

**INFLUENCE OF MONITORING AND EVALUATION OF
CURRICULUM IMPLEMENTATION ON ACADEMIC
PERFORMANCE IN PUBLIC SECONDARY
SCHOOLS: A CASE OF SMASE PROJECTS
IN MUKAA SUB-COUNTY,
MAKUENI COUNTY**

By

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**A Research Project Report Submitted in Partial Fulfillment for the Requirements of the
Degree of Masters of Art in Project Planning and Management of
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DECLARATION

This Research Project report is my original work and has not been presented for award of a degree in any other university.

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DEDICATION

I dedicate this research project report to my wife Irene Kioko and my two wonderful children, Wesley and Ashley for the support and love they have shown as I tried to pursue my dream.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASEI	Activity, Student, Experiment and Improvisation
EFA	Education for All
ICT	Information and Communication Technology
INSET	In-Service Education and Training
KCSE	Kenya Certificate of Secondary Education
MDGs	Millennium Development Goals
MOE	Ministry Of Education
MOEST	Ministry Of Education, Science and Technology
NGO	Non-Governmental Organization
PDSI	Plan, Do, See, Improvise
QASO	Quality Assurance and Standards Officer
SMASE	Strengthening Mathematics and Science Education
SPSS	Statistical Package for Social Sciences

ABSTRACT

The purpose of this study was to investigate the influence of monitoring and evaluation of curriculum implementation on academic performance in public secondary schools in Mukaa Sub County, Makeni County. The study focused on the SMASE projects in Mukaa Sub county and was guided by the following objectives: to assess the influence of monitoring and evaluation of classroom activities on academic performance in Physics in public secondary schools in Mukaa Sub County , to establish the influence of monitoring and evaluation of school management on academic performance in Physics in public secondary schools in Mukaa Sub County , to determine the influence of monitoring and evaluation of teachers' professional development on academic performance in Physics in public secondary schools in Mukaa Sub County and to establish the influence of monitoring and evaluation of instructional policy and planning on academic performance in Physics in public secondary schools in Mukaa Sub County. The study adopted a Descriptive Survey Research design. The target population was 65 comprising of 30 principals, 30 science department heads, 2(two) County Staffing Officers, (CSO), 2 (two) Strengthening Mathematics and Science (SMASE) Coordinators and 1(one) Quality Assurance Officer, (QASO). The researcher used census sampling to identify the respondents. A total sample size of 65 respondents was used in the study. Validity of the research instruments was ensured by undertaking a pilot test in 4 schools. Reliability of the instruments was then computed by correlating the results of the 4 schools to determine the reliability coefficient. The questionnaires were used as the main research instruments. The questionnaires were administered to principals and head of science department while the interviews were conducted for the SMASE coordinators, CSO and the QASO. The researcher used Statistical Package for Social Sciences version 21.0 to analyze the data. Descriptive statistics such as frequencies and percentages was used to summarize the data. Further analysis was done using correlation and regression models. The key findings for this study were; firstly, physics classroom activities greatly influence academic performance in secondary schools and that the SMASE projects implementation process needs to be closely monitored and evaluated to enhance more efficiency. Secondly, the school management significantly influenced the performance of physics and that the management needs to be audited to suit the needs of SMASE projects. Thirdly, the study concluded that the teachers' professional development determines academic performance in physics since this is one of requirements of the implementation of SMASE projects in schools. This is because there is a positive correlation between teacher's professional development and academic performance of students in physics. Finally, the study concluded that there is a strong relationship between instructional policy and planning and academic performance of students in physics. The researcher recommended that monitoring and evaluation of physics classroom activities should involve SMASE projects coordinators at the sub county levels; school management audits should be raised a notch higher as part of monitoring and evaluation of school management; teachers' professional development programs to be monitored and evaluated to ensure that they benefit the learners and not only the teacher; the ministry of education to hire and train more quality assurance and standards officers to conduct monitoring and evaluation of curriculum implementation in schools to ensure educational projects and programs such as SMASE are implemented to promote good academic performance of the learners. The study hopes to increase the available knowledge in the field of monitoring and evaluation of educational projects and programs to complement other quality assurance initiatives within the education system, which include program and service reviews and monitoring of learning achievements. The knowledge from this study is hoped to assist the school inspectors and administrators in designing effective practices for monitoring and evaluating curriculum implementation at classroom. The findings from this study may create awareness to the Ministry of Education to review its policies on school inspection, management and recruitment of quality assurance and standards officers.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The right of the child to quality education is at the centre stage of every nation. This is so because education is perceived as a right in itself and as a means of promoting peace and respect for everyone. At the international front, education has been recognized by the United Nations Universal Declaration of Human Rights of 1948 as a basic right for every child in its article 26 (1). Similarly, the African Charter on the Rights and welfare of the child; Article 11 articulates provisions on the right to free and compulsory basic education for the child.

Curriculum implementation presents teachers, schools and boards of management with a unique opportunity to engage in professional development improve learning outcomes and prepare children for the challenges and opportunities of the future. The task of curriculum implementation is complex: it requires in-school management teams, principals and boards of management to lead the implementation in the school as an organization. Curriculum implementation takes place in the classroom and it involves teachers translating curriculum document into practice, embracing teaching programs and methodologies, and providing a broad range of learning experiences for their students.

Monitoring and evaluation is a process that helps program implementers make informed decisions regarding program operations, service delivery and program effectiveness, using objective evidence (Ballard et al., 2010). It is a process in that it involves on-going and routine collection of information used to assess if the program has made efficient use of resources and is on track (monitoring), and to assess to what extent the program has reached its objectives in terms of outputs (program activities) and outcomes and impact (whether the expected benefits to the target population were reached). Monitoring and evaluation is often required by sponsors and other stakeholders in order to provide evidence that the investments into a program were worthwhile or whether alternative approaches should be considered to improve effectiveness.

According to Clegg and Billington (1994) in reflecting on the practice of monitoring by the office for Standards and Education (OFSTED) Britain, a major purpose of monitoring is to collect a range of evidence, mark the evidence against a statutory set of criteria, arrive at judgments and make those judgments known to the public. This therefore means that the general public has a right to know if the educational institutions are offering quality education of acceptable standards.

In the USA, the need for monitoring and evaluation in the educational field was sparked by the Federal Elementary and Secondary Education Act of 1965. Earlier evidence however exists of evaluation- like activities (Sanders, 1986). Firstly, the development of accreditation standards and procedures in the 1930s replaced school inspections which in turn led to a focus on inputs and processes (Sanders, 1986). In the 1930s as well, Ralph Tyler's groundbreaking work on curriculum evaluation stressed the importance of specifying measurable objectives against which to assess programme effectiveness. Another milestone in this discipline was Michael Scriven's ideas of the role that formative and summative assessment could play in education. The categories covered in educational evaluation courses included the history and philosophy of evaluation, alternative approaches (responsive, CIPP, utilization-focused), techniques and tactics (which included methods and techniques for data collection and analysis) as well as evaluation issues and special topics (standards, meta evaluation, and context of evaluation, role of the evaluator, etc.) (Sanders,1986).

One educational project - Head Start- warrants special mention here. Incongruously made possible because of the dissatisfying early performance of the Community Action Programme, this was to become one of the longest federally funded projects in the US. The original vision of the project was to improve the intellectual capacity and school performance of poor children. The federal government's commitment to this programme is evident in the many additions that followed as the project evolved (Riley & Epps, 1967).

In terms of school management in the USA, evaluation increased application in the enhancement of organizational effectiveness and management decision-making directly linked to issues around utility: initially programme evaluation's

contribution was narrowly focused on programmatic questions for example the clarification of objectives, the consideration of programme design and judgment of results. As the field of programme evaluation evolved, questions around utility started receiving greater emphasis which led to the development of other forms of evaluation such as management audits and cost benefit analyses. In this field, part of evaluation's contribution to the management sphere according to Perloff and Rich (1986): was as follows : In terms of organizational design in that decision-making processes and reporting structures are clarified, budgeting and resource allocation to be done in terms of cost benefit and cost effectiveness analyses, targeting of the correct individuals which improves personnel administration, a better work environment and clear monitoring system where staff's performance is linked to certain measures in terms of their implementation of activities.

Currently, the USA education is under the state's development of education. Many schools in the USA spend a lot of resources collecting and analyzing data that entail annual and biennial achievement testing and collection of demographic data. Sometimes data about homework policies, classroom discipline and the parental involvement is also collected. The aim of the monitoring system is to gather information about how teachers in a given jurisdiction and training perform compared to other jurisdictions. It also assess whether the achievement of learning outcome in these jurisdictions is changing over time and determine whether there are imbalances in achievements among learners with different social economic backgrounds (Williams, 2000). The monitoring and evaluation information in the department of state in USA is useful to school, Districts and state administrators for day to day decision making concerning allocation of resources, the efficiency of certain programs, and strengths and weaknesses of these program. In the evaluation aspects such as preparation for teaching, creation of positive classroom environment, effective teaching for all the students and professional responsibilities are assessed.

The Curriculum achievement standards in Australia provides a basis for identifying current levels of student achievement; monitoring progress; providing feedback; and measuring and reporting on performance. This ensures that assessment and reporting practices are explicitly centred on the improvement of student learning.

Under current national agreements, all schools are required to provide parents and caretakers twice a year with plain language reports on student progress and achievement, using grades A–E or an equivalent scale, clearly defined against the Australian Curriculum achievement standards. The Australian Curriculum sets out what students are expected to learn and an expectation of the quality of learning. Each education jurisdiction in Australia is responsible for the implementation of the Australian Curriculum.

Monitoring and evaluation of curriculum implementation in Nigeria is a mandate of inspectors who are Education Officers trained in the field of education. They abound in the Inspectorate Department of the federal and states Ministries of Education and also in the Teaching Service Commission, Area Education Offices, Local Government Education Authority (LGEA), and State Universal Basic Education. They are concerned with curriculum implementation, effective utilization of grants and materials allocated to schools, stimulation of teachers, and ensuring that schools adhere strictly to educational objectives, standards, and policies of government (Badare, 2007).

Some teachers and students are absentees and perpetual latecomers in Nigeria (Achimugu, 2005) while some teachers are drivers and businessmen/women (Ajayi & Shofoyeke, 2003; Famade, 2001) at the expense of their primary assignment. This implies that some teachers in Nigeria are ineffective, which is reflected in a poor trend of failures in examinations (Federal Ministry of Education, 2007; Punch, 2010, 17March), examinations malpractices (Awe, 2004; Olatubosun, 2009), and poor quality of outputs of secondary schools (Adeyemi & Ige, 2002).

