

# A MODEL FOR THE CONTINUING PROFESSIONAL DEVELOPMENT OF SERVING PRIMARY SCHOOL TEACHERS IN BOTSWANA

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## Abstract

The challenge of striking a balance in the provision of pedagogical and subject matter knowledge to generalist student teachers can be baffling for in-service teacher educators. This is compounded by several factors including the persistent need to respond to declining learner achievements; and the demands for 21<sup>st</sup> century skills which have necessitated instructional reforms that have rendered obsolete the teaching methods and approaches that were promoted in the past forcing serving teachers to require explicit instruction in the new ones while there is also the need to increase their subject matter knowledge. After reviewing literature and policy documents that are driving the educational reforms in Botswana, a model for a Continuing Professional Development (CPD) program is proposed for serving primary school teachers and conclude that an approach which incorporates school-based and university-based learning is the ideal.

**Keywords:** *generalists, in-service teacher education, Continuing Professional Development*

## Introduction

In Botswana, as elsewhere in sub-Saharan Africa, primary school teaching is organised around a generalist teacher model as opposed to the use of subject specialists. Yet the existing primary school curriculum and the recent curricular initiatives contained in the National Curriculum and Assessment Framework (henceforth NCAF) indicate, as we show later, that the primary school subject curriculum is specialized and broad (see NCAF, 2015). Secondly, in the effort to combat rote-learning, there is an urgent need to raise serving teachers' subject matter knowledge and pedagogical skills as part of increasing their teaching effectiveness. While the debate over the deployment of specialist teachers in the primary school rages (Kasale & Mokgwathi, 2010; Mokotedi, 2013; Kaelo, 2019), the challenge of striking a balance in the provision of pedagogical and subject matter knowledge to serving generalist teachers in the primary schools can be baffling for in-service teacher educators. As will be shown later, a combined deficit and developmental model is recommended noting, as Makuwa (2011) does, that there are divergent views about how much general education, and how much professional teacher training is needed for teachers.

The aim of the paper is to propose a model for a university Continuing Professional Development (CPD) program that meet the subject matter and pedagogical content knowledge needs of serving primary school teachers. Some of the literature used is from research on mathematics, science, and reading instruction, a factor attributable to the persistent concerns (see PIRLS, 2011; TIMSS, 2011; SACMEQ, 2011; Monyaku & Mmereki, 2011) for more effective teaching and learning in these three learning areas of the primary school. It is also projected (UNESCO, 2010; Glick & Sahn, 2010) that the majority of children who fail to make sufficient progress in these areas during the

primary school years are more likely either to drop out, or become disengaged and unable to access the increasingly demanding work of the later grades.

The paper uses work published online accessed via *Google Scholar*, *Emerald Insight* and *Research Gate* using the search words 'teacher learning'; '21<sup>st</sup> century learners'; 'in-service teachers' CPD'; 'learner perceptions of effective teaching'; and 'CPD models'. As an indication of the vastness of the literature on CPD, Emerald Insight alone yielded 780 books, book chapters and journal articles. We therefore limited the study to journal articles on primary school teachers' CPD. Recent national policy documents and those from the faculty of education, University of Botswana were instructive in the development of the combined *deficit* and *developmental* model for Botswana that we propose.

## Background

Following a proposal to transform colleges of education in Botswana into degree-awarding satellite campuses of the University of Botswana (NCAF, 2015), a degree qualification is planned to gradually become the minimum entry level into primary school teaching. Presently, primary school teachers who are degree-holders in the country are better regarded, better remunerated, and stand better chances for promotion to positions of responsibility (Molefe, Pansiri & Weeks, 2009; Statistics Botswana, 2014). As noted by Makuwa (2011), there is also a belief in many circles that teachers with such training perform better, a factor that should improve learner achievement. All these factors have popularised the CPD program to a large majority of Botswana's serving primary school teachers who, as elsewhere in sub-Saharan Africa (Junaid & Maka, 2015), begin their teacher training and teaching career as generalists teaching a very broad curriculum. At the moment the Botswana primary school curriculum is broad and includes examinable subjects (Agriculture, Setswana, English, Mathematics, Science, and Social Studies) and non-examinable subjects (Religious and Moral, Home Economics, Environmental Education, Physical Education, Art and Craft, and Music); which are often taught by one teacher.

