

Impact of Principals' Intellectual Stimulation on Students' Performance at Kenya Certificate of Secondary Education in Public Secondary Schools, Kenya

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Abstract: Education is considered not only as human right (UNESCO, 2011; United Nations, 2012), but the engine of national growth for all societies. This study was driven by the necessity to advance students' academic performance at Kenya Certificate of Secondary Education (KCSE) examinations in Mbooni West Sub-county, Kenya. The study was guided by two objectives: i. Establish the extent to which principals' leadership practice of intellectual stimulation (IS) in public secondary schools impact students' performance at KCSE examinations. ii. Examine the extent to which principals' demographic variables influence leadership practice of intellectual stimulation in public secondary schools. The study targeted 42 public secondary schools in the Sub-county. A sample of 38 schools was selected using Simple random technique whereby selections are made purely by chance. The study employed descriptive research design. Questionnaires, focus groups discussion, interviews, and Document Analyses were used to collect data. Data was analyzed using descriptive and inferential statistics. In descriptive statistics, frequencies, percentages, means, variance, and standard deviations were calculated and presented in tables. Pearson's Product Moment Correlation Coefficient was computed to test if relationships exist or does not exist between intellectual stimulation and students' academic performance tested at alpha value 0.05 or 0.01 levels of significance. Further, t-test was used to determine whether principals' demographic variables influence the leadership practices of intellectual stimulation. The findings shown that, intellectual stimulation has positive significant influence on students' performance at KCSE examinations with t_{198}^{**} at alpha value 0.01 level (2-tailed). Further, nonsignificant influence found of principals' demographic variables of working experience and academic qualification on leadership practice of intellectual stimulation. Future research should embrace larger sample sizes of principals and teachers using different methodology. Thus, examine influence of principals' transformational leadership practices on collective teachers' efficacy in public secondary schools. This study recommends higher learning institutions to restructure comprehensive courses on TLP for teacher trainees to enhance establishment of effective schools' leadership in Kenya.

Keywords: Principals' impact, intellectual stimulation, students' KCSE performance, public secondary school, Mbooni West Sub-county, Kenya

1. Introduction

United Nations Educational, Scientific and Cultural Organization (2009) emphasize that, high students' achievement depend to the central role of effective schools' leadership practices that can create revolutionary changes within educational institutions for educational excellence. Therefore, transforming schools and school systems is critical to sustained growth and success to both the individuals and societies (Mascal, 2007). Further, United Nations (2013) and UNESCO(2013) emphasize that, education is a vital tool that contributes towards accelerated economic growth, more wealth and income distribution, greater quality of opportunity, availability of skilled man power, and decline in population growth, long life, better wealth outcomes, low crime rates, national unity and political stability among others. Therefore, education is considered not only as human right (UNESCO, 2011; United Nations, 2012), but the engine of national growth for all societies. Further,

Therefore, Hopkins (2006) points out that, there is need for manpower that is highly committed to support the development of an efficient and responsive education and training systems. Further, Selamat and Nordin (2014)

findings show that, schools' leadership positions require competitive transformational leadership practices (TLP) as a hallmark of students' success in national examinations. Hence, Ergeneli, Gohar and Temirbekova (2007) support that, transformational school principals who practice intellectual stimulation (IS) search outside the formal boundaries of the school for innovative ways to enhance what is currently done by teachers and learners. This brings about desired changes that result to improved students' academic performance in national examinations.

Notably, Cole (2004) and Avolio, Walumbwa, Weber (2009) underscore that, systematic scientific research on how organizations can be best lead with new approaches suggested with research support continues to evolve. This allows progressive better understanding on what a leader is supposed to practice to bring success to the individuals and to the organization at large. Then, Kouzes and Posner (2002); Moore and Rudd (2006) highlight that, specific patterns of leadership practices vary over time and across cultures. This poses the question about the best leadership practices that can bring about positive and significant changes in the learning environments. Hence, Lam (2002); Lam and Pang (2003) and Williamson (2014) findings advocate that, transformational leadership practices are trusted to play a significant role within organizations, to

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successfully navigate the success of schools' learners in the 21st century.