In Tanzania, monitoring and evaluation of curriculum implementation is a vital exercise of ensuring delivery of quality education, adherence to set policy laws and regulations. The inspectorate department is empowered by a Parliamentary Act to oversee the implementation of the 1995 Educational and Training Policy (ETP) and currently the new ETP 2014. In doing so, it monitors and evaluates the provision of quality educational services in line with the laid down government educational standards, procedures and guidelines (URT, 2000). It provides feedback to education stakeholders on the status of implementation of the curriculum in basic education, oversee and recommend good governance practice in Secondary Schools in the

public sector. Monitoring as a component of the school system is essentially a quality control mechanism for ensuring standards in schools and the education they provide, (Galabawa, et al., 2000). Teaching in the schools is significantly effected by a powerful inspectorate that is mandated to ensure and maintain quality in resource allocation, curriculum delivery, and educational standards. Kabunduguru (2013) adds that over the years, monitoring has been an activity which is geared towards the improvement of the quality of education in schools.

In Kenya, responsibility for the monitoring and evaluation of the education system is vested on the Ministry of Education, Science, and Technology. The Kenyan philosophy of education embraces “the inculcation of a high quality instruction” (Republic of Kenya, 1999). According to Republic of Kenya, quality education has been equated with high standards, namely, a set of criteria against which an institution or system is judged. Among the determinants of quality on education, Republic of Kenya noted, are the availability of qualified and motivated teachers, a conducive environment for curriculum implementation, including the curriculum, facilities, the resources available for their provision, and the tools for evaluation. The Basic Education Act (2013) mandates the Education Standards and Quality Assurance Council (ESQAC) to ensure standards and maintain quality institutions of Basic Education, super vise and oversee curriculum implementation and delivery, monitor and evaluate standards and quality in basic education. It was inaugurated in November 2014.

According to statistical data at the Mukaa DEO’S offices, Mukaa is one of the 9 Sub-Counties in Makueni County. Until the year 2007, Mukaa district had been a division in the larger Makueni District when it became a district of its own.

The Sub-County has 43 public secondary schools. Monitoring and evaluation of curriculum implementation is done by the Quality Assurance and standards officer (QASO) in the Sub County level while in schools it is done by the principal and heads of department. Statistics from the office of the County Director of Education show that student’s academic results in Physics from various sub-counties are always different with some scoring highly and others performing below the entire county average score.

1.2 Statement of the Problem

Academic achievement in the Kenya Certificate of Secondary Education examination is of integral significance to all education stakeholders. Nationally, learners and parents have continued to attach a very strong interest in national examination results of secondary school students announced by the Kenya National Examination Council, KNEC each year. Left to regulate them self, internal efficiency of secondary schools may not be achieved. As noted in UNICEF report (2006), despite critical importance of monitoring and evaluation for organizational learning and self-renewal, the reality is that schools often do not have the means or inclination to engage in monitoring and evaluation. Monitoring and evaluation tends to be done on schools rather than by schools or with schools.

Makueni County has over the years exhibited good academic performance in these examinations, competing favorably with national schools country wide and performing better than the neighboring Kitui, Kajiado and Machakos County. However, not all the sub-counties in the Makueni County produce satisfactory results. Mukaa sub-county has been performing dismally particularly in Physics Science subject in the last 4 years. In the year 2012, the sub-county managed a mean score of 2.16 in Physics against 4.51 of the entire Makueni County. Machakos, the neighboring County scored 4.00. In 2013 the sub-county's average score dropped to 2.00 compared to 4.24 of the entire County. In 2014, the sub-county attained a mean of 3.02 lower than that of the county of 4.90 and in the year 2015 the sub-county attained a mean of 3.10 in Physics while the county mean was 4.50. The neighboring sub-counties like Kilungu, Mbooni West, and Nzaui have shown an increasing academic performance trend in Physics during the 4 year period, for instance, Nzaui sub-County obtained means of 3.90, 4.23, 3.15 and 4.86 consecutively in the last 4 years (DEOs office, Mukaa)

This raises concern as to how SMASE projects are monitored and evaluated by the QASO, principals and heads of departments who have the responsibility of ascertaining proper implementation of education programs, projects and policies in the schools in Mukaa sub-County to promote efficient and effective curriculum implementation. Therefore this study sought to establish the influence of monitoring and evaluation of curriculum implementation on academic performance in public secondary schools in Mukaa Sub-County, Makueni County, Kenya.

1.3 Purpose of the Study

The study purposed to investigate the influence of monitoring and evaluation of curriculum implementation on academic performance in public secondary schools by focusing on the SMASE projects in Mukaa Sub-County, Makueni County, Kenya.

1.4 Objectives of the Study

1. To assess the influence of monitoring and evaluation of classroom activities on academic performance in Physics in public secondary schools in Mukaa Sub-County.
2. To establish the influence of monitoring and evaluation of school management on academic performance in Physics in public secondary schools in Mukaa Sub-County.
3. To determine the influence of monitoring and evaluation of teachers' professional development on academic performance in Physics in public secondary schools in Mukaa Sub- County.
4. To establish the influence of monitoring and evaluation of instructional policy and planning on academic performance in Physics in public secondary schools in Mukaa Sub- County.

1.5 Research Questions

The study will be guided by the following questions:

1. How does monitoring and evaluation of classroom activities influence academic performance in Physics in public secondary schools in Mukaa Sub-County?
2. How does monitoring and evaluation of school management influence academic performance in Physics in public secondary schools in Mukaa Sub-County?
3. How does monitoring and evaluation of teachers' professional development influence academic performance in Physics in public secondary schools in Mukaa Sub-County?
4. How does monitoring and evaluation of instructional policy and planning influence academic performance in Physics in public secondary schools in Mukaa Sub-County?

1.6 Significance of the Study

The aim of this study was to investigate the influence of monitoring and evaluation of curriculum implementation on academic performance in Physics in public secondary schools in Mukaa Sub-County, Makueni County. The study hoped to increase available knowledge in the field of monitoring and evaluation of educational projects and programs thus complementing other quality assurance initiatives within the education system, that include program and service reviews and monitoring learning achievements.

The knowledge accrued from the study is hoped to assist the school administrators in designing effective practices for monitoring and evaluating curriculum implementation both at classroom and school level. The findings of the study may also promote awareness to the teachers as curriculum implementers on appropriate internal differentiation teaching methods that take into account the individual differences and different learning profiles of students and assessment methods that show how students' problems that require special attention are solved hence imparting desirable skills to learners from across the divide.

The findings from this study may create awareness to the Ministry of Education in view of its policy on school inspection, recruitment of quality assurance and standards officers, alignment of developmental appraisal for educators so that educators are confident that the features of good practice sought in whole-school evaluation are the same as those encouraged through appraisal and development programs and create clear links between those at national and County level who are responsible for quality education, and supervisors, schools and local support services), the Kenya Institute of Curriculum Development (KICD), in structuring the curriculum and preparation of learning materials; the government, policy makers and non-governmental organizations about the needs of learners that have to be addressed in order to realize effective curriculum implementation. Finally, the findings from this study may also add to knowledge on which further research on related issues can be based.

1.7 Delimitation of the Study

This study concentrated on the influence of monitoring and evaluation of curriculum implementation on academic performance in Physics in public secondary schools. The specific area of study was Mukaa Sub-County, Makueni County. The study dealt with four aspects: classroom activities, school management, teachers' professional development and instructional policy and planning.

Mukaa Sub County has a total of 43 public secondary schools. The study was delimited to the 43 public secondary schools within the sub-county. Focus was on principals, science heads of departments, QASO, SMASE Coordinators and County Staffing to help get crucial information about monitoring and evaluation of effective curriculum implementation in the Sub- County.

1.8 Limitations of the Study

The study used a sample of the population and the findings were not necessarily true to the whole of the Sub County. The study used questionnaires and interview guides and some of the respondents might have withheld or gave incorrect information. The study assumed that the data collected from the random sample was a representative of the population. These were mitigated by randomly sampling the population and guiding the respondents to complete the questionnaires.

1.9 Assumptions of the Study

In the study, it was assumed that principals and heads of departments are involved in monitoring and evaluation of the curriculum implementation process and that they monitor the preparation for curriculum delivery and evaluates the effectiveness of the process. It was also assumed that teachers prepare adequately for their lessons. In addition, the study assumed that QASOs from the Ministry of Education with the assistance of County staffing officer and C often carry out monitoring and evaluation of curriculum implementation process in all the schools. The study finally assumed that proper monitoring and evaluation of the implementation of SMASE projects is carried out by the coordinators.

1.10 Operational Definition of Terms

Academic Performance: This refers to the evidence that relevant prescribed learning outcomes have been accomplished in Physics.

Curriculum implementation: Refers to the ability of the educator to deliver contents of the curriculum, the stage when the curriculum itself, as an educational program, is put into effect.

Instructional policy and planning: Guidelines or procedures put in place for teaching and learning in a given school.

Monitoring and Evaluation: The continuous systematic checking of activities and judging that should be carried out by Quality Assurance and Standards Officers, principals and department heads in preparation and conducting of a lesson to facilitate curriculum implementation in schools.

Professional Development: Advancement of teachers teaching skills in teaching and learning which include seminars and workshops, in-service training and appraisals.

Program evaluation: Program evaluation can be defined as a systematic operation of varying complexity involving data collection, observations and analyses, and culminating in a value judgment with regard to the quality of the program being evaluated, considered in its entirety, or through one or more of its components.

Public secondary school: Any school that is fully funded by the government and administered by government appointees whose teachers and other staff are remunerated by the government.

Quality assurance: The process of assessing and reporting on educational institutions to ensure smooth co-ordination of the curriculum implementation.

1.11 Organization of the Study

The study is organized into five chapters. Chapter one dealt with the background of the study, statement of the problem, purpose of the study, objectives, research questions of the study, significance of the study, delimitations of the study, limitations of the study, assumptions of the study and operational definition of key terms. Chapter two dealt with literature review organized into sub title preview of influence of monitoring and evaluation process on curriculum implementation on performance in public secondary schools, theoretical framework and conceptual framework.

Chapter three dealt with introduction, research design, target population, sample size and sampling technique, research instruments, validity and reliability of the instruments, data collection and data analysis technique. Chapter four comprise of data analysis, presentation and interpretation of the findings. Chapter five summarized the research findings, a discussion of the findings and conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review literature related to the problem content. The literature was reviewed from relevant books and studies carried out by different researchers both locally and internationally. The review of the literature is related to the topic of the study and focused on the following areas: classroom activities, school management, teachers' professional development and instructional policy and planning of curriculum implementation in public secondary schools.

