

Burdgetary Allocation and Utilization of Instructional Resources for Science Based Subjects in Secondary Schools in Kenya: Addressing Policy Options in Funding and Spending

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Abstract

Instructional resources are educational inputs necessary for raising quality of education across the school system. Planning for instructional resources include setting aside money through budgetary allocation for procurement of resources. An assurance for availability and adequacy of instructional resources require defined sources of funds and standardized procedures with appropriate financial base for prudent utilization. Interaction between policy and practice in budgeting process assures efficient utilization of finance for science instructional resources in schools. The study focussed on identification of gaps within national educational policy framework on budgeting process which influence planning for science instructional resources. Specifically, determining extent to which policy framework supports budgetary allocation, financial resources, standardized procedures and financial accountability in science instructional management. The study adopted frontloading approach, a methodological process that translates (inter)national human rights standards and obligations into the budget proposals required for effective implementation in public policy. The study reviewed legal instruments, publications, reports and documentation on instructional management. Findings indicated that, domesticating ICESCR in Constitution of Kenya (2010) scanty policy guidelines on issues of quality instruction; limited specific provision for budgetary allocation for science instructional resources, as much as FDSE provide no budgetary guidelines on bridging deficits, adherence to legal provision guiding procurement procedures and accountability. The study recommends streamlining of policies to entrench framework support for implementation and monitoring and evaluation of resource allocation for quality of instruction and management.

Keywords: Budgeting Process, Utilization of Instructional Resources, Policy Framework, Human Rights

1. Introduction

Science is an instrument for development that plays dominant role in spearheading technological advancement, promoting national wealth and accelerating industrialization. According to Mascitti-Miller (2012) science education is a pillar in technological development and stimulates economic growth. Provision for quality science and mathematics instruction is valuable in spurring national development. Amunga, Amadalo and Musera (2011) asserted that sciences and mathematics equip learners with manipulative skills necessary for technological development and economic growth. Achieving national economic growth therefore require appropriate utilization of science instructional methods and resources provided through budgetary process at secondary school level. Supporting this position Okumbe (2007) noted that quality science instructions can only be achieved when resources are made available through adequate budgetary allocation. In Kenya, the national educational policy framework guides provision of quality instructional management through a number of legislations and policy papers. These legislations and policy papers provisions are derived from international legal instruments that regard education as human right (Chaudhury et al, 2006). As an integral part of economic, social and cultural rights (ESCRs), education is perceived as legitimate in terms of both individual and collective good, resulting into growth both in national and global arena (Walter, 2009).

1.1 Secondary Schools Budgeting and Science Instructional Management

Quality science instruction is not only a prerequisite in fulfilment of education as human right but basic requirement in technological advancement in any country. According to Hammond (2007) for quality instructions to be achieved instructional resources should adequately be availed through budgetary allocation to institutional

teacher professional development. The challenge for secondary education policy is the need to address not only rapid increase in demand for access but also provide for quality instruction. Responding to this challenge, most SSA countries carried reforms in the secondary education system to improve transitions from primary with less attention paid on quality instructions (Wadesango, 2012). Confirming that there has been minimal regard on quality instruction as secondary education is being expanded, Kung, Huang and Cheng (2015), asserted that reform have not been accompanied by provisions of instructional resources as limited budgetary allocation have been dwindling against demand for secondary education. In support of this argument, Kipkoech and Chesire (2011) noted that effective teaching of science subjects requires adequate and appropriate instructional resources to stimulate innovation and creativity among learners and teachers alike. Ideally, planning for instructional resources demands that money be set aside and budgeted for to make them available and adequate for learning sciences in secondary schools. Agreeing with this Uya (2004), noted that budgeting for instructional resources is no doubt an essential part of instructional planning without which effective learning cannot take place. An effective budgeting process would go a long way in overseeing, directing, conducting, regulating and controlling instructional management in schools. In support of the influence of budgeting process as a factor in quality instruction, Okumbe (2007) argues that it requires a policy environment that would appropriately address adequate instructional resources as provision.

