PERCEPTIONS OF TEACHER MANAGEMENT APPROACHES ON STUDENTS ACADEMIC ACHIEVEMENT IN PUBLIC SECONDARY SCHOOL EDUCATION IN MIGORI COUNTY, KENYA

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DECLARATION

DECLARATION BY THE CANDIDATE

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To the late Professor Theodore M.O. Ayodo who started this journey.

ACKNOWLEDGEMENTS

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ABSTRACT

Education is a fundamental human right which promotes acquisition of knowledge and fosters skills for development. Knowledge and skills are the drivers of economy and where education is not qualitative, the out-put may not spur development. In Kenya, despite efforts by policy makers, administrators, and teachers to improve student's academic achievement, performance remains poor. The poor performance is replicated in Migori County. The findings of this research can add to the valuable interventions to be considered by stakeholders in secondary schools to improve performance. The purpose of this study was to establish perception of teacher management approaches on promoting student's academic achievement in public secondary school education. The research was guided by objectives which considered influence of teacher professional development, relationship of supervision to performance, impact of teacher induction and role of motivation on student's academic achievement. This research incorporated concurrent triangulation research design. Population for this research were ten (10) education officers, One hundred and eighty four (184) public secondary schools, teachers were one thousand two hundred and thirty three (1233), and students were 73,385. A sample involving 8 education officers, 56 public secondary schools, 56 principals, and 370 teachers were drawn from target population. Simple Random sampling was used to sample 56 schools. After clustering teachers by gender, stratified random sampling was used to get 370 teacher respondents. Data for the study was collected by the use of questionnaires, interview schedules and document analysis. Validity of questionnaires was achieved through consultation with supervisors while reliability of questionnaires was tested during piloting in three schools in Migori County. A split-half correlation test was conducted whereby a coefficient of +0.80 or greater is considered good internal consistency. Pearson's r for reliability of piloted data was +0.83 for principals, and +0.86 for teachers which indicated good internal consistency. Quantitative data was collected, summarized, analyzed and presented in Tables, bar-charts, and pie-charts. Qualitative data analysis involved identification and interpretation of patterns and themes. Document analysis was used to generate literature review, performance indices and understanding policy guidelines. Inferential statistics was used whereby Regression analysis was used to gauge influences of Teacher Professional Development, Teacher Induction and Teacher Experience; Chi-square test was used to gauge relationship of supervision to students' academic achievement while Anova Test was used to appraise role of motivation, and impact of induction. The findings revealed that teacher PD, teacher qualification and teacher experience influenced student achievement in secondary schools; On the contrary, the study noted that supervision, evaluation, induction, and motivation had no significant impact on students' academic achievement. Further, the findings indicated a weak relationship between inductions (coefficient 0.011), motivation (coefficient 0.368) and student academic achievement. Therefore, the study concluded that administrators should put in place measures to enhance strong areas such as teacher Professional development (PD); teacher qualification, and teacher experience and recommends that institutional managers should design proactive processes to enhance supervision, teacher evaluation, induction, and motivation. The research which focused on perceptions of teacher management approaches on student's academic achievement in Migori County recommends that enhancing teacher management methodologies would strengthen student's achievement in public secondary school education.

LIST OF ABBREVIATIONS AND ACRONYMS

ALP	:	Annual Learning Plan
CDE	:	County Director of Education
CIDP	:	County Integrated Development Plan
CQASO	:	County Quality and Standards Officer
CPD	:	Cambridge Professional Development
CPD	:	Continuous Professional Development
SCQASO	:	Sub-County Quality and Standards Officer
EFA	:	Education for All.
ICT	:	Information Communication Technology
ILO	:	International Labor Organization
KCSE	:	Kenya Certificate of Secondary Education
KUCCPS	:	Kenya Universities and Colleges Central Service (KUCCPS)
KNUT	:	Kenya National Union of Teachers
KUPPET	:	Kenya Union of Post Primary Education Teachers
LICs	:	Low Income Countries
MICSR	:	Migori County Statistics Report
MSS	:	Mean Standard Score
NPFTED	:	National Policy Framework for Teacher Education and Development
NQTs	:	Newly Qualified Teachers
NTTP	:	National Teacher Training Program
OECD	:	Organization for Economic Co-operation and Development
RoK	:	Republic of Kenya
SSA	:	Sub-Saharan Africa
PDA	:	Professional Development Appraisal
TSC	:	Teachers Service Commission
UNESCO	:	United Nations Educational, Scientific, and Cultural Organization
UNICEF	:	United Nations Children Education Fund
UNDP	:	United Nations Development Programme
QDA	:	Qualitative Data Analysis

CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

During the 2010 World Teachers' Day, the Heads of United Nations Education, Scientific, and Cultural Organization (UNESCO), United Nations Children Education Fund (UNICEF), United Nations Development Programme (UNDP), International Labour Organization (ILO) and Education International noted that the world needed recovery from the crisis it was going through, and paid homage to the teachers of the world by declaring that recovery begins with teachers. Further, they noted that teachers are the change agents providing the impetus for the emergence of educated communities. The heads of UNESCO, UNICEF, UNDP, and ILO also postulated that nowhere in the world do teachers work in more challenging circumstances, serving communities with higher rates of poverty, managerial challenges than in Africa (UNESCO, 2010).

A report by the Republic of Kenya, (RoK, 2011) advanced that education is considered as one of the most favorable pathways for student's to realize better and more fruitful lives. The attention attached to education is a confirmation of the increased need for quality teacher resource and increased accountability by stakeholders. Maximization of returns on investment and achieving the best result are the concerns of all stakeholders in education. Through stakeholder support, secondary school education level empowers students as they acquire knowledge, skills and attitudes, which enables them to develop as holistic individuals (Republic of Kenya, RoK, 2012).

According to Ndebbio (2000) teachers play a crucial role creating an enabling environment for student academic achievement. Because of increased emphasis on high stakes testing, Stumbo & McWaters, (2010) asserted that teacher factors have traditionally been measured through student's outcomes such as test scores. In this regard, there is need to establish the effect of teacher professional development, assess the effect of supervision, determine the impact of teacher induction, determine role of teacher motivation on student's academic achievement in public secondary school education. A World Summit (OECD 2011) on teaching noted that teachers need to help students acquire not only the skills that are easiest to teach, but more importantly, ways of thinking; ways of working; and skills around citizenship, life and career aspirations. Despite the above needs, educators have a lot of gaps in education for example readiness gaps, performance gaps, attendance gaps, achievement gaps as revealed by Lynne and Kathryn, (2006). To sum up, this research was designed to come up with best practice teacher management approaches that can enhance student academic achievement.

A study by Bossaert, Doumen, Buyse, & Verschueren, (2011) specified that student academic achievement is the level to which institutions, teachers, or students achieved their short or long-term educational goals. Overall indicators of student academic achievement refer to completion of high school and moving on to higher institutions of learning. As a matter of fact, student academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important. Furthermore, there are inconclusive results over which individual factors successfully predict student's academic achievement; elements such as environment, motivation, supervision, professional development and human resource (teachers) require consideration when

developing models of school achievement. The problem that needs critical consideration is the relationship between the factors and the justification for embracing those management methodologies. Management indicators relate the actual result achieved to the desired objectives. They also relate to use of resources (for this research teachers) to enable institutions purpose needs for training to fast-track academic achievement.

According to Darling-Hammond (2012), promoting student academic achievement through evaluation is possibly the most important component of a teacher's job. Using student's achievements in evaluation is seen to promote the ultimate goal of teaching and to strengthen the direct accountability of teachers. According to Darling-Hammond, (2012), those in support of using student achievement as a measure of teacher output reason that student achievement addresses the incongruence that sometimes exists in teacher management methodologies. However, those in opposition to the use of student's achievement as the primary or the only means of evaluation dispute that students should not be evaluated in relation to their achievement in tested subjects (test scores). Using student's grades as the only measure can encourage rote method of learning, testing and manipulation of marks.

Student performance in Africa is generally poor. In South Africa for example, Pretorius, (2012) indicated pass rate of student's in examinations in their final year dropped continuously from 2006 to 2010. Wamba and Mgomezulu (2014) in a study conducted in Malawi advanced that there are some serious concerns about the quality of secondary schools including but not limited to overcrowding, poor teacher qualification, insufficient learning materials, and high pupil-teacher ratios. The issues in Malawi caused poor performance. In Tanzania, a study conducted in Nanyumbu

District by Malekano, (2018) generalized that 80 percent of poor performance was caused by teacher factors. In Uganda, an e-book entitled Kabale District (2017) illustrated that the Ministry of Uganda Report of the same year 2017 indicated that Eighty one (81) percent of secondary schools are poorly managed and therefore operate with unqualified staff thus leading to poor performance. Teacher factors seem to be central in countering good performance. This paints a gloomy picture for the continent and has led to managerial shift from engaging highly qualified teachers to need of highly effective teachers in every school as revealed by Barry, (2010). Barry further advanced that Africa has been in the forefront in agitating for need for teacher effectiveness to turn around student quality output.

Goldhaber and Brewer, (2000) in their research on teacher management approaches suggested policies generated from observable attributes, competence, and credentials were crucial for management. They opined that the most widely studied attributes are experience and education levels. There is mixed evidence, however, that experience and education levels are associated with student learning. Despite all this, African governments have faced increasing challenges in recent years while managing teachers at institutional level.

In Sub-Saharan Africa (SSA), Adedeji and Olaniyan (2011) noted that Africa will have increased its rural population from approximately four hundred and seventy (470) million in 2005 to five hundred and fifty two (552) million in 2016, the sub-continent cannot deny this large population the fruits of economic well-being, and that will not be possible without qualitative education. Teacher management approaches are therefore essential to the success of secondary school education systems in Africa. Management

approaches applied by principals coupled with relevant support from teachers will enable Africa improve student academic achievement to be able to get required out-put.

Kenya has the 8-4-4 system of education whereby students go through 8 years in primary, 4 years in high school and 4 years at the university. As has been witnessed in other countries such as Malawi, Uganda, Tanzania, and Nigeria, a study conducted in Kenya by Oketch and Rolleston, (2007) showed that education planning documents analyzed showed low learning outcomes for secondary school students in national examinations in the 8-4-4 system. As such, public secondary schools face increasing pressure of ensuring student's get quality grades that will enable them achieve positive learning outcomes and develop as holistic individuals. Despite Kenya's commitment to education reform, efforts geared towards achievement of education for all (EFA), priority action points include strengthening teacher capacities and teacher effectiveness (Republic of Kenya, Rok, 2012).

Additionally, issues of monitoring and evaluation of teachers should be prioritized. In Kenya the Teachers Service Commission (TSC) Pursuant of Section 11 (f) of the Act 2012, is mandated to monitor and evaluate teachers. To improve teacher performance through evaluation and monitoring, Teachers Service Commission (TSC) has introduced Performance Appraisal System called Teacher Performance and Development Plan (TPAD). TPADs objective number one as indicated on TSC Teacher Performance Appraisal and Development tool page 2 is to "Provide quality education to students in all public schools" (TSC/QAS/TPAD-T/01/REV/.2) This statement indicates that gaps are evident on teacher management approaches in Kenya. This research came up with suggestions that can be injected in the Teacher Performance and

Development Plan (TPAD). The suggestions would fine-tune management approaches exploited by managers from the national level to individual schools.

Table 1.1 below shows the Kenya National candidature in secondary schools from 2015 to 2019. Table 1.1 showed the number of students who qualified for university education from the year 2015 to 2019. The ranges in percentage within years indicated are between 11 percent in 2017 and 30 percent in 2016. This data was drawn from Kenya Universities and Colleges Central Placement Services website (KUCCPS) showed low transition to higher education.

Table 1.1:

Secondary school National qualifiers for University 2015-2018

Year	National Candidature	Qualifiers for University	%
2015	522,870	147,290	**28.17**
2016	483,630	149,717	**30.96**
2017	615,773	73,414	**11.92**
2018	631,750	73,690	**11.66**
2019	699,706	125,746	**17.97**
TOTAL	**2,953,729**	**569,857**	
AVERAGE	**590,746**	**113,971**	**20.13**

Kenya Universities and Colleges Central Service (KUCCPS) website 2019

The data collected from Kenya Universities and College Central Service (KUCCPS) as shown on Table 1.1 above shows that performance of secondary school students in National examinations in Kenya is considered poor since one hundred and forty seven thousand two hundred and ninety students (147,290) which was 28.17 percent of the national candidature of five hundred and twenty two thousand eight hundred and seventy students (522,870) qualified for university education in 2015, One hundred and forty nine thousand seven hundred and seventeen students (149,717) constituting 30.96 percent within the national candidature of four hundred and eighty three thousand six hundred and thirty students (483,630) qualified for university education in 2016, further, Seventy three thousand four hundred and fourteen students (73,414) which was 11.92 percent within national candidature of six hundred and fifteen thousand seven hundred and seventy three students (615,773) qualified for university in 2017. Also, seventy three thousand six hundred and ninety (73,690) constituting 11.66 percent within national candidature of six hundred and thirty one thousand seven hundred and fifty (631,750) qualified for university education in 2018 and lastly one hundred and twenty five thousand seven hundred and forty six students (125,746) constituting 17.97 percent within the national candidature of six hundred and ninety nine thousand seven hundred and six students (699,706) qualified for university education in 2019 (to join university in 2020).

In summary, for the period of five years from 2015 to 2019, there was a total of two million nine hundred and fifty three thousand seven hundred and twenty nine (2,953,729) candidates nationally whereby five hundred and sixty nine thousand eight hundred and seventy five (569,875) candidates qualified for university education. The qualifiers constituted 20.13 percent of the students who sat the examinations within the period.

The results show a downward trend. Document analysis by Musungu and Nasongo (2008) reported that 90 percent of the country's over forty thousand (40,000) schools posted poor examination results every year and that there are only six hundred (600) schools nationally that excelled and if a student is not in those schools, the student is not expected to achieve quality grades. Musungu and Nasongo (2008) further reported that half of the student's sitting Kenya Certificate of Secondary Education (KCSE) get D+ and below.

To sum up, the report clarifies that in the year 2007-2008, forty five (45) percent got D+ and below, in 2007, forty three (43) percent got D+ and below and in 2008 fifty (50) percent scored D+ and below. Currently, according to the Citizen Digital updates dated 22 December 2017, it was noted that 49 percent of 2017 KSCE scored D+ and below. It is important to note that of the national candidature of six hundred and fifteen thousand seven hundred and seventy three (615,773) candidates who sat for the year 2017 KCSE examination, four hundred and forty thousand seven hundred and eighty seven candidates (440,787) had a D+ and below with one hundred and seventy four thousand nine hundred and eighty six (174,986) scoring C minus and above. The Citizen Digital updates dated 22 December 2017 indicated that those who scored D+ were seventy one (71.58) percent as indicated in the overall National grade count summary for 2017. Further, Sunday Standard December 2017 indicated that three hundred and fifty two thousand four hundred and forty candidates (352,440) scored mean Grade of D and below. The result shows that performance is low in Kenyan Secondary Schools. This paints a grim picture that needs quick policy interventions that may change the current trends. One possible intervention is to resolve teacher management factors which were the concern of this research.

The Kenya Certificate of Secondary School national grade count for 2017 was considered in this background of the study to get an overview of the current grade output. This would facilitate an understanding of academic achievement in Kenya and be able to understand the prevailing gaps in performance in Migori County. Table 1.2 below shows the grades and percentages within the grade counts

Table 1.2

Kenya Certificate of Secondary Education Grade Count -2017

	Kenya Certificate of Secondary Education					
	GRADE COUNT – 2017					
Grade	Female	%	Male	%	Total	%
A	61	42.96	81	57.04	142	0.02
A-	901	33.20	1,813	66.80	2,714	0.44
B+	2,748	37.42	4,596	62.58	7,344	1.19
B	6,913	44.70	8,551	55.30	15,464	2.51
B-	7,755	38.99	12,135	61.01	19,890	3.23
C+	12,032	43.19	15,828	56.81	27,860	4.52
C	18,986	46.84	21,546	53.16	40,532	6.58
C-	29,834	48.88	31,206	51.12	61,040	9.91
D+	43,125	48.81	45,222	51.19	88,347	14.35
D	67,948	49.77	68,572	50.23	136,520	22.17
D-	91,341	50.92	88,040	49.08	179,381	29.13
E	17,191	47.05	19,348	52.95	36,539	5.93
	298,835	**48.53**	**316,938**	**51.47**	**615,773**	**100**

Kenya Universities and Colleges Central Service (KUCCPS) website 2019

In Table 1.2 on page 9, the data indicated that there were one hundred and forty two students (142) constituting only 0.02 percent of the candidates nationally scored grade A in Kenya Certificate of Secondary Education (KCSE) in 2017 of which sixty one (61) students at 42.96 percent were female and eighty one (81) students at 57.04 percent were male. Two thousand seven hundred and fourteen (2,714) students constituting only 0.44 percent of the candidates nationally scored grade A- in KCSE in 2017 of which nine hundred and one (901) at 33.20 percent were female and one thousand eight hundred and thirteen (1,813) students at 66.80 percent were male.

Also, the table on page 9 showed that there was Seven thousand three hundred and forty four (7,344) students' constituting 1.19 percent of the candidates nationally scored grade B+ in KCSE in 2017 of which two thousand seven hundred and forty eight (2,748) students at 37.42 percent were female and four thousand five hundred and ninety six (4,596) at 62.58 percent were male. Fifteen thousand four hundred and sixty four students (15,464) constituting only 2.51 percent of the candidates nationally scored grade B in KCSE in 2017 of which six thousand nine hundred and thirteen (6,913) at 44.70 percent were female and Eight thousand five hundred and fifty one (8,551) students at 55.30 percent were male.

In addition, Table 1.2 showed that there was nineteen thousand eight hundred and ninety (19,890) students' constituting only 3.23 percent of the candidates nationally scored grade B- in KCSE in 2017 of which seven thousand seven hundred and fifty five (7,755) students at 38.99 percent were female and twelve thousand one hundred and thirty five (12,135) at 61.01percent were male. Twenty seven thousand eight hundred and sixty students (27,860) constituting only 4.52 percent of the candidates nationally scored grade C+ in KCSE in 2017 of which twelve thousand and thirty two students

(12,032) at 43.19 percent were female and fifteen thousand eight hundred and twenty eight (15,828) students at 56.81 were male.

Further, Table 1.2 showed that there was forty thousand five hundred and thirty two (40,532) students' constituting only 6.58 percent of the candidates nationally scored grade C in KCSE in 2017 of which eighteen thousand nine hundred and eight six (18,986) students at 46.84 percent were female and twenty one thousand five hundred and forty six (21,546) at 53.16 percent were male. Sixty one thousand and forty students (61,040) constituting only 9.91 percent of the candidates nationally scored grade C- in KCSE in 2017 of which twenty nine thousand eight hundred and thirty four (29,834) at 48.88 percent were female and thirty one thousand two hundred and six (31,206) students at 51.12 percent were male.

Furthermore, Table 1.2 showed that there were eighty eight thousand three hundred and forty seven (88,347) students' constituting 14.35 percent of the candidates nationally scored grade D+ in KCSE in 2017 of which forty three thousand one hundred and twenty five (43,125) students at 48.81 percent were female and forty five thousand two hundred and twenty two (45,222) at 51.19 percent were male. One hundred and thirty six thousand five hundred and twenty students (136,520) constituting only 22.17 percent of the candidates nationally scored grade D in KCSE in 2017 of which sixty seven thousand nine hundred and forty eighty (67,948) at 49.77 percent were female and sixty eight thousand five hundred and seventy two (68,572) students at 50.23 percent were male.

Equally, Table 1.2 showed that there were one hundred and seventy nine thousand three hundred and eighty one (179,381) students' constituting 29.13 percent of the candidates nationally scored grade D- in KCSE in 2017 of which ninety one thousand three

hundred and forty one (91,341) students at 50.92 percent were female and eighty eight thousand and forty (88,040) at 49.08 percent were male. thirty six thousand five hundred and thirty nine students (36,539) constituting only 5.93 percent of the candidates nationally scored grade E in KCSE in 2017 of which seventeen thousand one hundred and ninety one (17,191) students at 47.05 percent were female and nineteen thousand three hundred and forty eight (19,348) students at 52.95 percent were male.

The above data showed that cumulatively in KCSE those who scored grades C+ and above were only seventy three thousand four hundred and fourteen (73,414) which constituted 11.92 percent of the national candidature for 2017 (C+ is considered the minimum requirement for admission to Kenyan Universities). Again, cumulatively those who scored below C+ were five hundred and forty two thousand three hundred and fifty nine (542,359) students who constituted 88.02 percent of the national candidature for 2017. Despite the government policy to achieve 100 percent transition, the data shows different perspective. Indeed the problem has to be resolved in schools because implementation of policy is undertaken by the teachers.

In Migori County, documents in The County Director of Education and The Migori County Government also raise concerns on need for highly effective teachers who have good management interventions and are ready to improve academic achievement among students. This research will strive to find out how effective teachers are in Migori County and possible remedy if they are not effective.

Also, teacher's data in Migori county and its neighboring counties as indicated in Table 1.3 showed that Migori County has the highest Student -Teacher Ratio in the region

and nationally. The county with the lowest Student-Teacher Ratio nationally is Kajiado at 17:1.

Table 1.3

Teacher's data in Migori County and Neighboring Counties

Teacher Data in Migori County and Neighboring Counties in the Lake Region				
County	**Secondary School Students**	**Teachers**	**Schools**	**Students-Teacher Ratio**
Migori	73,385	1,233	184	**60:1**
Homa Bay	89,730	2,096	187	43:1
Kisii	189,120	3,863	334	49:1
Kisumu	98,646	2,213	172	45:1
Nyamira	61,235	1,786	140	34:1
Siaya	76,181	1,861	182	41:1
TOTAL	**588,297**	**13,052**	**1,199**	45:1

Source: County Director of Education Office, Migori County.

In Migori County, as indicated on Table 1.3, the teachers employed by Teachers Service Commission (TSC) to teach in public secondary school education are one thousand two hundred and thirty three teachers (1,233). Neighboring counties in the lake region are staffed as follows: Homa Bay County, two thousand and ninety six teachers (2,096) with Student Teacher Ratio of 43:1; Kisii County, three thousand eight hundred and eighty six teachers (3863) with Student Teacher Ratio of 49:1; Kisumu County, two thousand two hundred and thirteen teachers (2,213) with Student Teacher Ratio of 45:1; Nyamira County, one thousand seven hundred and eighty six teachers

(1,786) with Student Teacher Ratio of 34:1; and Siaya County, one thousand eight hundred and sixty one teachers (1,861) with Student Teacher Ratio of 41:1. Migori County Student Teacher Ratio is highest in the Region and Nationally. National statistics put it at 59:1 whereas Migori County calculation indicates Student Teacher Ratio at 60:1 and regional statistics put it at 55:1. Nationally, The County with the lowest student-teacher ratio as mentioned earlier is Kajiado County at 17:1. The number of teachers in relation to the task they are expected to achieve in Migori County needs special management methodologies. Considering that not only teacher factors are the only issues facing education, teacher management approaches should be well understood to improve student academic achievement in secondary school education. This research came up with suggestions.

According to the Migori County Integrated Development Plan (CIDP) 2013-2017, the following challenges facing teachers were noted. First, Gross miss-distribution of qualified teachers within the county denies a portion of our public secondary school student access to quality education. CIDP noted lack of commitment to the profession arising from poor pay. Despite research showing that money is not a motivator, the issue keeps on coming up. A third challenge for teachers is that they have little voice in creating the policies and programmes needed to ensure every student has good teacher. This research opened up possible approaches that may be necessary to empower teaching process.

In addition, Migori County Integrated Development Plan (CIDP) 2013-2017, specified that there were notable challenges on student academic performance. The document recommended that there was need for proper teacher management interventions to ensure improved output in all learning institutions through improvement of

performance in national examination in the final year of secondary education. However, statistics show that the county is still grappling with issues of improvement in student academic achievement. This research considered the impact of CIDP proposals in relation to student academic achievement in public secondary school education. Table 1.4 below shows the performance indices per sub-county. The data was considered to assess the trend in performance in secondary education. In summary, the trend as shown on table 1.4 below showed low output in public secondary school education.

Table 1.4

KCSE performance indices per sub-county

KCSE MEAN STANDARD SCORES					
SUB-COUNTY	**Current Enrolment**	**2014**	**2015**	**2016**	**2017**
Kuria East	8,678	4.444	5.1121	3.0946	3.2321
Kuria West	4,492	3.999	4.996	3.1566	3.1455
Uriri	8,875	5.561	5.4679	3.6765	3.0030
Nyatike	10,497	4.2222	4.4998	3.2222	3.0211
Migori	17,156	5.4653	5.6212	4.1947	4.5214
Rongo	11,668	5.3234	5.8989	4.399	4.5556
Awendo	12,019	5.1392	5.3555	3.7637	3.9115
COUNTY TOTAL AND MEAN STARDARD SCORE (MSS)	**73,385**	**4.8792**	**5.2788**	**3.6439**	**3.6271**

Source: Migori County Integrated Development Plan (CIDP) 2013-2017

Table 1.4 shows that in Migori County, there are Seventy three thousand three hundred and eighty five (73,385) students' in secondary schools whereby eight thousand six hundred and seventy eight students (8,678) were from Kuria East Sub-County, four thousand four hundred and ninety two students (4,492) from Kuria West Sub-County, eight thousand eight hundred and seventy five students (8,875) were from Uriri Sub-County and ten thousand four hundred and ninety seven students (10,497) were from Nyatike Sub-County. Whereas Migori Sub-County had Seventeen thousand one hundred and fifty six students (17,156), Rongo Sub-County had eleven thousand six hundred and sixty eight students (11,668). Lastly, Awendo Sub-County had Twelve thousand and nineteen students (12,019).

The Mean Standard Score for the period of 2014 to 2017 were as follows: First, in the Period between the academic periods of 2014-2017, Kuria East Sub-County registered Mean Standard Scores of 4.444 in 2014, 5.1121 in 2015, 3.0946 in 2016 and 3.2321 in 2017. Kuria West Sub-County registered Mean Standard Scores (MSS) 4.492 in 2014, 3.999 in 2015, 4.996 in 2016 and 3.1455 in 2017. Further, Uriri Sub-County registered Mean Standard Scores of 5.561 in 2014, 5.4678 in 2015, 3.6769 in 2016 and 3.6765 in 2017. Nyatike Sub-County for the period of 2014-2017 registered Mean Standard Scores of 4.2222 in 2014, 4.4998 in 2015, 3.2222 in 2016 and 3.0211 in 2017. Migori Sub County registered Mean Standard Scores of 4.4653 in 2014, 5.6212 in 2015, 4.1947 in 2016 and 4.5214 in 2017. In addition, Rongo Sub County registered Mean Standard Scores of 5.3234 in 2014, 5.8989 in 2015, 4.3990 in 2016 and 4.5556 in 2017. And finally, Awendo Sub-County registered Mean Standard Scores of 5.1392 in 2014, 5.3555 in 2015, 3.7637 in 2016 and 3.9115 in 2017.

The county Mean Standard Score (MSS) for 2014 was 4.8792, the Mean Standard Score (MSS) for 2015 was 5.2788, the Mean Standard Score (MSS) for 2016 dropped to 3.6439, and the Mean Standard Score (MSS) for 2017 dropped further to 3.6271. Accordingly, these results within the 2015 to 2017 period are poor and pointedly showed a downward trend. Considering that the acceptable pass mark which is C+ (MSS of 7.000), all the sub-counties performed below the required standards.

The low performances raise queries on management methodologies used by leaders at educational administrative levels and teachers in schools to enhance performance. To be able to establish perception of teacher management approaches on promoting student academic achievement in public secondary school education, there is need for establishing teacher professional development processes, assessing impact of institutional induction, relationship of supervision to student's academic achievement and role of motivation on student's academic achievement to counter the downward trend in academic achievement in schools.

1.2   Statement of the Problem

The Government of Kenya asserts that all students should access secondary school education. Outstanding academic scores are the main concern of educationists and educational stakeholders with educators and policymakers focusing on testing, curriculum reforms, and teacher factors. Despite policy interventions, most public secondary schools in Kenya and more so in Migori County perform poorly evidenced from the background of the study. It is generally agreed that the most important manifestations of excellent education output have to do with teacher factors and approaches used by administrators. In Kenya, examinations are generally acceptable as valid measures of achievement and thus leading to over dependence on scores

(Bossaert, Doumen, Buyse, and Verschueren, 2011). Despite the government focusing on testing, curriculum reforms, and teacher factors, the problem have persisted where government policy requires that students in secondary schools should register outstanding scores (academic achievement) but the expectation is not achieved.

Due to the current low performance, in Migori County, it is necessary to assess and put in place approaches to improve student's achievement since it is increasingly becoming important that we enhance quality education for high school students. In the current set-up, students in 70 (seventy) percent of the schools are possibly destined to achieve poor grades. Since research has proved that there is a relationship between teacher management and performance, learning must be carefully guided and managed because low performance is an indicator of poor management. Sometimes schools that are in the same environment register results which are different in performance rates. This research focused on perceptions of teacher management approaches exploited by managers to enhance student academic achievement. There is need for establishing influence of teacher professional development processes on achievement, determine the relationship between supervision and student academic achievement, evaluate impact of teacher induction on student's achievement, and establishing the role of motivation on student's academic achievement. This research assessed problem of perceptions of teacher management approaches on student's academic achievement in public secondary schools in Migori County, Kenya

1.3 Purpose of the Study

The purpose of the study was to establish perception of teacher management approaches and their impact on student academic achievement in Migori County, Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives:

i. To establish influence of teacher Professional development on student's academic achievement in public secondary school education.

ii. To evaluate relationship between Supervision interventions and student's academic achievement in public secondary school education.

iii. To assess impact of Induction on student's academic achievement in secondary education.

iv. To determine role of motivation on student's academic achievement in secondary education.

1.5 Hypotheses

The following hypotheses were used to test influence of teacher professional development, relationship of supervision to performance, impact of induction, and role of motivation on student academic achievement.

Ho_1 There is no significant influence of teacher PD on Student Academic Achievement in public secondary school education.

Ho_2 There is no relationship between supervision and student's academic achievement in public secondary school education.

Ho_3 There is no significant impact of Induction on student's academic achievement in secondary education.

Ho_4 There is no significant role of motivation on student's academic achievement in secondary education.

1.6 Research Questions

    i. Does teacher PD, as perceived by teachers, relate to student's academic achievement in public secondary education in Migori County?

    ii. Is there a relationship between supervision and student's academic achievement in public secondary education in Migori County?

    iii. Does induction impact on Academic Achievement in public secondary education in Migori County?

    iv. What is the role of motivation on student's academic achievement in public secondary education in Migori County?

1.7 Significance of the Study

The findings of this research will be valuable to the government, policy makers, administrations, principals and secondary school teachers. The research will also be beneficial to development partners, communities and students on policies, plans, and strategies used by school managers and teachers to improve academic achievement in public secondary school education.

The findings will provide the Ministry of Education (MOE) with data on secondary school teachers management approach processes. The findings would also enable planners come up with practical policies and strategies to improve teacher productivity. In addition, the study will enable secondary school managers and teachers come up with possibilities of improving teacher management procedures to improve educational output. Equally, findings of the study would be used by institutional administrators and teachers as a self-assessment tool; education administrators and Head teachers as a guide. As a matter of fact, the findings of the study brought to light factors that could

be considered when generating policies that would enhance academic achievement in secondary schools and by extension Education for All (EFA).

1.8   Scope of the Study

This research study was conducted in Migori County. The county is divided into 8 sub counties (Rongo, Migori, Awendo, Uriri, Kuria East, Kuria West, and Nyatike). This Research targeted all the ten (10) officers, that is County Director of Education (CDE), County Quality and Standards Officer (CQASO), and all the 8 Sub County Quality and Standards Officers (SCQASOs). The scope also involved one hundred eighty-four (184) public secondary schools with total population of one hundred eighty-four (184) principals, one thousand two hundred and thirty three (1233) teachers, and seventy three thousand three hundred and eighty five (73,385) students. The students were not included in the study but the population of students was indicated here to justify the study. This demography of 73,385 students justifies need for qualitative delivery of education at this level. Lack of a well-managed education process to cater for Migori County secondary school population of seventy three thousand three hundred and eighty five students may be detrimental to their future as individuals and the county in general.

According to Creswell, (2014) based on the central limit theorem, thirty percent (30%) participation from the population gives credible generalizations. This is why Fifty-Six (56) public secondary schools were sampled for the study. To sum up, education officers were included in the study because they were the custodians of government policy; principals were involved because they are the institutional managers. Teachers

were involved in the study because they are the bridge between administrators and recipients (students) in the process of implementation.

The breakdown of the student's study population per sub-county was as follows: In Awendo Sub-County there were twelve thousand and nineteen (12,019) students, Kuria West Sub-County had four thousand four hundred and ninety two (4,492) students while Kuria East Sub-County had eight thousand six hundred and seventy eight (8,678) students, In Migori Sub-county there were seventeen thousand one hundred and fifty six (17,156) Students while Nyatike Sub-County had ten thousand four hundred and ninety seven (10,497) students, Rongo Sub-County had eleven thousand sis hundred and sixty eight (11,668) students and Uriri Sub-County had eight thousand eight hundred and seventy five (8,875) students.

1.9   Limitation of the Study

There were several limitations. First, some administrators were not willing to release Kenya Certificate of Secondary Education (KCSE) results to facilitate analysis. The administrators challenge was resolved by the researcher assuring them of anonymity and confidentially. Responses improved after the researcher assured the respondents that such information was for the purpose of the research only.

Secondly, the assumption that the capacity of the teachers due to experience and professional qualification was different, the researcher collected data from a cross-section of all teachers disregarding age and experience to get existing generalizations. The specified time of 45-60 minutes for interviews was rarely explored fully because principals had a lot to attend to. However, teachers and Heads of Department (HoDs) were cooperative and gave their views freely. Further, the study was carried out in

public secondary schools in Migori County and the intensity of factors varied from one school to the other. So, conclusions were made with caution.

1.10   Assumptions of the Study

The assumptions of the study were as follows:

i.   Teacher Professional Development is important for empowerment of teachers.

ii. Supervision is an important tool for administering teachers as they undergo teaching processes.

iii. Institutional motivation is crucial in making both teachers and students to take part in academic activities that may enhance student academic achievement.

iv. Kenya Certificate of Secondary Education examination results are acceptable measure of student's academic achievement after 4 years in secondary schools

1.11   Theoretical Framework.

The research was grounded on education production function theory which is one of the key concepts used in allocative efficiency (Hanushek 2008).

Education Production Function Theory.

Education production function is one of the key concepts used to distinguish allocative efficiency hence very applicable to this study where we considered perception of management approaches on student's academic achievement.

The study of education production function shows that schools perform two primary functions - Selection and socialization. The socialization process is premised on the preparation of youths to fit into adult roles. This involves transmission of skills, indoctrination of values and commitment appropriate to successful adult participation.

An education production function is an application of the economic concept of a production function to the field of education. Education production function relates various inputs affecting learning and measures outputs including subsequent labour market success. Hanushek, (2008) reported a very high correlation between adjusted growth rate and adjusted test scores. This fact indicated that if we are able to adjust performance level then we will definitely adjust growth.

A production function relating school inputs to the development of production capacity should give us a better indication of why the more educated are better qualified for specified roles. In setting school policy and in long range educational planning, knowledge of the educational production function is essential for efficient resource allocation since schooling does have unique effect on labour productivity or earnings, we should be able to trace this effect to the development of cognitive skills attitudes in schools.

This research explored the functionality of the education production function in enhancing achievement (Sickles and Zelenyuk 2019). The research explored the influence of teacher professional development, supervision; impact of induction and motivation on student's academic achievement in secondary education taking consideration the output in terms of performance results.

Education production function was relevant for this study because it is useful for enhancing allocation of resources. Since the most crucial resources in this study are teachers, exploitation of the allocated resources (teachers) leads to allocative efficiency. Teachers direct students to study and afterwards proceed to higher institutions. Once they proceed and graduate, they will fit well into adult life. Further, Education Production Function Theory is vital because management of teacher processes is one

way of controlling inputs (teacher service delivery) and finally measuring outputs (student's achievement). In tandem with the theory, this research discussed processes of effective teaching through relevant methodologies. This research entitled perceptions of teacher management approaches on student's academic achievement was grounded on this theory.

1.12 Conceptual Framework

The conceptual framework in Figure 1.1 is based on perceptions of teacher management approaches on student's academic achievement in the area of study.

Perception of influence of teacher professional development on achievement was crucial for the study because teachers need be professionally developed as advanced in government policies but their Impact on student academic achievement need be ascertained.

Secondly, the variable supervision and its related variable teacher evaluation were considered because institutions have noted supervision challenges. Supervision was considered to determine its impact on student's achievement.

Further, impact of induction and its related variable teacher experience were considered because teacher induction is useful but its impact was not clearly documented. Motivation was considered to determine whether it had effect on student academic achievement. Student's academic achievement in public secondary education was considered as dependent variable. See figure 1.1 on page 26.

PERCEPTIONS OF TEACHER MANAGEMENT APPROACHES

Independent Variables

Teacher PD
- Qualification
- Basis for PD
- Policy for teacher admission to University

Supervision
- Evaluation
- Test Scores
- Decision Making

Induction
- Experience
- Induction components
- Benefits of Induction
- Indicators of experience

Motivation
- Institutional Motivators
- Teacher satisfaction
- Salary Expectations
- Staff Housing
- Classroom methodologies

Intervening Variables
- Infrastructure
- Government policy
- Entry behavior

Dependent Variables

STUDENT ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS

Figure 1.1: Conceptual Framework

The conceptual framework above showed the various variables which were used to undertake the study entitled perceptions of teacher management approaches on student's academic achievement in public secondary schools in Migori County. On

teacher professional development, variables under study were professional development (PD), basis of teacher professional development, teacher qualification, and policy for admission to universities to undertake teacher education.

Secondly, the variable supervision which is a related variable to evaluation considered evaluation, test scores, and decision making. In addition, induction which should involve teachers and students considered induction components, benefits of induction, and indicators of experience which was a related variable to induction. The last variable for this study was motivation. Motivation was scrutinized because of challenges it faces nationally and internationally. The variables used to assess role of motivation were institutional motivators, teacher satisfaction, salary expectations, staff meetings and teacher classroom methodologies.

Intervening variables were infrastructure, government policy and entry behavior. The researcher realized that intervening variables must be controlled. First, there was infrastructure. The researcher felt that in the current system, most schools do not have disparities on their infrastructure since the various levels of devolved government are putting measures in place to resolve infrastructure issues.

Further, government policy was administered on equitable basis thus its influence was felt in all schools. In addition, entry behavior was considered as intervening variable because the policy was standardized and students had high probability of joining secondary schools of their choice through government placement and parental factors.

1.13   Operational Definitions of Terms

Academic achievement: Attainment of good results in secondary education which involves attaining university admission aggregate. It is the level to which students, teachers or institutions achieved end of four-year study process and resulting grades

Induction: Induction involves introduction, stimulation, instruction and institutional orientation to new teachers as they join new institutions

Teacher Management Approaches: Teacher management approaches refers to how the teacher is managed or how the teacher manages him/herself using approaches that suit or enhance academic performance.

Motivation: Motivation is operationalized for this research to mean processes creating enthusiasm, impetus and drive to improve academic achievement among principals, teachers and students. Motivation should also be anchored on policy hence it is operationalized to encompass education officers, principals, and teachers.

Teacher Professional Development: Process of improving and increasing capabilities of staff through access to education and training opportunities in the workplace.

Teacher Qualification: Teachers academic achievement as measured in terms of awarded certificates and degrees which are acceptable in Kenya

Supervision: Supervisory Processes undertaken by officers, principals and teachers in schools to improve academic achievement.

Secondary School education: Formal school learning acquired in secondary school level after 8 years in primary school within the current 8-4-4 education system.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter reviewed related literature on perceptions of teacher management approaches on student's academic achievement in secondary school education. The researcher reviewed literature on Teacher Professional Development (TPD) and its related variable teacher qualification, supervision and its related variable evaluation; Induction and its related variable teacher experience, and motivation.