2.2 Monitoring and Evaluation

Monitoring and evaluation is a deliberate process that involves systematic collection and analysis of information (UNDP, 2006). The introduction of monitoring and evaluation (M&E) systems and structures is often linked to public service reform initiatives in budgeting and accountability. M&E is important for various reasons. It is therefore important that staff, school managers, society organizations and school stakeholders should know about M&E. As governments in most parts of the world have considered their agenda for higher education over the last few decades, issues of quality assurance and quality enhancement have acquired a major focus of attention. Despite differences in the size and stage of development of their higher education sectors, many governments have decided that the traditional academic controls are inadequate to today's challenges and that more explicit assurances about quality are needed. Organizations such as the European Commission or OECD have reinforced this trend by their own calls for new structures and new approaches to quality assurance (El- Khawas, 1998).

The concept of Quality enhancement or improvement emphasizes the pursuit of continuous improvement and is predicated on the notion that achieving quality is central to the academic ethos and that it is academics themselves who know best what quality is at any point in time. Harvey and Green (1993) developed a methodology for assessing quality. Focusing on the identification of certain criteria to assess the quality of teaching and learning rather than administrative matters, they aimed at redefining the policy on quality. The groups of stakeholders that they addressed are students, teaching staff, non-teaching staff, employers, accrediting agencies, quality

assurers, quality assessors and the government. Through a set of multiple data collection procedures involving survey, in-depth interviews and discussion seminars, they found out that the majority of the groups agree on the following criteria: adequacy of human resources, clarity of the aims and objectives to all participants, relevance of the programme content to the award given, objectivity in assessment, consistency between assessment and course objectives, getting useful and feedback from assessment

M&E promotes greater transparency and accountability in terms of use of school resources, which is particularly required by the funders, i.e the government or development partners. Information generated through M&E provides leaders and staff with a clear basis for decision-making. From the information obtained through M&E, future school planning and development is improved when guided by lessons learned from previous experience. Monitoring and evaluation provides a full picture of the school performance as per that particular time. M&E therefore enables school managers to put strategies that can redirect the school towards desired results.

M&E provides information that helps in ascertaining whether the key milestones were made and thus measuring the progress of the school. It helps in comparing our school with other schools and helps us to see what has been achieved; makes work more effective and finally, M&E helps us approve evaluation methods.

2.3 Monitoring and Evaluation of Classroom Activities and Academic Performance

Research on the use of learning probes can produce achievement benefits (Cotton, 1988). Particularly effective techniques include: keeping questions at an appropriate level of difficulty – that is, at a level where most students can experience a high degree of success in answering; paying close attention to who is answering questions during classroom discussion and calling upon non volunteers; asking students to comment or elaborate on one another's answers; using information on students levels of understanding to increase the pace of instruction whenever appropriate. Monitoring can alert teachers to situations where they can profitably pick up the instructional pace and thus cover more material.

Cotton (1988) further adds, research comparing the behavior of effective teachers, that is, those whose students achieve highly or higher than would be expected given background variable) with that of less effective teachers has clearly revealed the importance of monitoring the class during seatwork periods. Such monitoring involves teachers moving around the classroom, being aware of how well or poor students are progressing with their assignments, and working with students one-to-one as needed. Viewing curriculum as a process (Mednick, 2006; Smith, 2000), it is essentially observing what actually happened and how these elements interacted to make meanings within the classroom (Smith, 2000). Inside the classroom there are a number of elements such as teachers, students, classroom environment and knowledge which are constantly interacting with each other (Huitt, 2003)

The most effective teachers: have systematic procedures for supervising and encouraging students while they work; initiate more interactions with students during seatwork periods, rather than waiting for students to ask for help; have more substantive interactions with students during seatwork monitoring, stay task oriented, and work through problems with students; give extra time and attention to students they believe need extra help and stress careful and consistent checking of assignments and require that these be turned in.

Researchers who study assessment and evaluation techniques are quick to point out that the role of standardized testing has received considerably more research attention than have classroom testing and other classroom-level assessment methods. The existing research does indicate, however, that well-designed classroom testing programs bear a positive relationship to later student achievement. Beneficial effects are noted when tests are: administered regularly and frequently; an integral part of the instructional approach (that is., well-aligned with the material being taught) and collected, scored, recorded and returned to students promptly so that they can correct errors of understanding before these become ingrained (Cotton, 1988).

According to Cotton (1988) homework confers the most beneficial results when assignments are: closely tied to the subject matter currently being studied in the classroom; given frequently as a means of extending student practice time with new material; appropriate to the ability and maturity levels of students; clearly

understood by students and parents; monitored by parents; i.e., when parents are aware of what needs to be done and encourage homework completion; quickly checked and returned to students; graded and commented on. Research indicates that homework which meets these criteria is positively related to student attitudes. Students may say they don't like homework, but research shows that those who are assigned regular homework have more positive attitudes toward school, toward the particular subject areas in which homework is assigned, and toward homework itself, than students who have little or no homework.

Observations by Cotton (1988) shows that the use of homework assignments bears a significant and positive relationship to achievement when the homework is carefully monitored, as well as serving the function of increasing students' learning time. Homework confers the most beneficial results when assignments are: closely tied to the subject matter currently being studied in the classroom; given frequently as a means of extending student practice time with new material; appropriate to the ability and maturity levels of students; clearly understood by students and parents; monitored by parents; i.e when parents are aware of what needs to be done and encourage homework completion; quickly checked and returned to students; graded and commented on. It is of great concern to this study to examine how classroom activities are monitored in public secondary schools and especially by principals and teachers in Mukaa Sub County.

2.4 Monitoring and Evaluation of Management of Schools and Academic Performance

A school with an established teaching and learning culture will also have a well- developed organizational structure and instructional program that focuses on all aspects of academic achievement and the professional development of educators. Davidoff and Lazarus (1997) in their study indicated the link between organizational culture and the culture of learning and teaching by pointing out that both the written and unwritten rules and norms of the school determine a certain pattern of behavior. In other words, the organizational culture ratifies what is proper and ideal for the school, it exerts pressure on both learners and educators to conform to the standards and validate the high expectations or performance as outlined in the schools' mission statement and policy. By means of the principals' instructional

leadership task he/she can influence the organizational culture of the school by emphasizing academic aspects such as staff development programs, involving educators in decision making, providing resources, supervision and provision of instructional time.

Academic excellence is one of the cornerstones of the success of schools. In this area of instructional leadership the principals play a major role. The principal of school B in Kruger (2005) explained it as follows: "... with the examination results my intervention (in instructional leadership) is usually very strong ...". According to Licata and Harper (1999), academic emphasis is a significant characteristic of effective schools. The emphasis on academic achievements provides a shared meaning about purposes and the vehicle for integrating the behavior of teachers and learners.

Productive work takes place when the goals of the school are understood by all stakeholders (Karpicke and Murphy, 1996). Both principals monitored the performance of the learners through a comprehensive analysis of the examination results especially the final matriculation results. These data are used to motivate teachers to achieve according to their expressed expectations and the abilities of the learners. School A's principal explained his monitoring process as follows: I keep record of the performance of every teacher and every group appointed to him via symbol spreadsheets, learner averages and subject averages. From Grade 6 up to Grade 12. This principal also stressed the emphasis on academic excellence as follows: ... the priority of the school's budget should be in the interest of the child ... (the budget) should have a direct influence on the bulk of the children, in other words their (the learners) academic work is the priority.

As a whole educational leadership can be seen as a phenomenon that needs to strike a balance between several extremes: direction versus giving leeway to autonomous professionals, monitoring versus counseling and using structures and procedures versus creating a shared (achievement- oriented) culture. Sammons, Hillman and Mortimore (1995) in this context refer to the leading professional. In more recent views on educational leadership, inspired by the concept of the learning organization, motivating staff by providing incentives and creating consensus on goals are emphasized. Mitchell and Tucker's concepts of transactional leadership and

transformational leadership (Mitchell & Tucker, 1992) form a case in point. Staff development and the 'human resource' factor are further underlined in these approaches. These newer perspectives do not create a sharp break with the longer existing conceptualizations of educational leadership, but emphasize the cultural and the staffing mode of schooling. Scheerens (1992) draws attention to the point that the rather heavy requirements of an educational leader do not necessarily rest on the shoulders of just one individual: "At first glance the description of 'educational leadership' conjures up an image of a show of management strength: not only the routine work necessary for the smooth running of a school, but also active involvement with what is traditionally regarded as the work sphere of the routine assignments leave sufficient time for the more pedagogic tasks. Nevertheless, this leadership does not always have to come down to the efforts of one main leader. From the school effectiveness research of Mortimore et al (1988) it emerges that deputy heads in particular fulfill educational leadership duties. Delegation can go further than this level: it is desirable that, given the consensus of a basic mission for the school, there is as broad as possible a participation in the decision making. In the end certain effects of pedagogic leadership such as a homogeneous team will fulfill a self-generating function and act as a substitute for school leadership (according to Kerr's (1977) idea of 'substitutes for leadership')."

Developing a school vision is an essential foundation from which the instructional activities of the school evolve (Haughey and MacElwain, 1992). In almost all the studies dealing with instructional leadership, defining and communicating a clear mission, goals and objectives for the school forms an important aspect of instructional leadership. As Keller (1998) puts it; "If there is one broad area of agreement among researchers, consultants, those who teach prospective principals; and the principals themselves – it is that schools must have a clear idea of what they are about". Understanding the purposes and goals of the school by all stakeholders contributes to a healthy organizational culture (Karpicke and Murphy, 1996). The principals and teachers of both schools indicated that effective year and term planning and the setting of clear objectives form important activities in the beginning of the year. The recognition of achievements forms an ongoing activity in schools.

However, it is apparent that members of the boards of management and parents do not play an active role in whole-school planning activities and that in some schools the responsibility for planning remains with the principal. However, priorities for development have yet to be identified in some schools, while in most schools the process of writing formal action plans is not embedded in the school plan. In a third of the schools in the sample, curriculum plans are not monitored or reviewed regularly. One of the most general conclusions emanating from the research on effective schools is that a principal can exercise a significant effect on the efficiency and success of the school (Hawley, Rosenholtz, Goodstein and Hasselbring, 1984).

The school effectiveness studies emphasized the importance of the principals' instructional leadership role which concerns the principal's responsibility to ensure that effective curriculum implementation takes place. It relates to the core activities of the school, i.e. teaching and learning in the classroom involving all the beliefs, decisions, strategies and tactics utilized by principals to ensure instructional effectiveness in every classroom. Instructional leadership occurs when the principal provides direction, resources and support to both educators and learners with the aim of improving teaching and learning at a school. Good instructional leadership is the path to good curriculum implementation and instructional leaders ensure a sound culture of learning and teaching in their schools at all times. This study tries to address how leadership and management of public secondary schools in Mukaa sub-county monitors school activities as seen in research question two and how this influences curriculum implementation in schools.

