# **Riding the wave: The journeys of two primary schools in supporting beginning teachers' assessment knowledge and practices**

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### Abstract

The development of teachers' knowledge and understandings about effective classroom assessment strategies depends on the roles played by initial teacher education (ITE) providers, the employing schools, tutor teachers and other colleagues. For beginning teachers this is learning to satisfy professional, school and systemic needs to improve learning outcomes for children.

Many teachers are currently overwhelmed by the demands of classroom assessment. This makes the induction of beginning teachers in classroom assessment practices somewhat problematic. This presentation explores the process by which beginning teachers become socialised into the culture of assessment from initial teacher education programmes into their first teaching positions.

This paper is drawn from a larger study which includes the socialisation roles of initial teacher education programmes and schools employing new graduates. The journeys of two beginning primary teachers learning their classroom assessment roles are the focus for this paper. Data is reported from these beginning teachers and those who have supported them to show what factors may help and hinder their professional learning for their assessment roles.

#### Introduction

In recent years New Zealand research in teacher education has been dominated by studies exploring the quality of initial teacher education programmes and support for beginning teachers (Cameron & Grudnoff, 1993; Renwick & Vise, 1993; Lang, 1996, 1999; Mansell, 1996; Meek, 1998/9; Renwick, 2001). Our research also addresses these two aspects but from a narrower focus on the classroom assessor role as experienced by final year teacher education students and new graduates in their first six months of employment as teachers (Lovett & Sinclair, 2005). However, the data shared in this paper is restricted to the experiences of two beginning teachers as they learn to enact their classroom assessment role s and responsibilities.

It is noted that learning about the classroom assessor responsibilities begins within programmes of initial teacher education (ITE) and is completed by the employing schools. Shanker (1996) suggests we should not think that student s are instantly transformed into teachers the minute the ink dries on their diplomas. Instead he argues they must learn through a continuing process of discovering what works and what does not, of observing experts and of discussing teaching dilemmas with their peers (p.222). Others concur that initial teacher education and induction are not the final preparation for a career in teaching and need to be seen as a platform on which further professional development will be built (Earley & Bubb, 2004). This means that the employing schools have a crucial role to play in the socialisation of beginning teachers and their ultimate survival in the profession.

Decisions about what to include in programmes of initial teacher education has always been problematic. Yinger and Hendricks- Lee (1993) draw attention to this difficulty by raising four questions for consideration. Namely:

- 1. Why is it that most graduates of teacher education programmes still have most of their learning to do?
- 2. Why do teachers point to their first few years of teaching as the place they really learned to teach?
- 3. Why has the theory-practice split been of such concern to teacher educators?
- 4. Why all the recent attention to different types of knowledge that practitioners need? (p.4).

How these questions are answered will depend on individual views of learning and the degree of importance given to professional learning and reflection throughout one's career as well as knowledge of the nature and scope of initial teacher education programmes by the employing schools. Ball and Cohen (1999) admit that it would be easier if schools were identified as being the problem and argue:

"If teacher education programs did a solid job of preparing teachers for good practice, which was then corroded by the schools, then we could focus on practising teachers but the stage is set years before in teachers' initial preparation.... Even when they aim high, pre-service teacher education offers a weak antidote to the powerful socialization into teaching that occurs in teachers' own prior experience as students" (p.5).

However, there are no simple answers to questions of how new graduates and beginning teachers might best be supported in their professional journeys in becoming teachers. The process of teachers' socialisation into the profession involves multiple influences which include the dispositions of the beginning teacher and those with whom they have contact. Nias (1986) refers to teacher development as the development of self alongside significant others. This emphasis on the individual's sense of self is derived from the sociological tradition of symbolic interactionism. It recognises that "the self is both a social product, shaped by the response of others and an independent actor capable of innovating, initiating actions and reflecting on them" (p.3). In developing a sense of individual identity as a teacher, the beginning teacher must learn to balance their own values and beliefs alongside those of more experienced colleagues and at the same time fulfil their legal responsibilities of the teaching role.

