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Educational inputs: A defining factor in planning for quality secondary education in Rwanda

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Abstract

This study aimed at investigating the relationship between educational inputs and quality education in day secondary schools. The study aimed at providing empirical data upon which policy makers, education planners, administrators and teachers would base critical decision making for the provision of quality education. Using a purposive sampling, 17 head teachers from 17 sectors were selected. Data was gathered using a questionnaire. Analysis of the findings using Pearson correlation between educational inputs and quality of education, was found to be positive and insignificant in the relationship ($r = .138$, $p<.001$) though funding and school characteristics were found to intervene. It was noted that there is inadequate funding for the schools which greatly affected the acquisition of educational inputs that are critical in the provision of quality education. It is recommended that education planners should utilize the available data regarding inputs as a prerequisite to well- grounded decision making. Further the production function, a concept common to economics and science is now the best framework within which quality education should be analyzed.

Keywords: Education, Inputs and outputs, Processes, Quality, Planning, Resources

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1. Background to the study

There has been growing concerns about the quality of education in developing countries, including Africa, however, poor quality education could be as a result of poor investment. An analysis of the impact of educational inputs requires a close monitoring of the quality, quantity and level of distribution in all public schools. Education is an agent of transformation that increases people's capacities to transform their visions into reality. All countries strive for quality education for their sustainable development (Education Improvement Commission, 2000). A number of decisions for future actions in order to achieve quality education is proceeded by heavy investments in terms of finance, human resources and material resources into the education system. In addition, educational standards set must be challenging to meet the needs of students and the society (Olaniyonu et al., 2008). It has been found that the major cause of difference between the economies of the developed and developing countries lies in the quality of education offered (Ministry of Education, 2010).

It is observed that, the term quality of education means different things to different stakeholders. Liston (1999) defined quality of education as the total effect of the features of the process, or service on its performance, or the customer's or client's perception of that performance. Hoy et al. (2000) said quality is what is good for the school and its students. Grisay and Mahlck (1991) argued that quality of education can be seen as the extent to which its products are able to achieve the intended outcomes. Liston (1999) further says that, quality is not just a mere feature of finished products but also the efficiency of internal processes. In view of this, quality cannot be measured by only looking at examination results but by holistically examining internal processes and efficiency of the entire education system. Education processes in individual school appear to have a significant effect of learning achievement consequently, there should be a balance between usage of resources and their availability. A study by Nannyonjo (2007) warns that, neglecting this reality will result in governments in developing countries spending scarce resources on inputs that may not directly affect learning achievement. Liston (1999) further argues that internal efficiency serves to reduce wastages in form of school dropouts, repetition rates, or wastage ratios, is a more appropriate measure of the quality of education. Low levels of the school's internal efficiency would therefore hamper the achievement of the identified educational objectives.

Achieving quality education is a call for the planners, administrators, managers to rethink deeply and plan strategically. Other ways of inferring quality education in secondary schools from the input side are, teachers who know how to teach and can actually teach, time for learning and the requisite tools for teaching and learning. According to UNESCO (2008) every person shall be able to benefit from educational opportunities designed to meet their basic needs. Many African countries have invested unprecedented amounts of money in creating universal access to basic education. Rwanda in conformity with MDG has provided universal access to secondary education with Nine Year Basic Education (9 YBE) as well as Twelve Year Basic Education (12 YBE) being successfully realized.

In Rwanda, Education sector strategic plan (ESSP) focuses on expanding access at all levels, improving quality and training to meet labor market demands as prime goals. The education system in Rwanda is cumulatively made of eighteen years divided into primary, secondary and tertiary. Primary education takes

six year while secondary education takes six years with the age ranging from 13 to 18 years. The secondary education is composed of lower secondary and upper secondary each lasting for three years with national examinations. At the end of upper secondary level students opt between continuing in Technical Secondary School (TSS) or Teacher Training Colleges (TTC) or joining university which on the minimum, lasts for four years. Student population in secondary education has grown 20% a year since 1996 an indication of now growing nearly three times as large as it was then (Habineza et al., 2003). The main challenge is the expansion of the system, particularly at the upper secondary level in tandem with twelve-year basic education strategy that involves expanding infrastructure, increasing the number of teachers, and teaching and learning materials. All these inputs require significant financial investments (Ministry of Education, 2013).

