Original Article

**Principals’ Provision of Professional Development Strategies on Teacher Productivity in Public Secondary Schools in Machakos County, Kenya**

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**Abstract:**

There has been a worldwide concern on human relation strategies that are applied in schools by the principals to enable healthy teacher productivity. This research aimed at examining the influence of principals’ professional development strategies on teacher productivity in public secondary schools in Machakos County, Kenya. The study was guided by the human relations theory and the theory of educational productivity. The study adopted mixed methodology and the descriptive correlational designs with concurrent triangulation model. The target population was 4,369, consisting of 4,312 teachers, 291 principals, 18 Sub-County education officers and 10 Teachers’ Service Commission (TSC) officers. The sample size was 490 participants which comprised of 433 teachers and 29 principals that were randomly sampled, 18 Sub-County directors of education and 10 TSC officers who were purposively sampled. Questionnaires were used for teachers and principals. Interview schedules were used for SCDEs and TSC officers. The content validity was established through judgment by educational management experts. Reliability was established using the split-half method. A reliability index of $r \geq 0.75$ was obtained using Cronbach Alpha Method, indicating high internal reliability. Data triangulation through multiple analyses ascertained credibility, whereas dependability was established by detailed reporting of each data collection process. Quantitative data was analysed using descriptive statistics such as frequencies, percentages, tables and inferentially using linear regression with the help of Statistical Package for Social Sciences (Version 24). Qualitative data was analysed thematically and presented in narrative forms and verbatim citations. The findings established that principals were not significantly using professional development among the schools and thus, affecting teacher productivity in schools in Machakos County. It was recommended that stakeholders in education work together with the schools to improve on professional development in the schools so as to improve teacher productivity.

**APA Citation**


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INTRODUCTION

Principals are key in achieving educational goals and valuable schooling in public institutions. According to Hattie and Clinton (2018) interpersonal strategies for school leaders include a range of activities that school leaders undertake to fulfil their teacher responsibilities and promote their students’ overall growth and development. These include, but are not limited to, motivation, professional development, teachers’ welfare and communication strategies.

In India, Deborah (2019) postulates that principals embrace various approaches to deal with advance solid relations among staff, which incorporate fostering a school culture helpful for educating and learning through shared authority and direction, risk-taking, giving educational authority through conversations of informative issues or more all, the board of under analysis’ discipline and co-curricular exercises. This infers that, for such training and educational programme goals to be actually understood, principals’ capacity to oversee human relations may not be disregarded as the main thrust and fundamental wellspring of the authoritative turn of events and scholastic development under analysis. In any case, the degree to which human connection methodologies embraced by principals contribute towards teacher efficiency in schools is yet to be completely investigated. As per World Bank (2017) teacher productivity entails teachers’ timely coverage of syllabus, effective participation in co-curricular activities and producing learners with quality grades in internal and national analysis. In other words, teacher productivity decides how much and how well students acquire education and the degree to which their schooling matures into a series of individual, communal and progressive benefits.

In Netherlands, for example, Moos (2019) asserted that a productive teacher is one who completes 85% of the syllabus in time, frequently participates in 80% of co-curricular activities such as athletics, music festivals as well as ball games and have his or her students register a mean grade of over 75% in internal analysis. The study also says this is only possible in schools where principals motivate teachers, engage teachers in professional development programmes, address teachers’ welfare and create a conducive communication environment. Despite these assertions, teacher productivity is still low, with many teachers not being able to meet their teaching and learning objectives in time. For example, a report by Marchington (2014) shows that, in Colombia, only 27.8% of teachers compete their syllabus in time, 31.9% frequently participated in school co-curricular activities and students only register a paltry mean grade of 35.9% in local and national outcomes.

In Kuala Lumpur, for example, Adré and Sullivan (2017) posit that, from a group point of view, the principals’ ability to adopt strategies such as teacher motivation is echoed in the self-regulated character of instructors and outcomes from their practices,
coupled with their proximal, which is their point of attraction immediately and innovative objectives. These assertions corroborate the viewpoints of Millette (2014) that, to realize and improve teacher productivity, strategies that border on enhancing human relations at school are key. The study places that, in profoundly powerful schools and schools that have switched a pattern of unfortunate efficiency and declining accomplishment among educators, the chief establishes the rhythm by driving other than establishing an invigorating climate where teachers undertake their instructional activities without a hitch. This indicates that, to make a difference in the ability of teachers to cover syllabus in time, effectively participate in co-curricular activities (CCAs) and produce students with quality grades (C+ and above) in internal and national analysis, principals’ human relations strategies come in handy and have to be practised vigorously among the schools.