2.2   Influence of Professional Development on Academic Achievements.

Cambridge Professional Development Forum (CPD, 2015), discussed the importance of teacher professional development. Cambridge Professional Development (CPD) opines that supporting teachers in their professional development leads to improved outcomes for students despite the big discrepancies in individual regional Professional Development (PD) needs. Cambridge Professional Development (CPD) offers a number of routes for teachers according to their experience and needs, ranging from subject-specific training to professional development qualifications. Cambridge Professional Development (CPD) approach to professional development and training supports teachers to become confident, responsible, reflective, innovative and engaged. Further, Fuller and Cohen, (2006) support that despite everything, teachers need to hone their craft, discover the many formal, informal, on-going, and job embedded professional-development programs to keep teachers at the top of the game. The gap lies on ascertaining the impact of teacher PD on student's academic achievement in public secondary school education. Varella, (2000); Franke (2002) indicated that professional development for teachers is ineffective. Ball, Lubienski and Newborn

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(2001) supported that professional development for teachers is intellectually low, disengaged from profound issues of curriculum and learning; disjointed and non-cumulative. They argue that PD programs just update teachers' understanding of phenomena instead of providing opportunity for constant learning.

Meagher (2011) recommended that there is no worldwide list of features of effective professional development for teachers. The extent of information leaves designers of professional development with tasks of synthesizing the information which necessitates a scrutiny of the same. The resolve of the investigation would be to prioritize the huge number of characteristics by counting which groupings of characteristics are mentioned most regularly. The designers of teacher PD can use these priority categories as an opening to begin their appraisals of the effectiveness of existing teacher professional development (PD) programs for teachers

Globally, processes have been put in place to improve student performance and reduce student achievement gaps. United States of America is in the forefront in developing teaching ideals and methodologies to enhance effective teaching. According to Darling Hammond, Wei, Andree Richardson, and Orphanos (2009), methodologies to enhance effective teaching and improve student's performance should compel organizing forums where teachers meet in capacity building programs to enhance personal development and share experiences. Other methodologies comprise promoting continual teacher professional learning, and capitalizing in teacher capacity building.

Cambridge Professional Development Forum (CPD, 2015), discussed the importance of teacher professional development by suggesting that supporting teachers in their professional development leads to improved outcomes for students despite the big discrepancies in Regional Professional Development (RPD) needs. CPD offers a

number of routes for teachers according to their experience and needs, ranging from subject-specific training to professional development qualifications. In summary, CPDs approach to professional development and training supports teachers to become confident, responsible, reflective, innovative and engaged.

Additionally, Marzano, Frontier, and Livingstone (2011) supported the view that the intensity of teacher professional development (PD) is likely to bring about long-term change in teacher performance. One degree of intensity is the time spent in the programs. The regularity of participation in various professional development (PD) programs should be cast against the extent to which teachers felt prepared to do various activities in the classroom. This is supported by Goldhaber, (2011) who postulates that one way of jump-starting capacity building which is important for professional development is de-privatizing instruction or making instruction public. This requires teachers to open up their classrooms, trusting that observers are not evaluating them but are providing valuable feedback to help them reflect on their practices thus improving delivery. Opening up classes for outsider evaluate is a challenge in Kenya. But if it is a requirement for enhancing teacher professional development then we need to think seriously about it in secondary education in Kenya.

The UNESCO (2009) report asserts that in Austria, national laws regulate examinations and certifications in teacher education and professional development which are finally considered a measure of teacher quality. In Malta, legislation defines entry qualifications, employment, teacher status, in-service training, and quality criteria for performance assessment and in Slovenia, Scotland and Poland, university curricula for initial teacher education mentions teacher standards, as defined by ministry regulations.

In China a study conducted by Meichen, Prashant, Yaojiang, Chiengfang, and Rozelle (2017) found out that there is a significant gap in student academic achievement between rural and urban students because of Professional Development gaps. Policymakers have sought to close this gap by improving the quality of teaching in rural China through teacher Professional Development program. Despite billions of Dollars in investment, there seems to limited evidence on the effectiveness of such programs. The study also evaluated the impact of Professional Development program through a program called National Teacher Training Program (NTTP) on student academic achievement in Rural China. The study found out that the National Teacher Training Program (NTTP) has no effect on Mathematics achievement among students but was effective on mathematics teaching knowledge among teachers. The result specified that teachers might have improved their knowledge through National Teacher Training Program (NTTP) but did not apply what they learned. The gap is that the above study based its findings on mathematics which might have negatively influenced the outcome since not all students like mathematics.

The Chinese government launched the National Teacher Training Program (NTTP) which was the country's teacher Professional Development program for improving learning of rural student's (MOE, 2010). The program is currently one of the key national government initiatives for improving human capital and improving quality among rural and urban China. Policy makers in China and other developing countries invest billions of dollars in teacher Professional Development program each year (Yan, 2013; Government of India, 2013) but there is only limited evidence of whether the program are effective (Bruns and Luque, 2014). At best policy makers have only obtained feedback from the teachers that have been trained and trainers running the

program (Zuo and Su, 2012). This research critically ascertained if the Chinese case is the same as the Kenyan case.

In Southern Africa, a study conducted by Dembele, (2005) exhibited that teacher professional development is increasingly considered a continuum of learning. Along this continuum three major phases appear consensual: preparation, induction and Continuous Professional Development (CPD). The three phases vary in length depending on context and are distinct yet interrelated. The new shift has been so dramatic that many had referred to it as new image of teacher learning, (Cochran-Smith and Lytle (2001); Walling and Lewis (2000)). The approach of teacher Professional Development in Kenya is different.

Further, in South Africa, a study conducted by Steyn, (2011) indicated that teacher Professional Development (PD) has become increasingly important for school improvement initiatives. The National Policy Framework for Teacher Education and Development (NPFTED) was instituted to assist in the provision of qualified teachers. The study however noted that teachers view on professional development as envisaged by NPFTED was unanimous on their support of the necessity of professional development. Despite their support, their perceptions illuminated challenges for principles associated with implementing effective professional development (PD) of practicing teachers.

In Lesotho, a study conducted by Ogbonnaya (2007) in support of Varella, (2000) and Franke (2002) showed that teacher professional development has positive effects on student's achievements but the issue is that it has to be long term. His study suggested that problem solving skills was greatest when teacher professional development was focused on how students learn and how to gauge the learning effectively.

In a study conducted in Burundi by Varly and Mazunya (2017) on professional development revealed that the new curriculum in Burundi made teacher retraining a *sine qua non* for success of reform and teacher professional development. Interviews with teachers showed that the main innovations conveyed by the curriculum were often unknown or misunderstood by teachers. Therefore, it became imperative that teachers were fully inducted and retrained. The misunderstood issues were focus on student learning, group discipline of students, a new profile of the basic education and reorganization of time and system. The Rwandese case revealed that it is essential to conduct retraining to enhance teacher professional development.

In a study conducted in Uganda by Nzarirwechi and Atuhumiza (2019), noted that in 1994, Ugandan Ministry of Education and Sports introduced Teacher Development Management Systems (TDMS) with the sole aim of supporting and enhancing Professional Development (PD) of teachers through in-service training. However, after training for two (2) decades, assumptions and misconceptions still persist. Using Data from three (3) districts that is Bushenyi, Rukunjiri, and Sheema, the analysis conducted by Nzarirwechi & Atuhumiza showed that in-service (retraining) has a significant effect on teachers and teacher professional development particularly on their academic qualification, professional development and performance. They further advanced that the benefits can only be realized when training is properly planned, implemented and continually evaluated. The findings by Nzarirwechi and Atuhumiza (2019) are crucial for this research but the gap is that it was conducted in primary school segment of education.

In addition, a study conducted in Nigeria by Osamwonyi, (2016) showed that retraining is a necessity in enhancing performance and motivation of teachers in the field

(Schools). Absence of retraining (in-service) of teachers will retard professional growth of teachers as well as creating gaps between demand and actual achievement levels. Osamwonyi, (2016) recommends that re-training should include seminars, workshops, conferences, exhibitions and processes that improve teachers and teacher professional development in institutions from initial employment stage to retirement. Therefore, it becomes important that every attention be devoted to teacher in-service (retraining) education to promote professional development and growth. This view underscores importance of teacher retraining as an indicator for professional development in secondary schools.

Alkus and Olgan (2014) recommended that in practice, in-service teacher training is recognized as essential part of the overall process of teacher education which can be achieved through attending events such as lectures, film festivals, exhibitions, conferences, seminars and workshops in which practical solutions to current difficulties are introduced and materials required for implementing these solutions are produced. This finding was useful for this research but it was conceptualized for Early Years Education (EYE) teachers

In Rwanda, according to Ministry if Education (MINEDUC, 2015) it was noted that Professional Development (PD) for teachers require that all teachers undertake and record continuous PD progress and ensure that effective system of appraisal, mentoring, support, assessment and relicensing for all teachers are put in place. The processes mentioned in (MINEDUC 2015) are undertaken in Kenya save for teacher relicensing. Induction is important and the report in Rwanda supports this fact. However, Induction process is a challenge in Kenya.

In Uganda, in a study conducted by Okiror, Hayward and Winterbottom (2017) suggested that experiences demand new and specifically tailored approaches with regard to teaching methods, which justifies the need for teachers to be exposed to in-service to enhance experience. This depicts teacher training as a continuous process focused on acquiring and maintaining knowledge. Continuous training equips teachers with new pedagogical skills which can shift an education system towards a desired outcome. Teacher retraining has been supported by several scholars and this research will assess if retraining as a management approach works in Migori County.

Education documents in the depository of The Republic of Kenya (1999) noted that good Continuous Professional Development (CPD) programmes were expected to improve teacher delivery. The concern would be that even with systems with quality pre-service training packages; the reality of the schools was that teachers needed to refresh their skills from time to time to meet the challenges. Teachers' policy on CPD has often been an afterthought to Education for All (EFA) and the Millennium Development Goals (MDG) targets. In the above view, a study conducted by Gitonga (2012) in Imenti South Sub County in Meru County further established that there was strong relationship between professional development and KCSE performance in secondary school education.

A study conducted by Otieno, (2009) and supported by Wenzare and Ward, (2000) indicated that teachers have been enrolling in all types of programmes that could be classified as continuing and career progression, but their contribution to professional growth are yet to be established. What was apparent in most of the recent policy initiatives in education was an attempt to re-think the teaching profession by

introducing significant changes in the way teachers are trained, promoted and professionally developed.

Teachers Service Commission (TSC) Report, (2015) showed that teacher Professional Development (PD) led to teacher promotion. Teacher promotions in Kenya are guided by provisions of the existing schemes of service namely; the scheme of service for non-graduate Teachers and the schemes of service for graduate teachers. The Government of Kenya is basing promotions on completion of ascribed years (TSC, 2005). So teachers have become complacent because whenever they complete a certain number of years they are sure of promotion (Longoiboni, 2013). In addition, The Technical Requirement Manual (TRM, 2010) illustrated that experienced teachers must avail themselves to the following: participate in one performance appraisal every five years which in Kenya is now done three times a year; actively participate in all meetings and observations related to his or her performance appraisal; sign the summative report to acknowledge receipt, and may add comments if desired; participate in any additional appraisals requested by the principal during or outside the regular appraisal cycle. Appraisal processes have been embraced in Kenya amid opposition from the two Unions in Kenya, Kenya National Union of Teachers (KNUT) and Kenya Union of Post Primary Education Teachers (KUPPET).

According to the Kenya Daily Nation Newspaper of Monday, October 19, 2015, it was noted that teachers would be promoted based on performance (TSC, 2015). The newspaper summarizes the code that, first, school heads were required to provide oversight in the performance appraisals of teachers in their respective schools; second, the commission determined the intervals at which appraisals in educational institutions

were conducted and further, officers were given powers to enter any educational institution to ensure performance standards are reinforced.

This research ascertained if indeed Teachers Professional Development is a process of teacher management approach which managers can use to be able to influence student's academic achievement in public secondary schools.

2.2.1   Influence of Teacher Qualification on Student's Academic Achievement

Rivkin, Hanushek and Kain, (2005) indicated that researchers have never reached a consensus on specific teacher factors that influence student's academic achievement. Some studies found experience and qualifications significantly influencing student's academic achievement as advanced by Asikhia, (2010) and Olaleye, (2010). Moreover, studies done by various scholars like Rivkin, Hanushek and Kain, (2005); Mbugua, Kibet, Muthaa, and Reche (2012) and Kimani, Kara, and Njagi, (2013) found out that professional qualification and teaching experience are not significantly related to student's achievement.

According to a study conducted in several states in the United States of America (USA) by Hanushek and Rivkin, (2010) showed that teacher qualifications include a range of variables. The variables include type of teaching certification, undergraduate major or minor, advanced degree(s) or certifications; type of preparation program, test scores, and years of teaching experience. In many countries, teaching credentials represent the main measure of teacher feature that teacher managers consider in decision making. Findings related to secondary school teachers' academic degrees' influence on student's academic achievement as indicated by degree levels are inconclusive. Some studies show positive outcomes as a result of advanced degrees as supported by Goldhaber (2000); while others show negative outcomes whenever teachers acquire

further degrees (Maguswi, 2013). The gap in the above finding is that in Kenya, a second degree is no longer recognized as critical in teaching outcomes. This research will give the Kenyan position to enable policy makers plan well for better teacher output.

In their research, Bangs, Galton, and MacBeath, (2010); Goldhaber and Brewer, (2000) advanced that despite academic qualification, teachers must undergo teacher certification. Certified teachers are usually those who have graduated from accredited teacher education programs and are considered more qualified. There is debate in the USA between those in favor of full certification (Darling-Hammond, 2006; Darling Hammond et al., 2004) and those who argue that students of teachers who hold full certification achieve similarly to those who study under teachers with temporary credentials. These authors also argue that relaxing requirements for certification is a way not only of attracting academically talented college graduates to teaching but also of recruiting a more diverse pool of candidates needed for a diverse student population. Despite all this, Goldhaber, (2011) admits that existing evidence indicates that use of regulatory policies to obtaining good teachers is extraordinarily difficult. The gap in the above finding is that in Kenya, certification requirements are becoming tightened rather than relaxed.

In Nigeria, a study conducted by Abe (2014) on influence of teacher qualifications on student's performance in secondary schools in mathematics. It was recommended that only qualified teachers should teach mathematics in secondary schools as advanced and supported by Musau and Abere (2015). Further, in Nigeria, Owalabi (2012) as quoted by Ojera (2016) examined the influence of teachers' qualification on performance of senior secondary school physics students. The results revealed that student's taught by

professional teachers perform better. However, teachers' experience in teaching the subject was of significant advantage in physics. Based on the results it was recommended that student's in the year of examination should be taught by experienced teachers.

According to study by Abe (2014) in Sky Journal of Education, there are three ways in which teacher qualification can be quantified that is level of education, years of experience in preparation of subject matter, pedagogy, certification and ongoing profession development. Children learn under the guidance of teachers with good qualification, proper pedagogy interventions and proper certification. Trained teachers use child centered teaching and skillful assessment to facilitate learning and reduce disparities among students.

In Zambia, Maguswi, (2013), when conducting a research on factors contributing to under performance of Zambian female student's in O-level physics examinations, found out that lack of qualified teachers of physics had a significant contribution to low achievement among female student's. In addition, Akinsolu, (2010) asserts that availability of qualified teachers determined the performance of students in schools. Wirth and Perkins (2013) indicated that teacher attitude contributed significantly to student attention in classroom and student achievement. Of interest to this research is that Wirth and Perkins (2013) attributed the mentioned attitude to teacher qualification. Huang and Moon (2009) documented that teacher qualification accounted for approximately 40 percent to 60 percent of the variance in average student's achievement.

In Kenya, Owoeye and Yara (2011) concluded that there was significant correlation between teacher qualification and pupil's performance in Kenya. The gap in this study

was that the study was conducted in primary schools as opposed to this research which based its findings in secondary school education. A study in Kenya by Kosgei, Mise, Odera and Ayugi (2013) further indicated that as the level of education of a teacher increases, the student performance increased. The result of their study found out that teacher academic qualification influenced student's academic achievement. The gap in their study was that it was based on biology as a subject but not overall performance in Kenya Certificate of Secondary Education (KCSE).

Longoiboni (2013), a long serving chief executive of the Kenyan Teachers Service Commission (TSC), in one of his circulars to justify teacher qualification gave the following guidelines. Graduate Teachers applicants must have a minimum of two (2) principles and one (1) subsidiary pass at 'A' Level or a minimum mean-grade of C+ (plus) at KCSE and in each of the two teaching subjects. In addition, they must have a Bachelor of Education Degree in two (2) teaching subjects. Bachelor of Science or Arts Degree holders must acquire Post Graduate Diploma in Education (PGDE) with two teaching subjects. Applicants for PGDE should have a minimum of C plain at KCSE plus a Diploma in Education with at least a C plain in two teaching subjects. In summary, several gaps arise from the literature review where contradictions on finding abound. The gap of whether teacher Professional Development and teacher Qualification could be crucial to improving student's academic achievement in secondary education was put in perspective in this research.

2.3   Supervision and Student's Academic Achievement

Findings of Glickman Gordon and Ross-Gordon, (2010), illustrated that although they present distinctive characteristics; supervision and evaluation are essential and serve complementary functions. Further, they advanced five roles for principals in

supervision namely clinical supervision, group development, professional development (PD), and curriculum development and action research. These five roles are geared towards supporting, motivating and assessing teachers so as to improve students' academic achievement. Glickman et al., (2010) found out that principals have a duty to check schemes of work, records of work, and other professional documents. In addition, their research suggested that where principals carry out these roles well, students will definitely register good performance. This research entitled perceptions of teacher management approaches on student academic achievement assessed whether principals are performing the above roles in Migori County.

Gongera, (2013) in his study conducted in Malaysia revealed that supervision in institutions must seek cooperation and collaboration of those supervising and those being supervised. Such cooperation is aimed at assisting supervisors in becoming successful in performing their supervisory duties. Supervision involves the practice of monitoring work performances of teachers and students and providing feedback by using valuable and suitable approaches.

Further, in Cameroon, Ngemunang, (2017) revealed that supervision must be basically done in classes. Ngemunang showed that head-teachers classroom visits helped in enhancing teaching processes. These observation and examination of the teaching methods used by teachers during supervision positively influenced teachers work performances and by extension impacted on student academic achievement.

In Ghana, a study conducted by Baffour-Awuah, (2011) noted that while principals use traditional methods of supervision, teachers showed that they preferred a more contemporary practice of direct assistance often referred to as clinical supervision. The study also noted that teachers required consultative, supportive and collegial methods

of supervision which are equally more modern. The above findings were relevant to this study because they would assist the researcher to come up with findings that would assess the influence of supervision on student's academic achievement in education.

In Nigeria, a study by Owadiae, (2012) observed that secondary school student's academic achievement in external examination have been low. For value-addition, supervision is mostly required in secondary schools. In support, Akinfolarin, Babalola, and Aledetin, (2017) affirmed that supervision had positive correlation to student's academic achievement in examinations, hence, student's academic achievement in examination can be attributed to the level of supervision of teachers. They concluded that achieving quality learning depends largely on effective supervision of teachers which improves student academic achievement in schools.

Further, study by Adewale, (2014) established that the principals and the Deputy Principals in Ogun State have designed their day-to-day activities in schools to administrative supervision, leaving the academic supervision open to external supervisors whose efforts have no continuity and dependability. This has provided an escape route for external supervisors to declare that they have done their part, what is left is for the teachers to do their part. Adewale, (2014) summarizes that supervisory strategy in Nigeria is not working. There is a gap because managers think they are managing resources in the right way but end up leaving out the most crucial aspects. Practically, there is a wide disconnect between external supervisors, teachers and school administrators in Nigeria. The situation in Nigeria mirrors what is taking place in Kenya. This research came up with research answers.

Sabaitu and Ayandoja (2012) conducted a study in Nigeria which sought to find out the influence of supervisory activities in student's academic achievement in English

Language in senior secondary schools. The purpose of the study was to examine the influence between supervision and student's academic achievement in senior secondary schools. The study showed that there was significant impact of supervisory interventions put in place by school managers on student's academic achievement in English Language. The approaches that were used were checking of student's notes, teacher's punctuality, checking attendance, moderation of examinations and class visitation

Similarly, a study conducted by Nakpodia (2011) further suggested that the best strategy is for the principal to be the head-teacher, supervisor, chief education officer, executor of instructional program, teacher of teachers and curriculum director. In support, World Bank, (2011) intimated that there is a growing conviction that empowerment of school site supervision can make a school respond to needs of student's and improve overall achievement. Monitoring of teachers is a guarantee for better qualities which is possible with cooperation between education officers, principals, deputy principals and teachers. The report indicated that supervision should be extended to classroom situation. The gap in this study was that it was conducted in primary schools as opposed to this study which was conducted in secondary schools.

Kramer, Blake, and Rexach (2005) in a study revealed that teachers in high performing schools view supervision as a friendly process while those in low performing schools regard supervision especially teacher observation as a witch hunt. This revelation is also echoed in Kenya by Muriithi (2012) who observed that majority of teachers in high performing institutions do not mind presenting their records of work for scrutiny by the principal. Muriithi (2012) further suggests that there is need to study ways of carrying out effective supervision and equipping principals with effective teacher

management approaches as a positive attempt for helping to improve student academic achievement.

In Kenya, a study conducted by Nyamwamu, (2010) indicated that it is only the principal who has the authority to put in place administrative and supervisory changes which is necessary to improve teaching and learning through class visitation. In support, Fischer, (2011) observes that through classroom visits, the supervisor can have an insight into quality benchmarks and performance. The same view is advanced by Mavindu, (2013) who suggested that supervision which included classroom visitation, teacher observation, post observation, conferencing and checking teacher's records significantly influenced student academic achievement in public secondary schools in Trans Mara West Sub-County. Most significantly, whether supervision practice has an effect on students' academic achievement is the concern of this literature review and the entire study.

A study conducted by Kimeu, (2010) found out that registration in the morning to check student's absence or late-comers have improved attendance greatly and by extension, punctuality to lessons were satisfactory. Ngujiri (2010) further suggests that registration should not only be confined to students. Principals as supervisors should mark the staff attendance register to ensure regular attendance to duty. In addition, Ngujiri advanced that the above interventions would improve delivery. In addition, a study by Muoka, (2007) examined ways in which principals conducted supervision in public secondary schools in Mwala Division, Machakos Sub County, Kenya. The Study wanted to determine the extent in which other teachers embraced supervision. The study found out that principal as supervisors were effective in carrying out instructional Supervision. The adoption of a more modern strategy of supervision was found to be

effective. It is an interest of this study to see how Muokas (2007) findings would relate to this study. However, challenges that the teachers faced in the study were different from the ones that Wenzare, (2012) cited which included heavy workload and inadequate learning materials.

Further, Kerubo, (2010) conducted a study on role of head-teacher's supervision on Kenya Certificate of Primary Education (KCPE) in Dagoretti Division. The study examined the extent to which head-teachers approved schemes of work, lesson plans and records of work. The study by Kerubo, (2010) found out that head-teacher supervisory interventions were effective. The gap in this study is that it was done in primary segment of education. This study would strive to fill the gap by establishing influence of supervision on student's academic achievement in secondary schools.

2.3.1   Impact of Teacher Evaluation on Student's Academic Achievement

Evaluation is generally understood as a reliable testing procedure for collecting summative data, but, it can also refer to the making of inferences based upon student's performances in learning activities whether the inferences are summative or formative (Kaplan and Owings, 2001). The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against standard benchmark. The goal of formative evaluation is to assess the end of operating cycle. Huhta, (2010) indicated that formative evaluation can make better learning in the future by helping teachers to see where the study needs strengthened. It typically involves qualitative feedback for both students and teachers. Most of the evaluations in our schools are summative but the new way should be formative evaluation or both.

Marshall (2005) and Aguerrando and Vezub, (2011) argues that a principal who is self-disciplined about making 3-5 mini observations a day can get into all classrooms in a

medium sized school every two weeks, systematically sampling the quality of teaching. The accuracy of the evaluation and information gained is far much superior. In many of the educational structures studied, teachers reported that evaluations do not give them useful feedback on their performance in the classroom. In addition, evaluation plans are insignificant. Results of evaluations are rarely used to make important decisions about development, compensation, tenure or promotion. In fact, most of the schools studied considered teachers' performance only when it was time to dismiss them. This research suggested ways in which supervision and evaluation can be used to enhance high school teacher management by the ministry, principals and teachers and by extension support student academic achievement.

In England, (OECD, 2013), regulations prescribe that teacher evaluation includes probationary assessment to determine the readiness of new teachers for entry into the system. Teachers with the minimum requirements are granted employment position. Probation is consequently used as a mechanism to prevent individuals with poor teaching potential from entering the profession. In Kenya, probationary requirement is essential but is a process that has no influence on whether one will maintain employment

In South Korea, research conducted by Dalley and Kim, (2010) indicates that teacher evaluation incorporates three different components, each operating independently from another and each with a different purpose. Performance appraisal in South Korea is used for teacher accountability and is used in resolutions about promotions and job prospect. Professional Development Appraisal (PDA), which relies on classroom observation by peers and school leaders as well as student's and parent surveys, is used for individual and teacher professional development appraisal. In addition, an incentive

scheme that is performance based, rewards teachers for achievement for specific roles. This research is parallel to the above finding but three levels indicated are not applicable.

Studies conducted by Bill and Melinda Gates Foundation, (2011); Toch and Rothman, (2008); and U.S. Department of Education, (2009), posit that teacher evaluation systems have not accurately measured teacher management approaches because they have failed to do a good job of discriminating between effective and ineffective teachers, and Second, teacher evaluation systems have not aided in developing a highly skilled teacher workforce. With these guiding principles and the flaws of current evaluation systems in mind, researchers such as Weisberg, Sexton, Mulhern, and Keeling, (2009); and Hanushek, (2010), propose that evaluation should be an annual process. All teachers should be evaluated at least annually. Evaluations should be based on clear standards of instructional excellence that prioritize student learning. Evaluations should consider multiple measures of performance, primarily the teacher's impact on student academic growth (Teacher Evaluation, 2010). Evaluations should employ four to five rating (multiple ratings) levels to describe differences in teacher effectiveness. Evaluations should encourage frequent observations and constructive critical feedback. The gap in their finding is that in Kenya evaluation is done thrice a year; should evaluation be done annually or three times. This research concluded that evaluation be continuous but summary of the evaluation processes be compiled every term.

In Denmark, (OECD, 2013), enumerates that evaluation includes teacher-to-teacher discourse, and team dialogues aligned to the way work is structured for teams of teachers, planning, learning and knowledge sharing all take place in work groups.

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Planning need be collective whereby learning should be mutual and knowledge shared. The Denmark model seems to be ideal but the gap in the Kenyan case, such discourses are not evidenced.

Hanushek (2010) shows that although efforts to move quickly in designing and implementing more effective teacher evaluation systems are laudable, we need to acknowledge a crucial issue that measuring teacher effectiveness and developing teacher professionalism are different purposes with different effects. An evaluation system that fosters teacher learning differed from one whose aim is to measure teacher competence. Countries including Kenya and their governments are busy developing or implementing teacher evaluation systems. However, it was not distinctive whether evaluation processes fostered teacher learning or teacher competence.

From the above discourse, the theory of action behind supervision and evaluation in Africa is that they improve teacher's effectiveness and therefore boost achievement. However, Wiggins and McTinge, (2005), and Reeves (2004) on studies done in Alexandria argues that the theory of action behind supervision and evaluation is flawed and the conventional process rarely changes in the classroom and ascribe to another theory that advances that the engine that drives high student's academic achievement is teacher team-working collaboratively towards a common curriculum expectations and using interim assessments to continuously improve teaching and attend to students who are not successful.

Evaluation of education systems and more so evaluation of teachers have faced challenges in Africa. For example, in Cape Verde, teachers have very little opportunity to receive on-going monitoring and pedagogical support and there is no national in-service training plan (World Bank 2018). World Bank Report on Cape Verde education

processes recommends that to have meaningful teacher evaluation there should be serious curriculum reform and teachers need to be equipped with skills to understand and successfully teach the new curriculum. The report suggests that special focus on activities related to the development of retraining models and increasing a support-system for coaching and mentoring teachers should be in place. This would improve teacher evaluation system to better support and manage teachers for enhanced academic achievement.

The report by the World Bank (2018) in Cape Verde further suggests that the country's ministry of education to develop a unit to help ensure that student assessment system which is the essence of evaluation accurately support and reflect the curriculum reform and ultimately help in improving student outcomes.

In Sao Tome, a report by the World Bank (2014) gives country specific suggestion on educational assessment. The report recommended that in Sao Tome education system should come up with assessment plans to improve learning outcomes. Ministry of Education in Sao Tome then finalized the decision for impact evaluation project. The intervention included training programme for school directors, creation of school improvement plans together with community and various mechanisms for sharing assessment results. In December 2016, a draft for the programme was designed. What remains is to see whether the process has worked or how far the process affected academic achievement in Sao Tome where educational output is considered poor.

Longoiboni, (2013) in one of his annual reports, advanced that most teacher evaluation systems suffer from a slew of design flaws. First, most of the evaluation systems are Infrequent. Many teachers aren't evaluated every year. These teachers might go for years before receiving any meaningful feedback on their performance. Secondly, most

evaluation plans are unfocused. A teacher's most important responsibility is to help students; yet student academic progress rarely factors directly into evaluations. Instead, teachers are often evaluated based on superficial judgments about behaviors and practices that might not have any impact on student learning - like the presentation of their bulletin boards and some certificates printed in cyber cafes.

In Kenya, teacher evaluation involves teacher appraisal. Teachers Service Commission (TSC) Pursuant of Section 11 (f) of the Act 2012 is mandated to monitor the conduct and performance of teachers in the teaching service. To achieve this, TSC has introduced Performance Appraisal System called Teacher Performance and Development Plan (TPAD). The TPADs objective number one is to "Provide quality education to students in all public schools." This statement indicates that provision of quality education to students need be enhanced.

A study conducted by Kadenyi (2014), in Vihiga Sub County that surveyed influence of teacher appraisal on improvement of student's academic achievement admitted that despite massive investment on teacher appraisal by the government, much is yet to be achieved in terms of improved educational standards. However, data analysis in the research by Kadenyi (2014) revealed that principals and teachers acknowledged that appraisal of teachers on service delivery were actively being conducted. All teachers acknowledged that appraisal of quality of classroom environment assisted in improving student's academic performance.

In summary, a study by Moreira and Vieira, (2011) suggested that implementation of supervision is still seen by teachers as generalist in nature, and not focused in solving educational problems. First, principals supervise only a tiny amount of teaching. If a teacher has five classes a day, five times a week, thirteen weeks a term, three (3) terms

a year. The lessons are about 900. If the principal supervises and evaluates only one lesson a year, the process accounts for 0.1 percent (See Appendix VII on page 251). Secondly, micro-evaluation of individual lessons does not carry much weight since they are often desirable and generally disciplined. Thirdly, in course of supervision and evaluation, instruments used frequently get on the way. Fourth, evaluation often fails to give teachers judgmental feedback and lastly, most principals are too busy to do a good job on supervision and evaluation.

On supervision and evaluation of teachers, Hanushek et al, (2010) posits that everyone agrees that supervision and evaluation of institutions and teachers are fragmented and in the same light they all agree that great teacher's evaluation is critical to student success. A study conducted by Goodwin, Cunningham and Childress, (2003) found out that principal's as the sole supervisors at institutional level spent less time on supervision. They have been reported to spend less than 20 percent of their time visiting classes, doing curriculum related tasks and staff development. The poor rate at which secondary schools in Migori County perform need urgent attention hence principals are required to improve on supervision interventions.

2.4   Impact of Induction on Student's Academic Achievement

Studies on schools induction in United States of America (USA) by Portner (2005) defined Induction as the support and guidance provided to novice teachers and school administrators in the early stages of their careers. In support, Wong, (2004) noted that induction programmes for new teachers have been identified as an important way to promote goals of teacher quality, teacher retention and student academic achievement. The theory of action for teacher induction is providing support to beginning teachers to increase likelihood that they will stay in jobs and do their jobs well. In addition, Carver,

(2004); Lopez, Lash, Schaffner, and Wagner (2004), demonstrated that despite all the attention to induction, empirical research demonstrating the actual effect of induction with regard to teacher retention, practices and student achievement have provided some information on nature of mentoring. Indeed, induction activities help us understand the causal mechanisms by which induction may lead to improved teacher practices and improved student academic achievement among students.

Internationally, studies conducted by Ingersoll, (2012) found out that in practice, teacher induction is common, but induction that is intensive, comprehensive, structured, and sequentially delivered in response to teachers' emerging pedagogical needs is not evidenced in many schools. An example of informal or low intensity teacher induction includes pairing each new teacher with another full-time teacher without providing any training, supplemental materials, or release time for the induction to occur. In the above light, according to reviews done by Ingersoll and Kralik (2004), it was revealed that little of the research on teacher induction to date has been conclusive or rigorous. Induction should incorporate orientation to the workplace, socialization, mentoring, and guidance during the beginning of a teacher's career. Comprehensive induction consists of several key elements: a multi-year program, rigorous mentor selection and training subject-area pairing of mentors. The gap in this citation is that schools do not embrace the ascribed induction methods.

Holt, (2011) revealed that teachers in the study had access to and participated in four induction programs components recommended by state school board. However, for many beginning teachers, support was lacking. Results of the study indicated that responding teachers were significantly low. Important questions about induction must be answered to best guide future policy. Despite research determining that students of

beginning teachers made greater academic progress if their teachers took part in comprehensive induction program (Ingersoll and Strong, 2011), more research is needed that would distinguish relationship between specific program components and student achievement.

Further, findings of Ingersoll and Strong, (2004) indicated that the first years in classroom are critical, intense and formative time that shapes future teaching patterns as well as influence longevity in the profession. They explained thus:

> Conditions under which teachers go through their first three years of teaching have strong influence on the level of effectiveness which the teacher is able to achieve and sustain over the years. Additionally, first years of teaching has influence on the attitudes which govern teacher's behavior over the years, and indeed on decision to continue in the teaching profession.

It has been found that supporting beginning teachers during early years (first three) in the profession can make a difference in the learning experiences of their student's (Furlong, 1997). Further, Gold, (1997) gave the following views on experience.

> Few experiences in life have such tremendous impact on personal and professional life of a teacher as does the first year of teaching. The initial experiences are embedded perceptions and behaviors regarding teaching, students, the school environment, and their role as a teacher.

In teacher's work environment, Marzano et al (2011) supported that induction programs emphasize instructional support in the form of skills, knowledge, and approaches for effective classroom teaching, and psychological support in the form of encouraging confidence building. Therefore, teacher participation in induction program is useful indicator of the extent to which elementary and secondary public schools are addressing the issue of training and retaining quality teachers.

Similarly, Research conducted by Potner, (2005) indicated that induction programs are typically designed to both improve teaching skills of beginning teachers and reduce attrition. Providing support for beginning teachers in African schools has been the focus of increasing attention mainly because attrition rates among new teachers are often much higher than among experienced teachers. From a policy standpoint, induction may increase the efficacy and retention of quality teachers because it has the potential to help new teachers cope with classroom realities and adjust to school environments. This discussion supports that we can support new teachers by coming up with workable induction processes.

In Africa, a study carried out in Ghana on induction of beginner teachers by Jared and Immanuel, (2012) revealed that beginning secondary school teachers reported many challenges including delayed payment of salaries, problems with classroom management and assessment and inadequate learning materials. The findings suggest that beginning teachers were not properly inducted into the teaching profession. Therefore, there is need for the government to create formal induction and mentoring policy for beginning teachers. These would fast track novice teacher induction to new school systems and quickly assist student's learning.

In Rwanda, according to Ministry if Education (MINEDUC, 2017) it was noted that once teachers are inducted, their professional development does not halt. Throughout their teaching career, teachers continuously engage in learning their profession. Further, the key to retaining teachers, especially teachers in the early years of their career is to provide a robust system of professional support in terms of induction. This support can quickly address job-related challenges and enhance commitment to teaching. All beginning teachers defined as teachers in the first three years of their career, will

receive a three tier professional support from head teachers, mentors and school inspectors. This should be the essence of induction. The induction process in Rwanda is important to note because a teachers induction porgramme lasts for three (3) years.

A study conducted by Dishena (2014) in Namibia which investigated the perceptions of Newly Qualified Teachers (NQTs) about school based induction in selected primary schools in Windhoek, with a view of assisting those tasked with responsibilities of inducting teachers, realized that induction is an important factor that is essential to the success of every Newly Qualified Teacher. It suggested that school-based induction be commenced as early as possible rather than waiting for Newly Qualified Teachers to blunder. The gap on the research by Dishena is that it was conducted in primary schools thus might not be generalized for secondary schools.

In addition, a study conducted by Dishena, and Mokoena, (2016) concluded that in order to achieve inductions intended objectives, induction programmes have to be well organized and facilitated in schools. The study by Dishena, and Mokoena, (2016) finally recommended that induction programmes should be allocated sufficient resources, sufficient mentors for new teachers, sufficient physical space, relevant workload as compared to veteran teachers to increase teacher effectiveness and retention. The findings however do not indicate the outcome of such induction programmes.

In Nigeria, Akpan and Ita (2015) conducted a study investigating the relationship between teacher's professional development and quality universal basic education. The findings of the study used 500 select teachers from primary and junior secondary schools revealed that teacher participation in induction programme, Information Communication Technology (ICT) training and seminars significantly impacted quality

universal basic education in Lagos State. The study indicated that teacher's professional development must include induction, ICT training and Seminars. In Africa, induction gaps have been witnessed.

In Kenya, a study by Waiganjo, (2014) sought to find out the factors affecting implementation of induction programmes in public secondary schools. The findings established that the financial resources, inductors and inductee's workload, transformational leadership style and induction methods affected implementation of induction programmes in public secondary schools in Kamkunji Sub-County, Nairobi City. The study by Waiganjo, (2014) did not assess the impact of inductions on student academic achievement.

A study by Indoshi, (2003) had shown that induction of newly qualified teachers (NQTs) in Kenya is haphazard and informal. Teachers seldom gain from induction processes. In this regard students do not benefit because teachers do not fit quickly into the system. Indoshi, (2003) advocated that induction programmes should be tailored according to beginning teacher's unique needs which arise from the fact that the new schools where they are posted have challenges. In Kenya and other East African Countries, universities have been blamed for poor performance of graduate employees in public secondary schools on the wrong assumption that initial training programmes must produce a complete and super employee. The assumption was also supported by Simatwa, (2010) in a study conducted in Bungoma on induction processes in schools. The study like most studies on induction did not look at the influence of such programmes on student's academic achievement.

Wenzare and Ward (2000) asserts that among other benefits, teacher inductions in Kenya might be viewed as an effort towards improvement of teaching profession by

retaining the most effective and ultimately enhances management and improve quality of education in schools. The study by Wenzare and Ward (2000) furthers points out schools with structured teacher induction programs reap positive improvements in student achievement that lead to positive morale. By engaging school leadership, the study opens up the possibility of discerning whether Newly Qualified Teachers (NQTs) induction is given a deliberate attention for the benefit the school obtains from practice. The gap in the above view is that elaborate induction should be conducted for NQTs whereas induction should include all aspects of teacher development. The gap in the above discussion is that in Kenya most schools introduce their new staff over the assembly and handed over to the Heads of Departments (HODs) who assign teaching lessons without substantive induction.

2.4.1 Influence of Teacher Experience on Student's Academic Achievement

A study conducted by Kane, Rockoff, and Staiger, (2006) speculated that experience makes a difference especially at the beginning of a teacher's career. On average, teachers with some experience are more effective than brand new teachers. Teachers improve the most early in their careers. One study found that close to half of the teacher achievement returns arise during the first few years of teaching. Further, Harris and Sass, (2007) established that the shift from no experience to some experience makes the biggest difference. However, most teachers reach their peak after about five years in the classroom. As one study put it that there is little evidence that improvement continues after the first three years (Rivkin, Hanushek, and Kain 2005).

A study conducted by Rivers and Sanders, (2002) suggested that teachers experience in terms of years in service had significance on student's academic achievement. Effectiveness increased dramatically each year during the first ten years of teaching and

further found evidence of growing teacher effectiveness out to 20 or more years although more than a half of the gains in teacher effectiveness occurred during the first few years of teaching. The study showed influence over the years but did not indicate how the experience gained affected student's academic achievement.

