A REVIEW OF LITERATURE ON THE INFLUENCE OF THE AFFECT IN IMPROVING TEACHING AND LEARNING OUTCOMES

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ABSTRACT

Research indicates that teaching in primary schools in Kenya is teacher centred with low learner enthusiasm, limited learner interaction and participation. This kind of education kills learner creativity, knowledge construction and innovativeness. Kenya requires innovative education in her aspiration towards a knowledge based economy. Poor acquisition of literacy and numeracy skills has been reported. This study sought to establish whether addressing the affective domain in teaching and learning enhances learners' innovativeness and learning outcomes. It also sought to establish whether the affective domain is addressed in Kenya policy documents and school curriculum. Four research studies were analyzed and revealed that addressing the affect in teaching and learning improves learner innovativeness. It was also established that use of information technology address the affective domain. It enhances learning environment, arouses learners' curiosity, enthusiasm and aids in development of problem solving skills which are crucial in development of learner knowledge construction skills. The affective domain was likened to lubricating oil used in turning cognitive wheels in molding a holistic individual when addressed alongside intellectual development. Kenya school curriculum and policy documents were found to address the affect as well as knowledge and skills and the puzzle was why learning is not effective in most Kenya primary schools. The main problem tends to be teacher effectiveness which should be addressed through continuous teacher professional development and monitoring of teaching effectiveness. Teaching approaches then should be consciously structured to address the affective domain. In particular, values should be emphasized. This study is critical as it brings to the awareness of teachers that teaching learning environment and teaching strategies ought to be directed to address the affective domain because it matters in improvement of learning outcomes and in holistic development of the learner.

Key Words: *teaching, learning, environment, affect, affective domain, strategies*

Introduction

Strategies to improve the quality of students' learning outcomes continues to be the focus of research mainly due to reported mismatch between school learning and skills required by the workplace (Gravosco, Pasa & Moti, 2002). In Kenya, research reports (Hardman, 2009 &Kenya National Examinations Council [KNEC], 2010) indicate that classrooms in primary schools are characterized with teacher dominance and passive learners and the main concern in class is high

examination scores. This is echoed by (Denis, 2002) who argues that much of the current curriculum based on Ralph Tyler's (1949) model has trained people to be passive receivers of predetermined truths and not active creators of knowledge. The model heavily influences Kenya school curriculum. Innovative teaching learning approaches need to be identified and practised in an attempt to curve the trend. Affective learning is concerned with how learners feel while they are learning, as well as with how learning experiences are internalized so they can guide the learner's attitudes, opinions, and behavior that influence learning outcome. Study by Gravosco, Pasa & Moti (2002) indicated that the manner in which students learn, which implies, determine the learning outcome. It also established that learning outcomes were higher when students learn collaboratively; an indicator that the affect tends to positively influence learning outcomes and the influence of the affect in learning outcome is the main focus of this study.

The affective domain includes the manner in which individuals deal with issues such as: feelings, emotions, values, appreciation, enthusiasm, motivation, attitudes, creativity and self development (Krathwohl, Bloom & Masia 1973). The affective domain is said to be intimately related to cognitive and psychomotor domains because cognitive learning and retention of concepts are strongly reinforced or hindered by attitudes, motivation and values and act as barriers to effective classroom communication. Values are caught from the environment and are retained in the individual and they are not merely taught (Pinar, 2004). Learning in the affective instills certain professional qualities and values in the learner that result in the learner's desirable behavior (Silcon & Diane, 2001). It aids development of critical thinking, professional judgment and value acquisition. For example, (Neuman & Forsyth, 2008) reported that learning in the affective domain in Radiological Technology shapes technologists attitude which in turn affect their performance and how clients perceive the quality of care they receive. They also found that attention to the affective domain and focused teaching in the area develops in the student characteristics considered desirable by instructors, employers and professionals. Valkenburg and Holden (2004) also found that addressing the affective domain produces professionals who take pride in their work and profession and who understand the value of competent performance and continued education; clients who are satisfied with the service they receive and increased efficiency. The affect is therefore a crucial variable to be studied in education for purpose of molding learners' character and at the same time developing their knowledge, skills and attitudes to prepare them serve the society with human concern and enthusiasm and not just for material gain. That would be a major expected learning outcome. Teaching and learning in the affect requires value oriented curriculum that strengthens and stimulates people to take full advantage of worthwhile experiences and worthwhile knowledge (Pinar, 2003).

