CONTRIBUTION OF CONTINUING PROFESSIONAL DEVELOPMENT FOR SCHOOL MANAGERS ON TEACHER MANAGEMENT COMPETENCIES OF SECONDARY SCHOOL MANAGERS IN KENYA

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ABSTRACT
Guided by the Learning Organizations' theory of Peter Senge (1990) this paper sought to determine the difference between the contribution of Continuing Professional Development (CPD) on the teacher management competencies of the Heads of Department and the senior managers of secondary schools in Kenya. The study's sample comprised of 443 respondents determined using the Cochran's sample size formula, stratified random sampling and purposive sampling techniques. Data was analyzed using means and t-tests. The study found out that there was a significant difference in contribution of CPD to the HoDs and senior managers' teacher management competencies. It concluded that there was a significant difference in contribution of CPD on teacher management competencies of the HoDs and the senior managers of secondary schools in Kenya.

Key words: Continuing Professional Development, teacher management competencies

LIST OF ACRONYMS

ACE: Advanced Certificate in Education

ADEM: Agency for the Development of Educational Management

BOM: Board of Management

CPD: Continuing Professional Development

CQASO: County Quality Assurance and Standards Officer

EFA: Education for All

EHP: Early Headship Programme

HoDs: Heads of Department

KEMACA: Kenya Education Management Capacity Assessment

KEMI: Kenya Education Management Institute

KESSHA: Kenya Secondary Schools Heads Association

KESSP: Kenya Education Sector Support Program

NCSL: National College for School Leadership

NPQH: National Professional Qualification for Headship

PPMCC: Pearson Product Moment Coefficient of Correlation

QASO: Quality Assurance and Standards Office

SBM: School Based Mentorship

TSC: Teachers Service Commission

1.0 Introduction

Organizations continue to transform themselves in response to the challenges posted by increased competition, globalization and rapid change in Information Technology (Hargreaves, 2003; Mutuva, 2012). However, reports indicate that despite the current reforms, Africa still faces serious development challenges in human development, notably in education sector (World Bank, 2005). This notwithstanding, economies that are increasingly "knowledge driven" need workers with extensive knowledge, developed skills, increased creativity, innovativeness and flexibility (World Bank, 2008; Pashiardis, 2009).

The school management team comprises of the Board of Management (BOM), the Principal, the Deputy Principals and Heads of Department (HoDs) (Haneberg, 2005). These managers are charged with the responsibility of leading and managing implementation of school programmes effectively and efficiently. Educational leadership and management are perceived as crucial factors in improvement, efficiency and effectiveness of schools (Musera, Achoka & Mugasia, 2012; Harris, 2002; Johansson, 2001: Bush and Jackson, 2002).

Notably, performance of any organization is crucially dependent on the quality of its management team. Studies have revealed that, effective school managers can help schools rise to the challenge of curricular change, acts as managers of improvement and transform teaching and learning conditions whilst ineffective managers can block improvement and stifle initiative (Gudo, Ibrahim & Maureen, 2011; Marzano, Waters and McNulty, 2005; Mathibe, 2007).

Managing school resources is one of the most important tasks of a school manager (Kamau, 2010; Macharia, 2002). Further, good management of resources leads to improved productivity and efficiency in schools (Okumbe, 2001). Ouston (1997) observed that there are four major management competencies needed by educational leaders: the management of policy, curriculum, staff and the resources. In addition, Mestry and Grobler (2002) have argued that in managing educators, school principals should be competent in personnel provisioning and managing human relations, which include skills to motivate educators, build effective teams and manage conflicts. Further, they have argued that managers should be able to appraise and develop staff members so that they can achieve their own objectives as well as the aims and objectives of the school.

