



INFLUENCE OF TEACHERS' KNOWLEDGE COMPETENCY ON PUPILS' ACADEMIC ACHIEVEMENT IN KISUMU COUNTY, KENYA

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Abstract:

Academic achievement of pupils' in Kisumu County has not been encouraging coupled with disparities between the sub-counties. Purpose of the study was to establish the influence of teachers' knowledge competency on pupils' academic achievement. The study employed survey research design. The study was conceptualized on principles of high-quality teaching and learning. Study Population comprised 3290 teachers, 658 head teachers, 7 assurance officers and 7 directors. Saunders, Lewis and Thornhill table was used to select sample of 294 teachers and 203 head teachers. Study sample were selected by stratified, random and purposive sampling. Samples selected comprised 294 teachers, 203 head teachers, 7 assurance officers and 7 directors. Informed consent, confidentiality of respondents was observed and data collected at work place. All sources were cited to avoid plagiarism Data was collected using questionnaire, interview schedule and observation checklist. Validity was ensured by comprehensively including all the study variables after which they were presented for assessment to the specialists in Curriculum and Instruction in Kisii University. Reliability of the instruments was determined by test-retest method. Correlation coefficient of teachers' questionnaire, Head teachers' questionnaire, QASOs interview schedule, ADDTMs interview schedule and teachers' observation checklist yielded 0.75, 0.71, 0.73, 0.74 and 0.77 respectively. Level of significance was set at 5%. Data was analyzed using quantitative and qualitative techniques. Quantitative data was sorted, coded and processed using SPSS version 20 to generate frequencies and percentages. Hypotheses were tested using Pearson's Product-

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Moment Correlations and Multiple Linear Regressions to establish presence or absence of correlations and association. Qualitative data were sorted into themes and sub-themes, analyzed in an on-going process then reported in prose. Teaching skills and assessment competencies had statistically significant relationship with pupils' academic achievement at (0.125), p-value (0.027) < 0.05 and (0.121), p-value (0.033) < 0.05 respectively. It was recommended that teachers' competencies be enhanced through in-service courses; review tests and measurements in professional studies offered in colleges.

Keywords: teachers, knowledge, competency, academic, achievement, Kenya

1. Introduction

A growing body of research suggests that teacher incompetence attenuates teacher quality and impacts negatively on pupils' academic achievement. Teachers' competencies as framework to guide teacher education and professional development is a key international priority connected to clear objectives for pupils learning Organization for Economic Co-operation and Development (OECD) (2005). Acquisition of competencies through training and practice should lead to teachers who impart high quality services. Quality teachers are likely to be successful in raising pupils' academic achievement. Kumar (2013) single out teacher competence as the key factor influencing pupils' academic achievement. Quality of education is judged by focusing on pupils' academic achievement, which entails what pupils learn and how well they learn it. Teacher competencies and pupils' academic achievement debate has taken center stage in many countries' education circles.

In United States of America, Lanier (2014) observes that pupils are not consumers of knowledge but creators, thus teachers are facilitators of learning, teachers need to set learning standards and assess how they are met. Teachers also need knowledge and professional values competencies. Similarly, Leithwood (2006) contended that in order to transform U.S.A. learning landscape there is need for setting teacher competency standards. This implies teacher competency framework. Lanier (2014) has not addressed the extent to which teacher competency influences pupils' academic achievement. This was focus of the study. Report by Parker and Pederzini (2000) revealed that demand for highly qualified teachers to address academic achievements of students has led to teachers' competency framework for licensing of teachers in New Mexico. This implies that teacher quality has influence on pupils' academic achievement. Thus, need to find out influence of teachers' competency on pupils' academic achievement. Research conducted by Department of Education and Training in Australia confirmed teacher competency as one of the most important factor-influencing student's academic achievement (Department of Education & Training, 2004).

Research by Abdul and Abdul (2010) in primary schools in Johar Bahru of Malaysia revealed that all teachers are competent and there is a significant relationship between teacher competency and pupil academic achievement. However, subject content

knowledge, teaching skills and classroom management were found to require improvement to build image as competent teachers. Research by Kulshrestha and Pandey (2013), Abdul and Abdul (2010), did not explicitly explore level of teacher competencies influence on pupils' academic achievement; this was focus of the current study.

Studies from Africa revealed that teachers' competencies have influence on pupils' academic achievement. Decline in educational standards in the Delta State of Nigeria is attributed partly to teachers in performance of their duties as teachers' effectiveness influence students' academic achievement (Akiri & Ugbooburgho, 2009). The decline was confirmed by Chinelo (2011) who affirmed that educational standards in the Delta State had fallen at all levels with tertiary level being most affected followed by secondary and least, primary. Ministry of Education [MOE], (2007) in Botswana recognized that teachers' competencies directly influenced students learning. Aluto (2006) confirmed this through his research on guidance role of instructional psychology where he recommended that teachers need to have competency in the delivery of content that involve having sound knowledge of the content and teaching strategies to enhance learning. In a study of assessment of primary school teachers' competences; Sakambuta, Musakanya, Lungu and Magaisa (2019), concluded that majority of primary school teachers in Zambia lacked the required competencies to implement 2013 re-revised curriculum. This was likely to compromise quality of education.

