

Towards Comprehensive Professional Development of Teachers: The Case of Kenya

Agnes W. Gathumbi¹, Njoroge J. Mungai², Denna L. Hintze³

Abstract

The quality of the teacher is vital in any country as the teacher not only embodies the sociocultural ethos of the country, but, in practices within the classroom, ensures its continuation and potential improvement. It is also said that no people can rise above the level of its teachers. Developing countries like Kenya peg their development agenda mainly on the provision of quality education. One approach to improving education is through in-service training of teachers, both novice and experienced. Ideally, in-service training programs are professional development programs committed to improving educator practices and growing their facilitation skills. It is through in-service training that educational institutions realize multiple goals, ranging from training teachers in the use of the latest technology, to helping them grow their skills in implementing pedagogical best practices, and sometimes even aiding educators as they innovate in pursuit of improved educational outcomes. This level of professional development requires the support not only of educational institutions, but of cultures and governments as well. For this reason, this paper supports the institutionalization of in-service training as a method of implementing a comprehensive policy for promoting ongoing professional development for educators. This is a position paper drawing largely from literature and the professional development experiences of teachers, which highlights key challenges worthy of attention by policy makers in order to create a comprehensive policy institutionalizing in-service training in Kenya. It is our stand that a comprehensive policy addressing these challenges would transform in-service training programs from their current ad hoc and local tendencies which generally focus on generic aspects of teaching into highly professional development programs which focus on measures such as student learning outcomes.

Introduction

Two contentious questions are sometimes asked: first, whether teaching is a profession, effectively distinguishable from an expert passing on information such as in the apprenticeship paradigm, and second, whether teachers are born or made (i.e., have inherent teaching talent as a fixed factor or have acquired the knowledge and skills necessary to function as teachers, Elger 2007). These questions often stir polarized philosophical debates in teacher education circles, with responses tending to define one's understanding of and attitude towards the meaning of *quality* with respect to teacher education. On the topic of teaching as a profession, there are as many notions regarding what characterizes a profession as there are societies. According to the National Council of Teacher Education (NCTE 2009), a profession is characterized by "an organized body of knowledge on which the undertaking is based, a period of academic training in tandem with practical experience in the field, and a code of ethics that binds its members into a fraternity" (p.15).

Even though there are arguably many other characteristics that can be used to qualify a given occupation as a

profession, our view is that the common denominator is the contribution that occupation makes towards achieving the stated aspirations of a society in which the occupation functions. Therefore, determining whether teaching is a profession requires an understanding of the important role teachers are expected to play in realizing a nation's developmental aspirations. It can be said that the destiny of a nation is shaped in its classrooms; as the National Council for Teacher Education (2009) explains, "The status of the teacher reflects the socio-cultural ethos of the society; it is said that no people can rise above the level of the teachers." For this reason, it is important that we seek to continually enhance the quality of teachers who, in addition to bearing responsibility for facilitating learner attainment of disciplinary knowledge as expert practitioners in their disciplines (Collins & Apple, 2007), are also responsible for facilitating student success (Beyerlein, Schlesinger, & Apple, 2007), demonstrating belief in student efficacy and increasing student motivation by setting high expectations (Smith, 2007), and, ultimately, helping students learn to improve their own performance as learners and self-growers (Myrvaagnes, 2007).

¹ Kenyatta University, Kenya

² Center for Mathematics, Science and Technology Education in Africa (CEMASTE), Kenya

³ Educational Consultant, Norway

Our position is that while some people may find themselves in the teaching profession through initial and sometimes very basic teacher education, it is through committed engagement in a program of continuous professional development that makes a teacher not only an expert who strives to increase proficiency within a discipline (improving his or her own learning), but a true scholar and self-grower in the discipline of education (Collins & Apple, 2007). As empowering as this vision of teaching professionals may be for both teachers and learners, too often it remains merely rhetorical when compared with the reality on the ground in most developing countries. It is this distance between the vision and reality that threatens the achievement of the goals of Education for All (EFA, a global movement mandated by UNESCO), especially the sixth goal which calls for improvement in the quality of education in its entirety (UNESCO, 2005). Further, the EFA Global Monitoring Report, focusing on quality as a fundamental imperative, asserts that education for all cannot be achieved without improving quality (UNESCO, 2005).

Though this might, at first blush, sound tautological or self-reinforcing, it is part of the tacit assumption behind several of the basic principles of Process Education. Principle 1 states that “Every learner can learn to learn better, regardless of current level of achievement; one’s potential is not limited by current ability.” Principle 5 holds that faculty must fully accept the responsibility for facilitating student success (Beyerlein, Schlesinger, & Apple, 2007). Only when educators are willing to accept that responsibility and are consequently trained not only to embrace the notion of education as a benefit to all but to facilitate learning on that basis, does education truly become “for all.” As Schwab (1973) and Novak, Mintzes, and Wandersee (2000) explain, quality improvement in education entails providing appropriate support to all elements involved in any educative experience: the learner, the teacher, the subject matter, resources, the social milieu, and assessment. Though continuous teacher professional development (TPD) plays a key role in supporting each of these elements, its focus is most appropriately on the *teacher*. It should be obvious, given the discussion about education for all and its relationship to quality, that it is only when TPD programs are grounded in comprehensive policies (a high-level commitment of education for all educators), that they can effectively and reliably elevate educator performance, giving us the desired teacher.

