



## TOWARDS LEARNER CENTERED PEDAGOGIES BY TEACHER EDUCATORS IN KENYA: A STUDY OF KERICHO TEACHERS' TRAINING COLLEGE

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### ABSTRACT

*This was a college-wide action research that assessed the use of various pedagogies by teacher educators. It was about how teacher educators could change their classroom instruction to advance student teachers' achievements. The study was conducted among 61 educators and 200 teacher trainees in Kericho Teachers Training College (TTC) using questionnaires and document analysis. The data captured was analyzed using SPSS Version 17.0 computer software programme. Data was presented using tables, frequencies, percentages and means. Open ended question items were put into themes and discussed. This research initially found that the teacher educators were mainly using teacher centered methodologies and they needed insets in subject area pedagogies. The research therefore recommended that the college should organize workshops to equip the educators on learner centered methodologies. The college stakeholders implemented this recommendation. Later the researchers evaluated the extent of execution after two months and found significant improvements on the use of learner centered approaches in the college.*

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**Keywords:** Learner centered methodologies, Teacher centered methodologies, Teacher trainer/educator, Teacher trainee.

### INTRODUCTION

In Kericho TTC, the student teachers' achievement in national examinations, the Primary Teachers' Examination (PTE), conducted by Kenya National Examination Council (KNEC) has not been satisfactory over the recent past as compared to other public teacher training colleges. According to the KNEC report for the year 2010, in a grading scale of 1 to 8 (1-2 is Distinction, 3-5 is Credit, 6-7

is a Pass, and 8 being a fail), the 19 public colleges mean grade at 95% confidence level was  $5.16 \pm 0.076$ . In Kericho TTC, the results for 2009 shows that 0.85% of the teacher trainees obtained distinction grade, while 9.23% failed. In 2010, 0.67% obtained a distinction and 10.2% failed while in 2011, 1.99% obtained distinction and 7.0% failed. The student teachers who have scored distinction grades have been very few while those failing have been more. This is an indication of a high wastage rate due to low completion rates as those who fail are suppose to re-sit the examination.

## LITERATURE REVIEW

This research had its foundations in the writings of John Dewey, the great American educational philosopher, who believed that professional educators should become involved in “community” problem-solving. Since the attainment of independence, reforms in the field of education in Kenya have been intensified and many important steps have been taken towards improving the accessibility, effectiveness and quality of education. Quality education is one that leads to effective learning amongst the learners. This means the learners should be able to develop knowledge and skills according to the curriculum, the ability to think creatively and apply knowledge to solving problems, positive social attitudes and behavior, and commitment to life-long learning.

According to UNICEF’s Child Friendly Schools (CFS) Manual (Ministry of Education/TEPD., 2008), quality of education is a result of many factors like safety, nutrition, school partnerships, and community linkages. However, to create quality education, the teacher is the most important factor. Internationally, a growing body of research confirms teacher quality as one of the most vital school based factors influencing student achievement or performance (Schulman, 1986). Based on studies carried out in the USA on student achievement, Darling-Hammond concluded that;...teachers’ qualification based on measures of knowledge and expertise, education, and experience – account for a larger share of the variance in students’ achievement than any other single factor (like race, poverty, parent education) (DuPlessis and Irfan, 2010).

In Australia, a number of studies have similarly concluded that the quality of teaching and learning is an important factor accounting for variations in school students’ achievement. The MOE has invested in programs towards the development of teachers’ competencies by strengthening teachers and teaching in TTCs. It should be borne in mind that without knowledgeable, skilled and committed teachers, the other factors may not necessarily contribute to quality education. This therefore means the trainers of teachers are in sharp focus. They need to be highly trained to use appropriate pedagogies that lead to student learning in an effective way.

There have been several training programmes geared towards the professional development of teacher trainers. All these have been made in order to change their practice. It should be remembered that teachers respond enthusiastically to programs of continuing professional

development that are made available within the college. This could be because teachers in nature have particular needs that are peculiar to their own situations and context. It is also true that if the ministry of education adopts a policy for teacher trainers to have a professional qualification in primary education, it will go a long way to improve quality education in TTCs.

