

## **Influence of Teacher Experience on School Academic Performance in Kenya Certificate of Secondary Education in Kisii Central Sub-County, Kenya**

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### **Abstract**

Teachers have a crucial role in improving learning outcomes. Since quality differs by teacher, their potential impact on student outcomes may also differ. The study explored the influence between teacher experience and school academic performance in Kisii Central Sub-County, Kisii County, Kenya. The study was carried out in Kisii central Sub-County which has 61 public Secondary schools and 13 private secondary schools. The study utilized mixed methods approach and concurrent triangulation design where qualitative data utilized an Ex post facto design while quantitative used correlational research design, then the two types of data were triangulated within the same time frame. The target population was 965 respondents comprised of all the 888 Secondary school teachers and principals in the 61 public secondary schools and 13 private schools in Kisii central Sub-County. The study used a sample size of 195 respondents (14 principals, 3 Area Education Officers and 178 teachers) using the central theorem. Data was collected through questionnaires, interview guide and document analysis. The instruments were piloted in 10 randomly selected secondary schools in the neighbouring Kitutu Chache Sub-County. The instruments validation exercise was done by the supervisors. A test- retest reliability technique was used to determine the reliability of the instruments where a coefficient of 0.76 was established. Descriptive statistics and inferential statistics were used to analyze data. Data was then presented through tables while bivariate analysis using Pearson Product Moment Correlation Coefficient to test if there was any relationship between teacher dynamics and student academic performance respectively. The findings of the study revealed that Teacher's experience, teacher's qualification, teacher's preparedness and teacher professional development positively and significantly influence academic performance of the learners/schools. In conclusion, teacher dynamics contributes 33.3% variability to the academic performance of the students.

**Key words:** *competence, performance, outcome, academic*

### **Background to the Study**

According to Akinbote, Oduolowu and Lawal (2001), Secondary education is the only level of education that is available everywhere in both the developed and the developing countries as well as in urban and rural areas. Hence all stake-holders; Parents, Students, Teachers, School Administrators and even the whole nation keenly watch the performance of schools where the new generation is educated. The Center for Public Education (2005) observes that of all the things schools can give students to help them succeed, good teachers are the best bet. Having an effective teacher consistently rises to the top as the most important factor in learning- than student ethnicity or family income, school attended, or class size. Hanushek (2010) believes that improving teacher quality can even have an impact on the national economy. He further observes that if a single highly effective teacher stays in the classroom for 30 years, he or she will contribute nearly \$13 million into the national economy over what a teacher with average effectiveness would.

The system of education in Kenya is highly selective in advancing from one level to another. Advancement is solely based on students' performance in national examinations. Examinations are used above all to identify and define those adjudged suitable to proceed to the next level of education. Success in educational institution is measured by the performance of students in external examinations. Examinations are used among others to measure the level of candidates' performances and clarify the candidates' level of education, training and employment. They also provide the basis for evaluating the curriculum both at local and national level. Examinations can when used properly, improve the quality of teaching and learning and because of this reason when Kenya Certificate of Secondary Education (KCSE) results are released the feedback is sent to schools through a report indicating not only how students have performed but also what teachers and students should do to improve on future examinations.

In terms of competence, researchers have argued that teacher competence is a function of teacher qualifications (Aghenta, 2000). How competent a teacher could be in teaching seems to depend largely on teacher's qualification. This contention supported Mullen's (1993) argument that the level of a teacher's subject matter competence is a prime predictor of students' learning. He argued that it is not only the qualifications obtained by a teacher that could contribute to a teacher's quality but actual performance in terms of subject matter competence. While some evidence suggests that better qualified teachers may make a difference for student learning at the classroom, school, and district levels, there has been little inquiry into the effects on performance that may be associated with large-scale policies, teachers' qualification and institutional practices that affect the overall level of teachers' knowledge and skills in the school.

Research tells us the influence of teachers is the single most important factor in determining student performance (Sanders and Rivers, 2009). In addition, a report by the National Commission on Teaching and America's Future (2004) observes that, the one factor that can make the most difference in improving a students' academic performance is a "knowledgeable, skilful teacher" in front of the classroom. Umeasiegbu (2009) also argues that the level of performance in any school is intimately related to the quality of its teachers while the quality of any school system is a function of the aggregate quality of teachers who operate it.

Agusibo (2008) however, observes that the absence of qualified teachers to teach in Secondary schools do contribute significantly to the poor performance in KCSE. This seems most especially to be corroborated by Kenya National Examination Council (2009) report on KCSE. Considering the foregoing, the objective of this study was to look at influence of teacher experience on school academic performance in Kenya Certificate of Secondary Education in Kisii Central Sub-County, Kenya.