The Desired Classroom Teacher

The *desired* teacher is one who facilitates meaningful learning. Novak, Mintzes, and Wandersee (2000) define *meaningful learning* as that which occurs when learners

seek to relate new concepts and propositions to relevant existing concepts and propositions in their cognitive structures. They further argue that the *desired* teacher encourages learners to “construct progressively more powerful explanations; wrestle with and resolve inconsistencies and unnecessary complexities in their thinking; and evaluate and challenge the knowledge and value claims of others” (p.372). In terms familiar to process educators, this means that a desired teacher is an educator committed to using the practices of effective teaching within the classroom, as explained by Burke (2007). These practices are outcome-, process-, and student-centered, and indeed, built on research that indicates that people learn best when they construct their own understanding based on their own previous knowledge, experiences, skills, attitudes, and beliefs (Hanson & Moog, 2007). Such a teacher helps learners improve their learning skills, including those in the affective domain, such that students achieve a positive attitude toward learning, a sense of self-efficacy, the ability to manage frustration, and willingness to take risks in learning (Duncan-Hewitt, Leise, & Hall, 2007). These desired teachers are also masters of scaffolding learning [e.g., “effective teaching is appropriate for the level of student knowledge and learning skills” (Burke, 2007) and “the most efficient and least frustrating learning occurs with a step-by-step process...be prepared to move back a level if the knowledge structure is not strong enough to add the next ‘floor’” (Nygren, 2007)]. Perhaps most importantly, however, these teachers strive to continuously improve student learning outcomes (the level of learner knowledge (Bobrowski, 2007)) such that learners move from the level of mere information and memorization through conceptual understanding, to application, working expertise (problem-solving), and then possibly to the highest level, that of the researcher who has “innovative expertise which can be used to develop new understanding and problem solutions” (see Table 1).

Equally critical for a society is that these desired classroom teachers are also committed to helping their students elevate their performance as self-growers from the lowest level, that of the static individual who minimizes effort and avoids learning, through the level of content individuals, responsive individuals, self-starters, and ultimately star performers, who have the most to offer for themselves, others, and the society in which they live, as they are the leaders, innovators, and problem-solvers (see Table 2). Table 3, on Becoming a Self-Grower, adapted from Leise (2007), offers a fairly comprehensive profile of a self-grower. It is therefore critical that countries adequately prepare *desired* teachers and support them regularly through continuous TPD.

Table 1 Levels of Learner Knowledge (adapted from *Learning to Learn: Becoming a Self-Grower*, by Pacific Crest, 2013)

<p>Level I: Information</p> <p>You can talk about a concept, process, tool, or context in words and can provide definitions or descriptions. You are best with questions about facts.</p> <p>A learner at this level can answer these questions: “Where is...?” “Can you list the three...?”</p>
<p>Level II: Conceptual Understanding</p> <p>You can construct an appropriate model in your mind pertaining to a particular item of knowledge. You also can link items of knowledge to each other.</p> <p>A learner at this level can answer these questions: “How would you compare or contrast...?” “What is the main idea of...?”</p>
<p>Level III: Application</p> <p>You can apply and transfer a particular item of knowledge to different situations and contexts. You can generalize the knowledge to determine ways to apply it, testing boundaries and linkages to other information. You are able to teach this knowledge to others.</p> <p>A learner at this level can answer these questions: “What would result if...?” “How would you apply what you learned to develop...?”</p>
<p>Level IV: Working Expertise</p> <p>You can solve complex problems by applying and generalizing multiple concepts, processes, and tools to produce a quality problem solution. You are seen as an expert in your field.</p> <p>A learner at this level can answer these questions: “Can you propose an alternative...?” “Can you construct a model that would change...?”</p>
<p>Level V: Research</p> <p>You have innovative expertise which can be used to develop new understanding. You often make new linkages among concepts and problem solutions which have not been seen before.</p> <p>A learner at this level can answer these questions: “Can you formulate a theory for...?” “Can you think of an original way to...?”</p>

Table 2 Performance Levels for Self-Growers (adapted from Myrvagnes, 2007)

Level 5: Star Performers	Understand the reasons for deficiencies in the current paradigm, and readily construct more appropriate paradigms. Create movements and organizations that often become self-perpetuating. Control their emotions in challenging situations while managing the affect of others.
Level 4: Self-Starters	Respond to the needs of research communities, adding incrementally to knowledge in their discipline. Initiate and manage social structures to accomplish more out of every hour of their time. Feel frustrated when they are not being challenged to perform at higher levels.
Level 3: Responsive Individuals	Use their problem-solving, learning, and thinking skills to improve their performance and get higher-quality results. Are positive people whom others enjoy and want to have on their teams. React to challenges with improved performance rather than complaints, feeling good about their accomplishments.
Level 2: Content Individuals	Are satisfied with their modest levels of effort in learning, thinking, and problem-solving. Interact freely with family and friends, but do not seek more diverse contacts and more challenging relationships. Feel like cogs in the machinery, doing little more than what is asked, feeling their contributions are not very significant.
Level 1: Static Individuals	Try to minimize or avoid the effort needed to think, learn, or solve problems. Limit their social interactions to like-minded individuals who complain about what they are not getting out of life. Feel that whatever they do will have little impact; that most things are not worth the effort.