Teacher colleges' classroom methods tend to be characterized by emphasis on recall and memorization for the sake of passing Kenya National Examination Council examinations. The reason for this could be the fact that the only way of appreciating one's education is through passing examination at the end of training. In fact, pre-service curriculum and examination policy have not changed to reflect active learning methodologies. The other reason could be the fact that insufficient resources are allocated to teachers' colleges by the government. Most teacher educators in Kericho TTC were not initially educated as professional primary school teacher educators. They are subject specialists recruited or re-posted directly from secondary schools with no experience of primary school classrooms or specialized knowledge of the professional area of primary school education. Many of them find it hard to make relevant connections between the knowledge they are teaching and how to teach this to student teachers who are mainly training for primary school teaching. There is lack of pedagogical content knowledge used in teacher education. This combines subject matter knowledge with relevant primary school methods (DuPlessis and Irfan, 2010).

Teacher education curriculum often covers content and pedagogy extensively. The concept of pedagogical content knowledge is ignored. This is critical in the knowledge and practice of both a good teacher educator and a good primary school teacher. Effective teacher education goes beyond knowing the subject to be taught (content knowledge) and a set of abstract teaching strategies (pedagogical knowledge). It depends on pedagogical content knowledge, which encompasses ideas on how to teach a particular subject. This includes knowing: how to structure the content and use methods in teaching that make sense for particular learners, why particular topics are easy or difficult to learn, how to represent concepts and processes of a topic, and what strategies to use to help learners gain understanding of content (Carnoy, 2007). According to a baseline survey conducted by Teacher Education Professional Development (TEPD) (Schulman, 1986), there is little evidence in Kenya that teacher educators either use pedagogical content knowledge or include it in how they prepare their students to teach. This is a critical gap in the teacher education curriculum and programme.

The assertions above do not mean that there have been no professional developments for teacher educators. These trainings have been sporadic and centralized, often conducted through donor support programmes aimed at particular segment of the TTC trainers like Strengthening Mathematics and Science Education (SMASE) for teachers of math and science. The impact of such programmes are modest and may not be sustained in most countries due to the following factors considered by Carnoy (Lewin and Stuart, 2003): narrow focus on specific subject oriented interventions, lack of institutional ownership of programmes, lack of follow up to support the

implementation of new knowledge and methods, high staff turnover in colleges creating the need to repeat the programmes, and lack of career incentives associated with such programmes.

Programmes to improve the professional knowledge and practice of teacher educators will only bear fruits if they are developed into curriculum policy. This policy change ought to be effected at the college level. This is an effective way of reaching all trainers. Lewin and Stuart (Susman, 1983) have argued that teacher educators at all levels need to have induction and continuing professional development. This could mean they are aware of recent developments, can judge whether these should be incorporated into training, have perspectives that run beyond their direct experience, and have a rich range of materials to draw on to support and stimulate trainee teachers.

Kericho TTC from this perspective acknowledges very greatly the need for quality education. The use of learner centered methodologies has become the focus of quality education and wholesome development of the learners; yet, many teacher educators have not been equipped with the requisite knowledge. Learner Centered Teaching (LCT) is about optimizing the opportunities for our students to learn. This means figuring out the best possible ways to get them to do the work. The widely accepted definition of learning is that it is a change in neuron-networks of the brain (Susman, 1983). For this change to happen, students must be paying attention and actively engaging their brains to process new sensory input. There is no such thing as passive learning. Cognitive Neuroscientist Janet Zadina explained in her presentations that, if students' brains are being engaged in new learning, their brains' neurons (specifically the dendrites) will begin to grow new cellular material. This new material is the start of new neuro-connections that will represent the new information. She also pointed out that if the new information does not get used or practiced, the brain will reabsorb the new cellular material. Zadina made it clear that the brain is good at conserving its resources. Therefore, the only way for our students to increase their learning is to actively engage in learning the content and skills that we teach, and then use and practice the content and skills for significant periods of time. It is this practice which will cause the new neuro-connections to grow into permanent representations of the learnt material. This means that most of the time students need to be doing more than just listening to a lecture, the students need to be doing the work.

