CHAPTER THIRTY ONE

Researching Language Teacher Education

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Various definitions exist (see e.g. Mann 2005), but in its broadest sense, *language teacher education* (henceforth *LTE*) encompasses all those activities which teachers, at any stage of their careers, engage in for the purposes of professional learning (which in turn can be defined as growth in one or more facets of teaching – behavioural, (meta)cognitive, attitudinal and emotional). In this chapter, though, I limit my focus to the discussion of what is often referred to as *in-service teacher education* – that is, professional learning for practising teachers, with specific reference to teachers of second and foreign languages. There are four reasons for my focus on practising teachers here: a comprehensive discussion of all forms of LTE would not be feasible in the space available; in-service teacher education has received less empirical attention in the literature than initial teacher preparation; there is increasing activity and interest worldwide in relation to the continuing professional development (CPD) of language teachers and systematic evaluations of its impact; and much of my own recent work has taken place in in-service contexts. Many of the issues I cover in discussing ways of researching LTE will be relevant to readers interested in pre-service work too; however, some of the theoretical issues I discuss and the examples of research I examine will relate specifically to work in in-service contexts from a range of language education settings internationally. Wright (2010) provides a detailed review dedicated to initial teacher preparation in language teaching.

I will first discuss two contrasting perspectives on in-service teacher education and summarize current thinking about how to promote teacher

professional learning. I then consider key issues relevant to researching LTE, including the study of its impact, before concluding with a discussion of approaches and methods in LTE and a sample study.

Training-transmission models of LTE

Conventionally, as Johnson (2009b) notes, in-service teacher education has been done by others *to* teachers; typically, this might take the form of workshops or courses led by external trainers who provide teachers with knowledge and ideas. While I am not suggesting that such activity cannot contribute to teachers' growth, it is clear that, driven by a growing international dissatisfaction with the impact of in-service training on what happens in classrooms (Timperley 2011), serious questions have been raised in recent years about the efficacy of this approach to professional development. For example, when in-service teacher education is dependent on external activities led by others, professional learning by definition becomes an infrequent activity and one in which teachers rely on external agents for their own growth. Also problematic is the assumption that professional learning involves the acquisition through training of theoretical ideas and their subsequent application in the classroom – this is what Freeman (2009) describes as an input-application view of LTE. The classroom is thus viewed simply as the place where the application of new knowledge occurs. Further objections relate to the decontextualized and generic nature of training content and to the manner in which it has traditionally been defined:

> The problem … is that the need to know something new is identified by someone external to the group of teachers (e.g., a policy official or a researcher) without the participating teachers necessarily understanding the reason why it is important to know it or being committed to doing so (Muijs et al. 2014, p. 247).

Such concerns about the limited impact of training-transmission models of professional learning are not particularly new – 20 years ago Lamb (1995) lamented the lack of sustained practical impact of an in-service course on a group of language teachers in Indonesia; more recently, Kubanyiova (2012) has provided a detailed analysis of the failure of a year-long in-service initiative to achieve substantial impact on language teachers in Slovakia, while it has also been noted in China that 'teacher training at all levels for the new curriculum was found to be unable to help teachers solve practical problems or support their professional autonomy' (Wang & Zhang 2014, p. 223). Korea is another context where limited success has been reported in promoting more communicative language teacher practices through INSET (i.e. in-service teacher education) courses (Choi & Andon 2014; Hayes 2012).

Development-constructivist models of LTE

In contrast to the position outlined above, contemporary perspectives on in-service teacher education see the classroom as a powerful site for teacher learning and systematic inquiry by teachers into their own practices is a key professional learning process. Additionally, professional learning is not seen as the sequential, additive mastery and routine application of knowledge and skills but the development of 'adaptive expertise' (Hammerness et al. 2005) – that is, the capacity in teachers to modify, in creative ways, how they teach in response to evidence that existing practices are not effective. The constructivist nature of this perspective on teacher learning means that prior knowledge, beliefs and experience are recognized as important influences on how and what teachers learn. Another important feature of this perspective on INSET is that it is social – teacher learning is seen to be more effective when teachers learn together and share experiences and expertise. Darling-Hammond (2013, p. 150) thus notes that 'teaching improves most in collegial settings where common goals are set, curriculum is jointly developed, and expertise is shared', while Johnston (2009, p. 241) goes further (too far perhaps) by claiming that 'teachers can only learn professionally in sustained and meaningful ways when they are able to do so together'. An emphasis on collaboration and teachers' ownership of their professional learning does not rule out support from external agents; such support is actually recognized as a factor that can contribute to effective professional development (e.g. through university-school partnerships – see Wang & Zhang 2014).