In learning their professional role, new teachers may face tensions between reconciling their own emerging values and beliefs about teaching with those of others around them. For example, a study by Lunn and Bishop (2003) investigated the extent to which student teachers were actively involved in their professional learning as emerging professionals during their initial teacher education programme. This study

was based on an analysis of final year teacher education students' assignments requiring a statement of educational beliefs supported by research, educational theory and ideology. One disturbing finding was that many of the student teachers viewed. themselves as "being trained to meet certain standards of competence" rather than learning to be reflective practitioners (p.196). Although the intention of the assignment was to help raise personal awareness of their teaching values and beliefs, the assignment had instead unsettled many of the students as they came to realise there was a mismatch between what they themselves believed and a curriculum which emphasised a set of standards. One could then ask whether it is possible for emerging professionals to develop a sense of their own professional identity if their work is to comply with nationally set professional standards. The same question could be asked of those working with the beginning teacher in an employing school because they have their own established ways of knowing and working. What is problematic here is that these more experienced teachers and principals hold positions of power in determining the beginning teacher's move from provisional to full registration as a teacher.

Howey (1996) notes a similar tension between general professional preparation and the specific needs and norms of the organisation in which teachers eventually work. Beginning teachers may feel obliged to match the status quo and subsume their own philosophies within the dominant culture. Stuart and Thurlow (2000) refer to this as functionalist socialisation. On the other hand, if beginning teachers were to consider themselves as active learners who would continue learning as a career- long activity. an interpretive approach to their socialisation might be more useful. Ball and Cohen (1999) suggest that teachers need to be actively learning as they teach and that a more productive question would be to ask, "what might it take to learn in practice and to learn from practice?" (p.10). This is a very different approach where there may not be a learning hierarchy of those more experienced and knowledgeable and the beginner. Indeed if such a stance were to be adopted then teacher education programmes might look rather different as would support and guidance (induction) programmes in schools. Reflection however is a skill which beginning teachers learn as they experience the professional role with a class of their own and supportive colleagues who model the processes of reflection in and on practice. For some such active engagement in reflective practice takes time to develop because survival and fitting into the existing culture are their immediate priorities. Such influences surrounding a new graduate may determine whether they become socialised to the status quo or are able to make decisions based on their analysis of interactions with others who in turn shape their ways of knowing and doing, helping them to be reflective practitioners.

Levin (2003) highlights the forces underpinning teachers' socialisation into the profession through his longitudinal research study into how effective teacher preparation is played out in the lives of teachers once they begin their careers in the classroom. Findings from his 15 year longitudinal study (1985-2000) confirm three influences as shaping teachers' pedagogical understandings. These include ' the importance of a support system, the necessity for ongoing professional development and a propensity for reflection and metacognitive thinking'' (p.234). These findings provide some justification for a more learning-centred approach to beginning teacher induction programmes.

In terms of teachers' socialisation into a culture of assessment, there are other factors that serve to make the transition from new graduate to provisionally registered teacher problematic. Recent changes to education policy have placed improved outcomes for all students as the highest priority for schools. This has meant changes to teachers' assessment schedules and the amount of assessment required of them. Teachers have been introduced to a new range of high-quality assessment tools to enhance their assessment literacy. They have also been required to produce evidence to inform the next steps in their teaching and learning programmes. The Ministry of Education has embarked on an ambitious programme to monitor student achievement levels for schools by requiring schools to supply statements of annual targets, strategic plans and analyses of variance which show the extent to which schools are making a difference to student achievement. It is inevitable that these changes will impact on the quality of support that can be offered by the employing schools for teachers developing their knowledge, practice and confidence to perform their classroom assessment roles and responsibilities. Our study provides case study data from two primary schools to illustrate the ways in which the practices of the employing schools may help and hinder the effectiveness of beginning teachers' assessment practices.

## Method

## Selection of sample

In adopting a case study approach, this study has required the selection of two schools and the consent of several participants including the school principals, tutor teachers, beginning teachers and others who have provided more informal support for the beginning teachers.

The first step in determining our sample was to make a list of the schools who had advertised a job vacancy in the same city in a particular month in the Education Gazette. This established a list of 19 schools who were then contacted by phone to establish that they had appointed a beginning teacher for 2004. Further information was also gained from phone calls to school secretaries to determine the beginning teacher's gender and class level taught in the schools and whether they were in fulltime employment, a recent graduate and New Zealand trained. Ten of these schools had made beginning teacher appointments, some of which had employed more than one beginning teacher. Our selection was then based on recruiting one male and one female beginning teacher who were teaching at different levels of the schools. Two schools satisfying this mix were selected. Contact was subsequently made with the principals who were given explanations of the project and what it would mean for their schools should they agree to be involved. Following initial agreement by the principals, consent forms were left for the remaining teachers to complete. The beginning teachers agreed to being interviewed on three separate occasions, tutor teachers twice and the remaining teachers once.