In Nigeria, Bukola and Subair (2015) asserted that, in addition to challenges related to teacher supply and training, Nigerian Government has to ensure that human relations and teacher welfare are addressed. The study stated that in secondary schools where teachers were motivated, had opportunities for professional development, their welfare concerns addressed and conducive environment for teaching and created, teachers were productive and covered syllabus in time, participated in co-curricular activities and produced students with quality grades in examinations.

With regards to these statements, Lethoko (2018) declares that principals in Pretoria in South Africa are supposed to be aware of teachers’ government assistance, spur staff, establish a helpful clear climate and comprehend what is occurring in the homerooms by strolling the production line floor. With this impact, Southworth (2018) keeps up with that powerful informative pioneers glean some significant experience by finishing the work, figuring out the educational programme, instructional method, and understudy and establishing an invigorating climate for instructing. As per the study, instructors who are active in instructing are spurred by the work that their directors put into instructing and advancing as a determinant of further developed educator efficiency. Be that as it may, this has been the situation in numerous secondary schools.

Kenya, and specifically Machakos County are no exceptions where principals’ ability to manage human relations is considered a key ingredient for providing effective instructional leadership to improve teacher productivity. Akala and Maithya (2018) assert that principals are tasked with ensuring the smooth supervision of teachers, undertaking performance appraisal and teacher discipline and motivation as strategies for improving pedagogy in public secondary schools. However, the effectiveness of such principals’ human relations strategies in improving teacher productivity in public secondary schools is still lacking. Ministry of Education (MoE) (2022) notes that secondary schools in Machakos County registered a mean grade of 28.6 % in 2018 KCSE against a national aggregate which stood at 69.3 % and the trend has continued to remain below the expected mean score of 12 for the last five years.

Teachers do not cover syllabus in time in many public schools in Machakos County, majority of them do not take part in co-curricular activities and teachers register poor grades in national examinations. Ministry of Education (2022) noticed that public schools in Machakos County enlisted a mean grade of 28.6 % in 2018 KCSE against a public total which remained at 69.3 %, and the pattern has kept on diminishing. As per the education ministry, public secondary schools in Machakos County rank low in implementation of their programmes even after considering everything that counts in performance. In local ball games in 2018, Machakos County was positioned position four (4) out of the five (5) sub-counties, number four in sports and five in music festivals. This requires a cross-analysis into the degree to which principals’ human relationship procedures impact teacher productivity in public secondary schools, thus the review and study undertaken here supposed to address this issue.
LITERATURE REVIEW

Professional development involves the growth of an individual in their professional responsibility. In the framework of instruction, Villegas-Reimers (2015) avows that professional growth is a group of happenings that progress persons’ skills, knowledge, expertise, and other features as a teacher. In an investigation done in the Netherlands, Boyle et al. (2015) recognized a very substantial agreement that professional growth deals with developing teachers. According to the study, continually deepening skills and knowledge is vital in developing any professional’s life. This implies that teachers’ development is necessary for improving quality teaching and learning.

To help this, Mundane and Nonchalant (2015) did some work in Germany that uncovered that proficient improvement is a deep-rooted advancement programme that spotlights on educators’ information, abilities, and demeanour to empower them to really educate students. It noticed that proficient improvement is an activity that objec-tives an educator, occurring throughout a specific chance to accomplish proficient development. Cool and Apathetic (2015) state that powerful expert improvement for instructors upholds educator inspiration and obligation to the educational experience. This shows that teachers’ expert advancement endeavours to consummate what instructors were helped in the tertiary to satisfy the needs of the educational plan and auxiliary schools, which accord their educators such chances to observe further developed teacher efficiency with regards to prospectus inclusion and under analysis’ scholarly results.

In numerous nations in Africa, Du Plooy (2018) thinks that schools see teacher advancement as significant to their efficiency. For instance, in a review done in Nigeria, Egu et al. (2014) uncovered that optional schools guaranteed that teachers take part in proficient improvement exercises to turn out to be better teachers. The study assuming teachers create, they are clearly inspired to instruct and are frequently drawn to proficient improvement since they accept that it may upgrade their insight and abilities, add to their development, and increase their viability with students.