1.2 Policy Framework and Quality Science Instructions

Realization of quality science instruction is dependent on educational policy framework articulation to position of teacher professional development for improved learning achievement. Kenya national educational policy framework should influence science instruction through budgetary allocation for adoption of learner centred instructional methodologies (Nolan, 2013). From national platform to secondary schools, financial policy framework provisions for quality science instructions through budgeting process need to ensure adequacy and availability of instructional resources. Agreeing with position, Mascitti-Miller (2012) underscored that policy driven budgeting process in promoting quality science instructions is essential for achieving industrialized status. National policy framework would therefore influence adequacy, availability and utilization of instructional resources through a budgeting process in secondary schools. In Kenya, the government through FSE policy provides finances for the purchase of instructional resources in public secondary schools according to their enrolment. However, funding ensures adequate instructional resources for science subject is achieved on legal instruments within educational policy framework informing budgeting process in secondary schools. Secondly, to ensure that there is quality science instructions in secondary schools an institutional financial management policy is required to influence budgetary allocation, sources different financial resources and financial accountability. This study looked at influence of national educational policy framework on school financial management strategy and how it influences budgetary allocation for science instructional resources different in secondary schools in Kenya.

2. Statement of the Problem

As suggested by Wagithunu, Muthee and Thinguri (2014), financial policy framework from national level should influence instructional management in schools in any country. However, management disparities exist in provision of instructional resources and their utilization in schools across Sub-Saharan Africa. According to Wadesango (2012) despite the fact that national philosophies of education in Sub-Saharan Africa emphasize inculcations of a high quality instructions, disparities occurs because of gaps within their legal and policy framework. With minimal scholarly work determinants of adequacy and utilization of instructional resources, it was necessary to identify gaps within legal and policy framework. This was critical because as noted by George (2005), legal and policy framework should stipulate how instructional management is overseen, directed, conducted, regulated and controlled through budgeting process. Secondly, as recommended by Kaggwa (2003), academic performance is dependent on effective decision on budgetary allocation which is better guided by a policy framework. Scholars have considered adequacy of science instructional resources as a factor of teachers' involvement in decision making, with limited consideration on its dependence on policy guidelines. Therefore, taking in consideration science teacher's involvement in budgetary decision making in secondary schools, this study focussed on identifying policy gaps that would curtail adequacy, availability and utilization of science instructional resources. Specifically, it looked at how domesticating ICESCR in Constitution of Kenya (2010) and accompanying legislations plus policy guidelines on issues of quality instruction; budgetary allocation, procurement procedures and accountability in science instructional management resources in secondary schools.

2.1 Theoretical Framework

This study adopted a methodological process used to offer budget recommendations on the basis of (inter)national human rights standards known as frontloading. Nolan (2013) defined frontloading as a methodological process

that translates (inter)national human rights standards and obligations into the budget proposals required for effective implementation in public policy and budget cycles. Allocation of funds for tuition as part of FSE policy has implications for the fulfillment of quality education as human rights depending on how sufficient the level of financing would be to ensure that there is adequate instructional resources for learning at school. As noted by Chetambve and Sakwa (2013) allocation for tuition through FSE policy is inadequate in ensuring availability for instructional resource. This position is supported by UNESCO (2015) assertion that often governments adopted laws and policies that are not implemented due to insufficient funding. Frontloading allows application all rights-based budgeting analysis framework on macro-level quantities to micro-level qualities focusing on circumstances of particular right, in case realization of quality instructions from funds allocated to tuition through FSE policy. To adequately allocate resources for instructional management, level of resources a government allocates to tuition in secondary schools.

