Teacher Advisory Centres (TACs) were established in the 1970s for Kenya primary school teachers' professional development. However, the teachers lack professional development opportunities and there are reports on teacher-centred teaching approaches and poor pupil learning outcomes. Research has found that teachers who participate in sustained curriculum-based teacher professional development activities reported changes in practice resulting in turn to high student learning achievement. The study interrogated the problem: How effective are TACs in teacher professional development? Schulman theoretical framework guided the study which focuses on content mastery and pedagogical knowledge. The study examined the extent to which TACs conduct teacher professional development activities, the challenges they face and the impact of teacher professional development on classroom practice. Descriptive survey was employed and the study was conducted in Nairobi County. TAC tutors and teachers were the main study subjects. Descriptive statistics were used to analyze data. Findings included that TAC tutors spend only 40% of their time performing teacher professional development duties and 60%, performing administrative duties of Ministry of Education. They lack facilitation, lecture and question and answer, and characterized classroom instruction. TACs tend to be ineffective in teacher professional development. Recommendations made were that TAC tutors should be relieved of MOE administrative duties, facilitated, equipped with resources, knowledge, and skills; provided clear organizational structure and career path.

If TACs performed teacher professional development activities effectively the outcome would be quality teaching where learners would be provided opportunities to construct knowledge in interactive, learner-friendly learning environments and which would lead to improved learning outcomes. Research shows that teachers who participate in sustained curriculum-based teacher professional development reported changes in practice resulting in turn to high student achievement scores in state examinations (Darling-Hammond, 1999). European Union (2010) reported that around the world teacher professional development is treated as critical. In Luxembourg, Poland, Portugal, Slovakia, and Spain, teachers accrue credit for attending professional development courses for consideration for promotion. In Italy, Cyprus, and Greece, continuous professional development is an obligation for newly appointed teachers. Czech Republic teachers are entitled twelve working days in a year for independent study. In Italy, some schools suspend classes to conduct intensive teacher development initiatives; teachers are exempted five days in a year to attend professional development activities. In Romania, teachers are granted one day per week for professional development. In China, lifelong learning is emphasized. Sri Lanka, study opportunities, training workshops, and in-service courses are provided. In the Philippines, school-based training programmes for science and mathematics are offered. In Japan, lesson study is adapted and almost all Japanese schools earmark a school-based professional development system.
development period within regular working hours. This has been picked up by Centre for Mathematics, Science and Teacher Education in Africa (CEMASTE) in Kenya which trains secondary school science and mathematics teachers.

**Statement of the problem**

The problem in this study is that primary school teachers tended to lack access to organized, effective, continuous teacher professional development. Teacher in servicing, which is the main role of TACs, is cited as inadequate and in some places unavailable (KIE, 2010; Hardman, 2009) and many students’ learning achievement is poor and teaching approach is teacher centred. Some Teachers themselves score poorly in tests set for pupils they teach and those set to assess their level of competency (KNEC, 2010, Otieno 2010; Oriedo 2010; Kathumbi, 2010). This is puzzling because Teacher Advisory Centres (TACs) were established to provide primary school teachers professional development as stipulated in MOE (1995) and TAC tutors were trained on their specified roles (KIE, 2010). It is conceptualized that effective performance of TACs role would ultimately result in enrichment of teachers’ content mastery and pedagogic skills. The expected ultimate outcome would be enriched pedagogic skills and mastery of content which should lead to quality teaching and improved learning outcomes. The study interrogated the problem: How effective are TACs in Nairobi County in teacher professional development?

The research questions which were investigated in the study were as follows:

1. To what extent do TACs conduct in service courses for teachers and visit schools to provide teachers professional support?
2. What challenges and issues do TAC tutors face in their effort to facilitate effective teacher professional development?
3. To what extent does teachers’ classroom practice reflect impact of professional development?

**Significance of the study**

The study is significant. The study contributes to serving Kenyan citizens who are now very concerned about education, quite well illustrated by the excitement release of examination results evokes nationally. Most significantly, the country braces to achieve the Kenya Vision 2030 which advocates for Knowledge based economy and relies on education and training in the aspiration to scale up the economy and provide high quality life to all citizens (Republic of Kenya, 2007). In the Vision, the education and training sector is charged with the task of creating a knowledge based society that upholds justice, democracy and issue based political engagements. The country’s Vision 2030 also aims at providing globally competitive and quality education and training and research. It also aims at turning Kenya to a regional centre of research and development in new technologies’ (Republic of Kenya, 2007). All these are dependent on quality teachers. Even the implementation of the new Constitution of Kenya relies on the teachers’ ability to actualize it in the classroom for correct interpretation, sustenance and continuity.