Table 3 Profile of a Self-Grower

A self-grower...

1. Thinks critically in different contexts so as to be efficient while producing quality results from the processes utilized.
2. Uses information in an efficient manner to limit “overload” by maximizing consistency of choices with values.
3. Seeks to improve his or her own performance with every experience.
4. Puts himself or herself into challenging environments that require increased levels of performance.
5. Self-assesses and self-mentors to facilitate his or her own growth.
6. Takes positive action in responding to external challenges that are personally critical or important to society.
7. Has a strong desire to grow and develop in all aspects of his or her life.
8. Creates his or her own challenges in order to take control of his or her own destiny.
9. Has a high degree of self-confidence and emotional maturity reflected in his or her ability to set realistic priorities and to take meaningful risks.
10. Serves as a mentor to others and is a model of service.

Given these aspirations for the *desired* teacher, it is evident that while teachers bear the noble burden of facilitating meaningful learning, it is incumbent upon those at a higher administrative level (i.e., governments) to institute comprehensive policies which ensure that teacher education initiatives actually create desired teachers. However, the reality as pointed out by Novak, Mintzes, and Wandersee (2000) is that:

...many pre-service courses in colleges and universities are...a deluge of information or problem-solving algorithms to be memorized and reproduced...the pedagogy in these courses often do little to foster development of the kind of knowledge frameworks that are needed for effective science [and mathematics] teaching (p.7).

As explained by Collins and Apple (2007), even in cases where there is commitment to professional development and use of best practices, “Most centers of excellence in learning and teaching are missing strong direction and needs analysis of faculty because faculties have a hard time determining the gap between expected performance and current performance.” From our experience in Kenya, school teaching is not accorded social status as high as other professions like law and medicine. Teaching is not a popular first choice course among most prospective tertiary (higher) education students. As a result, one is likely to find a significant number of unwilling and restless teachers in Kenya’s classrooms, always on the lookout for “greener pastures.” Compounding this problem, as a desperate measure meant to counter the serious shortage of teachers, especially in developing countries, is the lowering of entry grades required for admittance to initial teacher education programs. For example, the entry grade to teacher training

colleges for prospective primary school teachers is a ‘C’ grade. For those joining universities, the entry grade for a pre-service teacher is a ‘C+’ as opposed to, for example, the ‘A’ grade for prospective doctors and engineers. This situation has led to large-scale recruitment of unmotivated teachers (ironically, closer to the description of static individuals than even responsive individuals; see Table 2), rather than accomplished professional teachers, let alone desired teachers. The high percentage of poorly trained and uncommitted teachers in classrooms undermines the provision of quality education, and makes achievement of Education for All (EFA) goals by 2015 little more than wishful thinking, especially in developing countries. As the National Council for Teacher Education (NCTE) rightly observes, this attitude of resignation towards pre-service education, coupled with *ad hoc* in-service education, has degraded the teaching profession and the status of school teaching (2009).

Once recruited into teaching, most teachers tend to teach the way they were taught. Considering that teachers are constantly under pressure for their learners to perform exemplarily on high-stake national examinations, their focus is no longer the teaching process but the product of teaching. As such, teachers tend to individually decide how to prepare their students to meet examination goals, adopting teaching strategies that suit themselves, rather than the students in their classes. Such strategies include rote learning and memorization of facts, and no matter how many facts are included, never take learners and learning beyond Level 1 (Information) in the Level of Learner Knowledge (2013).

The appropriate intervention here is to provide teachers with professional development opportunities in order to

enhance their understanding of appropriate knowledge, skills, and attitudes that are needed in bringing about meaningful learning. One way of ensuring this is conducting in-service teacher education programs which are expected to nurture, support, and expand this understanding. At the backdrop of such an expectation, Levine (2006) laments the conflicting and competing beliefs globally on “issues as basic as when and where teachers should be educated, who should educate them, and what education is most effective in preparing teachers” (p.12). This observation, combined with tradition (that teachers tend to teach as they, themselves, were taught) and the *ad hoc* approach it tends to condone in teachers striving to meet the most common teaching challenges (i.e., preparing one’s students to perform satisfactorily on national exams), most likely this explains the unsatisfactory status of in-service teacher education in most developing countries, which are struggling to attain EFA goals (UNESCO, 2007; infoDev, 2010). The response we advocate, that of a comprehensive education policy aimed at helping teachers improve their own performance in order to improve the performance of their students, would address each of these problems and concerns, not only speaking to the issues raised by Levine, but also removing teacher improvement and practices from the realm of mere tradition and individual judgment, both of which tend to perpetuate low-performance educational strategies (such as memorization).

Towards Quality Teacher Education in Kenya

As a developing country, Kenya, through its Vision 2030 development agenda, is focused on becoming a middle level economy by the year 2030. Realization of Vision 2030 is underpinned by three pillars: social, political, and economic (Government of the Republic of Kenya, 2007). Under the social pillar, education is expected to play a key role, which would ensure that Kenya has an educated populace to be in a position to compete in a global market and sustain a democratic society. Her young citizens need to not only have access to education, but also meaningful and high-quality education. This will largely depend on the quality of classroom teachers, which implies that the future of Kenya is in the hands of its teachers. That being the case, it is incumbent upon the government to ensure that quality education is offered to all teachers.