Although there have been several arguments about whether inputs and processes independently produce observed student outcomes, as a consequence, little is available in the body of research and literature that decisively determines their interaction and impact on student outcomes. The indicators of quality education termed as educational inputs have been a matter of concern to many and need attention. This is because, once they are ignored or not predicted, followed and evaluated on time as it is done in local administrative entity, they lead to poor quality education. The focus of this study was to examine and analyze the situation of educational inputs and their relationship to quality education in Rwandan secondary schools. The study considered public schools which in this case are funded by government.

1.1. Objectives

Specifically, this study aimed at achieving the following objectives:

i. To assess the status of educational inputs in relation to quality education in day secondary schools
ii. To determine quality education indictors in day secondary schools
iii. To analyze the relationship between educational inputs and quality education in day secondary schools

1.2. Literature review

Theoretically, a production function can be constructed for any process as inputs and outputs and adequate data base concerning them is established. For some industrial processes, with specific inputs and outputs, this may be relatively simple task. However, for education the task of specifying the inputs and outputs is much more difficult. A change in productivity in education sector reflects only the growth in outputs or inputs (Tipper, 2013). Considerably output growth for education will have a flow on effects to other sectors such as high academic achievement thus more educated workforce that will result in wider productivity. However, these effects cannot be measured directly but take time to accrue.

Quantifying inputs in education and relating them to outputs has not been an easy task and has only been limited to serve as information for decision making. Traditionally, quantifying service provided by non-market providers has been problematic because of lack of market prices. This has resulted to output being determined by inputs however, now it is possible to compile activity and productivity in measurable terms (Atkinson, 2005). As a matter of fact, studies by Hanushek (2003) and Glewwe and Kremer (2006) on the contribution of education inputs to student learning achievement have elucidated doubts on production function of schools. Clark (1963) defined input as that which is spent in time, money and energy to create a produce and output as the product itself and in the case of education, it is the student and his knowledge. If inputs and outputs are measured, the relationship between each possible combination of inputs and the resulting output can be established.

A very significant proportion of educational input is attributed to the time value of money, assigned to students who are still enrolled in school. This feature of input in education appears to be entirely disregarded in estimates of quality and learning achievements (Griliches, 1992). However, study by Anitha, (1997) indicates that success of education is likely to be strongly influenced by the resources planned and made available to support the process and the direct ways in which these resources are managed. It is obvious that schools without qualified teachers, textbooks or learning materials will not be able to do an effective job. Educational inputs are interrelated to teaching and learning process which equally affect other types of inputs and how effectively they are put to use.

1.2.1. School infrastructure as a factor of quality education

Learning can occur anywhere, but the positive learning outcomes generally sought by educational systems happen in qualitative and conducive learning environments. Physical learning environments or the places, in which formal learning occurs, range from relatively modern and well-equipped buildings to open-air gathering places. A study by Ngware et al. (2011) on quality of primary school inputs in urban settlements in relation to benchmarks of education quality indicators in Kenya indicated that, quality of education in government schools was better than private owned in respect to availability of both human physical resources.

According to Fuller et al. (1999) the condition of school buildings is related to higher student achievement after taking into account student's background. In sum, at a minimum school qualitative plans needed to estimate how many students there would be, how many classrooms would be available in good conditions or rehabilitated, teachers, desks, what will be the cost and where the money will be sourced from and how it will be spent. These various projections culminated in a proposed budget for the next academic year and ended ultimately in a series of decisions and actions.