2.2 Conceptual Framework

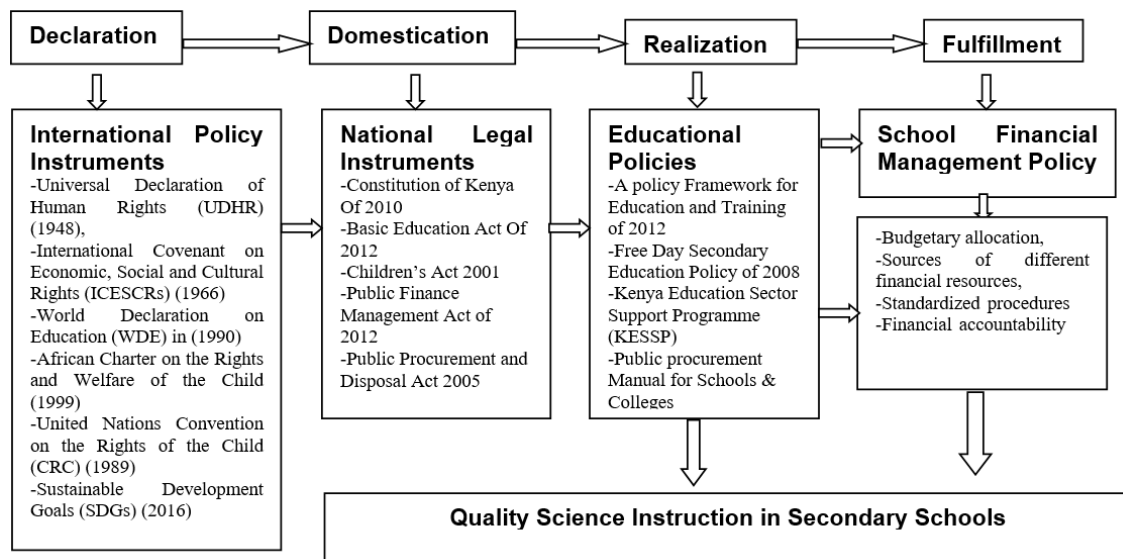


Figure 1. Policy Framework for Realization of Quality Instruction as an Educational Right

3. Methodology

This study endeavoured to merge theory with practice by relying on the critical literature review of statutes, policy papers, treaties and reports on education as a human rights issue. A desk review was conducted to establish the most recent developments and trends in the education sector, which involved a comprehensive study of legal instruments, publications, reports and documentation on instructional management and was conducted. The study is contemporary in nature as it seeks to assess ongoing reforms in the education sector in Kenya with a view to informing theory and practice on budgeting process as a factor in planning for science instructional resources in secondary schools.

3.1 Findings and Discussion

National educational policy framework is combination of legal instruments developed for the purpose of domestication, realization and fulfilment of education as human right. In realization and fulfilling right to education, national educational policy framework need to appreciate role science subjects in technological advancement, national wealth creation and spearheading industrialization. This study was focussed on identification of gaps in policy framework on issues of quality science instruction; budgetary allocation for science instructional resources, procurement procedures for science instructional resources and accountability in science instructional management in secondary schools.

3.2 International Covenant on Economic, Social and Cultural Rights (ICESCRs) of 1966

The Universal Declaration of Human Rights (UDHR) of 1948 in Article 2, International Covenant on Economic, Social and Cultural Rights (ICESCRs) of 1966 in Article 13 stated that everyone has the right to education (Nolan 2013). Education as a human right was reaffirmed at the World Declaration on Education (WDE) Jomtien,

Thailand in 1990 (Chaudhury, Hammer, Kremer, Muralidharan & Rogers 2006). As a way of fulfillment of UDHR (1948), ICESCRs (1966) and WDE (1990), in 2000 an international conference on education held in Dakar, Senegal came up with the initiative called Education for All (EFA), to encourage countries to work towards making education accessible to all by 2015 (Hussein, 2015) with no emphasis on quality instructions. UDHR (1948) highlights the right to education; including those relating to specific groups such as children, racial minorities, and women, but ICESCR provides the most comprehensive provisions. For instance Article 13(1) of ICESCR state in part that education shall be directed to the full development of persons to strengthen the respect for human rights; Article 13(2b) emphasizes that secondary education shall be made generally available and accessible to all by appropriate means and in particular progressively made free. In addition to article 13 which is the main provision, while other articles targeting education include Article 6(2) which obligates states party to create and implement training programs to fully realize the right to work and Article 10(1) that calls for protection and assistance of families in their responsibility in educating children. Reaffirmation of right to education as noted by Chaudhury et al (2006), was made through WDE in Jomtien in 1990 by stressing tapping each individual's talents and potential while developing learners' personalities, to improve lives and transform societies. The Jomtien 1990 conference was concerned with quantity without stressing quality through making instructional resource not only available but also adequate in schools (Hussein, 2015). Highlighting the need for quality instruction through budgetary provision for teaching and learning resources for science based subject would lead into technological advancement, national wealth creation and spearheading industrialization.