Ever since Botswana's initial reforms in education of the early 1990's, serving teachers across all levels of education and school subject have undergone upgrading programs. As a result, Botswana has a largely trained teaching force for the primary school level. The latest statistics show that of the 14,533 primary school teachers in the country, 68% held a Diploma in Primary Education, 12% held a Bachelor of Primary Education, and only 9.4% were without a teaching qualification (Statistics Botswana, 2015). UNESCO (2015) reports other critical achievements in the pursuit of quality infrastructure for education including the electrification of 571 of the 755 primary schools in the country which enables ICT use in 91 schools with computers, 114 others with mobile devices, Wi-Fi and internet access. Although, according to Kremer, Brannen & Glennerster (2013), a direct correlation between access to computers and improving learning has not been proven, learners of the 21<sup>st</sup> century will increasingly need to utilise ICT as indications are that internet access is becoming the standard in the workplace and in the home. It is in view of such developments that Botswana is proposing major educational reforms reflected in the NCAF (2015) and the Education and Training Sector Strategic Plan (ETSSP 2015-2020) (henceforth ETSSP, 2015). We note that official policy has also proposed making CPD a central component of these reforms.

Since 2000, serving primary school teachers can register at the University of Botswana for a residential two-year degree program if they hold a diploma; and for a three-year one if they hold a teaching certificate. Participants may register in one of five (5) specialization areas (called 'concentrations'), namely: Language Education; Mathematics and Science Education; Social Studies

Education; Practical Subjects; and Special Education (University of Botswana, 2016). A look at the program structure shows an extensive course content in which participants are required to study a specified number of courses as content in their areas of specialization. The menu includes *core*, *electives*, *optional*, and *general education* (GEC) courses. If desired an audit course may also be recommended (University of Botswana, 2016), albeit uncommon. Upon completion of studies, a participant will have accumulated the minimum credits required for graduation and are then judged to be well-suited to teach the particular school subjects reflected in the courses on their degree transcripts. Research that shows a link between teacher qualifications and student achievement (Hill, Rowan, & Ball, 2005; Mullens, Murnane, & Willet, 1996; Rowan, Chiang, & Miller, 1997), albeit from outside Botswana, has also nurtured a strong belief in education that teachers with more training teach better. For serving primary school teachers who begin their teaching career as generalists, the result of this belief has been a never-ending quest by teachers for a degree qualification and so, participants face the academic overload as martyrs since they have to make significant sacrifices in terms of the heavy study workload. Even then, more and more of them appear keen to attain a degree qualification through acquiring a government scholarship. However, thus far our residential program has had some negative impact on participants (Pansiri, Mhozya, Moletsane, & Bulawa, 2012). Kasule (2003) noted that a participant may miss lectures for several days as s/he has to travel home in an effort to rescue a marriage or an own child from derailment. A review of the program's mode of delivery and content load is wanting.

The term *continuing professional development* is used in this paper to refer to the residential courses at the University of Botswana organised for serving primary school teachers in order to enhance their subject matter and pedagogical content knowledge. The paper's aim is to see how best the university's CPD program can be organized in future to meet the subject matter and pedagogical knowledge needs of serving primary school teachers.

### **A theoretical framework for continuing professional development**

This paper adopts both the *critical approach* and the *social learning theory* to CPD for serving primary school teachers. According to Steyn (2008), a critical approach to CPD program involves 'the awakening awareness of one's inability or incompetence to perform according to one's own expectations or laid-down criteria' (p17). This links with Zeichner & Gore's (1990) notion of bringing 'to consciousness the ability to criticize what is taken for granted about everyday life' (p331). In this approach, practicing teachers are theorized as actively engaged in critical reflection about the effectiveness of what they do and how to improve it. For such teachers, learning does not stop in the lecture room but continues throughout their careers, hence the phrase *Continuing Professional Development*. From experiential learning perspectives, Taylor (2008) wrote that experience involves three steps namely *disorienting dilemma*, *critical reflection* and *action*. A disorienting dilemma exposes the limitations of a teacher's current approach to teaching. For example, a lesson challenge disorients the teacher, requiring critical reflection to enable him/her to critically assess the underlying assumptions so as to understand how these influence or limit understanding of the problem. Critical reflection results into action where alternative ideas and approaches are tested with peers or the mentor.

