Professional Standards and Professional Learning: A Position Paper

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The educational discourse in recent years in Australia, and in particular NSW has been on advancing the status of the teaching profession through the development of a framework of standards, and by supporting the nature of teachers' work in addition to improving student-learning outcomes. The close link between student learning outcomes and quality mathematics teaching has resulted in the call for an increase in teacher accountability and quality. This paper is an exploration of the relevant literature that focused on the professionalisation of the teaching profession in Australia and its potential impact on teaching in Australia.

It is thought that the educational reform movement began on a global scale in the mid 1980s and continued into the 1990s. Its purpose was to improve teaching practice and lift student performance after previous efforts had failed to make the changes that were sought. This reform appears to have been motivated by an international convergence towards educational uniformity, teacher accountability and standards based compliance and it has become a worldwide focus (Delanshere & Petrosky, 2004; Sachs, 2003). In Australia in the mid 1990s the Australian Association of Mathematics Teachers (AAMT) (2006) began the debate around the issue of professional teaching standards for mathematics as they stood within the Australian context. The purpose for developing a set of standards for teachers was to clearly articulate the specialist nature of the teaching of mathematics so as to inform the community and stakeholders about what quality teaching of mathematics is (Althorp, 2001). In many cases standards based education are thought to provide the magic ingredient to all educational ills (Sachs, 2003). However, the truth might be that teachers are in danger of being overburdened with guidelines and standards to which they must measure and provide evidence of their accomplishments within their profession rather than engage in the business of education.

Historically, teaching is one of the few professions where a beginning teacher assumes the same responsibilities as one who has been teaching for a number of years (Garvey, 2004). For many pre-service and graduate teachers this can appear to be a significant and somewhat daunting task that relies on their personal beliefs about mathematics and their teacher preparation programs. Beginning teachers have consistently expressed that pre-service teacher education courses are too theoretical and that the experiential processes of teaching are disregarded. Grenfell (1996) argues that in some settings the best place for quality teacher education is within the construct of the school. The dichotomies appear when the opposing notions such as theory versus practice, or school training versus institutional training, are influenced by an ever-changing political agenda, which can be argued, have a positive or a negative impact on teacher education according to the context. The influence of governmental policy on the culture of the teaching profession over many years is largely due to inadequate or insufficient research into how professional competence is achieved by an early career teacher. Yet policy changes are readily accepted as part of the culture of teaching (Grenfell, 1996).

Motivating teachers to participate in professional learning appears to be straightforward, as is the development of politically motivated educational policy; the difficulty lies in the implementation of the policy as its success relies on teachers'

awareness of its value and their ongoing and enthusiastic participation (Collinson et al., 2009). Kleinhenz and Ingvarson (2004) express their concern about the risk of teachers not seeing the value in standards based policy and fear there may be a danger of disconnectedness as a result of "bureaucratically conceived and executed evaluation schemes" (p32), potentially resulting in failure. Additionally, the apparent efficient implementation of policies can give the impression that management and administration are monitoring the processes, when in some cases the location of the core business of teaching, the classroom, isn't visited as part of the evaluation process (Kleinhenz & Ingvarson, 2004). As Grenfell (1996) notes:

> ... what is at stake is whether professional learning is seen as unfolding developmental and implicit, or a profession through a pre-set list of explicit competencies. These two approaches on professionalization are based on opposing views of training: the former sees it as personal and context dependent; the latter as the acquisition of definable skills. (p.289)

The evidence from previous research suggests that positive self-efficacy in mathematics can have a profound effect on both teaching practice and student learning (Wilson, 2008). Unfortunately, for many primary school teachers their negative memory of school mathematics may have created a cycle of anxiety, which can influence their practice to reflect their own school experience. This can potentially result in them resorting to teaching in the manner in they were taught, in conflict with current recommended practice (Hodgen & Askew, 2007; White-Clark, 2008). Similarly, the negative beliefs of individuals may remain rigid and unalterable whilst their current models of beliefs produce reasonable results and they may attribute failures to external forces rather than reflecting on their own practice (Duffy, 2003).

Variables that influence pedagogical practice include curriculum, familiarity with content, needs of the students and external pressures from school and parents. Some teachers can be guilty of using set of prescriptive standard procedures for teaching mathematics as a result of managing these external pressures, which can be a contributing factor in the disengagement of students in the mathematics classroom (Boaler, 2000). It is argued the greatest positive influence on pedagogical practice and self-efficacy is further education, on-going professional development in addition to developing knowledge, skills and gaining an excellent understanding of the pedagogical content knowledge, the knowing *how* to and *what* to teach (Beswick, Watson, & Brown, 2008; Ross, 2002). According to Feiman-Nemser, (1983) the first five to seven years of teaching is when teachers learn how to teach and professional development and on-going learning is highly valued both in the educational setting and by Australian teachers, resulting in a high level of influence on practice (McCullan, 1994).