Another study conducted by Ladd, (2008) found that, on average, teachers with 20 years of experience are not much more effective than those with less years of experience. On the other had a study conducted by Ben, (2009) found out that there is limited evidence that returns to experience vary based on how a teacher is assigned subjects over the years, and by how long they teach the same grade. However, Xu, Hannaway, and Taylor, (2009), found out that individual teachers tend to improve with experience. In addition, Rivkin, Hanushek, and Kain, (2005) agree that on the bottom line experience helps, but it doesn't guarantee excellence or student academic achievement. Earlier on, Rivkin, Hanushek, and Kain, (2000) had indicated that effect of teacher experience on student's academic learning/achievement had found a positive relationship between years of experience. The evidence currently available suggests that inexperienced teachers are less effective than more senior teachers. Rivkin et al, (2005) further concluded that experience is not related to achievement following the initial years in the profession. Despite all the above, studies by Sass, Hannaway, Xu, and Figlio, (2010) asserted that some less-experienced teachers are more effective than teachers with more experience. This gap need be filled up to a reaffirm whether management approaches can improve student academic achievement through teacher experience by resolving the contradictions in earlier findings.

On the contrary, a study conducted by Gilbert, (2013) asserted that a lot of teaching is experience not training and therefore content knowledge is not the key to successful

teaching and therefore concludes that there is no correlation between academic performance and good teaching arising from teacher experience.

A study conducted by Sweeney, (2012) which studied the relationship of teacher salaries, teacher experience and teacher education and outcomes found teacher salaries and levels of education affected student's academic achievement. But years of experience of teachers had little to no effect on student's academic achievement. This finding contradicted Adeyemi, (2008) who concluded that teacher years of experience had influence on student's achievement.

Harris and Sass (2007) in their study of teacher training, teacher quality and the impact on student's achievement concluded thus;

> Our results indicate that obtaining an advanced degree during ones teaching career does not enhance productivity. This may actually reduce in high school's mathematics and middle schools reading. This may be because graduate degrees include a combination of pedagogy and content that may have or may not have a positive influence on teacher productivity.

In South Africa, Buddin and May (2009) studied teacher qualifications as the basis of teacher experience and student achievement in urban elementary schools. The study examined that teacher licensure, test scores and other teacher attributes influence on elementary student achievement. They used longitudinal approach. The result showed large differences in teacher quality across school district. They noted that teacher license scores are unrelated to teacher success in classroom but further suggested that student achievement increases with teacher experience but the correlation is weak.

A study conducted in Nigeria by Adeyemi, (2008) found out that teaching experience was significant with student outcomes as measured by their performance in

examination. Schools having more teachers with five years and above teaching experience achieve better results than schools having more teachers with less than five years teaching experience. Considering the findings, Adeyemi, (2008) recommended that governments should encourage experienced teachers to stay on the job by providing them with incentives and better promotional prospects. Experience has been noted to be so critical in Nigerian education system that several views have come to the fore advancing need to involve retired teacher because of their long years of experience to teach in schools.

A study conducted by Ochieng' and Kiplagat (2016) revealed that the relationship between teacher qualification and mathematics performances was positive, strong and statistically significant. From their study findings, it was observed that the individual teacher's education standards contributed to the level of output and subsequent student performance in the subject matter. This implied that well educated teachers deliver instructional content more effectively and yield top quality results in national examinations. This finding however considered mathematics as a subject but not the overall student achievement in secondary education.

Further, a study conducted by Kosgei, Mise, Odera and Ayugi, (2013) investigated the relationship between Biology Teachers' Experience (Years of teaching, attendance of in-service courses and student academic performance. The study noted that experience is highly valued in the teaching profession. This was supported by Kosgei et al., (2013) who revealed that as the number of years of teaching progressed, student's academic achievement increased. However, the study did not measure the actual influence of the number of years of experience on student's academic achievement in schools.

A study conducted by Agwanda, (2015) in Kisumu Central Sub-County where data analysis was done using descriptive statistics, two variables were put to test. The two variables were teacher qualification and teacher experience. The result indicated that there was significant relationship between teacher qualification and teacher experience on student's academic achievement. An earlier study by Agwanda (2002) on student's achievement in national examination in Kisumu Municipality concluded that teacher qualification had positive correlation with student performance. The earlier study did not put teacher experience to test. The two contradicting views by Agwanda need be resolved through research to enable planners come up with informed decision. This would resolve whether teacher experience has any significant effect on student's academic achievement.

Sureiman, (2010) in studies on "Determinants of Academic Performance in Public Day Secondary Schools in Nandi Sub-County, Kenya" which was supported by Samoei (2014) revealed that the teachers experience among other variables has significant impact on Academic Performance of students in secondary schools while studies conducted by Kimani, Kara and Njagi (2013) established that teachers features such as age experience, gender, Professional qualification were not significantly related to student academic achievement. The two researches conducted by Sureiman, (2010) and Kimani, et al. (2013), have different implications whereby this research resolved the arising gaps.

2.5 Role of Motivation on Student's Academic Achievement

Motivation is a process which starts with needs whereby the desires set up drives. For the drives to alienate the needs, it is necessary to put in place relevant incentives. Drives are action oriented while incentives are those things that alienate needs.

According to Marques, (2010), motivation is what people need to perform better and can work if the right person, with right skills, right qualification, right drive, and right experience are placed in charge of the task at hand. Research conducted by Guajardo (2011) in Low Income Countries (LICs) south of the Sahara advanced that work motivation refers to the psychological processes that influence individual behavior with respect to the attainment of workplace tasks and goals. Financial motives are likely to be dominant among teachers in LICs where pay and other material benefits are too low for individual and household survival needs. A study conducted in Cameroon by Mbua, (2003) emphasizes importance of motivation when he says,

> Generally speaking, neither regulations nor resources; neither innovations nor programme reorganizations, can significantly alter school performance if motivation systems fail to energize and shape teacher behaviors in a way that link educational programme requirements to student's learning needs. Motivation is very important and are major concerns in all organizations or institutions

Further, Guajardo (2011) in his study of Save the Children accepted a general and more comprehensive definition of teacher motivation as the willingness, drive or desire to engage in good teaching. In addition, in studies conducted by Lazear, (2003), Teachers are arguably the most important group of professionals for any nation's future and the idea of linking a person's pay and promotion to job performance seems very natural. Therefore, it is disturbing to find that many of today's teachers are dissatisfied with their jobs. It is crucial that we determine what increases teacher satisfaction. Many factors have been examined in an attempt to find which ones promote motivation.

Studies by Tomaževič, Seljak and Aristovnik, (2014) supported studies conducted by Herzberg, (1964), that indicated that the factors that led to satisfaction included achievement, intrinsic interest in the work, responsibility, and advancement.

Conversely, the factors that caused dissatisfaction were institutional policy, institutional administrative practices, supervision, interpersonal relationships, working conditions, and salary. Two-factor theory distinguished between Motivators like challenging work, recognition for one's achievement, added responsibility, opportunity to do something meaningful, involvement in decision making, sense of importance to an organization that give positive satisfaction arising from intrinsic conditions of the job itself such as recognition, achievement, or personal growth; and Hygiene factors which comprised status, job security, salary, fringe benefits, work conditions, good pay, paid insurance, vacations that did not give positive satisfaction or lead to higher motivation. The term hygiene is used in the sense that these are maintenance factors which are extrinsic to the work itself, and include aspects such as company policies, supervisory practices, or wages/salary (Levin, 2010).

According to Jordan (2006), Incentives for teachers in the public education system that may enable them to perform well are frequently weak due to sanctions. Low pay forces large proportions of teachers to earn secondary income from private tutoring and other activities. Poor human resource management also seriously de-motivates employees. This research was critique to role of motivation on student's academic achievement.

Further, a study by Turner, (2007) investigated the relationship between features of the school organization and teacher motivation. The purpose of the study was to determine which factors of the school improved teacher's motivation. The study suggested that school organizations could use the information to promote teacher motivation and possibly increase academic achievement. The school features included teacher turnover rates, school size, and test scores. The characteristics that relate to teachers were years of experience; educational level; and attendance patterns. A study by Durosaro, (2000)

outlined further factors of motivation as follows: Constant achievement of educational goals, work recognition; responsibility and achievement, interpersonal human relations, participatory decision making, salaries and wages.

In a study on motivation, Hulin and Judge (2003) asserts that teacher motivation is assessed at both the global level (whether or not the individual teacher is satisfied with the job overall), or at the facet level (whether or not the individual is satisfied with different aspects of the job). The above study listed 14 common facets: Appreciation, Communication, Coworkers, Fringe benefits, Job conditions, Nature of the work, Organization, Personal growth, Policies and procedures, Promotion opportunities, Recognition, Security, and Supervision. A more recent definition of the concept of motivation is from Hulin and Judge (2003), who have noted that motivation includes multidimensional psychological responses to an individual's job, and that these personal responses have cognitive (evaluative), affective (emotional), and behavioral (interactive) components.

A study by Meagher, (2011) showed that most teachers reported that they were satisfied with the positions they currently hold. The reactions from the teachers were consistent throughout the research group. An additional reason that there was not a significant relationship between the variable of teacher motivation and the teachers perceived quality of professional development is that other factors relate to teacher's level of satisfaction besides the professional development program the teacher experiences. This research ascertained level of motivation with a view of assessing influence on student's achievement.

According to a study conducted by Alarm and Farid, (2011) noted that motivation of teachers is crucial as it affects the student's directly. This fact is supported by a

previous research by Marques, (2010) which determined that motivation, satisfaction and performance are interdependent. Motivation is a decisive factor that determines the general efficiency of an institution. Lack of motivation among teachers causes absenteeism from school; Lack of motivation also causes aggressive behavior towards colleagues and students; early exit from teaching profession and psychological withdrawal from work. Therefore, poor motivation of teachers would also have the same results as lack of motivation.

In the United Kingdom (UK), a study conducted by Serve and Bolin, (2002) revealed that teacher motivation was low due to work overload, poor pay and low influence by society. Similar findings in other developed countries confirmed presence of low teacher motivation which was attributed to intrinsic factors. The role of motivation arising from comfortable workload, acceptable pay and improved influence on student's academic achievement are yet to be established.

Research in the United States of America (USA) as conducted by Goshell, (2000) saw teacher career satisfaction as the degree to which people are happy with their careers, Essien (2002) viewed it as emotional response to a job situation and often determined by how outcomes meet expectations. Secondary teachers are currently facing many challenges in education and in society which may affect their levels of motivation (Adenike, 2011). Adenike advances that there are concerns regarding the attitudes of educators towards their work and their level of motivation. Further, a study by Iliya and Ifeoma (2015) concluded that discovering what matters to teachers and how best to motivate them for sustained and improved performance is a complicated challenge. Extrinsic rewards that have been tried in the past have equally not produced the desired

effect and results. Teachers are most likely to value intrinsic rewards like self-respect, responsibility, and a sense of accomplishment.

Sangay, (2010) in a study conducted in Bhutan revealed that a teachers' position in school determined his or her level of satisfaction with the work given. Sangay further noted that that various teachers have roles to play in their schools. The roles like being class-teacher, games teacher motivated them and gave them job satisfaction. What Sangay fails to clarify is whether satisfaction arising from motivation would influence student's academic achievement.

A study conducted in Malaysia by Yunus, Wan-Osman and Ishak, (2011) indicated that factors such as achievement and student motivation are influenced by the quality of the relationship that the students and teachers have with each other. From their findings, the respondents were aware of its importance and roles in their duty as teachers. From the above awareness the study confirmed that the relationship between student and teachers improved student behaviors and motivation as well as student academic achievement.

A survey conducted by Roger, (2011) in countries where teachers earn higher pay for higher performance achieved higher competence in mathematics, science and reading. Fifteen-year-old student's in countries that can pay teachers based on their performance achieve at higher level in mathematics, reading and science, even when compared only to students from the same continent.

The results of the study by Roger, (2011) showed that,

> Student's in countries that permit teachers' salaries to be adjusted for outstanding performance score approximately one-quarter of a standard deviation higher on the international mathematics and reading test than students in countries without performance pay.

Abbas, and Khurshid, (2013) in agreement to the above advanced that there is need for use of more than one motivational technique in classroom environment. The study proposed that novelty technique, competition technique, and aspiration techniques were ranked high in classroom environments. The study by Abbas and Khurshid, (2013) also suggested that use of positive reinforcement whereby teachers praised students had positive influence on academic achievement. Words like well done, keep it up, good, very good, fair, and neat were important motivational techniques. However, the study was silent on how teachers could be motivated to learner academic achievement.

There is a wide range of views about motivation in Africa, most of which are country specific. Topkaya and Uztosun, (2012) adds that there appear to be mounting concerns that unacceptably high proportions of teachers working in public school systems in many LICs are poorly motivated due to a combination of low morale and motivation, poor incentives, and inadequate controls and other behavioral sanctions. Consequently, Broekman, (2013) suggests that standards of professional conduct and performance are low and falling in many LICs.

In a wide study conducted on teacher motivation in Southern Asia and Sub-Saharan Africa, Paul and Kwame, (2007) indicated that with respect to motivation patterns, argued that working in rural schools is more difficult and thus more demotivating than in urban schools due to poor living and working conditions. The finding from the countries studied showed that teachers in rural schools were disadvantaged. This study indicated that teachers in urban settings were better placed to enhance student academic achievement.

In Support, Ogundele (2008) defined teacher's motivation as the level at which a teacher is contented with the working conditions and salary. Ogundele, (2008) however suggested that the government of Nigeria improve the working condition and teacher salaries in secondary so that educational objectives and quality can be achieved. The view of Ogundele (2008) attributed motivation to external forces and hence could be solved by the external forces.

In Africa, Jordan (2006) asserts that Teacher management approaches at the national and sub-national levels is nothing short of chaotic in many African countries, whereby teachers' pay large bribes to secure employment and desired postings as is the case in Uganda; this might impact on job commitment and overall motivation which means that teachers do not feel accountable to school managements, parents or the wider community. Being posted to a rural school is likely to de-motivate most teachers. Increasing hours of work, larger class sizes, more subjects, and constantly changing curricula are cited as major de-motivators in many countries. In Comoros there is general lack of facilities, equipment, qualified teachers, text books, and other resources. Salaries for teachers are often in arrears that many refuse to work. This shows that Africa has a lot of teacher motivation gaps. Jordan (2006) further opines that what is expected from teachers is not pitched at a realistic level in many countries given material rewards, workloads, and work and living environments. In many countries, teachers are being asked to take on more responsibilities, including HIV/AIDS education, counseling, and community development.

In Ivory Coast, a World Bank Report (2017) noted that in spite of limited outcomes in terms of educational output, teacher's salaries are relatively high compared to the country's stage of development in terms of both primary and secondary education. In

May 2017, the president of Ivory Coast asserted that the country's teacher have the highest salaries in the sub region. With a minimum salary of three hundred and ninety thousand CFA Francs (390,000) which converts to about Kenya Shillings 66,993 per month for elementary schools and a minimum of five hundred and eleven thousand CFA Francs (511,000) which comparatively converts to about Kenya Shillings 87,778 per month for secondary teachers in 2016, the president affirms that Ivory Coast teacher remuneration is the best in the sub region (*Connectionne Ivorriene* 2017). This fact is supported by the World Bank Report (2017) which states that on average, elementary salaries are thirty four (34) percent higher compared to the average comparator countries. The above teacher remuneration is not only better in their sub-region but even better than teacher remuneration in the East African region. Despite relatively better pay, Ivory Coast still grapples with quality service in the education sector. This salary factor shows that academic achievement is not only measured in terms of better salary.

In Uganda, a study conducted by Turinawe, (2011) noted that rewards systems and motivation is strongly related to each other. Equal compensation packages influenced the motivation of workers meaning that employee compensation should match his or her skill in order to be satisfied. Equal treatment with colleague of equal qualification and skills make employee satisfied. This study by Turinawe, (2011) dealt with whether satisfied teachers in the same rank achieved results of the same category. Since teachers as employees measure their output on student's academic achievement, the current research was geared towards assessing role of motivation on student's academic achievement.

In Tanzania, a study conducted by Ngibudzi, (2009) indicated that low motivation among teachers came as a result of poor pay, lack of fringe benefits, lack of bonuses; lack of promotion opportunities, poor processes and procedures, lack of in service training or professional development; lack of appreciation from employer. The results by Ngibudzi, (2009) revealed that teachers differ significantly in their motivation in relation to demographic location of the school. The result show that teachers in rural areas appear to be more satisfied with social benefits and support from the administration than their colleagues in urban areas. These results do not concur with the previous research findings of Bennel and Akyaempong (2007) which advanced that teachers in rural schools were less satisfied with their jobs.

However, in Djibouti, Hare and Harry, (2007) considered teacher attrition as an indicator of demotivation. Teacher attrition is very high thus creating challenges on staffing. New teachers are not recruited as fast as required. In addition, the local teacher training institute in Djibouti is unable to graduate more than 130 teachers per year. Nearly all teachers in Djibouti are trained in the highly selective Personnel training Centre for National Education (CFPEN). The challenge facing Djibouti is understaffing caused by high attrition.

In a study conducted in Papua New Guinea by the New Guinean, (2002) reported that motivation among secondary school teachers were fragile. Failure to meet teacher needs and expectations such as recognition, achievement, better terms, and working conditions of service such as salary resulted into demotivated teachers. The study brought in issues of teacher salary which has been debatable because some schools of thought have advanced that money is not a motivator.

In Kenya, a study by Kasyoka (2015) indicated that focusing on management plans; tactics and policies have not been well conceptualized. Studies available tend to focus on student's discipline, teachers' motivation and academic performance in public schools. In support, Ocham, (2012) in his studies agreed that teacher motivation was found to boost morale in enhancing student's performance. However, there is lack of knowledge on perception of head teachers. Further, on teacher motivation, a study by Wenzare, (2012) suggested that the principal must have proactive motivation approaches for staff and students to enhance academic achievement. They are expected to use supervisor-teacher responsive methods by moving away from traditional methods of control and authoritarianism. The traditional methods of inspection instilled fear on teachers and lowered their morale. Teacher management should therefore be sources of motivation of teachers and students.

Nyantika, (1996) on factors leading to poor performance in Kenya Certificate of Secondary Education (KCSE) in Magombo Zone Nyamira District showed that lack of rewards for teachers to boost their morale and clan politics was to blame for poor performance in KCSE. However, the study by Nyantika did not offer proposals on how to counter influence of clan politics. Despite being an old research, its findings may be important for institutional managers to understand external forces that may interfere with teacher motivation and in actuality affect students' academic achievement.

Further, a study conducted by Onyambu, (2014) noted that intrinsic motivation that encouraged teachers to work included being recognized, being recognized is a potential for professional growth in school, and a good internal relationship with colleagues. Also, the research concluded that when teachers developed good interpersonal relationship with students, there was bound to be improvement in student academic

achievement. Onyambu, (2014) confirmed that ranking high on extrinsic motivators were job security and adequate pay.

Also, Gitonga, (2012) in a study conducted in Imenti South Sub County in Meru County revealed that working conditions which provided decent learning atmosphere motivated teachers to perform better hence improved student's performance in examinations. The study also concluded that there was a strong relationship between working condition and performance. It was also concluded that there was a strong relationship between remuneration related factors and school performance in secondary schools. In other words, school performance in secondary schools may be explained by the prevailing remuneration factors. This research entitled Perceptions of teacher management approaches in determining student's academic achievement in public secondary schools came up with suggestions that may improve teacher factor and by extension student's academic achievement in public secondary schools.

In Bungoma, Kenya a study conducted by Juma, (2011) noted that learning environment and teacher motivation upon knowledge development need attention in our schools. Human resource as a factor of production is affected by adequacy and quality as reflected by the level of training and level of motivation. Equally, Majanga, Nasongo and Sylvia (2010) in a study conducted in Nakuru Municipality, Kenya, argued that Free Primary Education (FPE) has created increased class sizes, shortages of teachers, heavy teacher workload and lack of teacher motivation. The two studies suggest that management approaches be put in place to improve adequacy and quality to improve in achievement.

In a study conducted by Matoke, (2015) in Masaba South, the researcher indicated that school management should come up with approaches which should be geared towards

improving teaching and learning environment. Teachers when in satisfactory environment like offices, sizeable classrooms, laboratories and well equipped libraries in commendable state will always be motivated to work hard for better Kenya Certificate of Secondary Education (KCSE) results. These variables always go a long way in motivating teachers and enable the students to acquire knowledge which improves student's academic achievement in schools. Further, in Kenya, Olando, (2003) conducted an investigation into teacher motivation in public secondary schools in Nairobi City and established that low motivation could cripple an institution academically. Olando (2003) noted that low motivation leads to slow-downs, absenteeism and employee turnover. However, the study did not indicate the level of influence of motivation on student's academic achievement.

A study Conducted by Njiru, (2014) investigated factors which influence motivation among secondary school teachers to enhance performance and consequently raise academic standards. Motivation was achieved on timely payment of salaries. Njiru, (2014) noted that when salaries were paid efficiently, teachers were more satisfied with their jobs and more often stayed in school to teach and improve delivery which finally improved student's academic achievement. Despite being satisfied with efficient payments of salaries in time, the findings concluded that other factors which demotivated teachers were lack of equipment and resources, and interpersonal relations. A study conducted by Otanga and Mange (2014) in the Coastal Region of Kenya added that teachers are dissatisfied with some job demands such as the time spent in school in non-academic matters. The two studies however did not indicate how much teacher satisfaction and dissatisfaction impacted on student academic achievement in secondary school education.

Further, a study Conducted by Mutwiri, (2015) established that work conditions ranked number four when ranked with other factors influencing motivation of teachers. Compensation has been cited in many studies to influence motivation of employees. Teachers' salaries have for long been cited as a cause of dissatisfaction by teachers in Kenya. Teachers unions have been calling for National strikes for better pay. The study by Mutwiri however did not establish the influence of motivation on student's academic achievement. There were issues that needed to be resolved in this research. The gaps were level of compensation required to positively influence teacher motivation. This research assessed influence of teacher motivation on student academic achievement in education.

Jabuya (2010) in a study conducted in Migori County indicated that starting point for teacher motivation had already been established by schools. For example, schools provided incentives such as lunch, tea, housing, achievement rewards, promotions based on merit, benefits at work place such extra work pay as well as tours though the level was very low and did not influence motivation on teachers' performance as was expected.

A study conducted by Barasa, (2015) found out that in order to increase knowledge there is need for a more motivated teaching force. Findings in the area of study noted that there was low level of motivation of teachers. Teachers felt demotivated despite regular updates on emerging issues on the curriculum. Teachers were further demotivated because they felt that some of the promotions were unfair, and unjustified. In summary, the research indicated that teachers who are not motivated negatively influenced student academic achievement. Furthermore, Okumbe, (1998) argued that teachers as workers are mostly motivated by the work environment. Functional work

environment is positive towards personal comfort and also enhances work efficiency. Schools and their surroundings should be clean, safe and modernized with adequate facilities. In addition, Koech, (1999) through Koech Commission observed that poor terms and conditions of service led to poor morale among teachers. Some teachers who work in remote areas have no housing or access to clean water and health facilities. This resulted in serious wastage of teaching time and countered teacher motivation.

In conclusion, this literature review noted contradictions on worldview on teacher professional development whereby several scholars noted that teacher professional development did influence student's achievement while other notable scholars indicated that professional development (PD) did not influence student's achievement. Further, literature review indicated that supervision was crucial in institutional management. Despite supervision being crucial, most institutional leaders did not embrace best supervision practice processes. Also, the review indicated notable gaps in teacher induction. Teacher induction is common, but induction that is intensive, comprehensive, structured, and delivered in response to teacher's emerging pedagogical needs is not evidenced in many schools. In addition, the literature review showed that there were challenges facing institutional and teacher motivation worldwide.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1　Introduction

This chapter presented methodology that was used in the study. This chapter covers research design, location of the study, target population, sampling procedures, data collection tools, validity and reliability of instruments, data collection procedure, data analysis and ethical considerations.

3.2　Research Design

The study utilized concurrent triangulation research design. Triangulation research design was selected because it presents an opportunity to fuse both quantitative and qualitative data as a means to reconstruct a research outcome in order to find a solution to the pertinent issues in a study. In addition, Concurrent triangulation research design offers a unique means of data collection since it gives prospect to collect both quantitative and qualitative data and offer two crucial pathways for data analysis as advanced by Rothbauer and Paullette, (2008). In this research, both quantitative and qualitative data were collected concurrently in one phase and analyzed according to their individual characteristics. Concurrent triangulation research design aided the researcher incorporate human experience and overcome the weaknesses or intrinsic biases and the problems that come from single research method.

Figure 3:1 gives a graphical view of the process of concurrent triangulation research design for the purposes of this research.
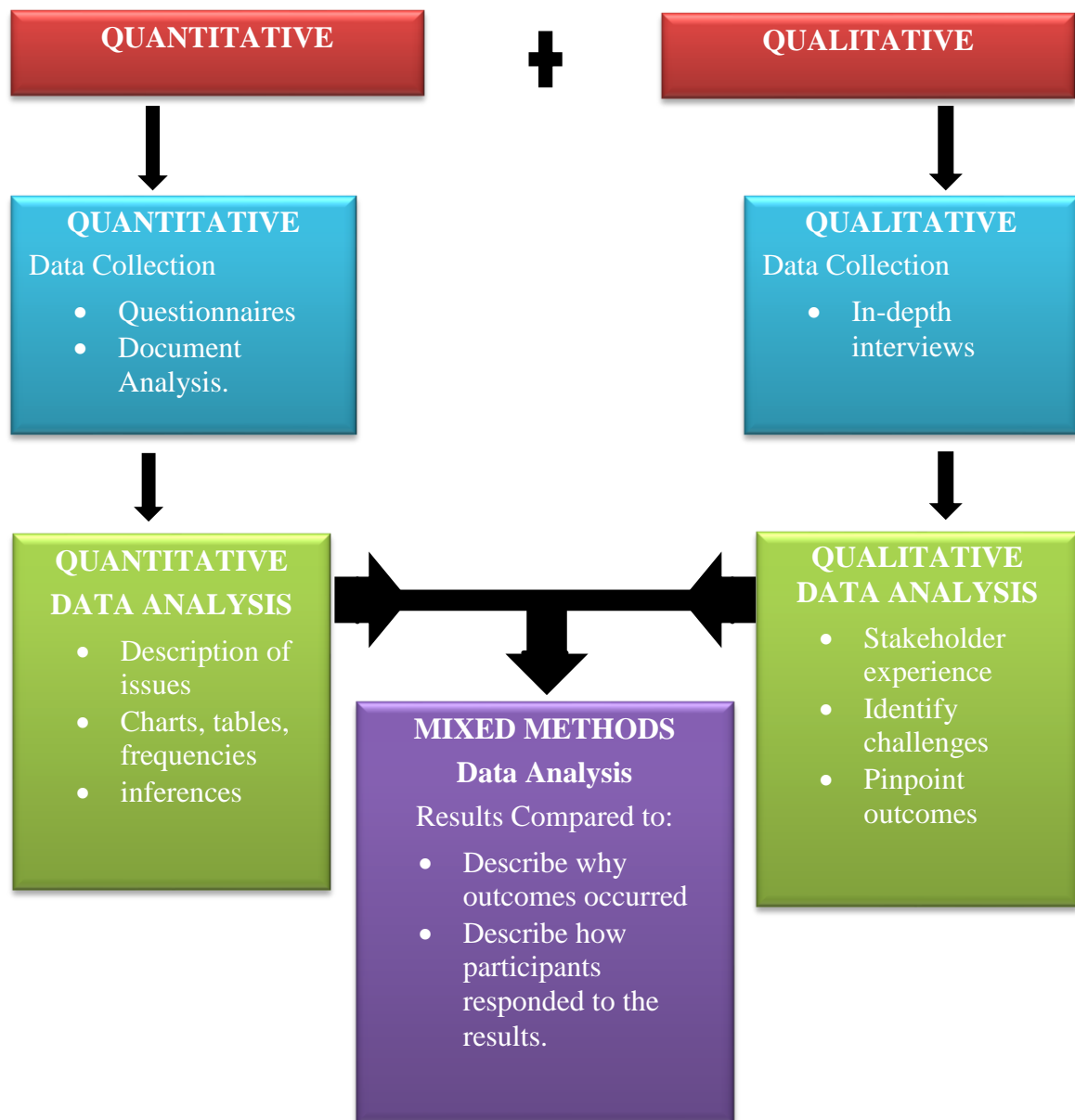
(*Adapted from Creswell and Clark 2011*)

Figure 3.1 Concurrent Triangulation Research design

Triangulation research method exploits both quantitative (validity) and qualitative (inquiry) data which is a process involving two pathways with one goal of giving a comparative result. Figure 3.1 shows that whereas quantitative data is collected through questionnaires and observations, qualitative data is concurrently collected through in-depth interviews. Further, the data analysis in quantitative data is done through

description of issues, quality indicators and presented in charts, tables, and reviews while in qualitative data analysis pathway the analysis is used to pinpoint outcomes, noting perceptions, identification of challenges and stakeholder experience. Once all the process is addressed the result is addressed by describing why outcomes occurred. Figure 3.1 above shows the procedure involved in Triangulation Research Design as supported by Jakob (2001)

> By combining multiple observers' theories, methods, and empirical materials, researchers can hope to overcome the weakness or intrinsic biases and the problems that come from single method, single observer, and single theory studies. Often the purpose of triangulation in specific contexts is to obtain confirmation of findings through convergence of different perspectives. The point at which the perspectives converge is seen to represent reality"

3.3   Location of the Study

Migori County (County number 44) is one of the forty-seven counties in Kenya. It is situated in the South-Western part of Kenya. It borders Homa-Bay County to the South, Kisii and Narok Counties to the west and the Republic of Tanzania to the North. Migori County is bordering Lake Victoria to the East. The county is located between latitude 0° 24° South and 0° 40° South and Longitude 34° East and 50° East and covers an area of 2,596.5 km^2 including approximately 478 km^2 of water surface. There are one hundred and eighty four (184) secondary schools in the county with an enrolment of Seventy three thousand three hundred and eighty five (73,385) of one hundred thousand two hundred (100,200) secondary school going population. This represented an average enrolment rate of 74% of the children eligible for secondary school education. The study locale was chosen because transition to University is 23 percent whereby 72

percent are male and 28 percent female. Gender parity index is 2:0 (MICS Report 2011).

3.4   Target Population

The target population for this study was ten (10) education officers (2 from county headquarters and 8 sub-County officers), one hundred eighty four (184) public secondary schools, one hundred eighty four (184) principals, one thousand two hundred twenty three (1233) teachers, and Seventy three thousand three hundred and eighty five (73,385) students. Principals were involved in the study because they are the managers. In addition, teachers were included in the research because they were involved in implementation and management at classroom level. The study population was carefully chosen because of low performance registered in examination classes.

The breakdown of the study population per sub-county was as follows: In Awendo Sub-County there were twelve thousand and nineteen (12,019) students, Kuria West Sub-County had four thousand four hundred and ninety two (4,492) students while Kuria East Sub-County had eight thousand six hundred and seventy eight (8,678) students, In Migori Sub-county there were seventeen thousand one hundred and fifty six (17,156) Students while Nyatike Sub-County had ten thousand four hundred and ninety seven (10,497) students, Rongo Sub-County had eleven thousand sis hundred and sixty eight (11,668) students and Uriri Sub-County had eight thousand eight hundred and seventy five (8,875) students. Furthermore, the study incorporated 1233 teachers, County Directorate of Education (CDE), County Quality and Standards Office (CQASO), and six Sub-County Quality and Standards Officers (SCQASOs). The total population for the study was seventy four thousand eight hundred and two (74,802) respondents.

3.5   Sample Size

The sample size was eight (8) officers, fifty six (56) public secondary schools (30 percent of the total population of one hundred and eighty four schools), fifty six (56) principals (30 Percent), and three hundred and seventy (370) teachers (30 percent of the total number of teachers). Sample for principals and teachers was 30 percent as suggested by Orodho (2009), Best and Khan (2009), Palguna, Joshi, Chakaravarthy, Kothari and Subramaniam (2015) and Kothari and Garg (2016) who suggests that a sample of 30 percent of the population is sufficient for making generalizations. In summary, the sample size for the study was fifty (56) principals (56 schools), and three hundred seventy (370) teachers.

3.6   Sampling Techniques

In this study, the researcher used simple random sampling and stratified random sampling techniques in arriving at the sample size for the study. Random sampling was used to get total of 56 schools which were stratified from the sub-counties. Involved in the study were one principal drawn from each of the schools sampled for the study. Stratified random sampling was used to acquire the desired sample for teachers and students. Out of one thousand two hundred and thirty three (1233) teachers in public schools, stratified random sampling was used to sample three hundred and seventy (370) teachers as advanced by Kothari and Garg (2016).

3.7   Data Collection Instruments

The study used questionnaires, documents and interview schedules as the main tool for data collection. Questionnaires allowed respondents to express their view and perceptions independently. Questionnaires were used because of their advantage of

collecting data from a big population. Two (2) sets of questionnaires were administered. One set of questionnaires was administered to the principals and Deputy Principals. The second set was administered to teachers. To gather pertinent data concerning high school teacher management approaches, interview schedules were used to allow participants express their feelings and opinions on influence of secondary schools' teacher management strategies. The instruments were structured according to the principles advanced for questionnaires construction by Oppenheim, (2000) and Wuensch, (2005).

3.7.1 Questionnaires

According to Mugenda and Mugenda (2009), questionnaires are a collection of items to which a respondent is expected to react to in writing. The questionnaires used for the study were self-made. According to Gay, (2002), questionnaires are used to collect a lot of information over a short period of time from a big number of respondents who are involved in a study. Questionnaires were used because they have other advantages. That questionnaire is appropriate for collecting large amount of data, that questionnaire is convenient because the researcher does not need to be present as answers can be mailed so respondents have time to consider, that questionnaire is can quickly show changes and attitudes or behavior before and after specific events, that questionnaire is used to capture numerical data and is concerned with making scientific measurements, that questionnaire is also useful in facilitating application of inferential statistical test are some of the reasons which prompted the researcher to use them.

The questionnaires comprised of close ended and open ended items. Questionnaires were suitable for the study because the population of the study is literate and large. The designed questionnaires were administered to principal's/deputy principals, teachers to

give accurate and clear information on perception of secondary schools' teacher management approaches in determining student's academic achievement on public secondary education in Migori County.

Questionnaires were used because a large number of respondents are reached easily. This research had three hundred and forty eight (348) teacher respondents who returned their questionnaires. Secondly, standardized questionnaires provide quantifiable answers for research topic. The responses are relatively easy to analyze. This research had many tables and charts generated because of the outputs. Third, questionnaires are effective when compared to face-to-face interviews whereby they reduce bias where the opinion of the researcher does not influence the respondents.

Questionnaires have disadvantages, for example, in questionnaires the researcher does not have the ability to probe responses because most of the responses are visual. Gestures and other visual cues are not available. Despite questionnaires having disadvantages like possibility of low response rate, this research at 90.16 percent response rate did not evidence low rate.

3.7.1.1 Principals Questionnaire (PQ)

The principals' questionnaire was used to gather information on the perceptions of teacher management approaches in determining student's academic achievement in public secondary schools. Data gathered from the principals were treated as reliable since principals are the chief manager or agent of TSC and the chief executive officer of the school and are the custodian of managerial functions in the school. The questionnaires had open-ended items for respondent's personal opinion and closed-ended items for specific responses. Information gathered from principals was treated as reliable since principals are implementers of policy at institutional level.

3.7.1.2 Teachers Questionnaire (PQ)

The teachers' questionnaire was used to gather information on the perceptions of teacher management approaches in determining student's academic achievement on public secondary schools. Data gathered from the teachers were treated as reliable since teachers are in constant interaction with students in classes. The questionnaires had open-ended items for respondent's personal views and closed-ended items for thematic responses.

3.7.2   Interview Schedules

According to Yuko and Onen, (2008), interview schedules refer to person to person verbal communication or through the telephone conferencing in which one person or a group asks another person or group questions intended to elicit information or opinion. The tools were self-developed by the researcher. Interview schedules allowed changes in the questions, seek clarification from the respondents' and were more personal to allow respondents give their opinion on perceptions of teacher management approaches in determining student's academic achievement on public secondary schools. The researcher interviewed education officers, principals, heads of departments and teachers.

Interviews were used because of their ability to obtain information about personal feelings, perceptions and opinions. Indeed interviews have greater attention to individual points of view which is important in research for getting perceptions of individuals about issues. Collection of qualitative data (non-numerical) on perceptions was crucial for this research and hence interviews were crucial. Interviews helps in gathering non-numerical data to find out in-depth particularly the way people think and feel. Further, interviews enabled the researcher to achieve high response rates since all

the sampled respondents for interviews responded. Despite the disadvantages of interview time, setting up, interviewing, transcribing, analyzing, feedback, and reporting; interviews are useful in recording perceptions. Interview schedule was administered as follows. All the eight (8) officers indicated in the sample were interviewed. Twenty (20) principals were interviewed for a minimum of 45 minutes. Their responses coded in themes and supported quantitative data. One teacher per school in the fifty four (54) schools was interviewed for a minimum of forty five (45) minutes. Their responses were also coded in themes. The data was injected in the study.

3.7.3 Document Analysis

Document analysis was used in this research. Document analysis is a form of qualitative research in which documents are used by the researcher to give voice and meaning around an assessment topic (Bowen, 2009). By exploiting data selection and not data collection, document analysis consumes less time and therefore more efficient. According to O'leary (2014), there are three types of documents that can be analyzed. They are public records, personal documents and physical evidence. For this research the documents that were analyzed were public records which included records on organizations like United Nations Children Fund (UNICEF), Republic of Kenya Policy Documents, (RoK), United Nations Development Program (UNDP), International Labour Organization (ILO), Migori County Integrated Development Plan (CIDP), Kenya Universities and Colleges Central Placement Services (KUCCPS) and Kenyan Ministry of Education documents. Further, personal documents included Kenyan Newspapers (Daily Nation Newspaper of Monday 19, 2015; Citizen Digital updates dated 22 December 2017), blogs and publications in journals. Lastly, the researcher used training materials which included Teacher Performance and Appraisal

Development Plan (TPADs), National Teacher Training Program (NTTP), and Technical Requirement Program (TRM) Data analysis was used to justify, counter or validate the current study.

3.8.1 Validity

Validity is what determines whether research truly measures what it is intended to measure or how truthful the results are, (Joppe 2009). Further Hyun, (2010) refers to validity as the appropriateness, correctness, meaning fullness and usefulness of specific inferences researchers make based on the data they collect and analyze. The designed instruments were given to supervisors who approved them for the study. The questionnaires were also discussed with colleagues undertaking thesis writing.

3.8.2 Reliability

Reliability of the questionnaires was established through piloting in three schools in Migori County. The researcher conducted a pilot study to ascertain reliability of the instruments. Pilot study was conducted in three secondary schools in Migori County. The selected schools for pilot survey were not among the sampled schools. Three 3 questionnaires for Principals and fifteen (15) Questionnaires for teachers were used during piloting. According to Yuko and Onen, (2008) Piloting enables a researcher to assess clarity of questionnaire items so that those items found to be inadequate or ambiguous were modified.

Test-Retest Reliability Test was used to test reliability of research tools. Test-Retest Reliability Test involved collecting and analyzing data. The approach used split-half correlation. This involved splitting the items into two sets, such that the first and second halves of the items or the even-numbered and odd-numbered items. Then a

score was computed for each set of items, and the relationship between the two sets of scores was examined. A split-half correlation test for reliability was conducted whereby a coefficient of +0.80 or greater is considered good internal consistency. Pearson's *r* for reliability of piloted data was +0.83 for principals and Heads of Departments (HoDs), and +0.86 for teachers. This result showed that the questionnaires were reliable for the research and further indicated reliability for the study tools for this research.

3.9   Data Collection Procedure

Before collecting data from the sample of target population, the researcher obtained an introductory letter from Rongo University which enabled the researcher to obtain an online research permit from the National Council for Science and Technology (NCST) and authority to conduct research from Sub-County Director of Education (CDE) Migori County. After obtaining the research permit, the researcher proceeded to collect data from the sampled schools in Migori County.

The researcher visited the sampled schools to familiarize with the respondents. After familiarization, the researcher went to schools to administer questionnaires and to schedule interview with principals. On the third visit, the researcher collected completed questionnaires and conduct interviews. Some respondents were not available, therefore, the researcher scheduled a fourth visit to collect remaining questionnaires and conduct interviews.