Best practice such as that from Ministry of Education (MOE) State of Israel (2002) integrates the cognitive and the affect in their definition of an ideal graduate who is defined as learned with broad education that is relevant to the place, community and era. The graduate should also be inquisitive, independent and flexible. Such a graduate should have good mental meta cognitive skills and abilities and capable of conducting research and utilizing resources of advanced

technology. The graduate should also be principled, ethical and involved in society. Such a graduate should have developed personal, social and national identity with positive self assurance, self esteem. The individual contributes to and is duty bound to society; identifies with humanistic, democratic and national values (MOE State of Israel, 2002).The image of such desired graduate demands integration of core curriculum with values that should be shared by all in the society and obligatory for all learners. Kenya needs to benchmark with such best practice in order for education to propel the country to achieve the Kenya Vision 2030 (Republic of Kenya, 2007) and to develop learners grounded in positive values and technical skills as well.

The need for addressing the affect is now more critical than ever before because the current challenges in society are even more threatening than before and the curriculum, including teaching and learning, should address the needs of the neo millennial children of the internet age who require guidance on how to manage the exploded knowledge and diverse values they are daily exposed to by modern technology (Jon & Bondi, 2007). Values today are influenced by the internet, television, computer and other media. The role of the teacher has been affected by technology which tends to dislodge teacher as the sole owner of knowledge who students have to rely on due to the fact that knowledge today is everywhere. Education therefore should be value laden to enable learners identify desirable values from the undesirable ones and uphold the desirable.

Some researchers such as Silberman (1970) argued that it is not the subjects offered that make values part of the education but rather how the subjects are taught, how they connect to the personal interests and talents of students who study them and how skillfully they are laid out against the whole continuum of human experience. He added that the way teachers teach may be more important in learning than what they teach. Leach and Moon (2008) observed that it is a widespread concern that today's traditional education systems mostly derived from 19th century factory models for knowledge delivery will be unable to meet the needs of 21st century's new growth economic models that demand knowledge creation. Achievement of the Kenya Vision 2030 requires new models such as constructivism to develop problem solving skills which are developed through addressing the affect. There exists ideas about the role of the affective domain in learning outcomes that required further verification through review of literature research approach.

Statement of the Problem

Research reports in Kenya (Hardman, 2009, KNEC 2010 & Mwangi, 2011) indicate that teaching and learning is teacher centred with low learner enthusiasm, limited learner interaction and participation geared to high test scores. In addition the Sessional Paper No. 1 of 2005 (Republic of Kenya, 2005) also reported that teaching in many primary schools in Kenya was dominated by transmission teacher centred teaching approaches where pupils were passive and were expected to recall facts in class dominated by the teacher. Such an approach encourages

memorization of facts and ideas as opposed to learning concepts. It is a traditional approach that Freire (1972) referred to as banking. It hardly promotes development of learners' skills in knowledge construction, creativity, innovation and problem solving. It results in rote learning, tends to kill learner creativity, knowledge construction and innovativeness and results to producing learners who achieve high test scores but are greatly challenged when required to put their theoretical knowledge and skills into practice

At school level, poor acquisition of literacy and numeracy skills has been reported (Kenya Examinations Council [KNEC], 2010; Oduor, 2011, & Otieno, 2010).The issue require redress. On the other hand brain research has shown that the brain performs best in a friendly environment enriched with variety of stimuli (Gardner, 1999). Therefore attributes of affect play a major role in learning and at the same time imparts values which the school should focus to the desired end. The Kenya society now than ever require to equip the citizens, in particular the youth, with values due to challenges of enticement to join terror gangs and also to develop in them an attitude of abhorrence of evils such as corruption and impunity among other evils. There is existing reported evidence that the affect influences learning outcomes but more literature review was required to further establish the extent of the influence.

Research Objectives

The objectives of the study were to further confirm whether the affective domain:

1. Influences learning outcomes in order to be used to improve learning outcomes in Kenya primary schools.
2. Is addressed in Kenya school curriculum and policy documents

Literature Review

There is massive research literature that indicates that the affective domain is intimately related to cognitive and psychomotor domains (Valkenburg & Holden, 2004; Smith, 2007 & Reddy, 2007). There were arguments that values are caught from the environment and not merely taught (MOE, 2008). As the teacher addresses the affective learners through action and personal presentations, the learners catches values that become permanent part of their own lives. Values are therefore experienced. Valkenburg and Holden (2004) explained that the complex affective domain and the behaviour that result from it originate within a particular culture and are the result of community's values and the influences of parenting where values are caught and not merely taught; which poses great challenge to the teacher in the process of teaching and learning. When the two; the affect and cognitive are smoothly integrated, learning outcomes are reinforced. It is further elaborated that every cognitive and psychomotor behavior has an affective component and many parts of the brain are involved (Neuman & Forsyth, 2008).Cognitive learning and retention of concept are strongly reinforced or hindered by attitudes, motivation and values (Valkenburg & Holden, 2004). Affective attributes therefore are

an important part of teaching and learning process. Learning in the affective instills certain professional qualities hence perpetrating professional ethics and standards that result in improved behaviour.