Various strategies have been proposed through which this contemporary perspective on INSET can be implemented, such as peer observation (Richards & Farrell 2005), lesson study (Tasker 2011), critical friends groups (Poehner 2011), collaborative planning (Martin-Beltran & Peercy 2014), reading groups (Fenton-Smith & Stillwell 2011), exploratory practice (Allwright & Hanks 2009), teacher study groups (Hung & Yeh 2013) and action research (Burns 2010, this volume). Not all of these are, of course, particularly new – collaborative action research, for example, has been a feature of English language teaching in Australia for many years (Burns 1999) – but, globally, LTE is not characterized by the widespread adoption and study of such forms of professional learning. Even where they do exist, such as when peer observation schemes are mandated by Ministries of Education, evidence about their implementation is limited and that which does exist sometimes implies that the strategies are seen by teachers to be more of an administrative requirement than a learning opportunity (see, for example, A'Dhahab 2009). The simple existence within educational systems of the kinds of professional learning activities listed above cannot be taken, then, as a measure of effective professional learning; that is of course one reason why it is important for the use and impacts of such activities to be systematically researched.

Overall, though, there seems to be an emerging consensus in the literature (e.g. Avalos 2011; Beijaard, Korthagen & Verloop 2007; Broad & Evans 2006; Cordingley et al. 2003; Darling-Hammond & Lieberman 2012; Garet et al. 2001; Hammerness et al. 2005; Johnson 2009a; Leu & Ginsburg 2001; Muijs et al. 2014; Opfer & Pedder 2011; Richardson 1996; Schwille, Dembele & Schubert 2007; Timperley 2011; Timperley et al. 2008; Villegas-Reimers 2003; Waters & Vilches 2010) that professional learning can achieve positive and sustained impacts on teachers, learners and organizations when:

- it is seen by teachers to be relevant to their needs and those of their students
- teachers are centrally involved in decisions about the content and process of professional learning
- collaboration and the sharing of expertise among teachers is fostered
- it is a collective enterprise supported by schools and educational systems more broadly
- exploration and reflection are emphasized over methodological prescriptivism
- expert internal and/or external support is available
- classrooms are valued as a site for professional learning
- professional learning is recognized as an integral part of teachers' work
- classroom inquiry by teachers is seen as a central professional learning process
- teachers are engaged in the examination and review of their beliefs
- adaptive expertise is promoted
- student learning provides the motivation for professional learning
- teachers experience the cognitive dissonance that motivates change.

As I note below, though, it is important not to view these factors, uncritically, as a template for success in promoting professional learning.

Researching language teacher education

The study of in-service LTE is a growing area of activity and Table 31.1 lists recent illustrative studies, with brief notes on their focus and the research methods used. I will now discuss some key issues in this field of research.

Table 31.1 Recent studies of in-service language teacher education

Source	Focus	Research methods
Borg (2013a–c)	Impact of a mentoring program	Teacher narratives
Burns (2014)	Evaluation of an action research scheme	Written teacher evaluations, recordings of discussions during workshops, teachers' written reports
Choi and Andon (2014)	Impact of an INSET program on teachers' classroom practices	Document analysis, video recorded lessons, interviews, teacher assessment results
Choi and Morrison (2014)	Impact of a professional development program on teachers' classroom practices	Observations, on-line discussions
Collins and Liang (2013)	Teachers' evaluation of the relevance of on-line professional development tasks	Q study (ranking instrument), interviews
Fenton-Smith and Torpey (2013)	Evaluation of an induction program for EFL teachers	Surveys, written reports, interviews, focus groups
Hiver (2013)	The professional development choices of EFL teachers	Interviews
Huang and Papakosmas (2014)	Impact of teacher education program on teachers' beliefs and behaviours	Focus group interviews, lesson observations, student and teacher questionnaires, document analysis
Hung and Yeh (2013)	Impact of teacher study groups on teachers' beliefs and practices	Transcripts of teacher study group meetings, interviews
Kabilan and Veratharaju (2013)	EFL teachers' professional development needs	Questionnaire

(*continued*)