## Procedure

Data was gathered primarily from interviews with the participants named above. Recent Education Review Office Reports were also accessed from the ERO website, and the principals shared their planning and reporting data which had been forwarded to the Ministry of Education. These documents highlighted each school's assessment strengths and weaknesses and provided a point of reference for our subsequent analysis of the support offered to the beginning teachers.

#### Case study profiles

The two schools which we have named School A and School B are located in the same city. School A was a large school with 16 classrooms and a non-teaching principal and deputy. School B was much smaller with just six classrooms, a non-teaching principal and an acting deputy principal who had classroom, syndicate and tutor teacher responsibilities. We have used the pseudonyms of Andrea and Danny for the beginning teachers in these case study schools. These schools had very different ways of working with their respective teachers. They differed in terms of their size, structural arrangements, staffing experience and turnover.

School A provided each classroom teacher with an extensive collection of written documentation regarding school policies and procedures to support curriculum delivery. These included guidelines for beginning teacher induction programmes and assessment timetables and procedures. The school also had templates for assessment records and was continually discussing and refining procedures at every level. Very favourable comments were made about the school's assessment procedures in their 2004 Education Review Office (ERO) Report which serve to indicate the considerable progress made in assessment. These points included the teachers' analyses of work samples in relation to achievement and the levels of the New Zealand curriculum showing next teaching steps, the written guidelines for teachers regarding the compilation of individual student portfolios, the tracking of progress in English and maths and the start made on computer recording of achievement data. The principal informed us that responsibility for curriculum and assessment had been delegated to those closest to the classroom and that his role was one of maintaining adequate support for teachers in terms of resources and professional development. Thus each syndicate had at least two senior teachers who were provided with teacher release to fulfil their additional responsibilities. This meant that Andrea, the beginning teacher, could seek advice and guidance from a range of staff and was not solely dependent on her tutor teacher.

School B was not as fortunate. After many years with relatively few staff changes, the school had recently faced a constant turnover of staff. Staff changes had occurred within the senior management team and at the classroom teaching level. The principal had only been at the school for two years and had no permanent deputy principal. In the meantime the most senior person was the assistant principal who was also acting deputy principal, syndicate leader for the junior school, tutor teacher and teacher for the new entrant class. These multiple responsibilities kept her fully occupied. Any other vacancies the school has had have been filled by temporary appointments or beginning teachers. Danny, the current beginning teacher, has been employed in a one year relieving position with another beginning teacher covering his 0.2 release entitlement.

The most recent ERO report for School B took place in the principal's first term of office in 2002. This report indicated that the school still had issues to address in its assessment procedures. For example it was noted that the teachers did not yet have a range of assessment tools such as criteria and benchmarks to make reliable judgements of students' achievement in relation to the New Zealand curriculum levels. Concern had also been expressed that there was insufficient guidance provided to teachers in the assessment policy and programmes of work for them to be able to identify learning outcomes for children. Similarly, it was noted that the portfolios, whilst including work samples, did not manage to indicate students' progress. Clearly these statements are indicative of a school which has further work to do in clarifying its assessment purposes and knowledge.

Both schools have tutor teachers who are new to their roles. At School A, Sam has taken on the role because the school's usual tutor teacher has a year's leave. He is fortunate to have followed a tutor teacher who had developed sound policies, job descriptions and processes with a suggested timetable for topics, formats for observations and templates for report writing. The school employs several beginning teachers and prides itself in providing excellent support. Sam was delighted to take on these responsibilities because he saw them as a pathway towards other management roles in the school.