There was need to inquire into the extent of usage of these pedagogies in the teaching of teacher trainees in this college and possibly come up with workable resolutions, hence the focus of this action research.

### **Objective**

To identify the extent of use of teacher centered pedagogies and strategies of enhancing learner centered teaching in Kericho TTC.

### **Theoretical Framework**

The research was based on Gerald Susman's model (Lather, 1986) (Appendix C). He distinguishes five phases to be conducted within each research cycle. Initially, a problem is identified and data is collected for a more detailed diagnosis. This is followed by a collective postulation of several possible solutions, from which a single plan of action emerges and is implemented. Data on the results of the intervention are collected and analyzed, and the findings are interpreted in light of how successful the action has been. At this point, the problem is re-assessed and the process begins another cycle. This process continues until the problem is resolved.

### **Significance of the Study**

This study operates from the premise of gathering evidence about the practice. The evidence then will be interpreted to practical understanding of why situations are as they are. It is only through reflexive critical stance in context that clear understandings are formed. Kericho TTC teacher educators have an opportunity to engage in critique of the situation in which practice is carried out from the evidence of the study. This in essence reflects home-based solutions which in the long run are not only more cost effective but are equally authentic (are situated in the reality of Kericho TTC).

### **Methodology and Execution**

This study was situated on the research paradigm of praxis which shares a number of perspectives with interpretive paradigm, and makes considerable use of its related qualitative methodologies. Praxis, a term used by Aristotle, is the art of acting upon the conditions one faces in order to change them. That knowledge is derived from practice, and practice is informed by knowledge, in an ongoing process (Glatthorn, 1987).

Kericho TTC is one of the 19 public teacher colleges in Kenya that have been offering candidates for Kenya National Examination Council's summative evaluation after a two year study. The college had a population of about 987 student teachers and 73 teacher educators. The study used questionnaires to collect the data. Student teachers and educators responded to questionnaires that contained close and open ended question items. The teacher trainees' questionnaire was for triangulation purposes. The research also used document analysis.

A sample of student teachers were administered the questionnaire. Simple random sampling technique was used to get the student teachers to respond to the questionnaire. A complete sampling frame of the students was availed from the college's admissions office. The 200 students sampled were encouraged to respond to the research items in the questionnaire individually. The response rate was 100%. The entire teacher trainers were also given the questionnaire. Their teaching timetable numbers were used as a sampling frame. After several follow up of those who had not returned the research tool, a response rate of 80.6% (61) was achieved. The researchers also analyzed the documents on lesson attendance by the lecturers/teacher trainers in the Dean of

Curriculum's office to be able to get a clear picture on the responses attendant to some research items in the questionnaire for corroboration purposes.

### **Data Analysis**

The teacher trainees were asked to show if the teacher educator's content delivery affected their performance. Their response puts a lot of responsibility on the teacher educators as 65.1% agreed to this fact. It then became necessary to find out in detail if the trainers in Kericho TTC were underprovided in their capacities to train. They were asked to comment on ways to improve teacher training in their subject area. Their responses were thematic such as: in-service training in subject area pedagogies (60.3%), demystification of learner centered approaches to teaching (28.8%) while others suggested curriculum review (10.9 %). The trainers were then asked if they were aware of any practical plans by Ministry of Education (MOE) for their professional development and 51.7% of them said that there were no structures from the MOE for professional development of teachers in their subject areas.

The trainers were further asked if there were structures in college that identifies their professional development needs and 37.9%.agreed and 62.1% denied. The trainers who agreed cited the following as areas that have been identified in the recent past: ICT know how, teaching practice assessment induction, anti-corruption and integrity issues and induction of newly posted trainers.