The argument of this paper is that CPD can also be theorized as a process of social learning within a community of practice. Communities of practice enable teachers to make meaningful learning because people 'engage in a process of collective learning in a shared domain of human endeavor' (Wenger, 2007:1). As a community of practice, teaching is composed of the novice teacher, the social world of educators, and the mentors and peers in the workplace. Members of a community of practice are practitioners who develop a shared understanding through ways of addressing problems and

sharing experiences. Moreover, mutual commitment is deepened when communities of practice take responsibility for their own learning, which can develop the practice even further (Wenger, 2000:231). Thus Lee (2005) believes that CPD programs situated in a school benefit both the school and teachers in several ways – the teachers share experiences; skills and problems are encountered in a setting that is receptive to teachers' needs and goals and how they learn; and the school's goals are promoted. However, Wenger (2000) cautions that communities of practice may fail in their effort to learn from their own experiences. It is opined that this is where the university may be of assistance by providing latest knowledge through conferences, workshops, seminars, training sessions or any other event which opens their 'eyes to a new way of looking at the world' (Wenger, 2000:p227).

In this theorization of CPD as social learning, teacher education and the workplace have roles different from that of *gate-keeper*. Instead training institutions and the workplace become centres that enable a process of social participation or interaction in which the practising teachers are positioned as active agents in their development. Lave & Wenger (1999) refer to mentorship as a form of *apprenticeship* – a process of social participation in which teacher education, among other factors, plays a key role of encouraging access and participation in the community of practice. This agrees with Vygotsky's (1978) Zone of Proximal Development (ZPD) which involves the presence of a more knowledgeable other (i.e. the mentor) who provides the necessary support to a novice or mentee. Collaboration between mentor and mentee allows and increases opportunities for mentees to gain 'access to a wide range of on-going activity, old timers, and other members of the community; and to information, resources, and opportunities for participation' (Lave & Wenger, 1999). Within such a situated learning approach, feedback from the mentor may be viewed as part of the process of apprenticing mentees into legitimate participation in their professional development. In other words, when in-service teachers position themselves as participants in the discourse community (consisting of their peers, their lecturers, and themselves), they become aware of the practices of the discourse community through social and cultural participation and interaction. This is because teaching best makes sense when situated in the workplace context of practice of which they are a part. In this view, the school is a powerful learning space for serving teachers.

### **Reforms in education in Botswana**

Driven by the need to address core education issues, Botswana is transforming the entire education system. The reforms are contained in two policy documents (NCAF and ETSSP). The NCAF calls for reforming education and learning so that learners acquire knowledge, skills, values and attitudes that enable them to contribute to sustainable development. Thus it invites teachers, not only to change their teaching approaches and roles, but also to enable learners to acquire skills appropriate for living in the 21<sup>st</sup> century. The ETSSP is talking about performance-based procedures and moving towards evidence-based planning and greater accountability from teachers. It further plans to develop professional standards for teachers and a set of teacher competencies. A new curriculum based on Outcome Based Education (OBE) and multiple pathways based on OBE are in advanced stages of development.

The reforms are in response to declining learner achievements over the years occasioned by rote-learning which is 'encouraged by an examination-driven management and monitoring of the education system' (NCAF, 2015:28). In such a system, teachers aim to complete the syllabus, a practice that does not result in learner acquisition of critical skills. Ideally, effective teaching is that which acknowledges that facts and ideas are important if they have a function in the learners' lives. For that reason, effective teaching guides learners on how to process, construct, deconstruct, reconstruct and use information. Teacher education therefore is challenged to produce the 'effective

teachers' who teach learners how to find, interpret, and use information. For this kind of learning to occur, NCAF (2015:90) has come up with the following four guiding principles:

1. *Ways of thinking* i.e. creativity and innovation; critical thinking, problem solving and decision making; and learning with others as well as learning independently
2. *Ways of Working*: being productive by relating well with others; cooperating and working in teams; and managing and resolving conflicts
3. *Tools for working*: effectively use and interact with language, symbols, and text; knowledge and information; varied forms of common technology; and ICT
4. *Living in the world*: Showing effective self-management; cultural awareness and expression; social and civic competence; and sense of initiative and entrepreneurship.

It is contended that these principles are in line with this paper's theoretical framework. They imply that the workplace (i.e. the school) is a community of practice where information and knowledge about what teaching and learning techniques work best are created and are made increasingly accessible to everyone. Such a workplace displays skills for living in a knowledge-based economy. According to the World Bank (2003), a knowledge-based economy relies on information that is created, acquired and used effectively by individuals, enterprises, organizations, and communities to promote economic and social development. Such a workplace also produces effective teachers who know that no one can know everything about every subject and that no one is absolutely ignorant, a principle they uphold in the classroom by practicing inclusive education.