Then, studies by Khasawneh, Omari and Abu-Tineh (2012) and Mbithi (2014) advocate that, intellectual stimulation in schools is exhibited whereby, the school principal challenges both teachers and students by holding high expectation performances from them. This makes teachers strive hard to teach effectively leading to overall good students' academic performance (GSAP) in schools. Therefore, this study found it necessary to examine and provide broad information the extent to which leadership practice of intellectual stimulation impacts students' performance at Kenya Certificate of Secondary Education examinations in public secondary schools in Mbooni West Sub-county, Kenya.

Intellectual Stimulation and Students' Academic Performance

A study by Lorgwell-Mckean (2012) on restructuring leadership for 21st Century schools in USA shows that, creating opportunities for teachers to grow in their ethical professional practices cannot be overlooked, if today's schools are to produce tomorrow's competitive schools' leaders. While, Hay (2007) study outcomes show that, the practice of intellectual stimulation (IS) provides an opportunity for schools' leaders and subordinates to propose better ways of moving the organizations forward. This is made possible by sharing and expressing new ideas in an open and accepting forum for the advancement of the organization at large.

Therefore, Bellé (2013) findings on leading to make a difference shows that, the practice of intellectual stimulation enable transformational leaders challenge followers' beliefs and values to break away from old ways of thinking. Then, Demir (2008) findings highlight that, transformational leaders stimulate followers to be creative, innovative, and systematic thinkers. According to Demir, followers' suggestions should be considered in decision making and mistakes not criticized publicly. While a study by Robinson, Lloyd and Rowe (2008) on impact of leadership on school outcomes disagree with Demir's findings by pointing out that, transformational leadership practices are not effective towards good students' academic performance in schools. Hence, a study by Marks and Printy (2003) on principal leadership and school performance advocate the importance of integrated approaches to leadership based on transformational and instructional models which lead enhanced students' academic performance in schools.

Study results by Leithwood and Jantz (2006) on transformational school leadership for large-scale reform disagree with study outcomes by Marks and Printy (2003) and Robinson, Lloyd and Rowe (2008) and argue that, principals who practice intellectual stimulation encourage teachers to be innovative and creative in their work, and approach old situations in new ways. This implies that, through questioning assumptions, subordinates are helped to solving problems using new approaches hence this enhances students' academic performance in schools.

Also, study results by Leithwood and Jantzi (2008) concur with Leithwood and Jantz (2006) by underlining that, school principal who provides intellectual stimulation challenges assumptions, takes risks and solicits teachers' ideas and hold high standards expectations performance for followers. This implies that, teachers strive to teach effectively leading to overall GSAP. Mascall (2003) conducted a study on leaders helping teachers helping students in USA and found that, school principal who displays intellectual stimulation challenges teacher to rethink old ways of doing things. These enable teachers reassess their old values and beliefs for better way of performing their teaching tasks to bring about GSAP in the school.

Besides, a report by convey (2007) on the transformational leadership emphasizes that, intellectual stimulation enable TSP challenges assumptions, and encourage creativity in their followers' work, therefore improving their work performance. Khasawneh, Omari and Abu-Tineh (2012) study results on the relationship between transformational leadership and organizational performance in Jordan show that, school principals who practice intellectual stimulation encourage teachers to have creative thinking in teaching. This involves looking at own values and those of the system in new ways which help teachers to be more effective leading to enhanced student' outcomes in their national examinations.

Then, a study by Liu (2013) on transformational school leadership model in Chinese Urban upper secondary schools found that, the practice of intellectual stimulation provides an important force in the school change context. Thus, it enables employee have new ways of thinking and encouraged to explore new issues in their organization. According to Bass and Rigglo (2006), transformational leaders who exhibit intellectual stimulation do not criticize followers when they commit mistakes but encourage followers to be innovative and use new ideas and approaches in their work. Therefore, mistakes are treated as a learning opportunity hence increases self-esteem and commitment towards good students' academic performance.