### **Statement of the Problem**

In Kenya, good results in KCSE are a prerequisite for any secondary school to be recognized as a performing school and avoid being reprimanded by stakeholders. Good performance in KCSE also acts as an insurance for the Students to get good facilities in the public universities which guarantees them a bright future. Despite the knowledge of all this, poor performance in KCSE is the norm in most parts of the country where some areas have a record of perennial mass failures in KCSE. This is especially so in Kisii central Sub-County whose mean score has been dropping since 2012. The Sub-county had a mean mark of 4.5066, 5.3843, 5.04809, 2.9030, 4.3810 and 3.9.36 dropping or below average –(MOEST

2017) since 2012, 2013,2014,2015 ,2016 &2017 respectively. Even though studies have been carried out to determine the reasons for the general poor performance in KCSE in the Sub-county, teacher qualification has not been singled out as a reason that might have a negative or positive influence on student's academic performance in the Sub-county. This study therefore sought to examine the relationship between teacher experience and public Secondary schools academic outcomes in KCSE in Kisii Central Sub-County, Kisii County, Kenya.

### **Literature Review**

The theoretical framework for this study was grounded in Albert Bandura's (1998) self-efficacy theory. Albert Bandura, well known for his work on various types of efficacy, proposes that the task of establishing learning environments conducive to the development of cognitive competencies in students relies heavily upon the talents and self-efficacy beliefs of teachers (Bandura, 1997). Self-efficacy is anchored in a bigger theory known as the social cognitive theory. This theory suggests that human performance depends on interactions between one's behaviors, personal factors (e.g. thoughts, beliefs), and environmental conditions (Bandura, 1997). Bandura states that people gain data to assess their self-efficacy from four things, their actual performances, their vicarious experiences, the persuasions they receive from others, and their physiological reactions. He goes on to state that self-efficacy beliefs directly affect task choice, effort, persistence, resilience and performance.

When examining people who question their capabilities and those who do not, those who feel efficacious concerning a task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level. Efficacy is based on the notion that psychological procedures act as a way of creating and strengthening expectations of personal efficacy. Bandura explains that within this analysis, efficacy expectations are distinguished from response-outcome expectancies (Bandura, 1997). Outcome expectancy deals with a person's perception that doing a specific task will lead to a certain reward or punishment (outcome). In contrast, an efficacy expectation is a person's belief that they can perform the task that will produce the outcome. Outcome and efficacy expectations differ in that a person may know what it takes to achieve a certain outcome (e.g. if I attend college I can get a better job). But, if they do not believe they can accomplish the task, (e.g. academic rigor of college) the knowledge of what it takes to handle the task is useless.

A person's level of self-efficacy can affect both initiation and persistence of a certain task. Efficacy levels can predict if a person attempts to perform a specific task and how long a person will persist at that task if initially things don't go as expected. According to Bandura, at the initial level, perceived self-efficacy influences choice of behavioral settings. People fear and tend to avoid threatening situations they believe exceed their coping skills. The opposite is also true. People get involved in activities and behave assuredly when they judge themselves capable of handling situations that would otherwise be intimidating (Bandura, 1977).

All efficacy beliefs constructs- student, teacher and collective- are future oriented judgments about capabilities to organize and execute the course of action required to produce given attainments in specific situations on context (Bandura, 1977). This study specifically explores the teacher efficacy construct.

For every society to succeed in this rapidly changing world, skilled human capital with a solid base of knowledge is essential. This "refined human capital" can only be produced by developing and sustaining education systems according to social demands. For this reason,

education of the young generation has become a priority in both developing and developed societies. Secondary education in particular is the level of education that develops in the individual the capacity to read, write and calculate and in so doing helps to eradicate illiteracy, which is one of the strongest predictors of poverty (Bruns, Mingat & Rakotamalala, 2003).

Odhiambo (2010) contends that there is a growing demand from the Kenyan government and the public for teacher accountability in students' performance. Schools are commonly evaluated using students and teachers cannot be disassociated from the schools they teach and academic results of the students. Teachers celebrate and are rewarded when their schools and subjects are highly ranked. According to Yala and Wanjohi (2011) Kenyan teachers who excel in their subjects are rewarded during open days. The study focused on teachers job satisfaction, teachers motivation, teachers profession professional training and teachers professional experience, influence on students performance in KCSE.