### Models of CPD programs

CPD programs take many different forms (Junaid & Maka, 2015) based on their duration and purpose. For example there are those fitted into a day, evenings, weekends, and vacations to address a specific a need (e.g. a new classroom technique or a new orientation in the curriculum) attainable by teacher participants from the same school without long absence from the classroom. In view of the proposed educational reforms in Botswana, it is anticipated to see frequent short-term CPD activities in the near future in the form of school workshops, seminars, conferences, and short courses. On the other hand, there are fulltime residential ones lasting several months and often leading to the award of a higher qualification through formal coursework. Ramatlapanana (2009) observed that in practice CPD programs are often workshop-type sessions in which the educator is the content expert who directs the flow of activities.

An earlier study by Bude & Greenland (1983) who investigated CPD programs in thirteen developing countries identified two broad types by *purpose*: (i) those that focused on *initial training* purposes targeting serving untrained teachers; general refresher purposes targeting a specific objective; curriculum re-orientation purposes targeting specific reforms; CPD for new roles such as head of department, examiner, school head, etc. (ii) those that focused on *upgrading* serving teachers such as the type offered at the University of Botswana in line with long-established official policy on CPD programs being used as a 'means of strengthening and reviewing the education system through the development of teachers' competence and sense of professional commitment' (Republic of Botswana, 1993:353).

Kennedy (2005) identified nine CPD models, namely: training; award-bearing; deficit; cascade; standards-based; coaching/mentoring; community of practice; action research; and transformative. Space does not permit full discussion of the features of each. It will suffice to observe that these features are context specific rather than generic. Additionally, Tan, Chang & Teng (2015) raised three CPD dilemmas and tensions, namely: the individual's tension between the urge to attending activities that the teacher personally enjoys versus those that benefit the school; the teacher's concern whether their students' learning will be affected in their absence; and whether professional

development activities should be compulsory or not. In this paper, we use Kennedy's ideas to propose a hybrid model that responds in part to these dilemmas and tensions.

### **A combined deficit and developmental model of CPD**

One of the difficult decisions that have to be made in organising a CPD curriculum for serving primary school teachers is determining whether to perceive entrants as *deficient* or as *developers*. A development perspective fits in well with a CPD agenda and would acknowledge that all skill learning goes through successive stages. The stages can be explained by Vygotsky's zone of proximal development where 'the gap' is that between what teachers are able to do in the classroom working independently and what they are able to do with help from the CPD activities. Such a view recognises critical reflection on the experiences and knowledge of classroom teaching that serving teachers enter the program with. The CPD program then facilitates activities that go beyond developing subject matter expertise and its delivery to embrace enhancing the acquisition of the learning, literacy, and life skill attributes. We refer to this as the developmental model of CPD.

A deficit model, on the other hand, assumes that though adequately skilled in classroom teaching, serving teachers who entered the teaching profession as generalists, have limited subject matter expertise because they have specialized in only two of the school subjects they teach. Research evidence (Kasule & Mapolelo 2005; Polaki 1996; Setati 2002) is that, within the classroom, teachers who lack content knowledge resort to various coping strategies including relying heavily on the textbook as a convenient source of information; or using instruction styles that avoid discussion and student questions. Such practice reflects a behaviourist approach to teaching and is rooted in the transmission perspective. From this perspective, teaching is the act of transmitting knowledge from the teacher to the learners. It is a teacher-centered approach where the teacher is 'the dispenser of knowledge, the arbitrator of truth, and the final evaluator of learning' (Johnson, 2010). CPD then provides explicit knowledge to such participants and attempts are made to minimize the divide between theory and practice by combining lecture room instruction with practical real-world experiences in the classroom; by either having a practicum period in the form of 'teaching practice' or through video study and critique.