Table 31.1 Recent studies of in-service language teacher education

Source	Focus	Research methods
Lin (2014)	Teachers' views about on-line professional development	Questionnaires and interviews
Martin-Beltran and Percy (2014)	Teacher learning through collaborative teaching	Classroom observations, co-planning sessions, interviews
Molle (2013)	Facilitation processes during a professional development program	Audio recordings of professional development sessions, teacher coursework, interviews, pre-post course surveys
O'Dwyer and Atli (2014)	In-service teacher educators' perceptions of their roles and needs	Interviews, questionnaires
Walsh et al. (2013)	Using mobile phones in large-scale teacher development	Classroom observations, assessment of teacher and student English oral proficiency, attitude questionnaires, analyses of resources
Wang and Zhang (2014)	University-school collaborative action research	Pre-post project questionnaires, interviews, reflective journals, discussions, and research reports

Note: I have only included here studies of second and foreign language teachers' practices, beliefs knowledge, etc. as these relate to a teacher education initiative; many additional studies have provided descriptive analyses of such issues without a focus on LTE.

Professional learning as part of a system

Despite powerful arguments in the literature for the value of more job-embedded, collaborative and inquiry-based forms of professional learning, it is important that as a field we remain critical in the assumptions we make about how to support the development of practising teachers. One reason for this is that the outcomes of LTE are not simply determined by the activities teachers engage in (e.g. workshops, peer observation or action research). As discussed by Oper and Pedder (2011), who apply complex systems thinking to their analysis of professional learning, the learning activities teachers engage in interact with both the teachers' own prior knowledge, beliefs and experiences and with the school systems that teachers are part of. These interactions are also characterized by variability, meaning that the same professional learning activities will be differentially effective across contexts. For example, while collaborative teacher learning is generally seen to be desirable, there will be contexts where excessive emphasis on collaboration may prove counterproductive; similarly, action research will not be an appropriate professional learning option everywhere. And despite criticisms of 'workshops' as a strategy for professional development, they can be productive, particularly in combination with school-based work (Orr et al. 2013). What all this implies is that research on in-service LTE should not be simply about identifying the characteristics of teacher learning activities which seem to be effective; what is also important is an understanding of how particular learning activities interact with teacher and school system variables to shape the impact that LTE has. Oper and Pedder (2011) argue that attempts to understand teacher learning which focus solely on the activities teachers engage in 'must be understood as partial, incomplete, and biased' (p. 379).

So, for example, one important but understudied area of research in LTE relates to the relative effectiveness of different ways of structuring in-service initiatives. Many options are available, such as input-based training programs, two-phase programs which combine input and school-based practice, mentoring models, wholly online or blended models, teacher research programs (e.g. Borg 2014) and technology-driven programs (e.g. the English in Action project in Bangladesh, where mobile phones are used to deliver content to teachers – Walsh et al. 2013). It is not possible to empirically understand the contributions these (and other – see Orr et al. 2013) models make to the professional learning of language teachers without also understanding how the activities teachers engage in interact with their existing cognitions and experiences and with their school systems. As already noted, the complex ways in which these three influences may combine to shape professional learning will differ across contexts; the expectation that research will ever show that any one way of structuring INSET is universally more effective than others is therefore unrealistic. What we do need is detailed contextualized evidence of how different approaches

to professional learning unfold, and as this becomes available our ability to make predictions about which approaches are most appropriate in which contexts will improve. Currently, though, our understandings of such matters in LTE remain limited. Thus, while I subscribe to many of the ideas about effective professional learning listed earlier (i.e. regarding collaboration and inquiry), I remain open-minded about their relative value in differing LTE contexts around the world.

Studying LTE and its impacts

Despite the need to consider LTE holistically, research projects typically delimit their focus, making particular facets of LTE salient. For example (see Table 31.1), LTE research can focus on:

- Teachers – for example, motivations for and evaluations of professional development, (the development of) their beliefs, attitudes, knowledge, skills, emotions, identities and classroom practices.
- Teacher educators – for example, their demographic characteristics, practices (such as facilitation and supervision[1]), cognitions and own professional development.
- Programs – for example, underlying philosophies, objectives, content, structure, resources, teaching/learning processes, modalities (e.g. face-to-face, on-line) assessment and evaluation.
- Strategies – specific approaches to professional learning such as peer observation, teacher support groups, teacher research and mentoring.
- Contexts – that is, how classrooms, schools, policies and cultures shape the nature and outcomes of teacher education.
- Impacts – the effects of teacher education on teachers, students and organizations.