In an attempt to enhance the quality of both primary and secondary school teachers, the Ministry of Education (MoE) has made progress towards the institutionalization of Teacher Professional Development (TPD) programs. Towards this end, the Kenya Institute of Education (KIE) which is the national curriculum development center, and the Center for Mathematics, Science, and Technology Education in Africa (CEMASTEIA), have been conduct-

ing in-service training (INSET) for secondary and primary school teachers. The main emphases in the INSET activities include sensitizing teachers on the need to adopt a learner-centered approach to teaching, and nurturing their proficiency in designing learner-centered lessons. This is done through an approach by CEMASTEIA called: ACTIVITY, STUDENT, EXPERIMENT, IMPROVISATION -PLAN, DO, SEE, IMPROVE. This is popularly referred to as the ASEI-PDSI approach (CEMASTEIA, 2009). A learner-centered lesson, which the ASEI-PDSI approach aspires to achieve, is based on constructivist theory where the aim is to actively engage the learner in the learning process (Vygotsky, 1997). The Transformation of Education: 14 Aspects (Hintze-Yates, Beyerlein, Apple, & Holmes, 2011), which is wholly based on the precepts of Process Education, notes that “control” or the locus of the power/authority for a learning situation or experience has traditionally been faculty-centered but should move toward being learning-centered (a mid-point on the continuum between traditional and transformed practice) and eventually learner-centered.

In a typical ASEI-PDSI lesson, the teacher is expected to plan for activities/experiments that will create opportunities for students to learn intended concepts, acquire needed skills, and in the process enjoy learning the subject. Reflection on what is being learned is encouraged to improve the lesson and learning of similar concepts in future lessons. While formal assessment is a model for consistent performance improvement (Baehr, 2007), as expressed by Hare, “When one practices reflection with a mindset toward assessment, one focuses on helping performers improve the quality of their future performances rather than simply analyzing and evaluating past events,” (2007). Unfortunately, the INSET, like many other similar TPD programs across the world, encounters many challenges that inhibit the achievement of intended goals. Based on our experiences, several challenges have been found to affect the success of institutionalized INSET in Kenya. These are discussed in the following sections and solutions are suggested for consideration by policy makers.

Shallow Coverage of INSET Content

Shallow coverage of INSET content is a major challenge facing in-service education programs, particularly those that use the cascade model. This model means that “training messages flow down from experts and specialists through several layers of personnel and eventually to the teachers,” (Dove, 1986). It is estimated that Kenya has about 240,000 teachers and a shortage of more than 64,000. Due to such a large shortage, and the government’s pressure for teachers to improve the quality of education, a cascade model is used to conduct INSET. For secondary school

teachers, a two-tier cascade model is used where national trainers use INSET to train selected senior teachers who become regional trainers, later using INSET to train their colleagues. The INSET for primary school teachers is a three-tier cascade model where the national trainers use INSET to train tutors in primary teacher training colleges. These then use INSET to train selected senior cluster teachers from primary schools who later use INSET to train their colleagues. With these two cascading conveyor systems of INSET, dilution of content has been observed. Indeed, lesson observation exercises conducted in 2011 in both secondary and primary schools indicated low ASEI-PDSI practice in classrooms by teachers who had already undergone the INSET (CEMASTEIA, 2011). Reasons given include that ASEI-PDSI slows syllabus coverage; that every lesson must have numerous hands-on activities/experiments for learners; that teachers are not supposed to provide lesson notes to learners but instead learners should make their own notes; and that ASEI-PDSI practice is most suited for pre-service teachers. These reasons were used to justify the low adherence to the requirements of the approach and will sound very familiar to any educator who has tried to implement Process Education-based transformations in traditional programs and classrooms (Hintze-Yates, Beyerlein, Apple, & Holmes, 2011).

Shallow coverage of content is a typical dilemma outcome of professional development programs that attempt to balance between quantity and quality, without explicitly teaching potential strategies for maintaining (or even raising) quality while maintaining quantity, such as offered by Process-Oriented Guided-Inquiry Learning (Hanson & Moog, 2007). Indeed, this assumption is voiced by Levine (2006), who observes that increasing teacher quality necessitates a reduction in learner quantity, and increasing quantity requires a trade-off in teacher quality (p.11). Consequently, by adopting the cascade model, teachers faced the challenge of coping with quantity while attempting to maintain quality. Inadvertently, this has led to dilution of INSET content and, in our view, contributed to minimal internalization of ASEI-PDSI practice by most teachers. This challenge is not unique to this INSET only. A study by Tatto (2004), as explained by Avalos (2006) established that the use of a cascading technique diluted the constructivist message in a program in Mexico, and that it was meant to reduce the number of students who were behind in their grade levels (PARE). As a remedy to this shortcoming, we propose having in place post-program support plans meant to achieve significant interactions between teachers and teacher educators, such that a professional community of professional practice is sustained. Towards achieving this, it is necessary to orient support personnel who, together with teacher educators,

directly support teachers in site-based teacher professional development (Sb-TPD) activities such as lesson study. Lesson study provides opportunities for extensive interactions and sharing of individual experiences among communities of teachers to build a stronger shared professional basis of best practices (Olson, 2005). We propose a mentorship of teachers where INSET trainers, Quality Assurance and Standards Officers (QASO) from the Ministry of Education at county education offices, and Teacher Advisory Center (TAC) tutors break out of their intellectual isolation and share their experiences and insights with teachers in the field, by participating in lesson study activities. In support of this, we recommend that TPD programs should develop or alter basic practice where a one-off training is conducted, by having more extensive interactions over time with the same resource group, such as is necessary in a successful mentoring relationship (Leise, 2007).