Teaching-learning methodology brings out the affect. Teaching methodology and style are as important as course content and the affective domain affects the cognitive (Smith, 2007). The affect could be compared to the oil that turns the affect wheel. A comfortable free learning environment motivates learners to ask questions and participate in open discussion (Dladla & Moon, 2002) which result in enhanced learning outcome. A student's attitude towards a given course or subject area could be a contributing factor to achievement in test scores (Leach & Moon, 2008). In the process of addressing the affective the learner catches values

There are vast examples that indicate the cognitive and values are entwined. Selection of educational objectives should be value laden and society oriented specifically the reformists who emphasize improving the society. Education should raise student consciousness as advocated by reconceptualist theory (Reddy, 2007). They should advocate conscious raising. Education should empower the learner to create their own knowledge. This would be through engagement and collaborative learning that include problem posing and problem solving and could be achieved in teaching methods. Reddy (2007) argues that the teachers' role should be skilful operation of uncovering what is hidden or latent in the learner by addressing the affect using affective activities that play a larger part and develops both the intellect and the affective. He pointed out that skills are best developed in a loving caring environment. The learner too learns to be loving and caring.

In contrast the present teaching and learning in class is a continuous series of instruction punctuated rather mechanically with home-work, tests, procedures following a rigid time-table, syllabi and examinations are viewed as most important. Due to rigidity in a mechanical structure, the centre of attention is not the learner but the book, the teacher and the syllabus, (Pinar, 2003). The methods which are most conducive to the development of the personality of the child are rarely if at all practiced mostly because they take cramming and time to drill for examinations. Discovering the learner potential was practiced even by Socrates who demonstrated in the Platonic dialogue, how a good teacher can, without teaching, but by asking suitable questions, bring out to the surface the true knowledge which is already unconsciously present in the learner. That was use of creative questioning method which could be enriched today by other approaches that involve the learner in learning (Reddy, 2007). Socrates argued that Just as knowledge cannot be taught but can only be uncovered even so virtue, too, cannot be taught but can be uncovered. Reddy emphasizes that the core programme of education should be so carefully devised that various threads of the programme are woven into the complex totality of all the other programmes of studies with the central theme of value education which should be central and not just appended (Reddy, 2007).

Research Methodology

Literature review was used to establish the concerns in this study. Creswell (2007) points out that a literature review means location and summarizing the studies about a given topic. The review of literature was important to inform teaching for improved learning outcome and to provide a deeper understand of the role of the affective domain in teaching and learning from research studies.

The variables 'affect' and 'learning outcomes' were searched to locate the studies and 40 research articles were found. Ten percent which was four research articles were selected purposively to cover primary, secondary and tertiary levels of education and the varied research methodology used in different articles gave them richness. The research articles reported on the treatment of the affective domain in the learning environment. In order not to lose the authenticity of the studies, the article reports were presented as reported by the researchers with little editing and comments based on the articles. The selected journal articles engage in teaching and learning in the affective domain. The Kenya school curriculum and specifically, the national goals of education, were selected to be studied to establish whether they address the affect. The national goals of education were selected for the study because they are included in all school syllabi (Ministry of Education [MOE], 2002 &2008). The documents are the focus of education in the country. Each subject in the school curriculum is focused to achievement of the national goals of education. The policy documents were selected for the study because they recommend improvement and changes in education in Kenya. The primary school life skills Education syllabus was identified for use in the study because it is a common course and cuts across all the classes and there is also a similar course offered at a higher level to secondary school students. The education commission reports were also studied to identify the affect in the recommendations for education improvement.

Research Results

The following is the presentation of the four journal articles that investigated different issues where the affect in education had been addressed in different ways but with similar results.

Effects of a Web Based Learning Environment on Student Motivation in a High School

Wang and Reeves (2006) conducted a study on the effects of a web based learning environment on student motivation in a High School. They designed an interactive web based learning environment to improve student motivation to learn science which was implemented in a tenth grade classroom as a student centered learning activity. Data were collected using individual student interviews, teacher interviews, motivation questionnaires and observation. The study revealed that web and associated learning activity improved student motivation.

The participants in the study were one male teacher and 27 tenth grade students from two Science classes. Classroom observation and student interviews were used where 12 students, six from each classroom were observed. The collaborating school was rich in computer technology including laptops and wireless networks. Successful measurement of student academic engagement helped to determine students' motivational status.