In Somalian schools, Jandaya (2017) asserts that optional schools perceive that offering teachers’ valuable development open doors for proficient advancement is a significant part of progressing instructor training and is basic to the job of the school personnel since it prompts their adequacy and efficiency. It uncovered that secondary schools that embraced persistent in-service administration preparing for their school personnel had their analysis register a typical yearly improvement of 5.9 % in public assessments. This suggests that proficient advancement is pivotal to instructors since it permits them to learn new ways to deal with teaching method and approaches to taking care of under analysis’ scholarly requirements, interests, and inclinations, which are vital to their scholastic efficiency. Proficient improvement looks to further develop teachers’ educational techniques, their capacity to adjust guidance to address the issues of the students, the executives’ abilities, and the production of an expert culture that depends on shared convictions about the significance of instructing and learning and underlines instructor collegiality.

In Kenya, there is acknowledgment that teachers require open doors for proficient turn of events and profession movement. A study in Thika West by Kemunto (2017) presents that teachers should be dependable in the information, abilities, values, standards, strategies, and methods pertinent to their field. The study demonstrated great expert advancement for showing staff is basic in practically every cutting-edge proposition for further developing schooling. It noticed that educators should be ready to fulfil specific guidelines and further develop student efficiency.

In Machakos County, there is an obligation for staff to go for in-service training plus any other specialized development courses to sharpen their teaching approaches. A study conducted in Machakos County by Galgallo (2019) established that teachers should be retrained and undergo
further professional advancement programmes to implement the secondary school curriculum effectively. According to the study, professional development enhances the teachers’ knowledge, is on par with subject development, improves teaching skills and creates new knowledge. However, much still needs to be done since it has not interrogated how offering teachers’ opportunities for professional development influences their productivity in terms of syllabus coverage, participation in CCAs, teaching subject scores, performance contract scores, and teacher job satisfaction in secondary schools.

**Theoretical Framework**

This study was directed by the human relations theory and theory of educational productivity. The human relations theory anchored the independent variable theme of the study while the theory of educational productivity anchored the dependent variable theme of the study on teacher productivity.

**The Human Relations Theory**

The human relation theory informs the independent variable which is principles to human relation strategy as demonstrated in the conceptual framework below. According to Walberg (2017), human relation theory takes an interpersonal approach to managing human beings with an intention to improving their productivity and job satisfaction as indicated in the conceptual framework below, in terms of Principals’ Motivation Strategies, Professional Development Strategies, Staff Welfare Strategies and principals’ communication strategies.

**Theory of Educational Productivity**

In this study, this theory associates diverse inputs affecting teacher productivity to human relation strategies undertaken by principals. These include teacher motivation, welfare management, professional development, and principals’ communication Strategies. in public secondary schools, all of which are expected to impact teachers’ syllabus coverage positively, participation in CCAs, teaching subject scores, performance contract scores, and job satisfaction.

On the other hand, the of educational productivity anchors the dependent variable teacher productivity. According to Walberg 2017, educational productivity is premised on influence by multiple parameters within the school environment guaranteeing teacher productivity in terms of improved syllabus coverage, Improved teaching subject scores, Improved performance contract scores, Increased teacher job satisfaction.

**RESEARCH METHODOLOGY**

The study examined principals’ provision of professional development strategies on teacher productivity in public secondary schools in Machakos County, Kenya. The sample consisted of 490 participants which comprised of 433 teachers and 29 principals that were randomly sampled, 18 Sub-County directors of education and 10 TSC officers who were purposively sampled. Questionnaires were used for teachers and principals. Data was analyzed in descriptive and inferential statistics using the linear regression. The study employed mixed methodology approach which utilized both quantitative and qualitative approaches. Mixed methodology provided the researcher with different choices of design involving a range of sequential and concurrent strategies. The features of these designs were then reported besides quality control methods and taking care of ethical concerns. Mixed methodology was suitable for this investigation as the investigator combined elements of quantitative and qualitative research approaches, information gathering, analysing, implications and practices for the extensive resolutions and depth of comprehending the research problem. The study applied the concurrent triangulation model that combined correlation survey methods. The correlation method was used for quantitative data while the phenomenological method used for qualitative data. Descriptive information was examined using frequencies and percentages and presented through tables and figures. Inferential statistics was analyzed through linear regression and presented through tables while qualitative data was analysed thematically and presented through narration and verbatim citations.

