

Influence of Teacher Professional Development on Learner Academic Achievement in Migori County, Kenya.

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Abstract: Education is a fundamental human right which promotes acquisition of knowledge and skills. Despite efforts by policy makers, administrators, teachers and learners to improve learner achievement, performance remains poor (MOEST, 2012). The purpose of this study was to survey the influence of teacher professional development on promoting student's academic achievement in public secondary school education. The research was guided by objective which assessed influence of teacher professional development on learner academic achievement. The study adopted concurrent triangulation research design. The target population for this study was 184 public secondary schools, 1233 teachers, and 73,385 learners. A sample involving 56 public secondary schools whereby 56 principals, 370 teachers and 398 learners was drawn from target population. Purposive sampling was used to get 56 schools, simple random sampling was used to get 370 teachers and stratified random sampling technique was used to get 398 learners. Data for the study was collected by the use of three different questionnaires and three different interview schedules. Validity of questionnaires was tested during the pilot study in Homa-Bay County which is neighboring Migori County. Split Half reliability test which is a measure of internal consistency was used. All pre-testing procedure for Reliability of instruments was based on reliability coefficient of 0.79 indexes. The data collected was summarized and analyzed qualitatively and quantitatively. Inferential statistics was used whereby Correlation, Regression and Chi-square tests were used to gauge influence of teacher management professional development on student academic achievement. The research revealed that teacher professional development had significant influence on learner academic achievement in secondary schools Therefore, the study concluded that administrators should put in place measures to enhance teacher Professional development. In conclusion, institutional managers should design proactive processes that can inculcate positive support for teacher professional Development.

Keywords: Policy makers, Administrators, Teachers, Learners, Learner achievement, Performance, professional development

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I. INTRODUCTION

A study by Loucks-Horseley, Hewson, Love & Stiles, (1998) indicated that Teachers' professional development (PD) refers to the opportunities offered to practicing teachers to develop new knowledge, skills, approaches and dispositions to improve their effectiveness in their classroom. It is an advancement of teacher's knowledge of the student's subject matter, teaching practices and educational related legislation. Teachers' professional development includes both formal and informal means of helping teachers not only to learn new skills but also develop insight in pedagogy. Professional development as used in this research does not include formal college or university training but only refers to seminars or workshops.

Meagher, (2011) suggested that there is no universal list of characteristics of effective professional development for teachers. The amount of information leaves designers of professional with tasks of synthesizing the information and necessitates an analysis of the same. The purpose of the analysis would be to prioritize the large number of characteristics by counting which categories of characteristics are mentioned most frequently. The designers of professional development can use these priority categories as an initial point to begin their evaluations of the effectiveness of existing professional development programs for teachers

Globally, countries of the world have put in place efforts to improve student performance and reduce achievement gaps. United States of America has been in the forefront in developing teaching standards and strategies to enhance effective teaching. According to Darling Hammond, Wei, Andree Richardson, and Orphanos (2009) strategies to enhance effective teaching and improve learners' performance should necessitate organizing forums where teachers meet in capacity building programs to enhance professional development and

share their experiences. In addition, other strategies include promoting teacher professional learning, and investing in teacher capacity building.

Research conducted by Marzano, (2003) indicated that Jump starting teacher management strategies comprises jumpstarting teacher professional development as is supported by Goldhaber, (2011) who postulates that one way of jump-starting capacity building 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.

Further, Marzano, Frontier, & Livingstone (2011) in a world view support the view that the intensity of professional development is more likely to bring about long-term change in teacher performance if it is intense. One measure of intensity is the time spent in the programs. The frequency of participation in various professional development programs should be cast against the extent to which teachers felt prepared to do various activities in the classroom.

The UNESCO, (2009) asserts that in Austria, national laws regulate the organization and definition of curricula, examinations and certifications in initial 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, & Rozelle (2017) found out that there is a significant gap in academic achievement between rural and urban learners 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 be 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 academic achievement in Rural China. The study found out that the National Teacher Training Program (NTTP) has no effect on Mathematics achievement among learners but was effective on mathematics teaching knowledge among teachers. The result indicated 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 learners 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 learners' (MOE, 2010 & MOF, 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 & Luque, 2014). At best policy makers have only obtained feedback from the teachers that have been trained and trainers running the program (Zuo & Su, 2012). This research will critically ascertain if the Chinese case is the same as the Kenyan case.

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); Franke (2002) showed that teacher professional development has positive effects on learner 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 learners learn and how to gauge the learning effectively. Despite the findings, other studies have noted that professional development programs are ineffective.