Professionalising the Profession

Over the past several years there has been a move towards promoting the professionalism of teachers through the development of teaching standards both internationally and in Australia. In 2001 the Commonwealth Government established a project known as the Quality Teachers Initiative, *Teachers for the 21ˢᵗ Century,* where four national teacher associations worked collaboratively to develop a set of standards that were specific to their subject matter and collectively could provide a framework for future development of teaching standards (Althorp, 2001). In 2002 the Australian Association of Mathematics Teachers designed a set of professional teaching standards and a program of assessment that concentrated on identifying the knowledge skills and attributes that teachers of mathematics comprise. Teachers who participate in and satisfy the professional

requirements of the AAMT teaching standards can be credentialed as *Highly Accomplished Teachers of Mathematics* (HAToM) (AAMT, 2006).

In some cases it is thought that standards in education are the answer to all of the woes that afflict the education system. Whilst they may provide guiding principles for the teaching profession they cannot solve the problems associated with "dysfunctional school organisations, outmoded curricula, inequitable allocation of resources, or lack of school support for children and youth"(Darling-Hammond, 1999, p.39). It seems to follow that by providing a framework of standards by which teachers can exhibit professionalism and competence, the quality of teaching and teachers should increase (Thrupp, 2006). Thrupp argues that this is not the case and that the public and professional appeal of teaching standards may be politically exploited and may serve as a way of controlling teachers. Sachs (2003) holds a similar view and states that professional standards have been used as a "government imposed regulatory framework" (p.185), over the teaching profession mainly due to the fact that teaching accreditation and licensing relies on teachers attaining the credentials. In contrast to Thrupp, Ingvarson (1998, cited in Sachs, 2003) and Chadbourne (1999, cited in Sachs, 2003) argue that the introduction of professional standards should improve teacher performance, improve the standards of teaching and contribute to the standing of the teaching profession. Furthermore, standards are thought to provide accountability to consumers of education and potentially represent a level of quality or at least an assessment of quality. However, Sachs (2003) argues that it is doubtful that the introduction of standards to the teaching profession can influence the publics' perception of the teaching profession particularly given that many people have developed their own opinion of what good teachers are based on their personal experience of the education system.

By definition, standards-based education provides a framework or criteria that teachers can use as a measure of their accomplishments and a way of providing evidence to stakeholders of their achievements and accreditation (Sachs, 2003). There have been a variety of terms applied to the teacher evaluation process: such as supervision, annual performance review, assessment, appraisal, inspection (Collinson et al., 2009). This is nothing new to the teaching profession; in reality, teachers have been made accountable for many years as their teaching was scrutinised, evaluated and observed by senior officers from Education Departments. This type of evaluation is reflective of corporate industry and referred to by Collinson, (et al, 2009) as "the clinical supervision model" or the "top down" model, as the hierarchy of an administration observe and report on the performance of a subsidiary (p6). The evaluation process can be described as a set of standards and may be generic or specific, generic being a broad set of descriptors that teachers can aspire to, whereas specific or specified standards are more explicit and can allow assessors to compare teachers' performance in relation to a set of descriptors (Thrupp, 2006). Thrupp suggests that the specified standards have a much greater capacity to "control and contain teachers" (p.3) by intensifying their workload resulting in few improvements in teaching quality as teachers could fabricate evidence in order to jump through hoops to meet requirements.

Similarly, this means of evaluation could be considered to be subjective and based mainly on the views of the supervisor. In some countries this method of appraisal continues; however, Australian teachers campaigned in the late 1960s against the inspection system, arguing that it was in direct opposition to the teaching 'profession' whilst the unions referred to the system as paternal and discriminatory (Kleinhenz & Ingvarson, 2004). The processes involved in professionalising teaching is shifting from

treating teachers as supervised workers to skilled experts, embraces professional development and better reflects the intricacy of teaching (Collinson, et al, 2009). The importance of teachers being skilled in the content knowledge of Mathematics and having the ability to impart that knowledge in an age appropriate and engaging manner especially in the primary classroom, leads to a discussion about the significance of Mathematics as an area of study.

The establishment of a Professional Standards framework and an Institute of Teachers in New South Wales came about as a result of suggestions made by Ramsey in his *Review of Teacher Education* (Ramsey, 2000) and McMorrow in the subsequent *Report of the Taskforce into the Review of Teacher Education* (McMorrow, 2001). Within the summary of the Taskforce Report, McMorrow outlined several key recommendations one of which recognised the impact that quality teaching has on student learning. As a result, three suggestions were put forward to the NSW Government.