Nderitu (2012) findings in Nairobi County show that, secondary schools have not been doing well at Kenya Certificate of Secondary Education (KCSE) Examinations due to ineffective leadership practices. According to Nderitu's findings, *challenging the process* has positive relationship on students' academic performance therefore, suggests training schools' principals on transformational leadership practices. Wainaina, Kipchumba and Kombo (2014) findings show that, public secondary school institutions in Kenya are undergoing transformation to reverse the falling trend in service delivery. Therefore, this study hopes the same thing can happen in Mbooni West Sub-county, where there is inconsistency in students' academic performance at KCSE for five consecutive years, thus (2011-2015).

The Kenya National Examination Council (KNEC) is in charge of basic national examinations, secondary examinations included. Mean grades in KCSE are awarding as follows:- A plain 12 points; A minus 11 points; B plus 10 points; B plain 9 points; B minus 8 points; C plus 7 points, C

plain 6 points; C minus 5 points; D plus 4 points; D plain 3 points; D minus 2 points; E 1 point. The minimum university entry requirement is C+ (plus) and above (MWSCQASO, 2016). Results for Mbooni West Sub-county schools for the KCSE examinations (2011-2015) years are shown in Table 1.1.

Table 1.1: National and Mbooni West Sub-County KCSE Results Analysis (2011-2015) percentages of C+ and above

| Years | 2011 | 2012 | 2013 | 2014 | 2015 |
|------------------------|-------|-------|-------|-------|-------|
| National index | 29.12 | 28.36 | 27.46 | 30.78 | 31.52 |
| Mbooni West Sub-county | 20.42 | 21.84 | 24.85 | 19.31 | 17.83 |

Sources: MWSCED and MWSCQASO Document analysis (2016)

Statistics in Table 1.1 from Mbooni West Sub-County Director of Education (MWSCDE) and Sub-County Quality Assurance and Standards Officer (MWSCQASO) (2016) on KCSE examinations (2011-2015) shows discrepancy. Why? The majority over 75 percent of the students who sat for KCSE examinations for five consecutive years were not able to obtain mean grade of C+ and above which is the minimum university entry requirement in Kenya.

Further, statistics from Makueni County Education Director (MCED) and the Makueni County Quality Assurance and Standards Officer (MCQASO) (2016) reported on KCSE mean scores analyses (2011-2015) years are shown in Table 1.2.

Table 1.2: Mbooni West Sub-County KCSE Mean Scores Compared to Makueni County KCSE Mean Scores, Results Analysis (2011-2015)

| Years | 2011 | 2012 | 2013 | 2014 | 2015 |
|------------------------|------|------|------|------|------|
| Makueni County | 4.95 | 5.00 | 5.03 | 5.16 | 5.07 |
| Mbooni West Sub-county | 4.07 | 4.09 | 4.16 | 4.02 | 4.06 |

Sources: MCED and the CQASO Document analysis (2016) Makueni County

Table 1.2 shows that, Mbooni West Sub-county is below Makueni County throughout the years (2011-2015). In Kenya, Ministry of Education (MoE) (2014) highlights that leadership is the most important aspects of management and contributes immensely to the general well-being of organizations' success and nations' growth and development. This implies that, education and training are central towards the height of transformation required in Kenya to be globally competitive country that provides a high quality life to its entire citizens by the year 2030 and beyond (Republic of Kenya, 2007). Therefore, this study advocates for sustainable schools' improvement efforts on existing leadership practices to move schools closer toward the ideals of equity and success for every student at KCSE examinations.