Two large groups of definitions could be mentioned concerning the academic achievement. The first group could be denoted as an objective one because it refers to marks of pupil's knowledge, which measure the degree of pupil's adaptation to school work and school system (Gbati, 1988). The second group is supposed to be a subjective or a psychological one. According to Khadivi-Zand (1982) academic achievement is defined as self-perception and self-evaluation of objective academic success. Therefore, academic achievement consists of student's attitudes towards his academic achievement and himself as well as attitudes of his significant others (parents, teachers) towards his success and himself

Teacher characteristics such as years of teaching experience have been investigated to determine their effect on student outcomes (Sanders and Rivers, 1996; Wright and Horn, 1997). A more recent analysis by Wenglinsky (2010) used multilevel structural equation modeling to analyze data from the NAEP and found that teachers with a major or minor in the subject area that they are assigned to teach produce greater gains in student performance in both mathematics and subject. This remained true even after controlling for teacher professional development, teacher classroom practices, class size, and student demographics. Interestingly, Hawk, Coble, and Swanson (1985), found that students with mathematics teachers assigned in- field scored higher and had greater gains than students with mathematics teachers assigned out- of-field which indicates a connection of content-knowledge, but not necessarily applying pedagogical knowledge to other content areas. However, teacher experience is a topic of potential concern to policymakers, because experienced teachers often try to move to Sub-counties, schools, and classrooms with a more privileged student body and higher resources.

In regard to teacher experience, several studies have found a positive relationship between teacher experience and student outcomes; (Rice, 2003; Provasnik and Young, 2003 and Goldhaber, et. al., 1996). Rice, (2003) reports the following about teacher preparation programs and degrees: Research suggests that the selectivity /prestige of the institution a teacher attended have a positive effect on student performance, particularly at the secondary level. This may be partially a reflection of the cognitive ability of the teacher. Evidence suggests that teachers who have earned advanced degrees have a positive impact in high school mathematics and subject performance when the degrees earned were in these subjects.

Thus, if teacher experience is related to student performance, and more experienced teachers are able to some extent select the schools and Sub-counties in which they teach, or even their

teaching assignments within a school, poor students and students at risk of educational failure may end up being doubly disadvantaged because they are more likely to be taught by inexperienced teachers. Greenwald, Hedges, and Laine (1996) found in their meta-analytical study that teaching experience had a positive and significant effect on student performance. Hawkins, Stancavage, and Dossey (1998) found evidence that although teaching experience appears to be related to student performance, the relationship may not be linear; students whose teachers had fewer than 5 years of experience had lower levels of mathematics performance as measured by the NAEP mathematics assessment, but there were no differences in mathematics performance among students whose teachers had more than 5 years of experience. Other researchers have disagreed with these findings. Hanushek (1997) wrote that 71 percent of the studies he reviewed did not find any results to support a relationship between teaching experience and student performance.

Ajao (2001) observes that the quality of education depends on the teachers as reflected in the performance of their duties. Over time pupils' academic performance in both internal and external examinations in Asia and sub Saharan Africa had been used to determine excellence in teachers and teaching. Afe, (2001) also observes that teachers have been shown to have an important influence on students' academic performance and they also play a crucial role in educational attainment because the teacher is ultimately responsible for translating policy into action and principles based on practice during interaction with the students. Both teaching and learning depends on teachers, hence an effective teacher has been conceptualized as one who produces desired results in the course of his duty as a teacher (Uchefuna, 2001).

According to Commeyras (2003), Ijaiya, (2000) and Ogundare (2002) experienced and qualified teachers have great importance to a school. They argue that experience and higher qualification improves teaching skills while students learn better at the hands of teachers who have taught them continuously over a period of years. Effective teaching could be measured by the level of a teacher's subject matter competence which Mullens (1993) regarded as a prime predictor of student's learning.

### **Methodology**

The mixed methodology approach was utilized in this examination. This sort of studies have risen up out of the worldview wars among subjective and quantitative research ways to deal with turn into a generally utilized method of request. Contingent upon decisions made crosswise over four measurements, mixed-techniques can furnish an agent with many plan decisions which include a scope of consecutive and simultaneous procedures. Characterizing highlights of these structures are accounted for alongside quality control techniques, and moral concerns, Terrell (2012). The mixed strategies configuration was suitable since the investigation utilized both

The study adopted the concurrent triangulation design. For qualitative data ex post facto design was used and correlation research design for quantitative data. An ex post facto design is used when the independent variables in the study cannot be manipulated because the presumed cause has already occurred. Researchers attempt to determine whether or not one or more pre-existing conditions caused the differences in the groups under study. According to Borg, & Gall (1996), ex post facto designs allow researchers to study these relationships where experimental manipulation is difficult or impossible.