**Theoretical Framework**

The study was guided by the theory advanced by Schulman (1986) that if teachers were to be successful, they would have to confront both issues of content and pedagogy simultaneously (Schulman, 1986). If draws variables from spell out TACs role in MOE (1995). The variables are:  in service courses, professional meetings of teachers with experts, mastery of content, pedagogic skills; classroom observation, lesson demonstration, develop, resources, assessment and examination of learning effectiveness (MOE, 1995). Effective performance of TAC role would ultimately result in mastery of content and pedagogic skills which is the gist of Schulman’s theory and hence the relationship between Schulman’s theory and this study. Schulman advocates that the teacher should be equipped with knowledge regarding curriculum, educational contexts and purposes of education: useful forms of presentation, analogies, illustrations, examples, explanations and demonstrations; understanding of what makes the learning of specific topics easy or difficult, including knowledge about conceptions and misconceptions that students bring to the subject. The teacher should also be concerned with formulation of concepts, pedagogic techniques, knowledge of students prior knowledge, teaching strategies, what students bring to learning situations; prior conceptions students are likely to have about a particular domain and potential misapplication of prior knowledge. Therefore a teacher should have deep knowledge of content and pedagogic knowledge to be able to transform the knowledge into a form that learners understand.

**Conceptual Framework**

Effectiveness of TACs in teacher professional development is measured by the extent to which TACs perform the specified TACs role. The role of TACs therefore is the independent variable – the cause. Independent variables are in service courses; professional meetings; training in assessment and evaluation; training in selection, development and use of resources; dissemination of information, classroom observation, demonstration lessons and resources. The dependent variable- the outcome or indicators of TAC effectiveness are: frequency and quality of teacher in service courses and professional meetings; selection, development and use of resources; records; learning environment; teacher assessment and evaluation of students; teacher mastery of content; teacher pedagogical skills, teacher’s manner, teachers and learners enthusiasm. The other dependent variables are learners’ creativity, innovativeness and construction of knowledge, learners’ academic results and learners’ behaviour. The following diagram illustrated the concept:
MATERIALS AND METHODS

Research Design

Descriptive survey design was employed in the study. The design allowed use of interview schedules to gather data from the participants and revealed the different respondents feelings, attitudes, opinions and experiences regarding effectiveness of TACs in teacher professional development. It also allowed probing for clarification of issues. Observation schedules allowed the researcher to observe phenomena and verify information provided in the interviews and also to experience situations by being present personally.

Study Location

The study was conducted in Nairobi County which is made up of the following districts and zones: Dagoretti district has – Riruta and Waithaka zones; Embakasi district has Kayole and Dandora zones; Starehe has Juja Road and Central zone zones. Westlands has Kilimani and Viwanda zones, Kasarani has Kahawa and Ruaraka zones. Kamukunji has Bahati and Eastleigh zones. Nairobi County was selected because of its uniqueness as the city of Kenya and may not be accurately generalized for other regions of the country. The environment has extreme characteristics such as the extreme luxurious Muthaiga residence, Karen, Westlands, the medium like South C, Buruburu and the middle level estates scattered in different parts of the county and the abject poverty of the slums areas where some households can barely afford a meal a day. Means of travel is also diverse and travel fares keep shifting depending on time of day and weather conditions; traffic jams are other phenomena in the county.

The Respondents

The TAC tutors were the key respondents as the main subjects of the study because they run the TACs and in this study they are the main determinants of TAC effectiveness. Teachers and KIE officers were also subjects of the study. 5 TAC tutors who served 5 zones participated in the study. One TAC tutor was male and the rest were female. Their teaching experience ranged as follows: two had taught for between 20-30 years and three 30-40 years. Three TAC tutors were aged between 40-45 years and two of them were aged above 50 years. Two were graduate teachers, two had diploma and one was an Approved Teacher Status one (ATS1). All of them had taught in primary school before appointment to the TAC office. Hence all the TAC tutors were qualified to manage the centre. Teachers were also important subjects because they were the ones who received services from TACs; their performance was expected to reveal the extent of TAC effectiveness. Ten teachers were observed teaching. Five (5) TAC centres were also part of the study. They were observed using an observation schedule. Five (5) KIE officers were key subjects because they work closely with TACs as outreach centres and interact with TAC tutors.