A number of studies show that professional training in many countries is not a requirement for appointment to the position of a school principal or to a managerial position and there is still an assumption that good classroom teachers can become effective managers and leaders without specific preparation for their leadership and management roles (Bush and Jackson, 2007; Bush and Oduro, 2006). School managers in many countries are appointed on the basis of irrelevant or insufficient criteria; for example, on the basis of their teaching record rather than their leadership skills, on the basis of long service and experience without any higher academic qualifications and even on the basis of acquaintances (Oduro and Macbeath, 2003; Bush and Heystek, 2006; Pashiardis and Heystek, 2007).

The scope of the concept of Continuing Professional Development (CPD) can be gauged through the explanation offered by eminent scholars (Barth, 1990; Guskey, 2002) who consider it encompassing all the in-service processes and activities provided to teachers for developing their knowledge, skills and learning about a positive change in behavior. Professional development is

primarily concerned with acquisition and improvement of the competencies for effective management (Mestry & Grobler, 2004).

Developed countries such as Singapore, the United Kingdom (UK) and the United States (US), have put national qualification structures in place to guide CPD (Walker & Qian, 2006). In the US, a teacher is only eligible to apply for the principal's post once he/she has completed the Master of Educational Administration degree (Tucker & Codding, 2002). In the UK, teachers who wish to continue up the career ladder must first become senior teachers or deputy head teachers and work with the principals as members of the senior management team (Weindling & Dimmock, 2006).

In South Africa, Ghana and Tanzania there are established institutions to conduct the CPD courses in Educational Leadership and Management for principals and for those aspiring for the principal's post (Naidu & Conley, 2005). The CPD aims at providing management and leadership support through a variety of interactive programmes that improve the managers' practice, professional growth, and ethos of leadership. These include the Ghana Institute of Management (GIM) and the Agency for the Development of Educational Management (ADEM) in Tanzania.

According to the Education Law and Policy Handbook (2001) the duties and responsibilities of the principal and the deputy principal include the following; Administration management keeping of records, both on financial matters and school events, allocation of resources for the maximum benefit of learners and the school as a whole; Personnel providing professional leadership within the school, development of staff training programmes, guiding, supervising and offering professional advice where needed and ensuring equal distribution of workloads among the staff (Anderson, 2001).

The handbook also states that the deputy principal shall assume principal ship in the absence of the principal and that the heads of departments shall engage in class teaching and at the same time be responsible for the smooth running of the departments. HoDs also have general administrative duties concerning their departments. They need to open channels of communication in their departments and with educators of other schools to initiate continuous improvements in their departments (Anderson, 2001). Therefore specific management skills are required in order to be able to carry out the above discussed duties effectively.

Mestry and Grobler (*ibid.*) found that in managing educators, principals should be competent in the following areas: First, personnel provisioning, which includes recruiting, selecting and placing educators so that the goals of the school can be achieved. Second, human relations, which mean that principals should have the necessary skills to motivate educators, build effective teams, and manage conflicts, stress and cultural diversity. They should liaise and build good relations with teacher organizations and non-governmental organizations. Finally, principals should be able to appraise and develop staff members so that educators can achieve their own objectives as well as the aims and objectives of the school. In sum, the competence-based development needs of principals differ from context to context; hence there can be no talk of universal or even national competence-based development needs.

The reforms experienced within the Kenyan education sector are intended to facilitate paradigm shifts in terms of education governance, quality, equity and international comparability (RoK, 2005; Amare and Temechegn, 2002). Teacher professional development remains one of the most challenging areas in teacher management over the years (Kafu, 2011). The Ministry of Education

Science and Technology (MoEST) has also acknowledged that there is indeed a mis-match between the existing level of capacities and those required to implement and effectively manage educational resources and programmes (RoK, 2003). Noteworthy reports of various commissions, taskforces and studies undertaken (RoK, 2003; RoK, 1997) have indicated that despite the ongoing professional development programmes in Kenya, competencies are still not matching with tasks. This is likely to lead to mismanagement of resources and therefore failure to improve the quality of education.