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FINDINGS AND DISCUSSIONS

The results were computed and presented in Table 1. From the table, the teachers responded to the indicator on the provision of staff development programmes. The agrees were 20 (6.45 %). Strongly agrees were only a mere 10 (3.23 %). The undecides recorded only 10 (3.23 %). The disagreement was 140 (45.16 %). The strongly disagreeing were 130 (41.94 %). Considering the combination of the total agreement side, the number was 30 (9.68 %). The combination of disagreeing side was 270 (87.10 %). This disagreement side percentage added to the undecides added to 280 (90.32 %). Evidently, this indicator was missing and hence the improved teaching subject scores could not be achieved. The question of whether this indicator could be witnessed among the teachers had similar outcomes. The agrees were only 5 (1.61 %). The undecides were 30 (9.68 %). The disagreeing was 170 (54.84 %). The strongly disagreeing were 100 (32.26 %).

The total agreement side was the majority with 270 (84.10 %) with 30 (9.68 %) making no decision. This is evidence that staff development programmes calendar of events was not found. Without such programmes, the improved teaching subject scores could not have been achieved significantly. The other indicator concerns the provision of opportunities for in-service training. Those who agreed were 20 (6.45 %). The strongly agreeing were similarly 20 (6.45 %). The undecides still were 20 (6.45 %). The disagreement was 150 (48.39 %) and the strongly disagreeing were 100 (32.26 %).

The total agreement side outcomes were insignificant since the number was only 40 (12.90 %). The total disagreement side was 250 (80.65 %). The total disagreement added to the undecides scored 270 (87.10 %). This meant that the in-service training, the conferences and the workshops were not provided to teachers in the public secondary schools in Machakos County. Thus, the improved teaching subject scores could not be achieved. Most teachers could not witness the provision of the opportunities for the in-service training, conferences and workshops. The only agreeing participants were 10 (3.23 %). The strongly agree were similarly 10 (3.23 %). Those who made no decision were 30 (9.68 %). The disagrees were 140 (45.16 %). The strongly disagreeing were 120 (38.71 %).

In actual fact, the total agreement side attracted only 20 (6.45 %) insignificantly. The total disagreement side had 260 (83.87 %) significantly. Judging from these responses, it was evident that this indicator was missing among the participants. So, the dependent variable could not have been realized. The other indicator was the provision of sabbatical leave for the personal growth so as to improve the teaching subject scores. According to the participants, there was no such provision since no participant could agree to it. In actual fact, 200 (64.52 %) could not agree. The rest of the participants, 110 (35.48 %) strongly disagreed.

All the participants, 310 (100.00 %) were on the disagreement side. This was a clear indication that sabbatical leaves were not granted hence poor teaching subject scores. Indeed, a rest was necessary for better performance. There were similar indicators on the other side of the indicator. It could not be witnessed by the teachers who participated in this study. There were 200 (64.52 %) who disagreed. The rest of 110 (35.48 %) strongly disagreed. Thus, all the participants, who were teachers, could not witness any sabbatical leaves being given to them. Indeed, there was no single participant who could support this. These leaves for personal growths among teachers were not given in Machakos County among the public secondary schools. Consequently, there was poor performance among the schools in the study county. The sabbatical leaves do not have to be long. The principals can grant teachers at least one week leave to rest and revitalize for better performance. All work and no play make Jack a dull boy. The play here is the sabbatical leave.

The final indicator was on the provision of funds for staff development in public secondary schools in the study county of Machakos. Those agreeing
were 20 (6.45 %) and strongly agreeing were similarly 20 (6.45 %). The undecided group comprised of another 20 (6.45 %). There was a significant disagreement in 155 (50.00 %). The strongly disagreement was 95 (30.65 %). From the above outcomes, only 40 (12.90 %) were on the agreement side meaning that only some public secondary schools in Machakos might have had staff development budgets. However, the disagreement side had significantly 250 (80.65 %) being the majority. The total disagreements and the undecides added to 270 (87.10 %). Therefore, it could be concluded that such budgets were not available significantly.

Witnessing of this indicator was not significant. Only 10 (3.23 %) agreed. Another 10 (3.23 %) strongly agreed. There were 30 (9.68 %) who could not make any decision. The disagreement was 200 (64.52 %). The strongly disagree were 60 (19.35 %). The total agrees were 20 (6.45 %). The disagrees were 260 (83.87 %) being the majority. According to this outcome, there were no funds provided for staff development significantly among the schools. This could hamper the improved teaching subject scores and as result, poor performance.