2.5 Monitoring and Evaluation of Professional Development of Teachers and Academic Performance

The critical success factor for our education system is a quality teaching force, supported by strong school leaders and administrators, working within an integrated ministry of education (MOE) family. Professional development of members of the teaching staff brings about openness to new ideas, and constant adaptation is essential as education is always a work in progress. It is worth noting that quality teachers are the sine qua non for any education system, therefore to sustain excellence, emphasis has to be placed on building capacity

among teachers and school leaders, to engender a teacher-driven culture of professionalism and to systematize the sharing of good practices which are crucial in moving an entire school system forward.

Professional development support, as established by IDES Report (2004) is provided for teachers through a number of agencies, the practice of individual schools supporting the attendance of their teachers at activities related to areas given priority for development needs to be systematically addressed at a policy level. In some schools, the board of management cites lack of funding as inhibiting their ability to support professional development activities of this nature.

Kruger (2005) in a study on instructional leadership: the impact on the culture of teaching and learning in two effective secondary schools in South Africa found out that involvement of the teachers in decision making about the allocation of work stimulates their professional growth and influences the organizational culture of the school positively. One of the teachers commented: "... if you are happy in your subject, you give your best". Both principals also set a high value on promoting the professional growth of the teachers. Teachers are motivated to attend workshops arranged by the department at the different teacher centers and to share these ideas with their colleagues.

The single most significant factor why teachers should be professionally developed is based on the conviction that the quality of teachers influences the quality of the learners' experience and achievement in a positive way. (Menlo& Poppleton, 1990). Presently in South Africa there is an energetic political press to judge teachers' quality by measuring learner performance. Raising the quality of teacher performance through teacher development programs is essential, it is believed, to improve the overall performance of the education system, which makes the debate about school type, school-by-school performance, and class size, among others, look irrelevant.

A study conducted by Wachira (2012) on head teachers' characteristics influencing instructional supervision in public secondary schools in Kasarani Sub County in Kenya revealed that the principal plays a very vital role as the first and resident supervisor in a school which leads to the realization of an enhanced performance

in the teaching/learning process. The findings of the study indicated that head teachers supervised their teachers when teaching and discussed the observations with the respective teachers irrespective of the head teachers' gender. Supervisory activities were found not to be significantly related to head teachers' experience. The study also found no significant relationship between head teachers level of professional training and most of their supervisory activities.

Meaningful teacher evaluation involves an accurate appraisal of the effectiveness of teaching, its strengths and areas for development, followed by feedback, coaching, support and opportunities for professional development. It is also essential to celebrate, recognize and reward the work of teachers. Research results reveal that the great majority of teachers report that the appraisal and feedback they receive is beneficial, fair and helpful for their development as teachers (OECD, 2009).

Danielson's Framework for Teaching (1996, 2007), groups teacher's responsibilities into four major areas further divided into components: planning and preparation – demonstrating knowledge of content and pedagogy, demonstrating knowledge of students, selecting instructional goals, designing coherent instruction, assessing student learning; the classroom environment – creating an environment of respect and rapport, establishing a culture for learning, managing classroom procedures, managing student behavior and organizing physical space; instruction - communicating clearly and accurately, using questioning and discussion techniques, engaging students in learning, providing feedback to students, demonstrating flexibility and responsiveness; professional responsibilities - reflecting on teaching, maintaining accurate records communicating with families, contributing to the school and district, growing and developing professionally, showing professionalism. This study looks at influence of teachers' professional development in curriculum implementation with reference to the academic performance of students in public secondary schools in Mukaa Sub- County.

2.6 Monitoring and Evaluation of Instructional Policy and Planning in Schools and Academic Performance

Kruger (2003) observes in his study on instructional leadership: the impact on the culture of teaching and learning in two effective secondary schools in South Africa that formal instructional leadership begins with well-designed policy

documents with regard to educational matters and well-designed year and quarterly planning. The policy documents that were studied included general aims for the school as well as explanations of instructional aspects such as: subject policies, subject meetings, subject files, differentiation, assessment and discipline. Other areas include goal setting and planning. Principals in Kruger study stressed the importance of well-designed planning.

As the principal of school A stated: “I think that the program (year plan) creates a certain sense of security ...” In the beginning of the year clear goals are also set by both learners and teachers. The principal of school B gives the senior learners as well as the teachers” opportunities to set and explain their goals for the year. During a staff meeting at the beginning of the year the goals are discussed and during subject meetings these goals are elaborated on and discussed in more detail as they should be applied in each subject.

According to the Inspectorate of the Department of Education and Science Report (2004) on evaluation of planning in schools in Ireland, it is evident that a wide variety of external support is used effectively by schools to support planning. External personnel facilitate whole-school review and guide planning, and structured frameworks are effectively used, formal structures, such as the allocation of time for planning, and regular meetings, enable whole-school planning to take place systematically.

It was for this reason that the study seeks to investigate the influence of instructional policy and planning on teaching and learning among public secondary schools in Mukaa Sub County, Makueni County.

2.7 Theoretical Framework

This study is based on theoretical model developed by Shavelson McDowell and Oakes (1987). The model presents education system in terms of inputs, processes and outputs. The inputs in this study may include, SMASE project which comprises of the INSET for mathematics and science teachers. Other resources include; the school infrastructure, school resources both human and physical and any other resources that schools are provided with to do their work. The school processes would be the policies and practices in the implementation of SMASE project. The outputs also seen as outcomes in this study would mean good

performance in Physics examinations. The study will also be guided by Systems Theory by Ludwig von Bertalanffy (1972) who is often cited as the father of general systems theory. The basic principle of the systems theory is that the whole is more than the sum of its parts, that the whole determines the nature of the parts, and the parts are dynamically interrelated and cannot be understood in isolation from the whole.

In order to be a functioning system, the total system has to define its objectives and performance measures; the environment has to be considered as an influencing factor; the resources must be determined; the components of the system must be defined; and the management of the system must be set (Churchman, 1968).

An educational system is described by the relationships among its components (teachers, students, content, and contexts) and the relationship this system has with its environment (Frick, 2004). When changes are made in an educational system, one or more of these relationships can be affected. This can be related to the effect of monitoring and evaluation of curriculum implementation. Systemic change, however, is a comprehensive process where “a fundamental change in one aspect of a system requires fundamental changes in other aspects in order for it to be successful” (Reigeluth, 1992). These aspects are: classroom activities school management, Instructional policy and planning, and teachers’ professional development.

2.8 Conceptual Framework

A conceptual framework can be defined as a model representation where a researcher represents the relationships between variables in the study and shows the relationship graphically and diagrammatically. The relationship between the different variables is as summarized in the figure below:

Independent variables

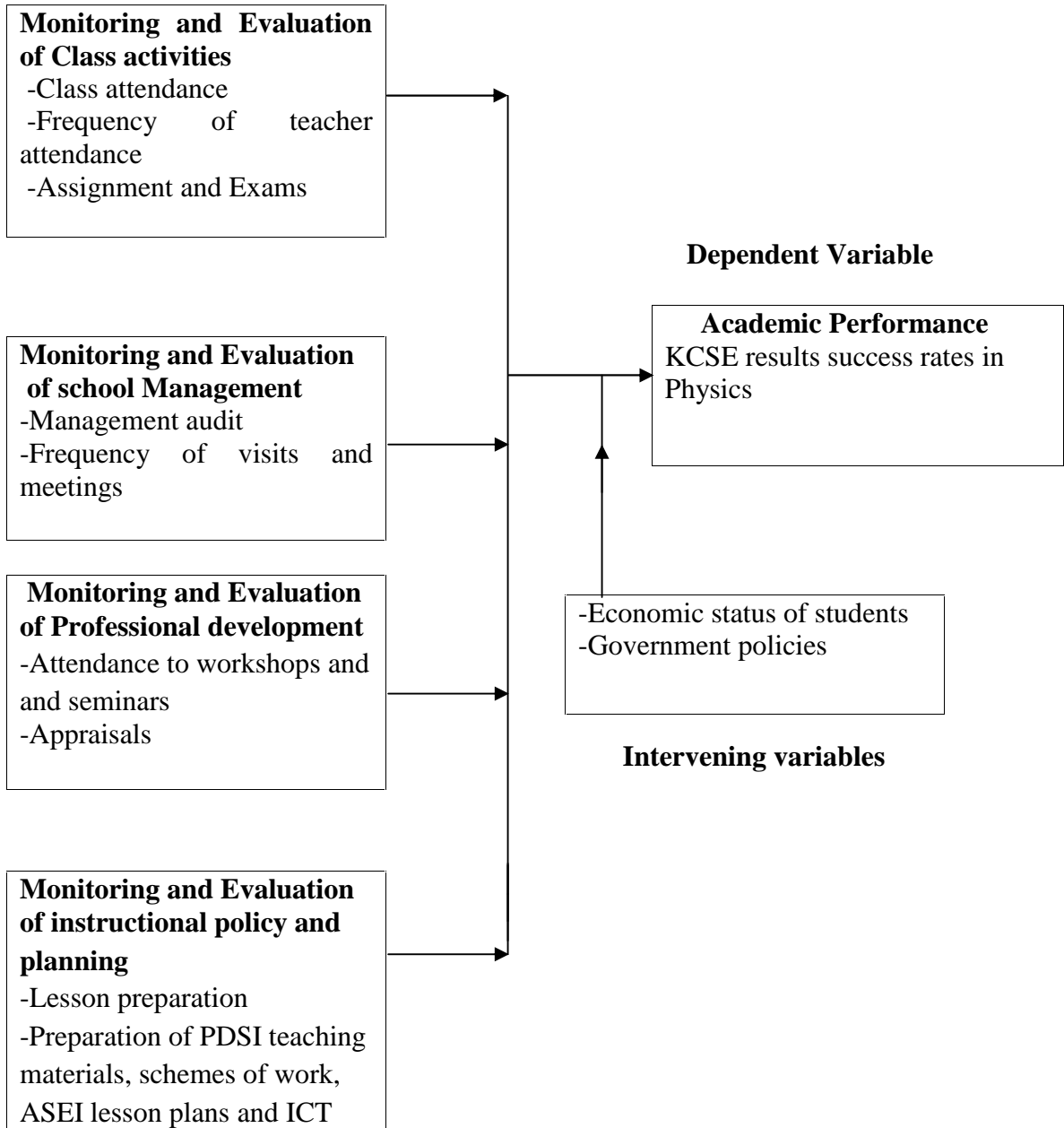


Figure 1: Conceptual Framework

According to Orodho (2009) a conceptual framework describes the relationship between the research variables. Jabareen (2008) argues that a variable is a measurable characteristic that assumes different values among subjects. The independent variables in this study include classroom activities, school management, Professional development, and instructional policy and planning. On the other hand, the dependent variable is the academic performance in Physics in Public Secondary Schools.