3.10 Data Analysis Techniques

Analysis of collected data was based on the purpose and objectives of the research study. Qualitative data from demographic section of the questionnaire and other closed questions were analyzed using descriptive statistics which involved coding and analysis

using Statistical Package for Social Sciences (SPSS) to produce Tables, frequencies, percentages, and pie charts. Coding as noted by Charmaz, (2006) is the pivotal link between collecting data and developing an emergent theory. Considering the above view, the researcher sorted data into categories and finally achieved the themes and their implication on the research variables (Ary, Jacobs, Sorensen, and Walker, 2014). Tables were used to analyze variables and sub-variables. Qualitative data generated from open-ended questions in the research instruments were organized in themes and patterns and categorized in comprehensive content analysis; in addition, notable views were reported verbatim. Data was further analyzed using inferential statistics to ascertain perceptions of teacher management approaches in determining student's academic achievement whereby the critical p-value was p>.005. According to **https://www.statisticshowto.com/p:value** the smaller the p-value, the more important (significant) the results.

Inferential data analysis was conducted whereby testing perception of teacher professional development exploited chi-square. Chi-square was used to measure relationship between teacher professional development and student academic achievement. Secondly, correlation was used to analyze relationship between supervision and student academic achievement. Correlation is used to measure strength of association. Further, regression was used to analyze impact of induction and role of motivation on academic achievement. Regression was used to analyze relationship between induction and academic achievement. Lastly, regression was used to analyze relationship between motivation and academic achievement.

The results of the study were compared with the literature review which was to establish influence of teacher Professional development on student's academic

achievement, evaluate the relationship between supervision and student's academic achievement, assess impact of Induction on student's academic achievement, and gauge role of motivation on student's academic achievement in secondary education.

3.10.1 Quantitative Data Analysis

Quantitative Data Analysis was used because it allowed the researcher to analyze data thus giving an opportunity to find out impact of independent variables on dependent variables. Quantitative data analysis enabled the researcher to be more objective about findings of the research. Quantitative data were analyzed using frequency Tables and computed to get percentages. Further, pie chart and charts were used to indicate trends of responses.

3.10.2 Qualitative Data Analysis

Qualitative data analysis (QDA) involved identification and interpretation of patterns and themes in textual data. QDA determined how patterns and themes help answer research question. QDA was used because it provided depth and detail. And exploited verbatim reporting and where applicable the data summarized in graphs to make them easily understandable. Verbatim reporting created openness and simulated respondent's experiences. Also, qualitative data analysis enabled the researcher to avoid prejudgment. Once the corpus from interviewees was gathered, the written discussion was analyzed, considering priority areas as advanced by (Punch, 2011 and Lichman, 2013).

3.10.3: Data Analysis Matrix

The data analysis matrix (Table 3.1 on page 91) shows pathways for data analysis. The objectives of the study are shown in column one, instruments used for data collection are indicated in column two, tools which were used to collect data for answering the

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corresponding research questions were clarified in column 3 and Data analysis processes was shown in the last column. The matrix was useful for data analysis because it showed the objectives against instruments used to collect data for them. Data collection tools were itemized according to the questions they answered. Lastly, data analysis processes were indicated in the last column.

Table 3.1

Data Analysis Matrix

Objectives	Instruments	Items	Data Analysis
i. Establish influence of teacher professional development on student's academic achievement in secondary school education.	*Questionnaire Interview Schedule, and Documents*	2a, 2b Interview schedule	Descriptive Statistics Bivariate Analysis • Distribution, Central Tendency QDA- Writing, Coding the themes, interpreting.
ii. Assess relationship between supervision and student's academic achievement in secondary school education.	*Questionnaire Interview Schedule*	3a, 3b Interview schedule	Descriptive Statistics Bivariate Analysis • Distribution, and Central Tendency QDA- Writing, Coding the themes, interpreting.
iii. Determine impact of teacher induction on student's academic achievement in secondary school education.	*Questionnaire Interview Schedule*	4a, 4b Interview schedule	Descriptive Statistics Bivariate Analysis • Distribution and Central Tendency. QDA- Writing, Coding the themes, interpreting.
iv. Determine role of motivation on student's academic achievement in secondary education.	*Questionnaire Interview Schedule, and documents*	5a, 5b, 5c, 5d Interview schedule	Descriptive Statistics Bivariate Analysis • Distribution, Central Tendency and Skewness. QDA- Writing, Coding the themes, interpreting.

The Data Analysis Matrix (Table 3.1) was used to itemize the data analysis process. The first research question was to establish influence of teacher professional development on student's academic achievement in secondary schools. The instruments used were questionnaires (Items 2a and 2b), interview schedules and document analysis. Questionnaires were used to get demographic characteristic of respondents, category of sampled schools, and characteristics of sampled schools. In addition, questionnaires were used to collect data on teacher professional development practices, basis for teacher professional development, policy for admitting teachers to teacher training institutions and data for hypothesis testing on influence of teacher professional development on student's academic achievement. Further, interview schedules as recorded on Appendix III to Appendix VI were used whereby responses were coded to thematically analyze the themes of collaborative teaching as a possible way of improving teacher capacity, team teaching, teacher retraining, teacher preparation and teacher appraisal. The document analyzed for this research question to assess importance of professional development was Cambridge Professional Development forum (CPD).

Additionally, the data analysis matrix was used to analyze the second research question which was to ascertain the relationship between supervision and student's academic achievement in secondary school education. The data collection instruments used was questionnaires (items 3a and 3b), interviews schedules and document analysis. Questionnaires were used to capture data on principal's responsibility on supervision, use of test scores to enhance supervision and evaluation, regularity of staff operational meetings, and aspects being evaluated in schools. In addition, questionnaires were used to collect data for hypothesis testing on relationship between supervision and student's academic achievement. Further, interview schedules as recorded on Appendix III to

Appendix VI were used to thematically analyze the themes of teacher classroom supervision to enhance learning, test scores, and systems of evaluation. Marshall's ratio (see Appendix VII) of supervision was analyzed to describe evaluation levels.

Also, the data analysis matrix on page 93 was used to show pathways for analysis of data for the third research question which was to determine impact of induction on student's academic achievement in secondary school education. The instruments used were questionnaires (items 4a and 4b), interviews schedules and document analysis. Questionnaires were used to capture data on induction of new teachers, induction components, benefits of induction, impact of teacher's years of experience and indicators of teacher experience. In addition, questionnaires were used to collect data for hypothesis testing on impact of induction and relationship between teacher experiences to academic achievement in secondary education. Interview schedules as documented on Appendix III to Appendix VI were used to thematically analyze the themes of benefits of induction, challenges facing induction, and role of teacher experience in enhancing academic achievement.

Lastly, the data analysis matrix was used to analyze the fourth research question which was to determine the role motivation on student's academic achievement in public secondary school education. The instruments used were questionnaires (Items 5a, 5b, 5c and 5d), interviews schedules and document analysis. Questionnaires were used to capture data on teacher motivation, school motivators which included tours, institutional meals, merit promotion, achievement rewards, incentives, refresher courses, intrinsic interest in teaching, teacher workload and involvement in decision making were put to test. Also, Questionnaires were used to capture data on indicators of teacher motivation, teacher satisfiers, salary expectations, and availability of

institutional teacher houses. In addition, questionnaires were used to collect data for hypothesis testing on role of motivation on enhancing student's academic achievement in secondary education and interview schedules as recorded on Appendix III to Appendix VI were used to thematically analyze the themes of involvement of teachers in decision making in institutions and perceptions of teachers on motivation in secondary schools. Document analysis was used give insights on teacher motivation.

Indeed, the data analysis matrix (Table 3.1) was a useful pathway in analysis of data and systematically assisted the analysis of data in this research entitled perceptions of teacher management approaches on students' academic achievements in public secondary schools.

3.11 Ethical Considerations

The Data collected from the respondents were treated with strict confidentiality and were only used for research purposes. Data collected were not falsified or misrepresented in any way. The participants were made to understand that they have a right to respond or decline to respond on the issues raised. Procedures and benefits were clearly articulated to the respondents. The researcher did not tamper with the views of the interviewee which maintained respondent's originality of thought. This process was recommended by (Denizen and Lincoln, (2011) and supported by Yuko and Onen, (2011), whereby they indicated that in social sciences, fundamental ethical issues arise. Researchers must therefore be wary of the ethical considerations so that these ethical issues do not interfere with research outcomes.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter constituted data presentation, analysis and discussion on perceptions of teacher management approaches on student's academic achievement in secondary education in Migori County, Kenya. Data was collected from eight (8) education officers in Migori County, fifty four (54) principals (among the fifty four (54) principals, Twenty (20) were interviewed). Ten (10) heads of departments, and fifty four (54) teachers - one teacher per school in sampled secondary schools was also interviewed. The eight (8) education officers were interviewed and qualitative responses recorded. The interviewed officers were one (1) County Quality and Standards Officer (CQASO), and seven (7) Sub-County Quality and Standards Officer (SCQASOs).

The study had the following research questions.

  i. Does teacher professional development, as perceived by teachers, affect student's academic achievement in secondary education in Migori County?

 ii. Is there a relationship between supervision and student's academic achievement in secondary education in Migori County?

iii. Does teacher induction impact on student's academic achievement in secondary education in Migori County?

 iv. What is the role of motivation on student's academic achievement in secondary education in Migori County?

The study was further investigated by the following hypotheses:

Ho$_1$ Teacher Professional development has no relationship to student's academic achievement in secondary school education.

Ho$_2$ Supervision has no relationship to student's academic achievement in secondary school education.

Ho$_3$ Teacher Induction has no impact on student's academic achievement in secondary education.

Ho$_4$ There is no significant role of motivation on student's academic achievement in secondary education.

4.1   Rate of Questionnaire Return and Interview Responses

Table 4.1 shows rate of questionnaire return and interview responses among respondents. The respondents included county, sub-County officers, principals, and teachers.

Table 4.1:

Rate of Questionnaire Return and Interview Responses

Respondents	Issued	Questionnaire and Interview Responses	%
	f	f	
Officers (interviews)	10	8	80.00
Principals	56	54	96.43
Teachers	370	348	94.05
Total	**436**	**410**	**90.16**

N=436/410

The study population comprised ten (10) officers, one hundred and eighty four (184) secondary schools, one thousand two hundred and thirty three (1233) teachers, and Seventy three thousand three hundred and eighty five students (73,385) in Migori County whereby a sample of fifty six (56) principals, and three hundred and seventy (370) teachers were sampled. However, those who responded were eight (8) officers constituting 80 percent of the officers in the county, fifty four (54) principals which was 96.43 percent of the sampled principals, and three hundred and forty eight (348) teachers constituting 94.05 percent of the sampled three hundred seventy teachers (370). There were two schools that did not respond hence only fifty four (54) schools were injected in the study.

The rates for questionnaires return in table 4.1 shows that Eighty percent (80 percent) of officers were interviewed; ninety-six point four three percent (96.43 percent) of Principals returned their questionnaires to the researcher. In addition, ninety-four points zero five percent (94.05 percent) of teachers returned their questionnaires. It is revealed from the data derived on the number of responses that an average of ninety point one six (90.16) percent) return of tools was experienced. This is useful because the data collected from respondents depicted the situation in Migori County in terms of respondent demographics.

4.1.1 Respondent Characteristics.

Table 4.2 shows demographic characteristic of officers, principals, and teachers by gender. Demographic characteristics of officers, principals, and teachers by gender were important because normality of data would support outcomes of the research. The demographic characteristics of respondents were as follows:

Table 4.2:

Respondents Characteristics

Gender	Education Officers n=8		Principals n=54		Teachers n=348	
	f	%	f	%	f	%
Male	5	62.5	38	70.4	228	65.5
Female	3	37.5	16	29.6	120	34.5
Total	8	100	54	100	348	100

Table 4.2 specified there were 8 education officers, fifty-four (54) principal respondents, (348) teacher respondents. The study had five (5) male education officers constituting 62.5 percent and three (3) female education officer respondents constituting 37.5 percent. The study involved thirty-eight (38) male principal respondents constituting 70.4 percent and sixteen (16) female principal respondents constituting 29.6 percent. Further, the study realized three hundred and forty-eight (348) teacher respondents. The teachers by gender were two hundred twenty-eight (228) male teacher respondents constituting 63.87 percent and one hundred and twenty (120) female teacher respondents. Respondent's characteristics are useful because the data collected should be representative. The output showed good representation that enabled the researcher to make important generalizations.

4.1.2 Category of Sampled Secondary Schools.

Table 4.3 shows the categories of sampled secondary schools. The study considered schools categorized as extra-county, county and sub-county schools.

Category of Schools

Category	Value
3	16
2	22
1	16

1- Extra County
2. county
3. Sub-County

Category of Schools
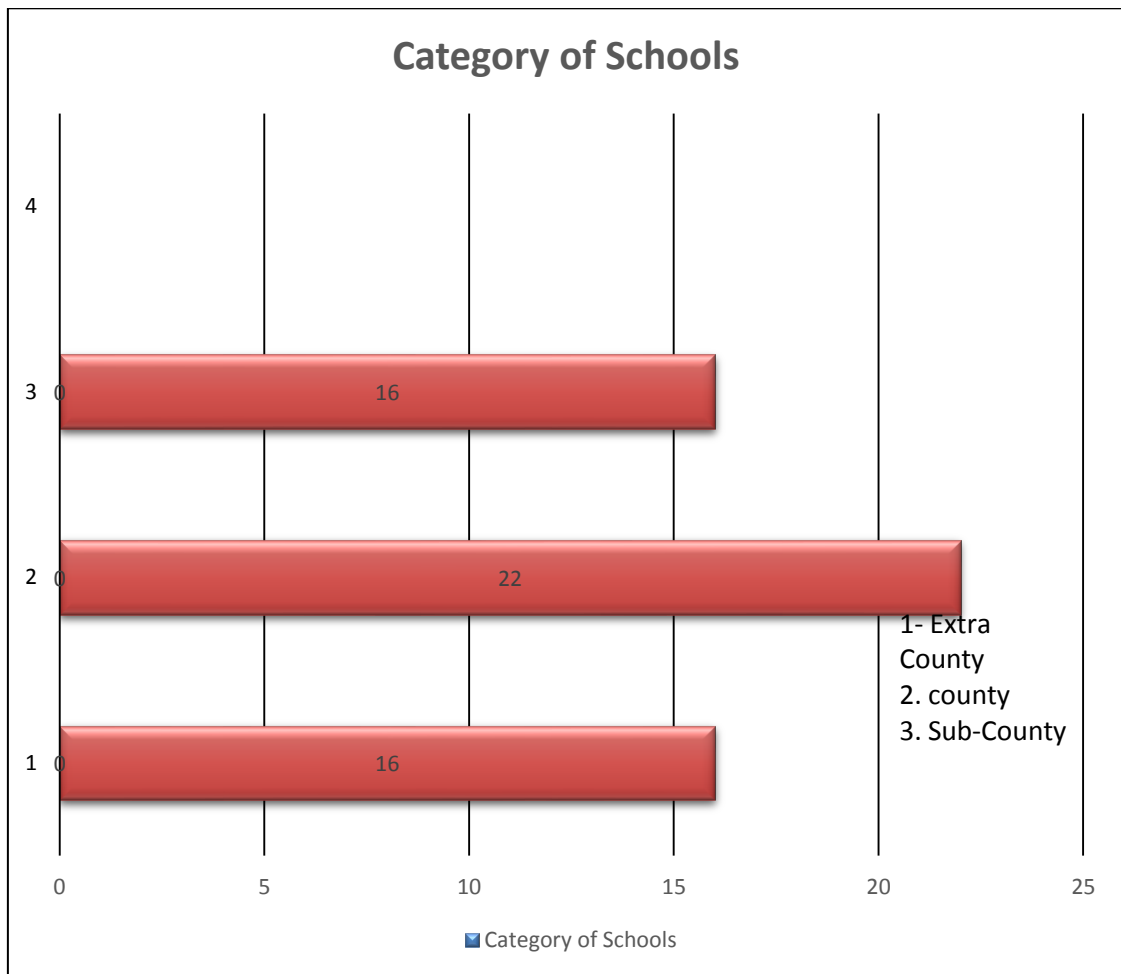
Figure 4.1: **Category of Schools**

Figure 4.1 showed the category of the fifty-four (54) secondary schools in the sample. There were sixteen (16) extra county schools which constituted 29.6 percent of the total sample. Twenty-two (22) county schools were used which constituted 40.8 percent of the total sample and sixteen (16) sub-county schools constituting 29.6 percent were

used in the study. Similarly, the demographic characteristics of secondary schools were further sub divided into boy's schools, girl's schools, and mixed day secondary schools. Table 4.3 shows the demographic characteristic of sampled secondary schools. The characteristics of sampled schools were Boys Schools, Girls Schools and Mixed Day Secondary Schools.

Table 4.3

Characteristics of Sampled Schools

Characteristics	*f*	Percent (%)	Valid Percent (%)
Boys	21	38.9	38.9
Girls	17	31.5	31.5
Mixed Day	16	29.6	29.6
Total	**54**	**100**	**100**

N=54

Table 4.3 showed that there were twenty-one (21) boys' public secondary schools which constituted 38.9 percent of the study sample. Further, seventeen (17) girls' secondary schools were used in the study; the girls' schools' constituted 31.5 percent of the study sample. Finally, sixteen (16) mixed secondary schools constituting 29.6 percent were incorporated in the study sample. Figure 4.1 and Table 4.3 showed both category and characteristics of respondent schools sampled for this study. The data for

category and characteristics of schools showed that the secondary school education population in the Migori County was well represented. The demographic

4.2 Influence of Teacher Professional Development on Academic Achievement

The first research question evaluated whether Teacher Professional Development (PD) influenced student's academic achievement in secondary education in Migori County. Teacher Professional Development incorporated teacher qualification as a related variable. This section considered role of Teacher Professional Development, basis for professional development which included role of collaborative teaching, personal knowledge, teacher preparation, and performance appraisal in supporting student's academic achievement. Additionally, the section considered policy for admitting teachers for training. Lastly, statistical inferences were made to ascertain whether Teacher Professional Development (PD) and teacher qualification had any notable impact on student's academic achievement.

4.2.1 Teacher Professional Development (PD)

This research assessed whether teacher professional development was crucial in influencing student's academic achievement in secondary school education. The researcher started by assessing teacher professional development activities.

In Table 4.4, the data captured was generated from a questionnaire which was given to teacher respondents. Teachers were asked whether they had attended workshops, whether they were involved in seminars, whether they conducted literacy retreat, whether they were involved in content discussion forums and whether discussion forums were organized for them; whether content focus workshop were conducted,

whether they attended collaboration enhancing workshops, and whether they accessed expert support and feedback processes.

Table 4.4 captured teachers responses on the issues raised. The data indicated different qualification views on each variable. The qualification brackets were Doctor of Philosophy, Masters in Education, Bachelor in Education, Post Graduate Diploma in Education, and diploma in education. Their views were crucial to better understand teacher professional development processes in Migori County.

Table 4.4

Teacher Professional Development Practices undertaken by Respondents

	PhD		Masters		BED		PGDE		Diploma		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
Workshops	3	100	56	91.8	221	94.8	22	71.0	11	35.5	313	89.9
Seminars	3	100	60	98.4	230	98.7	30	96.8	13	41.9	336	96.6
Literacy Retreat	2	66.7	23	37.7	150	64.4	15	48.4	5	16.1	195	56.0
Content Focus Workshops	1	33.3	15	24.6	187	80.3	27	87.1	9	29.0	239	68.7
Collaboration	3	100	49	80.3	201	86.3	30	96.8	6	19.4	289	83.0
Expert Support	1	33.3	12	19.7	122	52.4	29	93.5	7	22.6	171	49.1
Feedback and Reflection	0	0.0	33	54.1	88	37.8	16	51.6	3	9.7	140	40.2

N=348

Table 4.4 indicated that out of all three hundred and forty eight (348) teachers, three hundred and thirteen (313) teacher respondents which constituted 89.9 percent had attended workshops and three hundred and thirty six (336) teacher respondents constituting 96.6 percent had attended seminars. One hundred and ninety five (195) teacher respondents constituting 56 percent of all respondents had attended Literacy Retreat, while two hundred and thirty nine (239) teacher respondents constituting 68.7 percent had attended content focus workshops.

In addition, two hundred and eighty nine (289) teacher respondents constituting 83 percent established that there were involved in collaborative teaching to achieve academic achievement while one hundred and seventy one (171) teacher respondents constituting 49.1 percent had witnessed utilization of expert support. Finally, one hundred and forty (140) teacher respondents constituting 40.2 percent of all teachers sampled exploited feedback and reflection.

The analysis of the data on Table 4.4 further established that teachers in Migori County were professionally developed by revealing that teachers attended workshops, seminars, content focus workshops, and collaborative discussions.

The above mentioned indicators of teacher professional development were attended by at least sixty eight (68) percent of the respondents. This confirmed that teacher professional development was undertaken in Migori County. Further, Figure 4.2 shows summarized responses on teacher professional development in Migori County. The figure showed professional development practices and total number of respondents in support across teacher qualifications indicators.

PROFESSIONAL DEVELOPMENT BEST PRACTICES

	Workshops	Seminars	Literacy Retreat	Content Focus Workshops	Collaboration	Expert Support	Feedback and Reflection
■ Series1	313	336	195	239	289	171	140

RESPONDENTS
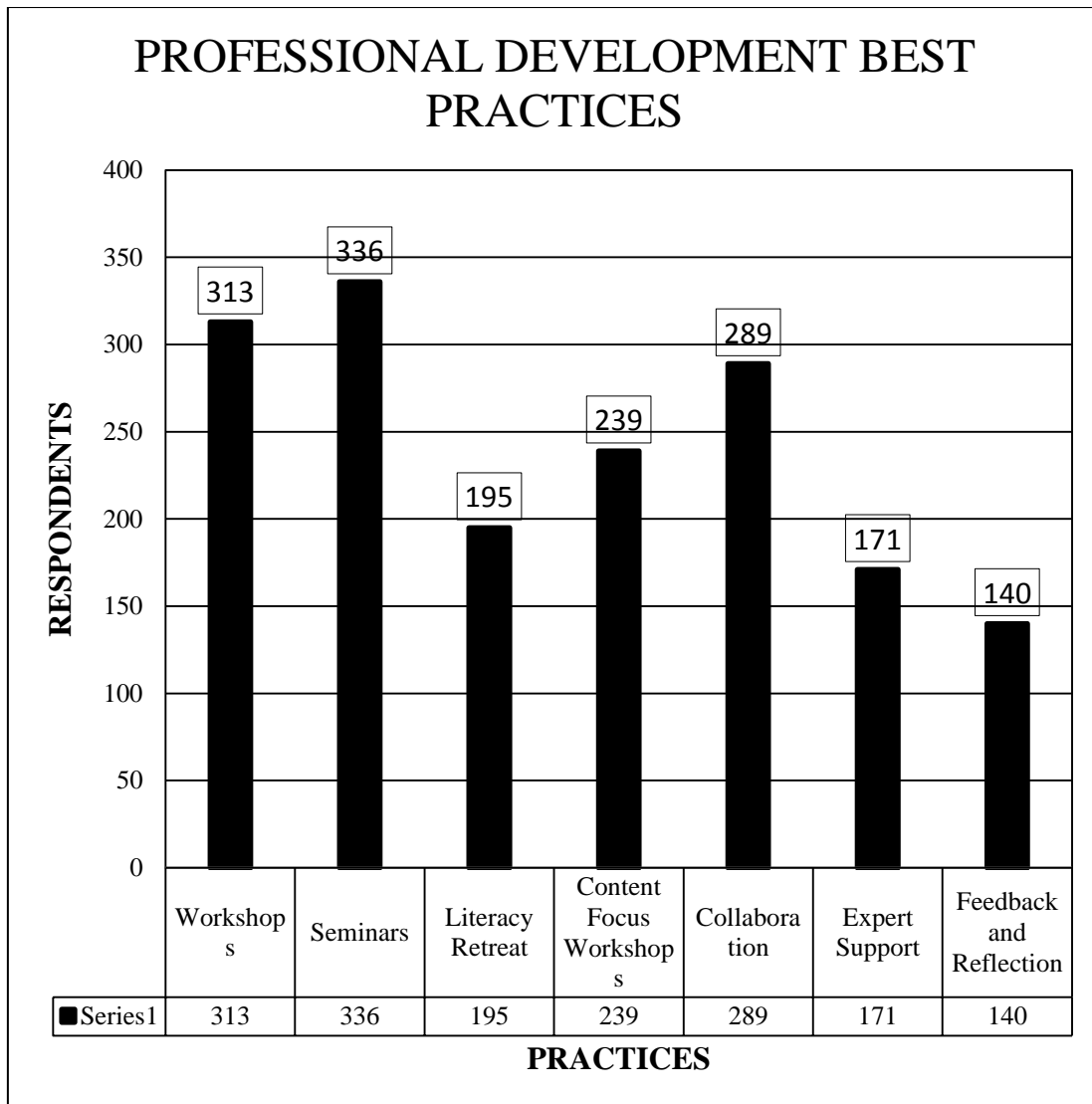
PRACTICES

Figure 4.2   Professional Development Best Practices

In summary, Figure 4.2 showed that within the research sample of three hundred and forty eight (348) respondents, the best attended teacher professional development practice was seminars whereby three hundred and thirty-six (336) respondents constituting 96.6 percent had attended, workshops followed closely with three hundred and thirteen (313) constituting 89.9 percent. The third practice evidenced by teachers was internal and external collaboration which disclosed support from two hundred and eighty nine (289) respondents (83.0 percent) followed by content focus workshops

which was demonstrated by two hundred and thirty-nine (239) respondents constituting 68.7 percent of the total sample. Additionally, expert support evidenced one hundred seventy-one (171) respondents constituting 49.1 percent. Lastly, feedback and reflection evidenced within the research sample of three hundred forty eight (348) showed that one hundred and forty (140) respondents constituting 40.2 percent were involved. This result showed that most of the practices were embraced in Migori County.

The result confirms studies by Cambridge Professional Development Forum (CPD, 2015) which underscored importance of teacher professional development. Cambridge Professional Development (CPD) opined that supporting teachers in professional development interventions lead to improved outcomes for students despite the big discrepancies in individual regional Professional Development (PD) needs. Cambridge Professional Development (CPD) offers a number of routes for teachers according to their experience and needs, ranging from subject-specific training to professional development qualifications. Furthermore, CPD approach to professional development and training supports teachers to become confident, responsible, reflective, innovative and engaged. In this study, findings in this section exhibited that teacher professional development processes are embraced in Migori County.

4.2.2   Basis for Teacher Professional Development

The researcher considered some aspects of teacher Professional Development to ascertain if they were basic for teacher professional development processes. The researcher considered collaborative teaching, team development, personal knowledge, teacher retraining; teacher preparation and teacher appraisal. The view that Teacher Professional Development (PD) Supported Academic Achievement was cross tabulated

with the six variables to ascertain whether they were basis for Teacher Professional

Development (PD) in secondary schools in Migori County. The out-put is captured in

Table 4.5.

Table 4.5

Basis for PD and Teacher Professional Development (TPD) cross tabulation

	Basis for Teacher Professional Development Variables	Teacher PD supports Academic achievement and collaborative Teaching is a Basis for PD.	Teacher PD Does Not support Academic achievement but collaborative Teaching is a Basis for PD Basis	Teacher PD Does support Academic achievement but collaborative Teaching is not a basis for PD	Teacher PD Does Not support achievement and collaborative Teaching is not a Basis for PD
1	Collaborative Teaching	78 (38.4)	54 (37.8)	125 (61.6)	89 (62.2)
2	Team Development	137 (67.5)	103 (72.0)	66 (32.5)	40 (28.0)
3	Teacher Personal Knowledge	139 (68.5)	108 (75.5)	64 (58.1)	35(40.9)
4	Teacher Retraining	76 (37.4)	50 (35.0)	127 (62.6)	93 (65.0)
5	Teacher Preparation	144 (70.9)	85 (59.4)	59 (29.1)	58 (40.6)
6	Teacher Appraisal	68 (33.5)	61 (42.7)	135 (66.5)	82 (57.3)

Internal Count for those who agree both way were 203 and those who disagreed both way were 143

n=346

In Table 4.5, the cross-tabulation showed that 38.4 percent within an internal count of

two hundred and three (203) teacher respondents agreed that both variables of Teacher

Professional Development (PD) and collaborative teaching were connected in

enhancing student academic achievement. 61.6 percent supported that Teacher

Professional Development (PD) supported student academic achievement in secondary

education but reiterated that collaborative teaching is not a basis for Teacher

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Professional Development (PD). Further, within an internal count of one hundred and forty three (143), 37.8 percent disagreed that Teacher Professional Development (PD) supported academic achievement but supported that collaborative teaching should be a measure for improving student's academic achievement. According to the tabulation above, 62.2 percent within an internal count of 143 did not support both view as crucial for academic achievement.

In addition, the result indicated that 67.5 percent within an internal count of two hundred and three (203) teacher respondents agreed that both variables of teacher professionalism and team development were connected in enhancing academic achievement. 32.5 percent supported that Teacher Professional Development (PD) supported academic achievement in secondary education but suggested that team development is not a basis for Teacher Professional Development (PD). Further, within an internal count of one hundred and forty three (143), 72.0 percent disagreed that Teacher Professional Development (PD) supported academic achievement but supported that team development should be a measure for improving student's academic achievement. According to the tabulation above, 43.8 percent within an internal count of one hundred and forty three (143) did not support both view as crucial for academic achievement.

Further, the result in Table 4.5 indicated that 68.5 percent within an internal count of two hundred and three (203) teacher respondents agreed that both variables of teacher professionalism and teacher personal knowledge remained connected in enhancing academic achievement. 31.5 percent supported that Teacher Professional Development (PD) supported academic achievement in secondary education but did not support that there was any connection between teacher personal knowledge as basis for Teacher

Professional Development (PD). Further, within an internal count of one hundred and forty three (143), 75.5 percent disagreed that Teacher Professional Development (PD) supported academic achievement but supported that teacher personal knowledge should be a measure for improving student's academic achievement.

According to the tabulation, only 24.5 percent within an internal count of one hundred and forty three (143) did not support both view as crucial for academic achievement. Similarly, the cross-tabulation indicated that 37.4 percent within an internal count of two hundred and three (203) teacher respondents agreed that both variables of teacher Professional Development (PD) and teacher retraining were connected in enhancing academic achievement. 62.6 percent supported that Teacher Professional Development (PD) supported academic achievement in secondary education but suggested that teacher retraining is not a basis for Teacher Professional Development (PD). Further, within an internal count of one hundred and forty three (143), 35.0 percent disagreed that Teacher Professional Development (PD) supported academic achievement but supported that teacher retraining should be a measure for improving student's academic achievement. According to the tabulation above, 65.5 percent within an internal count of 143 did not support both view as crucial for academic achievement.

Furthermore, the result indicated that 70.9 percent within an internal count of two hundred and three (203) teacher respondents agreed that both variables of teacher Professional Development (PD) and teacher preparation were connected in enhancing academic achievement. 29.1 percent supported that Teacher Professional Development (PD) supported academic achievement in secondary education but suggested that teacher retraining is not a basis for Teacher Professional Development (PD). Further, within an internal count of one hundred and forty three (143), 59.4 percent disagreed

that Teacher Professional Development (PD) supported academic achievement but supported that teacher retraining should be a measure for improving student's academic achievement. According to the tabulation above, 40.6 percent within an internal count of one hundred and forty three (143) did not support both view as crucial for academic achievement.

Finally, the result indicated that 33.5 percent within an internal count of two hundred and three (203) teacher respondents agreed that both variables of teacher professionalism and teacher appraisal were connected in enhancing academic achievement at sixty-six percent (66.5) Further, within an internal count of one hundred and forty three (143), 42.7 percent disagreed that Teacher Professional Development (PD) supported academic achievement but supported that teacher appraisal should be a measure for improving student's academic achievement.

According to the tabulation above, 40.6 percent within an internal count of 143 did not support both view as crucial for academic achievement. The analysis above revealed the quantitative connect between variables. However, the tabulation above does not say for sure how the basics for teacher professional development (PD) are related to student academic development.

In the view above, the data on Table 4.5 was subjected to χ^2 tests to test whether teacher collaborative Teaching, Teacher Team Development, Teacher Personal Development, Teacher Retraining, Teacher Preparation and Teacher Appraisal were a basis for Professional Development. The chi-square analyses were indicated on Table 4.6 on page 110.

Table 4.6

Summary of Chi-Square Tests on basis for Professional Development

		χ squared value	Pearson Chi-Square P-Value	Likelihood Ratio	Fisher's Exact Test Exact sig. (2-sided)
1	Collaborative Teaching	.016	.901	.016	**.911**
2	Team Development	.814	.367	.818	**.408**
3	Teacher Personal Knowledge	2.042	.153	2.064	**.184**
4	Teacher Retraining	.528	.468	.528	**.513**
5	Teacher Preparation	4.954	.026	4.925	**.029**
6	Teacher Appraisal	3.010	.083	2.999	**.091**

N=348

The data on Table 4.5 showed influence of collaborative teaching on teacher professional development. The data was subjected to χ^2 tests and the output shown on Table 4.6. Chi-squared value is 0.016; *p-value* is 0.901, *p*<0.05 likelihood ratio was 0.901 and Fischer's Exact Test indicated an Exact Significance (2-sided) of 0.911. The exact sig. 0.911 is greater than 0.05, According to Tyrell (2009), when the *P-value* is greater than 0.05, the null hypothesis is rejected. This indicated that collaborative teaching did support Teacher Professional Development (PD) by 91.1 percent in enhancing Academic Achievement in secondary schools in Migori County.

Further, the data on Table 4.5 showed influence of team development on teacher professional development. The data was subjected to χ^2 tests and the output shown on Table 4.6. Chi- squared value is 0.814; *p-value* is 0.367. χ^2 (1, N=348) = 0.814, p=0.05), likelihood ratio was 0.366 and Fischer's Exact Test indicated an Exact Significance (2-sided) of 0.408. The exact sig. 0.408 is greater than 0.05, when the *P-value* is greater than 0.05, the null hypothesis is rejected. This indicated that team development did support professional development at 40.8 percent in enhancing achievement in secondary schools in Migori County.

The data on Table 4.5 showed influence of personal knowledge on teacher professional development. The data was subjected to χ^2 tests and the output shown on Table 4.6 on page 110. Chi-squared value is 2.042; *p-value* is 0.153 (χ^2 (1) = 2.042< *p*=0.153), likelihood ratio was 0.151 and Fischer's Exact Test indicated an Exact Significance (2-sided) of 0.184. The exact sig. 0.184 is greater than 0.05 as shown on Table 4.10. The exact sig. value is greater than 0.05, the null hypothesis is rejected. The finding indicated that personal knowledge did support Teacher Professional Development (PD). The finding indicated that personal knowledge of teachers was crucial in enhancing Academic Achievement in secondary schools.

The data on Table 4.5 showed influence of teacher retraining on teacher professional development. The data was subjected to χ^2 tests and the output shown on Table 4.6. Chi-squared value is 0.528; *p-value* is 0.468 (χ^2 (1) = 0.528< *p*=0.468), likelihood ratio was 0.468 and Fischer's Exact Test indicated an Exact Significance (2-sided) of 0.513. The exact sig. 0.513 is greater than 0.05, According to Tyrell (2009), when the exact sig. value is greater than 0.05, the null hypothesis is rejected. This finding revealed that teacher retraining supported professional development of teachers at 51.3 percent and

the strategy could be exploited by institutional managers in enhancing Academic Achievement in secondary school's education in Migori County.

The data on Table 4.5 showed influence of teacher preparation on teacher professional development. The data was subjected to χ^2 tests and the output shown on Table 4.6. Chi-squared value was 4.954; *p-value* is 0.026 (χ^2 (1) = 4.954< *p*=0.026), likelihood ratio was 0.026 and Fischer's Exact Test indicated an Exact Significance (2-sided) of 0.029. The exact sig. 0.029 is less than 0.05, when the exact sig. value is less than 0.05, the null hypothesis is accepted. This indicated that teacher preparation was not a measure that supported Teacher Professional Development (PD). This revealed that teachers' institutional managers need to put processes in place to enhance teacher preparation.

The data on Table 4.5 showed influence of teacher appraisal on teacher professional development. The data was subjected to χ^2 tests and the output shown on Table 4.6 on page 110. Chi-squared value is 3.010; *p-value* is 0.83, likelihood ratio was 0.83 and Fischer's Exact Test indicated an Exact Significance (2-sided) of 0.91. The exact sig. 0.91 is greater than 0.05, According to Tyrell (2009), when the exact sig. value is greater than 0.05, the null hypothesis is rejected. This indicated that teacher appraisal did support professional development of teachers and was important in enhancing Academic Achievement in secondary schools in Migori County.

The above analysis showed that out of the six variables put to test, five supported academic achievement. The output showed that on average, the basis for teacher professional development (PD) supported academic achievement. Collaborative teaching, team development, teacher personal knowledge, teacher retraining, and

teacher appraisal were useful for enhancing teacher Professional Development (PD) which influenced academic achievement. Among the six indicators put to test five were crucial for academic achievement. The variable that did not impact on student achievement was teacher preparation where interviewed teachers revealed that preparation was time consuming and turned them into clerks.

Teacher Respondents who were interviewed by the researcher also responded in form of comments on influence of collaborative teaching on academic achievement. They supported the finding that teacher professional development (PD) was enhanced by Teacher collaborative teaching through the following comments by respondent T-145.

> Collaborative teaching improves capacity of teachers in their respective disciplines. This enables students to get different perspective of issues and relevant knowledge from different teachers which enables teachers to enhance student's knowledge.

<div align="right">T-145</div>

Qualitative response by respondent T-145 summarized all respondents view on role of collaborative teaching in schools. The coded analysis indicated that collaborative teaching improved capacity of teachers in their respective disciplines. Further, collaborative teaching improved knowledge of students. The qualitative data indicated that collaborative teaching ensured that teacher and student knowledge were enhanced in all areas of learning. This interpretation supported findings by Wiggins & McTinge, (2005) that suggested that collaborative teaching was an acceptable move towards student's academic achievement. Further, Wiggins & McTinge, (2005) advanced that collaborative teaching enhanced achievement of common curriculum expectations and often serves as an interim assessments tool that will continuously improve teaching.

Therefore, collaborative teaching is crucial and useful for empowering teachers. This is what we may need in Migori County to enhance achievement.

Further, a Head of Department respondent (H-07) who was interviewed by the researcher responded by giving the following comment on teacher collaboration as a way of improving teacher Professional development and suggested that collaborative teaching allowed for diversification of teaching methodologies and energized student interests.

> Collaborative teaching allows for diversifying teaching methodologies and re-energizes student's interest in learning a given discipline. Whenever methodologies are diversified, teachers will be in a position to vitalize strengths and reassess weaknesses with a view of strengthening and reinforcing student's academic achievement.
>
> H-07

Respondent H-07 revealed that collaborative teaching allowed for diversification of teaching methodologies. In fact, H-07 stressed that collaborative teaching energized students learning processes in various subjects. The energy to lean is attitudinal; therefore it is important for student academic achievement. H-07 further proposed that if methodologies are diversified, teachers will accomplish vital requirements that may enhance student academic achievement.

In addition, interviewed teacher respondents responded impact of team teaching and team development by indicating that teacher professional development is enhanced by teacher team development. Teacher respondent T-31 gave a summary of teacher's view on the outcomes of team teaching and team development.

Team Teaching and team development enhances syllabus coverage since no teacher has monopoly over knowledge. Team teaching enables teachers to support each other by sharing knowledge. Team development if embraced, allows teachers to interact freely in order to acquire shared teaching approach whereby when fully achieved enhances smooth running of departments and by extension boosts student academic achievement.

T-31

Qualitative response from T-31 summarized respondents view on role of Team Development among teachers in schools. The response implied that team development enhanced syllabus coverage and supported that team development if embraced, allowed teachers to interact freely in order to acquire shared teaching approaches. T-31 further indicated that team development enabled smooth running of departments. It is worth noting that when departments run smoothly there is a significant possibility of having a more peaceful learning atmosphere. Team development ensured that teachers have a more unified approach to teaching. This would boost performance in secondary schools.

Further, interviewed teacher respondents responded by supporting the need for enhancing teachers' personal knowledge in secondary schools

Nobody has monopoly of knowledge but when knowledge acquisition is collectively approached; such knowledge has far reaching effects in developing skills needed in the teaching profession. In summary, Teacher personal knowledge equips a teacher with required facts necessary for teaching but should not be considered as the absolute measure to Teacher Professional Development (PD) and ultimate student academic achievement.

T-88

Qualitative response by respondent T-88 above summarized respondents view on role of teacher personal knowledge. The coded excerpt noted that nobody has monopoly of knowledge but good knowledge should be collectively pursued. Teacher personal

knowledge has far reaching effect in developing skill which is necessary national development. In summary, Teacher personal knowledge equips a teacher with required facts necessary for teaching. Respondent T-88 indicated that teacher personal knowledge should not be the absolute measure of teacher professional development and ultimate student academic achievement.