De-Contextualization

De-contextualization is the second common challenge experienced by teachers. As noted by Jones (n.d.), de-contextualization is characterized by providing professional development away from the normal workplace of the participants, or that when it is conducted in a school it is unlikely that students will be present. Generally, and going against Schwab's (1973) recommendation, de-contextualization isolates the *social milieu* and the *learner* elements in the educative experience. Currently, most in-service programs are normally held during school holidays, where teachers are lumped together irrespective of their varying experiences, competences, qualifications, and differences in school settings. Although there is strength in diversity when teachers from different contexts gather together and share their individual experiences, if the INSET program is not tailored to suit contextual challenges that individual teachers encounter in their respective contexts and disciplines, then the 'one-size-fits-all' approach is likely to have little positive impact. During INSET, participants are given opportunities to use the same content they had taught their students in real classroom situations, this time using known effective teaching methods that they had been exposed to. While this is a good practice, it is a half measure considering that it takes place away from the normal workplace of the respective participants; it is removed from the reality awaiting them on the ground. The content of TPD programs must be such that teachers can relate to it from their own experience. Further, the TPD programs must provide opportunities for try-outs and reflection; participants must engage with theory alongside encounters with learners in real contexts in order to internalize the content.

Towards mitigating de-contextualization we recommend the expansion of in-service education in Kenya. Firstly, rather than concentrating on the ‘one-size-fits-all’ approach, teacher educators should make efforts to adapt a given TPD program to address contextual needs of the target teachers and learners. This should involve promoting the site-based TPD model, like lesson study, that is embedded in every teacher’s daily work. In support of this argument, Gaible and Mary (2005) argue that effective TPD should begin, firstly, with an understanding of teachers’ needs and their work environments—schools and classrooms. Secondly, institutionalization of experiential TPD programs is important in teacher development. This is because teachers at various stages of their careers have varying professional development needs that may require specific attention. As a way to promote this, Avalos (2006) recommends inclusion of extra training in response to student teachers’ various professional development needs. The Ministry of Education (MoE) needs to diversify the training by designing experiential in-service teacher education programs. Again, it is worth noting that a successful academic and professional mentoring model requires that the mentoring relationship is planned and executed for enhancing the improvement and growth of the mentee rather than for organizational requirements (Leise, 2007). Seen from a less hierarchical perspective, the model of peer coaching also has much to offer in that, if handled with a sensitivity to shared contexts, peer coaching not only improves the performance of the educator (the peer being coached), but also helps to create and reinforce a sense of professional community of practice, both of which contribute to the overall success of a TPD program (Cordon, 2007).

Unmet Aspirations

Teachers attend TPD programs with certain expectations in mind that act as motivators. These include certification for job promotion and monetary gain. Although teachers who attend INSET obtain certificates of attendance, it is not clear what value the employer attaches to these. For over a decade, holders of these certificates have been agitating for promotion in their places of work without success. Cumulatively, unfilled expectations contribute not only to lukewarm attendance but also to fatigue among teachers. In fact, Opertti (2006) reports that many times teachers reject or are apathetic towards a given TPD program. This is not precisely due to its content, but to a series of unmet aspirations that are more related to their perceptions of their rights and responsibilities.

Although value attached to certification is a contentious issue, it should not be done for its own sake; rather, certificates should be a currency with measurable value

because of what they represent. It is not enough just to issue a certificate of attendance for participation. The value of attendance should be measured by evaluating the performance of INSET participants through their classroom practices from time to time, and providing rewards for improvement and high-quality teaching. In support of this, Vaillant (2006) recommends evaluation of teachers from time to time as a way of improving both their classroom practices and the overall performance of the educational system.

Further, Levine (2006) argues that the focus of teaching has shifted from teaching to learning, i.e. to the skills and knowledge learners must develop, rather than the knowledge and skills teachers must teach. This shift from an “instruction paradigm” to a “learning paradigm” (in the famous words of Barr and Tagg, 1995) can only be successful if educators are engaged in formalized professional development, with their institutions rewarding this participation (Hurd, 2007). It follows that the focus of INSET should shift from ensuring attendance of INSET to ensuring the meeting of common learning outcomes for all learners. The country should set acceptable achievement targets that learners of teachers who attend TPD programs must attain in order for their respective certificates to have value. On the other hand, the MoE should reward teachers who, after INSET, ensure that learners attain the desired education targets.