For Marcia at School B, being the tutor teacher and teaching at another level have made her job harder. She has had to ask other teachers to spend time with Danny in order to take him through the necessary curriculum planning, assessment and resources for teaching a Year 2-3 class. These teachers were deemed to be more useful to Danny because they were teaching the same class level and had interchanged for maths, reading and religious education. Marcia considered her own contribution to Danny's teaching was one of giving advice and feedback on his classroom management, routines with exercise books and classroom environment. However, as the only senior teacher supporting the principal she has had multiple calls on her time and in her busyness has admitted to having assumed from passing conversations that Danny has either completed work or has been managing well. It was not until the time of the parent interviews that she discovered that Danny had not filed the necessary documentation and did not have everything in place. Consequently Danny had a very busy time getting all the paperwork completed for the portfolios. To some extent Marcia had contributed to his busyness and had learnt that she should ask for evidence in future.

Having received no training for her role, Marcia had assumed the position because there was no one else available in the school. When the beginning teachers returned from their in-service courses she had quizzed them about what they had learnt and their expectations of the tutor teacher role. These ideas informed her next steps about what to do in the advice and guidance programme. Until then she had relied on her associate teacher experience with student teachers and her long distant memory of being a first year teacher herself. There was no formal programme for beginning teacher induction in the school and her tutor teacher role was not part of her performance agreement. Marcia has felt very alone in her role as tutor teacher and admitted that she would welcome support and reassurance from the College of Education that she was on the right track. One suggestion made in her interview with us was for the College of Education to make two on-site visits to schools employing beginning teachers. She wanted these visits to include observations of the beginning teacher working in the classroom and discussions with the tutor teacher as is the practice with associate teachers and supervising college lecturers on teaching placements. Having another pair of eyes to affirm existing support or make suggestions for further development was seen as advantageous from Marcia's point of view. She was very keen to be doing her best to support her beginning teacher.

Both Marcia and Sam were mindful of their schools' assessment schedules and planned meetings to introduce the various assessments which would be used. These timetables largely determined their meeting agendas leaving little time for other matters to be addressed. The beginning teachers were then expected to administer and analyse the PAT tests, STAR, running records and establish individual portfolios for each of the children in their classes. Andrea took careful note of her assessment data and used it for grouping the children. On the other hand, Danny was just managing to keep pace with the assessment schedule having the largest class in the school. He had recorded the scores but had not used the information to inform groupings or future teaching steps.

In terms of knowledge and confidence about assessment there was a marked difference between the two schools. At School A all of the teachers were establishing learning intentions and success criteria with the children at the beginning of each lesson. The children knew what the their teachers expected from them. This was not as obvious at School B. Here the principal was introducing new requirements for assessment in the school. He had adopted two strategies to get teachers using assessment data to inform their teaching. One strategy was to create school benchmarks around an aspect of a school-wide integrated theme and to have the teachers moderate each others' samples of work. Marcia described this as 'nerve wracking' and was well aware that if she as an experienced teacher was struggling with this, then Danny would be finding it even harder.

At our second and third interviews we asked Andrea and Danny to come with an example of their assessments in literacy and/or numeracy. On both occasions, Danny talked about the school-wide benchmarks (instigated by the principal) in which the children had provided written scripts of interviews with an imaginary seal to determine how they survived in harsh conditions. This assessment had provided him with examples to illustrate the children's use of capital letters, full-stops and questions marks and whether they had included suitable questions. Danny also talked about using pre and post tests for maths but these were not sighted. His other example of a running record had been administered by another teacher and he was unable to provide much depth of analysis. Danny's talk about his assessment activities was primarily to satisfy compliance and the need to have evidence for the parent interviews.

In contrast, Andrea had brought several examples of written language to the interview. She explained how she had worked with the children to set learning intentions and success criteria. For example, in character writing, she had given each

of the children a photograph. As a class they had decided on 6 possible features which would provide an interesting description of the character. The children then selected or 3 of these and listed these at the top of their writing, "I want to show....". Then when they had completed their stories, they were asked to tick places where they had used these descriptions and get a partner to checkmark. In another example she showed that the quality of ideas and meaning were the first areas of focus in her responses to children's written language. Surface features were of secondary importance. Andrea was also able to describe how she was endeavouring to meet the individual needs of children in her class. She spoke about children who had pagelong sentences, provided limited explanations and those who needed to add more interest to their writing with descriptive words.