Qualitative data was analyzed to give insight on teacher retraining perceptions in Migori County, Kenya. A principal was interviewed and gave the following comments as was indicated by P-26

> Teacher retraining equips the teacher with new methods. Retraining enable teachers learn emergent technological approach to teaching. However, in third world countries, there are financial constraints that may not enable policy makers to think of attempting a budget for retraining. Therefore, after graduation, teachers are on their own as long as they are still in the teaching profession.

<div align="right">P-26</div>

Principal respondent P-26 supported that teacher retraining as a basis for teacher professional development was a useful methodology. The response showed that retraining equipped teachers with new methods and made teachers come to terms with emergent technological approaches to teaching. However, the respondent decried financial constraints that made teacher retraining lack prioritization in secondary schools. The respondent reiterated that despite teachers lacking retraining opportunities, suggested that it was crucial for teacher professional development.

This comment supported a study by Wenzare and Ward, (2000) and supported by Otieno (2009) which showed that teachers have been enrolling for retraining on their own. This led to career progression. Teacher retraining is therefore important and

institutional managers need to strategically use it for improved output in secondary school. However, it would give more qualitative output if the government came up with possible framework for teacher retraining.

In addition, teacher respondents supported that one way of ensuring that Teacher Professional Development (PD) support student academic achievement was by embracing teacher preparation. The open ended questionnaire captured the following comment as was noted by respondent T-100.

> Proper teacher preparation results in proper content delivery and enables teachers to administer content in a more robust, simplified and understandable way. Teacher preparation leads to teacher confidence, proper flow of ideas in a classroom situation. Further, teacher preparation enhances teacher astuteness, focus, and readiness to achieve intended learning goals. However, pegging professional development to teacher preparation may only encourage teachers to turn into clerks rather than teachers

T-100

View by T-100 noted that teacher preparation is important because it results into proper and simplified content delivery. The respondent further indicated that teacher preparation made teaching more forceful and enhanced confidence, proper streaming of ideas, and improved focus. Teacher preparation made teachers to work in a more comfortable atmosphere to save time and energy by following a known trajectory. On the other hand, T-100 suggested that teacher preparation should not be the only measure for teacher professional development. The respondent candidly specified that more often teacher preparation interventions turned teachers into clerks thus making them loose valuable time for teaching. The above discussion suggested that teacher

professional development (PD) should be multi-dimensional for its effects to be felt in the education system.

Teacher respondent T-222 who was interviewed by the researcher responded on importance of teacher appraisal as a basis for teacher professional development. The qualitative view by T-222 gave insight on impact of teacher appraisal on teacher professional development.

> Teacher appraisal enables a teacher to evaluate himself/herself at a personal level whereby the teacher can revitalize teaching processes to improve delivery in order to improve student academic achievement. Teacher appraisal has not been very useful because of lack of support from teachers.

> T-222

Teacher respondent T-222 showed that teacher appraisal enabled teachers to do self-evaluation. Self-evaluation should be done at personal level. Teacher appraisal revitalized teacher by giving the appraiser important suggestions to improve teacher quality. Further, the qualitative data indicated that teacher appraisal has not created a difference in the education system because of negative perception by teachers. However, the interviewee strongly supported that teacher appraisal was a basic component of teacher professional development and if exploited well can impact on student's academic achievement.

This view supported findings by Dalley and Kim, (2010) who indicated that performance appraisal is used for teacher accountability and is used for teacher promotions and job prospect. Further, the view above supports findings of a study conducted by Kadenyi (2014), which surveyed influence of teacher appraisal on improvement of student's academic achievement. The study admitted that despite,

massive investment on teacher appraisal by the government, much is yet to be achieved in terms of improved educational standards. In summary teacher appraisal is facing some challenges in education system.

Qualitative analysis came up with the following views. The analysis revealed that collaborative teaching allows for diversifying teaching methodologies; re-energizes student's interest in learning a given discipline. Additionally, Team Teaching and team development enhances syllabus coverage since no single teacher has monopoly over knowledge. Indeed, Team Development enhanced syllabus coverage and if embraced, allowed teachers to interact freely in order to acquire shared teaching approaches. Furthermore, Teacher personal knowledge equips a teacher with required practicalities necessary for teaching but should not be considered as the absolute measure of Teacher Professional Development (PD) and ultimate student academic achievement. Subsequently, retraining equipped teachers with new methods and made teachers come to terms with emergent technological approaches to teaching. On the contrary, there are financial constraints that may not enable policy makers to contemplate budget for retraining. To sum up, teacher preparation enhances teacher sharpness, focus, and readiness to achieve intended learning goals. However, pegging professional development to teacher preparation may only encourage teachers to turn into clerical teachers rather than quality teachers.

In summary, both quantitative and qualitative analysis supported the fact that collaborative teaching, team development, personal knowledge, teacher retraining; teacher preparation and teacher appraisal were crucial for teacher professional development.

4.2.3 Policy for admitting teacher training be raised

Policy for admitting teachers to institutions of teacher training was considered in this study to bring to light effect of policy on improving student academic achievement. Responses showed view on whether policy for admitting teachers for training should be raised to a higher grade from the current threshold of C+. A questionnaire was put to principals whether there was need for raising qualification for admitting teachers for secondary school training. The current policy requires that a student who has C+ at O level (Form 4) education level can pursue career in secondary school teaching. The principals who are policy custodians at secondary institutional level supported the proposal that the entry grade be increased at 33.33 percent whereas 66.7 percent felt that the policy of admitting trainees for secondary teaching at KCSE mean grade of C+ was sufficient. The view supports the current government policy of a minimum standard requirement of KCSE mean grade of C+ for admission to pursue career in secondary school teaching.

On teacher training admission policy, one of the Sub-County Quality and Standards Officer (O-5) respondent who was interviewed by the researcher gave the following response.

> Teaching is majorly about delivery of education services to students. The current training is adequate. The four years graduate training and the grade limit requirement (C+) are quite appropriate. Teacher instructional methods required can be acquired within that period. The entry requirement is satisficing in relation to performance in class and in examinations.

<div align="right">O-5</div>

The Sub-County Quality and Standards Officer (O-5) noted that the current policy on training and grade limit requirements of C+ and above are quite appropriate. The

respondent indicated that the entry requirement and time spent at the university was satisfactory for getting quality teacher resource into secondary school classrooms. The view showed that the government had the best policy for training new teachers. However, gaps were noted on the fact that after such training the outputs from secondary schools were still poor. This research came up with best possible ways of improving policy on teacher management.

This view supported findings by a study conducted in Bungoma, Kenya by Juma, (2011) that advanced that human resource as a factor of production is affected by adequacy and quality as reflected by the level of training. If this policy is acceptable, why then do we still experience poor results in education? This research gave possible solutions to the problem.

4.2.4   Hypothesis Test on Significance of Professional Development

This section presents more findings from analysis of data to test the hypothesis below:

Hypothesis I: There is no significant influence of Teacher Professional Development (TPD) on student's academic achievement in secondary school education. The hypothesis testing on influence of teacher professional development on student's academic achievement in secondary education used chi-square test to analyze data based on alpha P=0.05 level of significance.

Table 4.7 shows Chi-square test on influence of Professional Qualification on average student's achievement in 2015-2017

Table 4.7

Influence of Teacher Professional Development on Student's Achievement

Chi-Square Test			
	Value	*Df*	Asymp. Sig. (2-sided)
Pearson Chi-Square	**14.177**	7	.048
Likelihood Ratio	15.944	7	.026
Linear-by-Linear Association	.590	1	.442
N of Valid Cases	**346**		

*P<0.05 Chi Square = **14.177**, df = 7(14.077), N=348, P=0.048 (Critical Value **14.077**)*

Overall, the result in Table 4.7 showed that Teacher Professional Development (TPD) had significant influence on student's academic achievement in the 2015-2017 KCSE results, alpha 0.05 (P<0.05). From the result, the hypothesis was rejected. This was because in Table 4.7 above the computed value of chi-square is greater than the critical value of chi square. The critical value of chi-square at *df* = 7 is 14.07 while the calculated chi-square value is 14.177. according to Mangal, (2004), when the computed value of the chi-square is greater or equal to the critical value of the chi-square, then it is significant and consequently the null hypotheses is rejected. However, when the computed value of the chi-square is less than the critical value of the chi-square, then it is not significant and consequently the null hypothesis is not rejected. The finding showed that there was an association between teacher professional development and student academic achievement. There was need for institutional managers (principals)

to enhance teacher professional development to be able to support student academic achievement.

A Sub-County Quality and Standards Officer (O-3) who was interviewed by the researcher on teacher professional development supported the above finding in the following comments.

> A teacher who is professionally developed must have up-to-date notes, up to date professional documents, and show craftsmanship which are crucial for student academic achievement. However, better performance of a student is linked to a number of factors like attitude towards learning, accessibility to required learning resources, entry behavior, or schools location; a highly professional teacher is not the only variable.

O-3

The above respondent (O-3) recommended that teacher professional development should be accompanied by up-to-date notes; these notes will act as a quality measure in the teaching process. In addition the respondent indicated that a teacher must have up to date professional documents and there should be serious craftsmanship to be able to enhance student academic achievement. On the other hand, learners need to improve on their attitude towards learning. Learning resources must be accessible to both teachers and students. Other factors that support professional development are to improve entry behavior, and to have better understanding of the work environment.

4.2.5 Influence of teacher qualification on student academic achievement

To better gauge whether teacher qualification influenced student academic achievement, the researcher first considered level of teacher professional qualification. It was a concern of this study to understand the level of staffing in relation to teacher qualification ranges.

In Kenya, acceptable academic qualification included Doctorate, Masters in Education. Bachelor of education, Post graduate diploma in education (PGDE), Diploma in education and other relevant qualifications for special areas. The data for staffing in relation to teacher professional qualification is represented in figure 4.3. Qualifications of teachers sampled in Migori County were put in perspective.
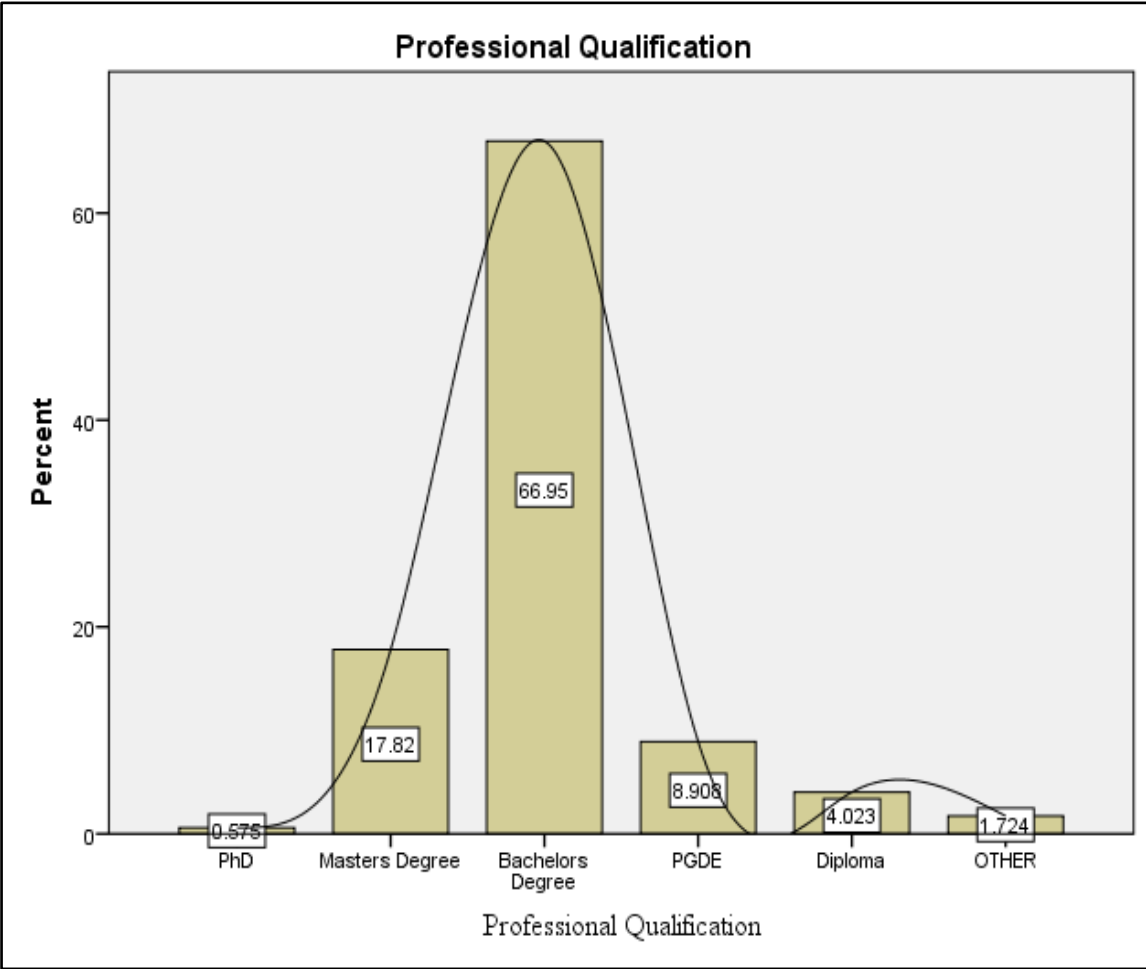
Figure 4.3: Professional Qualification

Figure 4.3 presented information on sampled teacher professional qualification in Migori County. Figure 4.3 indicated that three (3) teachers constituting 0.575 percent were PhD holders, sixty one (61) teachers constituting 17.82 percent were Master's

Degree holders, two hundred and thirty three (233) teachers constituting 66.95 percent were Bachelor's Degree holders, thirty one (31) teachers sampled constituted 8.908 percent were PGDE holders, fourteen (14) teachers constituting 4.023 percent were Diploma holders and six (6) teachers constituting 1.724 percent were having other non-specified qualifications.

Despite the majority being Bachelor of Education holders, the study had representation of all levels of teacher qualification to be able to give generalizations. Demographics of teacher qualification were normally distributed to be able to give credible overall view.

4.2.6 Relationship between Teacher Qualification and Academic Achievement

Demographic data for teacher qualification showed that teachers in secondary schools in Migori ranged from Doctorate (PhD), Master's Degree, Bachelor's Degree, PGDE, Diploma in Education and other teachers who taught ICT, and foreign languages. In Kenya, the minimum qualification requirement to teach in public and private secondary schools is a bachelor's degree from a recognized university. A teacher must train in two acceptable combinations of subjects.

Primarily, the variable professional qualification of teachers was cross-tabulated with outcomes in KCSE 2015-2017 Mean Standard Scores to assess influence of teacher qualification on student's achievement. The question was to assess whether higher qualifications translated into quality results. Table 4.8 showed the results as captured from teacher respondents and their performance indexes. Performance indexes in Kenya Certificate of Secondary Education are awarded points as follows: A plain 12, A minus 11, B plus 10, B plain 9, B minus 8, C plus 7, C plain 6, C minus 5, D plus 4, D plain 3, D minus 2 and E which is the lowest possible grade at 1 point. Therefore, it

means that if a Mean Standard Score of 2.000 is registered, then the outcome is an average of D-. Table 4.8 shows those indexes and teachers within the grade qualifications who achieved them.

Table 4.8

Teacher Qualification versus Mean Standard Score in KCSE 2015-2017

Impact of teacher Qualification on School MSS in KCSE 2015-2017								
MSS			Professional Qualification						TOT
			PhD	MED	BED	PGDE	DIP	Others	
Sch.	2.000	Count	0	0	2	0	1	0	3
Mean		% within KCSE	0.0	0.0	66.7	0.0	33.3	0.0	100.0
Standard									
Score	3.000	Count	1	6	27	2	1	1	38
(MSS) in KCSE		% within KCSE	2.6	15.8	71.1	5.3	2.6	2.6	
2015-	4.000	Count	1	12	43	8	5	2	71
2017		% within KCSE	1.4	16.9	60.6	11.3	7.0	2.8	
	5.000	Count	1	22	85	11	5	2	126
		% within KCSE	0.8	17.5	67.5	8.7	4.0	1.6	
	6.000	Count	0	18	59	7	1	1	86
		% within KCSE	0.0	20.9	68.6	8.1	1.2	1.2	
	7.000	Count	0	1	12	2	1	0	16
		% within KCSE %	0.0	6.2	75.0	12.5	6.2	0.0	
	8.000	Count	0	0	4	1	0	0	5
		% within KCSE	0.0	0.0	80.0	20.0	0.0	0.0	
	9.000	Count	0	2	1	0	0	0	3
		% within KCSE	0.0	66.7	33.3	0.0	0.0	0.0	
Total		**Count**	**3**	**61**	**233**	**31**	**14**	**6**	**348**
		% within KCSE	**0.9**	**17.5**	**67.0**	**8.9**	**4.0**	**1.7**	

Table 4.8 indicated that teachers with PhD were 3 teachers constituting 0.9 percent within an internal count of three hundred and forty eight (348) teachers. PhD holders registered results as follows. One (1) which was 0.3 percent of respondents registered a mean standard score of 3.000, One (1) which was 0.3 percent respondents registered a mean standard score of 4.000 and One (1) which was 0.3 percent respondents registered a mean standard score of 5.000. This was below expectation of their high student academic achievement when considering their ultimate output at an average MSS (Mean Standard Score) of 4.000.

Masters' Degree holders were sixty one (61) constituting 17.5 percent within an internal respondent count of three hundred and forty eight (348). Masters' degree holders performed as follows: six (6) constituting 15.8 percent of respondents which were within an internal count of those who achieved a MSS of 3.000, twelve (12) constituting 16.9 percent) respondents were within an internal count of those who achieved a MSS of 4.000, twenty two (22) which constituted 17.5 percent of respondents were within an internal count of those who achieved a MSS of 5.000, eighteen (18) constituting 20.9 percent respondents were within an internal count of those who achieved a MSS of 6.000, one 1constituting 6.2 percent respondent was within an internal count of those who achieved a MSS of 7.000, none scored a Mean Standard Score of 8.000 and 2.000 whereby 66.7 percent respondents were within an internal count of those who achieved a MSS of 9.000. The average MSS for Masters' Degree Holders was 5.145.

Bachelor degree holders performed as follows: two (2) respondents constituting 66.7 percent were within an internal count of those who achieved a MSS of 2.000, twenty seven (27) respondents constituting 71.1 percent were within an internal count of those

who achieved a MSS of 3.000, forty three (43) respondents which constituted 60.6 percent were within an internal count of those who achieved a MSS of 4.000, eighty five (85) respondents constituting 67.5 percent were within an internal count of those who achieved a MSS of 5.000, fifty (59) respondents constituting 68.6 percent were within an internal count of those who achieved a MSS of 6.000, twelve (12) respondent constituting 75.0 percent were within an internal count of those who achieved a MSS of 7.000, four (4) respondents (80.0 percent) were within an internal count of those who achieved a MSS of 8.000 and one (1) respondent constituting 33.3 percent respondent within an internal count of those who achieved a MSS of 9.000. The average MSS for Bachelor Degree Holders was 4.983. Despite having low MSS, quality grades were higher. PGDE holders and Diploma in Education holders had a MSS of 5.064 and 4.071diploma holders with only thirty one (31) teacher respondents and fourteen (14) teacher respondents respectively.

In summary, teachers with PhD performed dismally with an average Mean Standard Score (MSS) of 4.000. Teachers with Master's Degree in Education were average with a Mean Standard Score (MSS) of 5.145. Teachers with Bachelor of education in their area of specialization were the majority but achieved a Mean Standard Score (MSS) of 4.983. PGDE and diploma holders registered an average Mean Standard Score (MSS) of 5.145 5.064 and 4.071 respectively. The implication of teacher qualification on student's academic achievement were tested using a cross tabulation of respondent's professional qualification against Mean Standard Score in subjects of specialization in 2017.

Table 4.9 on page 129 shows mean standard score achieved on area of specialization against the various teacher qualification in Migori County.

Table 4.9

Impact of Teacher Qualification on Area of Specialization.

			Professional Qualification						
			PhD	MED	BED	PGDE	Dip	Others	Total
	1.000	Count	0	1	2	1	0	0	4
		% of Total	0.0	0.3	0.6	0.3	0.0	0.0	1.1
Teachers	2.000	Count	0	3	14	2	0	0	19
MSS in		% of Total	0.0	0.9	4.0	0.6	0.0	0.0	5.5
Areas of	3.000	Count	1	14	29	9	2	0	53
Specialty		% of Total	0.3	3.7	8.3	2.6	0.6	0.0	15.2
	4.000	Count	1	11	54	7	4	1	78
		% of Total	0.3	3.2	15.5	2.0	1.1	0.3	22.4
	5.000	Count	1	11	49	5	3	1	70
		% of Total	0.3	3.2	14.1	1.4	0.9	0.3	20.1
	6.000	Count	0	7	33	4	2	2	48
		% of Total	0.0	2.0	9.5	1.1	0.6	0.6	13.8
	7.000	Count	0	6	25	2	2	1	36
		% of Total	0.0	1.7	7.2	0.6	0.6	0.3	10.3
	8.000	Count	0	6	18	0	1	1	26
		% of Total	0.0	1.7	5.2	0.0	0.3	0.3	7.5
	9.000	Count	0	4	8	1	0	0	13
		% of Total	0.0	1.1	2.3	0.3	0.0	0.0	3.7
	10.00	Count	0	0	1	0	0	0	1
		% of Total	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Total		**Count**	**3**	**61**	**233**	**31**	**14**	**6**	**348**
		% of Total	**0.9**	**17.5**	**67.0**	**8.9**	**4.0**	**1.7**	**100**

n=348

The outcome from the data analyzed indicated that a higher grade did not necessarily indicate a better output from the teacher and better performance from students during examinations.

Table 4.9 above showed that the three respondents with a professional qualification PhD had an average of Mean Standard Score of 3.000, 4.000 and 5.000 respectively.

This outcome showed that despite high professional qualification, PhD qualification performed below average in enhancing learning in the institutions as noted in the final outcome at KCSE (average MSS of 4.000).

When area of specialization was considered in Table 4.9, Masters' Degree holders performed as follows: among the sixty one (61) Masters' Degree holder respondents who constituted 17.8 percent of the total sample, one (1) respondent had an average Mean Standard Score (MSS) of 1.000 constituting 0.3 percent of the masters' degree holders. Three (3) respondents had an average Mean Standard Score (MSS) of 2.000 constituting 0.9 percent. Fourteen (14) respondents had an average Mean Standard Score (MSS) of 3.000 constituting 3.7 percent. Eleven (11) respondents had an average MSS of 4.000 constituting 3.2 percent. Eleven (11) respondents had an average Mean Standard Score (MSS) of 5.000 constituting 3.2 percent of the masters' degree holders. Seven (7) respondents had an average Mean Standard Score (MSS) of 6.000 constituting 2.0 percent. Seven (7) respondents had an average MSS of 6.000 constituting 2.0 percent. Six (6) respondents had an average Mean Standard Score (MSS) of 7.000 constituting 1.7 percent of the masters' degree holders. A further six (6) respondents had an average Mean Standard Score (MSS) of 8.000 constituting 1.7 percent. Finally, only four (4) masters' degree holders had an MSS of 9.000. This constituted an overall Mean Standard Score (MSS) of 4.4677. This is an indication that Masters' Degree qualification performed below average in enhancing learning in the institutions as noted in the final outcome at KCSE (average Mean Standard Score (MSS) of 4.4677).

In addition, Bachelor Degree holders performed as follows: among the two hundred thirty three (233) Bachelor Degree holder respondents who constituted 67 percent of the total sample, two (2) teacher respondents had an average MSS of 1.000 constituting

0.6 percent of the Bachelor Degree holders. Fourteen (14) teacher respondents had an average MSS of 2.000 constituting 4.0 percent. Twenty nine (29) teacher respondents had an average MSS of 3.000 constituting 8.3 percent. Fifty four (54) teacher respondents had an average Mean Standard Score (MSS) of 4.000 constituting 15.5 percent. Forty nine (49) respondents had an average MSS of 5.000 constituting 14.1 percent of Bachelor Degree holders. Thirty three 33 teacher respondents had an average Mean Standard Score (MSS) of 6.000 constituting 9.5 percent. Twenty five (25) respondents had an average Mean Standard Score (MSS) of 7.000 constituting 7.2 percent. Eighteen (18) teacher respondents had an average Mean Standard Score (MSS) of 8.000 constituting 5.2 percent. Eighteen (8) teacher respondents had an average MSS of 9.000 constituting 2.3 percent. Finally, only one (1) teacher respondent had an average MSS of 10.000 constituting 0.3 percent. This constituted an overall average Mean Standard Score (MSS) of 5.051 for bachelor degree holders. This is an indication that Bachelor's Degree qualification was average in enhancing learning as noted in the final outcome at KCSE (average MSS of 5.051).

Further, Table 4.9 also revealed that PGDE holders performed as follows: among the 31 PGDE holder respondents who constituted 8.9 percent of the total sample, one (1) PGDE teacher respondent had an average Mean Standard Score (MSS) of 1.000 constituting 0.3 percent. Two (2) PGDE teacher respondents had an average MSS of 2.000 constituting 0.6 percent. Nine (9) PGDE teacher respondents had an average Mean Standard Score (MSS) of 3.000 constituting 2.6 percent. Seven (7) PGDE teacher respondents had an average MSS of 4.000 constituting 2.0 percent. Five (5) PGDE teacher respondents had an average Mean Standard Score (MSS) of 5.000 constituting 1.4 percent; Four (4) PGDE teacher respondents had an average MSS of 6.000 constituting 1.1 percent. Two (2) PGDE teacher respondents had an average Mean

Standard Score (MSS) of 7.000 constituting 0.6 percent. Finally, One (1) PGDE teacher respondent had an average MSS of 9.000 constituting 2.0 percent. PGDE holders did not register a performance of 10.000. This qualification bracket contributed an overall Mean Standard Score (MSS) of 4.645. This is an indication that PGDE qualification performed below average in enhancing learning in the institutions as noted in the final outcome at Kenya Certificate of Secondary Education.

The data further indicated that diploma holders performed as follows: among the fourteen (14) Diploma holder respondents who constituted 4.0 percent of the total sample, two (2) Diploma teacher respondents registered an average Mean Standard Score of 3.000 constituting 0.6 percent of the Diploma holders. Four (4) Diploma teacher respondents registered an average Mean Standard Score of 4.000 in their area of specialization constituting 1.1 percent.

Three (3) Diploma teacher respondents registered an average Mean Standard Score of 5.000 constituting 0.9 percent. Two (2) Diploma teacher respondents registered an average Mean Standard Score of 6.000 constituting 0.6 percent. Two (2) Diploma teacher respondents registered an average Mean Standard Score of 7.000 constituting 0.6 percent of the Diploma holders and one (1) Diploma teacher respondents registered an average Mean Standard Score of 8.000 constituting 0.3 percent of the Diploma holders in the sample. This constituted an overall MSS of 5.0714. This is an indication that Diploma qualification registered an average performer index in enhancing learning in the institutions as noted in the final outcome at KCSE Mean Standard Score (MSS) of 5.0714.

Other certification holders performed as follows: among the 6 respondents' holders of other certifications who constituted 1.7 percent of the total sample, one (1) respondent registered an average Mean Standard Score of 4.000 constituting 0.3 percent. One (1)

respondent registered an average Mean Standard Score of 5.000 constituting 0.3 percent of the other certification holders. Two (2) respondents registered an average Mean Standard Score of 6.000 constituting 0.6 percent of the other certification holders. One (1) respondent registered an average Mean Standard Score of 7.000 constituting 0.3 percent. One (1) respondent registered an average Mean Standard Score of 8.000 constituting 0.3 percent of the other certification holders.

In summary, it was noted that PhD holders achieved dismally at Mean Standard Score of 4.000, Master's Degree holders registered an average Mean Standard Score of 4.4677. Bachelor's degree registered an average Mean Standard Score of 5.051 and those who were PGDE qualification holders registered an average Mean Standard Score of 4.645. Diploma holders registered an average Mean Standard Score of 5.0714 and those who had other qualifications registered an average Mean Standard Score of 6.000 in their area of specialization. The outcome supported the findings on table 4.8 whereby higher qualification did not translate to higher performance.

Principal respondent P-24 who was interviewed by the researcher on teacher qualification gave the following comment:

> Bachelor Degree education syllabus is the most appropriate for secondary school teachers since it has functional content for the secondary school segment of education. Master's in education and PhD are applicable for teaching in tertiary segment and university in education.
>
> P-24

Respondent P-24 supported the view that bachelor degree is the best qualification for those teaching in secondary schools. P-24 indicated that bachelor degree training syllabus has appropriate content for secondary school teachers. The respondent also suggested that higher level academic qualifications of Masters or Doctor of Philosophy (PhD) be used in tertiary institutions and relevant universities.

This result supported findings by Huang and Moon (2009) who acknowledged that relevant teacher qualification accounted for approximately 40 percent to 60 percent of the variance in average student's achievement. The range of 40-60 percent is significant enough to justify use of bachelor degree as an acceptable teacher qualification (Huang and Moon 2009)

This research assessed the relationship between teacher qualification and student's academic achievement in secondary education. Using regression to evaluate influence of teacher professional qualification on student academic achievement whereby dependent variable was professional qualification and predictor variable were School Mean Standard Score (MSS) in KCSE - 2015, School Mean Standard Score (MSS) in KCSE - 2016, School Mean Standard Scores (MSS) in KCSE – 2017 gave the following printout.

Table 4.10

Influence of Teacher Qualification on Student Achievement

	Regression analysis						
	Unstandardized Coefficients		Standardized Coefficients	**T**	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	5.266	.257		20.505	.000	4.761	5.771
Professional Qualification	-.098	.082	-.064	-1.195	.233	-.259	.063

a. Dependent Variable: School Mean Standard Score (MSS) in KCSE 2015 –2017

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The regression analysis on Table 4.10 tested influence of teacher qualification on student academic achievement. The result showed that teacher qualification had significant impact on student's academic achievement in the 2015-2017 KCSE results, alpha 0.05 (P<0.05). This was because in Table 4.10 above the sig. value is 0.233. From the results, it was noted that the coefficient of 0.233 showed that teacher qualification has significant effect on student's academic achievement in secondary education.

In summary, the study found out in this section that both principals and teachers agreed that teacher professional development and teacher qualification supported student academic achievement. The questionnaires returned from principals and teachers showed that 63 percent and 58.3 percent respectively supported that Teacher Professional Development (PD) supported academic achievement. In addition, Chi-Square tests were conducted to ascertain if variables were a basis for Teacher Professional Development. The finding ascertained that collaborative teaching, team development, teacher personal knowledge, teacher preparation and teacher appraisal were characteristics that supported teacher professional development and by extension supported student academic achievement of students in secondary school education.

In support, interviewed teachers indicated that indeed collaborative teaching, team development, teacher personal knowledge, teacher preparation and teacher appraisal were critical in supporting student academic achievement. The finding contradicted a study conducted by Gildert, (2013) that asserted that teaching is not training or retraining and therefore content knowledge is not the key to successful teaching. There are other crucial factors that need be considered for empowerment of teachers, for example appraisal.

The finding further supported the current policy of admitting teacher trainees for secondary teaching is maintained because the threshold was functional. Qualitative analysis did not support that teacher training be geared towards achieving higher grades like Master's Degree and PhDs whereby they felt that such qualifications would only be useful for higher institutions of learning. In addition, the finding indicated that highly qualified teachers were not necessarily better performers. The most acceptable qualification was bachelor's degree. It was revealed by respondents that bachelor's degree education syllabus was the most appropriate for secondary school teaching.

Meagher, (2011) had suggested that there is no universal list of characteristics of effective professional development for teachers, Meagher, (2011) further suggested that once such characteristics as was researched are put in place, designers of professional development can use the prioritized categories as an initial point to begin their evaluations of the effectiveness of existing professional development programs for teachers. This research gives suggestions that collaborative teaching, teacher team development, teacher personal knowledge, teacher retraining and further suggested that teacher preparation and teacher appraisal be considered as characteristic of institutional professional development. Institutional managers should strategize on how to exploit them to improve student academic achievement.

The above finding countered the argument of Varella, (2000); Franke (2002) who showed that professional development for teachers is ineffective; the finding further countered the findings of Ball, Lubienski and Newborn (2001) who advanced that professional development for teachers is intellectually shallow, disconnected from deep issues of curriculum and learning; fragmented and non-cumulative. They argue that professional development programs just update teachers' understanding instead of

providing opportunity for continual learning. In essence, teachers who responded argued that at institutional level learning can be a process for teachers and students and not dichotomized to mean that teachers teach and students learn.

This finding would support the view of jump-starting teacher professional development as suggested by Marzano, (2003) who indicated that jump starting teacher management approaches comprises jumpstarting teacher professional development which was also supported by Goldhaber, (2011) who postulated that one way of jump-starting capacity building is de-privatizing instruction or making instruction public. Despite the billions of Dollars in investment in China whereby policymakers had sought to close this gap by improving the quality of teaching in rural China through teacher Professional Development program, there seemed to be limited evidence on the effectiveness of such programs in that country. The right strategy according to this finding is simply to enhance collaborative teaching, teacher team development, teacher personal knowledge, teacher retraining teacher preparation and teacher appraisal.

The findings of this section supported the findings of Dembele, (2005) who found out that in Southern Africa teacher professional development is increasingly considered a continuum of learning. Along this continuum three major phases appear consensual: preparation, induction and Continuous Professional Development (CPD). The three phases vary in length depending on context and are distinct yet interrelated. The new shift has been so dramatic that many had referred to it as new image of teacher learning, a new model of teacher education and even a new paradigm of professional development. However, this research had substantive questions raised on teacher preparation whereby the interviewed teachers argued that pegging professional

development to teacher preparation only encouraged teachers to turn into clerks rather than teachers.

This finding supported findings in a study by Ogbonnaya (2007) who found out that teacher professional development has positive effects on students' achievements but the issue is that it has to be long term. Ogbonnaya (2007) further suggested that problem solving skills was greatest when teacher professional development was focused on how students learn and how to gauge the learning effectively. Subsequently, this study supported a study by Owoeye and Yara (2011) which concluded that there was significant correlation between teacher qualification and pupil's performance in Kenya. Further, Kosgei, Mise, Odera and Ayugi (2013) indicated that as the level of education of a teacher increases students performance increase.

Further, Policy as advanced by a long serving chief executive of the Kenyan Teachers Service Commission (TSC) Longoiboni (2013), justified teacher qualification guidelines. These guidelines support importance of teacher qualification as a methodology for enhancing student academic achievement. To illustrate this, Owalabi (2012) as quoted by Ojera (2016) who examined the impact of teachers' qualification on performance of senior secondary school students revealed that student's taught by professional teachers perform better.

Additionally, a study conducted by Ochieng' and Kiplagat (2016) supported the study by revealing that the relationship between teacher qualification and performances was positive, strong and statistically significant. From their study findings, it was observed that the individual teacher's education standards contributed to the level of output and subsequently student performance in the subject matter.

Overall, using regression analysis, the research found out that Teacher Professional Development and its related variable teacher qualification had significant influence on student's academic achievement in secondary school education. The finding showed that teacher Professional development and teacher professional qualification had significant influence on student's academic achievement in the 2015-2017 KCSE results. Institutional managers should therefore put processes in place to enhance Teacher Professional Development and purpose functional teacher placement in terms of relevant qualifications.

4.3 Supervision and Students Academic Achievement

The second research question surveyed influenced of supervision on student's academic achievement in secondary education in Migori County. Supervision incorporated teacher evaluation as a related variable.

This section considered relationship between supervision and student's academic achievement. Variables in consideration in this chapter were Role of principals on meaningful supervision, test score as mode of evaluation, staff meetings, aspects to be evaluated and Decision making. Finally, inferences were made whether supervision and evaluation of schools, teachers and students had a relationship to student's achievement.

4.3.1 Principals responsibility on supervision

The variable principals' responsibility on supervision was considered in this study to find out if principals had an obligation on supervision to enhance student academic achievement in secondary school education. An education officer (O-7) had the following comment on importance of classroom supervision.

Teacher classroom supervision empowers teachers. Teachers on their own may not be aware of all the real and relevant facts on the ground that requires attention to enhance learning. Teacher classroom supervision if conducted by an administrator is essential for improving student academic achievement. However, if supervision is used to serve irrelevant victimization needs, then the intended outcome may not be achieved.

O-7

Respondent O-7 supported that supervision endowed teachers with confidence since shortcoming are noted and strong points enhanced. An education officer (O-7) illustrated that teachers who are left on their own were bound to miss out on emerging teacher issues and would continuously make mistakes that would have been corrected earlier. Respondent O-7 concluded that if supervision was meticulously done, it became relevant for improving academic issues unless it was used to pursue victimization matters.

The view of O-7 supports the findings of Owadiae, (2012) who observed that secondary school student's academic achievement in external examination have been low but for value addition, supervision is a requirement. Further, Owadiae, (2012) said that supervision underscores achievement and is a crucial management approach that should be employed by institutional managers to be able to enhance student academic achievement. similarly, this view supported findings of the World Bank, (2011) that reported that there is a growing conviction that empowerment of school site supervision can make a school respond to needs of student's and improve overall achievement if the processes is extended to classroom situation. Likewise, this study supports findings by Kerubo, (2010) which indicated that head-teacher supervisory interventions were effective.

The data analysis underscores importance of school supervision. Most institutional managers supervise infrastructure but not what happens in classes (See Appendix VII on Page 251). If a principal visits a class once a year, the outcome will not have any impact on student academic achievement since one-time classroom visit amounts to 0.1 percent annually.

4.3.2   Use of Test Scores enhance Supervision

Use of test scores was discussed as a variable under supervision because the main rationale for secondary education is to pass examinations and transit to higher institutions of learning. Summary of respondent views indicated that 228 (65.5 percent) teacher respondents agreed that tests could be a good parameter for enhancing supervision while 120 (34.5 percent) teacher respondents did not support the view that test scores should be used to supervise teachers and evaluate students. Teachers were interviewed to give their opinion on whether test scores could be useful in gauging supervision processes.

Their responses by teacher respondents were summarized by the view of respondent T-176 in the following paragraph:

> Test scores should be used for supervision and evaluation but practicing teachers should strive to evaluate other parameters of student's like behavior, personality, attitude, and talents. Test scores encourage rote learning and turn our students into robotic learning machines. It is therefore important to strike a balance between test scoring and holistic learning.

<div align="right">T-176</div>

Respondent T-176 indicated that apart from insisting on test scores, teachers should strive to evaluate other parameters of student's behavior, personality, attitude, and

talents since test scores encourage rote learning. The respondent who was interviewed equally submitted that it is crucial to strike a balance between test scores and holistic learning. The respondent purposed by suggesting that test scores made students delve in robotic learning which is quickly forgotten when the tests are done.

This result supports a World Summit (OECD 2011) on teaching which noted that teachers need to help students acquire not only the skills that are easiest to teach, and enhanced test scores but more importantly, ways of thinking; ways of working; and skills around citizenship, life and career aspirations. Apart from teaching for the sake of teaching, teachers should ensure that they start from known to unknown. The prospect of enhancing test scores is not only good but supporting other aspects of learning which include ways of thinking, behavior, skills around citizenship and integrity that adds quality to the outcome. Indeed, it important to understand that learning is not only passing examinations and proceeding to the university but also to consider future aspirations of the society. When learning is purposed for holistic education then we shall achieve our national development agenda.

