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**PRACTISING REFLECTIVE TEACHING:  
A Personal Journey of Professional Development**

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**ABSTRACT**

This paper recounts my learning experiences over the last fifteen years as a secondary school teacher, a curriculum specialist and until recently, a teacher educator in science education. My personal story is one of professional growth in many aspects of the teacher knowledge domain. Viewed through multiple lenses of teacher development model, curriculum conceptions, and personal perceptions and beliefs, I describe my journey with quotes, maxims, and examples of scientific demonstrations that characterize Schön's (1983, 1987) notion of reflection. I engage my teaching vocation with a simple life mission: "I live to learn with passion and service, and I learn to live with purpose and significance".

**KEYWORDS**

Professional Development, Reflective practice, Teaching and Learning, Science Education.

## TEACHING – A PERSONAL AND COMPLEX PHENOMENON

Few would ever dispute that teaching is a highly personal and complex activity. In one sense, teaching is personal because "each teacher's practice is an expression of a personal and professional way of knowing that is shaped and informed by personal and professional background, experience, perceptions, attitudes, beliefs, and goals" (Cole, 1990, p.203). In another sense, teaching is complex because the domain of teacher knowledge is vast and its application often contextual (Carlsen, 1999). At the same time, reflection, characteristic of a teacher's reflective and critical practice, has been recognized as the essential element of the professional development process (Rust, 1999).

In this paper, I describe my personal professional growth seen through the multiple lenses of teacher development model, curriculum conceptions, personal perceptions and beliefs of teaching, paying careful attention to how I engage in reflective practice. The aim is not to formulate any generalizations of my account but rather to inspire and enthuse teachers alike to embark on their own journeys of professional development through reflective practice.

## A JOURNEY OF PERSONAL PROFESSIONAL GROWTH

When I started teaching some fifteen years ago in a neighbourhood secondary school, I was teaching some twenty hours a week in subjects such as Mathematics, Physics and English Language. Prior to this, I had graduated from a one-year post-graduate diploma-in-education programme. While I was enthusiastic and passionate about teaching, following many of the teacher development models (Berliner, 1988; Kagan, 1992, Ho & Toh, 2000), I was very much a novice. Although my pedagogical content knowledge (PCK) was limited, teaching was predominantly enhanced by my strong knowledge of general pedagogy (see Morine-Dershimer & Kent, 1999, for a PCK model). Holding on to the 'academic rationalism' conception (Morris, 1996) of the curriculum, I taught from specially prepared notes that I had spent hours sourcing from various textbooks. I had a belief then that I still adhere to today. I believe that 'the more you prepare outside class, the less you perspire in class. And the less you perspire in class, the more you inspire in class.' However, what I did not realize then was that I wasteaching a subject such as Mathematics or Physics but I was not teaching students Mathematics or Physics. I was too focused on the teaching of the content knowledge that I did not pay enough attention to or give enough effort on student learning. I only realized this subtle distinction some eight years later when I co-taught with one of the teachers that I supervised. I was then working as a curriculum specialist at the Ministry of Education, Gifted Education Branch. I was teaching a lesson on 'Electrical resistance in series and parallel' and had asked her to observe me. At the end of the lesson, when we walked out of the classroom, I was anxious to find out from her if my lesson had gone on well; things such as relevance of the introduction, the logical development of ideas and the like. What greatly surprised me was that she did not address any of my concerns but instead asked me if I had observed the behaviour and responses of certain students. I was stunned and I could not answer her because I had not observed student learning closely.

I have now come to understand and embrace the perception that teaching is about learning and empowering our students to learn more and in more effective ways. I have moved from the 'academic rationalism' conception to include the 'child-centered' conception. During my six-year stint with the Ministry of Education as a curriculum specialist dealing with curriculum development as well as teacher development, I learnt about curriculum differentiation as a way of individualizing instruction. As the saying goes, "they (the students) do not care how much you learn until they know how much you care". Knowledge of learners and learning must be closely knitted with the knowledge of the subject matter. However, a teacher does

not possess all the knowledge and therefore has to ascertain the truth when in doubt or in ignorance. A teacher has the power to influence students and their learning or the lack of it. Consequently, I have always believed that as teachers, we must never abuse the privileges accorded to us. One of my favourite quotes comes from Thouless (1974) who puts it this way:

The best teachers are not those who use their prestige to force meek acceptance of what they say, but those who retain, to the end of their days the spirit of students, always ready to learn more, and expecting, from those whom they have to teach, argument, contradiction, and above all, the impartial testing of the truth by experiment (p.124).