2. Statement of the Problem

Education is considered not only as human right but the engine of national growth for all societies, Kenya inclusion. Ministry of Education Science and Technology (2012) emphasizes that, school head teachers shoulders the greatest burden to lead schools achieve educational goals. The

government of Kenya immensely invests in training educationalists to enhance provision of quality education, and the establishment of effective leadership practices among teacher trainees for all schools. However, Tables 1.1 and 1.2 shows that, Mbooni West Sub-county schools consistently posted low KSCE mean grades compared to the National Index and Mkeni County KCSE results analyses (2011-2015) years respectively.

3. Objectives and Hypotheses of the study

The study was guided by the following objectives:

3.1 Objectives

- 1) Establish the extent to which principals' practice of intellectual stimulation in public secondary schools influence students' performance at Kenya certificate of secondary education in Mbooni West Sub- County.
- 2) Examine the extent to which principals' demographic variables influence leadership practice of intellectual stimulation in public secondary schools in Mbooni West Sub- County.

3.2 Research Hypotheses

The study addressed the following null hypotheses in tune with the above stated objectives:

H₀₁. No significant correlation among principals' practice of intellectual stimulation in public secondary schools and students' performance at Kenya certificate of secondary education.

H₀₂. There is no significant difference between principals' demographic variables and the practices of intellectual stimulation in public secondary schools.

4. Methodology

4.1 Research design

The study used descriptive research design which involved observing and accurately describing the actions of people in a certain situation without manipulating them in any way (Oso & Onen, 2009). Descriptive research design was used to offer correct and valid picture of a situation as it obviously occurs then, summarize variables relevant to the research objectives (Mugenda & Mugenda, 2003). Therefore, this research design facilitated the researcher to collect data, describe and wrote down aspects of the principals' transformational leadership practice of intellectual stimulation on students' academic performance at Kenya Certificate of Secondary Education (KCSE) examinations in Mbooni West Sub-county (2011-2015) years.

4.2 Population and sample size

The target population for this study comprised 42 public secondary schools and 595 teachers (Mbooni West Sub-county, Education Director, 2016) report. The study established Pagano Gauvreau formula (2000) appropriate to calculate number of schools' and teachers' samples sizes

respectively. The researcher randomly selected 38 schools signifying 90 per cent of the schools' target population and 266 teachers signifying 45 per cent of the teachers' target population.

4.3 Instrumentation

The research adopted and adjusted a template from Multifactor Leadership questionnaires (MLQ Form 5X) (Bass & Avolio, 1995), which is largely applicable to a wide range of administrative leadership situations where there is responsibility to impact the activities of others. Besides, focus groups discussion guides, interviews, and document analysis guide were used to enhance confidence in research findings by triangulation of sources and instruments. There were two questionnaires, one for teachers and the other for the principals. Each questionnaires consisted five items based on a five-point Likert scale answered as 5- strongly agree, 4-agree, 3-Not decided, 2-disagree, 1-strongly disagree to measure principals' leadership practice of intellectual stimulation (IS). Higher scores of 4 to 5 indicate high and strong transformational leadership practice (TLP) of intellectual stimulation by the school principal, whereas a 3 to 3.99 indicate moderate practice of intellectual stimulation, and below 3 scores indicate low and weak leadership practice by the principals. Testing hypothesis in tune with the leadership practice was done at alpha value of 0.05 or 0.01 level of significance.

4.4 Data analysis

Both quantitative and qualitative methods were used for data analysis. Quantitative data from the questionnaires was coded and entered into the computer using the Statistical Package for Social Sciences (SPSS version 21.0) program for descriptive statistics analysis on leadership practice of intellectual stimulation by calculating frequencies,

percentages, Means, and Standard deviations of the data. Thereafter results were presented in form of tables. Pearson's Product Moment Correlation of Coefficient (PPMC) referred to as Pearson's r was used to test if relationships exist or does not exist between leadership practice of intellectual stimulation and students' academic performance at KCSE examinations tested at alpha value 0.05 or 0.01 levels of significance (Orodho, 2005; Goodman, 2008; Orodho, Khatete & Mugiraneza, 2016).