Shortage of Teacher Educators

Shortage of teacher educators is identified as a major area of weakness facing most teacher preparation institutions in sub-Saharan Africa (infoDev, 2010). The shortage is twofold: in terms of the inadequacy of required numbers, and a mismatch in the qualifications of teacher educators and their job specifications. The shortage undermines the provision of quality teacher education, be it at the pre-service or in-service level. An assertion made by NCTE (2009) on effective teacher preparation implies that the education and training of a teacher will be effective only when it has been delivered by teacher educators who are competent and professionally equipped for the job (p. 63).

The shortage of quality teacher educators could be attributed to various factors. Examples of these are lack of high academic and professional qualification, motivation, and experience. In addition to having basic qualifications in teaching such as a Bachelor of Education degree, the teacher educator should, at the minimum level, also be a holder of a Master’s degree in the relevant area of specialization (i.e., “an expert practitioner in his or her discipline, as well as a scholar in the discipline of teaching/learning” Collins & Apple, 2007). Other areas

critical to teacher education include curriculum studies, subject specialization, assessment in education, education foundations, philosophy, and psychology, among others. While experience is key in teacher education, we view it from two perspectives. First, the teaching experience of the prospective teacher educator is not necessarily defined by the number of years spent teaching (as poor practices can be repeated for years on end), but must also include the significant accolades, achievements, and contributions the teacher has made within the profession. Secondly, one's experience should be active and continual, keeping abreast of current educational trends, best practices, and innovations. This should be done through attending INSET or other forums aimed at improving TPD. Considering that TPD is an important undertaking meant to nurture professionalism in teaching, institutionalized INSET providers need to create a more regulated and regimented environment that strives to enhance the quality of teacher educators. As such, we propose the following professional engagements for serving teacher educators:

- Periodic professional renewal of teacher educator licenses gained by attending refresher courses in university schools of education and departments that teach subject content. This will ensure having in place teacher educators who exemplify high teaching standards and mastery of subject matter and pedagogy, and who have the ability to integrate technology during teaching.
- Avoiding disconnection from contextual realities in schools. Over the years, classrooms may transform due to various economic, demographic, and technological forces. When teacher educators are disconnected from current classroom realities, they are likely to fail to build capacity in handling these new realities when working with pre-service teachers. As a remedy, teacher educators need to have field experiences. These may include involvement in classroom research with teachers, mentoring, part-time classroom teaching, setting and marking examinations, and participation in educational forums.

The aforementioned proposals will ensure that teacher educators are both disciplinary scholars and expert practitioners. Importantly, this will help teacher educators to remain up-to-date in their fields, offer relevant curriculum to teachers, and remain intellectually productive.

Insufficient Inclusivity

Another way to offer high-quality teaching, and arguably one of the most challenging undertakings for teachers, is being able to adjust one's pedagogical approach to cater to individual differences among learners. In any given

classroom, different learners have different capabilities and learning styles or preferences to which teaching must adjust if that teaching is to be successful. As explained by Burke (2007), "an effective teacher recognizes that different students learn differently." This idea is expanded by Hadley (2007), who notes that,

...student learning and growth is influenced by the interaction between instructional methods and individual learning style. When there is a mismatch, some students will experience cognitive dissonance, making their learning efforts less efficient. If educators can identify their students' preferred and non-preferred learning styles, they can make a substantial difference in student success by designing quality learning environments that capitalize on these differences. Instructors can also strengthen their facilitation skills in ways that expand the comfort level and learning skills of those with more limited styles and attitudes about learning.

One cannot claim to be providing quality education if there are learners who are "left behind." Martin (2006) points out that an education system, school, or classroom will only possess quality to the extent that they ensure equity. Since in classroom teaching quality and equity are two inherently intertwined imperatives, teachers must endeavor to offer help to learners who have different needs so that all can experience and achieve the levels of learning of which they are capable. It behooves us to remember the first and most fundamental principle of Process Education: "Every learner can learn to learn better, regardless of current level of achievement; one's potential is not limited by current ability," (Beyerlein, Schlesinger, & Apple, 2007). Neither should one's potential be limited by one's learning style.

Since inclusivity continues to be the key to equity in education, it is necessary that TPD programs sensitize teachers about the philosophy of inclusiveness and orient them to the variety of pedagogical practices that support all learners. Our immediate recommendation is for the MoE to re-design INSET to accommodate all categories of teachers, especially those who teach learners with special needs. Because inclusivity is a constitutional requirement in Kenya, with all public institutions required to conform to disability mainstreaming, TPD programs have a legal and moral responsibility to ensure that their contribution to meeting the goal of an inclusive society, one that tolerates and celebrates diversity and promotes both equity and social justice, is real and effective.