United States Agency for International Development (USAID) Kenya Cooperative Agreement 623-A.00-07-00031-000 has put in place Teacher Education and Professional Development (TEPD) programme (Republic of Kenya [ROK], 2007b). The overall goal of the programme is to improve the practice and competencies of teachers in Kenya. Emanating from this programme, consultative group (CG) was put in place. Formation of CG was encouraged by the fact that other countries had developed teacher competency framework (TCF). The CG resolved to borrow from other countries' TCFs but the need for contextualization was emphasized. By the year 2010, CG produced competency framework for primary school teachers (Transitional partners, 2013). This competency framework is organized under knowledge, teaching skills, assessment and professional values competencies. Teachers should not only be aware but also put in practice these competencies. This study explored teacher competencies influence on pupils' academic achievement.

Kisumu County has seven sub-counties. In this study, the sub-counties were coded K1 to K7. The County had recorded 255.92, 264.91, 262.20, 286.39 and 255.92 mean scores out of 500 possible marks in the last five years in Kenya Certificate of Primary Education (KCPE). Sub-counties K7, K6 and K5 have been registering below 260 mean score with K7 trailing at 243.32, 247.58 and 249.22 for the previous three years (County Director of Education, 2019). The KCPE mean scores for the last five years in the county are not encouraging. In addition, the wide disparity in mean score between K1 and K7 is a cause to worry. Teacher competency framework is in place and research from other countries on teachers' competencies and pupil's academic achievement show that there is a positive correlation. However, studies by Goodman, Arbona, and Dominguez de

Rameriz (cited in Kunter *et al.*, 2013) conclude that the competency or courses which matter most in teacher education remains an open question. In addition, different researchers such as Kumar (2013), Rakido, Kiplagat and Nyongesa (2016), Sultan and Shafi (2014) studied teachers' knowledge, assessment, teaching skills and professional values competencies separately and in isolation. Thus, specific contribution of each competency to pupils' academic achievement remains unclear. This study addressed the four teachers' competencies and established their relationships with pupils' academic achievements in primary schools in the County, as KCPE performance in the county is not encouraging. Trend of KCPE performance in the county is shown in Table 1.

Table 1: KCPE Trend in Kisumu County between 2013 and 2019

Sub-County	Max. KCPE Score	Mean Scores					
		2019	2018	2017	2016	2015	2014
K1	500	294.76	273.09	303.37	310.60	297.06	299.04
K2	500	260.96	260.15	263.81	263.89	269.35	271.45
K3	500	257.37	261.43	269.18	260.31	264.38	265.67
K4	500	257.26	257.48	258.46	250.92	263.03	261.57
K5	500	252.91	254.14	258.86	250.03	254.43	256.2
K6	500	247.61	203.99	253.13	256.46	247.47	251.52
K7	500	243.22	203.15	247.58	243.32	251.06	249.22
County			255.92	264.91	262.22	264.11	264.95

Source: County Director Education, Kisumu, 2019.

Kisumu County has seven sub-counties, these have been coded K1 to K7. From Table 1, Kisumu County KCPE mean score for the previous three years has been below 265. Sub-county K1 has consistently recorded a mean score of between 310.06 and 273.09 for the last five years while mean score for sub-county K7 has been below 250 apart from 2015 when it registered a mean score of 283.39. The difference in mean score between sub-counties K1 and K7 has been over 30 for the previous three years. This study focused on the cause of this remarkable difference in mean score.

2. Statement of the Problem

In pursuit of pupils' academic achievement, teachers' professional competencies are of great importance. In an attempt to help teachers improve in their competencies hence performance, Ministry of Education Science and Technology (MOEST) has put in place competency framework for primary school teachers. Kisumu County education office has been organizing insets through workshops and seminars for teachers. In some sub-counties in Kisumu County, parents and other stakeholders have been motivating teachers and pupils through field trips. Despite these efforts, performance in KCPE in Kisumu County is still not encouraging and there is a wide disparity in KCPE performance among the sub-counties as shown in Table 1.1. Kisumu County has professionally qualified teachers who should have the required competencies to propel pupils' academic achievement. Yet, pupils' academic achievement in some sub-counties

is still below average. Thus, it was important to explore teachers' competencies influence on pupils' academic achievement in Kisumu County.

2.1 Objective of the Study

To establish influence of teachers' knowledge competency on pupils' academic achievement in Kisumu County.