5. Study Findings and Discussion

Effect of Intellectual Stimulation on Students' Academic Performance at Kenya Certificate of Secondary Education (KCSE) examinations

Intellectual stimulation (IS) assists the school principal conduct internal analysis of the organizational performance. The principal challenges teachers' teaching and students' learning processes to break away from old ways of thinking, thus status quo. The school principal stimulates creativity, innovation and hold high performance expectations for both teachers and students to strive hard to excel. This increases organizational commitment resulting to desired good students' academic performance at KCSE examinations.

Intellectual stimulation had 5- items to measure using the scale: 5- strongly agree, 4-agree, 3-Not decided, 2-disagree, 1-strongly disagree. Higher scores of 4 to 5 indicate high and strong intellectual stimulation leadership practice by the school principal. Whereas 3 to 3.99 indicate moderate leadership practice and below 3 scores indicate low and weak leadership practice of intellectual stimulation by the school principal. Principals rated themselves, and teachers also rated their Principals as well. The findings from the principals are shown in Table 5.1.

Table 5.1: Principals' Responses on Intellectual Stimulation

| | As a principal I: - | | 5 | 4 | 3 | 2 | 1 | Total |
|-----|---|---|------|------|------|-----|---|-------|
| i | Encourage teachers to evaluate their practices, refine them in light of new understandings to improve academic performance. | f | 14 | 19 | 5 | - | - | 38 |
| | | % | 36.8 | 50.0 | 13.2 | - | - | 100 |
| ii | Work toward consensus with teachers in determining which initiatives can be implemented. | f | 13 | 15 | 9 | - | - | 37 |
| | | % | 35.1 | 40.5 | 24.3 | - | - | 100 |
| iii | Regularly lead teachers review school performance, holding high performance expectations as professionals. | f | 16 | 17 | 5 | - | - | 38 |
| | | % | 42.1 | 44.7 | 13.2 | - | - | 100 |
| iv | Help teachers learn new teaching techniques for student success. | f | 8 | 18 | 11 | - | - | 37 |
| | | % | 21.6 | 48.6 | 29.7 | - | - | 100 |
| v | Include teachers to participate in school decision-making to enhance team's achievement towards good students' performance. | f | 16 | 20 | 1 | 1 | - | 38 |
| | | % | 42.1 | 52.6 | 2.6 | 2.6 | - | 100 |

Table 5.1 shows principals responses on how they practice intellectual stimulation in public secondary schools. According to item one, majority 50.0% of the principals agreed to practice IS in schools by encouraging teachers to evaluate their practices, refine them in light of new understandings to improve academic performance however, 13.2% of the principals did not know.

After rating item two for measuring intellectual stimulation, majority 40.5% of the principals accepted that, they work with teachers in determining which initiatives can be implemented to enhance students' performance in schools, while 24.3% of the principals did not know. On item three,

majority 44.7% of the principal concurred that, the practiced of IS in schools is done by leading teachers regularly review school performance and holding high levels performance expectations, but 13.2% of the principals did not know.

Considering item four, most 48.6 % of the principals agreed that, they practice intellectual stimulation in schools by helping teachers learn new teaching techniques for student success, although 29.7% noted not to do. On item five majority 52.6% of the principals agreed that, they practice intellectual stimulation in schools by involving teachers in school decision-making towards good students'

performance, while a few 2.6% disagreed that. Therefore, principals' mean summaries on IS are shown in Table 5.2