1.2.2. Teaching and learning materials vis-à-vis quality education

The quality of school buildings may be related to other school quality issues, such as having enough teaching and learning materials, appropriate working conditions and ability of teachers to apply innovative teaching strategies. Studies indicate that in addition to other factors, books and other learning materials are

significant and cost-effective inputs in the learning process (Galabawa, 2003). Quality of learning can be compromised by lack of educational resources such as facilities and instructional materials which in turn make teaching ineffective (Vegas, 2007). In addition, Chiu and Khoo (2005), observe that educational resource factor that includes physical resources in schools has proved to contribute significantly to academic achievement. Such factors as on-site availability of clean water supply, classroom maintenance and furniture availability all have an effect on educational quality. According to Willms (2000), the learners who lacked classroom materials, were more likely score low in tests and have high repetition rate than their counterparts in well-equipped schools

1.2.3. Human resources and quality education

Until now, much discussion on quality education puts emphasis on educational inputs, such as infrastructure, teaching materials, human resource etc. However, more attention has to be paid to educational processes on how teachers and administrators are considered as inputs to frame meaningful learning experiences for students. The highest quality teachers are those most capable of helping their students to learn, have deep mastery of both their subject matter and pedagogy (Darling-Hammond, 1997).

According to Rosemary (2005), the nature and quality of planned educational inputs significantly determine the outcome of educational provision. Those inputs are the following; Educational Personnel include teachers and the non-teaching staff. But teachers are the principal factor in educational provision and thus affect quality of education in a significant way. In an attempt to have effective learning and quality teaching, there is no dispute that selection and training of teachers who will foster performance is critical (World Bank, 2010). Qualification of teachers to a large extent influence their behavior positively (Wenglinsky, 2000) however, the impediment in developing countries lies in policies to support this initiative.

Human resource should be planned and specified in ways of helping the school to achieve its mission because the teachers are the principal factor in educational provision and thus affect quality of education in a significant way. In many developing countries, the quality of teacher education programs is still low and lack relevance to school needs (Mckenzie and Santiago, 2004). Attributes of concern include number of teachers available, pupils-teacher ratios, and the personal characteristics of the individual teachers. These personal characteristics include academic qualification, pedagogical training, content knowledge, ability or aptitude and years of experience (Ankomah et al., 2005).

Teacher qualification and preparedness greatly influence learning outcomes. This is affirmed by Darling-Hammond (1997)'s study that ill prepared teachers have difficulties in pedagogy, curriculum development and managing learning as whole. They fail to understand student difficulties and how to tailor instructional strategies to meet individual student learning needs. With respect to teacher preparedness a study by Fehrler et al. (2009) recommend that emphasis should be on quality of training process rather than duration. Research also shows that effective teachers provide varied opportunities for students to acquire and apply knowledge and skills in different learning situations (Kinyanjui, 2011). This is a strong indication that supply of well trained teachers is one measure of quality education.

1.2.4. Educational funding and quality education

Latika (2009) established that a 60% increase in education inputs in terms of spending increases satisfactory score by one standard deviation which can be attributed to higher salaries. On the other hand Welch (1966) using the production theory, established that expenditure per student, teacher per 100 students, average salary and student enrolment per school to a large extent are factors that trigger realization of quality education. There is an urgent need for schools to be supported in developing and implementing an appropriate financial model that will be useful in attracting and retaining students in schools (Lima, 2011).

In Rwanda, financial recourses for education usually accrue from different sources such as government revenue. Here governments allocates funds to schools for capital and recurrent grant demand for both quality and quantity education. The second source of school funding is school fees for certain schools and parents contributions, the third is local community while constructing and development of major educational physical facilities especially in secondary schools with the program of 9YBE as well as 12 YBE. The fourth, according to Nicholas (1993), are Projects. Government policy encourages institutions to seriously engage in self-help projects to meet some of their daily requirements. The last source of school funding is NGOs such as World Vision which at times contributes in terms of instructional materials, finances and equipments. Therefore, for building a successful school, the administration school would indicate those different sources of funds and execute what they have planned accordingly.