3.3 Free Day Secondary Education Policy

In 1972 Kenya signed ICESCR as a declaration of education as a human right which would require better focus on sciences as means towards industrialization and wealth creation. In 2003, Kenya launched FPE, while FDSE was initiated in 2007 as results for political campaigns after elections. This meant they were launched before policy papers were developed to address issues of quality instruction in sciences and were purely meant for realization of World Declaration on Education of 1990 (Chaudhury et al 2006). Later, a budgeting framework for guiding planning for educational goals is provided for in FDSE policy. According to FDSE policy, the government meets fees of Kshs. 10,265 per student in secondary school broken down as in Table 2

Table 1. Breakdown of Allocation of FSE in Vote Heads per Student

| S/No. | Vote Head | Amount (Ksh) |
|--------------|--------------------------------------|---------------|
| 1 | Tuition | 3,600 |
| 2 | Repairs, Maintenance and Improvement | 400 |
| 3 | Local Travel and Transport | 400 |
| 4 | Administrative Costs | 500 |
| 5 | Electricity, Water and Conservancy | 500 |
| 6 | Activity | 600 |
| 7 | Personal Emolument | 3,965 |
| 8 | Medical | 300 |
| Total | | 10,265 |

Source: MOEST, Nairobi (2016)

Table 1 indicates that tuition is allocated Kshs: 3600, which is expected to finance instructional resources. While the provision of FDSE is commendable, there is no empirical evidence on how it influences science instructional management. At secondary school level, adequacy and availability of science instructional resources is determined by a financial management framework guiding the budgeting process. Therefore secondary schools are expected to financial management framework to guides budgeting process by looking at how effectively science instructional resources could availed for better learning outcomes. Learners' achievement in science subjects are products of effective utilization of instructional resources provided for in FDSE policy as budgetary provision for tuition. However, there is no policy directive on compelling secondary schools to allocate a given portion of this on science instructional resources. This is in tandem with findings from study on effective management of schools in Ghana by Drah (2011) who noted government's failure to put in place a policy framework on minimum standards in relation to provision of science instructional resources. Wagithunu, Muthee and Thinguri (2014), looked at extent to which FDSE policy has contributed to availability of instructional resources in secondary schools and suggested the need of a clear guideline on spending KES: 3600 meant for tuition per learner. The contribution of FDSE on availability of science instructional requires school level financial management to guide

budgetary allocation for effective learning outcome. A school budgeting policy would therefore guide planning, monitoring and controlling the utilization of instructional resources towards desirable learning achievements in science subjects.

3.3 Sessional Paper No. 1 of 2005 on Education, Training and Research

Sessional Paper No. 1 of 2005 on education, training and research was developed and adopted to bring reforms through a Sector Wide Approach to Planning (SWAP) for the purpose of improving quality of instructions in secondary schools. The sessional paper emphasized access, equity, quality, relevance and the strengthening of governance with no provision on how to make instructional resources adequate and available, (Kaguri, Njati & Thiaine, 2014). For effective learning in sciences Okumbe (2007) as well as Nolan (2013) suggested that schools need a framework for budgeting to oversee, direct, conduct, regulate and control instructional management. Such a framework as noted by Kipkoech and Chesire (2011) should be intended to provide school leadership with basis for ensuring adequate utilization of instructional resources to help students understand the concepts in science subjects.