Notwithstanding the Sessional paper number 1 of 2005, KESSP 2005-2010, the Kenya Education Management Capacity Assessment (KEMACA) report (2008), EACC report on Free Primary Education fund (2016), the education task force report of 2012 all outlines the need to enhance the management skills of education managers through CPD (RoK, 2005a; RoK, 2005b; RoK, 2010; MoE, 2008; Oduor, 2016). It is therefore hoped that, through participation to CPD programmes, school managers will enhance their management skills, knowledge and attributes thus enabling them to keep pace with the changing needs of the society. To this end there is need for empirical data on the current status and contribution of CPD on resource management competencies of secondary school managers. This data is hoped to guide CPD policy formulation process in Kenya.

1.1 Theoretical Framework
The study was guided by the Learning Organization theory propounded by Peter Senge (1990). The theory is based on the concept that organizations in the era of globalization need to enable people to continually expand their capacity to create the results desired globally. The establishment of the capacity development structures in Kenya such as KEMI which has the mandate to conduct capacity building to serving and aspiring education managers in liaison with and the TSC (2007) policy on human resource management is a strategy towards embracing the Learning Organization theory. The Learning organization theory was applied by this study to determine the extent to which participation to CPD by the HoDs and the senior managers contributed to their teacher management competencies.

1.2 Methodology
Descriptive design was applied to collect and analyze data. The sampling frame comprised of county secondary schools in Western region of Kenya. This region was purposively selected because of the reported rising cases of teacher and financial resource mismanagement in schools (Wichenje *et al*., 2012). The target population comprised 1,379 teachers in the 137 county secondary schools in the Western region. The targeted respondents of the study were 4 TSC Human Resource Development Officers, one KEMI Head of training department and the 4 County Quality Assurance and Standards Officers (CQASO). Further, 137 chairpersons of the school's BoM, 137 principals, 137 deputy principals, 959 HoDs were targeted.
These respondents were targeted because they formed the management team of the school and the study aimed at investigating CPD for education managers thus they automatically held key information in relation to participation, contribution of CPD. The HoDs were involved in school administration and resource management. They directly dealt with teacher supervision and implementation of the school's financial plan thus was expected to provide information of resource management. The KEMI head of training, CQSO, TSC HRD officer formed part of the study population because they are in charge of CPD for teachers and school managers.

The Cochran's sample size formula was used to determine the required number of respondents (Fox, Hunn, and Mathers, 2007). Considering that the analysis was done at 95% level of confidence, (5% margin of error), and α-error = 0.05;

$$n_0 = \frac{(t)^2 \times (P)(q)}{(d)^2}$$

$$n_0 = \frac{(1.96)^2 \times (.5)(.5)}{(.05)^2} = 384.16$$

Where;

n_0- the sample size

t- Value for the selected alpha level eg 1.96 for 95% confidence level

p- Estimated proportion of an attribute that is present in the population

q-1- (minus) p

$(d)^2$ the acceptable margin of error for proportions being estimated

The required sample size was 384.16. However since this sample size exceeded 5% of the total population which is 1,379 (1,379 ×.05=68.95) the Cochran's correction formula for samples was used to determine the actual minimum sample size.

$$n_1 = \frac{n_0}{(1 + n_0/\text{population})}$$

$$n_1 = \frac{384.16}{(1+384.16/1,379)} = 300.453$$

Although there is no standard acceptable response rate, Reilly & Wrensen (2007) urge researchers to attempt to obtain response rates over 50%, however it should be noted that, the higher the response rates the more valid is the data. This is based on the argument that sufficient response rates are important as a survey that collects very little data may not contain substantial information (Orodho, 2003). The expected minimum sample size was 300.453 respondents, however from the previous studies of this nature it was anticipated that a response rate of 67.8% will be achieved (Komba & Nkubi, 2008). Therefore the actual number of respondents required for the study was determined by calculating n_2 as shown below;

$$n_2 = n_1 / 67.8\%$$
$$= 300.453/0.678$$
$$= 443.146 \text{ respondents.}$$

To form the required sample size of 443, 44 school principals, 44 deputy principals, 308 HoDs and 44 chairperson of the BoM were purposively selected. All the seven HoDs from each selected school were included in the study (Language, science, mathematics, applied sciences and technical subjects, humanities, guiding and counselling, games/sports). Simple random sampling was applied to pick one CQASO and one TSC HRM & Development officer. The KEMI head of training department was also selected purposively. The distribution of respondents in summarized in table 1.1.