2.9 Summary of the Literature Review and Knowledge Gap

Monitoring and evaluation (M&E) systems and structures are often linked to public service reform initiatives in budgeting and accountability. From the literature review, research identifies the practice of monitoring and evaluating curriculum implementation as an essential component of high-quality education. Monitoring and evaluation is conducted for several purposes namely to learn what works and does not; to make informed decisions regarding programme operations and service delivery based on objective data; to track progress of programs; to assess extent the programme is having its desired impact; to create transparency and foster public trust; to understand support and meet donor needs; and to create institutional memory. Monitoring and evaluation of school activities is shown to be one of the major factors differentiating effective schools and teachers from ineffective ones. Majority of the studies reviewed touching on areas that are monitored and evaluated in schools conducted in secondary schools reveal that the focus has been on the principals as the main respondents.

In addition most of these studies have been conducted in countries other than Kenya. Studies that have tried to address the effect of monitoring and evaluation processes on curriculum implementation have not addressed a myriad of areas and how this influences the overall academic performance in secondary schools. Further, studies trying to unravel challenges that monitoring and evaluation faces in secondary schools have greatly focused on the inspectorate or quality assurance and standards officers at the expense of other stakeholders especially at school level and this may tilt the mitigation measures towards the school inspectorate. This study tries to fill this void by conducting a study on the influence of monitoring and evaluation of curriculum implementation on academic performance in public secondary schools.

It addresses monitoring and evaluation of classroom activities, school management, teachers' professional development and instructional policy and planning as the variables that influence effective curriculum implementation for quality academic performance in Physics.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers research methodology under the sub titles: the research design, the target population and sample frame, data collection instrument and procedures and data analysis methods.

3.2 Research Design

The study adopted descriptive survey research design. The research design is applied in a research conducted in order to explain any behavior in an institution. It could be done using questionnaires, interviews, and random sampling (Orodho, 2002). The design was chosen because the researcher gathered data on the state of affairs in the study location without manipulating any variables. Ogula (2005) notes that the survey design is an efficient method of collecting descriptive data regarding current practices, conditions and needs in population. According to Mugenda and Mugenda (2003), a survey design also enables the researcher to summarize and organize data in a meaningful way and be able to describe the existing relationship effectively.

3.3 Target Population

Target population is defined as all the members of a real or hypothetical set of people, events or objects to which a researcher wishes to generalize the results of the research study (Borg and Gall, 1989). The study target a total population of 91 comprising of 43 public secondary school principals in Mukaa Sub County, 2 SMASE Coordinators, 43 science department heads, 1 quality assurance and standards officers (QASO), and 2 County staffing officers. (Source: County Director's office, Makueni).

3.4 Sample Size and Sampling Procedure

A sample is a representative part of a population as defined by Gay (2007). Therefore by studying the sample, one can be able to know more about the population without having to study the entire population. Although Mukaa Sub County currently has 43 secondary schools, only 30 out of the 43 participated in the study. This is because currently in Mukaa Sub County there are 13 new public

secondary schools mostly Constituency Development Fund (CDF) initiatives which have not enrolled Form 4 candidates within the 4 year period covered by this study. In this study, census sampling was used where all the 30 principals and all the 30 heads of science departments in the 30 public secondary schools were included in the study. This is 100 percent of the target population. This is sufficient as proposed by Gay (2003), who argued that a census sampling yields better results.

3.5 Data collection instruments

The researcher used two research instruments to collect information to enable him to come up with answers for the research questions. These instruments were Questionnaires and interview guides. The questionnaires were administered to the principals and science heads of department while the QASO, SMASE Coordinators and the CSO were interviewed.

3.5.1 Questionnaires

The researcher used both open and closed ended type of questions. Cooper & Schindler, (2011) observed that, the questionnaire design defines the problem and the specific study objectives. The instrument made it possible for the researcher to reach a large number of respondents who were able to read and write independently. Close ended questions were used for the purpose of getting specific information by providing the respondents with all possible alternatives from which the respondents select the answer that best describes their situation. The open ended items enabled the respondents to have a chance to think beyond the researchers' scope and by so doing the researcher got more useful information.

The questionnaires consisted of six sections, namely A, B, C, D and F. Section A – included the demographic characteristics of the respondents. This is general information on the background of the respondents. Section B consisted of items that sought to gather information about areas that are monitored and evaluated in Physics classroom activities. Section C – influence of monitoring and evaluation of school management on academic performance in Physics, Section D-influence of teachers' professional development on academic performance in Physics, Section E- influence of monitoring and evaluation of instructional policy and planning on academic performance in physics and Section F-academic performance in Physics for the last 4 years. A Likert Scale of 1-5 was utilized to vary the strength of the response ranging

from Strongly Agree (SA), Agree (A), Undecided (U), Disagree (DA) and Strongly Disagree (SD) was incorporated in these sections. The questionnaire was used to collect data from principals and heads of departments from the different secondary schools.

3.5.2 Interview Guide for the CSO, SMASE Coordinators and the QASO.

The researcher conducted intensive interview with the QASO, SMASE Coordinators, and the CSO, Mukaa Sub-County. This interview guide allowed flexibility where the researcher would make clarification, expound on the items or change the items if need be so that the respondents fully understood the intention of the researcher. By using this instrument, the respondent gave more complete and valid answers because clarifications and elaboration was provided by the researcher. The interview guide included some background information of the respondents and information on the areas of curriculum implementation that are monitored and evaluated, the influence of these practices to various stakeholders and possible interventions.

3.6 Pilot Testing of Research Instrument

The researcher conducted a pilot test of the instruments in 3 schools on 6 respondents in the neighboring Kilungu sub county to test the reliability and validity of the questionnaire. Isaac and Michael (1995) suggested 10-30 participants while Hill (1998) also suggested 10-30 participants for pilots in survey research. Treece and Treece (1982) suggested 10% of the project sample. Thus this study used 3 principals and 3 heads of science department.

3.7 Validity of Research Instruments

Validity is the degree to which the empirical measure or several measures of the concept accurately measure the concept (Orodho, 2004). It is essentially concerned with establishing whether the questionnaire content is measuring what it purports to measure. The study used content validity, which is the degree to which the content of a given test are related to the traits for which it is designed to measure (Best and Khan, 2004). To ensure content validity of the questionnaires to be used in the study, the researcher discussed the items in the instrument with the supervisor from the department and some colleague students. Advice given by these people helped the researcher to determine the validity of the research instruments.

3.8 Reliability of Research Instruments

According to Mugenda and Mugenda (1999) the reliability of an instrument is the measure of the degree to which a research instrument yields consistent results or data after repeated trials. In order to test the reliability of the instrument to be used in the study, piloting was used. Piloting was done in 3 schools in the neighboring Kilungu sub-county. These schools included a variety of schools types and locations and involved single sex, mixed day and mixed boarding school. The results obtained from the pilot study assisted the researcher in revising the questionnaire to make sure that it covered the objectives of the study.

3.9 Data Collection Procedure

The researcher was issued with a letter from the University of Nairobi introducing him to National Commission for Science, Technology and Innovation (NACOSTI). The County Director of Education-Makueni was also notified of researcher's study. Principals of the public secondary schools to be sampled were also notified and clearance sought before the instruments were administered. Questionnaires were used since it is a low cost method. Even when the universe is large, respondent have adequate time to give well thought out answers. In addition respondents who are not easily approachable can be reached. Conveniently, large samples can be made use of thus making the results dependable and reliable (Jwan, 2010). The questionnaires were administered by the researcher and the assistant who visited the schools to meet heads of science departments and principals. Interviews were contacted for the QASO, SMASE coordinators and the CSO.

3.10 Operationalization of Variables

This is the process of strictly defining variables into measurable factors. The process defines fuzzy concepts and allows them to be measured empirically and quantitatively (Babbie, E. 2008). This section analyses the operational definition of variables on Factors Influencing Monitoring and Evaluation of Curriculum Implementation on Academic Performance in Physics in Public Secondary Schools: A Case of SMASE projects in Mukaa Sub County. The variables are given in below table:

Table 3.1: Operationalization of Variables

Objectives	Independent Variables	Indicators	Measure	Measurement Scale	Tools of Analysis	Type of Statistics
Assess how monitoring and evaluation of classroom activities influence academic performance in Physics	Class attendance Frequency of teacher attendance Assignments and Exams	Marking of register Progress record of students	Number of times register is marked per day Number of assignments and tests per month	Ordinal Ordinal	Mean, Percentage, Standard deviation	Descriptive Inferential
Establish how monitoring and evaluation of school management influence academic performance in Physics	Routine managerial operations Managerial audits Visits by QASO	Financial considerations Cost of Evaluating the management Application usage	Budget allocation Number of meetings held Number of visits	Ratio Ordinal	Mean, Percentage, Standard deviation	Descriptive Inferential
Determine how monitoring and evaluation of Physics teachers' professional development influence academic performance in Physics	Appraisals Seminars Attendance to workshops	Certificates Promotions	school Monitoring and evaluation schedule	ordinal	Mean, Percentage, mode, Standard deviation	Descriptive Inferential
Establish how monitoring and evaluation of planning and policy development influence academic performance in Physics	Usefulness of M&E results	Decision making Accessibility	Number of successful students	Ordinal	Mean, Percentage, mode	Descriptive Inferential

Dependent Variable

Objective	Indicators	Measure	Measurement scale	Measure	Type of Statistics
Assess the academic Performance of physics students.	-Success rates in KCSE Physics	KCSE mean grade	Ratio	Mean, Percentage, mode	Descriptive Inferential

3.11 Data Analysis Technique

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then coded to enable the responses to be grouped into various categories. The study generated both qualitative and quantitative data. Coded quantitative data entered into Statistical Packages for Social Sciences (SPSS Version 21.0) and analyzed using descriptive and inferential statistics. Descriptive statistics involves use of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively).

An Analysis of Variance was used to measure statistically the significance in predicting how classroom activities, school management, teachers' professional development and instructional policy and planning, influence academic performance in Physics in public Secondary schools in Mukaa Sub County. The test of significance involved the use of squared moment correlation coefficient, the R square, as a measure of significance. The coefficient is a standard measure of an assumed linear relationship between variables. A coefficient of value between (+ve) 0.5 and (-ve) 0.5 or higher indicates a strong relationship and by extension a significant variable in influencing the trend of the dependent variable.

Further, a multiple regression analysis was used to establish the relationship between the dependent and the independent variables. The relationship among the variables is depicted as the equation for academic performance in Physics in Public Secondary schools is expressed in the following equation:

$Y = 0 + 1X_1 + 2X_2 + 3X_3 + 4X_4$, where, Y= Academic Performance in Physics in Public Secondary schools, 0= constant (coefficient of intercept), X1=

classroom activities; X_2 = school management; X_3 = Physics teachers' professional development; X_4 = instructional policy and planning; ϵ = error term; β_1, \dots, β_4 = regression coefficient of four variables

The findings were presented using tables, frequencies and percentages. Tables were used to summarize responses for further analysis and facilitate comparison. Qualitative data was analyzed based on the content matter of the responses. Responses with common themes or patterns were grouped together into coherent categories.