4. Constitution of Kenya (2010) and Quality Science Instruction

Domestication of ICESCR came in Constitution of Kenya (2010), by recognizing education as human right Article 43. Secondly, articles 43.1f, 53.1b and 55a makes education a right of every citizen and like FPE and FDSE which came into force earlier, issues of quality science instructions was not addressed. Further, in Schedule 4 it is stipulated that among the roles of national government are education policy and standards. Instructional management in secondary schools falls within these functions and is expected to be addressed through parliamentary legislations and ministerial policy papers. Given that Vision 2030 underscores the importance of science subjects in ensuring relevant human and social capital for sustainable development, Constitution of Kenya (2010) provides a basis for adequate budgetary allocation for instructional resources through legislation. This is further highlighted in article 11(2) (b) and (c) which recognises the role of science in the development of the nation on top of guaranteeing every child to free and compulsory basic education.

On financial management to ensure adequate budgetary allocation for science instructional resources is realized and managed for effective learning, article 10(2) of the Constitution sets out the national values and principles of governance. These include inter alia inclusiveness, good governance, integrity, transparency and accountability. Together with provisions of chapter 13, the constitution lays a basis for secondary schools boards of managements (BOMs) with values and principles key in managing schools resources for effective science instructional management. Such values according to Odundo and Oyier (2017), define school financial management leadership which directly influence budgetary allocations for science instructional resources. Further in Articles 20, 35, 42, 43 and 53 have an emphasis on education as a human right and Nolan (2013) asserted that countries to be guided by the principle that it is their responsibility to have resources to implement educational programmes. The constitution may not be explicit on resources for science instructional management in secondary, but accompanying legislation need to provide direction on sources of funds.

Values and principles mentioned in Article 232 of the constitution to Odundo and Oyier (2017), define how secondary school financial management leadership would efficiently and effectively manage available resources in the most economical way to ensures quality science instructions. This will further determine budgetary allocations for instructional resources and how they are sourced or procured in the most accountable way possible. Specifically, Article 232 (1a), talks of high standards of professional ethics which would require secondary schools leadership to work with science teachers in determination and management of budgetary allocations for science instructional resources. This is further emphasized in Articles 201(a), (d), and (e); 226 and 227 on Public Finance relating to transparency, accountability, and appropriate governance of public monies. As noted by Joubert and Bray (2007) in an article on public schools administration it is prudent to be accountable for effective instructional management. Specific guideline on science teachers' involvement in budgetary allocations and management of resources for effective learning in sciences could be traced from Article 237 on the Teachers Service Commission

4.1 Kenya Vision 2030

The Kenya Vision 2030 is the national long-term development policy aiming at transformation into a new industrialized and middle-income country by 2030. The Vision recognises the role of science, technology and innovation (STI) in a modern economy, which can only realized through effective learning at all levels of education. Therefore science instruction is expected to be the principle catalyst towards realization of Vision 2030. Quality science instructional management is critical in the sense that it would will results into an educated and skilled population that can create, share and use knowledge towards industrialization in Kenya. As much as Vision 2030 recognises that in the process of the emergence of the knowledge economy is associated with an increase in

science-related and technology-related activities, it does not specifically underscore instructional management. To adequately improve on the national pool of scientific skills and talent adequate budgetary planning, allocation, monitoring and control for science instructional resources is essential. So long as policy framework on education address budgetary implications for science instructional management Vision 2030 envisaged curriculum that would lead to national pool of scientific knowledge, skills and competencies to meet the human capital needs of the country. The goal is to develop a repertoire of skills and competencies necessary to achieve the objectives and goals embodied in the Constitution, 2010 and Kenya Vision 2030. Under the policy and the subsequent legislative framework, the Government should provide free and compulsory basic education that is qualitative and relevant to Kenya's development goals through quality instructional management.

4.2 Sessional Paper No14 of 2012

Article 11(2) (b) and (c) of the Constitution of Kenya (2010) recognises the role of science in the development of the nation on top of guaranteeing every child to free and compulsory basic education. This is guided by the principle of universal access to education for every child under 18, as enshrined in Article 53 of the Constitution. Every child is entitled to free and quality education, regardless of their social condition, gender, regional background, and disabilities. This is operationalized in Sessional Paper No14 of 2012 as a policy framework for education and training. Sessional Paper No14 of 2012 contains educational reforms anchored in Bill of Rights of the Constitution of Kenya (2010) has no specific provision for quality instructions in science subjects. Learners' achievement in science subjects are products of effective utilization of instructional resources provided for in FDSE policy as budgetary provision for tuition. Therefore realization of Sessional Paper No14 of 2012 aspirations could partly be achieved through school level financial management policy which would ensure adequate budgetary allocation for science instructional resources.