The researchers identified three aspects of task engagements as follows: observable behavioral responses and correct cognitive responses activated during learning and the other was interest. The level of student academic engagement was measured to detect the impact of fossilization on their motivation using questionnaires, classroom observations and interviews with student and learner on the interactive web. After using fossilization studies, students were able to identify necessary conditions for fossilization and construct possible scenario for fossil formation by manipulation of variables through simulation. A pilot study was conducted in the middle of the production phase to evaluate the usability of web, examine the initial motivation of the student and ensure that the prototype met the teacher's needs.

To obtain reliability, two observers conducted observation in different classrooms and discussed findings after each session.

Two primary strategies were used. In the first case there was prolonged engagement where the researcher spent time learning about research context, become familiar with the teaching, familiarizing with the classroom and creating rapport with teachers and students at school. Triangulation was the other technique used where multiple qualitative methods were employed to gather data. The collaborating teacher assigned students tasks at the beginning of first period to find solutions using fossilization web during that period and two subsequent class periods. After introduction on basic operation of fossilization, the teacher did not provide any academic instruction about the topic. Six students from each class were observed as they used the tool to complete assignments. At the end of third lesson, all students filled in the motivation themed survey questionnaire.

In second week, 20 more interviews with each of the 12 observed students were conducted followed by an hour long interview with the teacher to discuss the nature of assignments and assess effectiveness of the tool from the teacher's perspective. Significant themes found in both teacher and student interviews were compared and analyzed to determine relevant similarities and differences. The results helped to confirm the effectiveness of attempts to integrate motivational factors with interactive web design. Classroom observation notes were analyzed to investigate student levels of engagement as they used fossilization web in class.

The major finding was that use of interactive web enhanced students' motivation to learn about fossilization and they expressed a desire to have more interactive lessons. They reported that in the process of using the tool to complete the assignments, their knowledge of the different conditions for fossilization was enhanced. They displayed great concentration while using the

tool. With the use of the software, the students were able to visualize the process and they reported that learning was more fun than listening to lectures or reading a textbook. In case of difficulties, they observed animations again. Students enjoyed autonomy while doing their assignment. Their motivation to learn about fossilization improved.

The results of this study indicate that interactive web tool and students' engagement motivated the high school students in a lesson on the complex process of fossilization and positively influenced learning outcome.

Affective Versus Cognitive Goal Orientation in Elementary Teachers

Prawat (1985) conducted a study on Affective Versus Cognitive Goal Orientation in Elementary Teachers where teachers goal orientations were assessed by means of tape recorded three hour interviews. Content analysis of interview transcription replicated earlier findings indicating that elementary teachers place an ordinary high priority on affective concerns.

Group one expressed a predominantly affective orientation; Group two expressed predominantly cognitive in orientation; group three expressed mixed affective and cognitive orientation. Discussion focused on teachers' responses to individual interview items and the consistency of their responses particularly as it relates to teachers' professional goals and educational practices.

Teachers conception of the affective in education was explored through a three hour structured interview for a sample of elementary school teachers and the teachers were asked series of open ended questions such as the extent to which they emphasize ; kind of students characteristics they consider most desirable and specific strategies they use in trying to realize objectives in the affective domain.

The following research questions were asked: Do elementary teachers consistently differ in the relative priority they place on affective versus cognitive goals in education? What is the relationship between thinking and action in the affective domain such as between teachers' goals and objectives and what they actually do in the affective domain as revealed through self report? How do teachers balance individual affective needs and those of the group?

A total of 40 elementary K-6 teachers from 24 schools in an urban school district participated in the study. Teachers were randomly selected from a large volunteer sample of 90 teachers from 36 different schools. Large sample of teachers 34 of the 40 teachers were female 35 had more than five years experience.

Specific purpose of the Interview schedule was to explore teacher thinking about the affective domain. The purpose was restricted to direct proves covering teachers goal orientation. For example stated: regarding general goals or priorities of the various things you do as a teacher, which do you consider as the most important? Questions targeting most desirable teacher characteristics included: What kind of reputation would you like most to have with the classes

and students with whom you currently deal? Questions on desirable student characteristic were framed: What do you regard as good from the class which you taught which you think of as having been your best class? Regarding classrooms the item was framed, Describe the rules of boundaries you set at the beginning of the year. How do you bring these to realization? Regarding affective objectives they were asked; which affective objectives do you think you've made pretty good progress towards accomplishing this year? About affective strategies they were asked; Have you done anything in the affective area, tried any particular approach or approach where you have been criticized or where you haven't been satisfied?

To determine goal orientation along an affective to cognitive curriculum, teachers were asked: Of the things you do as a teacher which do you consider the most important?