In figure 4.4 the researcher on the assumption that tests scores have been widely used in gauging output in secondary school education, considered the Mean Standard Scores (MSS) scored in areas of specialization to gauge whether teachers embraced supervisory and evaluation interventions. The researcher crossed checked the average mean scores achieved by teachers in relation to their response on whether to use test scores should enhance supervision. The blue bars indicated those in agreement within the Mean Standard Scores (MSS) that teachers registered KCSE 2015-2017.
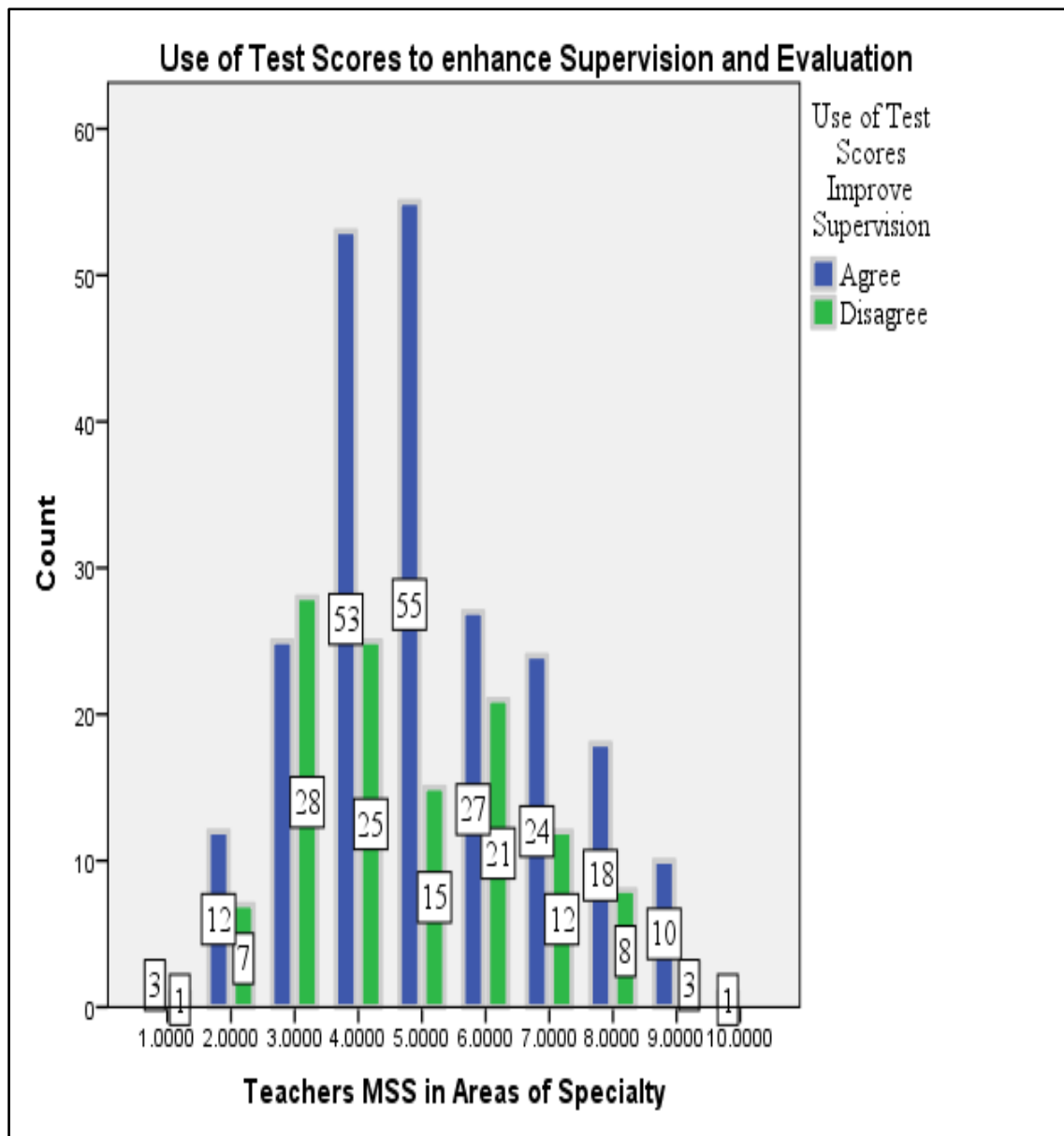
Figure 4.4: Use of test scores to enhance supervision and evaluation

Figure 4.4 revealed teachers within an internal count of two hundred and twenty eight (228) teachers who supported that test scores be a parameter for enhancing supervision. Teachers who registered a Mean Standard Score (MSS) of 1.0000 in their area of specialization were four (4) whereby three (3) constituting 0.9 percent supported that test scores should be used to enhance supervision. Teachers who registered a Mean

Standard Score (MSS) of 2.000 in their area of specialization were nineteen (19) whereby twelve 12 constituting 3.4 percent supported that test scores should be used to enhance supervision.

Teachers who registered a Mean Standard Score (MSS) of 3.000 in their area of specialization were fifty three (53) whereby twenty five (25) constituting 7.2 percent supported that test scores should be used to enhance supervision. Teachers who registered a Mean Standard Score (MSS) of 4.000 in their area of specialization were seventy eight 78 respondents whereby fifty three (53) constituting 15.2 percent within an internal count of two hundred and twenty eight (228) supported that test scores should be used to enrich supervision.

In addition, teachers who registered a Mean Standard Score (MSS) of 5.000 in their area of specialization were seventy (70) whereby fifty five (55) which were 15.8 percent supported that test scores should be used to improve supervision. Teachers who registered a Mean Standard Score (MSS) of 6.000 in their area of specialization were forty eight (48) whereby twenty seven (27) constituting 7.8 percent supported that test scores should be used to enhance supervision. Teachers who registered a Mean Standard Score (MSS) of 7.000 in their area of specialization were thirty six (36) whereby twenty four (24) which was 6.9 percent supporting that test scores should be used to boost supervision.

Teachers who registered a Mean Standard Score (MSS) of 8.000 in their area of specialization were twenty six (26) whereby eighteen (18) constituting 5.2 percent supported that test scores should be used to enhance supervision. Teachers who registered a Mean Standard Score (MSS) of 9.000 in their area of specialization were

thirteen (13) whereby ten (10) constituting 2.9 percent supported that test scores should be used to enhance supervision. Only one teacher registered a Mean Standard Score (MSS) of 10.000 whereby none supported that test scores should be used to enhance supervision.

The finding shown on Figure 4.4 indicated that two hundred and twenty eight (228) which constituted 65.5 percent teacher respondents supported that test scores should be used to enhance supervision as one hundred and twenty 120 constituting 34.5 percent respondents disagreed.

On the basis of the qualitative and quantitative analysis above, there are contractions about role of supervision in enhancing achievement. Interviewed respondents indicated that use of test scores should not be the only parameter for evaluating student academic achievement. Whereas questionnaire respondents suggested at 65.5 percent that it is crucial to use test scores, it is worth noting that 34.5 indicated that it may not be crucial use test scores to enhance supervision in schools. This clearly shows that there is no agreement between perception of teachers and the actual significance of supervision.

4.3.3 Staff meetings per term to Evaluate Academic Achievement

Staff meetings were considered in this research to find out if institutions interacted at staff level to improve supervision and evaluate academic matters. This research did not assess whether such staff meetings were used to generate policies to make teaching more effective. The research was only interested in whether the meetings were there and how regular. Indeed this data was generated on the premise that in private institutions we evidence more staff meetings thus their output is good.

Figure 4.5 on below shows responses by principals on regularity of staff meetings. The items of response were once a term, twice a term, three times a term, when needed and unspecified occasions.
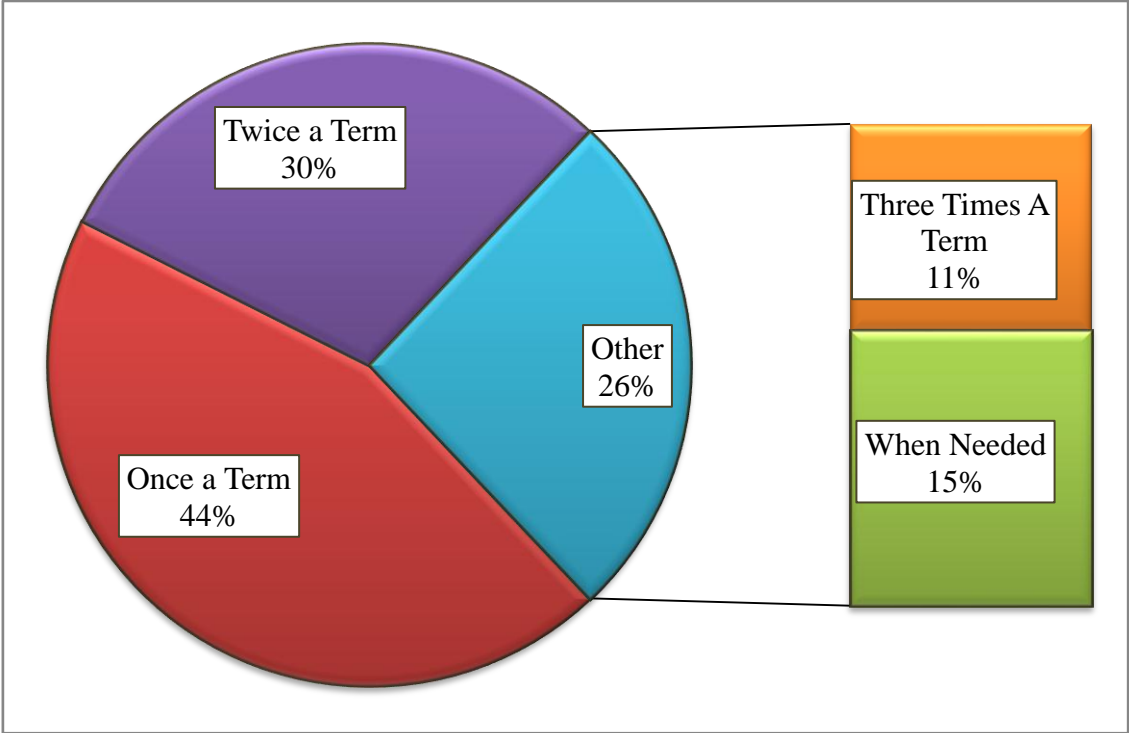
Figure 4.5:   Staff meetings per term

Figure 4.5 indicated that among the fifty four (54) principal respondents, twenty four (24) principal respondents constituting 44.4 percent conducted one staff meeting per term. Sixteen (16) principal respondents at 29.6 percent indicated that they conducted two staff meetings once a term. The Table further indicated that six (6) respondents which constituted 11.1 percent specified that they conducted staff meetings three times a term and eight (8) principal respondents at 14.8 percent showed that they conducted staff meetings when such staff meetings were needed. The finding above indicated that schools in Migori County conducted staff meetings irregularly.

The finding indicated that meeting were far apart thus teachers were not effectively informed of day to day changes to be able to be abreast with immerging requirements. This may require further research to ascertain the optimal number of staff meetings per term because most interviewed principals did not have a prescribed agreement on how often staff meetings should be conducted. A principal respondent P-32 was asked to give perceptions on how many staff meetings were relevant to in improving student academic achievement in secondary school education. The following were the principal's response

> Staff meetings should not be regulated. The idea of having staff meetings in some regularized number of times per term is a misjudgment. Staff meetings should be conducted as regularly as possible on weekly basis or even daily as is done in companies. There is need for weekly briefs and other longer meeting as may be required. The challenge is that staff meetings be conducted within schedules that do not clash with student learning. Apart from urgent meetings, other main stream meetings should be organized when students are not in class for example weekends. P-32

Respondent P-32 clearly exhibited that we should regularize staff meetings. Staff meetings may be conducted as often as may be required. There are urgent matters that require urgent consultation by the staff and in such circumstances we do not need to wait for a regularized meeting. Respondent P-32 suggests that meetings should be weekly. In most private institutions, meetings are done every morning in the name of morning briefs. The only challenge as noted by the respondent is that school meetings are challenging because learning is timetabled in schools. Schools should organize meetings when students are not in class possibly over the weekends.

4.3.4 Correlation between Decision Making and Supervision

Correlation between decision making and supervision was considered in this study to assess whether involvement of institutional stakeholders in decision making influenced

student's academic achievement in secondary school education. Table 4.11 showed correlation test on whether involving teachers in decision making related to supervision and by extension student's achievement. Table 4.11 shows a correlation of 0.816 which indicated a high correlation between the view that teachers and students be involved in decision making in schools.

Table 4.11

Correlation on Decision Making and Improving Supervision

		Involving Teachers Improve Supervision	Involving Student's Improve Supervision
	Correlation Test		
Involving Teachers Improve Supervision	Pearson Correlation	1	.013
	Sig. (2-tailed)		.816
	N	**348**	347
Involving Student's Improve Supervision	Pearson Correlation	.013	1
	Sig. (2-tailed)	.816	
	N	347	**347**

Table 4.11 revealed that there is a strong correlation coefficient of 0.816 (81.6 percent) between the views that both students and teachers be involved in decision making. It is therefore fundamental to strategize on using both teachers and students in management processes in our institutions. Involving teachers and students in decision making in secondary school institutions is crucial in management approaches within institutions thus enables institutions to improve on internal effectiveness. The result showed that

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the dichotomization of teachers as teachers and students as students with no input to support management approaches should be recast. The data outcome indicated that involving students and teachers in decision making were important tools in enhancing achievement in secondary school education. Managers would improve achievement if they improved teachers and students in decision making.

A teacher respondent T-120 was asked to give insights on role of decision making in improving student academic achievement in secondary schools. The following were the teacher's (T-120) response in support of collective decision making.

> Decision making is an integral process of making thing work. Crucial stakeholders in schools are the government, communities, parents, teachers, and students. The specific stakeholders at institutional level are parents, teachers and students.it is therefore important to involve all relevant stakeholder in decision making processes and more so teachers and students need be involved in day to day running of school undertakings.   T-120

Respondent T-120 supported the fact that decision making process in schools should be a collective responsibility. The principal at the top, teachers in the middle and students who are the main recipients of policy need be involved in decision making process. Respondent T-120 enumerated that vital stakeholders in education should work hand in hand to make sure that systems are in place. However, day to day running of institutions should be coordinated by teachers and students. In summary, decision making is a very important undertaking in secondary school education.

The above analysis agrees with studies conducted by Tomaževič, Seljak and Aristovnik, (2014) that indicated that involvement in decision making is sensible and important. Tomaževič, et. al. (2014 further showed that being involved in decision making is quite motivating to teachers just like intrinsic conditions of the job itself such as recognition, achievement, or personal growth.

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4.3.5 Hypothesis test on Influence of Supervision on Achievement

This section presents more findings from analysis of data to test the hypothesis below:

Hypothesis II: There is no significant influence of supervision on student's academic achievement in secondary school education. Hypothesis testing on influence of supervision on student's academic achievement in secondary education used chi-square test to analyze data based on alpha P=0.05 level of significance. Table 4.12 below shows Chi-Square test on influence of Supervision on student's achievement in KCSE 2015-2017.

Table 4.12

Relationship between Supervision and Achievement in KCSE 2015-2017

Chi-Square Test			
	Value	*Df*	Asymp. Sig. (2-sided)
Pearson Chi-Square	**12.275**	7	.092
Likelihood Ratio	13.639	7	.058
Linear-by-Linear Association	3.517	1	.061
N of Valid Cases	**348**		

P<0.05 Chi Square = 14.177, df = 7, N=348, P=0.092

The result in Table 4.12 showed that supervision had no significant association with student's academic achievement in the 2015-2017 KCSE results, alpha 0.05 (p<0.05).

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From the result, the hypothesis was rejected. This was because in Table 4.12 above the computed value of chi-square is less than the critical value of chi square. The critical value of chi-square at $df = 7$ is 14.07 while the calculated chi-square value is 12.275 according to Saleemi, (2014), when the computed value of the chi-square is greater or equal to the critical value of the chi-square, then it is significant and consequently the null hypotheses is rejected. However, when the computed value of the chi-square is less than the critical value as is the case above, then it is not significant and consequently the null hypothesis is not rejected.

This confirms that supervision has not been conducted to the required level that could enhance student academic achievement. Institutional managers should put approaches in place to improve on supervision to enhance student academic achievement. However, the finding does not advance that we should not embrace supervision. If supervision is well coordinated, the findings of Akinfolarin, Babalola, and Aledetin, (2017) who affirmed that supervision had affirmative correlation to student's academic achievement will become a reality.

4.3.6   Aspects being evaluated in schools

Aspects being evaluated as a variable were considered in this research to enable the researcher identify items which are crucial for evaluation. Using an open ended question, the principals and teachers mentioned several aspects. However, the most mentioned aspects were academic performance, class attendance, classroom observation, and content delivery, level of hygiene, performance in subjects, professional documents, syllabus coverage, teacher punctuality and time management.

These aspects were considered as essential and should be evaluated regularly as confirmed by interviewed respondents. The outcome is shown on Table 4.13.

Table 4.13

Aspects Being Evaluated

	Responses	**%**
Academic Performance.	35	10
Class attendance	27	8
Classroom observation	11	3
Content delivery	52	15
Level of hygiene	16	5
Performance in subjects.	54	16
Professional Documents	68	20
Syllabus coverage	15	4
Teachers Punctuality in schools	58	17
Time management	12	3
Total	**348**	

n=348

Table 4.13 above showed respondent's revelation of aspects that were evaluated. The researcher summarized them and captured the most mentioned aspect. It was established that the most evaluated aspect was professional documents which was

supported by sixty eight (68) respondents constituting 20 percent of all respondents followed by teacher punctuality supported by fifty eight (58) respondents constituting 17 percent. However, teacher punctuality in class attendance was not evaluated. At number three was performance in subjects supported by fifty four (54) respondents constituting 16 percent followed closely by content delivery which was supported by fifty two (52) respondents constituting 15 percent of all respondents.

Academic performance was fifth at 10 percent backing whereby the respondents in support were thirty five (35); class attendance among students was ranked sixth by gaining support from twenty seven (27) respondents constituting 8 percent of all teacher respondents. Level of hygiene was seventh whereby sixteen (16) respondents constituting 5 percent were in support. Ranked eighth among evaluated aspects was syllabus coverage with fifteen (15) respondents which constituted 4 percent, time management with twelve (12) respondents at 3 percent and Classroom observation with eleven (11) respondents at 3 percent were ranked ninth and tenth respectively.

Table 4.13 on page 152 exhibited that several aspects were evaluated and showed that evaluation which evidenced was not focused and remained fragmented. The data analysis showed that evaluation process need be focused on one or two crucial activities rather than doing all of them at once. The main aim of secondary evaluation is suggested by the interviewed County Quality and Standards Officer (O-1)

> A system of evaluation should emphasize learning of concepts; discourage rote memorization by remove ambiguities and contradictions. Evaluation should be geared towards preparing the student for the world of work, as well as pursuit of professional and specialized education. Also, Evaluation should create a desire among students who are undergoing secondary education to graduate with quality grades. Evaluation should be extended to teacher recruitment, teacher training and selection so that teaching-learning processes make learning attractive and rewarding.   O-1

Education officer (O-1) indicated that evaluation should lay emphasis on student perceptions and concepts. Any evaluation process should not be vague and should be able to add value to what a student is doing. In addition, evaluation should facilitate preparation of the recipients (students) for the world of work in terms of enabling them to pursue professional and specialized education.

The officer (O-1) also suggested that evaluation should be extended to teachers in a three-tier process involving recruitment, training and selection. By focusing on both the teacher and the student, quality grades will be achieved. The view by the education officer supports evaluation processes but prefers new approach to evaluation. If a new look at evaluation is put in place, then learning will be rewarding and attractive. Similarly, a teacher respondent T-03 was asked to give insights on importance of use of test scores as an evaluation measure for improving student academic achievement in secondary schools. The following were the teacher's (T-03) response on role of test scores as a measure for improving student academic achievement.

> In Kenya, test scores are the ultimate measure of student academic achievement. This is why the government spends trillions of shillings to support education to be able to churn those required test scores. The ministry uses more money in setting examinations, paying supervisors, monitoring examination processes, paying examiners and other logistics. However, as teachers, our perceptions are different. Test scores should not be the ultimate measure of evaluation and supervision. Other factors should be put in place.

<div align="right">T-03</div>

Respondent T-03 started by indication the policy guideline on role of test scores (examinations). The respondent revealed that the current policy still believes in ensuring that students sit examinations and resultant test scores be used to gauge student academic achievement. This is true but achievement should go beyond the

expenditure put in place which included examination monitoring and national marking of the test papers. Respondent T-03 indicated that other ways should be used to supervise and evaluate students. However, the respondent did not give suggestions on the best evaluation methodology.

On the basis of the findings, the results agree with findings by Hanushek and Rivkin (2010) who hypothesized that teacher evaluation were fragmented and in the same light supported that teacher evaluation is critical to student success. Similarly, Longoiboni, (2013) in one of his annual reports advanced that most teacher evaluation systems suffer from design flaws whereby many teachers aren't evaluated every year. In addition, Longoiboni, (2013) indicated that most evaluation interventions were not designed to achieve desired goals.

The theory of action behind supervision and evaluation in Africa is that they improve teacher's effectiveness and therefore boost achievement. However, Wiggins and McTinge, (2005), and Reeves (2004) on studies done in Alexandria argues that the theory of action behind supervision and evaluation is flawed and the conventional process rarely changes in the classroom and ascribe to another theory that advances that the engine that drives high student's academic achievement is teacher collaborative team work.

To sum up, the study in this section found out that both principals and teachers reinforced that supervision was essential for improving student's academic achievement. The questionnaires returned from principals and teachers showed that 88.9 percent and 91.4 percent respectively supported that supervision is important.

The findings confirmed that the principals had a role of enhancing supervision to facilitate teacher collaboration in classroom processes. Further, relevant questionnaire out-put suggested that test scores should be used to evaluate teachers while interviewed respondents demonstrated that test scores could be used but other methods were also crucial. Test scores could be tabulated to show level of achievement of teachers in the various classes they taught.

This section noted that the aspects being evaluated should be professional documents, teacher's punctuality, performance in subjects, content delivery, and class attendance; level of hygiene, syllabus coverage, and time management. As a matter of fact, evaluation should be more focused.

In addition, correlation test was conducted to ascertain whether there was a correlation whether students and teacher should be involved in decision making. The finding ascertained that there is a strong correlation coefficient of 0.816 (81.6 percent) between the views that both students and teachers be involved in decision making. It is therefore essential that institutional mangers put approaches of involving teachers and students in management processes in institutions.

A hypothesis test was conducted to ascertain the association of supervision to student's academic achievement using Chi-square based on alpha 0.05 ($P<0.05$). The Hypothesis was accepted. $P<0.05$ (Chi Square = 12.275, df =7, N=348, P=0.092). This was because in Table 4.12 the computed value of chi-square is less than the critical value of chi square. The critical value of chi-square at df = 7 is 14.07 while the calculated chi-square value is 12.275. The computed value of the chi-square was less than the critical value consequently the null hypothesis was accepted. In conclusion, the result showed

that despite indication that supervision was important, it had no significant influence on student's academic achievement in the 2015-2017 KCSE results.

4.4 Impact of Teacher Induction on Student's Academic Achievement.

Teacher induction was considered in this research to find out if new teachers were inducted into respective institutions. Variables considered were induction of new teachers, induction components; benefits of induction and impact of induction on achievement. The researcher considered teacher experience under teacher induction because in the view of the researcher, experience is a related variable. Of interest to the research was whether induction and teacher experience were a strategy used by institutional managers to enable new teachers and newly admitted students settle into secondary school programmes.

In an attempt to define induction, teacher respondents who were interviewed said the following about induction. Their response was summarized in the following paragraph.

> Induction involves being taken through academic performance of previous years and the targets for the present, forecast for the future and approaches put in place to enhance student achievement. Students should be taken through all schools' infrastructure, rules and regulations as well as academic expectations. Induction should involve introducing teachers and students to students-centered activities like academic disciplines, co-curricular activities, music, drama, debates and national and even international labour market requirement of being ICT compliant.

T-5, T-18, T-72, T-155, T-221 and T-310

A cross-section of teacher respondents that is T-5, T-18, T-72, T-155, T-221, and T-310 suggested that teacher induction should involve taking inductees particularly Newly Qualified Teachers (NQTs) and new students through academic performance in the

previous years to enable them understand the past and shape future outcomes. Taking inductees through previous academic outcomes would enable inductees to understand past performances with a view of creating future personal and institutional targets. Students should be taken through rules and regulations, available infrastructure as well as academic expectations.

The respondents summarized by revealing that teachers and students need be introduced to student-centered activities involving academic and curricular activities for example music, drama, debates and a requirement that we are living in a global village where ICT is compulsory.

The above view supports a research findings by Indoshi, (2003) who advocated that induction should be tailored according to beginning teacher's unique needs which arise from the fact that the new schools where they are posted have challenges. Induction should be conducted internally but external induction is also acceptable. An officer (O-4) who was interviewed gave the following comment giving a new dimension that suggested that induction could also be external:

> Induction can be conducted through conducting joint examinations with neighboring schools; organizing interclasses in sporting activities not only in soccer or such popular sports but even in tug-of-wars with neighboring schools to enable new students and new teachers understand aspirations of individual and neighboring institutions. This would help in settling teachers quickly to the task of learning and jumpstarting institutional experiences.

O-4

An education officer O-4 in support of external induction suggested that induction should involve understanding how neighboring schools work and their aspirations. Respondent O-4 gave a roll of activities that may make induction more meaningful.

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The respondent argued that inductee students be involved in joint examinations, and sporting activities. Also, new teachers should be involved in the said activities to make them quickly understand their new environment. Such processes will enable new teachers and newly admitted students settle quickly into the task of learning. This would enhance student academic achievement in secondary school segment.

4.4.1 Teacher Induction is conducted in school

The variable teacher induction was considered in this research because it is a management approach which has been incorporated in institutions. This section was geared towards assessing if induction is embraced in schools to improve student academic achievement in secondary schools in Migori County and by extension secondary schools in Kenya.

Among the teacher respondents, one hundred and fifty five (155) teacher respondents at 44.5 percent had noticed induction being conducted in their institutions. One hundred and ninety three (193) respondents which constituted 55.5 percent of teacher respondents did not witness any component of induction in their schools. This data indicated that 55.5 percent of the teachers were not inducted to be able to fit quickly in their new work environment.

The variable teacher induction was considered in this research and the findings confirmed that it is a management approach which has been incorporated in institutions.

Table 4.14

Induction of New Teachers

			Who Inducts New Teachers					TOT
			Principal	Deputy Principal	Senior Teacher	HOD	Class Tchrs	
Venues for induction of new teachers	Assembly	Count	64	53	39	25	19	200
		% within	32.0	26.5	19.6	12	9.6	
	Dining Hall	Count	10	30	7	3	7	57
		% within	17.5	52.4	12.7	4.8	12.7	
	Class room	Count	35	30	6	12	6	89
		% within	38.8	33.7	7.1	13.3	7.1	
Total		**Count**	**109**	**113**	**52**	**40**	**32**	**346**
		% within	**31.3**	**32.6**	**15.3**	**11.3**	**9.5**	

N=346

Table 4.14 indicated that two hundred (200) teacher respondents out of the three hundred forty six (346) teacher respondents witnessed teachers being introduced over the assembly, sixty four (64) respondents constituting 32.0 percent indicated that principals introduced teachers to student are during assembly. Fifty three (53) respondents which constituted 26.5 percent of three hundred forty six (346) respondents indicated that deputy principals introduced new teachers to students over the assembly. Thirty nine (39) teacher respondents constituting 19.6 percent indicated that senior teachers introduced new teachers to students during assembly programmes. In addition twenty five (25) respondents which was 12.0 percent indicated that Heads of Department (HoDs) introduced new teachers to students during assemblies and

nineteen (19) respondents constituting 9.6 percent indicated that class teachers introduced new teachers to student's over the assembly.

Further, Table 4.14 showed that fifty seven (57) teacher respondents witnessed new teachers being introduced in the dining hall as students took their lunch or supper, ten (10) which was 17.5 percent out of three hundred forty six (346) indicated that principals introduced teachers to student's in dining halls. Also, thirty (30) teacher respondents constituting 52.4 percent indicated that deputy principals introduced new teachers to student's as they took meals. Seven (7) constituting 12.7 percent indicated that senior teachers introduced new teachers to students during over meals in the dining hall. Three (3) constituting 4.8 percent indicated that Heads of department introduced new teachers to student's and seven (7) constituting 12.7 percent indicated that class teachers introduced new teachers to student's in dining halls.

The analysis captured on Table 4.14 showed inconsistency on the way teachers were introduced in secondary schools thus raising induction concerns. The analysis clearly indicated that there was no formally approved process of introducing new staff members. Further, the teacher respondents who were interviewed admitted that the processes of induction were not effective and could affect student's achievement because teachers took unnecessarily long time to settle in institutions. These concerns on improving the way teachers settle in their new work stations should be improved so that students can start gaining from all teachers without delay.

4.4.2   Most prevalent induction components

Induction components were considered in this study to find out if there were components applied by administrators to manage institutions to enhance student

academic achievement in Migori County. Most prevalent induction components would be crucial on assessing whether induction was fully embraced in schools. The analysis revealed that the most prevalent induction components were orientation, mentor support, administrative support and professional development. The result is captured in figure 4.6.
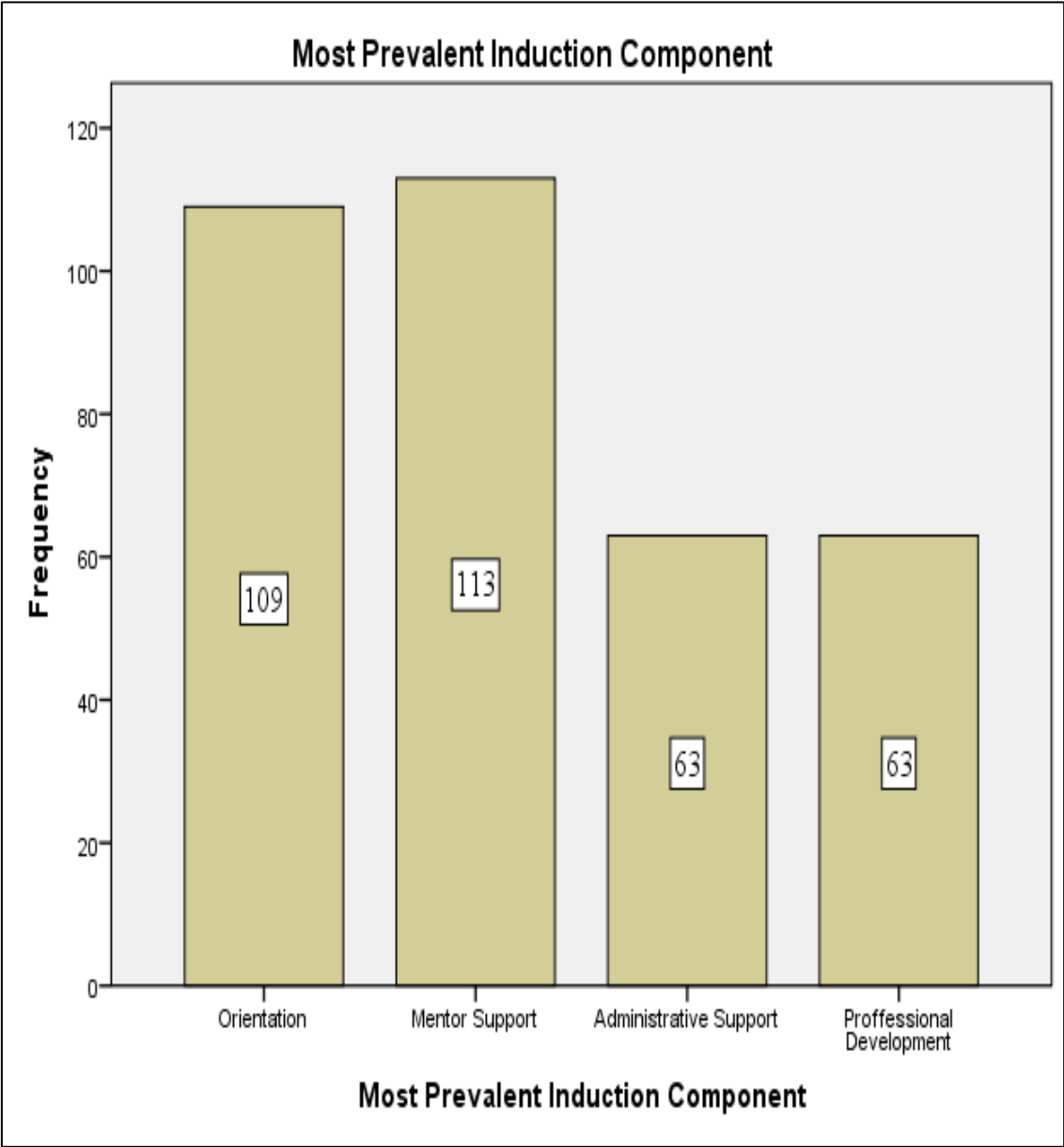
Figure 4.6: **Prevalent Induction Components**

Figure 4.6 on page 162 revealed that the most prevalent induction component was mentor support which was supported by one hundred and thirteen (113) teacher respondents constituting 32.5 percent. In addition, one hundred and nine (109) teacher respondents which constituted 31.3 percent of all three hundred forty eight (348) teacher respondents indicated that institutional orientation was equally important induction process. In addition, Administrative support was supported by sixty three (63) teacher respondents at 18.1 percent and finally Professional Development (PD) shared support with administrative support at sixty three (63) teacher respondents.

The research revealed in this section that mentor support was very crucial. This revelation indicated that induction should be a continuous process rather than its traditional one or two days programme.

4.4.3   Benefits of induction

Benefits of induction were considered in this study to find out if teachers realized that induction had some benefits to them. Qualitative comments were used to ascertain benefits of induction. The following comment by T-347 and P-46 summarized what respondents felt about benefits of induction as other comments were geared towards bringing to light challenges facing induction.

Comment 1

> Induction helps teachers to familiarize with new environment, improves efficiency, induction is functional for capacity building, updates teachers and informs them on school aspirations. Induction is beneficial to teachers and students because it enables them to feel they are part of a system as they get ready to embark on academic and non-academic programs on the institution. Lastly, induction is an impetus to teachers and students.

T-347

> Challenges facing induction are numerous. First, there is the challenge of financial constraints. Also, schools face challenges of inadequate resources to conduct proper induction, constraint of time, non-compliance of some teachers to adhere to induction processes, lack of prioritization of induction, lack of guidelines and ineffective leadership. Once challenges are resolved there would be positive improvement as expected from teacher orientation.
>
> P-46

In the above qualitative data, induction was summarized by T-347 and P-46. The two respondents showed that induction should be used for familiarization which improves efficiency. The respondents indicated that induction can be used for capacity building, updates on institutional goals, updates on school aspirations, updates on new way of doing things. This process of familiarization inculcates a sense of belonging at the new work station. This sense of belonging supports activities geared towards learning. However, P-46 revealed that induction has challenges of inadequate resources, constraints of time, non-compliance of some teachers, and ineffective leadership. Other crucial challenges facing induction were lack of adherence to induction processes.

4.4.4 Hypothesis test on Impact of Induction on Student's Achievement

This section presents more findings from analysis of data to test the hypothesis below:

Hypothesis III: There is no significant impact of teacher induction on student's academic achievement in secondary school education.

The hypothesis testing on impact of teacher induction on student's academic achievement in secondary education used Anova test to analyze data based on alpha P=0.05 level of significance.

Table 4.15

Impact of Induction on Students Academic Achievement

Model	Sum of Squares	*Df*	Mean Square	*F*	Sig.
Impact of induction on student's achievement					
Anova test					
Regression	1.580	1	1.580	6.478	.011
Residual	84.383	346	.244		
Total	85.963	347			

a. Dependent Variable: Teacher Induction interventions
b. Predictors: (Constant), School MSS in KCSE 2015-2017

According Table 4.15 (F (1,146) =6.478, sig-0.11, p>0.05) we accept the null hypothesis. There is no significant influence of teacher induction on student's academic achievement in secondary school education. A regression coefficient of 0.011 or 1.1 percent between induction and performance indicated a weak relationship between induction and student academic achievement. In other words, induction should explain outcome in performance but the analysis showed that induction did not do so. The research revealed that teacher induction needs to be improved to achieve required benefits. Poor induction processes result in teachers and student's failure to settle quickly on the processes of learning. This finding supports an International study conducted by Ingersoll, (2012) which found out that in practice, teacher induction is common, but induction that is intensive, comprehensive, structured, and sequentially

delivered in response to teachers' emerging pedagogical needs is not evidenced in many schools.

The finding in this section supports the findings by Indoshi, (2003) had revealed that induction of newly qualified teachers (NQTs) in Kenya is haphazard and informal. Teachers seldom gain from it and by extension students don't benefit because teachers do not fit quickly into the system. Indoshi, (2003) suggests that induction programmes need be tailored according to beginning teacher's unique needs which arise from the fact that the new schools where they are posted have challenges.

4.4.5 Teacher Experience

Teacher experience was considered as a related variable to teacher induction. Impact of teacher experience on student's academic achievement was considered in this study to assess whether teacher experience had influence on student's academic achievement in secondary school education.

4.4.6 Impact of Teachers' Years of Experience

The variable was used in this research to find out the point where teacher experience started making a difference in a teacher's career. Respondents were given year of service ranges to designate where they felt teachers experience started making a difference.

Table 4.16 on page 167 indicated demographic responses on teacher's years of experience in secondary schools in Migori County

Table 4.16

Impact of Teachers' Years of Experience

		f	%	Index
	Teacher Years of Experience			
Year of	0 year - 4th year	68	19.8	0.83
Experience	5th year - 9th year	116	33.3	0.39
	10th year -14th year	89	25.6	0.74
	14th year -19th year	51	14.7	0.61
	20th year and above	23	6.6	0.27
	Total	**348**	**100.0**	

Table 4.16 indicated that in the first 4 years, sixty nine (69) teacher respondent constituting 19.8 percent of showed that with influence index of 0.83 teacher experience started making a difference; one hundred and sixteen (116) teacher respondents constituting 33.3 percent of total teacher respondents with influence index of 0.39 exhibited that teacher experience made a difference from the 5th year to the 9th year. The 5th year to the 9th year analysis showed lower influence than the previous range of 0-4yrs. The data further revealed that eighty nine 89 teacher respondents at 25.6 percent indicated that at the 10th year to 14th year bracket teacher experience made a difference with an influence index range of 0.74. This range showed more impact than 5-9yrs and slightly more than the first 4 years of employment. In addition, out of

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the entire three hundred forty eight (348) teacher respondents, fifty one 51 teacher respondents at 14.6 percent indicated that teacher experience started making a difference between the 15th years to the 19th year of teaching service. The influence index on the range of 15-19yrs was 0.61 which showed that teachers were becoming less effective. Lastly, only twenty three (23) teacher respondents at 6.6 percent indicated that teacher experience only made a difference beyond the 20th year of service. With an impact index of 0.27, this was the lowest among the researched ranges.

The demographic data above showed that data was normally distributed. The data showed that years of experience impacted on learners. The various influence indices designated level of impact. For example, influence of 0.83 showed that the first year of experience was very influential followed by 10-14yrs. The least influential was 20yrs and above. The influence indices exhibited that most of the ranges 0-4yrs, 10-14yrs, and 15-19yrs showed that teachers were making a difference. Teacher respondent T-128 was asked to give views on impact of teacher years of experience in improving student academic achievement in secondary schools. The following were T-128 response on impact of teacher years of experience in improving student academic achievement

> The view that a teachers year of experience impacts on student's academic achievement is true. However, there are other factors that need be considered for a more qualitative output from all teachers. Years of experience needs be coupled with a teacher's attitude towards teaching as a profession. If a teacher is qualified, has been teaching for years and has negative attitude towards work, the output will be weak.

> T-128

Respondent T-128 indicated that indeed it is true that teacher experience is crucial and student outcomes can be explained by the prevailing teacher experience factors.

However, teachers should go beyond taking for granted that they have been teaching for years. Their attitude towards their duties as teachers should be sharpened to be able to accept changes and be better teachers.

This finding supported Adeyemi, (2008) that advanced that teacher's years of experience had influence on student achievement and recommended that governments should encourage experienced teachers to stay on the job by providing them with incentives and better promotional prospects. The analysis contradicted a study by Sweeney, (2012) which studied the relationship of teacher salaries, teacher experience and teacher education. The study by Sweeney indicated that years of experience of teachers had little to no effect on student's academic achievement. Despite all these contradictions, this analysis showed a relationship between teacher years of experience and student academic achievement. The finding above agrees with the findings of a study by Ladd, (2008) who suggested that on average, teachers with 20 years of experience are not much more effective than those with less experience.

4.4.7   Academic Indicators of Teacher Experience

Table 4.17 shows data on academic indicator of teacher experience. Academic indicator of experience was considered to ascertain the effect of academic experience of teachers on student's academic achievement. The academic indicators put to test were Doctorate (PhD), Master's Degree in Education, Bachelor's Degree in Education, Diploma Certificate in Education and Other relevant indicators. The demographic output of the indicators is presented in Table 4.17.