1.3. Theoretical framework

Production theory explains how quality is attained by the process of converting inputs into outputs. The outputs can be goods or services. This theory stipulates that there are three sorts of production. First the primary production which is responsible for changing natural resources into primary products. The second is the secondary production which involves the conversion of raw materials into finished or semi-finished products and lastly tertiary production that deals with provision of services like education (Asiimwe, 2009). Here, education is taken as a process whose product is educated human resource that is as a result of utilizing human, financial and other physical resources which in themselves are scarce. In the same understanding, production theory can substantially be applied in education operations just like in any other industry (Jagero, 2013).

An important assumption of production theory is that people will interpret their environment in such a way as to maintain a positive self-image. As Bandura (1994) puts it in the self efficacy theory, People attribute success and failure to factors that will make them feel good. In essence when learners or teachers succeed they may want to attribute these to their own efforts. On the contrary when they fail they try to find scapegoat by making reference to other factors beyond their control like poor education background. As argued by Heneveld (1994), an effective education system and the provision of adequate material and human support are vital elements in school's effective planning. This also includes adequate physical infrastructure, funds and teaching materials.

2. Methodology

This study employed a descriptive survey design to ascertain educational inputs as a factor of quality education in Rwandan secondary schools by focusing on Nyamagabe District. The choice of the District was based on the level of achievement in many of its development targets including: student to teacher ratio, education for all and reduced infant mortality rate. Information obtained from the district development plan indicate that the district's average literacy rate is 63.2% and it appears among the last four districts with the lowest levels of literacy rate within population aged 15 and above (Nyamagabe District, 2013). The district has 52 secondary schools of which 14 are boarding schools and 39 day schools. All these 39 day secondary schools account for 22,306 learners, 547 teachers 39 head teachers and 17 SEOs. A sample of 17 Secondary day schools and head teachers were purposively selected one from every sector ensuring that all day secondary schools located in 17 sectors have been represented.

Data was collected using a questionnaire consisting of both open and closed ended questions. With open – ended questions respondents were given their personal responses or opinions in their own words whereas with closed ended questions, respondents gave different alternatives to choose from. The study considered structured and non – structured questions to capture the opinions from the viewpoint of head teachers of 17 schools selected. Data collected from the field was analyzed using Pearson's correlation coefficients and in ascertaining the levels of significance T- test was used. The Pearson's correlation coefficient was considered sufficient for the purpose of establishing linear relations between educational inputs and outputs.

3. Findings and discussion

The educational inputs investigated ware school funds utilization, staffing and teaching and learning materials. Information gathered in respect to utilization of capitation grants is illustrated in Table 1.

The information regarding the scheme of capitation grant and its utilization in the 17 sampled schools affirmed that the expenditure margin range between 1% to 20% for School construction/Rehabilitation, Teachers Bonus, Communication costs, Mission allowances, Public relations& awareness, Professional& Contractual services, Maintenance and Repair, Office equipment, Furniture, fittings and, training costs. Teaching and learning materials take between 36 to 55% as declared by all respondents. It was also revealed that, 9 head teachers out of 17 indicated that office supplies and consumables take between 1% to 20% of the whole capitation grant, vise à vise 8, who said that they spend money in the margin of 2% to 35%. Regarding teachers as one of the educational inputs, the qualification of the teaching staff, their gender, and work experience was ascertained as in Table 2.

In the 17 schools sampled as indicated in Table2, 26 teachers out of 684 hired in 2014 were holders of A2 in teaching, 216 teachers hold A2 without professional training, 102 are holders of A1 in teaching, 104 holders of A1without professional training, 88 holders of Ao in teaching and 148 out of 684 teachers were holders of Ao without professional training. The study revealed that only 27.8% of teachers were qualified

for teaching in secondary schools. This is against the evidence that teacher quality is important in influencing learning outcomes (Mourshed et al., 2011).