In the affective teachers were concerned with fostering interpersonal adjustment. Teachers asked what a good day meant to them cited indicators of affective accomplishment while describing good day mostly in cognitive. Teachers view a good day as one which runs smoothly, all go as planned; all cooperate, few interruptions or external infringements on classrooms. On desirable students and teachers characteristics: a total of 60% referred personal qualities such as warm and personal interest in students. About 40% referred to take oriental skills in management and instructional roles. On ideal students, teachers said one who is open, friendly, eager to learn, hardworking, not overly conforming-should deviate on occasions.

The mean student characteristics cited by cognitively overall teacher was 3.33 compared to 1.95 on an especially good class teachers response with cognitive attributes. On affective goals, students gave those of interpersonal type such as individual emotional wellbeing. Asked the most important thing they did, class discussion was frequently mentioned. On allowing students more input in classroom decision making in terms of rule setting, teachers in the sample appeared to be consistent in their professed goals and reports of education presence.

There was a significant relationship between teachers' goals orientation and their rule system. Cognitive oriented teachers listed more rules governing student movement $(3,6)=3.50.P<.03$. They mentioned slightly over two on average 2.11 compared to.84.56 and.33, teachers expressing affective attributes. Teachers who are subject matter oriented tend to exert more control over students action. Teachers who show affective goals such as getting students to see how exciting and fun learning can be tend to have more quietness rules. There appeared to be a relationship between what teachers value as educational outcomes and how they structure or organize educational experiences. In affective area, teachers chose between meeting individual and group needs. There was a significant negative correlation between individual and group priority scores $(r=-.42$ $p<.004)$. Teachers who favoured interpersonal goals did not tend to favour individual over the group in response to the wait time. The relationship was marginally significant $(r= 22$ $p<.09)$.

Teachers who place equal emphasis on affective and cognitive goals were most effective in promoting affect in their classrooms. They emphasize positive attitudes towards others and towards the class as a whole. Students tended to perform well in class when the affect was addressed and also showed good behaviour. The affect in this study too tended to influence learning outcome.

Relationship between Class Size and Teaching Approaches: A Multi Method Analysis of English Infant Schools

Blatchfold, Morialty, Endmonds & Martin, (2002) investigated the connection between class size and teaching interactions which are aspect of affect. In a small class the affect was stronger than in a large class. A multi method approach integrating qualitative information from teachers' end of year accounts and systematic observations was applied. The data were from longitudinal study of cohorts of more than 10,000 children altogether for three years after enrolment in English infant school of 4-7 year old children. Results showed that in small classes there was more individualized teacher support for learning.

An observer reports on visit to the school class of 4-5 years of 15 pupils in village in East Sussex, England. On general classroom environment, there was lightness about the activities and good sense of humour. Work was not neglected but rather supported by personal style of interaction.

On classroom management, little time was spent on control and little effort was made to keep children on task which they did naturally in contrast to a large class of 30 pupils where interactions with pupils was a continuous battle to keep their attention on task. The teacher was severe and the children subdued.

The teacher in a small class knew pupils individually and the knowledge, informed   teaching and meeting learners' individual needs. The teacher in a small class was able to hear each pupil read aloud which was not effective with a large class. The more the number of the learners the more time the teacher takes in logistical matters such as calling the register, toiletry and accidents exhausting the teacher. Large class reduces teacher attention. Small classes result in greater teacher attention, more affect and better learning outcome.

Research in secondary school revealed that teachers substitute group instructions for lecture as class size increases and involve less time to group instruction and more to individual instruction in smaller classes. In mathematics, as class size increased more time was spent on small group and individuals' innovative, instructional practices and whole group discussions.

Data were gathered from 28 lessons and nine teachers. It was found that smaller classes allowed more interactions between teacher and pupils activities and achieved better learning outcomes. Quality and quantity of interaction decreased when classes were large. Pupils had less quality time with the teacher. On the other hand there was rich teacher-learner interaction in small

classes. Teachers could listen to all learners and respond to each. Interactions were of high quality in small classes observed. Children attention was observed throughout by the teacher. Teachers mostly used modeling and rephrasing the answers pupils gave.

From termly questionnaires on teacher time estimate, there was a moderate but significant correlation between class size and percentage of time spent over all year one (p=15 p=.01 n=279 and -187, p<.01 n=207) respectively.

In summary, the termly questionnaire provided consistent though not strong evidence that class size was related to the amount of teaching over all. On systematic observation results, on teacher-child interactions in small classes, there were more one to one teaching, more teaching in groups but not more or less teaching in whole class context.

For purpose of triangulation data were collected on start of school and end of school assessment. Forms of data collection were: end of year questionnaires on teacher experiences of the effect of class size on teaching and learning; case studies of selected small and large classes conducted by field workers; teacher estimates of time allocation: overall teaching time, teaching to individual groups of whole class and systematic classroom observation.