Table 4.17

Indicators of Teacher Academic Experience

		F	Percent (%)	Cumulative Percent (%)
Teachers Academic Experience	PhD	2	3.7	3.7
	Master's Degree	13	24.1	27.8
	Bachelor's Degree	24	44.4	72.2
	Diploma	11	20.4	92.6
	Others	4	7.4	100.0
	Total	**54**	**100.0**	

N=54

Table 4.17 indicated that only two (2) principal respondents which were 3.7 percent advanced that PhD certificate would be a good indicator for teacher experience. Master's degree was preferred by thirteen (13) principal respondents constituting 24.1 Percent and Bachelor's Degree by twenty four (24) teacher respondents constituting 44.4 percent. Eleven (11) teacher respondents which constituted 20.4 percent indicated that the acceptable indicator for teacher experience should be Diploma certificate whereas only four (4) respondents which were 7.4 percent showed that other academic indicators could also be applicable. The result indicated that the best indicator for teacher experience in secondary school is a Bachelor Degree in education.

On teacher experience, the County Quality and Standards Officer (CQASO) who was designated as respondent O-1 gave the following response on impact of teacher experience on student academic achievement.

> An experienced teacher has more confidence and good mastery of content area of specialization. Armed with mastery and content, an experienced teacher executes a more effective coverage of the syllabus. However, teachers with no experience are more energetic. This extra energy at times may be misconstrued as effectiveness or efficiency.
>
> O-1

An Education Officer respondent O-1 showed that experience inspired teachers to be more confident. A teacher with good mastery and equally good content can perform well by executing the syllabus more effectively. However, teachers without experience are more energetic and at times the energy is misconstrued as efficiency.

Principal respondent (P-15) who was interviewed by the researcher on teacher experience supported the current research finding in the following comment.

> Teachers with no experience are not any better. Experience builds character and confidence. Character and confidence are two essential components involved in making of a great teacher. Experience should not be measured in terms of certificates held but should include numbers of years a teacher has been actively teaching.
>
> P-15

The respondent principal (P-15) recommended that experience builds character and confidence. The respondent exhibited that character and confidence are essential components that elevate teachers to greatness. The principal suggested that experience

should not only be measured in terms of certification but should indicate number of years a teacher has been in service.

4.4.8   Relationship of Teacher Experience to Academic Achievement

This section presents more findings from analysis of data to test the hypothesis below:

There is no significant impact of teacher experience on student's academic achievement in secondary school education.

The hypothesis testing on relationship of teacher experience on student's academic achievement in secondary education used Anova test to analyze data based on alpha P=0.05 level of significance.

Table 4.18

Teacher Experience relationship to Students Achievement

	Anova Test				
	Sum of Squares	*Df*	Mean Square	*f*	Sig.
Regression	6.622	1	6.622	.254	.615[b]
Residual	9027.126	346	26.090		
Total	9033.747	347			

a. Predictors: (Constant), School MSS in KCSE 2015-2017
b. Dependent Variable: Total Years of Service

Table 4.18 specified a regression coefficient was 0.615 or sixty one point five (61.5) percent. There is thus strong relationship between years of experience and student's' academic achievement. In other words, secondary school performance in secondary schools can be explained by the prevailing teacher years of experience.

Head of Department respondent (H-11) who was interviewed by the researcher on teacher experience gave the following comments.

> Teacher experience is an essential part of a teacher's cycle. An experienced teacher is easy to work with and more so helpful in enhancing institutional goals. Teacher's years of experience is crucial if a teacher worked in a competitive environment.
>
> `   H-11

The Head of department (H-11) gave a comment that revealed that teacher experience is an essential part of a teacher's progression and ultimate achievement. The respondent suggested that experienced teachers are easy to work with because they were more knowledgeable and understood what is to be done. However, the respondent noted that a teacher needs to work in a reasonable environment to be able to understand how things are done.

This finding supports findings by Sureiman, (2010) whose study entitled "Determinants of Academic Performance in Public Day Secondary Schools in Nandi Sub-County, Kenya" discovered that the teachers experience had significant impact on Academic Performance of students in secondary schools. Further, the study supported results of a study conducted by Adeyemi, (2008) which indicated that teacher teaching experience was significant on student outcomes as measured by their performance in examinations.

Further, this finding counters the research findings of Kimani, Kara, and Njagi, (2013) suggested that teacher experience are not significantly related to student's achievement.

In summary, the findings in this section indicated that induction was crucial for forecasting the future in terms of required management approaches. Interviewed respondents suggested that induction should include taking new students through all school infrastructure, rules and regulations as well as academic expectations. The findings indicated that induction should involve introducing students and teachers to student centered activities like academic disciplines, co-curricular activities, music, drama, debates and various requirements of being Information Communication Technology (ICT) compliant.

Despite the responses, out of a total of three hundred and forty eight (348) teacher respondents one hundred and fifty four (154) constituting 44.5 percent witnessed comprehensive induction in their institutions. This result indicates that institutional managers should revisit approaches of improving induction so that gains that can arise from induction are realized. The findings revealed that new teachers are haphazardly inducted into their new environment. The findings indicated that teachers were not given full institutional induction.

This section noted that the most prevalent induction component was mentor support, orientation, administrative support and professional development. The finding suggested that institutional managers should exploit strategy of improving mentor support, orientation, administrative support and professional development to be able to improve student academic achievement in secondary school education.

Indicators of teacher experience were based on certification, whereby cumulatively, seventy two (72) percent of teachers had bachelor's degree certificate and relevant higher qualification. Interviewed education officers supported this finding by suggesting that experienced teachers have more confidence and have good mastery of subject content. Armed with mastery and subject content, experienced teachers were more effective on syllabus coverage. Seventy two (72) percent teacher experience revelation could work well for the Migori County but the remaining 28 percent needed monitoring.

The indicators of teacher experience were cumulatively felt within the first fourteen (14) years of a teacher's service. The finding was corroborated by the student's view that they were better in the hands of older teachers. Further the finding is supported by Ingersoll and Strong, (2004) who advanced that the conditions under which a person carries out the first years of teaching have a strong influence on the level of effectiveness which the teacher is able to achieve and sustain over the years.

This study supported a study conducted by Holt, (2011) which revealed that teachers needed to participate in four induction programs components recommended by state school board. However, for many beginning teachers, support was lacking. This is the same scenario which was realized in the current study. Despite recent research determining that students of beginning teachers made greater academic progress if their teachers took part in comprehensive induction program as advanced by (Ingersoll and Strong, 2011), induction is not taken seriously as an aspect of teacher management approach in Migori County-Kenya.

Further, The findings in this study was supported by a study conducted by Marzano et al (2011) which recommended that induction programs emphasize instructional support in the form of skills, knowledge, and management approaches for effective classroom teaching, and psychological support in the form of encouraging confidence building. Since this research has indicated that induction improves delivery, this study also supports a study conducted by Potner, (2005) which indicated that induction programs are typically designed to improve teaching skills of beginning teachers. Despite theoretical support by managers, the findings in this study confirmed that teachers and students were not fully inducted.

Furthermore, this study supports findings by Jared and Immanuel, (2012) which indicated that beginning teachers were not properly inducted into the teaching profession thus showing gap on induction process. Therefore, there is need for the government to create formal induction processes and mentoring policies for beginning teachers and newly admitted students in secondary school institutions. Induction processes would fast track novice teacher to new school systems and quickly assist student's achievements.

This study agreed with a study by Indoshi, (2003) that showed that induction of Newly Qualified Teachers (NQTs) in Kenya was haphazard and informal. Teachers seldom gain from induction and student don't benefit because teachers do not fit quickly into the system. Indoshi, (2003) suggests that induction programmes needed to be tailored according to beginning teacher's unique needs which arose from the fact that the new schools where they are posted had unique challenges.

Subsequently, this research also confirmed that teachers with no experience are not any better than their counterparts with experience. Experience builds character and confidence, Character and confidence are two essential components involved in making of a great teacher. The finding illustrated that experience should not only be measured in terms of certificates held; but should also include numbers of years a teacher has been actively teaching.

In addition, the research revealed that there was a strong relationship between teacher experience and student academic achievement. In other words, secondary school performance can be explained by the prevailing teacher certification and years of experience. Therefore, there is need for harnessing teacher qualification and enhancing induction to reduce the time it takes teachers to settle in new stations.

The section revealed that there is thus strong relationship between years of experience and student's' academic achievement (Regression coefficient was 0.615 or 61.5 percent). In other words, secondary school performance can be explained by the prevailing teacher years of experience.

However, this research countered the findings of Goldhaber and Brewer, (2000) who had advanced that there is mixed evidence that experience and education levels are associated with student learning.

4.5   Role of Motivation on Student's Academic Achievement

The fourth research question considered role of motivation on student's academic achievement in secondary education in Migori County.

4.5.1   Teacher Motivation

The variable teacher motivation was used in this research to find out whether teachers were motivated to teach and enhance student's achievement. Preliminary data analysis showed that thirty nine (39) principal respondents constituting 72.22 percent noted that teachers were not motivated to undertake their professional duties of teaching. Only thirteen (13) constituting 23.95 percent of the principals noted some level of motivation among teachers. However, two (2) principal respondents constituting 1.85 percent of the principals did not respond to the questionnaire items.

Several questions were put to teachers to gauge level of motivation among teachers in Migori County. The questionnaire items looked at school tours, institutional meals, merit promotion, achievement rewards, incentives, institutional houses, refresher courses, intrinsic interest in work, comfortable teacher workload and involvement in decision making.

At a scale of 1-5 involving: Very True (VT), True (T), Somehow True (ST), Not True (NT) and Not True at All (NTA) the respondents were given the opportunity to indicate their views.

Teachers gave their views and the following data was generated: column on valid respondents, column on mean of their responses, Standard Deviation of responses from the mean, Variance and column for Skewness of responses.

The output showing secondary school motivators were summarized on Table 4.19 on page 179. All the three hundred and forty eight (348) teacher respondents gave their responses on indicators of teacher motivation and their relationship to performance.

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Table 4.19

School Motivators

Motivation in Schools					
	Valid	**Mean**	**Std. Dev.**	**Variance**	**Skew-ness**
Tours	348	2.39	1.229	1.511	0.590
Institutional Meals	348	2.45	1.348	1.816	0.686
Merit Promotion	348	3.07	1.319	1.739	-0.077
Achievement Rewards	348	3.31	1.396	1.948	-0.197
Work Benefits/Incentives	348	3.11	1.841	2.192	-0.012
Institutional housing	348	3.29	1.447	2.093	-0.212
Attending Refresher Courses	348	2.53	1.291	1.668	0.663
Intrinsic interest in work	348	3.16	1.416	2.061	-0.010
Comfortable Teacher workload	348	3.18	1.743	2.170	-0.093
Involvement in decision making	348	3.07	1.421	2.018	-0.60

In Table 4.19 teachers were given an opportunity to respond whether tours for teachers were organized in their schools, the responses indicated a Mean of 2.39, Standard Deviation of 1.229, variance of 1.511 and Skewness of 0.950. With a Mean of 2.39 and a positive skew of 0.950, it was noted that teachers in the sampled schools went for tours. This research did not consider destinations of these tours. This outcome supports

Jabuya (2010) in a study conducted in Uriri Sub County indicated that starting point for teacher motivation had already been established by schools whereby tours for teachers are witnessed; though the level was low.

In addition, Table 4.19 teachers were given an opportunity to respond whether institutional meals were offered in their schools, the table indicated a Mean of 2.45, Standard Deviation of 1.348, variance of 1.816 and Skewness of 0.686. With a Mean of 2.45 and a positive skew of 0.686, it was noted that teachers in the sampled schools had institutional meal prrogrammes.

Further, teachers were given an opportunity to respond whether promotions based on merit were evidenced in schools. Table 4.19 indicated a Mean of 3.07, Standard Deviation of 1.319, variance of 1.735 and Skewness of -0.077. With an average Mean of 3.07 and a Skewness of -0.077, it was noted that teachers in the sampled schools did not witness promotion of teachers based on merit. Promotions of teachers were not based on teacher's excellence. This finding supports a study conducted by Barasa, (2015) which found out that there was low level of motivation of teachers arising from promotions. Teachers felt demotivated despite regular updates on emerging issues on the curriculum. Teachers were further demotivated because they felt that some of the promotions were unfair.

Teachers were also given opportunity to respond whether achievement rewards were given in schools. Achievement rewards are gifts given after students have accomplished secondary education and the results are used to appreciate teachers. Table 4.19, showed a Mean of 3.31 for achievement rewards and Standard Deviation of 1.396, variance of 1.948 and Skewness of -0.197. With a Mean of 3.31 and a Skewness of -0.197, it was

noted that teachers in the sampled schools did not witness achievement rewards. This view agrees with a study conducted by Nyantika, (1996) on factors leading to poor performance in Kenya Certificate of Secondary Education (KCSE) which showed that lack of rewards for teachers to boost their morale were to blame for poor performance in KCSE.

Subsequently, teachers were given opportunity to respond whether work benefits/incentives were given to teachers in schools. Work benefits/incentives are gifts given during school programmes to improve delivery. Table 4.19 indicated a Mean of 3.11, Standard Deviation of 1.841, variance of 2.192 and Skewness of -0.012. With a Mean of 3.11 and a Skewness of -0.012, it was noted that teachers in the sampled schools did not witness achievement rewards/incentives.

Additionally, In Table 4.19 teachers were given an opportunity to respond whether they were given opportunity to attend refresher courses, the table indicated a Mean of 2.53, Standard Deviation of 1.291, variance of 1.668 and Skewness of 0.663 with a Mean of 2.53 and a Skewness of 0.663, it was noted that teachers in the sampled schools had given teachers opportunity to attend refresher courses.

Again, teachers were given an opportunity to respond whether they were self-motivated; the table indicated a Mean of 3.16, Standard Deviation of 1.416, variance of 2.061 and Skewness of -0.010. With a Mean of 3.16 and a Skewness of -0.010, it was noted that teachers in the sampled schools had no intrinsic interest in work

. In Table 4.19 teachers were given opportunity to respond whether teachers in schools were given comfortable workloads as prescribed by government policy. Table 4.19 indicated a Mean of 3.18, Standard Deviation of 1.743, variance of 2.170 and Skewness

of -0.093. With a Mean of 3.18 and a Skewness of -0.093, it was noted that teachers in the sampled schools did not have comfortable workload as prescribed in policies.

Teachers were also given opportunity to respond whether they were involved in decision making in schools. Table 4.19 indicated a Mean of 3.07, Standard Deviation of 1.421, variance of 2.018 and Skewness of -0.60. With a Mean of 3.07 and a Skewness of -0.60, it was noted that teachers in the sampled schools were not involved in decision making.

Whereas Tours, institutional meals, attending refresher courses, and involvement in decision making were motivation indicators evidenced in schools; the rest of the indicators comprising promotion based on individual teacher merit, achievement rewards, work incentives, institutional housing and comfortable workload were not evidenced in schools. Out of the 10 indicators, only four had positive impact on teachers while the remaining six were not incorporated hence did not impact on teacher factor. This finding supports views by Jordan (2006) who revealed that incentives for teachers in the public education system that may enable them to perform well are frequently weak due to sanctions.

Respondent P-37 who was a principal was interviews and gave the following comments in support of motivation in schools

> Motivation is important not only to teachers but even to students in secondary schools. Teachers are motivated through incentives and rewards, tours, institutional meals and involvement in decision making. However, motivation of teachers through institutional processes is challenging because the government has put checks and measures to curb unnecessary burden to parents and institutions. The policy in place does not facilitate possibilities of improving overall motivation in schools
>
> P-37

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Principal respondent P-37 recapped that motivation is crucial in secondary schools. The respondent noted that there are some acceptable methods that schools can use to motivate teachers. The respondent mentioned rewards, tours, meals and involvement in management of school as important motivators for teachers. On the other hand the respondent indicated that the government does not approve on any extra expenditure in schools to enable school principals to embark on teacher and student motivation.

4.5.2 Teacher Classroom Methodologies

Several questionnaire items were put to teachers to assess their involvement in classes. The questionnaire items assessed teacher's exploitation of varied methods of teaching; whether teachers give regular exercises to enhance learning, whether teachers gave students opportunity to freely ask questions in class, whether teachers organized regular practical lessons, whether teachers used motivational techniques and whether teachers in this school were truly friendly. At a scale of 1-5 involving Very True (VT), True (T), Somehow True (ST), Not True (NT) and Not True at All (NTA).

Teachers gave their views and the following data was generated: there was a column on valid respondents, column on mean of their responses, column on standard deviation of responses from the mean, critical rating, column for frequency of responses within rating range and percentage of responses within the range.

In the analysis interpretation, a mean of 2.5 or less showed a skewed response in support of the view as positive and purposeful. On the other hand, a mean of 2.6 to 3.5 indicated a negatively skewed response which showed weak impact and of lack of exploitation of the approach. The output is summarized on Table 4.20. The output was used to show perceived impact of teacher classroom methodologies.

Table 4.20

Teacher Classroom approaches

Teacher Classroom Approaches

Variables	Valid	*f*	%	Mean	Std. Dev.	Rating
Teachers use varied methods of teaching	348	289	82.9	2.4	1.239	1-3
Teachers give regular exercises to enhance learning	348	279	80.2	2.5	1.364	1-3
Teachers give students opportunity to ask questions	348	233	67.0	3.06	1.313	1-3
Teachers organize practical lessons	348	224	64.3	3.13	1.5	3-5
Teachers use motivational techniques	348	215	61.9	3.06	1.422	3-5
Teachers in this school are friendly	348	246	70.8	3.27	1.453	3-5

In Table 4.20, three hundred and forty eight (348) respondent responses were collected. Within the total count of three hundred and forty eight respondent's (348) responses, two hundred and eighty nine (289) respondents which was 82.9 percent with a mean of 2.4, a standard deviation of 1.239 were within the range of 1-3. This exhibited that the variable whereby teachers used varied methodologies while teaching was exploited in secondary schools in Migori County. Further, within the total count of three hundred

and forty eight respondent's (348) responses, two hundred and seventy nine (279) respondents which was 80.2 percent with a mean of 2.5, a standard deviation of 1.364 were within the range of 1-3. This exhibited that the variable whereby teachers gave regular exercises while teaching was exploited in secondary schools in Migori County. Additionally, within the total count of three hundred and forty eight respondent's (348) responses, two hundred and thirty three (289) respondents which was 67.0 percent with a mean of 3.06, a standard deviation of 1.313 were within the range of 3-5. This showed that the variable whereby teachers gave students opportunity to freely ask questions while teaching was not exploited in secondary schools in Migori County. Further, within the total count of three hundred and forty eight respondent's (348) responses, two hundred and twenty four (224) respondents which was 64.3 percent with a mean of 3.13, a standard deviation of 1.5 were within the range of 3-5. This exhibited that the variable whereby teachers organized regular practical lessons while teaching was not fully exploited in secondary schools in Migori County.

Similarly, within the total count of three hundred and forty eight respondent's (348) responses, two hundred and fifteen (215) respondents which was 61.9 percent with a mean of 3.06, a standard deviation of 1.422 were within the range of 3-5. This showed that the variable teacher motivational teaching was not exploited in secondary schools in Migori County. In, addition, within the total count of three hundred and forty eight respondent's (348) responses, two hundred and forty six (246) respondents which was 70.8 percent with a mean of 3.27, a standard deviation of 1.453 were within the range of 3-5. This demonstrated that the variable whereby teachers were friendly to students in classrooms was not fully exploited in secondary schools in Migori County.

The analysis above showed that teachers in Migori County exploited various methods of teaching by giving regular exercises to enhance learning. On the contrary, teachers did not give students opportunity to freely ask questions in class and did not organize regular practical lessons. Also, teachers did not use motivational techniques and they were unfriendly to learners. The outcome suggested that a new way of classroom interaction be put in place in Migori County to be able to enhance student's academic achievement.

This result above agreed with the findings of Barasa, (2015) that indicated that in order to increase knowledge there is need for a more motivated teaching force in terms of classroom interaction. The result noted that there was low level of motivation of teachers thus making them fail in positive interaction with students. In addition, the result supported findings by Olando (2003) which noted that low motivation led to vices that countered productivity.

Finally, the study supported a study conducted in Bungoma, Kenya by Juma, (2011) that noted that learning environment and teacher motivation upon knowledge development need attention in our schools. This is the way forward to enable us enhance students achievement in Migori County.

4.5.3   Principals responses on Indicators of Teacher Motivation

Indicators of teacher motivation were considered in this research because a motivated teacher is able to teach and improve student academic achievement as suggested by Marques, (2010), who advanced that motivation is what people need to perform better if the right person, with right skills, right qualification, right drive, and right experience are placed in charge of the task at hand.

Preliminary analysis indicated that 13.5 percent of teachers showed that intrinsic interest in work was an indicator for motivation and 21.3 percent showed that added responsibility was a true indicator of teacher motivation. In addition, 24.6 percent disclosed that promotion made teachers more satisfied with their work whereas 19.5 percent indicated that challenging work was the right indicator for teacher motivation and 14.4 percent indicated that for teachers to be satisfied, the same question was posed to principals who gave the following view as captured on Figure 4.7
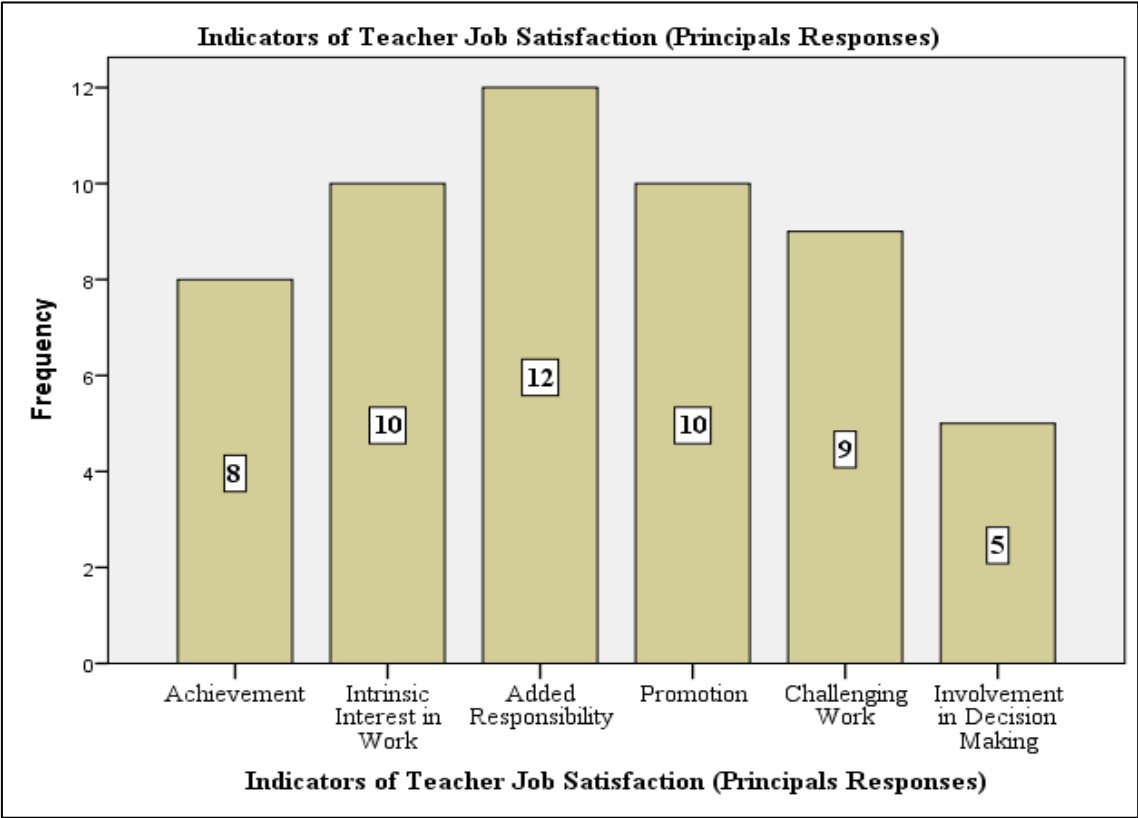
Figure 4.7: Indicators of Teacher Motivation

Figure 4.7 indicated that eight (8) principal respondents constituting 6.6 percent suggested achievement should be one of the indicators for teacher motivation. Ten (10)

principal respondents constituting 18.5 percent indicated that intrinsic interest in work was the best indicator for motivation. Twelve (12) principal respondents constituting 22.2 percent indicated that added responsibility was a good indicator of teacher motivation. In addition, Ten (10) principal respondents constituting 18.5 percent revealed that promotion made teachers more satisfied with their work. whereas nine (9) principal respondents which constituted 16.7 percent specified that challenging work was the an indicator for teacher motivation, five (5) principal respondents constituting 03.7 percent indicated that for teachers to be satisfied, they must be involved in decision making in institutions.

The indicators as given by the principals showed that the best indicator for teacher supervision was added responsibility which was supported by 22.2 percent. Achievement as an indicator was followed by intrinsic interest in work and promotion on merit which constituted 18.5 percent. The third indicator was challenging work which was supported by 16.7 percent of the principal respondents. Challenging work was followed by achievement at 6.6 percent of all principal respondents. Lastly, the principals did not see the need of involving teachers in decision making. The respondents who supported that involvement in decision making were only five (5) principal respondents constituting 03.7 percent.

On overall, the data and the resultant analysis does not indicate the best indicator for teacher motivation. Generally, both teachers and principals were in agreement on indicators of motivation. The analysis and the resulting quantitative output showed that the indicators of motivation were exploited in secondary school education in Migori County, Kenya. However, impact of motivation indicators of teacher job satisfaction

are not yet felt in student academic achievement in Migori County as is required within the national goals.

4.5.4 Teacher Satisfiers versus Performance

A cross tabulation between results in KCSE 2017 and teacher satisfiers was conducted to gauge relationships. Table 4.21 shows the output.

Table 4.21

Teacher Satisfiers versus Academic Performance

			Teacher Job Satisfiers						Tot
			Achie-vement	Intrinsic Interest in Work	Added Responsibility	Promotion	Challenging Work	Decision Making	
Sch. MSS in KCSE 2017	2.000	Count	1	0	1	1	0	0	3
		% within MSS	33.3	0.0	33.3	33.3	0.0	0.0	
	3.000	Count	2	5	10	8	8	5	38
		% within MSS	5.3	13.2	26.3	21.1	21.1	13.2	
	4.000	Count	6	9	16	8	22	10	71
		% within MSS	8.5	12.7	22.5	11.3	31.0	14.1	
	5.000	Count	8	19	19	41	21	18	126
		% within MSS	6.3	15.1	15.1	32.5	16.7	14.3	
	6.000	Count	5	12	23	18	16	12	86
		% within MSS	5.8	14.0	26.7	20.9	18.6	14.0	
	7.000	Count	1	2	4	7	1	1	16
		% within MSS	6.2	12.5	25.0	43.8	6.2	6.2	
	8.000	Count	0	0	0	2	0	3	5
		% within MSS	0.0	0.0	0.0	40.0	0.0	60.0	
	9.000	Count	0	0	1	1	0	1	3
		% within MSS	0.0	0.0	33.3	33.3	0.0	33.3	
Total		Count	23	47	74	86	68	50	348
		% within MSS	6.6	13.5	21.3	24.7	19.5	14.4	

N=348

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Table 4.21 indicated influence of teacher job satisfiers on student academic achievement in secondary education. Three (3) teacher respondents recorded a mean standard score of 2.000 whereby one (1) teacher Respondent (33.3 percent), one (1) teacher Respondent constituting 33.3 percent, and one (1) teacher Respondent who constituted 33.3 percent advanced that achievement, added responsibility and promotion respectively were crucial job satisfiers. Thirty-eight (38) teachers who recorded a mean standard score of 3.000 whereby two (2) teacher Respondents at 5.3 percent, five (5) teacher Respondents constituting 13.2 percent, ten (10) teacher Respondents at 26.3 percent, eight (8) teacher Respondents constituting 21.1 percent, eight (8) teacher Respondents at 21.1 percent and five (5) teacher Respondents constituting 13.2 percent advanced that achievement, Intrinsic interest in work, added responsibility, promotion, challenging work, and involvement in decision making respectively were crucial job satisfiers.

Further, Seventy-one (71) teachers recorded a mean standard score of 4.000 whereby six (6) teacher Respondents at 8.5 percent, nine (9) teacher Respondents constituting 12.7 percent, sixteen (16) teacher Respondents constituting 22.5 percent, eight (8) teacher Respondents who constituted 11.1 percent, twenty two (22) teacher Respondents at 31.0 percent and ten (10) teacher Respondent constituting 14.1 percent advanced that achievement, Intrinsic interest in work, added responsibility, promotion, challenging work, and involvement in decision making respectively were crucial job satisfiers. Similarly, one hundred twenty six (126) teachers recorded a mean standard score of 5.000 whereby eight (8) teacher Respondents at 6.3 percent, 19 teacher Respondents constituting 15.1 percent, nineteen (19) teacher Respondents who were 15.1 percent, forty one (41) teacher Respondents constituting 32.5 percent, Twenty one (21) teacher Respondents at 16.7 percent and eighteen18 teacher Respondents

constituting 14.3 percent advanced that achievement, Intrinsic interest in work, added responsibility, promotion, challenging work, and involvement in decision making respectively were crucial job satisfiers.

Also, Eighty-six (86) teachers recorded a mean standard score of 6.000 whereby five 5 teacher Respondents at 5.8 percent, twelve (12) teacher Respondents at 14.0 percent, twenty three (23) teacher Respondents who constituted 26.7 percent, eighteen (18) teacher Respondents at 20.9 percent, sixteen (16) teacher Respondents constituting 18.6 percent and twelve (12) teacher Respondent at 14.0 percent advanced that achievement, Intrinsic interest in work, added responsibility, promotion, challenging work, and involvement in decision making respectively were crucial job satisfiers.

Furthermore, sixteen (16) teachers recorded a mean standard score of 7.000 whereby one (1) teacher Respondent at 6.2 percent, two (2) teacher Respondents at 12.5 percent, four (4) teacher Respondents constituting 25.0 percent, seven (7) teacher Respondents constituting 43.8 percent, one (1) teacher Respondent at 6.2 percent and one (1) teacher Respondent at 6.2 percent advanced that achievement, Intrinsic interest in work, added responsibility, promotion, challenging work, and involvement in decision making respectively were crucial job satisfiers.

Additionally, three (3) teachers recorded a mean standard score of 8.000 whereby two (2) teacher Respondents at 6.2 percent, and three (3) teacher Respondents constituting 12.5 percent indicated that promotion, and involvement in decision making respectively were central job satisfiers. Also, three (3) teachers recorded a mean standard score of 9.000 whereby one (1) teacher Respondent with a percentage of 33.3, one (1) teacher Respondent at 33.3 percent and one (1) teacher Respondent constituting 33.3 percent

specified that added responsibility, promotion and involvement in decision making respectively were vital job satisfiers.

The result indicated that within the lower Mean Standard Scores (MSS) range of 1.000 to 4.000 teachers were more interested in achievement, intrinsic interest in work and added responsibility but as they become high achievers they were more interested in promotion, challenging work and involvement in decision making. The finding above supports findings by Onyambu, (2014) who noted that intrinsic motivation that encouraged teachers to work included being recognized which is a potential indicator for professional growth in secondary schools. However, the data analysis above does not reliably justify whether teachers at all levels of achievement in terms of Mean Standard Score were different in the way they viewed job satisfiers in the teaching profession. As a result, that data on Table 4.21 was summarized to show responses based on grouped levels of performance. Table 4.22 shows grouped responses on Kenya Certificate of Secondary Education (KCSE) teachers output versus job satisfiers.

Table 4.22

Teacher Job Satisfiers versus Performance

		TEACHER JOB SATISFIERS					
	MSS	Achiev-ement	Intrinsic Interest in Work	Added Responsibility	Promotion on merit	Challenging Work	Decision Making
SCH MSS IN KCSE 2017	2.000-5.999	17	33	46	58	51	33
	6.000-9.999	6	14	28	28	17	17

Table 4.22 showed that seventeen (17) respondents in the lower MSS range of 2.000-5.999 specified that achievement was an acceptable teaching job satisfier. Intrinsic interest in work, added responsibility, promotion on merit, challenging work and decision making within the range of 2.000-5.999 had thirty three (33), forty six (46), fifty eight (58), fifty one (51) and thirty three (33) respondents respectively. Further, Table 4.21 showed that six (6) respondents in the upper MSS range of 6.000-9.999 indicated that achievement was an acceptable teaching job satisfier. Intrinsic interest in work, added responsibility, and promotion on merit, challenging work and decision making registered fourteen (14), twenty eight (28), twenty eight (28), seventeen (17) and seventeen (17) respondents respectively.

The table was subjected to chi-square test to ascertain if there was no significant difference between view on job satisfiers and the result in KCSE 2017. KCSE 2017 was used because it was an exam which was conducted with a lot of integrity. The output of the test was $p<0.05$, Chi-square = 47.6263, df=11(28.80), N=348. Since the calculated chi-square value (47.6263) is greater than the critical value (28.80), the alternative hypothesis is accepted. This clearly indicated that all teachers were in agreement that the job satisfiers were useful indicators of motivation. When Sub-County Quality and Standards Officer respondent (O-6) was given opportunity to list some activities that would motivate teachers for quality output, Respondent O-6 gave the following opinion:

> Teachers should be involved in decision making in school systems. Teachers should receive equal treatment by the administration. If there is a prize giving day, the prizes should be functional and applicable. General awards should be avoided at all cost. Other activities that would inspire teachers should include good lunch, encouragement and mentorship; appreciating what teachers and students do by organizing tours, get together parties and out of pocket financial support whenever need arises.

O-6

Respondent O-6 suggested that teachers should be involved in decision making processes. There should be incentives that are relevant to level of achievement of the teacher. The officer suggested that general awards are not supportive of teacher motivation. The officer supported tours and out of pocket financial support whenever need arose. This indicated that managers need to work on motivation processes to improve student academic achievement in schools. Further, respondent P-22 who was a principal was interviews and gave the following comments on teacher job satisfaction

> Teacher job satisfaction is not open and shut process but a continuous process. There are several issues that need be tackled to enable us make teachers more satisfied with their jobs. Job satisfaction can only be achieved if teachers inculcate a personal interest in teaching. In addition, the teacher must improve on interpersonal relations to create an enabling environment for appreciation of self and colleagues. A school with teaching staff members who are bonded work more cohesively and are satisfied with their jobs.
>
> P-22

Respondent P-22 indicated that it is worth noting that teacher job satisfaction is based in intrinsic attributes of the teacher and collaboration with colleagues. The school family plays an important part in making each other love their job. A staff that is bonded is more united and supports each other and by extension improves delivery of academic output. Indeed, there is no teacher who will be satisfied with his/her job without first inculcating a personal connect with teaching.

4.5.5 Respondent Salary Expectations

The researcher noted that teacher remuneration was relatively low. There was need for teachers to indicate their salary expectations.

Table 4.23 below shows expectations of teachers on the amount of salary they would wish to earn.

Table 4.23

Respondents Salary Expectations

Respondent Salary expectations

Current Salary		Salary that Can Motivate Teachers to Improve Academic Achievement				Tot
		50 - Kshs 100,000	100,001 - Kshs 150,000	150,001 - Kshs 200,000	Above Kshs 200,000	
Below Kshs 30,000	Count	10	2	1	0	13
	% within Current Salary	76.9	15.4	7.7	0.0	
Kshs 30,000- Kshs 39,999	Count	5	5	4	2	16
	% within Current Salary	31.2	31.2	25.0	12.5	
Kshs40,000- Kshs 49,999	Count	31	29	21	2	83
	% within Current Salary	37.3	34.9	25.3	2.4	
Kshs50,000- Kshs 59,999	Count	1	90	63	11	165
	% within Current Salary	0.6	54.5	38.2	6.7	
Kshs60,000- Kshs69,999	Count	0	32	32	4	68
	% within Current Salary	0.0	47.1	47.1	5.9	
kshs70,000- Kshs 79,999	Count	0	1	1	1	3
	% within Current Salary	0.0	33.3	33.3	33.3	
Total	**Count**	**47**	**159**	**122**	**20**	
	% within	**13.5**	**45.7**	**35.1**	**5.7**	

N=348

Table 4.23 indicated that thirteen (13) teacher respondents constituting 3.7 percent earned a salary below Kshs. 30,000 per month out of which ten (10) teacher respondents constituting 76.9 percent preferred a salary of between kshs.50,000 and Kshs 100,000; two (2) teacher respondents constituting 15.4 percent preferred an

enhanced salary of between Kshs. 100,001 and Kshs 150,000; and one (1) teacher respondent preferred a salary of between Kshs. 150,001 and Kshs. 200,000 per month. Sixteen (16) teacher respondents earned a salary between 30,000 and 39,999 per month out of which five (5) teacher respondents constituting 31.2 percent preferred a salary of between Kshs 50,000 and Kshs. 100,000; five (5) teacher respondents constituting 31.2 percent preferred an enhanced salary of between Kshs 100,001 and Kshs. 150,000; four (4) teacher respondent constituting 25.0 percent) preferred a salary of between 150,001 and Kshs. 200,000 per month; and two (2) teacher respondents would have preferred a salary above Kshs 200,001. Eighty three (83) teacher respondents constituting 23.9 percent earned between Kshs 40,000 and Kshs 49,999 per month out of which thirty one (31) teacher respondents constituting 37.3 percent preferred a salary of between Kshs. 50,000 and Kshs. 100,000; twenty nine (29) teacher respondents (34.8 percent) preferred an enhanced salary of between 100,001 and Kshs. 150,000; twenty one (21) teacher respondents which were 21.3 percent preferred a salary of between Kshs 150,001 and Kshs. 200,000 per month; and two (2) teacher respondents which were 2.4 percent would have preferred a salary above kshs.200,001.

Further, one hundred and sixty five (165) teacher respondents constituting 47.4 percent earned a salary between Kshs. 50,000 and Kshs. 59,999 out of which one (1) teacher respondent at 0.6 percent preferred a salary of between Kshs. 50,000 and Kshs. 100,000; ninety (90) teacher respondents which constituted 54.5 percent preferred an enhanced salary of between Kshs 100,001 and Kshs. 150,000; sixty three (63) teacher respondents at 38.2 percent would have preferred a salary of between Kshs 150,001 and Kshs. 200,000 per month; and eleven (11) teacher respondents constituting 6.7 percent preferred a salary above Kshs. 200,001. Additionally, sixty eight (68) teacher respondents constituting 19.5 percent earned a salary of between

Kshs. 60,000 and Kshs. 69,999 out of which thirty two (32) teacher respondents at 47.1 percent preferred an enhanced salary of between Kshs. 100,001 and Kshs. 150,000; thirty (32) teacher respondent at 47.1 percent would have preferred a salary of between Kshs. 150,001 and Kshs. 200,000 per month; and four (4) teacher respondents at 5.9 percent would have preferred a salary above Kshs. 200,001. Further, only three (3) of the teacher respondents at 0.9 percent earned a salary of between Kshs. 70,000 and Kshs 79,999 out of which one (1) teacher respondent who constituted 33.3 percent preferred an enhanced salary of between Kshs. 100,001 and Kshs. 150,000; one (1) teacher respondent 33.3 percent preferred a salary of between Kshs 150,001 and Kshs. 200,000 per month; and one (1) respondent 33.3 percent would have preferred a salary above Kshs 200,001.

Several researches have shown that money is not a motivator but the data above shows that all teachers indicated that they would have preferred better pay. This research exhibited that teachers were not satisfied with the salary they were getting. It is therefore imperative that teacher remuneration be revisited a fresh.

4.5.6   Availability of Staff Houses and sufficiency

Preliminary data presented by respondents showed that two hundred and thirty nine (239) teacher respondents constituting 68.7 percent did agree that their schools had staff quarters. One hundred and nine (109) teacher respondents which were 31.3 percent indicated that they did not have staff quarters. Further, the data analyzed indicated that seventy six (76) teacher respondents which constituted 21.8 percent showed that their schools had staff quarters which were adequate. Two hundred and seventy two (272) teacher respondents constituting 78.2 percent showed that staff

quarters were available but not adequate. Hence, the correlation test supports this view as indicated on Table 4.24.

Table 4.24

Availability of Staff Houses and Sufficiency

		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Correlation Test					
Interval by Interval	Pearson's R	.042	.052	.783	.434
Ordinal by Ordinal	Spearman Correlation	.042	.052	.783	.434
N of Valid Cases		348			

a. Using the asymptotic standard error assuming the null hypothesis.
b. Based on normal approximation.