These findings from the teachers can be echoed by similar findings. Professional development involved the growth of a person in their professional protagonist. In the background of instruction, Villegas-Reimers (2015) asserted that professional development was a set of activities that developed a person’s skills, knowledge, expertise, and other characteristics as an instructor. In an investigation done in the Netherlands by Boyle et al., (2015) it was found that there was a very substantial agreement that professional development dealt with growing teachers. The recurrent deepening of skills and knowledge was vital in developing any professional’s life and skills. This implied that teachers’ development was essential for refining value teaching as well as learning.

In the same manner, the principals responded to this objective in their questionnaires. Table 2 has the details.

From Table 2, the principals gave their opinions regarding the indicators in the second objective of the study. Regarding seeing the staff development programmes calendar of events, 6 (20.69 %) were in agreement. A similar number, 6 (20.69 %) strongly agreed. The neutrals were 5 (17.24 %). Those that disagreed were 10 (34.48 %) and strongly disagree were 2 (6.89 %). From the outcomes above, the agreement side had 12 (41.38 %). The disagreement side equally had 12 (41.38 %). The total disagreement and the neutrals were 17 (58.62 %). These figures indicate weak acceptance on the side of the principals. The positive response was due to the fact that the participants were the implementors of the indicator and so, they could not have denied it.

The other side of the indicator was on providing staff development programmes calendar of events. Those that agreed that they provided were 10 (34.48 %). The strongly agreeing were 2 (6.89 %). The disagreeing was 8 (27.59 %) and the strongly disagrees were 4 (13.79 %). From the above outcomes, the total agreement side had 12 (41.38 %). The total disagreement was similarly 12 (41.38 %). The combination of disagreements and the neutrals was 17 (58.62 %). Actually, this indicator does not seem to reflect significant acceptance from the principals.

The participants responded to the second indicator which was on the provision of opportunities for in-service training, conferences and workshops in schools. The number agreeing was 12 (41.38 %). The strongly agrees were 2 (6.90 %) with another similar number, 2 (6.90 %) making no decision. The disagrees were 3 (10.34 %) and the strongly disagrees were similarly, 3 (10.34 %). The combination of the agreement side had a total of 14 (48.28 %). The disagreement side had 13 (44.83 %). The total disagreements and the neutrals combined were 15 (51.72 %). This being the case, it is clear that the indicator had no significant acceptance among the participants who were even the persons supposed to implement it.

The other side of the indicator was on whether individual principals provided opportunities for
in-service training, conferences and workshops. The agrees were 10 (34.48 %) and the strongly agrees were 4 (13.79 %). The neutrals were 3 (10.34 %). The disagreeing was 10 (34.48 %) and the strongly disagrees were 2 (6.90 %). Judging from the above figures, the acceptance side was 14 (48.28 %) and the disagreement side had 12 (41.38 %). The total neutrals and disagreements combined were 15 (51.72 %). Bearing in mind that the participants were the principals who were supposed to provide these opportunities, it could be said that there was weak acceptance. Thus, the improved teaching subject scores could have been hampered significantly.

The third indicator was on the provision of the sabbatical leaves among the teachers in Machakos County. This was not done since no participant agreed or strongly agreed. Indeed, the majority of 19 (65.52 %) did not want to take sides. Those who disagreed were 5 (17.24 %) and a similar number, 5 (17.24 %) strongly disagreed. The total agreement side had zero response. The disagreement side had 10 (34.48 %). The combination of neutrals and disagreements were all participants, 29 (100.00 %). This, no doubt, was an indication that leaves were not available among the public secondary school teachers in Machakos County.

The other side of the indicator asked if individual principals granted sabbatical leaves. The agrees and the strongly agrees had zero response. The majority were neutrals being 19 (65.52 %). The disagreeing was 6 (20.69 %) and the strongly disagrees were 4 (13.79 %). The combination of the agreement side was zero. This disagreement had 10 (34.48 %). The neutrals had the majority of 19 (65.52 %). Thus, the total neutrals and the disagreeing were all the 29 (100.00 %) participants. This means that the idea of sabbatical leave was not practised among the teachers in the study county hence hampering the improved teaching subjects scores.

The final indicator in the second objective was the question if there were funds for staff development in the school budgets. The agrees were 5 (17.24 %) and the strongly agrees were similarly, 5 (17.24 %). The undecides attracted a similar figure of 5 (17.24 %). The disagreement indicated by 10 (34.48 %) and strongly disagreed by 4 (13.79 %). The combination of the agreement side was 10 (34.48 %). The combination of disagreement side was 14 (48.28 %). The total neutrals combined with disagreements was 19 (65.52 %). This is clear evidence that funds for staff development were not significantly available among the schools otherwise, a more significant response could have been seen. To evaluate better this indicator, the participants, who were the school principals, were asked to declare if they provided the funds for staff development in their schools. The agrees were 10 (34.48 %). The undecides were 5 (17.24 %). The disagrees were 8 (27.59 %) and strongly disagrees were 6 (20.69 %).