- development of a framework of professional teaching standards, drawn from the professional insight and experience of teachers
- recognition of standards of professional practice, from initial graduation through to professional leadership, supported by related incentives and rewards
- establishment of the conditions necessary to support teachers' professional growth and renewal, from induction and mentoring of beginning teachers through to all stages of a teaching career.

(McMorrow, 2001)

Issues Effecting Early Career Teachers

According to Garvey (2004), classroom management, discipline, integration of students with special needs, providing individual education programs, learning new curriculum, adapting to a new school culture and being accountable to educational stakeholders are high on the list of concerns facing new and beginning teachers. Furthermore, early career teachers are frequently given the more behaviourally or learning difficult classes or students, or sent to the more challenging schools. Collinson et al. (2009) argues that these stresses can have a significant effect on both the personal and professional development of recently qualified teachers as they try to come to terms with new responsibilities. Teachers are also responsible for influencing the motivation and engagement of students, two key components that are essential to learning, especially when focusing on the key learning area of mathematics.

A fundamental aspect of teaching is the value that a teacher places on a specific content area. Student attitudes towards mathematics whether positive or negative, are shaped and can be altered as a result of the pedagogical practices demonstrated by the teacher (Hargreaves, 1994). If a teacher exhibits a positive attitude towards mathematics they are more likely to foster, encourage and support mathematical understanding in the students (Rawnsley & Fisher, 1998). Teacher professional development and classroom observations of what constitutes good practice can support the development of early career teachers. In Australia, the pedagogical focus in recent times has been on constructivist approach whereby students 'construct' their learning as they engage with the task and reflect on the processes they used; rather than the traditional 'chalk and talk' where the teacher is the director of the learning and may use a textbook or worksheets as a way of focusing the student. Past studies have shown that teachers generally will not change their beliefs simply because it was recommended (Duffy, 2003). This is a view held by Hoff (2003),

who states that altering a teacher's practice can prove difficult. A powerful reason for change must exist in order for a person to change what they believe to be best practice.

In many cases teachers in secondary schools are asked to teach outside their area of expertise due to shortages of qualified teachers, most frequently occurring within the subject areas of Mathematics and Science (Collinson, et al. 2009). In Australia a little over 50% of junior secondary teachers of mathematics hold the recommended qualifications in mathematics or studied the discipline as a first subject (Vale & McAndrew, 2008). A factor that may be contributing to more teachers teaching outside their area of expertise is the increasingly short term contracts offered to early career teachers, sometimes as short as one school term (Collinson et al., 2009).

From the primary viewpoint, evidence suggests that many primary teachers lack knowledge and confidence in their own mathematical abilities (Beswick et al., 2008) and struggle with a negative or indifferent attitude towards Mathematics (Klein, 2008). Exhibiting a positive attitude towards mathematics can have a profound effect on the learning that occurs in a classroom and if teachers also have excellent mathematical content knowledge and the ability to impart that knowledge in a superior manner we are less likely to create a cycle where students avoid the higher levels of mathematics. (Vale & McAndrew, 2008). Purposeful choices by teachers in the area of professional development can support their learning, in turn, increasing their knowledge base and the quality of teachers.

Professional Development and Teacher Motivation

When teachers undertake professional development, there are three purposes that drive their participation: the extension, renewal and growth of self, correlated with the development of knowledge, skills and understanding of teaching and learning mathematics. The two forces that impel teachers to partake of professional development are a systemic need to fulfil contractual obligation or for registration and is associated with renewal and a personal desire to learn more about the pedagogy or the content of the subject which encompasses all three purposes (Grundy and Robison, 2004, cited in Anderson 2008). Anderson argues that teachers do not typically seek out professional development to solve a specific set of problems or seek a specific area of learning; rather, they participate in professional development for more informal reasons such as, convenience or accreditation. It might also be argued that any professional development undertaken by an early career teacher or indeed any teacher will be of benefit to them and their students providing the learning is put into practice.

A study by Kennedy (2005 as cited in Anderson, 2008), found that improvements in classroom practice were initiated by teachers themselves and were *informal*, influenced by colleagues through shared discussion, *institutional*, from textbooks or curriculum documents and to a lesser extent, k*nowledge vending*, the participation by teachers in formal, organised professional development

Raymond (1997) states that professional development programs do not have the power to directly influence pedagogical practice beyond a certain level and that teacher education programs have a greater influence on the beliefs and attitudes of prospective teachers when the focus is on influencing the attitude of teachers towards mathematics. However, Thomas et al. (2009), report that when scrutinised, the teacher education courses offered to pre-service primary teachers lack the knowledge of the mathematical content and do not create a way of developing a depth of understanding to support quality teaching and learning of mathematics. Delandshere and Petrosky (2003) discuss the importance of education

programs reflecting the accreditation process for standards based education and that tertiary institutes are now altering their programs to fit the standards as set out for each state.

