at this level of education. Secondly, after research there is no mechanism by which the information generated and recommendations made can be implemented.

(ix) Financing of Education: Money is a crucial input in any educational system as it provides the essential purchasing power with which education acquires its human and physical inputs. Education is largely financed by the public sector in Kenyabecause the social and private rates of return to investment in education still seem to be high and as the demand remains strong, governments are no longer willing to allocate an increasing share of public expenditure to education. Kenya has a problem of financing education due to shortage of resources. Education takes a large share of the national budget and the government has to reduce this expenditure. This has a significant implication to the financing of education at all levels. It implies that education ought to be financed from other sources which include parents, loans and grants from donor countries and agencies and private companies and organizations. Out of these sources, the major source remains school fees paid by parents. The loan scheme for financing university education was introduced to make education appear more equitable than where the state meets all the costs. Experience has shown that student loans have contributed to both efficiency and equity goals. They are more flexible as a means of finance and can help to increase the share of private finance for educational investment thereby improving the quality of education (Psacharopoulos and Woodhall, 1985). Higher Education Loans Board (HELB) is doing a commendable job now that even students in private universities access the loans. The main drawback to quality education caused by private financing of education concerns equity and equality of opportunity. Many parents and communities in Kenya have found financing their children's education through cost sharing difficult because of their poor socio-economic backgrounds. The government's free primary and secondary education has not made it better as there are too many learners in school compared to the low number of teachers and lack of facilities resulting from low financial resources.

**Policy Options to Improve Quality/Quantity Mix:** In order to improve the quality of education in Kenya given the ever rising enrolment, a number of policy options should be implemented:

- a. Effectiveness of Schooling There is need to produce socially productive graduates by working on their attitudes and try to give some recognition to their willingness to co-operate with their peers, and not so much stress competition.
- b. Control the haphazard opening up of schools, colleges, universities and university campuses. This is because uncontrolled opening of these institutions can lead to institutions that are unstable and qualitatively poor, and can increase inequalities between social groups and between regions (Bray, 1987). The government, therefore, ought to control the establishment of schools by registering those that are in a position to insist on various qualitative safeguards.
- c. Control the operations of existing institutions and the dissemination of information between the Ministry of Education and the communities and between the Ministry officials and the institutions to help improve quality of education in Kenya.
- d. There are several changes in knowledge, technology, job requirements and shift in population. These would require corresponding changes in the textbook content, level of intake, teacher qualifications and teaching methods in order to achieve quality education. Educational institutions must accommodate changes that affect us.
- e. It would be difficult to produce people who have attained quality education if the education system cannot change with changes in the socio-politicoeconomic structures of the nation. Given the thrust of the new constitution and the county governments the Kenyan education system should embrace changes that would enhance quality as well as equity between gender and regions.
- f. Universities to review their programmes in order to meet the demands of the job market, the needs of the industries. We need graduates who are not job-seekers but job-creators. This requires high level training on universities.
- g. All university lecturers should undergo pedagogical training to be effective in class. It cannot be assumed that teaching can be done effectively by anybody who has a degree.
- h. Need to seriously engage education experts in the management of education especially at the planning and implementation stages.

#### Conclusion

The quality and quantity mix is a serious issue in our education system. This is because the higher the enrolment the lower the quality of the output of the education system. Apparently the devolved government may face serious challenges in ensuring quality education particularly where they do not have enough financial resources.

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