The above picture shows that the total agreement side had 10 (34.48 %). The total disagreement was 14 (48.28 %). The total combination of undecides and the disagreeing were 19 (65.52 %). These outcomes are a clear indicator that staff development funds were not provided by the principals in the schools. This was a stumbling block in the improvement of the teaching subject scores. The findings from the principals were echoed in Cool and Apathetic (2015) study. It was seen that influential expert development for teachers is sustained by motivation and responsibility to the instructive skill. This showed that teachers’ expert advancement endeavoured to consummate what they were assisted to satisfy the needs. The staff development programmes were necessary for the teacher productivity.

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### Table 1: Teachers’ responses on principals’ provision of professional development strategies on teacher productivity

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<th>SD</th>
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<td>In your school, you have provision of staff development programmes calendar of events which has catapulted improved teaching subject scores</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>140</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(6.45)</td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(45.16)</td>
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<tr>
<td>You have witnessed provision of staff development programmes calendar of events which enhanced improved teaching subject scores</td>
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<td>05</td>
<td>30</td>
<td>170</td>
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<td>(1.61)</td>
<td>(9.68)</td>
<td>(54.84)</td>
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<tr>
<td>In your institution, there is provision of opportunities for in-service training, conferences and workshops which have improved teaching subject scores</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>150</td>
<td>100</td>
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<td></td>
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<td>(6.45)</td>
<td>(6.45)</td>
<td>(6.45)</td>
<td>(48.39)</td>
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<tr>
<td>In your institution, you have witnessed provision of opportunities for in-service training, conferences and workshops which have improved teaching subject scores</td>
<td>10</td>
<td>10</td>
<td>30</td>
<td>140</td>
<td>120</td>
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<tr>
<td></td>
<td></td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(9.68)</td>
<td>(45.16)</td>
</tr>
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<td>Your school has provision of sabbatical leave for personal growth which has improved teaching subject scores</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>200</td>
<td>110</td>
</tr>
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<td>(0.00)</td>
<td>(0.00)</td>
<td>(64.52)</td>
</tr>
<tr>
<td>You have witnessed provision of sabbatical leave for personal growth in your school which has improved teaching subject scores</td>
<td>00</td>
<td>00</td>
<td>00</td>
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<td>(0.00)</td>
<td>(0.00)</td>
<td>(64.52)</td>
</tr>
<tr>
<td>There could be provision of funds for staff development in your school budget which has improved teaching subject scores</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>155</td>
<td>95</td>
</tr>
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<td>(6.45)</td>
<td>(6.45)</td>
<td>(50.00)</td>
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<tr>
<td>In your institution, you have witnessed provision of funds for staff development in your school budget which has improved teaching subject scores</td>
<td>10</td>
<td>10</td>
<td>30</td>
<td>200</td>
<td>60</td>
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<td>(3.23)</td>
<td>(3.23)</td>
<td>(9.68)</td>
<td>(64.52)</td>
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</table>

**Source:** The researcher, 2024

### Table 2: Principals’ Responses on Principals’ Provision of Professional Development Strategies on Teacher Productivity