Table 1. 1 Sample Size of the Study

Category	Principal	D/principal	BoM	HoDs	CQSO	KEMI	TSC	Total
Target	137	137	137	959	4	1	4	1,379
Sample size	44	44	44	308	1	1	1	443

Questionnaires, document analysis schedules and interview schedules were used to gather data from the Chairperson BoM, the school principals, deputy principals and HoDs. A pilot study was conducted in four schools within the region to determine the validity and the reliability of the instruments. The instruments used were developed by the researcher with the guidance of experts in the department of Educational Planning and Management. To ascertain the face and content validity of the research instruments, a pilot study was done. Questionnaires were administered to four school principals, four deputy principals and eight HoDs randomly picked from four schools within Western region of Kenya. Careful examination and comparison of the response against research objectives were done so as to determine the suitability of the questionnaires and to rephrase questions in an unambiguous way. Comments on the adequacy of the instruments in coverage of the topic under study were sought from experts to ensure the questions were technically logical. Thus, this enabled the researcher to develop instruments that yielded face and content valid data, adequately covered topic under study and logically sequenced instrument. The research assistants were taken through the instruments to understand the data to collect and how to record correctly and be informed about ethical issues.

Reliability is the measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda, 2003). Split half reliability test was done to verify internal consistency of the questionnaires. This was by randomly dividing the questionnaire items into equivalent halves of 16 questions each and administering each half to a group of the respondents on the same occasion. Using the Spearman Rank Order, the performance of the two groups of respondents was correlated. One challenge with the split-half reliability coefficient is that since only half the number of items is used the reliability coefficient is reduced. Cronbach (1990) observes that to get a better estimate of the reliability of the full test, Spearman-Brown correction formula should be used to adjust the coefficient. Thus this formula was used and a reliability coefficient of 0.8 was obtained. For descriptive survey research, a reliability coefficient of 0.70 and above is normally accepted as a measure of reliability for the instruments (Kathuri and Pals, 1993).

1.3 Contribution of CPD on Teacher Management Competencies
The managers were asked to indicate the extent to which attendance to CPD contributed to their teacher management competencies. The means of every competency was computed and the results tabulated and summarized on table 1.2

Table 1.2 Group Statistics for Teacher Management Competencies

Competency	Position held	N	Mean	Std. Deviation	Std. Error Mean
Effective communication	senior	96	3.1146	1.08453	.11069
	HoDs	251	2.2470	1.04439	.06592
Teacher appraisal	Senior	96	3.3750	.97603	.09962
	HoDs	251	2.2829	1.08980	.06879
Decision making	Senior	96	3.0313	.94538	.09649
	HoDs	251	2.3625	1.34463	.08487
Team building	Senior	96	2.4063	.97956	.09998
	HoDs	251	2.4900	1.21445	.07666
Staff CPD	Senior	96	2.8958	1.10004	.11227
	HoDs	251	2.7251	1.12077	.07074

Conflict management	Senior	96	3.0104	1.02078	.10418
	HoDs	251	2.6295	1.10732	.06989
Teacher motivation	Senior	96	2.9688	1.00998	.10308
	HoDs	251	2.5299	.96856	.06113

Source: SPSS Output
Extremely Large Extent (coded 5), Large Extent (4), Average (3), Small Extent (2) or Extremely Small Extent (coded 1).