Sampling Procedure

Simple random sampling was used. Out of the total 8 districts and 16 zones, 5 districts and 5 zones were selected as follows: Waithaka zone in Dagoretti district; Buruburu zone in Makadara district; Kahawa zone in Kasarani district; Juja Road zone in Starehe district, and Kayole in Embakasi district.

Research instruments

The researcher developed 4 instruments for use in the study as follows: TAC effectiveness observation schedule for Teacher Advisory Centres; TAC effectiveness classroom observation schedule, TACs effectiveness Interview schedule for TACs tutors and TAC effectiveness interview schedule for KIE officers. All the instruments were administered by the researcher to the respondents in their natural area of daily operation. TAC effectiveness observation schedule for TAC had 10 items. It captured data on: TAC location, distance to schools, centre facilities and resources. Content validity was established by discussing the tool with KIE officers who had trained TAC tutors on centre management and role of TAC tutor. Reference was made to the TAC tutor’s Handbook used in training them. Triangulation of items was employed to establish reliability. For example, the question on adequacy of resources was included in other instruments.

TAC effectiveness interview schedule for TAC tutors contained 12 items. It captured data on TAC tutors’ background information, role of TAC tutors, duties performed by TAC tutors, challenges faced by TAC tutors, feeling of TAC tutors and attitude to work. Validity was ensured by first reviewing Literature regarding Teacher Advisory Centres in the world including European Union countries. Areas of interest were noted and they were reflected in the items in the instrument. The instrument was discussed with TAC tutors who were not used in the study and some KIE officers. Areas lacking were included and those unnecessary were replaced with the necessary ones. Reliability was assured by triangulation of items such as role of TAC tutors, challenges faced by TAC tutors in teacher professional development, rating of TAC tutors, time taken in teacher professional development.

The TAC effectiveness observation schedule contained 3 questions with subsections. It gathered data such as teachers’ gender, age bracket, teaching experience, academic level, teaching styles-student involvement and opportunity offered to construct knowledge. To assure content validity of the instrument the researcher read widely on good teaching and learning techniques teaching and learning styles (best teaching and learning practices). Key points such as methods that lead to learner construction of knowledge, learning environment and teachers’ manner, were noted and formed part of the items in the instrument. Triangulation of some items in the instrument such as teaching method, challenges facing TACs and rating TAC tutors’ performance was used to establish reliability. The TAC effectiveness interview schedule for KIE officer had 7 items. It captured data on background of the officers used in the study, rating TACs’ performance in teacher professional development. Content validity was established by discussing the instrument with KIE officers. The instrument was also used to gather data for triangulation on issues such as challenges facing TAC tutor and rating TACs in teacher professional development for purpose of validation.

Data collection procedure

The study data collection procedure followed three distinct phases. In the first phase the researcher gathered information regarding TACs in counties from Ministry of Education office
which provided data on districts and zones in the county. Information specifically on TACs and teachers in public primary schools in Nairobi County was gathered from City Education office. The TACs tut ors and the researcher negotiated and agreed on the day to meet at the centre and visit some sampled schools to interview teachers and observe them teaching. A TAC tutor in each of the 5 targeted zones was interviewed and the centres were observed. The TAC tutors accompanied the researcher to the schools where teachers were observed while conducting lessons; and the researcher interviewed the teachers. The researcher also collected data from 5 KIE officers. Data were finally organized analyzed and report written.

**Data Analysis**

Descriptive statistics was used to explore data and data were analyzed thematically following the research questions which addressed research objectives. For example, data on the objective, ‘to establish extent to which TACs had performed teacher professional development’ was captured in the TAC tutors Interview schedule, teachers interview schedule, TACs observation schedule and other interview schedules for KIE officers. It also captured data on issues and challenges faced by TACs. Interventions needed to revitalize and sustain TACs’ were captured by interview schedule for TAC tutors and KIE officers. Data from the different instruments were grouped according to themes, compiled and organized. The organized information was edited, interpretations and conclusions were made. Results were presented in percentages and words. Based on the findings conclusions and recommendations were made.