2.2 Teachers Knowledge Competency and Pupils Academic Achievement

Teachers need subject content knowledge, professional knowledge, emerging and contemporary knowledge and the practical understanding in order to deliver effectively. Teacher performance and appraisal in Ontario take into cognizance the importance of teacher knowledge competency where new teachers are expected to have good command of subject matter in order to promote pupils' learning (Ministry of Education. 2010). Sandra (2009) conducted a study on teacher competencies and students' academic achievement from a sample of teachers and students in secondary schools in Italy. Main theory discussed was the cultural debate about the professional status of teachers. It revealed fundamental questions concerning the nature of professional status within the system of education, which is influenced by factors such as social expectations, cultures of working with parents, family education and the role of other agencies. Two questionnaires were used, one for the student and one for the teachers. Findings of the study revealed that 93.1% of secondary teachers in Italy had knowledge competency. One of the teachers interviewed confirmed that when they introduce new terms to students, they explain them carefully. The study employed questionnaire only for data collection. This implied that there was no cross-validation of the findings and teachers' manifest competency was not assessed. In the present study, questionnaire, interview schedule and observation checklist were employed for purposes of gathering and cross-validating information from all major players and the study was done in primary schools where pupils may not be focused as those in secondary schools. Observation checklist was specifically used for in-depth assessment of teachers' manifest knowledge competency.

Any profession requires one to be trained or study a prescribed course and be certified in order to practice effectively. Study carried out by Eva and Monica (2007) on the impact of teachers' competence in public and independent schools in Sweden revealed that students taught by certified teachers did better than those teachers who were not certified. This study only looked at formal competence of teachers. It also looked at certified teachers and non-certified teachers. The current study explored both formal and manifest competencies and covered only certified teachers since teaching is profession.

Competence enables one to be effective in his or her line of duty and assignment. Teachers require different competencies in order to be effective. In Germany, Kunter et al. (2013) carried out a study on competence of teachers' effect on instructional quality and students' development. They looked at how teachers' knowledge, constructivist belief, intrinsic motivational orientations and self-regulation would explain differences

in their students' mathematical related achievement and motivation. This study was wide in scope. However, it was done on student achievement on a single subject. In spite of its wide scope of coverage, it also left out other teachers' competencies. The current study looked at all teachers' competencies influence on pupils' academic achievement across all subjects in primary school curriculum.

Licensed teachers should be able to implement an approved curriculum. In order to implement an approved curriculum effectively, a teacher should have adequate knowledge of subject content. In Germany, the government places emphasis on content mastery. During the first stage of teacher preparation, education studies and school placement take a maximum of 30% of the allocated time while the remaining time is left for content mastery (Center on International Education Benchmarking, 2015). Licensing of teachers in New Mexico is done at three levels; level 1, level 2 and level 3 (Parker & Pederzini 2000). Ability of teachers to address the learning needs of all New Mexico's students forms the framework for the New Mexico teacher competencies. In knowledge area, the teacher is expected to accurately demonstrate knowledge of the content area and approved curriculum. For instance, professional teacher level 2 should enhance and extend approved curriculum, give clear explanations relating to lesson content and procedures, communicate accurately in the content area and integrate other subjects into the content curriculum. Licensing of teachers using competency framework may not solve the problem of low academic achievement of pupils. In anticipation of acquiring a license, a teacher may prepare well for the interview. However, the same may not be replicated in school environment. Thus, it was important to find out the practices in schools in order to determine teachers' manifest knowledge competencies, which was the purpose of this study.

Teaching is not only delivery of curriculum. Teachers must have certain competencies to be able to teach effectively. Evaluation of teachers' performance has become both a profession and political debate in most countries of the world. This can be observed from the policies of no child left behind act 2002 in the United States of America (Bennet, 2014). Passing of a written examination may not guarantee that a person would be a good teacher. A teacher may not be able to transfer theoretical knowledge demonstrated on examination in real teaching practice (Kay, 2012). Transferring of theoretical knowledge to real teaching practice would be construed to imply pupils' academic achievement. In an attempt to verify Kay's school of thought, the current study investigated teachers' manifest competency and its influence on pupils' academic achievement. It was expected that practicing teachers were qualified and demonstrated both formal and manifest competencies. Majority of studies about learning in schools conclude that the teacher is the single factor that has greatest influence on what pupils learn (Danish Clearinghouse for Educational Research, 2008). In an attempt to explore which teacher competences could be shown through empirical research to increase the pupils learning, Ministry of Education and Research in Denmark, through tender number 20070275, allotted the task to Danish Clearinghouse for Educational Research. This Study was done between 1998 and 2007. It was a secondary research. In this study, 70 previous

studies were reviewed. Out of the 70 studies reviewed, 33% were on subject knowledge. The study revealed that a teacher who demonstrate abstract thinking in their teaching promote pupil learning. In addition, teachers who have been confronted critically but constructively within their own ideas about the subject contribute with increased pupil learning. This research used secondary data, which may have been outdated or may not have been reliable. In the present study, data was collected from the primary sources and teachers' practice assessed.