According to article 49 of the law n° 29/2003 of 30/8/2003 establishing the organization and functioning of nursery, primary and secondary school, teachers should at least have a higher diploma of A1 in teaching and those of upper secondary school should have a university degree A0 in teaching. Whereas teacher qualification is paramount to the quality of education there are mixed findings about the correlation between teacher level of qualification and academic performance. Some studies have shown a positive correlation while other indicates a negative (Greenwald et al., 1996).

Table 1. Percentage School Utilization of Capitation Grant

Activities	**Percentages range of utilization**				
	1-20	*21-35*	*36-55*	*56-75*	*76- 100*
School construction/Rehabilitation	17				
Teachers Bonus	17				
Teaching and learning materials			17		
Mission allowances	17				
Communication costs	17				
Office supplies & Consumable	9	8			
Insurances & licenses	3				
Public relations& awareness	17				
Professional& Contractual services	17				
Maintenance and Repair	17				
Training costs	17				
Office equipments, Furniture and fittings	17				
Other expenditures:					
To be specified……..	17				
Total					

Table 2. Teaching Staff by Qualification, Gender and Working Experience

Qualification	*Less than 1 Year*		*1 Year*		*2 Years*		*More than 2 Years*		*Total*		
	M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*T*
A2/D6, D7 Teaching	1		2	2		1	6	1	9	4	**26**
A2/D6, D7 Nonteaching	11	6	8	8	8	5	38	24	65	43	**216**
A1 Teaching	11	3	5	4	4	5	15	4	35	16	**102**
A1 nonteaching	5		5	3	6	5	19	9	35	17	**104**
A0 Teaching	7	2	12	4	9	3	7		35	9	**88**
A0 nonteaching	6	4	5	1	12	1	30	15	53	21	**148**
Masters											
Total	**41**	**15**	**37**	**22**	**39**	**20**	**115**	**53**	**232**	**110**	**684**

3.1. Teaching and learning materials in schools

The mission statement of education in any country is to ensure that there is efficient, effective and equitable distribution and utilization of material resources as necessary inputs towards the promotion of quality and relevant education. The seriousness given to teaching materials is always evident in the budgeting plans as provided in Table 3.

Table 3. Evidence of Budget plan for Teaching and learning materials

Teaching & Learning Materials	**Number of Schools**	%
Maps	17	100
Sports materials	17	100
Computers	2	11.76
Chemical Laboratory Equipment	0	
Note books	17	100
Pens	17	100
Class dairy	17	100
Physical Laboratory Equipment	0	
Others:……	0	0

The assessment of the educational inputs in terms of educational materials revealed that, schools have quite adequate number of books both for the teacher and the students though their usage is limited to students. The number of computers and their usage is low and therefore a major challenge in all schools. Infrastructure is a major challenge to these schools as none of the schools had a library, a computer laboratory and science laboratory. There was relatively low evidence of availability of extra spaces in the schools as no school had a football playground though about 10 of the 17 schools had a volleyball playground.

3.2. Quality education in Day Secondary Schools/ Nyamagabe District

The analyzed indicators for quality education were the ratios of student to desk, student to Computer, and student to qualified teachers in education with A1 and A0. In addition, Promotion rates, dropout rates, and repetition rates were also considered as indicated in Table 4.

Table 4. Quality Education Indicators

		Pupil-Desk Ratio	Pupil-Computer Ratio	Pupil-Qualified Teacher Ratio	Dropout Rate	Promotion Rate	Repetition Rate
N	Valid	17	17	16	17	17	17
	Missing	0	0	1	0	0	0
Mean		1.9471	122.3970	95.5077	14.6023	74.4969	10.8794

The student-desk ratio was found to be adequate since 2 students per desk was evident while the Student-computer ratio was worse (122:1) which according to presidential order establishing quality standards in education for Nursery, Primary and secondary schools is very insufficient. The order stipulates that every student should have an opportunity to use a computer for at least one hour per weak implying practical application of computers should be the indicator of quality. Student to qualified teacher ratio was high standing at 96:1 indicating an under staffing for the student population. The rate was low and this can be attributed to education policy that does not permit rates above 10%. The dropout rate stood at15%which is high and contradicts the government policy that requires all school age going children to be in school.