**FINDINGS OF THE STUDY**

The findings of the study were organized in themes and presented as follows:

The Extent to which TACs Conduct In-service Courses and Visit Schools for Teacher Professional Development

A total of 3 out of 5 TAC tutors had visited all schools once in a term. Only one TAC tutor had visited 2 schools thrice in a term and another TAC tutor had visited a school twice in a term. The majority of the schools 10 out of 15 schools in their zone had not been visited. TAC tutors conduct the following activities when they visit schools: Investigate on whether schools were effecting MOE policies such as stoppage of use of caning; students’ discipline and investigate on malpractices in schools; provide guidance and counseling where discipline is lax; guide where there are internal conflicts involving either teachers or students; gather data at the beginning of term on teachers and pupils who reported to school; assess general school standard during panel assessment, sort bursary issues as members of bursary committee, count textbooks; coordinate school feeding programme; check on number of orphans; collect Education Management Information System (EMIS) data for Ministry of Education (MOE); assist Key Resource Teachers with Tutor Marked Assignments and tutorials, disseminate MOE information. They also to school infrastructure, attend school annual general meetings, count textbooks, file forms on school feeding programme, coordinate economic stimulus programmes, advice candidates, coordinate subject panel activities, induct newly appointed teachers, conduct teacher training needs assessment. All the TAC tutors visited had prepared work plans which they had not followed due to unplanned activities from the Ministry of Education (MOE) and other interested bodies. No TAC tutor had organized any in-service course for teachers as their own initiative from identified teacher needs but as initiative of organizations such as KIE, CEMASTEA, CIBT, QASO, NGO, and publishers. The TAC tutors has attended innumerable seminars and workshops organized by different education stakeholders but lacked facilitation to conduct training of teachers after they received them training. However private schools head teachers had facilitated them TAC tutors to train teachers in their own schools. All TAC tutors (100%) accurately stated all their roles in teacher professional development. However, TAC tutors’ performance in teacher professional development was rated by all the respondents as fair at 40%.

Teaching learning approaches used by teachers in the classroom

Lecture was the dominant teaching learning approach observed and rated by researcher as follows: Lecture takes 80% of a 30 and 35 minutes lesson; question and answer 12%, group work 4%, ‘individual work 2%', discussion and others like role play 2% of the lesson time. This concurred with the TAC tutors who had reported that the main teaching learning approach they had observed used in the classroom was lecture and text book teaching. Teachers wholly depended on textbook for classroom assessment. No teacher was observed giving their own personally set questions. No TAC tutor had observed teachers using radio lessons or computer to enhance teaching and learning. No teacher studied was observed using teaching aids. About 40% of teachers reported that they had attended seminars and workshops facilitated by TAC tutors, 20% had never met the TAC tutor and 40% had no comment. Therefore the majority 60% of the teachers had not attended seminars and workshops. However the seminars and workshops facilitated by TAC tutors were not organized by TAC tutors but by organizations and institutions such as KIE, CEMASTEA and QAS on syllabus interpretation and teaching of mathematics and science. The TAC tutor was only one of the trainers. No TAC tutor had organized a teachers’ in service course as their own initiative due to lack of facilitation.

Challenges and Issues faced by TAC Tutors in their Effort to Facilitate Teacher Professional Development

TAC tutors, in their effort to conduct teacher professional development, had faced challenges as follows: unclear terms of service, too many assignments, lack of capacity, unclear reporting systems and lack of facilitation. TAC tutors are employees of Teachers Service Commission but they report to Senior School Advisors from Ministry of Education or employees of the City Council of Nairobi. They lacked travel facilitation to visit schools in Nairobi. They use their own money to travel to schools, which is not sustainable. Some schools are inaccessible. TAC tutors attend training workshops most of the time organized by different interested groups and they have no time and facilitation to implement knowledge and skills acquired in the numerous trainings they are made to attend. They lack finance for facilitation of activities and are not recognized in Ministry of Education (MOE) management structure. TACs have no stationery and
the centres are not furnished; they all had been given a room in primary schools which are used by the senior teacher when the TAC tutor was out of station and the meager TAC resources are not secure. The 12-25 schools to be visited by one TAC tutor, were said to be too many. MOE administrative activities interfered with teacher professional development activities. The centre assistants were not computer literate, there were no computers, TAC tutors’ programme of work was interfered with by administrative duties from the MOE. They lack capacity to perform administration duties and not teacher professional development activities.