Findings in table 1.2 indicate that, the means representing the extent to which CPD contributed to the teacher management competencies of the managers were comparatively higher for senior managers. Competencies in effective communication had a mean of 3.11, teacher appraisal competencies has a mean of 3.37 and a mean of 3.03 in decision making competencies. Further, a mean of 2.40 for team building competencies, 3.01 for conflict management competencies, 2.96 for staff motivation competencies and a mean of 2.89 was obtained for planning of staff professional development competencies. Again it was observed that the contribution of CPD to team building competencies of the senior managers was low with a mean of 2.40 while the contribution was high for teacher appraisal competencies which had the highest a mean of 3.375.

The means showing the extent to which CPD contributed to teacher management competencies of the HoDs were 2.24 for effective communication, 2.28 for competencies in teacher appraisal process, 2.36 for decision making competencies and 2.49 for team building competencies. Further, the findings showed a mean of 2.75 for competencies in staff professional development, 2.62 for competencies in conflict management and 2.53 for teacher motivation competencies. Notably, means of less than 2.5 implied that there was little contribution of the CPD to the teacher management competencies.

These findings therefore indicated that the CPD programmes attended by HoDs had little contribution on their teacher management competencies. Specifically the contribution to effective communication, teacher appraisal process, decision making and team building competencies was very little. However, the extent of contribution of the CPD to staff CPD, and motivation was average.

A document analysis of the course schedules and the course content revealed that the SBM and the QASO CPD programmes which were majorly attended by the HoDs did not place a lot of emphasis on teacher resource management competencies rather emphasis was on curriculum implementation competencies. This was contrary to the focus of the CPD programmes (KESSHA and KEMI) attended by majority of the senior managers which majorly focused on effective resource management competencies as indicated by the course schedules.

1.4 The Difference in the Means Showing Teacher Management Competencies
An independent t-test was performed to test the H_{01} that there was no significant difference in the extent to which CPD contributed to teacher management competencies of the managers. The results were as summarized in table 1.3.

Table 1.3 Independent t-tests

Levene's Test for Equality of Variances		F	Sig.	t-test for Equality Of Means			
				T	Df	Sig. (2-tailed)	Mean Difference
Effective communication	Equal variances assumed	.000	.988	6.849	345	.000	.86757
	Equal variances not assumed			6.734	166.38	.000	.86757
Teacher Appraisal	Equal variances assumed	1.442	.231	8.588	345	.000	1.09213
	Equal variances not assumed			9.022	190.72	.000	1.09213
Decision making	Equal variances assumed	7.952	.005	4.467	345	.000	.66870
	Equal variances not assumed			5.204	243.48	.000	.66870
Team Building	Equal variances assumed	7.403	.007	-.605	345	.546	-.08379
	Equal variances not assumed			-.665	211.72	.507	-.08379
Staff CPD	Equal variances assumed	1.579	.210	1.276	345	.203	.17073
	Equal variances not assumed			1.287	174.93	.200	.17073
Conflict Management	Equal variances assumed	6.182	.013	2.928	345	.004	.38093
	Equal variances not assumed			3.036	185.48	.003	.38093
Teacher Motivation	Equal variances assumed	5.617	.018	3.731	345	.000	.43887
	Equal variances not assumed			3.662	165.78	.000	.43887

Source: SPSS Outputs

From the analysis, Levene's test for equality of variance was not significant ($p>0.05$) for effective communication ($p=0.988$), teacher appraisal competencies ($p=0.231$) and planning for staff CPD ($p=0.210$). Therefore the law of equality of variance was applied leading to the use of the upper t value for the test.
However, the Levene's test for equality of variance was significant ($p<0.05$) for decision making competencies ($p=0.005$), team building ($p=0.007$), conflict management (0.013) and teacher motivation (0.018). Thus the law of equality of variance not assumed applied leading to the use of the lower t value for these competencies.

The means showing the extent of contribution to the managers' competencies in communication were 3.11 and 2.25 for the senior managers and HoDs respectively implying that the CPD

contribution was average for the senior managers (3.11) and little (2.25) to the HoDs' competencies. The null hypothesis that "There is no significant difference in the contribution of CPD on teacher management competencies of the secondary school managers" was tested using the independent sample t test and the results show a t-test value of 6.849 (p=0.000) was greater than the t critical value of 1.960 leading to rejection of the null Hypothesis. This implied that there was a statistically significant difference between the contribution of CPD on the communication competencies of the HoDs and the senior managers. There was more contribution to communication competencies of the senior managers compared to the competencies of the HoDs.