4.3 Basic Education Act of 2015

The constitution may not be explicit on resources for science instructional management in secondary, but accompanying legislation need to provide direction on sources of funds. As a requirements of the constitution, Basic Education Act of 2015 repealed Education Act 211 of 1968 to modernise Kenyan educational management. In Article 86 (2), the Act highlights the need of adequate funding of secondary education without elaborating on budgetary allocation for science instructional resources. This failed to address quality science instruction which is lacking in Science and Technology Act of 2009. Secondly, as much as emphasis is on training shifts from knowledge-reproduction to knowledge-production it does not provide a clear policy guideline towards quality science instructions. Thirdly, it highlights on reforming management of education and make it functionally relevant to the provisions of the constitution without emphasis budgeting process towards realization of better learning outcome. However, it has emphasis on efficiency in delivery of education through creation of structures to ensure public participation in the management. This is key science instructional management and according to Odundo and Oyier (2017) recognition the role of science teachers in budgeting process go a long way in effective utilization of teaching and learning resources. Further, it echoes Okumbe (2007) assertion that participation of science teachers in budgeting process is key in overseeing, directing, conducting, regulating and controlling in science instructional management.

4.4 Children Act of 2011

Education in the Children Act of 2011 means the giving of intellectual, moral, spiritual instruction or other training to a child. Children Acts of 2011 operationalizes Articles 53 of the Constitution provisions on children's right to free, compulsory and quality basic education, . This provision however, has no direct influence on science education and budgetary allocation for relevant instructional resources. Right to education as provided for in Article 7 emphasizes responsibility government and parents in funding education. This is a confirmation to Chetambve and Sakwa (2013) assertion that public secondary schools are mainly financed by the government through parliamentary approval each year and school fees paid by parents. According Kaguri, Njati and Thiaine (2014), the government through FDSE policy meets fees of Kshs. 10,265 per student in secondary school out of which Kshs: 3600 is for tuition and should cater for science instructional resources. Schools can also finance budgetary allocations for instructional resources from fees paid by parents, funds from income generating projects, contributions or donations by private sources and special grants from government (KIPPRA, 2007). In ensuring adequate budgetary allocation for science instructional resources, schools will be fulfilling provisions of Article 7(2) Children Act 2011 and Article 28 of the United Nations Convention on the Rights of the Child

4.5 Teachers Service Commission (TSC) Act 2012

Article 237 of the constitution accords special status to the Teachers Service Commission (TSC), whose main role is teacher management. TSC as a constitutional office is for this purpose of the TSC Act, 2012 targets instructional

management in secondary schools. The TSC Act converted the TSC, previously a semi- autonomous agency into a constitutional commission. The Act operationalized article 237 of the constitution of Kenya. Article 237 provides for registration, recruitment, employment, promotion, and management of teachers. This puts secondary school leadership to play a key role in the delivery of quality instruction. In particular, the principals' responsibilities include ensuring educational strategies are in place that support effective learning in science subjects. To ensure this takes place schools need strategic plans plus financial management policy to guide budgeting for instructional resources. Although the importance of the instructional leadership responsibilities of the principal, in reality, good instructional leadership skills are seldom practiced as noted by Okumbe (2007). One reason for this could be lack of clear financial management policy at the schools level. This is gap that needs to be addressed in order to ensure that allocation for instructional resources is adequate for quality instructions to take place.