**TAC attempts to address challenges and issues faced while conducting teacher professional development activities**

The following collection of responses by the interviewed TAC tutors indicate the challenges and frustrations they face while conducting teacher professional development activities:

- ‘I obey the superiors and attempt to do everything and end up doing a shoddy job.
- I trek to schools to observe teachers where possible, pay my own fare to schools.
- I walk, hire taxis and boda boda (motor bike or bicycle) to visit schools, air grievances to City Advisor of schools, visit very few schools due to challenges and also buy stationery at my own expense; pay for typing services; use my own personal computer; borrow stationery and other facilities from the host school and store documents at my home to ensure their security’.

**Suggested Intervention measures**

The following are some of the suggestions of a TAC tutor on intervention measures:

- ‘Recognize TAC tutor post by including them in MOE structure; build capacity of TAC tutor; facilitating TAC activities by provision of finance; providing TAC tutor clear job description which is understood by all; Assign TAC tutors number of schools they can manage; furnishing TAC centres; allow TAC tutors to concentrate on teacher professional development activities; KIE should monitor TAC teacher professional development activities impact in classroom; provide clear career progression, and link up TAC management structure with KIE’.

**DISCUSSION**

The results of the study reveal that TACs do not perform teacher professional development activities effectively and efficiently. TAC tutors are too overloaded and lack facilitation to be effective in discharging their core mandate and as a result teachers tend to lack professional support which TAC is the institution mandated to provide. This is in agreement with other studies such as Strengthening Primary Education (SPRED) one (MOE 1998 & DFID1999) which had revealed that TACs lacked facilities, financial facilitation, tutors had no clear job description and their reporting system was not procedural. In the classroom, lecture method was dominant. Learner creativity was not encouraged. Questions and answers dominated the lesson where learners gave chorus answers. Poor content mastery of teachers in the subject they teach and poor teaching methods are reported as the main challenges (Otieno, 2010) and (Oriedo, 2010). Study by Hardman (2009) revealed that teaching was teacher centered grounded in traditional method of teaching; the discourse was made up of teacher initiated question and answer sessions interrupted by brief lectures. Gathumbi (2010) reported that an overall of over 40% of the pre-service teacher trainees did not attain the desired literacy competence level in a test administered to them. They were particularly poor in: speaking, grammar, punctuation, self expression and in composition writing. About 35.7% of the teacher trainees could barely handle the work that requires them to teach listening and writing skills in primary schools. In composition writing; 92.86% of the teacher trainees did not attain desired competency level and 50% of the trainees lacked adequate ability to teach grammar and vocabulary. In this study, private schools were reported to have facilitated TAC tutors to train their teachers. No wonder they led in the 2010 and 2011 KCPE results and that 8,115 KCPE graduates from public schools can’t read or write (Kigotho and Indakwa, 2011).

**CONCLUSION**

TAC tutors tend to be ineffective in teacher professional development though they seem to understand their role which they compare with the work they actually do and rate themselves in their teacher development performance at 40% in agreement with teachers who had also rated them 40%. TAC tutors are qualified for their job. There are other providers of teacher professional development such as KIE and MOE but neither their outcome nor their impact was observed in teachers in their classroom practice. Teaching is teacher centred and lecture method is the main teaching approach. Teachers rely on textbooks for guidance; teaching aids were not used. Clearly teachers’ classroom practice did not reveal impact of teacher professional development activities such as in service courses.

**RECOMMENDATIONS**

Based on the findings of the study and the conclusions, the following are the recommendations:

1. TAC tutors should be relieved of MOE administrative duties to enable them to conduct teacher professional development activities.
2. TAC tutors should be equipped with knowledge and skills to enable them provide teachers quality professional development.
3. TAC tutors should be facilitated by provision of financial resources, equipment and facilities such as computers, stationery, and furniture and space for meetings to enable quality effective teacher professional development.
4. There should be a clear organizational structure with clear career path for TAC.
5. Education stakeholders who fund TAC in-service training should facilitate roll out of the activity to the teachers.
6. Research should be conducted on quality of professional development provided by other education stakeholders.
7. Teacher professional development providers should work together for a common goal.
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