3.12 Ethical Considerations

The following ethical considerations were taken into account during the study; the need for approval of the research project by the School of Continuing and Distance Education, (SCDE) University of Nairobi was essential and mandatory to give validity to the document and to show that the study has been done according to approved research standards and practices. Informed consent from the participants in the study was necessary so as to gain their trust and confidence in the objectives of the study which were purely academic in nature. Observation and maintenance of confidentiality was vital, especially for respondents who would like to remain anonymous for either official or personal reasons, fear of reprisals or otherwise.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents data analysis and interpretation following research objectives. Data were collected using the questionnaires as the main research instrument. Census sampling of the 30 public day secondary schools in Mukaa Sub County was done and the 30 principals and 30 heads of science department from each school provided information. The collected data was analyzed using both descriptive and inferential statistics. For descriptive statistics, frequency distribution tables showing responses in frequencies and percentages were constructed while inferential statistics correlation and regression analysis were generated from coded data using Statistical package for social scientist (SPSS) version 21. This was followed by data interpretation.

4.2 Questionnaire Return Rate

Questionnaire return rate is the proportion of the sample that participated in the survey and returned their questionnaires as intended by the researcher. For the purpose of data collection, 60 questionnaires were issued to principals and heads of departments. The questionnaire return rate was 100% (60). All the questionnaires were returned by the principals and the Science department heads under this study. This shows that the researcher had good rapport with the respondents and that the respondents were taking the research seriously. Also the researcher and his assistant made a good follow up of the distributed questionnaires to enabled him to get back all of them.

4.3 General Characteristics of the Respondents

4.3.1 Age Distribution of Respondents

The researcher sought to establish the age distribution for the principals and science department heads. This was to determine how the age of the principals and heads of science departments was distributed among the schools and how age influenced Physics performance.

Table 4.1: Age distribution of principals and heads of science department

Age in years	Frequency	Percentage (%)
Below 25	0	0
25-35	15	25.0
36-45	25	41.7
46-50	14	23.3
Above 50	6	10.0
Total	60	100

Table 4.1 revealed none (0%) of the principals and heads of science department in Mukaa Sub County are below 25 years of age while majority (41%; f=25) of the school principals and heads of department were 36 – 45 years of age. This age indicates that the principals and heads of science department were relatively young and therefore assumption is made that they were in a better position to improve Physics performance in the Sub County.

This was followed by those in the age bracket of 25 – 35 with 25.0% (f=15) percent and closely by those in the age bracket 46-50 with 23.0%. The table also revealed that a very small percentage (10%; f=6) was above 50 years in Mukaa Sub County. The experience of this age group should be useful in assisting the Sub County in improving Physics performance.

4.3.2 Employment Status

Respondents were further asked to indicate their employment status and the following responses were realized:

Table 4.2: Employment status of the respondents

Category	Frequency	Percentage (%)
Permanent	54	90.0%
Contract	6	10.0%
Part time	0	0.0%
Total	60	100%

As depicted in Table 4.2, 90.0% (f=54) of the respondents are employed on permanent basis compared to 10.0% (f=6) who are on contract. This presents a better opportunity of ensuring all teachers in schools are well monitored and

evaluated by agents of a single employer or the Ministry of Education officials.

4.3.3 Academic Qualification for the Respondents

The researcher sought to investigate the academic qualification for principals and Science heads department.

Table 4.3: Professional Qualification of Respondents

Category	Frequency	Percentage (%)
Masters	6	10.0
Degree	47	78.3
PGDE	7	11.7
Diploma	0	0.0
Total	60	100

Table 4.3 revealed that majority of the principals and heads of science departments (78.3%; f=47) had a bachelor of education as their highest academic qualification. This shows that they had acquired academic qualification which could enable them to mobilize Physics performance effectively. This forms a good team to supervise and implement SMASE projects and advise on the best strategies towards improving physics performance. Only 10% (f=6) of the principals and department heads had a master's degree implying a low attitude towards professional development. This is likely to influence the principals' resource mobilization strategies geared towards providing facilities needed for the student's good performance in academics especially in acquisition of laboratory equipment.

4.3.4 Distribution of respondents by gender

The respondents were asked to indicate their gender with the aim of establishing how gender influenced academic performance in Physics in Mukaa Sub County. The results were shown in Table 4.4.

Table 4.4: Distribution by gender

Category	Frequency	Percentage (%)
Male	33	55.0
Female	27	45.0
Total	60	100

Table 4.4 shows majority (55.0%; f=33) of the respondents were male while (45.0%) were female. This indicates that the number of males conducting monitoring and evaluation in public secondary schools in Mukaa Sub County were almost equal to the number of females. There seem to be gender balance in the distribution of the respondents which is likely to give balanced views concerning how SMASE projects are implemented and how this influences performance of Physics in secondary schools in the Sub County.

4.4 Monitoring and Evaluation of Physics Classroom Activities and Academic Performance in Physics

The first objective for this study was to assess the influence of monitoring and evaluation of classroom activities on academic performance in Physics in public secondary schools in Mukaa sub-county. To achieve this objective the researcher required the respondents to indicate the extent to which they agreed with the statements given as; SA for Strongly Agree, A for Agree, U for undecided, D for Disagree and SD for Strongly Disagree.

Table 4.5: Monitoring and Evaluation of Physics Classroom Activities and Academic Performance in Physics

Category	SA	A	U	D	SD	Total
Frequent assessment of Physics teachers in classrooms improves performance.	(61.7%)	(21.7%)	(5.0%)	(6.7%)	(5.0%)	(100%)
Supervision of issue and checking of assignments improves academic performance	(56.7%)	(13.3%)	(10.0%)	(6.7%)	(13.3%)	(100%)
Implementation of ASEI lesson plans and PDSI in the class enhances performance.	(76.7%)	(11.7%)	(3.3%)	(5.0%)	(3.3%)	(100%)
Preparation of ASEI lesson plans, use of ICT and schemes of work increases academic performance.	(81.7%)	(10.0%)	(5.0%)	(3.3%)	(0.0%)	(100%)
Keeping of students' progress records helps track their performance.	(35.0%)	(25.0%)	(8.3%)	(25.0%)	(6.7%)	(100%)
Department heads' regular discussion with teachers about the content taught improves academic performance.	(46.7%)	(25.0%)	(3.3%)	(18.3%)	(6.7%)	(100%)
Daily marking of Class register helps to monitors leaner's' performance.	(28.3%)	(41.7%)	(0.0%)	(23.3%)	(6.7%)	(100%)
Mean total	(55.3%)	(21.2%)	(5.0%)	(12.6%)	(5.9%)	(100%)

Table 4.5 shows that majority (55.3%; f=33) strongly agreed with the given statements followed by those who agreed. However there was a significant difference between those who strongly agreed with the statement that teachers' preparation of ASEI lesson plans, use of ICT and schemes of work increases academic performance in physics leading with 81.7% (f=49) followed by the statement that implementation of ASEI lesson plans and PDSI in the class enhances academic performance in physics with 76.7% (f=46).

4.5 Monitoring and Evaluation of School Management and Academic Performance in Physics

The second objective for this study was to establish the influence of monitoring and evaluation of school management on academic performance in physics in public secondary schools in Mukaa Sub County.

To achieve this objective the respondents were required first to indicate the extent to which they agreed with the statements given in Table 4.6.

Table 4.6: Monitoring and Evaluation of School Management and Academic Performance in Physics

Category	SA	A	U	DA	SD	Total
Principals' classroom observations helps address problems encountered by Physics teachers in class	(61.7%)	(21.7%)	(6.7%)	(10.0%)	(0.0%)	(100%)
Supervision by QASO, principals and department heads helps teachers to prepare professional documents	(73.3%)	(20.0%)	(5.0%)	(1.7%)	(0%)	(100%)
Monitoring and evaluation makes principals to adhere to the TSC rules and regulations	(63.3%)	(21.7%)	(6.7%)	(5.0%)	(3.3%)	(100%)
Monitoring and evaluation of management in your school can lead to effective curriculum implementation	(65.0%)	(15.0%)	(10.0%)	(5.0%)	(5.0%)	(100%)
Principals' supervisory skills help improve on Physics teachers' teaching skills.	(63.3%)	(18.3%)	(6.7%)	(11.7%)	(0.0%)	(100%)
Principals monitoring effective utilization and management of school resources assists academically	(65.0%)	(21.7%)	(8.3%)	(5.0%)	(0.0%)	(100%)
QASOs frequent visits and meetings with the administrators boots academic performance	(51.7%)	(31.7%)	(11.7%)	(5.0%)	(0.0%)	(100%)
Mean total	(63.3%)	(21.4%)	(7.9%)	(6.2%)	(1.2%)	(100%)

Table 4.6 shows that majority of the respondents (63.3%; f=38) strongly agreed with the given statements. The statement that teachers' preparation of ASEI lesson plans, use of ICT and schemes of work increases academic performance in physics leading at 73.3% (f=44) led in this category. This implies that monitoring and evaluation of the implementation of SMASE projects does influence academic performance of the learners a significantly.

4.6 Monitoring and Evaluation of Teachers' Professional Development and Academic Performance in Physics

The third objective was to determine the influence of monitoring and evaluation of teachers' professional development on academic performance in Physics in public secondary schools in Mukaa sub- County.