On teacher experiences of the effect of class size on teaching and learning – the large class received less attention and feedback to individual children in the class

Teachers were concerned that large classes affected the quantity of educational interaction each child received. Quality and quantity of interaction decreased as class size increased. Teachers were not able to give immediate feedback on children's written work in large classes. Support for children learning in large class was less than in small class and basic skill learning suffered in large classes. Teachers in large classes could not easily develop a depth of knowledge and understanding of individual children.

Case study was also conducted. A large class in a village school in rural Shropshire with mostly white children of the middle class was studied. There were 37 children enrolled in first year. The number had reduced to 35. The teacher had taught for 13 years, 8 of them in the school studied. The teacher knew the children very well. However the teacher was under stress and worn out. She spent most of the time outside her contract time marking and reading with children individually during her lunch break. Observation revealed that effective teaching was evident but because of the teacher getting frustrated and tired, occasionally she could become irritated. The behavior of students showed possible strain which could be due to limited space the children had to operate in and the teacher's feelings. Children were grouped according to ability and highest ability group was not performing as expected.

There was consistent evidence that in small classes, children were more likely to interact with their teachers and more individualized teaching took place and children were more often the focus of teachers' attention. More teaching took place overall and the children were more often

attended to by their teachers and they became more actively involved in interactions. This shows that children in small classes receive more work oriented and more socially intense interactions.

The findings strongly suggest that in a small class the teacher more easily provided effective attention. Interaction is a social aspect and an aspect of the affect. It impacts greatly on children learning especially the young ones and class size has great implication on learning and improved learning outcome. A small class allows for class interaction hence increased affect leading to improved learning outcomes.

An Investigation into Excellent Tertiary Teaching: Emphasizing Reflective Practice Conducted By Kane, Sandretto and Heath (2004)

The study sought to investigate the characteristics of tertiary teaching excellence in the university and to use these findings to address the needs of the less experienced teaching staff. It was carried out in two phases. Phase one consisted of the identification and subsequent study of excellent teachers from university science departments. Phase two involved the development and evaluation of an intervention with novice lecturers.

The research group was restricted to science lecturers. Soliciting heads of departments identified the relevant participants. Nominated lecturers were 17, 10 men and seven women, and they all agreed to take part in the study. They were teachers from anatomy and structural biology, chemistry, computer science, family and community studies, geology, marine science, mathematics and statistics, microbiology, human nutrition, physical education, psychology, surveying, and zoology. Their teaching experience ranged from 6-34 years with an average of 18 years. All participants were active researchers.

A multi method research design was used to capture both what the teachers say about their teaching and also to directly observe their teaching practices. "Talking" about the teaching was availed by initial individual interviews and elicitation of repertory grids while direct observation was made possible by video-taping teaching episodes and subsequent stimulated recall interviews.

Data analysis followed an inductive approach grounded in critical reading and re-reading of the transcripts from initial interviews, the repertory grids and the stimulated recall interviews. Data analysis was stimulated using Non-numerical Unstructured Data Indexing Searching and Theorizing software from Qualitative Solutions and Research which allows the researcher to work with the transcripts in a manageable way.

The five components of effective tertiary teacher performance were given as command of the subject in terms of clarity, instructor-group interaction, instructor-individual student interaction and enthusiasm. Students showed high regard for the following teacher characteristics: clarity, stimulation of interest in the course, preparation and organization of the course, and motivation of the students. The affect was central in each of the cases.

In total there were 17 participants in the study. Subject knowledge came out clearly as a key attribute of excellent tertiary science teacher in the initial interviews of 15 participants. Clarity of pedagogical skill was mentioned by all the 17 participants and very good communication skills and the need to be heard and understood at various knowledge levels were pointed out as critical. A total of 16 out of the 17 participants noted the importance of making real world connections between the subject and the student experience to encourage student learning. Other 15 participants identified the necessity of organization and clarity of expectations in the tertiary science classroom. A total of 14 participants used several different terms to describe teachers who used strategies such as to inspire, or motivate, or stimulate the interest of students in learning or in the subject area. An excellent science teacher is adaptable according to nine of the participants. Other nine participants identified preparation as a key attribute of excellent tertiary science teachers. Seven participants described an excellent tertiary science teacher as a life-long learner. Other researchers have supported the role of clarity, organization, motivation, inspiration, stimulating interest, and preparation as important in successful tertiary level teaching (Feldman, 1988). Interpersonal relationships between the teacher and the students was identified by all the 17 participants as playing critical role in teaching; incorporating a deep respect, empathy and even fondness for the students. A total of 16 participants videotaped their teaching in a large group lecture, and each of them identified establishing interpersonal relationships as central to successful teaching at a tertiary level regardless of class size.