A teacher uses a variety of strategies for effective communication. When most of the activities are centered on the teacher, then the teaching-learning is teacher centered i.e. individual teaching, team teaching and deductive approach (teaching that proceeds from given rules or generalizations to specific examples). The above approaches are inclined to rote learning. In this research, teacher educators were asked to indicate whether the subject area they were currently teaching was related to their initial professional training. The majority (98.3%) of them were currently teaching areas that were related to their initial training and only 1.7% were not.

It therefore means most of the teachers were at ease with their subject areas. The educators mentioned the pedagogies they mainly used in classroom instruction thus: teacher centered (39.7%), learner centered (25.9%), hybrid (a mixture of learner & teacher centered approaches) (31.0%). Those who were not able to identify with any method were 3.4%. The educators said that learner centered methodologies could be improved in college through peer teaching, group discussions, availing more teaching and learning resources, educators and student teachers to engage in more research on topical issues and establishment of in-service courses akin to SMASE policy.

Teacher trainers categorized the methodologies they often used in class instruction as lecture (37.9%), question and answer (19.0%), demonstration (5.2%). It emerged that teacher educators by 63.8% agreed that they adopted methodologies that allowed them to clear the syllabus on time

before the national examinations, 27.6% did not agree to this. It was also very significant to note that 86.2% of the educators said that most of the teaching approaches they used mainly equipped learners towards recalling facts during examinations, a fact refuted by 12.1%. This research notes that teaching approaches that encourage recall or memorization of facts which are soon forgotten are teacher centered.

It was therefore found in this research that teacher trainers mainly used teacher centered approaches during class instruction, that is, pedagogies that would help them complete the syllabus before national examinations and yet many do not complete the syllabus on time.

The study recommended that teacher trainers be equipped with relevant know how to enable them adopt learner-centered teaching. Such an approach encourage learners imagination, build character, develop creativity, arouse learners interests, discriminate facts or information, develop learners problem solving skills, cooperative skills etc.

Upon dissemination of the college action research finding to the college community, the college administration organized workshops for all the teaching staff on learner centered teaching. The workshops identified appropriate CCIM (Child Centered Interactive Methodologies) that could be used for effective implementation of teacher education curriculum in Kericho TTC. Learner centered pedagogies explored included; use of students' discussions, research projects, question and answer, demonstration, observation amongst others. These pedagogies were based on Doyle's principle (2008), who found out in his fifteen years of neuroscience, biology and cognitive psychology research findings on how humans learn and offered this powerful and singular conclusion: "It is the one who does the work who does the learning". This conclusion strongly suggests that the traditional model of teacher centered instruction often called the 'jug and mug' where teachers do a lot of the work, is less effective and can be detrimental to students' learning.

After owning the research finding and workshop ideas, the teacher educators at Kericho TTC embarked on implementation of learner centered pedagogies in class instructions. A second set of questionnaires were administered after two months to evaluate whether there were changes in teacher educators' pedagogies in class. Teacher trainees and teacher educators, yet again, responded to sets of question items measuring the use of CCIM pedagogies in class. Most of the initial trainees of 200 were sampled in first and second year classes. A total of 59 teacher educators took part this time in the research representing 77.63% of the teaching force. The teacher educators by 76.2% said the insets on learner centered teaching were beneficial. The evaluation noted that 74.6% of them had adopted largely learner centered approaches. The teacher educators ranked (with 1 as the best and 6 the least used) a list of learner centered pedagogies as follows: 1) discussion 2) observation 3) demonstration 4) question and answer 5) lecture and 6) project method. On the other hand some of the learner centered methodologies were given to the teacher trainees to show their level of agreement in a scale of 1–5 on the way their teachers used them in

class. They responded as follows: discussion (43.5%), question and answer (27.2), observation (22.0%), and project method (7.3%). It therefore seems that the teacher educators' assertions are given credence by teacher trainees. On the basis of the above declarations, 75.0% of the trainees said they had noticed some transformation in the approaches used by teacher educators in their classrooms, 25.0% thought otherwise.