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<th>SD</th>
</tr>
</thead>
<tbody>
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<td>Staff development programmes calendar of events in your school are seen which have improved teaching subject scores</td>
<td>6 (20.69)</td>
<td>6 (20.69)</td>
<td>5 (17.24)</td>
<td>10 (34.48)</td>
<td>02 (6.90)</td>
</tr>
<tr>
<td>You provide staff development programmes calendar of events which might have catapulted teaching subject scores</td>
<td>10 (34.48)</td>
<td>02 (6.90)</td>
<td>5 (17.24)</td>
<td>08 (27.59)</td>
<td>04 (13.79)</td>
</tr>
<tr>
<td>There is provision of opportunities for in-service training, conferences and workshops in your school which might have improved teaching subject scores</td>
<td>12 (41.3)</td>
<td>02 (6.90)</td>
<td>02 (6.90)</td>
<td>10 (34.48)</td>
<td>03 (10.34)</td>
</tr>
<tr>
<td>Your institution, you have provided opportunities for in-service training, conferences and workshops which might have improved teaching subject scores</td>
<td>10 (34.48)</td>
<td>04 (13.79)</td>
<td>03 (10.34)</td>
<td>10 (34.48)</td>
<td>02 (6.90)</td>
</tr>
<tr>
<td>There is of sabbatical leave for personal growth which may improve teaching subject scores</td>
<td>00 (0.00)</td>
<td>00 (0.00)</td>
<td>19 (65.52)</td>
<td>5 (17.24)</td>
<td>5 (17.24)</td>
</tr>
<tr>
<td>You provide sabbatical leave for personal growth in your school which may have improved teaching subject scores</td>
<td>00 (0.00)</td>
<td>00 (0.00)</td>
<td>19 (65.52)</td>
<td>6 (20.69)</td>
<td>04 (13.79)</td>
</tr>
<tr>
<td>There are funds for staff development in your school budget which might improve teaching subject scores</td>
<td>5 (17.24)</td>
<td>5 (17.24)</td>
<td>5 (17.24)</td>
<td>10 (34.48)</td>
<td>04 (13.79)</td>
</tr>
<tr>
<td>You provide funds for staff development in your school budget which may improve teaching subject scores</td>
<td>10 (34.48)</td>
<td>00 (0.00)</td>
<td>5 (17.24)</td>
<td>08 (27.59)</td>
<td>06 (20.69)</td>
</tr>
</tbody>
</table>

**Source:** The researcher, 2024
Inferential Statistics Analysis

There was a linear regression analysis that was done to test if the principals’ provision of professional development strategies significantly predicted teacher productivity. The results of the linear regression model were significant, $F(1,729) = 559.55, p < .001, R^2 = .43$, indicating that approximately 43.42% of the variance in teacher productivity was explainable by principals provision of professional development strategies. Principals’ provision of professional development strategies significantly predicted teacher productivity, $B = 0.65, t(729) = 23.65, p < .001$. This indicated that on average, a one-unit increase of principals’ provision of professional development strategies increased the value of teacher productivity by 0.65 units. The null hypothesis in chapter one was, thus, rejected. Table 3 summarizes the results of the regression model. The regression model becomes: Teacher Productivity = 0.55 + 0.65*Principals’ provision of professional development strategies.

Table 3: Results for linear regression with principals’ provision of professional development strategies predicting teacher productivity

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>95.00% CI</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>0.55</td>
<td>0.06</td>
<td>[0.44, 0.66]</td>
<td>0.00</td>
<td>9.83</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Professional development strategies</td>
<td>0.65</td>
<td>0.03</td>
<td>[0.60, 0.70]</td>
<td>0.66</td>
<td>23.65</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

*Note. Results: $F(1,729) = 559.55, p < .001, R^2 = .43$*

Source: The researcher, 2024

These findings concurred with other findings in literature review. In Somalia for instance, Jandaya (2017) stated that optional schools perceived that offering teachers’ valuable open doors for proficient advancement was a noteworthy part of developing teacher training and was basic to the job of the school personnel since it prompted their competence and effectiveness. It exposed those institutions which involved persistent in administration preparation for their school personnel had improved by 5.9 %. This proposed that proficient advancement was essential to teachers since it permitted them learn innovative ways to deal with instruction methods. Proficient improvement looked to further develop teachers’ instructive procedures and their capacity to adjust guidance to address the problems of the learners.

Thematic Analysis

The education officers were interviewed to find out how the principals provided professional development strategies. The first indicator was on the provision of staff development programme calendar of events. This indicator was not fully implemented as one officer said,

“Some schools have established calendar of events for staff development for instance, you find some principals organize internal training to refresh their teachers. However, I can say that this is not the case in most schools. I agree that this can enhance teaching subject scores if implemented properly” (EO1).

On the side of the TSC officers, the calendar of events did not seem to be a concern to the principals. One officer noted,

“The principals seem to have too many more important activities at the expense of staff development. There is no much concern on the professional development strategies. Yes, I agree that this can cause poor teacher productivity and for sure, teachers may never improve their teaching subject scores” (TSC1).

Thus, judging from the interview, this indicator could not be found among the public secondary schools in Machakos County. The education officers as well as the TSC officers in the sub counties could not agree on calendar of events. However, all the participants agreed that the calendar of events could improve the teaching subject scores if properly organized.

The education officers were interviewed on the provision for opportunities for in-service training, conferences and workshops. It seemed that this
was part of their duty but thus had to be initiated by the principals as one officer said,

“The in-service training and refresher courses are part of our duties to oversee. However, the principals should identify the key areas for training since they know where their staff weaknesses are. They should prepare to meet the cost. Nevertheless, there has been issues on funding whenever it comes to these trainings and courses. We can identify good facilitators but the issue is on the payment” (EO2).