Personality was cited as one of the most common attributes of excellent teachers cited by 15 participants. Emphasis was on need to infectiously enjoy and have real passion for the whole teaching experience. At the heart of establishing interpersonal relations with students is the "person" of the teacher. In addition 13 participants mentioned that a sense of humour can play a vital role in the tertiary classroom. Another 10 participants said teachers need to be approachable and passionate which makes the student want to go out and learn more. Excellent tertiary teachers were expected to be humane according by six participants. Other four participants felt that fun was an important component of excellent tertiary teaching stating the importance of communicating to the students the joy of teaching and learning. All participants emphasized that good teaching comes from the identity and integrity of the teacher. The attributes identified are based on feelings and emotions hence affect plays a significant role in teaching and learning.

Reflection is also critical in teaching. Reflection enabled participants to interrogate their teaching practice and to find the best between their subjects, teaching skills, relationships built with students, research and personality. Descriptive reflection was unique to 16 participants and it involves analyzing one's performance in the professional role and giving reasons for actions taken. Critical reflection was observed in three participants; which is thinking about the effects upon others of one's actions taking account of social, political and cultural forces. All participants were passionate about their subjects.

The Affective in Kenya Goals of Education

The affect was examined from Kenya Education National Goals of Education which provide education in Kenya focus. They provide a vision of the expected outcome of education in Kenya. There are eight National goals of education. The goals address the affective intertwined in cognitive and psychomotor elaborated as follows: Education in Kenya should foster nationalism, patriotism and promote national unity. Education should inculcate in the youth the spirit of nationalism by eradicating conflicts and promoting positive attitudes of mutual respect which enables people to live together in harmony and foster patriotism. Education should also promote the social, economic, technological and industrial needs for national development (MOE, 2008). Education in this essence should lead to holistic development. A vital aspect of individual development is character building (MOE, 2008). Education aims at character building, as brought out in the study of Literature and Life Skills Education in secondary school curriculum. Education should promote respect for and development of Kenya's varied cultures. In addition education should promote international consciousness and foster positive attitudes towards other nations. The country is a global village and people should be able to live harmoniously with all nations. Education should finally promote positive attitude towards good health and environmental protection. It should hence inculcate in the youth the value for good health and the youth should not engage in activities injurious to their health.

Clearly, values and attitudes are key areas of emphasis in Kenya school curriculum. The goals of education intertwine the affective with cognitive and psychomotor learning domains. Words such as feelings, values appreciation, and attitudes, which are in the affective domain, are common words in the Kenya's goals of education which guide in curriculum development.

National Educational Reports

The report of the National Committee on Educational Objectives and Policies (Republic of Kenya, 1976) stressed the affective. The report emphasizes that the country should promote its local and cultural values based on its philosophy of African socialism and its African tradition of political democracy and mutual social responsibility. It recommended teaching of arts and humanities to address the affective. The report emphasized social, values and ethics.

The Report of the Presidential working party on establishment of second university in Kenya (Republic of Kenya, 1981) also emphasizes the affective domain. It recommended that an appropriate balance should be maintained between knowledge, skills, attitudes and social political aspirations. The national philosophy in Kenya is that of mutual, social responsibility described in sessional paper No. 10 of 1965.The University should produce mature and conscience graduates with ability and desire to contribute to the well being, advancement and development of fellow citizens and the country on mutual social responsibility.

The Report of the Presidential working party on Education and manpower training for the next decade and beyond (Republic of Kenya, 1988) also emphasized the affective. It recommended

that education and training should develop skills and attitudes that lead to self reliance, self employment and proper management of time at work or leisure. Education and training should develop in the learners attitudes and habits towards maintaining a clean and hygienic environment. It should also equip students with appropriate skills and attitudes for life and employment in rural areas. Education on population and family life should be intensified for it is very important in character formation. The philosophical basis of the society includes in the overall the objective to achieve: social justice, freedom of conscience, promotion of cultural heritage, equal opportunity to all citizens and a higher and growing national income equitably distributed.

Totally Integrated Quality Education and Training (TIQET) Report of the commission of Inquiry into the education system of Kenya (Republic of Kenya, 1999) laid stress on the affective domain. It stated that Kenyan philosophy of education must be based on the need to fashion the individual to grow and develop into a sound and effective citizen with mental capacity to appreciate the cultural heritage of the nation as well as being able to make a meaningful contribution towards further development of the nation and social economic stability. Learners should possess: integrity of character, with a sense of purpose, skill and vision in the upholding of justice towards harnessing, utilization and conservation of the country's national and human resources. Mutual social responsibility is emphasized. It implies a moral obligation by society and its members to do their very best for one another with the full knowledge and understanding that if the whole society prospers its members will share in that prosperity and society cannot prosper without full co-operation of its members (Sessional Paper No.1 of 1965 cited in Republic of Kenya, 1999). African rule of conduct should not be discarded. The youth had been taught the importance of enduring hardship, living in peace and harmony with the others, obedience to elders including parents, societal laws, hence inculcating in the youth a sense of maturity and integrity (Republic of Kenya, 1999) recommended that education must take central role of inculcating values that will guide Kenyans to 21st century.