The study targeted all the 888 teachers in the 61 Public Secondary & 13 Private Secondary schools in Kisii Central Sub-County as shown in table 1.

**Table 1: The number of schools and teachers per division in Kisii central Sub-County**

Divisions	Number of schools	Number of Principals	Number of teacher	Number of AEO's
Keumbu	22	22	264	1
Kiogoro	32	32	384	1
Getembe	20	20	240	1
<b>TOTALS</b>	<b>74</b>	<b>74</b>	<b>888</b>	<b>3</b>

*Source: Source: Kisii Central Sub County Director Education (2019)*

In terms of sample selection, the Sub-county has 888 teachers, 74 principles, 74 secondary schools. Orodho (2004) and Gay, (2002) contends that a sample size of 20% is a good representative of the total population.

**Table 2: Sample size determination**

Divisions	Number of schools	Sample size of schools	Number of Principals	Sampled principles	Number of teachers	Sampled teachers	Number of AEO's
Keumbu	22	4	22	4	264	53	1
Kiogoro	32	6	32	6	384	77	1
Getembe	20	4	20	4	240	48	1
<b>Totals</b>		<b>14</b>		<b>14</b>		<b>178</b>	<b>3</b>

**sample size**

*Source: Source: Kisii Central Sub County Director Education (2019)*

Since the Sub-county has 74 secondary schools and the unit of analysis is at school level, 14 schools were randomly sampled; 4 from Keumbu division, 6 from Kiogoro division, and 4 from Getembe division. 178 teachers who handled the 2017 form 4 candidates in each school were also randomly sampled from the selected schools using school time tables; these includes 53 from Keumbu division, 77 from Kiogoro division and 48 from Getembe division. All the three Area Education Officers in Kisii Central Sub-County were purposively included in the sample.

### Findings

Table 3 indicates questionnaire response rate for this study.

**Table 3: Questionnaire response rate**

Divisions	Sampled principles	Return rate of principals	Sampled teachers	Return rate of teachers	Number of AEO's
Keumbu	4	4	53	52	1
Kiogoro	6	6	77	74	1
Getembe	4	4	48	46	1
<b>Totals sample size</b>	<b>14</b>	<b>14(100%)</b>	<b>178</b>	<b>172(96.6%)</b>	<b>3(100%)</b>

*Source: Field Data (2019)*

The results in table 3 above show that there was 14(90%) questionnaire return rate by principals, 172(96.6%) questionnaire return rate by teachers and 3(100%) questionnaire return rate by AEO's

The study adopted descriptive statistical techniques such as frequency, percentage and mean distribution. This helped to assess **Influence of teacher experience on school academic performance in KCSE** in public primary schools in Kisii Central Sub County. The results are presented below

**Table 4: Teaching experience**

Years	Frequency	Percent
Less than 1 year	19	10
1-5 years	42	22
6-10 years	69	36
11-20 years	44	23
More than 20 years	18	9
<b>Total</b>	<b>192</b>	<b>100</b>

Source: Field Data (2019)

The results in table 4 above show that 19(10%) of the respondents (teachers) had less than 1 year of teaching experience, 42(22%) of the respondents (teachers) had 1-5 years of experience, 69(36%) (both teachers and principals) had 6-10 years, 44(23%) of the respondents (both teachers and principals) had 11-20 years of teaching experience and lastly but not least 18(9%) of the respondents (both teachers and principals) had more than 20 years of teaching experience. Research in Pakistan (Tayyaba 2012) found that teachers' training was decisive in determining students' performance, whereas availability of resources and multi-grade teaching were less important.

The respondent were asked to rate the performance of students based on the teaching experience of the teachers. Their responses were captured in table 5 below;

**Table 5: Rate of performance based on experience**

Years	Frequency	Percent	Mean	Std. deviation
Less than 1 year	144	74	2.001	0.956
1-5 years	148	76	3.234	1.203
6-10 years	135	69	4.043	1.432

11-20 years	158	81	4.432	1.098
More than 20 years	148	76	4.563	1.834

Source: Field Data (2019)

The analysis results in table 5 revealed that teacher with experience of less than one year contributed to fair academic performance of learners/schools(mean 2.00), those with 1-5 years of experience contributed to good academic performance of learners(mean 3.00), those teachers with 6-0 years of teaching experience contributed to very good academic performance of learners(mean 4.00) and lastly but not least teacher with more than 20 years of teaching experience contributed to excellently academic performance of learners(mean 5.00). The smaller standard deviation in relation to their respective rating means imply that there was no significant difference between the sample means and population means. This was confirmed by Swanson (1985), found that students with mathematics teachers assigned in- field scored higher and had greater gains than students with mathematics teachers' assigned out- of-field which indicates a connection of content-knowledge, but not necessarily applying pedagogical knowledge to other content areas.