A study by Kulshrestha and Pandey (2013), in India, looked at competency at theoretical and operational view. One of the items in the operational view was the knowledge. Kulshrestha and Pandey affirmed that quality of education was judged by focusing on pupils' academic achievement. The study looked at importance of relationship between teacher competency and pupils' academic achievement particularly in a situation where many factors contribute to inadequate performance of pupils. The findings revealed that there was a direct link between teachers' knowledge competency and pupils' academic achievement. This concurs with findings of Hakim (2015), which indicate that teachers' professional competency had a significant positive contribution in performance of learners as evidenced by the significance value $(0.002) < \alpha 5\%$. Brick and Williams (2013) conducted the study in secondary schools where students are more focused and exposed to various study skills and revision strategies than their counter parts in primary schools and especially rural areas. The present study filled this gap by carrying out the study in primary schools in both rural and urban areas. Instrument for data collection was teachers' questionnaire and study population were teachers only. The questionnaire was constructed using likert scale. This questionnaire could not be used to capture teachers' manifest competency. Secondly information given by teachers was not verified by other authorities. The present study filled this gap by employing observation checklist to factor in manifest competency. Further, QASOs, ADDTMs and head teachers were part of target population and information received from them was used to verify information received from teachers. The study assumed that resources were limited and many factors contribute to pupils' achievement. In the present study, particular concern was teachers' knowledge competencies and pupils' academic achievement.

The work of Anupama and Minaketan (2011) in India on perception of student teachers about teachers' competencies shows knowledge of subject matter ranked first among 23 competencies. This was an indication that subject matter is perquisite for teaching profession. Importance of a competency without attaching its effect on pupils' academic achievement may not be useful for decision making in education circles. The present study looked at influence of teachers' knowledge competency on pupils' academic achievement. Siraiti (2016) conducted a study on teacher quality and student achievement in Republic of Indonesia. The findings indicated that teachers' professional subject competency was statistically significant in relation to students' achievement in senior high school and statistically insignificant in junior high school. Teachers covered were not of the same minimum academic qualifications. In such studies there is need to get information from immediate field officers to cross validate the competency level. The

current study filled this gap by including teachers of same minimum academic qualification. In addition, different instruments were employed to capture both formal and manifest teachers' subject content competency. Observation checklist was used in the current study to capture practical mastery and understanding of the subject content. Field officers of education formed part of study population and information obtained from them was used to cross validate that obtained from teachers through questionnaire and observation checklist. On the other hand, Arif, Elvira, Darin and Anissa (2015) examined the relationship between lecturers' professional competency and its impact on students' academic performance in higher education institution in Indonesia, which revealed that professional competency of lecturers did not have a significant relationship with students' academic performance. The significance value was 0.435 which was larger than 0.05. Lectures professional competency referred to knowledge regarding the courses they handle. This is in consonance with the results of the current study which shows that there is no statistically significant relationship between teachers' subject knowledge competency and pupils' academic achievement as p-value (0.211) > 0.05 level (2 tailed). The study employed use of self- administered questionnaire. Population of the study were students and lecturers in school of economics and business studies from Telkom University. In Arif et al. (2015) study, lecturers' professional competency was only sourced by one instrument and from lecturers only. The current study filled this gap by using, in addition to questionnaire, observation checklist and involving quality assurance personnel to corroborate the information obtained from teachers' questionnaire. The current study was carried out in primary schools where pupils may not be focused as those students in higher learning institutions.

Teachers are regarded as the most imperative school-based factor that influences students' academic achievement. Muzenda (2013) conducted a study on lecturers' competencies and students' academic achievement in Pretoria University of South Africa. He used descriptive survey and correlation designs. Instruments for data collection were lectures questionnaires and students' statement of academic results. His findings were consistent with the previous study by Eggen and Kauchak (2009), Schacter and Thum (2004), and Starr (2002) who found high positive correlation between teachers' subject knowledge competency and student academic achievement. This was a recent study done at a higher level of education where students were assumed to be focused in pursuit of their careers. However, there was need to carry out this study at lower level of education, primary schools, because pupils at this stage were not focused and heavily relied on their teachers for knowledge. This was focus of the study.

Many studies have pointed out teacher quality as a factor affecting pupils' academic achievement. Appah et al. (2015) conducted a study on the relationship between the quality of teachers and pupils' academic performance in Secondi Toko Metropolitan Assembly Junior High School. The objective of the study was to determine the relationship between the quality of the teachers and pupils' academic performance in Metropolis. One of the hypotheses that guided and directed the study was that there is no relationship between teachers' subject matter and the pupils' academic performance.