## CONCLUSIONS

The roles that teacher educators play in pre-service teacher training in Kericho TTC and this country at large are invaluable. The quality of pre-service trainees is a function of programmes that are geared towards continuing professional development for the trainers. They will put the colleges at the plinth/platform in playing their central role of enhancing quality education in Kenya.

Quality education in schools today is a key concern of parents, politicians and the general public. Every year when, especially, the Kenya Certificate of Primary Education (KCPE) results are released, several head teachers are locked out of their schools for posting poor results. The public debate on the media on performance take up to a month. Quality is at a critical stage now that the country is motivated towards achievement of the UN's UPE by 2015 and Kenya's Vision 2030. It will then mean that schools endeavor to provide education that leads to effective learning in the form of knowledge and skills according to the curriculum, ability to creatively apply knowledge to problem solving, develop positive social attitudes and behaviour, and a commitment to life-long pursuit of knowledge.

From the foregoing, quality education is therefore a result of a combination of varied factors that transpire together in the classroom in the teaching and learning process. At the pivotal role of all these factors is the teacher. This will mean that pre-service teacher education is brought to the fore in the process of creating quality education, hence, the imperative role played by the teacher trainers in this process. After implementation of the action research finding to the teacher educators on learner centered methodologies, it seems that the teacher educators were now implementing the use of learner centered approaches in classroom teaching. The new way of using learner centered approaches espoused in the teacher educators' workshops as a way of improving the quality of teaching and learning in Kericho TTC puts the teacher educators at disequilibrium (a state of instability between the old practice and the new approach). At this stage teacher educators require congeniality (friendly, affable, amiable, good-natured, pleasant, and hospitable) so as to fit into the new practice which meets the recommendations of the action research and implementation report. Glatthorn ([Kenya National Examination Council., 2010](#)), and Kenya Institute of Education ([Shiundu and Omulando, 1992](#)) have argued that the implementation of new practice is a lonely undertaking and that for stability in change, the mental health and attitudes of teacher educators are crucial to success. Because of the high demand on the time of teacher educators, those who are



committed often feel exhausted and burned-out. Other teachers experience isolation in the absence of official support (Zuber-Skerritt, 1996; Kenya National Examination Council., 2010).

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Rank in 2010 Nationally	Rank in 2009 Nationally	College Name TTC	No. of Candidates	Average Grade
1	2	Eregi	573	4.764
2	4	Kamwenja	439	4.868
3	7	Meru	537	4.948
4	1	Muranga	363	4.964
5	10	Kaimosi	581	4.997
6	8	MoiBaringo	374	5.019
7	15	Shanzu	474	5.133
8	5	Kilimambogo	499	5.134
9	16	Kigari	640	5.145
10	19	Bondo	425	5.155
11	17	Asumbi	432	5.206
12	21	Tambach	564	5.222
13	9	Machakos	535	5.273
14	6	Egoji	758	5.276
<b>15</b>	<b>13</b>	<b>Kericho</b>	<b>485</b>	<b>5.330</b>
16	11	Mosoriot	535	5.344
17	31	Garissa	513	5.366
18	14	Migori	579	5.416
19	12	Thogoto	356	5.497

(Adapted from Kenya National Examination Council PTE (13) for 2009 &2010 by Rop, Osman&Kirui)

#### Appendix B: Kericho TTC PTE performance 2006-2011

Year	Distinction	Credit	Pass	Fail	CRNM	Absent	Entry
<b>2006</b>	01	232	91	69	04	03	<b>400</b>
<b>2007</b>	02	356	171	99	03	00	<b>631</b>
<b>2008</b>	01	250	152	76	04	03	<b>486</b>
<b>2009</b>	05	363	154	57	03	04	<b>586</b>
<b>2010</b>	03	292	109	46	01	00	<b>451</b>
<b>2011</b>	11	464	66	39	02	00	<b>554</b>

CRNM – Course Requirements Not Met

(Adapted from Kericho TTC's Kenya National Examination results by Rop, Osman&Kirui)

**APPENDIX C: Gerald Susman's 1983 Action Research Model**