In relation to the first of these points, while LTE has typically focused on the development of teachers' methodological skills, it is increasingly the case (especially in developing contexts) that improving teachers' language proficiency is the predominant focus of INSET; such work often happens at scale (i.e. with thousands of teachers), though to date the analysis of such work has been limited to largely internal project evaluations rather than the focus of empirical study. In relation to the last point on the list above, impact, from a research point of view as well as for practical accountability, understanding and demonstrating what difference LTE makes are important issues. However, impact can be defined and studied in a range of ways and researchers thus need to give due consideration to the way they

operationalize this notion. At a broad level, professional learning can impact on teachers, students and organizations. And breaking this down further, Figure 31.1 illustrates a range of ways in which the impact on language teachers might be defined – this covers impacts on knowledge, teaching, affect and teachers' capacity for self-direction. Impact studies may or may not define their precise focus in advance; it is possible, for example, to adopt an initially broad orientation on impact to explore (e.g. with teachers) their perceptions of the different ways an in-service initiative is promoting change and to identify different kinds of impact from this analysis. In other studies, though, a concern for particular kinds of impact (e.g. on student learning) will be defined from the outset and studies will be designed with this specific focus in mind. Irrespective of whether impact is studied inductively or deductively, criticality is needed in considering what different kinds of evidence can actually tell us about professional learning. Oper and Pedder (2011) note the dangers of mistaking empirical evidence of change for evidence of professional learning; in LTE, for example, Scott and Rodgers (1995) compared teachers' conceptions of writing using a pre- and post-course survey and found that initially 58.5 per cent of the beliefs expressed were aligned with the principles and practices promoted on the course, compared to 89 per cent afterwards. There was clearly empirical evidence of change here; the lack of information about whether such change had any impact in the classroom, though, means caution is needed in the claims that are made about the effectiveness of the in-service program. Another important variable in the study of the impact of teacher education is timing – while evaluation data are commonly collected at the end of teacher education initiatives, it is less common for the longer-term impact of

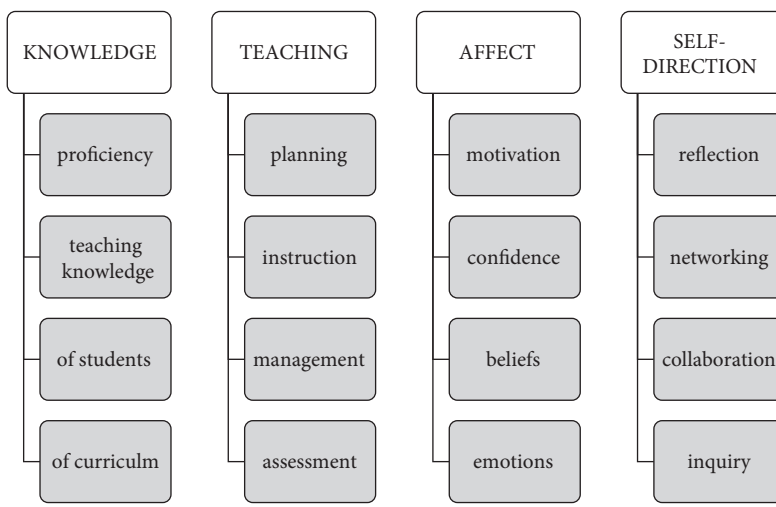

FIGURE 31.1 *Impacts on teachers of in-service language teacher education*

these initiatives to be studied (i.e. in terms of what happens when teachers return to the classroom). The formative study of impact is also an option for more extended programs.

Professional learning and student achievement

In recent analyses of INSET (e.g. Timperley et al. 2008), the key impact which has been used in defining effectiveness is student learning and Cochran-Smith and Fries (2008) note that this focus on student outcomes is currently the dominant paradigm for teacher education research in the United States. In LTE, Johnson (2009b, p. 26) has also noted that

> the next generation of research on L2 teacher education must tackle the thorny question of the relationship between teacher professional learning and student learning…. Probing the relationship between what teachers come to know through professional development and what, through their teaching, their students come to know and are able to do will be absolutely critical for the professional legitimacy of L2 teacher education in the future.

However, little progress has been achieved in this area and I am not aware of any research in LTE where links between professional learning and student outcomes have been explicitly studied. Poehner (2011), for example, provides a powerful account of how a teacher transformed her thinking and practices through a critical friends group but admits that 'we do not have evidence of student learning' (p. 202). Hutterli and Prusse (2011), to take just one more example, also report some success in transferring innovations into classrooms through INSET, but how these innovations benefitted students is not discussed. There are several reasons why research on LTE has yet to engage with student outcomes in any substantial manner (see also Hayes & Chang 2012; Tsui 2011):

1. Research which establishes causal relationships between professional learning and student outcomes employs complex statistical techniques (e.g. McCutchen et al. 2002). Researchers in LTE may often lack the required methodological expertise.
2. The data required for the statistical study of associations between teacher professional development and student outcomes are often not available (e.g. teachers on in-service LTE initiatives are very often not assessed).
3. Researchers may object on paradigmatic grounds to the assumption that professional learning, teaching and student outcomes can be causally studied. Freeman and Johnson (2005), for example, reframe the relationship between teacher knowledge and student learning as one of influence rather than causality.