Findings of study revealed that there was a positive relationship between teachers' knowledge in the subject matter content and pupils' academic performance in Basic Education Certification Examination of the year 2012 where ($r= 0.109^*$). The findings of this study were consistent with those of Muzenda, (2013). Appah, *et al.*, (2015) used stratified sampling method to collect the data. Teachers have supervisors inform of head teachers and Ministry of education officials who have rich information on quality of teachers. Head teachers are only one in each school and quality assurance officers may also be one in a zone or district. This called for purposive sampling. The current study filled this gap by using simple random, stratified sampling methods to select teachers. Head teachers, quality assurance officers and teacher management officers were selected using purposive sampling method. In this study only one instrument, questionnaire was used. There was need to cross-validate the information obtained from the teachers using other sources and instruments. The current study filled this gap by including head teachers, quality assurance officers and teacher management officers in the study sample. Further the current study used interview schedule to collect information from head teachers, quality assurance officers and teacher management officers for cross-validation purpose. In addition to interview schedule, the current study employed observation checklist to find out level of manifest knowledge competency of teachers.

Some studies equate academic achievement to academic performance. One such study was by Olatoun (2010) in Nigeria. The study looked at teachers and students' academic performance in Nigeria Secondary Schools: Implication for the curriculum. The study was based on four hypotheses. The first hypothesis stated that there was no significant relationship between teachers' qualification and students' academic performance. Findings revealed that there was a positive correlation between teachers' qualification and students' academic performance. The calculated value of 0.892 was greater than the table value of 0.44 at 0.5 significance level. In this study, academic qualification was measured according to teacher's level of education such as master and bachelor's degree holders. Level of academic qualification is only an aspect of subject knowledge competence. The present study adopted holistic approach, which entailed content knowledge, professional knowledge, emerging and contemporary knowledge, and the practical understanding that a teacher needs in order to perform his or her duties. Most research carried out on teachers' competence influence on pupil academic achievement was on subject basis. A study by Filipe (2009) on teachers' competence and its effect on pupil performance in upper primary school in Mozambique established that without the essential subject knowledge and confidence in subject matter, teachers could not provide effective instruction. Specifically, the study explored teachers' competence and pupils' performance in mathematics and reading in Mozambique in upper primary school. Thus, teachers' competence affects pupils' academic achievement. The study failed to find out the level of significance of the correlation and in addition, it only looked at two subjects. The current study looked at the level of significance and in addition employed a holistic approach as per the curriculum.

Education issues have attracted a lot of research both nationally and internationally. Non-governmental organizations such as Action Aid and Southern and Eastern Africa Consortium for monitoring education quality have contributed immensely. A paper presented by Marphatia, Legault, Edge, Accher (2010) in Senegal on impact of teachers on quality of education in Brundi, Malawi, Senegal and Uganda pointed out that 40.6% of fifth graders tested achieved the desired levels. This was a research report on improving learning outcomes in primary schools' projects. Teacher was noted as a factor contributing to low percentage of pupils' academic achievement. Being a teacher in Senegal used to be a prestigious job and in every village, a teacher was one of the most respected people. Currently education absorbs anybody who is ready to be a teacher (Lanier, 2014). This report reveals that teaching profession has been watered down in Senegal. In least developed countries teaching faces a lot of challenges for instance teachers' lack of participation in education policy formulation, workload, large classes and inadequacy of training (Marphatia et al., 2010). In Senegal anybody who is ready to be a teacher was allowed to practice, this compromised teacher competency (Action Aid Senegal). Allowing people who have no minimum academic qualification join the profession, especially subject knowledge content has affected pupils' academic achievement. The study did not assess the level of teacher competency. The current study filled this gap by assessing level of teachers' knowledge competency and establishing influence of teachers' knowledge competency on pupils' academic performance where all teachers had minimum academic qualification as prescribed by the MOEST (2012).

Gains in education require teachers to have essential content knowledge. Without content knowledge a teacher would be incapacitated. Due to great attention currently attached to teachers' competency and its influence on pupils' academic achievement, many studies have been carried out. Adedeji (2008) carried out a study on teacher variables as predictors of academic achievement of primary school pupils in mathematics. One of the predictors examined was teachers' self-efficacy and its relationship with pupils' academic achievement in primary school mathematics. The findings of the study revealed that only teacher self-efficacy and teacher interest were significantly correlated with mathematics achievement outcomes ($r=0.265$ and 0.313 ; $p<0.05$, respectively). In this study, teacher competencies were put together under self-efficacy. In condensed form, teacher competencies should be knowledge, teaching skills, assessment and professional values. The researcher used mathematics result from self-constructed examination which may have lacked all characteristics of a good testing instrument. The current study used result of national examination which should have had all characteristics of a good testing instrument. The work of Akinbode and Abati (2019) pointed out that teachers' subject content knowledge is a significant predictor of students' academic achievement. On the other hand, Odumosu, Olisame and Areelu (2018) noted that teachers' content knowledge and pupils' academic achievement had a weak positive correlation. Akinbode and Abati (2019) investigated the effects of teachers' content knowledge on students' academic achievement in Lagos. The hypothesis for the study was that there is no significant effect of teacher content knowledge on students'