The findings also showed that there was statistically significant difference in the extent to which CPD contributed towards the teacher appraisal competencies of the senior and the HoDs. The mean for the senior managers was 3.375 and 2.282 for the HoDs showing that the extent to which CPD contributed to teacher appraisal competencies of the senior managers was rated average while it was rated below average for the HoDs as evident by the means. The null hypothesis that "There is no significant difference in the contribution of CPD on staff appraisal competencies of the secondary school managers" was tested using the independent sample t test. The t-test value of 8.588 (p=0.000) was greater than the t critical value of 1.960 leading to rejection of the null. This meant that there was statistically significant difference in the contribution of CPD on teacher appraisal competencies of school managers. Attendance to CPD had a greater contribution to the senior manages teacher appraisal competencies than it had to the HoDs.

The means of the extent of CPD contribution towards decision making competencies were 3.03 and 2.36 for the senior managers and HoDs respectively implying an average level for the senior managers and the contribution was to a small extent for the HoDs. Findings of the independent sample t test showed a t-test value of 5.204 (p=0.000) which was greater than the t critical value of 1.960. This led to rejection of the null hypothesis and thus there was significant difference in the extent to which CPD contributed to the managers' decision making competencies. This implied that attendance to CPD contributed to the senior managers' decision making competencies compared to the extent to which it contributed to the HoDs decision making competencies.

The results of the independent sample t test showed that there were no statistically significant differences in the extent to which CPD contributed to the team building competencies of the senior managers and the HoDs. The t-test value of 0.665 (p=0.507) was less than the t critical value of 1.960 leading to acceptance of the null hypothesis. Thus there was no significant difference in the contribution of CPD on team building competencies of the HoDs and the senior managers. The means of the extent of CPD contribution were 2.41 and 2.49 for the senior managers and HoDs respectively implying that the CPD contribution towards team building competencies was below average for the HoDs and the senior managers.

On finding out the extent to which attendance to CPD contributed to competencies in planning for staff CPD, the hypothesis was tested using the independent sample t test. The t-test value of 1.276 (p=0.203) was less than the t critical value of 1.960 leading to acceptance of the null hypothesis that "there is no significant difference in the extent to which CPD contributed to staff CPD competencies of the managers. This implied that staff CPD competencies of both the HoDs and the senior manager's competencies were averagely improved.

The findings also showed that there was statistically significant difference in the extent to which CPD contributed towards the conflict management competencies of the senior and the HoDs. The

mean for the senior managers was 3.0104 and 2.6295 for the HoDs showing that the extent to which CPD contributed to conflict management competencies of the senior managers and the HoDs was rated average. Further the null hypothesis that "There is no significant difference in the contribution of CPD on conflict management competencies of the secondary school managers" was tested using the independent sample t test. The t-test value of 3.036 (p=0.003) was greater than the t critical value of 1.960 leading to rejection of the H_{01}. This implied that attendance to CPD had slightly greater contribution to the senior managers' conflict management competencies compared to contribution to the HoDs competencies.

Findings of the independent sample t test showed that there was a statistically significant difference in the extent to which CPD contribute to the teacher motivation competencies of the managers. This was because the t-test value of 3.662 (p=0.000) was greater than the t critical value of 1.960 thus the null hypothesis was rejected. This meant that there was a significant difference in the extent to which attendance to CPD contributed to teacher motivation competencies of the HoDs and the senior managers. The means of the CPD contribution were 2.968 and 2.529 for the senior managers and HoDs respectively implying that the CPD contribution to the senior managers was greater compared to contribution to the HoDs' competencies.