4 Researchers may also find flawed the expectation that generalizable connections between professional learning and student outcomes can be established given the many other variables related to teachers, learners and school systems that interact in defining the impact that professional learning has on what students learn.

5 Another objection to process-product research on the effects of teacher education, as Borko, Whitcomb and Byrnes (2008) note, is that it does not generate findings that are of practical value and cannot explain why particular approaches to professional learning succeed or fail in particular contexts.

Despite these arguments, experimental and correlational studies demonstrating statistical links between professional learning and student achievement are very attractive to policy makers as well as to donors who may be investing substantial funds in INSET in order to raise student achievement and who can justifiably expect some measure of the difference it is making to what students learn. As a field, we need to engage more robustly with this issue and to develop frameworks which can support researchers in examining how professional learning influences student learning. Methodological pluralism should be encouraged, with space for both quantitative and qualitative approaches.

Approaches and methods in researching LTE

A survey of the available literature does not highlight any substantial discussion of methodological issues in the study of LTE. Many individual publications reporting research findings and discussing key relevant concepts do of course exist; deeper analyses of particular theoretical frameworks and their implications for the way teacher learning is conceptualized are also available; Johnson (2009a), for example, provides a detailed account of a sociocultural perspective on LTE; Borg (2006) outlines a framework centred on teacher cognition; Feryok (2010) draws on complexity theory while teacher conceptual change is the framework developed by Kubanyiova (2012). Despite their differences, such frameworks all reflect a move away from process-product and input-output models of professional learning and embrace more complex, dynamic notions of what it means to be and to grow as a teacher. However, frameworks which seek to classify different approaches and methods in the study of LTE are not readily available and I would now like to examine this issue.

The first point I will make is that there is nothing unique about the approaches and methods that are used in research on LTE. The broad processes for such inquiry – designing, conducting, reporting – are those which apply to educational research more generally. The options regarding

paradigms, approaches and data collection strategies are similarly those which exist more generally in the social sciences literature and readers are referred to research methods texts for discussions of these. Also in common with research more generally, LTE research must strive for rigour to ensure that it generates trustworthy findings (what counts as 'rigour' and 'trustworthiness' will of course vary depending on one's perspective on social inquiry). It is also important that LTE research contributes in a productive way to the improvement of educational practice and, very importantly too, that it is ethical. Methodological diversity in LTE research should also be seen as a strength and quantitative, qualitative and mixed methods designs all have a role to play in the further development of the field (the examples in Table 31.1 suggest that qualitative work currently predominates).

Despite the above comments, there have been attempts in the mainstream teacher education literature to define different approaches to research and I will comment on just two examples here. The first, Zeichner (1999), discussed what he called 'the new scholarship' in teacher education research (in the United States) and proposed five kinds of research that were characterizing the field at the time. His categories were: survey research, case studies of teacher education programs, conceptual and historical research, studies of learning to teach and examinations of the nature and impact of teacher education activities, including self-study research. This list is problematic (as the author himself admits) as a framework for classifying different approaches to researching teacher education; for example, while survey research denotes either a research approach or a specific method of data collection, studies of learning to teach refer to a research focus (which may be examined through surveys). This analysis, though, does highlight potential differences of emphasis in the way that LTE might be approached. A second, more recent, framework for teacher education research consisting of four genres (see also Kennedy 2006, for an earlier discussion of genres in teacher education research) is provided by Borko, Whitcomb and Byrnes (2008), again largely with reference to the United States. The first genre discussed is the *effects of teacher education research*, which is the statistical approach to establishing links between teacher learning and student outcomes discussed earlier. Studies in this group use experimental and correlational designs and complex statistical procedures to study links between specific variables in teacher education and what students learn. A second genre is *interpretive research,* which utilizes qualitative methodologies (such as ethnography, case studies and narratives). Interpretive research in teacher education is concerned with understanding, from stakeholders' perspectives, the experiences, processes and outcomes of professional learning. Data are collected through a range of methods such as interviews, observations and journals and data analysis involves qualitative strategies such as thematic analysis (Braun & Clarke 2006) through which detailed contextualized