Impact of Policy Mandated Professional Development and Standards-Based Education on Beginning Teachers

In some settings professional standards have been used as a regulatory framework over the teaching profession mainly due to the fact that teaching accreditation and licensing relies on teachers passing the certification process (Sachs, 2003). Ingvarson (1998, cited in Sachs, 2003) and Chadbourne (1999, cited in Sachs, 2003) argue that the introduction of professional standards should improve teacher performance, teaching standards and contribute to the ongoing professional development of teachers. Additionally, standards are thought to provide accountability to consumers of education and potentially represent a level of quality or an assessment of quality. However, many teachers regard the evaluation process and performance management as unacceptable, but have yet to provide an alternative to the practice (Kleinhenz & Ingvarson, 2004).

The Institute of Teachers' Bill was introduced to the NSW Parliament on the 12th of May 2004 by Dr Andrew Refshauge, the then Deputy Premier of New South Wales and the Minister for Education and Training as a result of collaboration between the Professional Teaching Council (PTC), the Primary and Secondary Principals Associations in the government sector, the Catholic Education Commission, the Association of Independent Schools, the Teachers Federation, the Independent Education Union and parent organisations. The Institute of Teachers' Bill, now overseen by the New South Wales Institute of Teachers (NSWIT), decrees that all teachers employed after the 30th of September 2004, either at point of entry (graduate teachers) or returning to the profession following a break and wishing to gain accreditation, must show Professional Competence. The 2010 registration cost of AUD100 per annum is paid from the date that teachers are available to teach regardless of whether they are working full-time, casually, part-time or are unemployed (NSWIT, 2006). There is little written about the impact of the NSWIT Bill on early career teachers in the New South Wales setting, and there may be changes that occur as a result of the introduction of the National Curriculum in 2010. There has, however, been discussion about whether there should be a broad set of standards at a national level with the states and territories regulating them (Lee, 2009)

The introduction of educational policy can sometimes be a reaction to a political agenda and the structure and value of the policy may be influenced by negative student outcomes and test scores and can often be seen as a solution to increase results (Delanshere & Petrosky, 2004). The implementation of educational policy is often left in the hands of practitioners with little communication from the policy makers about the processes required to execute them sometimes resulting in adverse or unintentional consequences especially if the policy is the result of short term political thinking. Other considerations that need to be taken into account are whether schools, registration boards or tertiary institutes are equipped to deal with the changes and costs required with the implementation of innovative educational policies (Collinson, et al. 2009; Lee, 2009). In Australia the New South Wales Institute of Teachers (NSWIT) recognises that teacher education at tertiary level does not necessarily make a new graduate 'classroom ready'; teachers require more experience in the classroom and should not be considered 'fully fledged' teachers in their first or even their third year of teaching (Lee, 2009)

Conclusion

The existence of an explicit set of teaching standards and the articulation of those standards provides a means by which they can be expressed to everyone both inside and outside the profession. They contribute to the ongoing professional development of teachers and may enhance the status of the teaching profession (Mayer, 2005). However, policy mandated professional development increases the already heavy workload of teachers and creates a situation whereby teachers must be seen as a member of a profession that has a 'set' of publically documented standards by which their competence is measured (Sachs 2003). This has implications for early career teachers, particularly in New South Wales, as they strive to manage their teaching responsibilities as well as participate in the accreditation process in their formative years of teaching. As stated previously, the first five to seven years are the time when teachers learn the expertise associated with teaching, the 'how' and 'what' of teaching. Instead of expecting new teachers to engage in the accreditation process within their first two years of teaching, perhaps there should be consideration given to allowing graduate teachers more time to become familiar with the processes and responsibilities of teaching before requiring them to show proficiency.

The importance of ongoing professional development and identifying quality teachers of mathematics and their practices cannot be underestimated; how best to do this remains an issue. A great deal has been written on the question of standards within the Australian context. However, little has been written about how the teachers are reacting (O'Meara, 2004). Concerns about the proliferation of teaching standards across numerous key learning areas and state standards and now the National Standards in Australia (Teaching Australia, 2008) are the justification for this paper and future investigation. Further research is required into the standards debate to identify what choices of professional development are made by graduate teachers of mathematics. The impact of professional development on teaching practice requires investigation given that beginning teachers are in the very early stages of their career and are coming to terms with the responsibilities of teaching. Indeed, are they implementing new or innovative practices in mathematics or are they simply engaging in the professional development to 'get through' the accreditation process?

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