4.6 Public Finance Management Act 2012

Articles 201(a), (d), and (e), 226, and 227 of the constitution have provisions on Public Finance relating to transparency, accountability, and appropriate governance of public monies. Public Finance Management Act 2012 (PEMA) operationalizes requirements of article 201 of Constitution of Kenya (2010); and Education Act 2012 in ensuring that budgetary allocations for science instructional resources are prudently managed. It directly influence budgeting process in secondary schools in ensuring that instructional resources for science are adequately made available for quality instructions. Adoption of provisions of PEMA 2012 into secondary school financial management systems is key in overseeing, directing, conducting, regulating and controlling in science instructional management. Further, emphasis on stakeholders echoes Etindi (2001) assertion that involvement of science teachers in budgeting process for sourcing of instructional resources would go along in ensuring effecting learning in biology, chemistry and physics in Kenyan secondary schools. As PEMA 2012 operationalizes provisions in Articles 201(a), (d), and (e), 226, and 227 of the Constitution it provides secondary schools management with basis for effective science instructional management through budgeting process. This made possible because Article 207 of PFMA provides for participatory governance through structural mechanisms, processes and procedures. Ideally, for effective science instructional management, principals need support for respective subject teachers in school budgeting process to ensure adequate budgetary allocation for teaching and learning resources. Echoing Gichohi (2015) on the need for collaboration with science teachers. However, as noted by Etindi (2001) there is limited stakeholder involvement budgeting for instructional resources for science in Kenyan secondary school. This requires further legislations to operationalize Chapter 13 of the constitution to address involvement of science teachers in budgeting for instruction resources. As noted by Anderson (2008) budgeting for instructional resources is part of school financial management provides the most visible ways through which science teachers can participate in decision making in secondary schools, hence the need of policy guideline on the same. This will ensure adequate budgetary allocation for science instructional resources to make them available for effective utilization as a determinant of good learning outcome and overall performance of the school.

4.7 Science, Technology and Innovation (ST&I) Policy of 2012

The mandate of the education sector is to respond to the Constitution (2010) and Kenya Vision 2030 and in so doing to propose strategies to make education in Kenya inclusive, relevant and competitive regionally and internationally. Science education is an instrument for development and a key player in spearheading global relevance and competitiveness through technological advancement and accelerating industrialization. In support of these sentiments Amunga, Amadalo and Musera (2011) in an article on implications of Vision 2030 on learning achievements underscored the role of science instruction in enhancing national development through innovative technology that would promote industrialization. To realize The Kenya Vision 2030 aim of transforming the country into a newly industrialized and middle-income nation, a comprehensive policy framework to promote science education was needed. This was achieved through Science, Technology and Innovation (ST&I) policy 2012 which aims at creating endogenous capacities appropriate to national needs, priorities and resources. ST&I policy focusses on creating a science, technology and innovation culture whereby socio-cultural and economic solutions are sought. However, ST&I policy has no provision for promoting science education through adequate budgetary allocation at secondary school level.

Kenya government recognizes the key role played by science in wealth creation, building human capital and innovations required for the transition to much desired knowledge driven economy (Onsomu, 2014). Specifically, Vision 2030 proposes to intensify the application of science to raise productivity and efficiency levels across the three pillars of national development; namely economic, social and political. Through Science, Technology and Innovation (ST&I) policy of 2012 Kenya laid an implementation framework focussing on identification, acquisition, transfer, diffusion and application of relevant scientific knowledge in all sectors of the economy (Republic of Kenya, 2012). This policy framework was incorporated in the second Medium Term Plan (MTP) of

2013-2017 purposely to achieve the transformational knowledge based economy that integrates science education. However, both Vision 2030 and ST&I policy do not have specific provision for making sure secondary schools have adequate instructional resources for learning sciences. This could explain continued poor performance in science subjects' national examinations not only in Kenya but also in Sub-Saharan African (SSA) countries (Mbugua & Rarieya, 2014).