descriptions of events and experiences are generated. *Practitioner research* is a third genre of research on teacher education. Here, we must be careful to distinguish practitioner research as a strategy for teacher professional development and practitioner research as a strategy through which teacher educators study their own practices – it is the latter which functions as a genre of teacher education research. This form of research is also called self study (see the special issue of the journal *Studying Teacher Education*, Vol. 8, No. 2, which is dedicated to this theme). In practitioner research, teacher educators are both the researchers and the focus of the research. They engage in the systematic study of themselves (rather than, as in conventional research, of others) and can collect data through a wide range of qualitative and quantitative methods. The final genre of teacher education research that Borko, Whitcomb and Byrnes (2008) mention is what they call *design research*. The characteristics of this approach are that it takes place in real settings (not experimental ones); consists of repeated cycles of design, application and redesign of an educational innovation, is theory-driven; and requires close collaboration between researchers and practitioners over an extended period of time (perhaps years). Multiple forms of data are collected in order to provide detailed insights into the processes and outcomes of the innovation being developed.

Applied to the LTE research in Table 31.1, the genres of teacher research described above are both useful and problematic. They are helpful in that they indicate that while interpretive research in LTE is common, practitioner research by in-service language teacher educators is less in evidence. They are problematic because they do not account in a comprehensive manner for the different ways in which LTE is being studied, most obviously (in the four genres proposed more recently) by not accounting for questionnaire-based studies of teachers' views about professional development. The distinction between interpretive research and practitioner research is also one I do not find particularly valuable in analytical terms given that the latter is very often interpretive in nature. What we require, then, is a scheme for describing different approaches to research in LTE which is comprehensive and provides relatively discrete categories that allow comparisons at different levels of analysis (e.g. research paradigms, approaches and methods). It may be that frameworks for classifying approaches to research more generally will serve this purpose well, supplemented with descriptors that link them explicitly to teacher education research. For example, Bryman (2012) classifies research through a matrix of research designs (experimental, cross-sectional, longitudinal, case study and comparative) and research strategies (quantitative and qualitative); Creswell (2013) presents a framework which combines philosophical worldviews, designs, research approaches and research methods; while, to take a final example, Saunders, Lewis and Thornhill (2012) propose the 'research onion' in which research

parameters are described through a series of concentric circles which move inwards and become increasingly specific, covering (starting from the most general parameter) philosophy, approach, methodological choice (quantitative, qualitative or mixed methods), strategies, time horizon (cross-sectional or longitudinal) and techniques and procedures. Mapping LTE research onto such frameworks is beyond my scope here but would be a valuable activity to undertake.

A sample study

To conclude this chapter, I will now briefly discuss a sample study of in-service LTE. I have opted to focus on a project of my own, not to suggest this is necessarily better than others that are available but because I can comment with deeper insight on the processes that the study entailed. As already noted, though, the studies in Table 31.1 are all excellent candidates for further study by readers wanting to develop their understanding of research methods used in current research on LTE.

The study I discuss here (Borg 2011a, b) examined teacher learning during an INSET program called the Delta (Diploma in Teaching English to Speakers of Other Languages) and which is administered by Cambridge English Language Assessment. The study covered a range of questions but the two I will focus on here are:

1. What evidence is there of teacher learning – defined broadly as changes in knowledge, practices, awareness, attitudes, and beliefs – both in participants' own accounts of their experience on the Delta modules and in their assessed work and tutor feedback on it?
2. After completing the Delta, what impact on their professional practice do participants say the Delta modules have?

Data collection

The study was interpretive and longitudinal and data were collected from six teachers during the eight-week intensive program. The data took many forms, primarily detailed semi-structured interviews (six per teacher) and all the coursework the teachers produced during their program together with the tutor feedback they received on it. My role in this study was that of external researcher – I was not involved in the delivery of the course in any way. All the data for each teacher were compiled into chronologically ordered case files which allowed their experience of the program to be studied from just before the course started until two months after its completion.

Data analysis

Data analysis was qualitative and case studies were constructed for each teacher to narrate the stories of their learning during the program. The teachers read these accounts and provided comments on them. Methodologically, then, the study was underpinned by a belief in the value of studying teacher education qualitatively, narratively and longitudinally. The study also had a strong ethical dimension; for example, it was designed in negotiation with the course manager and the teachers to ensure data collection points did not clash with times when they were particularly busy.