Diversity of Needs

Part of the motivation for this paper is the assertion by NCTE (2009) that choice of programs for teachers to

attend INSET should be based on their own assessment of what they need, through a valid assessment of professional requirements. As stated earlier, one size cannot fit all; and just as the needs of learners differ, so do the professional development needs of educators. In this regard, TPD policies need to recognize different routes and experiences that contribute to continuing professional development in order to encourage teachers to participate and find value in that participation. It is therefore necessary for policy makers to conceive of ways in which teachers can opt for different kinds of professional development, based not only on national objectives, but also on teachers' interests and assessed individual professional needs. This will reduce the burden that would arise from an INSET curriculum structure that is repetitive and dissociated from the personal and social milieu of teachers. We thus suggest recognition of the following professional development avenues and undertakings for teachers:

- Pursuance of short- or long-term courses: Institutions that offer INSET, like the Kenya Institute of Education, CEMASTEIA, and education departments in some public universities, could design courses that address specific topics that have been found to be problematic for the majority of learners.
- Taking time off to engage in the advancement of both their academic and professional skills, as well as conducting research.
- Attending professional conferences, workshops, and seminars related to one's subject areas or professional areas such as curriculum development, assessment, and integration of ICT during teaching.
- Involvement with site-based professional development activities like the development of schemes of work and lesson plans, as well as preparation and use of teaching and learning resources.
- Coordinated teacher exchange visits: Teachers should have opportunities to visit high-performing schools in other counties, both inside and outside the country, to gain exposure to different and strong teaching methods.
- Mentoring programs: Teachers, especially novices, should have the opportunity to join mentoring programs to improve their professional skills.
- Remaining actively engaged and up-to-date: Following up and remaining familiar with what goes on in schools, universities, pre-service teachers' colleges, and teacher advisory centers.
- Development of the facilitation skills that enable educators to cope successfully with large class sizes, such as those found in schools in Kenya.

- Learning how to support all learners, by providing equal educational opportunities.

Inadequate Funding

Financial commitment by governments in support of education is a major indicator of progress towards achieving EFA goals. In about 70 of 110 countries surveyed by UNESCO, public spending on education increased as a share of Gross Domestic Product (GDP) (UNESCO, 2006). Although this is a positive report, much of the increase has to do with increases in education access, like that experienced by Kenya where there is an increase in government spending to provide free primary secondary education. While this is certainly to be lauded, we are concerned about the lack of sufficient funding for successful TPD programs. It will be impossible to achieve EFA goals if the quality of teacher performance is not ensured through professional development. We therefore advocate an increase in funding for INSET. Further, we recommend that allocation of funds be more decentralized in order to support site-based TPD activities, rather than the current popular model of funding mass trainings, based on the one-size-fits-all and limited cascade design. Certainly, to achieve favorable funding, there will have to be political will. This is necessary to try to overcome the paradoxical nature that faces funding of teacher education as outlined by Opertti (2006):

This [political] paradox rests on the fact that, while we expect from teachers that they will build learning communities, contribute to the knowledge of society, strengthen the innovative capacity, be flexible and have disposition to change, teachers are also the victims of cutbacks in public social expenses and of a lower respect and trust from society (p. 41).

Conclusion

It has been argued in this paper that teaching is a profession. Considering the significance of education in achieving Kenya's development agenda, and that provision of quality education to learners necessitates that we instill professionalism in teaching, there is a need to ensure that teacher preparation initiatives nurture thinking professionals. While pre-service education equips prospective teachers with course content and a pedagogical approach, and can instill positive attitudes towards teaching, in-service education can not only enhance content delivery, expose educators to alternative pedagogical approaches, and nurture attitudes of efficacy, but also provide opportunities for practicing teachers to improve as educators and grow their skills in facilitating learning and student success. This should be the focus of all TPD programs.

Notably, the more the society advances, the more personal, social, and professional challenges teachers encounter. Over time, teachers develop their own working professional identities based on these challenges. As such, the extent to which they benefit from any TPD program is a function of their assessment of its quality, and the extent to which it helps them address their teaching needs and welfare. As a result, several threats undermining the quality of TPD programs desperately require policy redress. The threats to INSET include shortage of teacher educators, shallow

content coverage and delivery, de-contextualization, unmet aspirations, insufficient inclusivity, limited diversity of resources, and inadequate funding. A comprehensive policy for INSET is therefore necessary to mitigate these threats in order to improve teachers' personal, social, and professional profiles, as a way of fostering and consolidating meaningful learning. Meaningful education depends to a large extent on professional competencies, which is significant in the realization of Vision 2030.

References

- Apple, D. K., Morgan, J., & Hintze, D. (Eds.) (2013). *Learning to learn: Becoming a self-grower* (Pre-Market ed.). Hampton, NH: Pacific Crest.
- Avalos, B. (2006). The curriculum and professional development of teachers. In UNESCO (2006). *The curriculum in the spotlight. Prelac journal*, 3, 104-111.
- Baehr, M. (2007). Distinctions between assessment and evaluation. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 441-444). Lisle, IL: Pacific Crest.
- Barr, R. B., & Tagg, J. (1995). From teaching to learning: A new paradigm for undergraduate education. *Change*, 27, (6), 13-25.
- Beyerlein, S., Schlesinger, M., & Apple, D. K. (2007). Introduction to Process Education. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 193-196). Lisle, IL: Pacific Crest.
- Bobrowski, P. (2007). Bloom's taxonomy: Expanding its meaning. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 161-164). Lisle, IL: Pacific Crest.
- Burke, K. (2007). Overview of effective teaching practices. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 379-382). Lisle, IL: Pacific Crest.
- CEMASTE A (2009). CEMASTE A strategic plan 2009 – 2013. Available at: <http://www.education.go.ke/Documents.aspx?docID=1409>
- CEMASTE A (2011). *Lesson observation study: A study on the practice of ASEI-PDSI by teachers of mathematics and science in secondary schools in Kenya*. Unpublished Internal Report.
- Collins, W., & Apple, D. K. (2007). Profile of a quality faculty member. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.). Lisle, IL: Pacific Crest.
- Cordon, D. (2007). Peer coaching. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 471-471). Lisle, IL: Pacific Crest.
- Dove, L. A. (1986). *Teachers and teacher education in developing countries: Issues in planning, management and training*. New Hampshire: Croom Helm.
- Duncan-Hewitt, W., Leise, C., & Hall, A. (2007). Affective domain. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 213-216). Lisle, IL: Pacific Crest.
- Elger, D. (2007). Theory of performance. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 19-22). Lisle, IL: Pacific Crest.