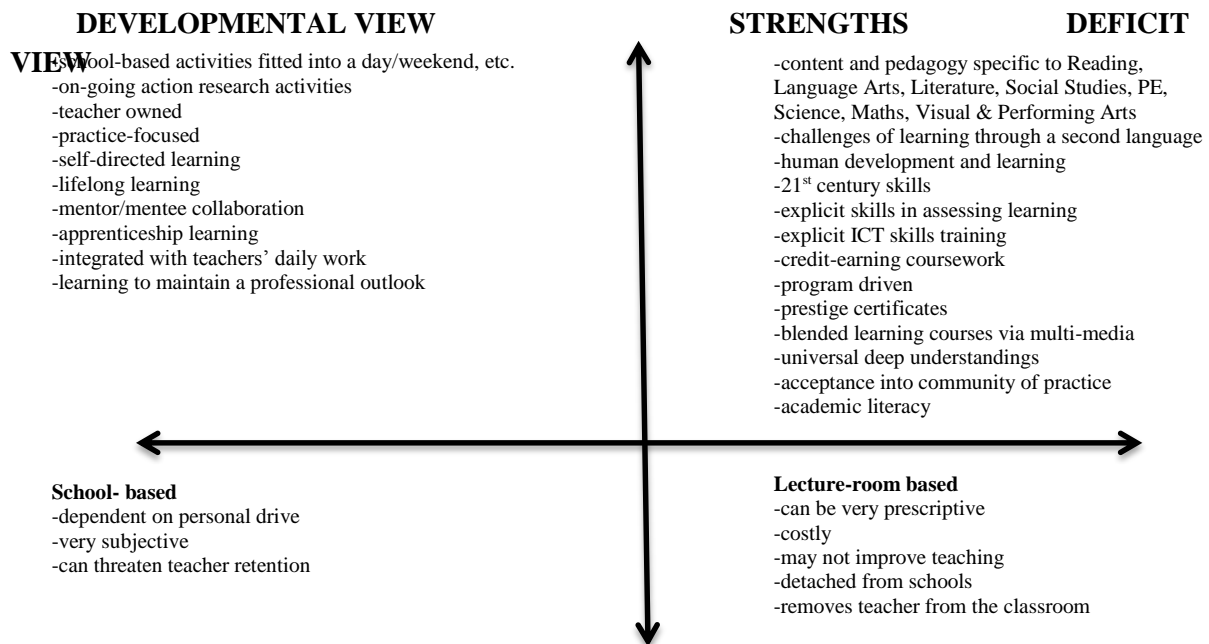
Ideally, CPD program outcomes should be determined by educator and participants together. While in practice this can be difficult, the deficit view acknowledges participants' vast prior experiential knowledge of classroom teaching. This is factored into the program's duration. It is this experience which may have enabled CPD participants to acquire certain core teacher competencies prior to admission into the program. According to Zeigar, (2018), the core competences include the ability to:

- interact well with learners
- create a learning environment
- use varied teaching strategies
- plan and design lessons
- assess
- identify students' learning needs,
- collaborate
- communicate effectively
- maintain a professional appearance
- demonstrate a commitment to the profession (np).

It is therefore recommended that the CPD program for this category of teachers adopts a combined *deficit* and *developmental* view of teacher education. In this approach, we can have CPD

can be series of activities that combine school-based ones with a university-based study program as represented in Figure 1.

**Figure 1:** A combined developmental and deficit model



Combining the *deficit* and *developmental* model fits well into the CPD agenda. It also responds well to concerns raised recently by external reviewers that the Department of Primary Education at the University of Botswana is over-teaching (Tlou, 2015; Mamvuto, 2015; Siraj, 2015; Mtetwa, 2015). These reviewers' concerns are based on the course descriptions and actual problems participants reported in focus group interviews. A study by Agolla & Ongori (2009) has also identified academic workload as a stressor at the University of Botswana. More recently, Korthagen (2017) has suggested that teacher educators should develop teacher change processes that start from the person of the teacher warning that, not doing so, will make the 'school context have an influence of its own, often counterbalancing attempts to change teacher behaviour' (p.399). The strengths of the proposed model is that it strikes a balance between theory from the training institution, practice at the workplace, and the person of the teacher without an over-emphasis on one or the other. In this view, a combined deficit and developmental model of CPD will ensure that learners receive quality education by first providing the best education to those who will teach them (Kasule, 2003; Molefe, Pansiri & Weeks, 2009).

## Conclusion

This paper has argued that linking school-based and university-based CPD activities minimises the negative impact of a long residential CPD program. In the same way relying on school-based activities, removes the teacher from the universal community of knowledge. Guided by the combined deficit and developmental model of teacher education, one dimension would be to start the online mode of delivery. In this way the teacher remains in the workplace while benefiting from the universal community of knowledge. Another dimension of the model would be to allow participants to register for one or two credit-earning courses at a time which are then banked until the participant completes the program course menu, and is subsequently awarded the degree. In this way, training becomes lifelong, work-related and develops through self-study and self-learning, which are the characteristic strengths of our proposed combined model.

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