Results

The results show that, collectively, through the course the teachers experienced enhancements in their practical skills, theoretical knowledge, planning and interactive decision-making skills, criticality, reflective ability, awareness of their beliefs, strengths and weaknesses, confidence and self-esteem, awareness of learners, attitudes to teaching and attitudes to professional development. Even where the observable impact of the Delta on teachers' classroom practices (during and after the course) was not felt to be significant, participants reported major changes in the thinking behind their work. Two months after the course, while contextual factors in the teachers' institutions did not always support their ability to apply learning from the Delta to their subsequent work, the teachers remained nonetheless positive of the considerable difference to their knowledge and thinking that the course had made. One area where impact varied was in changing teachers' beliefs about language teaching and learning. There was evidence that belief change did occur, but in some cases the teachers did not seem fully aware of or capable of articulating these changes.

Limitations

One limitation of the study relates to the lack of observational data about teachers' practices during and after the Delta. During the course, substantial data were collected about teachers' lessons through their lesson plans and from the lengthy written feedback they received from tutors on these lessons, but no direct observations of the teachers during practice teaching or input sessions during the course took place. Similarly, their classroom practices after the course were not observed. The study thus relied very heavily on teachers' own accounts of their professional learning.

Note

1 See Bailey (2006), Chapter 13, for a discussion of research on supervision in in-service contexts.

Resources for further reading

Borko, H, Jacobs, J & Koellner, K 2010, 'Contemporary approaches to teacher professional development', in P Peterson, E Baker & B McGaw (eds), *International Encyclopedia of Education*, 3rd edn, Elsevier, Oxford, pp. 548–556.

This chapter provides a concise analysis of contemporary understandings of what makes professional development for teachers effective.

Johnson, KE & Golombek, PR (eds), 2011, *Research on Second Language Teacher* Education, Routledge, London.

This collection of studies in both initial and in-service contexts illustrates the application of sociocultural perspectives to the study of LTE.

Muijs, D, Kyriakides, L, van der Werf, G, Creemers, B, Timperley, H & Earl, L 2014, 'State of the art – teacher effectiveness and professional learning', *School Effectiveness and School Improvement*, vol. 25, no. 2, pp. 231–256.

A recent review of literature on the factors that influence student learning, including teacher professional development.

Richards, JC & Farrell, TSC 2005, *Professional Development for Language Teachers*, Cambridge University Press, Cambridge.

This practical book on professional development strategies can provide researchers with ideas about the kinds of issues in LTE that can be researched.

Wedell, M 2009, *Planning Educational Change: Putting People and Their Contexts First*, Continuum, London.

While concerned with educational change more generally, this book provides analyses which are very relevant to the design and implementation of in-service LTE initiatives.

References

A'Dhahab, SM 2009, 'EFL teachers' perceptions and practices regarding reflective writing', in S Borg (ed.), *Researching English Language Teaching and Teacher Development in Oman*, Ministry of Education, Oman, pp. 1–15.

Allwright, D & Hanks, J 2009, *The Developing Language Learner: An Introduction to Exploratory Practice*, Palgrave Macmillan, Basingstoke.