- Gaible, E. & Mary, B. (2005). Using technology to train teachers: Appropriate uses of ICT for teacher professional development in developing countries. Washington, DC: infoDev / World Bank. Available at: <http://www.infodev.org/en/Publication.13.html>
- Government of the Republic of Kenya (2007). *Kenya Vision 2030*. The national economic and social council of Kenya (NESC). Available at: http://siteresources.worldbank.org/KENYAEXTN/Resources/kenya_Vision2030_Popular.pdf?resourceurlname=kenya_Vision2030_Popular.pdf
- Hadley, J. (2007). Student learning styles. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 495-498). Lisle, IL: Pacific Crest.
- Hanson, D., & Moog, R. S. (2007). Process-oriented guided-inquiry learning. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 387-390). Lisle, IL: Pacific Crest.
- Hare, P. (2007). Team reflection. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 419-420). Lisle, IL: Pacific Crest.
- Hintze-Yates, D., Beyerlein, S., Apple, D., & Holmes, C. (2011). Transformation of education: 14 aspects, *International Journal of Process Education*, 3, 73-93.
- Hurd, B. (2007). Annual professional growth plan. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 65-68). Lisle, IL: Pacific Crest.
- infoDev (2010). ICTs and the professional development of teachers: A handbook to guide and assess the appropriate use of ICTs to aid in the professional development of teachers to benefit Education for All. Retrieved March 15, 2010, from <http://www.infodev.org/en/Project.4.html>.
- Jones, A. J. (n.d.). Integration of ICT in an initial teacher training course: Participants' views. La Trobe University, Australia: Institute for Education.
- Leise, C. (2007). Becoming a self-grower. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 479-482). Lisle, IL: Pacific Crest.
- Leise, C. (2007). Overview of mentoring. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 477-478). Lisle, IL: Pacific Crest.
- Levine, A. (2006). Educating school teachers: The education schools project. Retrieved November 15, 2011, from http://www.edschools.org/pdf/Educating_Teachers_Report.pdf.
- Martin, E. (2006). The curriculum and addressing the needs of diversity: The curriculum in the spotlight. In UNESCO (2006), *PRELAC Journal*, 3, 112-119.
- Myrvaagnes, E. (2007) Performance levels for learners and self-growers. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 87-90). Lisle, IL: Pacific Crest.
- National Council for Teacher Education (2009). National curriculum framework for teacher education: Towards preparing professional and humane teacher. New Delhi: Author.
- Novak, J. D., Mintzes, J. J., & Wandersee, J. H. (2000). Learning, teaching, and assessment: A human constructivist perspective. London: Academic Press.
- Nygren, K. (2007) Elevating knowledge from level 1 to level 3. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 165-168). Lisle, IL: Pacific Crest.
- Olson, J. (2005). Do teachers change their practices while participating in a lesson study? In P. Clarkson, A., Downton, D., Gronn, M., Horne, A., McDonagh, R., Pierce, & A., Roche (Eds.), *Proceedings of the 28th annual conference of the mathematics education research group of Australasia*, Melbourne, (pp. 593-600).

- Opertti, R. (2006). Curriculum change and teacher professional development within the agenda of Education for All (EFA) global action plan: The curriculum in the spotlight. *PRELAC Journal*, 3, 28-45.
- Schwab, J. J. (1973). The practical 3: Translation into curriculum. *School Review*, 81, 501-522.
- Smith, P. (2007). Setting high expectations. In S. W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance* (4th ed.) (pp. 329-330). Lisle, IL: Pacific Crest.
- Tatto, M.T. (2004). *La Educación Magisterial: Su alcance en la era de la globalización*. (Teacher education: Its potential in the globalization era). Mexico, D.F.: Editorial Santillana.
- UNESCO (2005). EFA global monitoring report. The quality imperative. Paris: UNESCO. In: <http://unesdoc.unesco.org/images/0013/001373/137333e.pdf>.
- UNESCO (2006). Education for all global action plan: Improving support to countries in achieving the EFA goals edition of 10 July 2006. A basis for enhancing collective effort among the EFA convening agencies. Paris: UNESCO
- UNESCO (2007). ICT in education in the Asia-Pacific region: Progress and plans. Bangkok: UNESCO Asia and Pacific Regional Bureau for Education.
- Vaillant, D. (2006). Documentos de trabajo de la OIE sobre el currículo N° 2, julio de 2006. SOS profesión docente: Al rescate del currículum escolar. In http://www.ibe.unesco.org/resourcebank/working_papers.htm
- Vygotsky, L. S. (1997). *Educational psychology*. London: Tylor & Francis.