academic achievement in algebra. This study adopted pre-test, posttest quasi experimental design. This design may have been hampered by the practice effect, which is influence on performance from previous experience. The current study filled this gap by using only KCPE results, which is summative to collect pupils' data and questionnaire for teachers to avoid the practice effect. Population of the study was made of senior secondary school students and teachers from public and private schools. Senior secondary school students are focused and may use many strategies for revision to enhance their academic achievement. Thus, a part from teacher factor students' maturity may be a factor contributing to their academic achievement. The current study filled this gap by focusing on primary school pupils who were less focused and mostly rely on their teachers for gainful learning. Thus, pupils' academic achievement would be more of teachers' effort in primary schools than secondary schools. Findings of Odumosu et al. (2018) showed that students taught by teachers with high, average and low content knowledge had marginal mean of 52%, 53% and 50% thus students differ insignificantly in academic achievement irrespective of teachers' level of content knowledge in algebra. Finding of this study and the current study were similar where teachers' content knowledge and pupils academic achievement had a weak positive correlation (0.071) and was statistically insignificant as p-value (0.211) >0.05 level (2tailed)

Teachers' characteristics are many and summarized into competencies. A study by Kadri and Benmouhoub (2019) in Algeria on training pre-service teachers for professional expertise: A neglected area in Algerian higher educational system, observed that for effective teaching and high quality learning teachers must be equipped with necessary skills and competency in pre-service course. Therefore, it was necessary to establish influence of teachers' knowledge competency on pupils' academic achievement. According to Omotayo (2014) on a study conducted on teachers' level of education and students' academic achievement in Ondo State, the study was set to find out the relationship between teachers' level of education and students' academic performance in accounting. This study assumed teachers' characteristics to be two, teachers' level of education and teaching experience. The target population was teacher and students of financial accounting. Instrument for data collection were teachers' questionnaire and students' achievement test. In a system of education, there should be a minimum level of education prescribed for the profession entrants. Different topics are covered in different classes in secondary schools. In some areas, curriculum is spiral. Students are likely to be taught by different teachers in different classes. Thus, academic qualification used in this study may not be a true reflection of teachers' level of education. The current study filled this gap by looking at the four teacher competencies with teacher knowledge competency having content knowledge component, acquired from various level of education. Further, P1 teachers were targeted as the minimum qualification for teaching in a primary school. Hakim (2015) established that there is a positive and significant($r=0.58$) relationship between teachers' level of education and academic performance of students in financial accounting. Findings of the current study reveal that teachers' knowledge competency and pupils' academic achievement had weak positive correlation (0.071) and it was

statistically insignificant as p -value (0.211) > 0.05 level (2 tailed). The difference in findings between the two studies could be attributed to the fact that the previous study looked at only one component of teachers' knowledge competency while the current study looked teachers' knowledge competency holistically. This study was done in one subject only in the curriculum. The current study filled this gap by looking at the influence of teachers' knowledge competency on pupils' academic achievement across all subjects in the curriculum.

Worldwide debate on teachers' competency has attracted attention of many researchers' in many regions of the world; East Africa is not left behind in this quest for academic excellence. Teaching is a quasi-profession. It has both characters of a profession and non-profession. In some countries unqualified teachers have been allowed to practice. A paper presented by Education is a central pillar to socio-economic development in any society. Thus, factors of production in education sector especially teacher has been of great interest to researchers. Chokera (2014) carried out a study on influence of teachers' characteristics on pupils' academic performance in public primary schools in Akithi Division, Meru County. The study attempted to assess teacher qualification influence on pupils' academic performance. Data was collected using pupils' and teachers' questionnaire, interview schedule and document analysis. Teachers' education qualification was solicited using questionnaire. Pupils' academic achievement was solicited from KNEC examination results of KCPE. The findings indicated that teachers' qualifications were P1 48.9%, Diploma 20.4%, Degree 8.2 % and Master 2.0 %. Analysis of KCPE results showed that Akithi zone had the lowest KCPE mean score for the last five years in the division. The study concluded that teachers' qualification had influence on pupils' academic performance. This was based on the fact that most teachers were P1 (24; 48.98%) certificate holders a fact that could limit their delivery. In any education system, there is minimum level of academic and professional qualification one requires to practice at a given level. Any further qualification apart from specialization may not be of much impact at the same level. Chokera (2014) inferred findings from the fact that majority of teachers in Akithi zone were P1 holders. The study thus lacked empirical evidence. The current study filled this gap by conducting a correlation between teachers' knowledge competency and pupils' academic achievement. Rakido et al. (2016) conducted a study on influence of teacher competence on mathematics performance in KCSE examination among public schools in Nyatike Sub-county. The study looked influence of teacher educational qualification on mathematics performance in KCSE. Teacher educational qualification was equated to teacher knowledge competency. The study employed descriptive research design which is all about describing people who take part in the study. The current study employed survey research design which involves describing characteristics of a population by examining samples of that group. This gave in-depth characteristics of teachers' knowledge competency. The study used questionnaire and interview schedule for data collection. Questionnaire and interview schedule instruments were only able to provide data on formal competency and not manifest competency. In addition to questionnaire and

interview schedule, the current study employed observation checklist for manifest competency. The study revealed that correlation between teachers' educational qualification and mathematics performance was positive and statistically significant ($r=0.490$; $p<0.05$). Findings of Rakido et al. concur with those of Mutahar and Yu (2011), Kang'ahi et al. (2012) and Tenaw (2014). This study was done on one subject at secondary school level. The current study explored influence of teachers' knowledge competency on pupils' academic achievement across all subjects in primary school curriculum.