In describing her assessment learning journey, Andrea was aware that she had initially collected far too much information and had moved towards finding ways to record that information in ways which would inform her next teaching. She also admitted that she was endeavouring to move from praise to more constructive oral and written feedback. Her discussion of student samples of work clearly showed that she was not only excited about the children's work but was giving constructive feedback about how her students could improve their work

### Discussion

Andrea and Danny had different experiences of learning the classroom assessment role within their employing schools. For Andrea, it was clearly advantageous to be working in a larger school in which there were multiple sources of support available. Her tutor teacher was not inundated with additional responsibilities and was therefore able to make time for her when she needed it. She was also supported in the role herself by the principal and other senior managers and had been given a very structured programme to follow which had included an assessment timetable. Danny, was not as fortunate. Although he appeared to be confident in his teaching role, he was surrounded by teachers who were themselves adjusting to new ways of classroom assessment. This limited the number of role models who could show him how they used assessment data to inform their teaching.

In focusing on school-wide assessments, School B's principal was attempting to increase the teachers' assessment knowledge and skills through teacher talk and sharing of assessment practices so that they could learn from and support one another. Staff and syndicate meetings were providing opportunities for teachers to reflect on their practices through shared discussion of their assessment examples. This was a first step on a long journey towards creating the conditions to support and sustain teacher learning for improved student achievement in order to satisfy both individual and collective needs of the school as a whole. The teachers were developing shared knowledge and goals to promote effective classroom assessments as well as endeavouring to put these ideas into practice and using that data to inform subsequent decisions about their next teaching steps. The school's smaller size and lack of senior staff meant that it was harder to work with individual teachers to model effective teaching through classroom observations because teacher release was a scarce commodity. Beginning teachers are fortunate that they are likely to receive regular help from their advice and guidance programme with an assigned tutor teacher at least for their time of provisional registration. They are even more fortunate if "they are able to experience a culture in which the resources for inquiry into student experience and learning are supplied and teachers share responsibility for student well-being and achievement and the organisational scale enables sustained exchange regarding student learning" (Little, 1999, p.235). The organisational structure of School A matched this pattern because it had senior teachers able to focus on curriculum and assessment responsibilities and provided release time for this purpose. Collegiality was evident in the teachers' problem solving and continual questioning of their practices regardless of their years of experience as a teacher. The prevailing culture was one of continuous improvement showing teachers largely determining their own learning agendas rather than being dependent on others to do the thinking for them. Teachers at School B were currently more dependent on their principal's leadership to guide their assessment practices but were nevertheless improving their assessment knowledge and practices.

Both the employing schools in this study seemed unaware of what the initial teacher education programmes might cover in teaching the classroom assessor role. This meant that these schools accepted that they would need to instruct their beginning teachers on the use of classroom assessment tools as part of the advice and guidance programme. Both of the teachers in our study learnt their employing school's ways of assessment and endeavoured to put them into practice. This meant fitting into whatever the school required regardless of whether it matched the theory introduced through their initial teacher education programmes. In Andrea's case, teachers at her employing school were already implementing learning intentions and involving the children in assessing their work. She had had a brief introduction to learning intentions in her initial teacher education but admitted that it had not been enough to be confident in her own practices. Danny did not mention learning intentions at all and his assessment practice focused on the collection of samples of work for inclusion in individual portfolios of work to satisfy parents at interview discussions.

Our findings from these two case studies concur with those of Levin's much larger (2003) longitudinal study which identified three themes as being the shapers of teachers' development of thinking in the pedagogical domain. These themes emphasised the importance of a support system, the necessity for ongoing professional development and a propensity for reflection and metacognitive thinking (p.234). Indeed the two schools in our somewhat smaller study highlighted the differences when a school had developed clear systems and had a critical mass of experienced staff who could offer formal and informal support to beginning teachers. The presence of ongoing professional development in assessment was making a real difference at School A where the beginning teacher was immersed in a culture of continuous improvement and encouraged to ask questions and reflect on her practices. Andrea found it professionally stimulating to be working amongst experienced teachers who were continually refining their own practices and welcomed the input of other teachers' ideas. This type of school culture encouraged learning, risk taking and questioning by all of its participants which in our view had helped Andrea's assessment knowledge and practices to grow from strength to strength. The

importance of social interaction with colleagues for the purpose of improving learning and teaching is also highlighted by Levin (p.277). Similarly, these thoughts match a symbolic interactionist frame to demonstrate the development of self identity in teaching within a community of other learners who play an active role in shaping that development through their support, guidance and questioning of practice. Such reflection in and on practice is what can sustain and nurture the teaching profession as it becomes responsive to learner needs and able to make adjustments to suit.