Table 5.2: Principals' means on Intellectual Stimulation

| | As a principal I: - | N | M | SD | CM |
|---|---|----|------|-----|------|
| 1 | Encourage teachers to evaluate their practices, refine them in light of new understandings to improve academic performance. | 38 | 4.24 | .68 | |
| 2 | Work toward consensus with teachers in determining which initiatives can be implemented. | 37 | 4.11 | .77 | |
| 3 | Regularly lead teachers review school performance, holding high performance expectations as professionals. | 38 | 4.29 | .69 | |
| 4 | Help teachers learn new teaching techniques for student success. | 37 | 3.92 | .72 | |
| 5 | Include teachers to participate in school decision-making to enhance team's achievement towards good students' performance. | 38 | 4.34 | 6.9 | 4.14 |

Table 5.2 shows how principal perceived themselves practicing intellectual stimulation (IS) in public secondary schools. According to these results, items had 4.24; 4.11;

4.29; 3.92, and 4.34 giving a combined mean of 4.14. The standard deviations were .68; .77; .69; .72, and .69 respectively giving an overall SD 0.71. Therefore, the over all mean was 4.14 indicating high and strong leadership practice of intellectual stimulation by the school principals. Mostly principals indicated that, they practice intellectual stimulation in schools by involving teachers in school decision-making to enhance good students' performance in schools.

Further, teachers rated principals on how they practice intellectual stimulation in schools and their responses are shown in Table 5.3.

Table 5.3: Teachers' Responses on Intellectual Stimulation

| | The principal :- | | 5 | 4 | 3 | 2 | 1 | Total |
|-----|--|---|------|------|------|------|-----|-------|
| i | Encourages teachers to evaluate their practices, refine them in light of new understandings to improve academic performance. | f | 63 | 108 | 20 | 11 | 4 | 209 |
| | | % | 31.1 | 50.9 | 9.4 | 5.2 | 1.6 | 100 |
| ii | Works toward consensus with teachers in determining which initiatives can be implemented. | f | 49 | 105 | 36 | 11 | 10 | 211 |
| | | % | 22.9 | 49.1 | 18.2 | 5.1 | 4.7 | 100 |
| iii | Regularly leads teachers review school performance, holding high performance expectations as professionals. | f | 60 | 96 | 30 | 16 | 7 | 209 |
| | | % | 29.7 | 45.3 | 14.2 | 7.5 | 3.3 | 100 |
| iv | Helps teachers learn new teaching techniques for student success. | f | 35 | 104 | 37 | 16 | 14 | 206 |
| | | % | 18.2 | 49.8 | 17.7 | 7.7 | 6.7 | 100 |
| v | Includes teachers to participate in school decision-making to enhance team's achievement towards good students' performance. | f | 46 | 99 | 29 | 22 | 15 | 211 |
| | | % | 22.9 | 46.3 | 13.6 | 10.3 | 7.0 | 100 |

Table 5.3 shows teachers' perception on how principals practice intellectual stimulation in schools. The results show wide range of variation on how principals practice intellectual stimulation in schools ranging from strongly agree to strongly disagree in all the five items measuring the practice of intellectual stimulation in public secondary schools. On item one, teachers had the same perception with principals, but differed with a few 1.6% who strongly disagree that, principals practice intellectual stimulation in schools. Again, second item majority 49.1% of the teachers had the same perception as principals' results, thus agree but differed in a few 4.7% who strongly disagreed that principals in public secondary schools practice IS.

Considering all the other items three, four and five majority of the teachers had the same perception as principals, thus they agree that, intellectual stimulation is practiced in schools but differ in a few who strongly disagree the practice of IS in public secondary schools. Table 5.4 show teachers' means summaries on intellectual stimulation.