An incompetent teacher lacks tools to engage pupils effectively in classroom or any formal learning situation. Pupils lag behind in their subjects, something that they may never compensate. For instance, some pupils in standard six of the current 8-4-4 system of education are unable to read, as they were not taught phonetics properly in lower primary due to teacher incompetency. Ouma (2017) revealed that most pupils in class three could not read English and Kiswahili in class one books. Many scholars have concluded that teachers' characteristic is key to students' academic achievement in any subject. Teachers require a minimum academic qualification in order to handle a given area of discipline. Wasike (2016) conducted a study on influence of teachers on performance of students in English Language in public secondary schools in Mumias District. The study sought out to investigate the extent to which teachers' academic qualification influence students' performance in English Language in public secondary schools. Population of the study comprised teachers of English and heads of English department. Teachers of English questionnaire and heads of English department questionnaire were used for data collection. In order to get data on academic qualification, teachers were required to indicate their level of academic qualification. On the other hand, heads of department for English were asked to give their view on competency of teachers of English, whether they were highly qualified or not. The findings of this study indicate that teachers' academic qualification positively affected students' performance in English language. According to Wasike (2016), academic qualification entailed only teachers' highest qualification. Teachers' qualification was not confirmed from any other source. In addition, the researcher relied on students' performance from what teachers of English language indicated in the questionnaire. This may not have been reliable. The results indicated by the teachers may have been from team teaching comprising teachers of different levels of academic qualification. In some schools horizontal teaching is practiced as opposed to vertical teaching. The current study filled this gap by determining influence of teachers' subject knowledge on pupils' academic achievement. The current study, through questionnaire explicitly brought out level of teachers' subject knowledge competency. Pupils' academic achievement in the current study was KCPE which was summative, external and authentic, thus reliable.

Teaching as profession requires trained teachers as a matter of policy. Despite this policy being in place untrained teachers still find their way into the profession in Kenya, Kisumu and other Counties. The question is, can untrained teachers be as effective as trained teachers. A study carried out by Waseka, Simatwa and Okwach (2016) on influence of teacher factors on students' academic performance in secondary school

education in Kakamega County revealed that teachers with bachelor of education qualification had greatest influence on students' academic performance where ($r=0.700$) and ($p< 0.05$). Untrained teachers who were of form four level of education had the greatest negative influence on students' academic performance where ($r=-672$) and ($p<0.05$). Objective of the study was to establish the influence of teacher factors that influence students' academic performance. Descriptive survey and correlation designs were used in the study. Research instrument used were questionnaire, interview schedule, focus group discussion and document analysis. Specific teacher factors looked at were teachers' qualification, experience, gender and teaching load. Teacher qualification is equated to teacher knowledge competency. Knowledge competency ranges from content knowledge, professional knowledge to practical understanding that a teacher needs in order to perform his or her duties. Teacher competency has taken centre stage in most countries' education circles. Thus, teacher competencies should be given the right weight in such a study. This was focus of the current study as it covered the main areas of teachers' competencies. It was also important to find out manifest competencies of the teachers. The current study filled this gap by employing observation checklist. Secondary school students are more focused than their primary school counterparts thus may make use of variety of resource in preparation for KSCE examination. The current study filled this gap by carrying out the research at primary school level where pupils are less focused and basically rely on teachers as the only source of information.

3. Research Methodology

This study used survey research design. Survey design aims at describing the characteristics of a population by examining a sample of that group (Zoltan, 2007). This design was suitable because the study was set to determine teachers' professional competencies influence on pupils' academic achievements by administering questionnaire to teachers' samples. The study population comprised 3290 teachers of standard eight of the year 2018, 658 head teachers, 7 Assistant Deputy Directors Teacher Management (ADDTMs) (County Director Teacher Management, 2019) and 7 Education Quality and Assurance Standards Officers (QASOs) in Kisumu County (County Director of Education, 2019). In this study, Saunders, Philip and Thornbill (2009) table developed for determining small sample size needed to be a representative of a given population was used to select sample size of teachers and head teachers of mixed schools. The sample frame is shown in Table 2.