In Kenya, referring to government publications under Republic of Kenya (1999) it was 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 recent years, in a study conducted by Otieno, (2009) and supported by Wanzare 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. A recent report by the Teacher Service Commission (TSC) highlighted the fact that the programmes are making little contributions to professional development. 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 that teachers were trained, promoted and professionally developed.

TSC, (2015) indicate that teacher Professional Development (PD) leads 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). The Technical Requirement Manual (TRM, 2010) noted that an experienced teacher 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, as long as they comply with legislated requirements. An experienced teacher may also request a meeting with the principal to discuss the Annual Learning Plan (ALP). This programme has 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 of Monday, October 19, 2015, it was noted that teachers will be promoted based on performance (TSC, 2015). The newspaper summarizes the code that, first, school heads will be required to provide oversight in the performance appraisals of teachers in their respective schools; second, the commission will determine the intervals at which appraisals in educational institutions will be conducted and further, officers will have powers to enter any educational institution to ensure performance standards are reinforced.

1.2 Purpose of the Study

Teacher professional development on student academic achievement in secondary school education in Migori County , Kenya

1.3 Research Objective

To establish the influence of teacher professional development on student academic achievement in secondary school education

1.4 Hypothesis: There is no significant influence of teacher Professional Development (PD) on student's academic achievement in secondary school education.

11. RESEARCH METHODOLOGY

A concurrent triangulation design was adopted in this study. This design was used because it presents a fused method to reconstruct a research outcome in order to find a solution to the problem under study. The design enables the researcher to incorporate human experience and overcome weaknesses or intrinsic biases and problems that come from single research method. The study targeted 184 public secondary schools, 1233 teachers and 73385 learners. The study used purposive sampling to get 56 schools, simple random sampling to get 370 teachers and stratified random sampling to get 389 learners. Questionnaires and interview schedules were used to collect data. Data was analysed using mixed method involving qualitative and quantitative approaches.

II. RESULTS AND DISCUSSION

The hypothesis testing on influence of teacher Professional development on student's academic achievement in secondary school education used chi-square test to analyze data based on alpha $P=0.05$ level of significance. Below is the table showing Chi-square test on influence of Professional Qualification on student's achievement in 2017

Table 1.1

Influence of teacher professional development on learner achievement			
Chi-Square Test			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.177 ^a	7	.048
Likelihood Ratio	15.944	7	.026
Linear-by-Linear Association	.590	1	.442
N of Valid Cases	346		
<i>P < 0.05 Chi Square = 14.177, df = 7, N = 348, P = 0.048</i>			

The result in table 1.1 showed that Teacher Professional Development (TPD) had significant influence on learners' academic achievement in the 2017 KCSE results, alpha 0.05 ($P < 0.05$). From the result, the hypothesis was rejected. This was because in table 1.1 above the computed value of chi-square are 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.

An officer who was interviewed by the researcher on teacher professional development supported the above finding in the following comment.

“A teacher who is professionally developed must have up to date notes, up to date professional documents, and shows craftsmanship in student’s activities which crucial for 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, and area school is located; a highly professional teacher is not the only variable.”
Respondent No. 3

In summary, the study found out in this section that both principals and teachers agreed that teacher professional development supported learner 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 teacher’s academic achievement. In addition, Chi-Square tests were conducted to certain 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 academic achievement of learners in secondary school. In support, interviewed teachers indicated that indeed collaborative teaching, team development, teacher personal knowledge, teacher preparation and teacher appraisal were critical in supporting academic achievement. The finding contradicted a study conducted by Gildert, (2013) that asserted that a lot of teaching is not training or retraining and therefore content knowledge is not the key to successful teaching.

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 argued 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 will be 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 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 learners and not dichotomized to mean that teachers teach and learners 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 strategies 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. Indeed, spending billions as was done in China whereby policymakers had sought to close this gap by improving the quality of teaching in rural China through teacher Professional Development program. Despite the billions of Dollars in investment, 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.

Finally, using regression analysis, the research found out that teacher Professional development and its related variable teacher qualification had significant influence on learners' academic achievement in secondary school education. The finding showed that teacher Professional development and teacher professional qualification had significant influence on learners' academic achievement in the 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.

III. CONCLUSION

The data gathered from respondents who participated in the study concluded that there was significant influence of Teacher Professional Development (PD) on learners' academic achievement in public secondary education Using regression analysis, the research concluded that teacher Professional development had significant influence on learners' academic achievement in secondary school education.

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