3.3. Relationship between educational inputs and quality education

The relationship between educational inputs and quality education was analyzed using regression analysis by first considering the independent (inputs) and dependent (quality) alone, then including the intervening variable. This section presents each of the analysis according to variables.

From the analysis (Table 5), the relationship produced a Pearson Coefficient r = .138 at p=.001 indicating that there was a positive correlation between independent and dependent variables. To find the strength of the relationship, the significance test was performed as shown in Table 5. The study established strength of the relationship to be t=.523 and a p=.609. This indicates that though the relationship was positive, the strength was weak and insignificant at a p=.001 level. Therefore, it can be concluded that the current

educational inputs examined in the schools is positively affecting quality though at a very weak level of strength that is not statistically significant. The Educational inputs only contributed 1.9% of the variance in the result compared to the R2 % value of .019.

Table 5. Educational inputs and Quality education without intervening variable

	Model Summary				Change statistics			
Model	**R**	**R Square**	**Adjusted R Square**	**t**	**B**	**Beta**	**t**	**Sig.**
1	.138[a]	.019	-.051	107.84147	.193	.138	.523	.609

a. Dependent Variable: Quality
b. Predictors: (Constant), Educational Inputs

3.3.1. Educational Inputs and Quality Education with funds as intervening variable

Theoretically, literature shows that in the relationship between educational inputs and quality education there are several intervening variables that may affect the quality of education. In this study, funding of the school and the uniqueness of the school were considered and analyzed to see if they played any significant role in the sampled schools. Table 6 presents correlation results of the analysis of relationship between educational Inputs and Quality Education when funding is intervening.

Table 6. Educational Inputs and Quality Education with funds as intervening variable

			Model Summary			Change statistics		
Model	**R**	**R Square**	**Adjusted R Square**	**t**	**B**	**Beta**	**t**	**Sig.**
1	.449[a]	.202	.079	100.96005	.059	.042	.166	.871
					31.545	.438	1.724	.108

a. Dependent Variable: Quality
b. Predictors: (Constant), Educational Inputs and Educational Funding

The findings indicate that there is a positive correlation of r=.449 with r2=20.2%. This gives an implication that the relationship is positive and educational inputs account for 20.2% towards quality education relationship if the funding factor is added. The relationship strength was found to be t=.166 and t=1.724 for educational inputs and funding respectively. The significance value at p=.001 were also .871 and .108 with respect to educational inputs and funding. This shows that funding has a positive effect on the relationship and can significantly improve quality of education though for this sample the contribution was positive but not significant. This could be as a result of indirect effect of funds which manifests itself in terms

of physical facilities acquired. Karemera (2003) found that the facilities of Library, computer laboratory positively correlates with the performance of students and the overall quality of education.

3.3.2. Educational Inputs and Quality Education with School Characteristic as the Intervening variable

Finally it was prudent to find out the effect of school characteristics on the relationship between educational inputs and quality Education.

Table 7. Correlation results

	Model Summary				**Change statistics**			
Model	**R**	**R Square**	**Adjusted R Square**	**t**	**B**	**Beta**	**t**	**Sig.**
1	.142[a]	.020	-.131		.203	.146	.517	.614
					.517	-.033	-.116	.909

a. Dependent Variable: Quality
b. Predictors: (Constant), Educational Inputs and School

Table 7 shows that the relationship produced a Pearson Coefficient r = .142 and r2 = 2%. This means that the correlation is positive and the two variable accounts for 2% of quality education in the sample. School as a whole contributes a positive relationship with Sig. = .909 that is not very significant. However, it should be noted that both intervening variables when combined with the independent variable produced Pearson Coefficients greater than when they are not considered.