The TSC officers did not seem to encourage the principals to initiate courses. There was constraint of funds. They could majorly deal with the primary school teachers. The secondary schools had to find their own ways and means to train their teachers. One officer lamented,

“We do not have enough money to involve all the teachers in the sub county. The school heads can arrange for training as we look for appropriate facilitators. I believe that such courses can help teachers improve on their subject scores. Yes, there is need to keep training teachers as we are getting into the new system of education” (TSC2).

The second indicator of this objective was not achieved to a greater extent. Once teachers leave the training colleges and universities, they need to be refreshed from time to time. There are many changes coming up with the new system of education in Kenya.

The third indicator on the provision of sabbatical leaves for personal growth could not be seen. This was gone from the memory of the education officers. Nobody could dream of this as one officer said,

“Nowadays sabbatical leaves are next to impossible. People may not have replacements if they take leaves. Teachers take leave during the school holidays automatically. However, these annual leaves are not meant for motivation or for the improvement of teaching scores. It the teachers’ right to go on leave annually. Again, this can be a very expensive thing to do especially now that a new system of education is picking” (EO3).

The TSC officers did not even support any leave outside the normal school holidays. The did not find it necessary. It was a waste of time and the human resources. However, the leaves could have helped teachers grow professionally and improve their performance. One officer noted,

“It is a good idea to have sabbatical leaves. The teachers can grow professionally and produce better results. Nevertheless, there is an issue of replacements during the leaves. Even the study leaves with pay have been rare if not impossible. We cannot afford to let teachers take leaves any how” (TSC3).

The final indicator in this objective was on the funds for staff development being reflected in the school budgets. Schools seemed to have problems with funds. Often times than not, the capitation funds delay. The budgets may include money for staff development but never to be done as one officer observed,

“Issue of funds in the schools are escalating. The capitation funds may delay. The budgets may reflect money for staff development but at the end of the fiscal year, you find that the staff development has not been due to lack of funds. You know, schools have their own priorities and the funds are very much scarce and limited. This development, though necessary for the improvement of teaching subject scores, may not be considered a priority among the schools” (EO4).

The TSC officers had similar sentiments. Funding the schools is not an easy task for the government. The capitation funds are not enough to cater for staff development. In the case where the parents had to chip in, it was always an issue as one officer observed,

“The staff development can be funded by the parents. However, whenever money is asked from them, it has been often difficult. This is
even worse in the case of free day secondary schools where parents think that they should not pay any levies. It becomes a war to get funds from such parents. Teachers can perform better if they are being developed professionally” (TSC4).

These findings had similar outcomes in Kenya. There was acknowledgment that teachers required open doors for proficient turn of events and professional development. An investigation in Thika West stated that teachers must have been dependable in the material and thus, there must be funds to help them grow professionally. It was demonstrated that great professional progression for the staff was basic. It was realized that teachers must be prepared to achieve specific procedures and develop in their jobs (Kemunto, 2017)

CONCLUSIONS AND RECOMMENDATIONS

There were no resources provided for staff development significantly. There was a bit of positive response owing to the circumstances that the principals were the ones giving the information and so, they could have been biased. There was no significant acceptance. Opportunities for in-service training, conferences and workshops had disagreements. This is to. Sabbatical leaves were not practised. The funds were not provided by the principals. Inferential statistics had that professional development strategies significantly predicted teacher productivity. The results of the linear regression model were significant, $F(1,729) = 559.55$, $p < .001$, $R^2 = .43$. Principals’ provision of professional development strategies significantly predicted teacher productivity, $B = 0.65$, $t(729) = 23.65$, $p < .001$. The null hypothesis in chapter one was, consequently, rejected.

Thematic analysis from the qualitative instruments indicated that there was an issue with the indicators of this study. The schools did provide adequate staff development programmes, in-service training opportunities, sabbatical leaves and funds for staff development programmes in their budgets.

Recommendations

Based on the findings of this study, the following recommendations were done for the purpose of practice

- The Ministry of Education should provide refresher training for secondary school principals on human relations so as to improve on the teacher productivity
- The principals should motivate teachers by developing them professionally, caring for their welfare and proper communication
- The government reward teachers who perform well in the national examinations to enable them perform better
- The Boards of management should budget for funds to enable motivation of teachers in the schools

REFERENCES