The national motto for development, Harambee, embodied the concept of mutual social responsibility and need to work together for a common goal. Harambee was also embodied in the Nyayo philosophy of peace, love and unity. It enhances ethical, moral foundation of democratic African socialism and emphasized selflessness. The philosophy enhances sharing and suppresses selfishness, arrogance. It also emphasizes fostering of positive attitudes and consciousness towards other nations.

Kenya's education philosophy and education Reports emphasized the affective domain. However schools tend to emphasize the cognitive aspect of learning at the expense of the affective which relate to the development of desirable character and values.

The Affect in the School Curriculum

The school curriculum is developed with a view to imparting the desired knowledge skills attitudes and values. In addition school textbooks and other instructional materials are vetted by Kenya Institute of Education (KIE), now Kenya Institute of Curriculum Development (KICD), to ensure quality and that it is only the desired values that are exposed to learners.

The Literature books selected express values where is punished the negative values are criticized and positive lauded. Characters in a text book or a story whose actions have negative influence to learners is punished.

Life Skills Education

From Life Skills Education curriculum the learner is expected to acquire psychosocial abilities to enable the learner develop adaptive and positive behaviour, so as to deal effectively with challenges and demands of life (MOE, 2008).

Through life skills education, it is expected that the learner will develop positive attitudes towards self and others. The skills would enable the learner to translate knowledge, skills and values into actions. The topics addressed in life skills could help in development of the affective. They include development of: self awareness, self esteem, coping with emotions, coping with stress, empathy, effective communication, conflict resolution, negotiation, friendship formation, interpersonal relationships, peer pressure resistance and effective decision making. The values that enhance developments of life skills include tolerance, cooperation, happiness, simplicity, love, honesty, respect, responsibility, peace, freedom, humility and integrity. The affective has therefore been an area of concern since independence and it is there in the written curriculum. However it seems to get lost in implementation and in the outcome of the learners who go through the education system.

The affect is adequately addressed in Kenya education policy documents. In spite of all the effort made it is crystal clear that the education system is not producing the desired results. Total disrespect to human life was demonstrated in the violence that followed the 2007 general elections. Individualism tends to replace African abhorrence for doing evil and this has entrenched the country in the mud of corruption. There seems to be a serious gap in the product of our education system.

Discussion

The studies demonstrated that the affect influences learning outcomes and that modern technology heightens the affect. The findings were in agreement with Silcock and Diane (2001) that intellectual, social and affective dimensions of life are umbilically joined and therefore teaching should address the affect as well as the intellect. The affective could be likened to lubricating oil used in turning cognitive wheels. The affect is so strong in learning that the

elements of affective domain such as motivation, arousing interest, deep respect, empathy and fondness appear vividly even where the main focus is the development of the cognitive – the intellect. Another significant emerging observation is that how the affect is addressed in the formal education depends on the teachers' creativity and effort in the teaching learning approaches. The affect makes teaching and learning effective and it is critical in character development and in molding an individual holistically.

The affect is clearly well spelt out in the Kenya school curriculum and in the policy.

Conclusions

Based on the findings from the studies cited, the affective domain influences learning outcomes and it could be used to influence learning outcome in learning institutions in Kenya in particular primary schools. Study of the Kenya school curriculum and policy documents also revealed that the affect is addressed in the documents and it is not clear why learning outcome have been in education in Kenya schools has been low.

Recommendations

Teachers to address the affective domain in teaching as well as the intellect, the academic- and they should display desired values in their teaching and general conduct to act as role models to the learners. Teachers should use teaching resources such as ICT and teaching strategies in class to evoke the affect. The affect should be address to improve learning in primary schools and other learning institutions.

Teacher effectiveness which tends to be the main problem should be addressed through continuous teacher professional development and monitoring of teaching effectiveness. Teaching approaches then should be consciously structured to address the affect as a means of addressing the cognitive and psychomotor domains.

Aspects of Tyler (1949) curriculum development model- determination of educational purposes - the study of the learner, society and professionals to continue guiding in formulation of objectives and the curriculum also to reflect post modern theoretical concepts such as constructivism to develop the learner's problem solving skills.

A study should be conducted to establish the cause of the discrepancy between presence of the affective domain in educational documents and the expected learning outcomes.

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