To achieve this objective the respondents were required first to indicate the extent to which they agreed with the statements given in Table 4.7:

Table 4.7: Monitoring and Evaluation of Teachers' Professional Development and Academic Performance in Physics

Category	SA	A	U	D	SD	Total
Quality of Physics teacher influences academic performance of the learners	(63.3%)	(21.7%)	(11.7%)	(0.0%)	(3.3%)	(100%)
Monitoring and evaluation aims at creating an overview of the quality of education in the school	(56.7%)	(21.7%)	(8.3%)	(10.0%)	(3.3%)	(100%)
Monitoring and evaluation helps diagnose the short comings in implementation of curriculum in physics	(68.3%)	(26.7%)	(5.0%)	(0.0%)	(0.0%)	(100%)
Teachers who receive guidance in curriculum implementation from principals or Quality assurance and standards officers are good performers	(73.3%)	(21.7%)	(1.7%)	(1.7%)	(1.7%)	(100%)
Professional development strengthens Physics teachers' teaching skills.	(70.0%)	(20.0%)	(5.0%)	(5.0%)	(0.0%)	(100%)
Monitoring and evaluation matches evidence against criteria, arrive at judgments and make those judgments known to stakeholders.	(56.7%)	(22.7%)	(8.3%)	(11.7%)	(1.7%)	(100%)
Sponsoring physics teachers to attend workshops and seminars boost their professional development	(78.3%)	(11.7%)	(0.0%)	(10.0%)	(0.0%)	(100%)
Mean total	(66.7%)	(20.9%)	(5.7%)	(5.5%)	(1.4%)	(100%)

From Table 4.7, the respondents strongly agreed with the statements with most of them agreeing that sponsoring physics teachers to attend workshops and seminars boosts their professional development (78.3%; f=47). Similarly, most of them strongly agreed that those teachers who receive guidance in curriculum implementation from principals or Quality assurance and standards officers are good performers (73.3%; f=44)

4.7 Monitoring and Evaluation of Instructional Policy and Planning and Academic Performance in Physics

The last of objective of this study was to establish the influence of monitoring and evaluation of instructional policy and planning on academic performance in Physics in public secondary schools in Mukaa sub- county

Table 4.8: Monitoring and Evaluation of Instructional Policy and Planning and Academic Performance in Physics

Category	SA	A	U	D	SD	Total
Teachers' daily attendance in school gives academic confidence to learners	(43.3%)	(23.3%)	(5.0%)	(20.0%)	(8.3%)	(100%)
Frequency of lesson attendance by teachers enhances performance	(63.3%)	(20.0%)	(6.7%)	(6.7%)	(3.3%)	(100%)
Physics teachers who check students notes and assignments help them to improve performance	(56.7%)	(33.3%)	(5.0%)	(3.3%)	(1.7%)	(100%)
Increases performance of students						
Frequency of students' class attendance helps keeps them on track	(66.7%)	(26.7%)	(0.0%)	(1.7%)	(0.0%)	(100%)
Resolutions in staff meetings are realized	(56.7%)	(30.0%)	(0.0%)	(13.3%)	(0.0%)	(100%)
Use of curriculum implementation materials such as ASEI lesson plans, ICT, teachers' notes, schemes of works enhances performance	(78.3%)	(20.0%)	(0.0%)	(1.7%)	(0.0%)	(100%)
Supervision of continuous assessment tests and examinations when frequently conducted increases performance	(63.3%)	(30.0%)	(0.0%)	(6.7%)	(0.0%)	(100%)
Mean total	(61.2%)	(26.2%)	(2.4%)	(7.6%)	(1.9%)	(100%)

Table 4.8 shows that use of curriculum implementation materials such as ASEI lesson plans, ICT, teachers' notes, schemes of works enhances performance with most of the respondents strongly agreeing with the statement (78.3%; f=47).

Further analysis of the data produced the following correlation and regression models:

Table 4.9: Correlations Matrix

		Academic performance in Physics	M&E of classroom activities	Monitoring and evaluation of school management	M&E of teachers' professional development	Monitoring and evaluation of instructional policy and planning
Academic performance in Physics	Pearson Correlation Sig. (2-tailed)	1				
M&E of classroom activities	Pearson Correlation Sig. (2-tailed)	.715	1			
Monitoring and evaluation of school management	Pearson Correlation Sig. (2-tailed)	.673	.064	1		
M&E of teachers' professional development	Pearson Correlation Sig. (2-tailed)	.622	.338	.117	1	
Monitoring and evaluation of instructional policy and planning	Pearson Correlation Sig. (2-tailed)	.798	.106	.058	.045	1
		.008	.018	.047	.034	

The correlation matrix shows that there is a stronger relationship between:

M&E of instructional policy and planning and academic performance in physics (0.798) followed by M&E of classroom activities and academic performance in physics at 0.715.

Generally, monitoring and evaluation of classroom activities, monitoring and evaluation of school management, monitoring and evaluation of professional development and monitoring and evaluation of instructional policy and planning influences academic performance.

Table 4.10: Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805 ^a	.648	.623	.321

a. Predictors: (Constant), M&E of classroom activities, Monitoring and evaluation of school management, M&E of teachers' professional development, Monitoring and evaluation of instructional policy and planning

Table 4.10 above is a model fit which establish how fit the model equation fits the data. The adjusted R^2 was used to establish the predictive power of the study model and it was found to be 0.623 implying that 62.3% of the variations in Academic performance in Physics are explained by M&E of classroom activities, Monitoring and evaluation of school management, M&E of teachers' professional development and Monitoring and evaluation of instructional policy and planning leaving 37.7% percent unexplained. Therefore, further studies should be done to establish the other factors (37.7%) affecting the Academic performance in Physics in Kenya.

Table 4.11: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.009	4	2.752	25.339	.000 ^b
	Residual	5.974	55	0.109		
	Total	16.983	59			

a. Dependent Variable: Academic performance in Physics

b. Predictors: (Constant), M&E of classroom activities, Monitoring and evaluation of school management, M&E of teachers' professional development, Monitoring and evaluation of instructional policy and planning

The probability value of 0.000 indicates that the regression relationship was highly significant in predicting how M&E of classroom activities, Monitoring and evaluation of school management, M&E of teachers' professional development and Monitoring and evaluation of instructional policy and planning affected Academic performance in Physics. The F calculated at 5 percent level of significance was 25.339 since F calculated is greater than the F critical (value = 2.5252), this shows that the overall model was significant.

Table 4.12: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.475	0.541		2.726	.0086
	M&E of classroom activities	0.632	0.241	0.529	2.622	.0113
	Monitoring and evaluation of school management	0.539	0.157	0.509	3.433	.0011
	M&E of teachers' professional development	0.506	0.146	0.426	3.466	.0010
	Monitoring and evaluation of instructional policy and planning	0.713	0.249	0.614	2.863	.0059

a. Dependent Variable: Academic performance in Physics

The established model for the study was:

$$Y = 1.475 + 0.632X_1 + 0.539X_2 + 0.506X_3 + 0.713X_4$$

The regression equation above established that taking all factors into account (M&E of classroom activities, Monitoring and evaluation of school management, M&E of teachers' professional development and Monitoring and evaluation of instructional policy and planning) constant at zero Academic performance in Physics was 1.475. The findings presented in the model also show that taking all other independent variables at zero, a unit increase in the M&E of classroom activities would lead to a 0.632 increase in the scores of Academic performance in Physics and a unit increase in the scores of Monitoring and evaluation of school management would lead to a 0.539 increase in the scores of Academic performance in Physics. Further, the findings shows that a unit increases in the scores of M&E of teachers' professional development would lead to a 0.506 increase in the scores of co Academic performance in Physics. The study also found that a unit increase in the scores of Monitoring and evaluation of instructional policy and planning would lead to a 0.713 increase in the scores of Academic performance in Physics. All the variables were significant ($p < 0.05$).

CHAPTER FIVE

SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is organized into the following sub-headings: summary of the study, discussions of the study findings, conclusions of the study, recommendations of the study and suggestions for further studies.

5.2 Summary of the Study

It was established that that monitoring and evaluation of classroom activities influenced academic performance in physics. However there was a significant difference between those who strongly agreed with the statement that the preparation of ASEI lesson plans, use of ICT and schemes of work enhances academic performance in physics in secondary schools. Also there is a strong positive correlation between physics classroom activities and academic performance in physics. It was also established that monitoring and evaluation of school management influences academic performance in physics. However there was a significant difference in the responses with majority of the respondents strongly agreeing with the statement that; Supervision by QASO, principals and department heads helps teachers to prepare professional documents for use in enhancing performance in physics. It was also established that there is a moderately strong correlation between monitoring and evaluation of school management and academic performance in physics. Thirdly, the study established that monitoring and evaluation of teachers' professional development influences academic performance in physics with majority strongly agreeing that the teachers who receive guidance in curriculum implementation from principals or Quality assurance and standards officers are good performers. Lastly, the study revealed that monitoring and evaluation of instructional policy and planning influences academic performance in physics with of the respondents strongly agreeing that the use of curriculum implementation materials such as ASEI lesson plans, ICT, teachers' notes, schemes of works enhances performance.

5.3 Discussion of the Findings

It was established that most of the respondents strongly agreed with the statement that; monitoring and evaluation of implementation of PDSI, ASEI and use of ICT enhances performance. This agrees with SMASSE report, (2002) which argued that the guiding principle of SMASSE is the ASEI/PDSI pedagogical paradigm. ASEI principle involves providing meaningful teaching Activities focused on Student learning mainly Experimental/practical work and Improvising resources where necessary. PDSI approach embraces orderly steps of executing learning activity by first Planning for the activity, then Doing it while seeing, observing with intent to evaluate and then finally improving on the process. (ADEA, 2005; Republic of Kenya, 1988; World Bank, 2007; UNESCO, 1996). This study concluded that there was a significant positive relationship between monitoring and evaluation of classroom activities and academic performance in physics ($r=0.715$).

The study established that there was a significant relationship between role of quality and standards office on effectiveness of SMASSE projects and the performance of physics. This agrees with Robins (1999) who argued that the role of the QASO is to provide the teachers with support, guidance, feedback, problem solving skills and a network of colleagues who share resources, insights, practices and materials thus this work tries to assess the influence of such visits/supervision by the QASO. A good curriculum provides an independent external evaluation of its effectiveness by promoting the standards, personal development and well-being of the learners, the quality of its provision and how well it is led and managed. Curriculum supervision should contribute to improvement and be centered upon individual of learners. The mission of the Department of Quality Assurance and standards is to establish, maintain and improve educational standards in the country. Its vision is to provide quality assurance feedback to all educational stakeholders on all educational institutions in Kenya. The function of assessing the standards of teaching and learning in schools is a reserve of the quality assurance directorate of the Ministry of Education. This directorate is charged with the responsibility of ensuring that there is standardization of education carrying out various types of assessment of schools and colleges. These results resonates with the findings of Kamuyu (2001), Wilcox and Gray (1994) and McGlynn and Stalker (1995), who reported that both inspectors

and the school staff agreed that inspection had been valuable in reviewing the position of the school and indicating its way forward and findings of inspection are used to identify aspects requiring attention and improvement in individual schools; to clarify performance of education system as a whole; and to inform national and regional educational policy, practice, and development. The results clearly pointed out that teachers could easily be monitored and supervised by principals and department heads in the Sub County. The study concluded that there was a strong positive correlation $r(60) = (0.673)$ between monitoring and evaluation of school management and academic performance in physics in public secondary schools.

Thirdly, the study established that 66.7% strongly agreed that monitoring and evaluation of teachers' professional development influences academic performance in physics with majority (73.3%) strongly agreeing that the teachers who receive guidance in curriculum implementation from principals or Quality assurance and standards officers are good performers. Key respondents were found to be degree holders. There is need for these officers to further their education in order to productive advice. This will motivate teachers in effective curriculum implementation since teachers learn and share new ideas as advocated by Kruger, A. (2005). Also there is a moderately strong correlation ($r=0.622$) between monitoring and evaluation of teachers' professional development and academic performance in physics. It was therefore concluded that monitoring and evaluation of curriculum implementation influences academic performance on physics.