## Recommendations

Our recommendations are based on our interview data and document analysis of assessment data and programme information from two contrasting schools. In particular we note the desirability of:

- 1 all schools developing *written policies and guidelines for advice and guidance programmes to support both beginning teachers and their assigned tutor teachers.* Such documents have the potential to provide information in order to clarify requirements, the use of the 0.2 release allocation, reporting of progress and useful ways of working together.
- 2 having *stronger links between the initial teacher education provider and the employing schools*. If schools had a clearer idea of initial teacher education curriculum and the key competencies expected from graduates they might not need to repeat information.
- 3 *professional development providers spending time in schools offering support to tutor and beginning teachers.* Information gained could then be used to inform the content of subsequent professional development programmes.
- 4 *tutor teachers attending professional development* to support their work with beginning teachers.
- 5 *registration for tutor teachers* which could only be renewed if their annual performance appraisals had assessed the quality of their support for beginning teachers as being suitable.
- 6 providing salary increments for tutor teachers.

## References

Ball, D.L., & Cohen, D.K. (1999). Developing practice, developing practitioners. Toward a practice-based theory of professional education. In L. Darling-Hammond., & G. Sykes. (Eds.). *Teaching as the learning profession. Handbook of policy and practice.* San Francisco: Jossey-Bass.

Cameron, M., & Grudnoff, L. (1993). What principals think of their beginning teachers. *SET: Research information for teachers, 2,* item 15.

Earley, P., & Bubb, S. (2004). *Leading and managing continuing professional development*. *Developing people, developing schools*. London: Paul Chapman.

Howey, K. (1996). Designing coherent and effective teacher education programs. In J. Sikula (Ed.). *Handbook of research on teacher education*. (Ch.8) (2<sup>nd</sup> edition). New York: Simon and Schuster Macmillan.

Lang, C. (1996). *Preparedness for teaching: Beginning teachers' views of their pre-service programmes and their first year of teaching*. A thesis submitted in partial fulfilment of the requirements for the degree of Master of Education. Hamilton: University of Waikato.

Lang, C. (2001). When does it get any easier? Beginning teachers' experiences during their first year of teaching. *Waikato Journal of Education*, *7*, 85-98.

Levin, B.B. (2003). *Case studies of teacher development: An in-depth look at how thinking about pedagogy develops over time*. London: Lawrence Erlbaum Associates.

Little, J.W. (1999). Investing in teacher learning: Staff development and instructional improvement (Ch.8) In L. Darling Hammond & G. Sykes (Eds.). *Teaching as the learning profession. A handbook of policy and practice.* San Francisco: Jossey-Bass.

Lovett, S., & Sinclair, L. (2005 in press). *The socialisation of teachers into the culture of assessment*. Final report. Wellington: New Zealand Council for Educational Research.

Lunn, P., & Bishop, A. (2003). 'To touch a life forever': a discourse on trainee teachers' perceptions of what it means to be an effective teacher in the primary school. *Educational Studies*, 29(2/3): 195-206.

Mansell, R. (1996). *Professional development of beginning teachers. How does it work?* Paper presented at the New Zealand Association for Research in Education Conference, Nelson, 5-8 December.

Meek, B. (1998/9). The professional competence of beginning teachers: A survey of employers. *Journal of Educational Research*, 4(1), 51-60.

Nias, J. (1986). Teacher socialisation: the individual in the system. Victoria: Deakin University.

Renwick, M., & Vise, J. (1993). Windows on teacher education: Student progress through Colleges of Education and the first year in the classroom. The final report. Wellington: NZCER.

Renwick, M. (2001). *Support for beginning teachers. Final report.* Wellington: Ministry of Education.

Shanker, A. (1996). Quality assurance. What must be done to strengthen the teaching profession. *Phi Delta Kappan* 78(3), 220-224.

Stuart, C., & Thurlow, D. (2000). Making it their own: Preservice teachers' experiences, beliefs, and classroom practices. *Journal of Teacher Education* 51(2), 113-121.

Yinger, R., & Hendricks-Lee, M. (1993). Working knowledge in teaching. In C. Day., J. Calderhead, & P. Denicolo. (Eds.). *Research on teacher thinking. Understanding professional development.* (Ch.7). London: Falmer.