Table 5.4: Teachers' means on Intellectual Stimulation

| | The principal :- | N | M | SD | CM |
|---|--|-----|------|------|------|
| 1 | Encourages teachers to evaluate their practices, refine them in light of new understandings to improve academic performance. | 209 | 4.31 | 3.64 | |
| 2 | Works toward consensus with teachers in determining which initiatives can be implemented. | 211 | 3.81 | 1.00 | |
| 3 | Regularly leads teachers review school performance holding high performance expectations as professionals. | 209 | 3.92 | 1.00 | |
| 4 | Helps teachers learn new teaching techniques for student success. | 206 | 3.66 | 1.06 | |
| 5 | Includes teachers to participate in school decision-making to enhance team's achievement towards good students' performance. | 211 | 3.69 | 1.13 | 3.88 |

Table 5.4 shows the five items measuring the practice of intellectual stimulation had means of 4.31; 3.81; 3.92; 3.66 and 3.69. The standard deviations (SD) were 3.64; 1.0; 1.0; 1.06 and 1.13 respectively. Overall, the teachers perceived

that intellectual stimulation is moderately practiced with an overall means of 3.88 and SD of 1.57 which is different from principals who perceived high and strong leadership practice.

Further, the teachers' results were different from the principals that, mostly principals encourage teachers to evaluate their teaching approaches, refine them in light of new understandings to improve students' academic performance in schools. Majority 39.5% of the students' focus groups rated principal to have moderate practice of intellectual stimulation. Students noted that, principals challenge their results after examinations which are held termly. Besides, they encouraged them to evaluate their learning outcomes always in order to enhance their academic performance in national examination.

The TSC director noted that, school principals lack knowledge in legal professional practices in spite of 75% qualify basic degree and are within (M – N) job groups but this is not equitable to professional knowledge on how to practice intellectual stimulation in schools. The Sub-county education director pointed out that, the practice of intellectual stimulation is not instituted by the ministry but a few principals might be aware of it, therefore difficult to be practiced by all.

The principals overall mean score of 4.14 and SD of 0.71 concurred with the Mbithi (2014) findings on transformational leadership of the universities in Kenya which revealed that, intellectual stimulation to be high and strong with a grand mean of 4.25 and SD of 0.58. According to Mbithi's results, the participants mostly perceived top leadership in Kenyan universities as leaders who re-examines critical assumptions to question whether they are appropriate or not.

However, principals' results disagreed with: findings of Saxe (2011) which shown IS as a moderate with an overall mean of 3.41 and SD of 0.44, and advocated that, transformational leadership behaviors of the school principal should be flexible in the face of change. Also, principals' results differed with Khasawneh, Omari and Abu-Tineh (2009) who found that IS was moderately practiced and applied by Jordanian principals. Further, principals' findings disagreed with Bekele and Darshan (2011) findings which reflected moderate practice of IS with an overall mean of 3.54 and SD of 0.82.

Bekele and Darshan advocate that, leaders who use this practice continuously generate the highest levels of creativity from the diversity of the subordinates, and integrating a diverse range of perspectives, are able to create genuinely new ideas and initiatives in the organization. Then, Khasawneh, Omari and Abu-Tineh, Saxe and, Bekele and Darshan findings concurred with both teachers' and students' results which shown moderate practice of intellectual stimulation in public secondary schools in Mbooni West Sub-county, Kenya.

Hypotheses testing

H₀₁. There is no significant relationship between principals' practice of intellectual stimulation in public secondary schools and learners' performance at Kenya certificate of secondary education.

HA1. There is significant relationship between principals' practice of intellectual stimulation in public secondary schools and learners' performance at Kenya certificate of secondary education.

Pearson's Product Moment Correlation of Coefficient (PPMC) referred to as Pearson's r was used for testing whether relationship exist or does not exist between principals' practice of *idealized influence* in public secondary schools and students' performance at KCSE at alpha value 0.01/0.05 level of significance (Orodho, 2005; Orodho, Khatete & Mugiraneza, 2016). The findings are shown in Table 4.16.