Table 4.24 shows a spearman's correlation test which were conducted to test the correlation between availability of teacher's houses and their sufficiency. The test indicated that there was a weak correlation of 43.4 percent between availability of teacher's houses in schools and their sufficiency.

It was noted that the houses were available for teachers but were not sufficient hence teachers were forced to stay out of school thus reducing effective monitoring of students. This finding confirmed that students faced challenge because most teachers were day scholars.

4.5.7   Hypothesis test on Role of Teacher Motivation on Student's Achievement.

Hypothesis IV: There is no significant impact of motivation on student's academic achievement in secondary school education. The hypothesis testing on role of motivation on student's academic achievement in secondary education used regression test to analyze data based on alpha p=0.05 level of significance.

Table 4.25

Role of Motivation on Student's Achievement

		Anova Test				
Model		Sum of Squares	*Df*	Mean Square	F	Sig.
	Regression	4.496	3	1.499	1.056	.368[b]
	Residual	488.156	344	1.419		
	Total	492.652	347			

a. Predictors: (Constant), Current Salary, Teachers are Motivated to Undertake Their Professional Duties, Teacher
b. Dependent Variable: School MSS in KCSE – 2017

Table 4.25 indicated that the regression coefficient was 0.368 or 36.8 percent. The outcome shows a weak relationship between motivation and student academic achievement. In other words, secondary school performance schools cannot be explained by the prevailing teacher motivation interventions. Institutional managers must strive to put matters in place to enhance motivation so as to improve student's achievement in secondary school education.

The study established that motivation was a challenge in secondary education in secondary schools in Migori County. Teachers are often underpaid and work in inappropriate conditions. The salary paid is not motivating. Whereas 38.2 percent of teacher respondents were satisfied with their pay package, 61.8 percent were not satisfied with their salary. This clearly shows that teachers needed to be motivated by enhanced salaries. This finding was supported by Guajardo (2011) who showed that financial motives are likely to be dominant among teachers in LICs where pay and other material benefits are too low for individual and household survival needs. However, this study does not support a study conducted by Sweeney, (2012) which assessed the relationship of teacher salaries, teacher experience and teacher education and outcomes found that teacher salaries and levels of education affected student's academic achievement.

Further, the study revealed that the best indicator for teacher motivation were intrinsic interest in work, added responsibility, promotion, challenging work and being involved in decision making in institutions. These indicators would be used strategically to manage teacher input and output. Further, the study showed that teachers should be involved in decision making at institutional level. Being involved in decision making would enhance motivation. This study supported findings by Marques, (2010), who advanced that motivation is what people need to perform better if the right person, with right skills, right qualification, right drive, and right experience are placed in charge of the task at hand.

This finding supported the view of Wenzare, (2012) who suggested that the principal must have proactive motivation approaches for staff and students to enhance student academic achievement. They are expected to use supervisor-teacher friendly methods

by moving away from traditional methods of control and authoritarianism. The traditional methods of inspection instill fear on teachers and lower their morale. Teacher management approaches should therefore be sources of inspiration for teachers and their student's

Finally, the study found out that a regression coefficient of 0.368 or 36.8 percent revealed a weak relationship between motivation and student's academic achievement. This demonstrated that in secondary school performance, schools and stakeholders have not embraced teacher motivation processes. Institutional managers must strive to put measures in place to enhance motivation so as to improve student's achievement in secondary school education.

4.6 Chapter Summary

The findings in this chapter showed that there is significant influence of teacher professional development in enhancing students' achievement in secondary schools. In addition, the result showed that supervision had no significant impact on students' academic achievement. In addition, a regression coefficient of 0.011 or 1.1 percent between induction and performance indicated a weak relationship between induction and student academic achievement. In other words, induction should explain outcome in performance but the analyzed showed that induction did not do so. Further, a regression coefficient was 0.368 or 36.8 percent showing a weak relationship between motivation and student academic achievement. In other words, secondary school performance schools cannot be explained by the prevailing motivation interventions.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives summary of the study and findings, conclusions, recommendation and suggestions for further research for this study entitled perceptions of teacher management approaches on student academic achievement in Migori County.

5.2 Summary of the study

This study aimed at finding out perceptions of teacher management approaches on student academic achievement in public secondary schools in Migori County. Four research objectives were set to guide the collection of data that was required for analysis. The objectives of the study were set to find out influence of teacher professional development (PD), relationship between supervision and achievement, impact of teacher induction and role of motivation and how they impacted on student's academic achievement in secondary school education in Migori County.

Chapter one discussed background of the study, problems of the study, significance of the study and ended up with a summary of ideas leading to theoretical framework and conceptual framework of the study. Subsequently, Literature review for the study focused on perceptions of teacher management approaches on student's academic achievement in public secondary schools.

To guide the research, the study sought information through use of questionnaires, documents, and interview schedules. Out of the sampled fifty six (56) secondary schools, only fifty four (54) schools were injected in the study. The items included in the questionnaires for principals, and teachers were those that were designed to capture required information on influence of teacher professional development (PD), relationship between supervision and achievement; impact of induction and role of motivation and how they impacted on students' academic achievement in secondary school education.

Interviews were conducted whereby eight (8) education officers, twenty (20) principals and fifty four (54) teachers were interviewed. Among the fifty four (54) interviewed teachers, ten (10) were heads of departments. Documents were analyzed to get information on gaps facing teacher management approaches. Further, hypotheses tests were conducted in all the four objectives to test the level of significance of influence of teacher professional development, association between supervision and achievement; impact of induction and role of motivation on student academic achievement in secondary school education.

The study adopted concurrent triangulation research design (mixed methods) which exploited both quantitative and qualitative methods. Finally, the study exploited inferential statistics whereby correlation, regression and Chi-Square were used to infer influence, relationship and impact of variables on student's academic achievement in public secondary school education in Migori County.

5.3 Findings of the Study

The Findings of the study entitled perceptions of teacher management approaches on student's academic achievement in Migori County were presented in accordance with the 4 research objectives of the study. The objectives of the study were set to find out influence of teacher professional development (PD), relationship between supervision and achievement, impact of teacher induction and role of motivation in enhancing academic achievement in secondary school education.

5.3.1   Influence of Teacher Professional Development on Student Achievement.

The first objective of the study was aimed at establishing influence of teacher professional development and its related variable teacher qualification on student's academic achievement in public secondary school education. Through this research, it has been demonstrated that there was significant influence of teacher professional development and its related variable teacher qualification on student's academic achievement.

The research established that teachers in Migori County were professionally developed by revealing that teachers attended workshops, seminars, content focus workshops, and collaborative discussions. The above mentioned indicators of teacher professional development were attended by at least sixty eight (68) percent of the respondents thus confirming that teacher professional development was undertaken in Migori County.

In addition, the research exhibited that out of the six variables put to test as possible basic teacher professional development indicators, five among them that is collaborative teaching, team teaching, teacher personal knowledge, teacher retraining,

and teacher appraisal impacted on student academic achievement. Collaborative teaching allowed for diversification of teaching methodologies, team teaching enhanced syllabus coverage, personal knowledge equipped teachers with facts necessary for teaching, teacher retraining updated teachers with immerging methodologies and teacher appraisal revitalized teaching processes which improved delivery.

This research further confirmed that bachelor degree was still the most appropriate teacher qualification for teachers in secondary schools.

Similarly, both qualitative analysis and quantitative analysis supported the above finding and revealed that collaborative teaching, team development, personal knowledge, teacher retraining, personal knowledge and teacher appraisal were crucial for teacher professional development.

A hypothesis test which was conducted showed that there was an association between both professional development and teacher qualification and student academic achievement. The results were as follows (P < 0.05, Chi Square = 14.177, df = 7(14.077), N = 348, P = 0.048). In summary, secondary schools performance can be explained by the prevailing teacher professional development processes.

5.3.2 Relationship between Supervision Interventions and Academic Achievement.

The second objective of the study was aimed at establishing the relationship between supervision and its related variable evaluation on student academic achievements in public secondary school education. The study established that there was no significant influence of supervision and evaluation on student's academic achievement. This

means that student academic achievement cannot be explained by supervision and evaluation factors.

In addition, the results showed that test scores were used as parameters of supervision. However, this research proposed that test scores should not be the only parameter for supervision and evaluation. This research further exhibited that student behavior, personality, attitude and talents need also be injected in the supervision processes.

Furthermore, the research revealed that staff meetings as supervisory tool was not fully utilized. The meetings were far apart thus teachers were not effectively updated on day to day administrative interventions. This research revealed that schools need to borrow ideas from the private sector where meetings are held every morning or on weekly basis. The respondents suggested that staff meetings be regularized by conducting staff meeting on weekly basis.

Additionally, the research exhibited that dichotomization of teachers as teachers and students as learners should be avoided. Secondary schools should exploit processes of collective decision making by all stakeholders that is parents, teachers and students to enhance supervision and evaluation.

This research further revealed that evaluation processes need be focused. Improved focus would enable supervision and evaluation to enhance secondary school academic aspirations. Apart from performance evaluation, teachers need be evaluated at recruitment, training, selection and staffing level.

Similarly, Qualitative analysis exhibited that supervision was essential for improving student academic achievement but the principals and teachers did not put serious supervision into practice.

In addition, the finding discovered that there is a strong correlation (81.6 percent) between the views that both students and teachers be involved in decision making to enhance supervision and evaluation.

When subjected to inferential analysis, the result showed that teacher supervision and teacher evaluation had no significant influence on student's academic achievement. In summary, secondary schools performance cannot be explained by the prevailing teacher supervision and teacher evaluation interventions.

5.3.3   Impact of Induction on Academic Achievement.

The third objective of the study was aimed at establishing impact of induction and its related variable teacher experience on student's academic achievement in public secondary school education. On the basis of this study it was established that whereas there was significant impact of teacher experience on student academic achievement, there was no significant impact of teacher induction on student's academic achievement in public secondary education. This research specified that induction and teacher experience should not be considered as related variables.

The research exhibited that that despite the institutional operationalization of the meaning of induction, there is need for new conceptualization and enhancement of induction. Teachers and students should be introduced to student-centered activities like academic activities, academic disciplines, co-curricular activities, music, drama,

debates, Information Communication Technology (ICT) interventions and processes of understanding neighboring institutions.

The research further exhibited that the most acceptable induction components should include teacher and student orientation, teacher and student mentor support, teacher and student administrative support, and teacher professional development.

This research also revealed that induction faced challenges of inadequate resources, constraints of time, non-compliance of teachers, ineffective teachers who are given the mandate to induct new teachers and lack of adherence to induction schedules.

The study further showed that experienced teachers have more confidence and have good mastery of subject content. To sum up, secondary school student academic achievement cannot be explained by prevailing induction factors but teacher experience positively impacted on student academic achievement through teacher certification and years of experience.

5.3.4 Role of Motivation on Academic Achievement.

The fourth objective of the study was aimed at establishing role of motivation on student academic achievement in public secondary school's education. On the basis of this study, it was revealed that teacher motivation had a weak relationship to student's academic achievement.

The findings of this research exhibited that teachers in Migori County exploited various methods of teaching by giving regular exercises to enhance learning. On the contrary, teachers did not give students opportunity to freely ask questions in class; teachers did

not organize regular practical lessons; teachers did not use motivational techniques and were unfriendly to learners. The outcome suggested that a new way of classroom interaction be put in place in Migori County to be able to enhance student's academic achievement.

Further, the study demonstrated that whereas tours, institutional meals, attending refresher courses and involvement on decision making were motivation processes evidenced in schools, the rest of the processes comprising promotion on merit, achievement rewards, work incentives, institutional housing and comfortable workload were indicators of motivation which were weakly embraced thus failed to support student academic achievement.

The study revealed that the best indicators for teacher motivation were intrinsic interest in work, added responsibility, promotion, challenging work and being involved in decision making in institutions.

Similarly, qualitative data analysis disclosed that all the interviewees were in agreement that motivation was crucial for enhancing achievement. However, they equally indicated that the government lacked the goodwill to support motivation activities in schools. Any motivation processes that required monetary support were considered by the government a burden to parents who paid the extra levies.

Statistically, a regression coefficient of 0.368 or 36.8 percent revealed a weak relationship between motivation and student's academic achievement. This validated that in secondary school performance, schools and stakeholders have not embraced teacher motivation processes. Institutional managers and classroom teachers must strive to put measures in place to enhance motivation so as to improve student's achievement

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in secondary school education. In summary, secondary schools performance cannot be explained by the prevailing teacher motivation interventions.

5.4   Conclusion

The following were the conclusions for the study aimed at investigating perceptions of teacher management approaches on student's academic achievement in Migori County, Kenya.

i.   The analysis on teacher professional development data output enabled the researcher to concluded that there was significant influence of teacher Professional Development (PD) on student's academic achievement in public secondary education. Secondly, the study concluded that workshops, seminars, content focus workshops, and collaborative discussion needed to be enhanced. In addition, this study enabled the researcher to conclude that professional indicators including collaborative team teaching, teacher personal knowledge, teacher retraining and teacher appraisal impacted on student academic achievement. Using regression analysis, the research concluded that teacher Professional development and its related variable teacher qualification had significant influence on student's academic achievement in public secondary school education.

ii.   The study concluded that there was no association between supervision and student's academic achievement in public secondary education. In addition, the study concluded that tests scores which is the basic measure for evaluation should not be the only measure for gauging student academic achievement. Other possible measure for supervision should include student behavior, student

attitude, student personality and talents. Further, the study concluded that staff meetings be held weekly.

Using correlation test, the research concluded that supervision and its related variable teacher evaluation had no significant impact on student's academic achievement in public secondary school education. Finally, the study concluded that supervision was essential for improving student's academic achievement but was not seriously exploited as a management approach by principals and teachers in public secondary school educations in Migori County.

iii.   The study concluded that there was no significant impact of induction on student's academic achievement in public secondary school education. Also, the study concluded that student-centered activities like curricular and co-curricular activities be introduced in schools and should be extended to neighboring institutions. The study further concluded that challenges facing induction are inadequate resources, constraints of time, ineffective teachers who are mandated to run induction processes, and lack of adherence to induction processes. This research concluded that secondary academic achievement cannot be explained by prevailing teacher induction factors but teacher experience which is a related variable to teacher induction has impact on student academic achievement. Furthermore, the study concluded that induction is crucial for forecasting the future in terms of required management approaches and should be enhanced in public secondary schools. Using Anova Test, the research concluded that whereas teacher induction had no significant impact on student's academic achievement its related variable teacher experience had significant influence on student's academic achievement in public secondary education.

iv.   The study concluded that teachers were poorly motivated in public secondary school education and advanced that the best indicator for motivation should be intrinsic interest in work, added responsibility, promotion, and challenging work. In addition, the study concluded that lack of involvement in decision making, lack of consultation, lack of motivation, lack of appreciation of achievement from institutional managers, poor results after hard work, inadequate learning resources, poor channel of communication and poor policy articulation caused dissatisfaction among teachers. The study concluded that teacher classroom methods like lack of practical lessons, lack of positive interactive classroom dynamics, and lack of motivated approach to learning affected student academic achievement.

Further, the study concluded that tours, institutional meals, attending refresher courses and involvement in decision making were crucial in schools and should be exploited by both institutional mangers and teachers to enhance student achievement. Also, the study concluded that measures should be put in place to streamline promotion of teachers on merit, enhance rewards/incentives, support achievement rewards, and ensure comfortable workload and institutional housing. Finally, the study concluded that there was weak relationship between motivation factors and student's academic achievement in public secondary school education in Migori County.

In summary, the study established that a lot needs to be done to justify a study by Hanushek, (2008) which reported a very high correlation between adjusted growth rate and adjusted test scores. If the education system improves management approaches, then the system will improve test scores which relates to student academic achievement.

5.5   Recommendations of the Study

In consideration of the findings and deductions made in this chapter, the researcher came up with the following recommendations

i.   Institutional Managers should enhance processes of ensuring that the gains achieved from teacher professional Development are maintained. Further, since gains on teacher professional Development are not fully implemented, the study recommended that collaborative teaching, team development, teacher retraining, personal knowledge and teacher appraisal which are crucial for enhancing teacher professional development are implemented in schools. In addition, since intensity of professional development is more likely to bring about long-term change in teacher performance, this research recommends for frequent professional development (PD) enhancement programmes in secondary schools.

ii. Supervision is essential for enhancing student's achievement in public secondary school education. The study recommends that principals should supervise classroom teachers regularly to improve student's achievement. The study also recommends that supervision be embraced whereby teachers can listen to others (collaborative teaching) and share ideas. Further, the study recommends that test scores should not be the only parameter for supervision of teachers and students. Other parameter to evaluate students be level of hygiene, talents, punctuality, discipline, ways of thinking; ways of working, skills around citizenship, life and career aspirations and teacher be evaluated by assessing their behavior, personality attitude and talents. Lastly the study recommends that policies be put in place so that staff meetings in schools are more frequent as being evidenced in the private institutions.

iii. The study recommends that institutional managers should employ approaches to enhance overall school induction. Induction should encompass teachers and students. It also recommends that induction involve introducing teachers and students to student-student centered activities like academic activities, academic disciplines, co-curricular activities, drama, debates and ICT. There is need for managers to improve teacher induction methods to be able to settle teachers quickly so that student academic achievement is realized. If the process is improved, the necessary benefits will be achieved. In addition, the findings recommends that institutional managers should exploit strategy of improving mentor support, orientation, administrative support and professional development to be able to improve student academic achievement in public secondary school education.

iv. The study recommends that institutional managers should improve processes of motivation to enhance motivation among teachers and students. The study also recommends that policy be generated to enhance classroom methodologies. Since practical lessons were not regularly taken, since there is revelation of poor interactive processes between teachers and students, and since classes are unfriendly to students, the study recommends that policies be put in place to enhance the challenges facing classroom methodologies. However, at individual level, teachers must also improve on intrinsic self-drive so that student's achievement can be realized. Finally, the study recommends that the government should come up with policies that can enhance motivation in schools.

5.6   Suggestions for Further Research

i.   Impact of Professional Development (PD) indicators on teacher output in secondary education. This research would look at each indicator of Professional Development (PD) and ascertain their impact on secondary school education

ii.   Role of Supervisory interventions in improving student academic achievement in secondary education. Supervision has faced several challenges in the findings of this research. Further study can improve supervision interventions in secondary schools.

iii. Impact of induction on school dynamics in public secondary school education. This research would assess both teacher and student's induction processes. This suggested research would give an overall view of induction interventions and overall impact on student output in secondary schools

iv.   Ways of improving motivation interventions in public secondary school education. This research may put to light how motivation can be improved to enhance student academic achievement in secondary education.

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APPENDICES

APPENDIX I: **QUESTIONNAIRE FOR PRINCIPALS**

This Questionnaire consists of several sections which have set of instructions. Please Tick or fill in your responses on the blank spaces as required. The information will be treated with confidentiality and will be used for gathering data for my research entitled "Perception of teacher management approaches on student's academic achievement in public secondary schools in Migori County".

SECTION ONE:

1a. **Background Information**

1. State your gender (√)   Male [   ]   Female [   ]

2. For how long have you been at the current station…………………………………

3. State your experience (years of service) as a Principal?

0-4 yrs.	5-9yrs	10-14yrs	15-19yrs	20yrs & above

4. Professional qualification?

   PhD   [   ] Masters [   ] Bachelor of Education [   ] Others [   ]

   If OTHER, Kindly indicate ………………………………………………………….

5. Have you undertaken refresher courses?   Yes [   ] No [   ]

If Yes, which ones? …………………………………………………………………..

6. Please tick (√) all that apply to your school

Category of sampled schools				Characteristics		
National	Extra County	County	Sub-county	Boys	Girls	Mixed

7. What are the 3 consecutive school Mean Standard Scores for this school

2015	2016	2017

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Section 2a: Teacher Institutional Professional Development on student's achievement

i.   Teacher Professional Development supports student's academic achievement?

      YES   [   ]   NO   [   ]

ii.   If NO,

Explain ………………………………………………………………………………………

………………………………………………………………………………………………..

iii.   List   some   attributes   of   teachers   who   are   professional developed   ………………………………………………………………………………

………………………………………………………………………………………………

iv.   Teachers professional development training processes should be:

Collaborative teaching   [   ]   Team development   [   ]

Personal Knowledge   [   ]   Retraining   [   ]

Teacher Preparation   [   ]   Performance Appraisal [   ]

 v. Tick the professional development processes which you have interacted with.

       Workshops   [   ]   Seminars   [   ]

       Literary Retreat   [   ]   Content Focus Workshop [   ]

       Collaboration   [   ]   Expert Support   [   ]

       Feedback and Reflection   [   ]

vi.   Explain how any two of the items you have ticked above can enhance academic achievement in this institution

       1. ………………………………………………………………………….……….

       2. ………………………………………………………………………….……….

vii.   If No on item v above, suggest better professional Development processes

………………………………………………………………………………………………

Section 2b: Influence of teacher qualification on student's achievement

i.   Policy for admitting secondary school teachers to training should be raised.

YES   [   ]   NO   [   ]

ii.   If No, explain………………………………………………………………………..

iii.   If YES, kindly suggest the minimum requirement………………………………

iv.   The highest professional qualification for secondary school teacher should be?

PhD [   ] Master's degree [   ] Bachelor's Degree [   ] Diploma [   ]

v.   If Bachelor's Degree, why not any of the higher qualifications

………………………………………………………………………………………………

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vi.   Student's taught by highly qualified teachers do better?

YES   [   ]   NO   [   ]

vii.   If NO, explain …………………………………………………………………...

Section 3a: Supervision and student's academic achievement

i.   Supervision involves being in charge of decision making?

YES   [   ]   NO   [   ]

ii.   If NO, explain …………………………………………………………………

…………………………………………………………………………………………

iii.   Tick the best 2 indicators of supervision?

Setting Discussion sessions   [   ]   Use of test scores   [   ]

Involving students   [   ]   Involving teachers   [   ]

iv.   The principal has much responsibility to do meaningful institutional supervision.

YES   [   ]   NO   [   ]

v.   If NO, suggest possible options …………………………………………………

…………………………………………………………………………………………..

Section 3b: Impact of Evaluation on student's achievement

i.   Teacher work evaluation is done in this school

YES   [   ]   NO   [   ]

ii.   If YES in item i, suggest ways of improving teacher evaluation

…………………………………………………………………………………………

iii.   List areas where evaluation can assist in student's' academic achievement?

…………………………………………………………………………………………

iv.   Test Scores should be used for evaluating teachers

YES   [   ]   NO   [   ]

v.   If YES in item iv, how are the test scores used ………………………………….

vi.   If NO in item iv, suggest better options …………………………...……………

vii.   Do you conduct staff meetings to discuss evaluation reports?

YES   [   ]   NO   [   ]

viii.   If YES, how many times a term …………………………………..…………

ix.   List the aspects of the school system you have evaluated in the last 6 months.

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

Section 4a: Impact of Induction on student's achievement

i.   Induction is conducted in this school

YES   [   ]   NO   [   ]

ii.   If YES, is the induction process effective?

YES   [   ]   NO   [   ]

iii.   If NO item i above, explain why it is not effective.

…………………………………………………………………………………………………

iv.   List some aspects of induction that can be embraced in an educational institution.

…………………………………………………………………………………………………

v.   Suggest benefits of teacher induction

…………………………………………………………………………………………………

vi.   List possible challenges facing teacher induction

…………………………………………………………………………………………………

vii.   Do we need to induct students into the school system?

YES   [   ]   NO   [   ]

viii.   If YES on item vii, suggest ways of inducting student's. ……………………….

…………………………………………………………………………………………………

ix.   Identify the most prevalent induction component in this institution

Orientation   [   ]   Mentor Support   [   ]

Administrative Support   [   ] Professional Development   [   ]

Section 4b: Influence of teacher experience on student's achievement

i.   Teacher experience effects occur in

• The 1st-4th year of service   [   ] The 5th-9th year of service   [   ]

• The 10th-14th year of service   [   ] Above 15 years of service [   ]

ii.   Teacher with NO experience are more effective than experienced teachers

YES   [   ]   NO   [   ]

iii.   If YES, Explain Why?..

…………………………………………………………………………………………………

iv.   If NO, Explain? …………………..…………………………………….....................

Section 5a: Role of teacher motivation on student's achievement

i.   Teachers in this institution are motivated to undertake their duties?

YES   [   ]   NO   [   ]

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ii.   If YES, List the motivation processes put in place

……………………………………………………………………………………………………

iii.   If NO, suggest ways in which teachers can be motivated to enhance academic
achievement? …………………………………………………………………………………

……………………………………………………………………………………………………

iv.   Is money a motivator?

YES   [   ]   NO   [   ]

v.   If Yes in item iv, which salary bracket would motivate teachers

Kshs. 50,000-100,000 per month [   ]   Kshs. 100,001-150,000 per month [   ]

Kshs. 150,001-200,000 per month   [   ]

vi.   If in item iv, what other processes would motivate teachers to enable them
improve delivery……………………………………………………………..………………..

vii.   Please list other possible motivators for teachers

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………..

Section 5b: Indicators of teacher motivation

i.   The following are possible indicators of motivation among teachers. Tick at
        least 4 which would make you more satisfied in your teaching duties?

        Achievement   [   ]   Intrinsic interest in work   [   ]

        Added Responsibility [   ]   Advancement (promotion)   [   ]

        Challenging work   [   ]   Involvement in decision making [   ]

ii.   List some issues that create dissatisfaction you have evidenced in this school

……………………………………………………………………………………..…………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………..

iii.   Are you satisfied with the salary you are earning?

YES   [   ]   NO   [   ]

iv.   If NO in item iii, suggest a salary bracket that would motivate you as teacher

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

APPENDIX II: **QUESTIONNAIRE FOR TEACHERS**

This Questionnaire consists of several sections which have set of instructions. Please Tick or fill in your responses on the blank spaces as required. The information will be treated with confidentiality and will be used for gathering data for my research entitled "Perception of teacher management approaches on student's academic achievement in public secondary schools in Migori County".

SECTION ONE:

1a.   **Background Information**

1. State your gender   (√)   Male   [   ]   Female [   ]

2. State the position you hold in school. HOD [   ]   Teacher [   ]

3. State your experience (years of service) as a teacher?

0-4yrs[ ] 5-9yrs [ ]   10-14yrs [ ] 15-19yrs [ ] Above 20yrs [   ]

4. Professional qualification?

Masters [   ]   Bachelor of Education   [   ]   PGDE [   ]   DIP [] Other [   ]

If OTHER Kindly specify………………………………………………………….

5. Have you undertaken refresher courses?   Yes   [   ]   No [   ]

6. If Yes, which ones? …………………………………………………………

……………………………………………………………………………………..

7. Indicate the subject you teach in this School…………………………………..

8. Indicate the 2 most recent MSS your classes scored in the subject you have indicated

SUBJECT	FORM	MSS 1	MSS 2

9. KCSE Class Please include for 2 consecutive years

	SUBJECT	KCSE YEAR	MSS 1	MSS 2
1				
2				

Section 2a: Teacher Professional Development on student's achievement

i.   Teacher Professional Development supports student's academic achievement?

YES   [   ]   NO   [   ]

ii.   If NO, above Explain …………………………………………………………

iii.   List some attributes of teachers who are professional developed ………….......

………………………………………………………………………………………………

iv.   Teachers professional development should be based on (tick the best 3)

- Collaborative teaching   [   ]
- Team development   [   ]
- Personal Knowledge   [   ]
- Retraining   [   ]
- Teacher Preparation   [   ]
- Performance Appraisal   [   ]

v.   Tick the professional development process which you have interacted with.

- Workshops   [   ]
- Seminars   [   ]
- Literacy Retreat   [   ]
- Content Focus Workshop   [   ]
- Collaboration   [   ]
- Expert Support   [   ]
- Feedback and Reflection   [   ]

vi.   If No on item v above, suggest better professional Development processes

………………………………………………………………………………………………

Section 2b: Influence of teacher qualification on student's achievement

i.   Policy for admitting secondary school teachers to training to be raised.

YES   [   ]   NO   [   ]

ii.   If No, explain. ………………………………………………………………………

………………………………………………………………………………………………..

iii.   If YES, kindly suggest the minimum requirement. …………………………………

iv.   The highest professional qualification for secondary school teacher should be?

PhD [   ] Master's degree [   ] Bachelor's Degree [   ] Diploma [   ]

v.   If Bachelor's Degree, why not any of the higher qualifications

………………………………………………………………………………………………

………………………………………………………………………………………………

vi.   Student's taught by highly qualified teachers do better?

YES   [   ]   NO   [   ]

vii.   If NO, explain……………………………………………………………..………

………………………………………………………………………………………..

Section 3a: Supervision and student's academic achievement

i.   Supervision involves being in charge of decision making?

YES   [   ]   NO   [   ]

ii.   If NO, explain ………………………………………………………………

iii.   Tick the best 2 indicators of supervision?

a) Setting Discussion sessions [   ]   b) Use of test scores   [   ]

c) Involving students   [   ]   d) Involving teachers [   ]

iv.   The principal has much responsibility to do meaningful institutional supervision.

        YES   [   ]   NO   [   ]

v.   If NO, suggest possible options

…………………………………………………………………………………………

Section 3b: Impact of Evaluation on Student's Achievement

    i.   Teacher work evaluation is done in this school

YES   [   ]   NO   [   ]

If YES in item i, suggest ways of improving teacher evaluation

…………………………………………………………………………………………

ii.   List areas where evaluation can assist in student's' academic achievement

…………………………………………………………………………………………

iii. Test Scores should be used for evaluating teachers

YES   [   ]   NO   [   ]

iv.   If YES in item iii, how are the test scores used …………………………………

…………………………………………………………………………………………

v.   If NO in item iii, suggest better options ……………………………………...……

………………………………………………………………………………………...…

vi.   Do you conduct staff meetings to discuss evaluation reports?

YES   [   ]   NO   [   ]

vii.   If YES, how many times a term ……………………………………………………

Section 4a: Impact of Induction on Student's Achievement

i.   Induction is conducted in this school

    YES   [   ]   NO   [   ]

ii.   If YES, is the induction process effective?

YES   [   ]   NO   [   ]

ii.   If NO item ii above, explain why it is not effective……………….….................

…………………………………………………………………………………………...............

iii.   List some aspects of induction that can be embraced in an educational institution ……………………………………………………………………………….

iv.   Suggest benefits of teacher induction

…………………………………………………………………………………………..

v.   List possible challenges facing teacher induction

…………………………………………………………………………………………..

vi.   Do we need to induct students into the school system?

YES   [   ]   NO   [   ]

vii.   If YES on item vii, suggest ways of inducting student's ……………………

viii.   Identify the most prevalent induction component in this institution

Orientation   [   ]   Mentor Support   [   ]

Administrative Support   [   ]   Professional Development   [   ]

Section 4b: Influence of teacher experience on student's achievement

i.   Teacher experience effects occur in

The 1st-4th year of service   [   ] The 5th-9th year of service   [   ]

The 10th-14th year of service [   ] Above 15 years of service   [   ]

ii.   Teacher with NO experience are more effective than experienced teachers

YES   [   ]   NO   [   ]

iii.   If YES, Explain Why?...

iv.   If NO, Explain?...

Section 5a: Role of Teacher Motivation on Student's Achievement

a.   Teachers in this institution are motivated to undertake their duties?

YES   [   ]   NO   [   ]

viii.   If YES, List the motivation processes put in place. ……………………………

b.   If NO, suggest ways in which teachers can be motivated to enhance academic achievement? …………………………………………………………………….

c.   Is money a motivator?

YES   [   ]   NO   [   ]

d.   If Yes in item iv, which salary bracket would motivate teachers

• Kshs. 50,000-100,000 per month   [   ]

- Kshs. 100,001-150,000 per month [ ]
- Kshs. 150,001-200,000 per month [ ]

e.   If in item iv, what other processes would motivate teachers to enable them improve delivery …………………………………………………………………………………

f.   Please list other possible motivators for teachers

…………………………………………………………………………………………………

Section 5b: Indicators of Teacher Motivation on Student's Academic Achievement

i.   The following are possible indicators of motivation among teachers. Tick at least 4 which would make you more satisfied in your teaching duties?

a) Achievement   [   ] b) Intrinsic interest in work   [   ]

c) Responsibility   [   ] d) Advancement (promotion)   [   ]

e) Challenging work   [   ] f) Involvement in decision making [   ]

ii.   List some dissatisfiers you have evidenced in this school

…………………………………………………………………………………………………

…………………………………………………………………………………………………

iii.   Are you satisfied with the salary you are earning?

YES   [   ]   NO   [   ]

iv.   If NO in item iii, suggest a salary bracket that would motivate you as teacher

…………………………………………………………………………………………………

Section 5c: Perception of Motivation
Perceived issues that may enable you improve in academics in this school

This section requires that you indicate your feeling on motivators in your school. You are advised to tick the answer that suits your judgment of the situation. There are no wrong or right answers.
Very True(VT)-5 points, True(T)-4 points, Somehow true(ST)-3 points, Not True(NT)-2 points, Not True at All(NTA)-1 point

NO	QUESTIONS	VT	T	ST	NT	NTA
1	Teachers are taken for tours					
2	Institutional meals are offered to teachers					
3	We have Achievement rewards					
4	Incentives/work benefits					
5	Promotions are on Merit					
6	We attend refresher courses					
7	I have intrinsic interest in work					
8	Teachers witness Student Discipline					
9	Comfortable teacher workload					
10	Teachers are involved in decision making					

Section 5d. Teacher Classroom approaches

Perceived issues on the way teachers undertake teaching activities in classes in Migori County.

This section requires that you indicate your perception on classroom approaches in your school. You are advised to tick the answer that suits your judgment of the situation. There are no wrong or right answers.

Very True (VT) -5 points, True (T) -4 points, Somehow True (ST) -3 points, Not True (NT) -2 points, Not True at All (NTA) – 1 point

Teacher Classroom Approaches						
Variables	**VT**	**T**	**ST**	**NT**	**NTA**	
Teachers use varied methods of teaching						
Teachers give regular exercises to enhance learning						
Teachers give students opportunity to ask questions						
Teachers organize practical lessons						
Teachers use motivational techniques						
Teachers in this school are friendly						

APPENDIX III: INTERVIEW SCHEDULE FOR PRINCIPALS

1. How long have you been a Principal?

2. Do you get time for teacher's appraisal?

3. How do you disseminate important information to teachers in your school?

4. How often do you have staff meetings?

5. Explain how you induct your new teachers into the school system.

6. Do you explore classroom observation in evaluating teacher's performance?

7. When using classroom observation as a form of teacher assessment what does it involve?

8. What problems do you encounter during classroom observation or assessment?

9. In your opinion do you think that the interventions you have put in place improve academic achievement

10. Enumerate on challenges that may hinder qualitative output from your staff?

11. What are the major challenges associated with achieving effective management of teachers?

APPENDIX IV: INTERVIEW SCHEDULE FOR HODs

1. How long have you been an HOD?

2. Do you get time for teacher's appraisal?

3. Let us concentrate on your role as a HoD. How do you disseminate important information to teachers in your department?

4. How often do you have subject panel meetings?

5. Do you have any teacher in your department who pose problems of competency?

6. If Yes in number six, how do you assist such teachers?

7. What problems do you encounter during classroom observation or assessment?

8. Comment on what enhances teacher satisfaction

9. What makes your work as HoD difficult?

APPENDIX V: INTERVIEW SCHEDULE FOR EDUCATION OFFICERS

1. How long have you been in your current office?

2. What is your professional qualification?

3. How often do you visit schools for evaluation?

4. Let us concentrate on your role as an Education Officer, How do you disseminate important information to schools in your area of jurisdiction?

5. How often do you have meetings with teachers?

6. How do you assist teachers to improve their managerial skills?

7. What does teacher evaluation entail?

8. What is the importance of staff development?

9. What makes your work as an officer difficult?

APPENDIX VI: INTERVIEW SCHEDULE FOR TEACHERS

1. Do you consider all that you learnt in college as far as teacher training courses are designed were the full requirement for teaching?

2. Does your institution support you for capacity building courses?

3. Were you given orientation when you came to this school?

4. How often do you discuss issues relating to teaching and learning with your Principal?

5. How often do you discuss issues relating to teaching and learning with your HoD?

6. How do you evaluate yourself in terms of your student's achievement outcomes?

7. What support do you get from your Principal in executing your Job?

8. What do your personal view on school administrators (Principal or HoD) observing you in your class?

9. Do you exploit collaborative teaching?

10. What makes your job as a classroom teacher challenging?

APPENDIX VII: PRINCIPAL'S CLASSROOM EVALUATION ONCE A YEAR

Marshall (2005, 0.1%)

APPENDIX VIII: INSTITUTIONAL LETTER (RONGO UNIVERSITY)

RONGO UNIVERSITY

OFFICE OF THE DEAN

SCHOOL OF GRADUATE STUDIES

Tel. 0771349741	P.O. Box 103 - 40404 **RONGO**

Our Ref: **PPE/9103/2014**   **Date:** Wednesday, October 17, 2018

The Chief Executive Officer,
National Commission for Science, Technology & Innovation,
off Waiyaki Way, Upper Kabete,
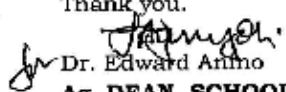P.O Box 30623-00100,
Nairobi-KENYA.

Dear Sir,

RE: **RESEARCH PERMIT FOR MR. OGUTA PAUL ALELA-
PPE/9103/2014**

We wish to inform you that the above person is a bona fide graduate student of Rongo University in the School of Education pursuing a PhD degree in Planning and Economics of Education. He has been authorized by the University to undertake research titled; *"Influence of Teacher Management Strategies on Students Academic Achievement in Public Secondary Schools in Migori County, Kenya"*.

This is, therefore, to request the commission to issue him with a research permit to enable him proceed for field work.

Your assistance to him shall be highly appreciated.

Thank you.

Dr. Edward Animo
Ag. DEAN, SCHOOL OF GRADUATE STUDIES

**RONGO UNIVERSITY
THE DEAN
17 OCT 2018
SCHOOL OF GRADUATE STUDIES
P. O. BOX 103 - 40404, RONGO**

Copy to: Vice Chancellor
              Deputy Vice Chancellor (Academic and Student Affairs).
              Dean, School of Education
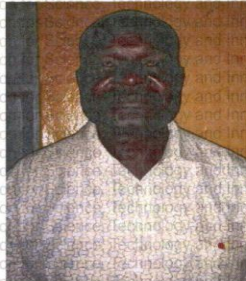   HoD, Educational Management and Foundation

APPENDIX IX : RESEARCH LICENSE (NACOSTI)

THIS IS TO CERTIFY THAT:
MR. PAUL ALELA OGUTA
of RONGO UNIVERSITY, 100-40404
RONGO, has been permitted to conduct
research in *Migori County*

on the topic: INFLUENCE OF TEACHER
MANAGEMENT STRATEGIES ON
LEARNERS ACADEMIC ACHIEVEMENT IN
PUBLIC SECONDARY SCHOOLS IN
MIGORI COUNTY KENYA

for the period ending:
12th December, 2019

Permit No : NACOSTI/P/18/62880/27186
Date Of Issue : 12th December, 2018
Fee Recieved : Ksh 2000

....
Applicant's
Signature

....
Director General
National Commission for Science,
Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science,
Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

NACOSTI

National Commission for Science,
Technology and Innovation

RESEARCH LICENSE

Serial No. A 22353
CONDITIONS: see back page

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APPENDIX X : RESEARCH AUTHORIZATION LETTER (NACOSTI)

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/62880/27186**   Date: **12th December, 2018**

Paul Alela Oguta
Rongo University
P.O. Box 103-40404
RONGO

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Influence of teacher management strategies on learners academic achievement in Public Secondary Schools in Migori County Kenya"* I am pleased to inform you that you have been authorized to undertake research in **Migori County** for the period ending **12th December, 2019.**

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Migori County.

The County Director of Education
Migori County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified

APPENDIX XI: PERFORMANCE IN KCSE IN MIGORI COUNTY (2013-2016)

YR	ENROL	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	Y	MS
2013	9791	103	293	434	845	937	1001	1200	1398	1396	1290	881	65	20	5.61
2014	10902	47	327	570	781	1080	1258	1509	1666	1633	1175	529	22	-	4.88
2015	12192	58	316	630	1014	1391	1580	1683	1881	1757	1202	413	8	-	5.30
2016	13578	1	82	224	723	7615	856	1137	1630	2051	2765	3411	574	50	3.64

Source: County Director Education -Migori County 2017

APPENDIX XII: MAP OF KENYA AND MIGORI COUNTY