On the contrary, the effective teacher teaches in a manner that ultimately makes him or her dispensable. Edward G. Bulwer-Lytton opines that "the best teacher is the one who suggests rather than dogmatizes, and inspires his listener with the wish to teach himself" (Maggio, 1997, p. 29). And, it was Maria Montessori who identifies the greatest sign of success for a teacher as being able to say, "The children are now working as if I did not exist" (ibid., p. 51).

## **HOW CAN I BE EFFECTIVE IN MY TEACHING?**

The key to becoming an effective teacher, I believe, lies in my willingness and ability to reflect and learn from experiences, both of my own and from others. Herbert Kohl observes that "nobody starts out as a completely effective and creative teacher...The desire to teach and the ability to teach well are not the same thing. With the rarest of exceptions, one has to learn how to become a good teacher" (ibid., p. 38). But we all learn from our experiences, don't we? Not really. There are people who do not learn from their experiences (Jarvis, 2000) so that even when they go through similar experiences a second or third time, they behave very much in the same way as before. I have learned that we often assume that we learn from our experience and that experience is the best teacher. This is an inaccurate conception. The truth is that only evaluated experience is the best teacher. Merely going through an experience does not guarantee that we learn from it, although an experience might be the starting point of our learning. "Our day-to-day experiences as we confront challenges, incidents, and problems in our lives are rich sources of learning...if accompanied by reflection on action" (Butler, 2001, p. 1). Hence, I conclude that I need to engage in reflective teaching in order to become effective in my practice.

## **ENGAGING IN REFLECTIVE TEACHING**

Reflection, in the form of conversations, stories, and narratives, is crucial for the professional development of teachers (Rust, 1999). In one phrase, it is the teachers' 'evaluated experience' that can inform their practice. "Reflection is the primary process of learning from action" (Butler, 2001, p. 1). Schön's (1983, 1987) reflection-based epistemology of practice provides a frame for meta-learning development; that is, development of personal knowledge, control and awareness of learning. He extended the notion of reflection by characterizing the nature of thought into 'Reflection-in-action', 'Reflection-on-action' and 'Reflection-for-action'. When we are reflecting while doing something, that is 'Reflection-in-action'. So, 'Reflection-in-action' is thought used in the process of making sense of complexity. After we have done something and we reflect on what we have done, that is 'Reflection-on-action'. 'Reflection-on-action' is thus the thought used to review the experience of making sense of complexity. 'Reflection-for-action' is also practiced after the

action but it aims to engage the teacher in reflection to guide future actions. Butler (1992) added another mode known as 'Reflection-to-action'. This is done before the action and it is useful in leading us to design the actions and be aware of possible reactions. Taken together, the four modes of reflection can be identified as:

**Table 1: Four Modes of Reflection**

<b>Nature of Thought</b>	<b>Description</b>
Reflection-to-action	Before action – it can lead to the design of actions and reactions
Reflection-in-action	During action – it can lead to modification of action and learning while carrying out the designed action
Reflection-on-action	After action – it can lead to retrospective evaluation and learning from remembered actions
Reflection-for-action	After action – it is used to guide future actions

Atkinson and Claxton (2000) succinctly describe Schön's notion of reflection as "a view of professional practice in which the knowledge and thought of a practitioner is evident most fully in the actions of the practitioner" (p. 5). Reflection is necessary and in particular, reflection with an aim to improve one's practice. However, with ever increasing demands made on teaching, I have observed that teachers often complained that they do not have the time to engage in reflective practice. Personally, I feel that this is not the real issue. The real challenge is for us to learn how to prioritize our activities.

## A REAL CHALLENGE FOR TEACHERS

While I agree that our fast and unrelenting pace of life does not support a culture of reflection, especially for teachers who constantly have to make decisions about their classroom practices while teaching, this does not mean that we cannot engage in it. I do not deny the fact that great demands are made on a teacher's attention. However, we might need to study the issue more closely. Time or the lack of it is often cited as an issue hindering reflection. But does it? Time is the fairest commodity – we each have 24 hours a day, no more, no less. We do need time for reflection. After all, it is a process. The real challenge then for teacher is not the perceived shortage of time but whether or not we have prioritized time for reflection. Do I engage in reflective learning or has presumption become my typical response to my everyday experience? Of course, we each have different capacities and capabilities for work. While reflection may be a human activity and may thus be a very natural process for the mind, it can also be very elusive. It is easy for us to become thoughtless and mechanical in our daily work. We must never be so busy teaching that we forget to become effective at it!

## CONCLUSION

This personal account serves as a catalyst to activate teachers to think about their own developmental process and the accompanying philosophies one might form and subscribe to thereafter. The key to becoming effective at teaching lies in our willingness and ability to reflect on our own practice. My years of experience has shown me that engaging in reflection is no easy task for teachers but one that definitely has to take top priority in the teaching agenda if we are seriously about improving our practice.

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