A scrutiny of some of the departmental files indicated that, majority of the HoDs had well-kept records of individual teachers' performance targets. However there was no evidence in the departmental minute files to show that these HoDs participated in teacher appraisal exercise or even meaningful follow up activities towards achievement of the targets. Document analysis also suggested that most HoDs did not actively participate in staff CPD activities. There were no track records on the staff CPD, no budgets for departmental CPD programs neither did they have departmental CPD policies. This implied that some of the HoDs lacked key teacher management competencies.

However a document analysis of most of the senior manager's records suggested that they had the necessary teacher management competencies. For instance they were in possession of teacher's performance target records, appraisal forms. The senior manager's had records on teacher's attendance to CPD programs such as trainings, seminars and workshops. However most of the senior manager did not have documentation teacher's CPD.

1.5 CONCLUSIONS

The findings indicated that attendance to CPD programmes had a fairly greater contribution to teacher management competencies of the senior managers in the highlighted areas compared to the heads of department; effective communication (3.14), teacher appraisal process (3.37), and decision making (3.03), 3.01 for conflict management, 2.96 for staff motivation and a mean of 2.89 was obtained for planning for staff professional development competencies. Further the findings revealed that attendance to CPD had little contribution to teacher management competencies of the HoDs as indicated by their means of less than 3.00 implying below average.

The means of the competencies of the HoDs were 2.24 for effective communication, 2.28 for teacher appraisal process, 2.36 for decision making and 2.49 for team building competencies. The findings also showed a mean of 2.75 for coordinating staff professional development, 2.62 for conflict management and 2.53 for teacher motivation.

The null hypothesis that "There is no significant difference in the contribution of CPD on teacher management competencies of the secondary school managers" was tested using the independent sample t test and the results show a t-test value of 6.849 (p=0.000) was greater than the t critical value of 1.960 leading to rejection of the null Hypothesis. This implied that there was statistically significant difference in the contribution of CPD on the communication competencies of the HoDs and of the senior managers. There was greater contribution to communication competencies of the senior managers compared to the competencies of the HoDs.

Under teacher appraisal competencies, the t-test value of 8.588 (p=0.000) was greater than the t critical value of 1.960 leading to rejection of the null. This meant that there was statistically significant difference in the contribution of CPD on teacher appraisal competencies of school managers. Attendance to CPD had a greater contribution to the senior manages teacher appraisal competencies than it had to the HoDs.

The means of the extent of CPD contribution towards decision making competencies were 3.03 and 2.36 for the senior managers and HoDs respectively implying an average level for the senior managers and the contribution was to a small extent for the HoDs. Findings of the independent sample t test showed a t-test value of 5.204 (p=0.000) which was greater than the t critical value of 1.960. This led to rejection of the null hypothesis.

The results of the independent sample t test led to acceptance of the null hypothesis that 'there were no statistically significant differences in the extent to which CPD contributed to the team building competencies of the senior managers and the HoDs'. This was revealed by a t-test value of 0.665 (p=0.507) which was less than the t critical value of 1.960.

The null hypothesis on the CPD contribution to the staff CPD competencies was accepted. An independent t test had a t value of 1.276 (p=0.203) which was less than the t critical value of 1.960 showing that there was no significant difference in the extent to which CPD contributed to staff CPD competencies of the HoDs and the senior managers. Contribution to the senior managers' competencies was greater than the HoDs.

The findings however showed that there was statistically significant difference in the extent to which CPD contributed towards the conflict management competencies of the senior and the HoDs. This was revealed by a t-test value of 3.036 (p=0.003) which was greater than the t critical value of 1.960 leading to rejection of the H_{01}. This implied that attendance to CPD had slightly greater contribution to the senior managers' conflict management competencies compared to contribution to the HoDs competencies.

The null hypothesis for CPD contribution to the teacher motivation competencies was rejected. This is because the t-test value of 3.662 (p=0.000) was greater than the t critical value of 1.960. Showing that there was a statistically significant difference in the extent to which CPD contributed to the teacher motivation competencies of the managers.

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