Table 2: Sample Frame

Category	Population	Selected Sample	Percentage	Sampling Technique
Teachers	3290	322		Saunders et al. table
Head Teacher-mixed	655	217		Saunders et al. table
Head Teachers-girls	2	2	100	Purposive
Head Teachers-boys	1	1	100	Purposive
QASOs	7	7	100	Purposive
ADDTMs	7	7	100	Purposive
Total	3,962	556		

Table 2 shows categories of the respondents, population, sample size. Percentage selected and sampling technique. Saunders, Philip and Thornbill (2009) table was used for determining sample size of teachers and head teachers of mixed schools as they were a large population and the researcher required small size sample. The head teachers for girls and boys schools, the ADDTMs were few hence sampled purposively.

Data was collected using interview schedules, questionnaires and observation checklist.

4. Findings

4.1 Influence of Teachers' Knowledge Competency on Pupils' Academic Achievement

The study sought to establish influence of teachers' knowledge competency on pupils' academic achievement. Competency framework for primary school teachers in Kenya spells out knowledge competencies expected of a practicing teacher. Knowledge competency refers to the content knowledge, professional knowledge, emerging and contemporary knowledge and the practical understanding that a teacher needs in order to perform his or her duties. In addition, the teacher is expected to have acquired knowledge of inclusive education. The results obtained from teachers' questionnaire were tabulated against schools KCPE mean score obtained from teachers' questionnaire as shown in Table 3.

Table 3: Teachers' Knowledge Competency Level and KCPE Mean

Knowledge Competency Level	Mean	N	Std. Deviation	% of Total N	Minimum	Maximum
Average Competency	263.7550	17	33.54514	5.8%	179.13	346.00
Good Competency	262.0839	102	34.44354	34.7%	179.13	375.00
Very Good Competency	269.1275	146	39.30939	49.5%	179.13	375.00
Excellent Competency	265.6932	29	42.77289	10.0%	179.13	375.00
Total	266.0282	294	37.70135	100.0%	179.13	375.00

Findings on teacher subject knowledge competency in Table 3 were obtained from teachers' responses to questionnaire items. It can be observed that teachers' knowledge competency level ranged from average to excellent competency. Few teachers (17, 5.8%) had average knowledge competency while majority (146, 49.5%) had very good

knowledge competency. This concurs with Sandra's (2009) finding where 93.1 % of teachers had thorough knowledge competency. Teachers of average knowledge competency had KCPE mean score of 263.7559, good knowledge competency 262.0839, very good knowledge competency 269.1275 and excellent knowledge competency 265.6932. Teachers of average knowledge competency registered higher KCPE mean score than their counterparts of good knowledge competency. In order to correlate teachers' knowledge competency and pupils' academic achievement, teachers' questionnaire was employed to generate teachers' knowledge competency ratings. This is indicated in Table 3. The correlation coefficient was determined using Pearson's product-moment correlations and generated using SPSS version 20. The results are shown in Table 4.

Table 4: Relationship between Teachers' Knowledge Competency and Pupils' Academic Achievement

		KCPE mean score	Percentage Knowledge Competency score
KCPE mean score	Pearson's Correlation	1	.071
	Sig. (2-tailed)		.211
	N	294	294
Percentage Knowledge Competency Score	Pearson's Correlation	.071	1
	Sig. (2-tailed)	.211	
	N	294	294

As shown in Table 4, it can be observed that teachers' knowledge competency and pupils' academic achievement had weak positive correlation (0.071) and it was statistically insignificant as p-value (0.211) > 0.05 level (2 tailed). Thus, the null hypothesis, there is no statistically significant relationship between teachers' subject Knowledge competency and pupils' academic achievement, was accepted. Value of correlations r lies between +1 and -1. The value of r nearer +1 or -1 indicates strong correlations between the variables (Kothari, 2004). Thus, a correlation of 0.071 is a weak positive correlation. The findings of this study concurred with those Arif et al. (2015) who found no significance relationship between teachers' knowledge competency and pupils' academic achievement. Pupils differed insignificantly irrespective of teachers' level of subject content knowledge.

5. Conclusion

Teachers' formal and manifest knowledge competency matched. Majority (293, 94.2%) of teachers in the county were well equipped with subject knowledge. However, there is no significant positive correlation between teachers' knowledge competency and pupils' academic achievement.

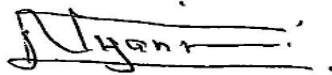
5.1 Recommendations

Teachers' competencies should be enhanced through in-service as pupils' academic achievement is subject to all the four teachers' competencies. School head teachers need to embrace and encourage the concept of team teaching in their schools. This would help ensure that pupils are not disadvantaged in some subject areas, as teachers who have no difficulties in those particular subjects' content areas would teach them. The curriculum developers need to incorporate more contemporary issues and inclusive education components in education programme to equip graduates to enable them face education challenges in their field of practice.

Conflict of Interest Statement

The authors whose names are listed immediately below certify that they have NO affiliation with or involvement in any organizational or entity with any financial interest or non-financial interest in the subject matter or material discussed in the manuscript.

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