Table 4.16: Hypothesis testing on intellectual stimulation and students' academic performance at KCSE examinations

| | | Combined Mean | Principals' Intellectual Stimulation Mean |
|---|---------------------|---------------|---|
| Cumulative mean | Pearson Correlation | | .198** |
| | Sig. (2-tailed) | | .005 |
| ** Correlation is significant at the 0.01 level (2-tailed). | | | |
| N=202 | | | |

According to Table 4.16, a positive and significant relationship was found ($r(200) = 0.198, P < 0.05$). Therefore a high score in the principals' intellectual stimulation was associated with high overall mean scores for the schools. The null hypothesis was rejected and alternative hypothesis accepted (Orodho, Khatete & Mugiraneza, 2016). This implies that, the practice of intellectual stimulation by the principals in public secondary schools lead to enhanced students' academic performance at KCSE examinations.

These findings concur with findings by Khasawneh, Omari and Abu-Tineh (2009) who found that IS has a positive and significant relationship on secondary schools' performances in Jordan. Also the current study results are supported by findings by convey (2007); Mbithi (2014) which indicate that, the practice of intellectual stimulation enables schools' principals challenge assumptions, and hold high standards expectations performance for both teachers and students leading to improved students' and schools' performances.

Hypothesis testing

H₀₂. There is no significant influence between principals' demographic variables on leadership practice of intellectual stimulation in public secondary schools.

HA2. There is significant influence between principals' demographic variables on leadership practices of intellectual stimulation in public secondary schools.

Therefore, t-test was used to determine whether principals' demographic variables have significance influences on

leadership practice of intellectual stimulation. Results shown no significant influences found.

6. Conclusions

Intellectual Stimulation

The study findings shown that, intellectual stimulation had a positive and significant relationship at alpha value 0.01 level of significance, ($r(200) = 0.198, P < 0.05$). This implies that, the practice of intellectual stimulation (IS) by the principals in public secondary schools lead to enhanced students' academic performance at KCSE examinations. Therefore, the null hypothesis was rejected in favour of alternative hypothesis.

Further, the findings shown that, principals perceived that, the practice of intellectual stimulation was high whereas, teachers indicated to be moderate. The students' FGD rated principals to have moderate practice of IS. The TSC director noted that, public secondary schools' principals lack knowledge in legal professional practice of intellectual stimulation. Besides, the Sub-county education director pointed out that, the practice of IS not well instituted in schools' leadership though a few principals might be aware of therefore, difficult to be practiced by all.

Therefore, principals' findings concurred with Mbithi's (2014) findings which indicated high practice of intellectual stimulation. However, the principals' results differed with Khasawneh, Omari and Abu-Tineh (2009), Saxe (2011) and, Bekele and Darshan (2011) findings which shown moderate practiced of intellectual stimulation and, these researchers' findings concurred with results from teachers and student' FGD of the current study which shown moderate practiced of intellectual stimulation.

Principals' Demographic Variables

The findings shown that, no significant influence of work experience and academic qualification found on the leadership practice of intellectual stimulation in public secondary schools.

7. Recommendations

Based on the results of this study, the investigator found it essential to make commendations that may be significant to the Ministry of Education, Directorate of Quality Assurance, Universities and teachers' training colleges, and Principals.

Ministry of Education

From policy outlook, a comprehensive policy that improves students' academic performance at KCSE examinations should be well placed. Further, a well-defined measure is necessary on how to assess, promote and appoint knowledgeable schools' principals because many are lacking.

The Directorate of Quality Assurance

There is necessity for consistent visit to public secondary schools to administer the progress of curriculum execution. Organize leadership capacity building to the practicing schools' principals on transformational leadership practices which are worldwide linked with successful schools, majority lack the knowledge.

Universities and teachers' training colleges

Since transformational leadership practices (TLP) can be learned and trained in higher learning institutions, design curriculum and ensure they are comprehensively structured and trained to all teacher learners.

Principals

There is need to attend workshops and training courses to be updated with the most competitive leadership practices. Further, ensure schools have well strategic planning on implementation of school curriculum to enhance quality teaching that leads to desired results at KCSE examinations.

8. Suggestions for further research

Future research should include larger sample sizes of principals and teachers from a variety of schools' settings. Thus, influence of principals' transformational leadership practices on collective teachers' efficacy in public secondary schools.

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