**Inferential Analysis**

The continuous variables consisted in each sub scale of the independent variable Teacher factor were transformed into the new independent variable. This was in turn transformed into categorical Variable teaching experience. Afterwards a correlation analysis was conducted between the recoded independent variable *teachers experience* with the sub-items consisting of the dependent variable academic performance.

**Table 6:Chi-Square Tests for teacher’s experience vs academic performance**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	215.540 <sup>a</sup>	36	.000
Likelihood Ratio	211.439	36	.000
Linear-by-Linear Association	3.673	1	.055
N of Valid Cases	195		

a. 24 cells (48.0%) have expected count less than 5. The minimum expected count is .22.

In this case, the significance value is so low that it is displayed as .000, which means that it would appear that the two variables are related. We therefore reject the null hypothesis and accept the alternative hypothesis.

**Table 7: Correlation between teachers experience and academic performance of students**

Teacher experience	Academic performance
Years of teaching	Spearman correlation coefficient .301**
	Significance .050
	N 195



The table 7 above show that teachers experience positively and significantly influence academic performance of students/schools at  $r=.301^{**}$ ,  $p=.05$  significant level. Calculating the coefficient of determinant, teacher experience contributes 9.0% variability to academic performance of the students/schools. This findings were confirmed by Greenwald, Hedges, and Laine (1996) who found in their meta-analytical study that teaching experience had a positive and significant effect on student performance.

### ***Thematic Analysis***

This was supported by an interviewee who had the following to say;

*...While teacher experience has always been and will continue to be an important aspect of teaching (it's important for teachers to know whether pupils have learned what was intended), teaching experience has increasingly come to play an important role in academic performance. In order to post good academic outcome for purposes of instruction, teachers must have relevant teaching experience. ...Male Participant, 48 years, Head teacher.*

This implies that when teachers have a relevant teaching experience, the pupils academic performance is most likely to improve.

### ***Mixing and Interpretation***

From the descriptive statistical analysis, the teachers' appraisal on teaching experience influence academic performance in public primary schools. The inferential statistics (correlations) teaching experience has strong positive correlation with academic performance). The significance level below 0.05 thus indicating statistical significant difference in teacher factors on teaching experience and academic performance in public primary schools. The differences between means are therefore likely due to chance and likely due to the fact that teachers teaching experience influence on pupils' academic performance in public primary schools.

Analysis result established that teacher's experience positively and significantly influence academic performance of students/schools at  $r=.301^{**}$ ,  $p=.05$  significant level contributing 9.0% variability to academic performance of the students/schools. These findings are in agreement with many scholars. According to Commeyras (2003), Ijaiya, (2000) and Ogundare (2002) experienced and qualified teachers have great importance to a school. They argue that experience and higher qualification improves teaching skills while students learn better at the hands of teachers who have taught them continuously over a period of years. Effective teaching could be measured by the level of a teacher's subject matter competence which Mullens (1993) regarded as a prime predictor of student's learning.

Teacher characteristics such as years of teaching experience have been investigated to determine their effect on student outcomes (Sanders and Rivers, 1996; Wright and Horn, 1997). A more recent analysis by Wenglinsky (2010) used multilevel structural equation modeling to analyze data from the NAEP and found that teachers with a major or minor in the subject area that they are assigned to teach produce greater gains in student performance in both mathematics and subject. This remained true even after controlling for teacher professional development, teacher classroom practices, class size, and student demographics. In regard to teacher experience, several studies have found a positive relationship between teacher experience and student outcomes; (Rice, 2003; Provasnik and Young, 2003 and Goldhaber, et. al., 1996).

## Conclusion

Teacher's experience, teacher's qualification, teacher's preparedness and teacher professional development positively and significantly influence academic performance of students/schools. In conclusion, teacher factor contributes 33.3% variability to the academic performance of the students/schools.

## Recommendations

- Policymakers should ensure equitable distribution of experienced teachers as they often try to move to Sub-counties, schools, and classrooms with a more privileged student body and higher resources.
- Regardless of the circumstance, teachers should not be assigned to teach subjects outside their areas of subject matter training and certification as this may contribute to poor academic performance of the learners/schools.

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