4.8 Public Procurement and Disposal Act 200

Procurement of instructional resources in secondary schools in Kenya starts with setting tendering committees as required by Public Procurement and Asset Disposal Act 2015 (PPADA). The main provision of PPADA is decentralization which grants teachers and subordinate staff the power to control procurement process through tendering committees in secondary schools. Expanding membership of tender committees to include BOM and PTA members remains critical for checks and balances with such committees. Based on this, it is critical that procurement regulations be reviewed to allow the inclusion of BOM, PTA, opinion leaders, teachers and ministry representatives in school tender committees. This is likely to provide a strong mechanism for checks and balances needed by the committees to ensure budgetary allocations for every vote head are effectively utilized. Wagithunu et al (2014) acknowledged existence of guidelines on the vote heads and allocation of funds that schools in Kenya use in managing schools finances based on student numbers. As noted by Chetambve and Sakwa (2013) in Kenya through FSE policy the government meets fees of Kshs. 10,265 per student in secondary school of which Kshs: 3600 is tuition covering purchase of instructional resources like textbooks according to enrolment. At secondary school level, existence of a budgeting policy beyond the guidelines from MOEST would effectively guide utilization of budgetary allocation for instructional resources for science subjects from Kshs: 3600 allocated for tuition.

5. Conclusions

The right to education is a multiplier or empowerment right as well as an essential means to promote other rights. Enjoyment of the right to education enhances all rights while its violation jeopardizes them all. Focussing on Article 13(1) of ICESCR which state in part that education shall be directed to the full development of human personality to strengthen the respect for human rights; and Article 13(2b) emphasizes that secondary education shall be made generally available and accessible to all by every appropriate means and in particular progressively made free. This study found out that despite, having domesticated ICESCR in Constitution of Kenya (2010) there are no policy papers on issues of quality instruction. This evident in Sessional Paper No14 of 2012 as a policy framework for education and training containing reforms anchored in Bill of Rights of the Constitution of Kenya (2010) has no specific provision for quality instructions in science subjects through availability and adequacy of instructional resources. This is so despite the fact that Article 11(2) (b) and (c) of the Constitution recognising the role of science and indigenous technologies in the development of the nation, and the promotion of intellectual property rights of the people of Kenya.

Lack of emphasis on quality instruction in science subject is evident further in Basic Education Act of 2013; MOEST's policy on Science, Technology and Innovation; and Science and Technology Act of 2009. For school to adequately provide for science instructional resources they need strategic plans plus financial management policy to guide budgeting for instructional resources, which is rare in most institutions. One reason for this could be lack of clear financial management policy at the schools level; and this is gap that needs to be addressed to ensure that allocation for instructional resources is adequate for quality instructions to take place. Lastly, Articles 201(a), (d), and (e), 226, and 227 of the constitution have provisions on Public Finance relating to transparency, accountability, and appropriate governance of public monies, but there is little involvement of stakeholders budgeting process for sourcing of instructional resources in Kenyan secondary schools has not been documented so far. This happens because in Public Finance Management Act of 2012 which is supposed to operationalise provisions in Articles 201(a), (d), and (e), 226, and 227 has nothing directly related to budgeting process in schools, hence there is limited stakeholder involvement budgeting for instructional resources for science. This gap has made schools boards of management fail to abide by Chapter 13 of the constitution and its articles on the Public Service provides for the values and principles of public service as far as involvement of science teachers in budgeting for instruction resources

6. Recommendations

The study recommends that policy gaps in laws that make it difficult to operationalise provision of the constitution on education as human right and public finance management to ensure that there is availability and adequate instructional resources needs to be in place. Secondly, it is important to have policy on strengthen the capacities of principals at Kenya Education Management Institute (KEMI) on formulation of school financial management

strategy. This is because as much as principals are appointed on the basis of their teaching experience, as well as their academic and professional qualifications, most do not have financial management capacities. Thirdly, schools should find means bringing all possible input from staff, parents, students and the community together to ensure adequate provision for instructional resources in science. On further research, the study recommends work of the effects on school financial policy on availability and adequacy of instructional resources.

As mentioned by Kumbi (2015) principals in developing countries have unique challenges and singles out autocratic leadership style, less open, low degree of change initiation, and lack of instructional leadership functions. Such challenges critical in maintaining quality of standards in financial management and should in turn be points of focus for educational policy and reforms to ensure adequate budgetary allocation for science instructional resources and their effective utilization. Otherwise, school financial management policy should provide standardized procedures, rules, regulation and guidelines on how best funds can be planned and utilized for effective instructional management and especially in source doe learning materials

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