3.3.3. Educational Inputs and Quality Education with Both School and Funding as Intervening variables

When the two intervening variable were combined (Table 8), they produced r =.455 and r2 = 20.7%. This indicates that in the analysis of the relationship between educational inputs and quality education, other factors must be considered and taken care of if the findings will be considered valid. For this study, the two intervening factors combined with the educational input variable accounted for 20.7% of the variance in quality education. This indicates further that the more the factors considered, the better the results of the relationship.

In today's complex society educational inputs impacts quality and in return quality determines the level of inputs from stakeholders. In enhancing the quality of teaching and learning the dynamics of teacher training and processes as critical input should be emphasized. More effort should be directed to aspects like curriculum design, pedagogy assessment of learner performance and progress. In order to realize academic achievement of all these components, appropriate management practices are crucial (Premji, 2003). The teacher is the central figure in organizing and managing any school. Timely recruitment of teachers and their rational deployment in schools is the core function that every school leadership has to manage in a systematic manner. The mismatch between the number of teachers and classrooms to teach in is similarly

problematic. Equally problematic is the situation where classrooms remain unutilized due to inadequate provision of teachers. Similarly, a range of situations with respect to the ratio of number of students to number of classrooms show that some schools are overcrowded. It can also be observed that learning materials should be seen as the touchstone of success and failure of any education system because they help learners to keep in touch with the subject content (Thapliyal, 2014).

Table 8. Funding, School characteristic to Educational Inputs

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455[a]	.207	.009	104.72494

a. Predictors: (Constant), Funding, School, Educational Inputs

In Latin America and the Caribbean for example, public expenditure on education declined in most countries of the region. The government expenditure on education has constantly diminished from about 15 to 13 percent between 1980 and 1990 (Vos, 1996). The situation is not different in Rwanda. A report by UNESCO (nd) revealed that government expenditure on education, was 16.60 as of 2013 with the highest over the past 14 years being 26.70 in 2001, while its lowest was 15.39 in 2011. In view of this, it is imperative that budgets are adequate and specifically directed to improving leaning infrastructure such as classrooms and laboratories. School management at the same time need to ensure that funded facilities are accessed and adequately utilized for learning achievements. Failure to meet student expectations and needs eventually leads to lower levels of student involvement and achievement (Hall, 2001). We ought to look at quality in reference to efforts, performance, adequacy, efficiency and process.

Efficiency of resource allocation at macro and micro levels should be analysed to enable effective utilization and in turn realization of investment objectives of education. A study by Jagero (2013) that investigated the extent to which school inputs affect the quality of education in day secondary schools in Kenya, established that the most important inputs that affected the performance of these schools included involvement of parents teachers Association in management, instructional materials supplied and amount spent on laboratory equipment. These initiatives are associated with growth in terms of subjects offered, learners enrolled, pass-out rates, learner support services provided and evaluation mechanism adopted. This clearly points out the need to establish a set of priorities in equipping schools with infrastructure and also the need to give urgent attention to meeting the most basic facilities in schools.

4. Conclusion

Looking at the findings, day secondary schools have not matched educational inputs and quality education however, this relationship may be positive when funds invested in schooling increases. The critical inputs in

terms of infrastructure, teaching materials, qualified human resource and funding are inadequate in day secondary schools. These factors intern compromise the provision of quality education. Planners within the ministry of education should utilize the available data regarding inputs as a prerequisite to well- grounded decision making. It should be realized that the production function, a concept common to economics and science is now the best framework within which quality education should be analyzed. Proper management and justification of resource use requires effective and efficient information. In order to achieve positive outcomes, the national government, local authorities and school leadership should identify interventions that will bring about meaningful change within the education sector.

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