Lastly, the study revealed that 61.2% of the responses strongly agreed that monitoring and evaluation of instructional policy and planning influences academic performance in physics with 78.3% of the respondents strongly agreeing that use of curriculum implementation materials such as ASEI lesson plans, ICT, teachers' notes, schemes of works enhances performance. The study concluded that monitoring and evaluation of curriculum implementation influences academic performance in physics.

5.4 Conclusions of the Study

Based on the findings for this study, the researcher concluded that the physics classroom activities greatly influenced academic performance in secondary schools and that the SMASE project implementation process needs to be closely

monitored and evaluated to enhance more efficiency. This is because most of the respondents (81.7%) felt that the preparation of ASEI lesson plans, use of ICT and schemes of work, which are implementation practices of SMASE, increases academic performance in physics. Secondly, the school management significantly influenced the performance of physics and that the management needs to be audited to suit the needs of SMASE projects.

Thirdly, the study concluded that the teachers' professional development determines academic performance in physics since this is one of requirements of the implementation of SMASE projects in schools. This is evident since there is a positive correlation ($r = 0.62$) between teacher's professional development and academic performance in physics.

Finally, the study concluded that there is a strong relationship ($r=0.798$) between instructional policy and planning and academic performance in physics. It was established that majority of the responses (61.2%) strongly agreed that monitoring and evaluation of instructional policy and planning significantly influenced academic performance of physics.

5.5 Recommendations of the Study

From the research findings the researcher made the following recommendations:

- i. Monitoring and evaluation of Physics classroom activities to involve SMASE projects coordinators at the Sub County levels.
- ii. School management audits to be raised a notch higher as part of monitoring and evaluation of school management.
- iii. Teachers' professional development programs to be monitored and evaluated to ensure that they benefit the learners and not only the teacher.
- iv. The ministry of education to hire and train more quality assurance and standards officers to conduct monitoring and evaluation of curriculum implementation in schools to ensure educational projects and programs are implemented to promote good academic performance of the learners.

5.6 Suggestions for Further Study

Considering the limitations and delimitations of this study, the researcher would like to make the following suggestions for further study;

1. Assessment of the influence of SMASE projects in enhancing the performance of Science subjects in Mukaa Sub County.
2. Evaluation of the influence of teacher characteristics in implementing SMASE projects.
3. This research was conducted in only one Sub County; future research can be done in other Sub Counties and in other Counties.

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APPENDICES

APPENDIX 1: INTRODUCTORY LETTER

**UNIVERSITY OF NAIROBI, P.O. BOX 3900,
NAIROBI.**

Dear Respondent,

I am a student from University of Nairobi pursuing a Master Arts Degree in Project planning and Management. I am carrying out a research entitled:

“Influence of monitoring and evaluation of Curriculum Implementation on Academic Performance in Public Secondary Schools in Mukaa Sub County, Makueni County, Kenya”

Please assist me by filling in the questionnaires provided. The questionnaires are meant to help in fulfilling the research objectives. The researcher assures you confidentiality in the information given.

Yours faithfully,

SHADRACK K. NDAMBUKI

REG. No. L50/74148/2014

APPENDIX 2: TRANSMITTAL LETTER



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2341349,3310571,2219420
Fax: +254-20-218255,318219
Email: og@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

8th floor, Uhali House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No:

Date:

NACOSTI/P/16/90679/12786

26th July, 2016

Shadrack Kioko Ndambuki
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Influence of Monitoring and Evaluation of curriculum implementation in public secondary schools: A case of SMASE Projects in Mukuu Sub County,"* I am pleased to inform you that you have been authorized to undertake research in **Makueni County** for the period ending **26th July, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Makueni County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Makueni County.

The County Director of Education
Makueni County.

APPENDIX 3: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MR. SHADRACK KIOKO NDAMBUKI
of UNIVERSITY OF NAIROBI, 0-504
NAIROBI, has been permitted to conduct
research in Makeni County
on the topic: INFLUENCE OF
MONITORING AND EVALUATION OF
CURRICULUM IMPLEMENTATION IN
PUBLIC SECONDARY SCHOOLS: A CASE
OF SMASE PROJECTS IN MUKAA SUB
COUNTY
for the period ending:
26th July, 2017

Permit No : NACOSTI/P/16/90679/12786
Date Of Issue : 26th July, 2016
Fee Received :Ksh 1000



[Signature]
Applicant's Signature

[Signature]
Director General
National Commission for Science, Technology & Innovation




CONDITIONS

- 1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed without prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice**

RESEARCH CLEARANCE PERMIT

Serial No. A. 10319

CONDITIONS: see back page



APPENDIX 4: QUESTIONNAIRE FOR HEADS OF DEPARTMENTS AND SCHOOL PRINCIPALS

This questionnaire is to collect data for purely academic purposes. The study seeks to investigate the Influence of Monitoring and Evaluation of Curriculum Implementation on Academic Performance in Public Secondary Schools in Mukaa Sub-county, Makueni County, Kenya. All information will be treated with strict confidence. Do not put any name or identification on this questionnaire.

Answer all questions as indicated by either filling in the blank or ticking the option that applies.

SECTION A: BIO DATA

1. By means of a tick please indicate your age.

Below - 25 years () 36 - 45 years ()

25 - 35 years () 46 - 50 years () Above - 50 years ()

2. Which one of the following grades indicates your highest professional qualifications?

a) Diploma in Education () b) Degree ()

c) PGDE () d) Masters ()

3. Employment status

Permanent () Contract () Part time ()

4. Gender Male () Female ()

5. How long have you been in this school? (tick)

Less than 2 years () 11-15 years ()

3-5 years () More than 15 years ()

6-10 years ()

SECTION B: CLASSROOM ACTIVITIES IN SCHOOLS

6. Please indicate by ticking in the appropriate column whether you are in agreement with the following reasons on how Physics classroom activities are monitored and evaluated in your school. Tick appropriately.

1) Strongly agree (2) Agree (3) Undecided (4) Disagree (5) Strongly disagree

	Classroom Activities in Schools	1	2	3	4	5
a)	Frequent assessment of Physics teachers in classrooms improves academic performance in Physics.					
b)	Supervision of issuing and checking of assignments improves academic performance.					
c)	Implementation of ASEI lesson plans and PDSI in the class enhances performance.					
d)	Preparation of ASEI lesson plans, use of ICT and schemes of work increases academic performance.					
e)	Keeping of students' progress records helps track their performance.					
f)	Department heads' regular discussion with teachers about the content taught improves academic performance.					
g)	Daily marking of Class register helps to monitor learner's performance.					

SECTION C: SCHOOL MANAGEMENT

7. Please indicate by ticking in the appropriate column the extent to which you are in agreement on how monitoring and evaluation of school management influences effective teaching of Physics in your school. Tick appropriately.

(1) Strongly agree (2) Agree (3) Undecided (4) Disagree

(5) Strongly disagree

	School Management	1	2	3	4	5
a)	Principals' classroom observations helps address problems encountered by Physics teachers in class					
b)	Supervision by QASO, principals and department heads helps teachers to prepare professional documents					
c)	Monitoring and evaluation makes principals to adhere to the TSC rules and regulations					
d)	Monitoring and evaluation of management in your school can lead to effective curriculum implementation					
e)	Principals' supervisory skills help improve on Physics teachers' teaching skills.					
f)	Principals monitoring of effective utilization and management of school resources and funds assists academically					
g)	QASOs frequent visit and meetings with the administrators boosts academic performance					

SECTION D: TEACHERS' PROFESSIONAL DEVELOPMENT

8. Please indicate the extent of agreement or disagreement to the following statements. Tick appropriately.

- (1) Strongly agree (2) Agree (3) Undecided
 (4) Disagree (5) Strongly Disagree

	Teachers' Professional Development	1	2	3	4	5
a)	Quality of Physics teachers influences the academic performance of the learners in Physics					
b)	Monitoring and evaluation aims at creating an overview of the quality of education in the school					
c)	Teachers receive guidance in curriculum implementation from principals or Quality assurance and standards officers.					
d)	Monitoring and Evaluation helps diagnose the problems and short comings in implementation of the curriculum in Physics					
e)	Monitoring and evaluation matches evidence against criteria, arrive at judgments and make those judgments known to stakeholders.					
f)	Professional development strengthens Physics teachers' teaching skills.					
g)	Sponsoring physics teachers to attend workshops and seminars boost their professional development					

SECTION E: INSTRUCTIONAL POLICY AND PLANNING

9 Indicate by ticking appropriately how often the following areas are monitored and evaluated in your school:

1) Daily (2) Weekly (3) Fortnightly (4) Monthly (5) Not at all

Instructional policy and planning		1	2	3	4	5
a)	Teachers' daily attendance in school gives academic confidence to learners					
b)	Frequency of lesson attendance by teachers enhances performance					
c)	Physics teachers who check students notes and assignments help them to improve performance					
d)	Frequency of students' class attendance helps keeps them on track					
e)	Resolutions in staff meetings are realized					
f)	Use of curriculum implementation materials such as ASEI lesson plans, ICT, teachers' notes, schemes of works enhances performance					
g)	Supervision of continuous assessment tests and examinations when frequently conducted increases performance.					

SECTION F: ACADEMIC PERFORMANCE IN PHYSICS

10. Indicate the students' Average KCSE Physics mean scores in your school for the following 4 years: Tick appropriately

(1) 5 or more (2) 4 - 5 (3) 3 - 4 (4) 2 - 3 (5) 1 - 2

KCSE year	KCSE Physics mean score				
	5 or more	4 - 5	3 - 4	2 - 3	1 - 2
2012					
2013					
2014					
2015					
Average					

Thank you for your cooperation

**APPENDIX 5: INTERVIEW SCHEDULE FOR THE CSO, SMASE
COORDINATORS AND QASO**

The following questions will guide the researcher during the interview sessions with the key respondents.

1. Please indicate your gender

Male () Female ()

2. Indicate your academic qualifications

- a) Certificate () b) Diploma in Education () c) Degree ()
d) Masters in Education () e) Other

3. Have you received any training in monitoring and evaluation of curriculum implementation in schools? If yes please indicate in which areas

.....

4. Indicate your working experience in your field of work

- a) Below 3 years () b) 4 – 6 years () c) Over 7 years ()

5. How does monitoring and evaluation of curriculum implementation influence teachers and principals on academic performance in Physics?

.....

6. How often do you visit the schools in the Sub County to carry out monitoring and evaluation?

.....
.....

Thank you for your cooperation