Avalos, B 2011, 'Teacher professional development in Teaching and Teacher Education over ten years', *Teaching and Teacher Education*, vol. 27, no. 1, pp. 10–20.
Bailey, KM 2006, *Language Teacher Supervision*, Cambridge University Press, Cambridge.
Beijaard, D, Korthagen, F & Verloop, N 2007, 'Understanding how teachers learn as a prerequisite for promoting teacher learning', *Teachers and Teaching: Theory and Practice*, vol. 13, no. 2, pp. 105–108.
Borg, S 2006, *Teacher Cognition and Language Education: Research and Practice*, Continuum, London.
——— 2011a, 'The impact of in-service teacher education on language teachers' beliefs', *System*, vol. 39, no. 3, pp. 370–380.
——— 2011b, 'Teacher learning on the Delta', *Research Notes*, vol. 45, pp. 19–25.
——— (ed.), 2013a, *Narratives of Teacher Development 1: Reading and Speaking*, The British Council, Kuala Lumpur.
——— (ed.), 2013b, *Narratives of Teacher Development 2: Stories and Songs*, The British Council, Kuala Lumpur.
——— (ed.), 2013c, *Narratives of Teacher Development 3: Engaging Young Learners*, The British Council, Kuala Lumpur.
——— (ed.), 2014, *Teacher Research in Pakistan: Enhancing the Teaching and Learning of English*, British Council, Lahore.
Borko, H, Whitcomb, JA & Byrnes, K 2008, 'Genres of research in teacher education', in M Cochran-Smith, S Feiman-Nemser, JD McIntyre & KE Demers (eds), *Handbook of Research on Teacher Education: Enduring Questions in Changing Contexts*, 3rd edn, Routledge/Association of Teacher Educators, New York, NY, pp. 1017–1049.
Braun, V & Clarke, V 2006, 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101.
Broad, K & Evans, M 2006, *A Review of Literature on Professional Development Content and Delivery Modes for Experienced Teachers*, Canadian Ministry of Education, Toronto.
Bryman, A 2012, *Social Research Methods*, 4th edn, Oxford University Press, Oxford.
Burns, A 1999, *Collaborative Action Research for English Language Teachers*, Cambridge University Press, Cambridge.
——— 2010, *Doing Action Research in English Language Teaching: A Guide for Practitioners*, Routledge, New York, NY.
——— 2014, 'Professional learning in Australian ELICOS: An action research orientation', *English Australia Journal*, vol. 29, no. 2, pp. 3–20.
Choi, DSY & Morrison, P 2014, 'Learning to get it right: Understanding change processes in professional development for teachers of English learners', *Professional Development in Education*, vol. 40, no. 3, pp. 416–435.
Choi, TH & Andon, N 2014, 'Can a teacher certification scheme change ELT classroom practice?', *ELT Journal*, vol. 68, no. 1, pp. 12–21.
Cochran-Smith, M & Fries, K 2008, 'Research on teacher education: Changing times, changing paradigms', in M Cochran-Smith, S Feiman-Nemser, JD McIntyre & KE Demers (eds), *Handbook of Research on Teacher Education: Enduring Questions in Changing Contexts*, 3rd edn, Routledge/Association of Teacher Educators, New York, NY, pp. 1050–1093.

Collins, LJ & Liang, X 2013, 'Task relevance in the design of online professional development for teachers of ELLs: A Q methodology study', *Professional Development in Education*, vol. 39, no. 3, pp. 441–443.
Cordingley, P, Bell, M, Rundell, B & Evans, D 2003, *The Impact of Collaborative CPD on Classroom Teaching and Learning*, EPPI Centre, Social Science Research Unit, Institute of Education, London.
Creswell, J 2013, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4th edn, Sage, Thousand Oaks, CA.
Darling-Hammond, L 2013, *Getting Teacher Evaluation Right: What Really Matters for Effectiveness and Improvement*, Teachers College, New York, NY.
Darling-Hammond, L & Lieberman, A 2012, *Teacher Education Around the World: Changing Policies and Practices*, Routledge, London.
Fenton-Smith, B & Stillwell, C 2011, 'Reading discussion groups for teachers: Connecting theory to practice', *ELT Journal*, vol. 65, no. 3, pp. 251–259.
Fenton-Smith, B & Torpey, MJ 2013, 'Orienting EFL teachers: Principles arising from an evaluation of an induction program in a Japanese university', *Language Teaching Research*, vol. 17, no. 2, pp. 228–250.
Feryok, A 2010, 'Language teacher cognitions: Complex dynamic systems?', *System*, vol. 38, no. 2, pp. 272–279.
Freeman, D 2009, 'The scope of second language teacher education', in A Burns & JC Richards (eds), *The Cambridge Guide to Language Teacher Education*, Cambridge University Press, Cambridge, pp. 11–19.
Freeman, D & Johnson, KE 2005, 'Towards linking teacher knowledge and student learning', in D Tedick (ed.), *Second Language Teacher Education: International Perspectives*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 73–95.
Garet, MS, Porter, AC, Desimone, L, Birman, BF & Yoon, KS 2001, 'What makes professional development effective? Results from a national sample of teachers', *American Educational Research Journal*, vol. 38, no. 4, pp. 915–945.
Hammerness, K, Darling-Hammond, L, Bransford, J, Berliner, D, Cochran-Smith, M, McDonald, M & Zeichner, K 2005, 'How teachers learn and develop', in L Darling-Hammond & J Bransford (eds), *Preparing Teachers for a Changing World*, Jossey-Bass, San Francisco, CA, pp. 358–389.
Hayes, D 2012, 'Mismatched perspectives: In-service teacher education policy and practice in South Korea', in C Tribble (ed.), *Managing Change in English Language Teaching: Lessons from Experience*, The British Council, London, pp. 99–104.
Hayes, D & Chang, K 2012, 'Theoretical perspectives on and international practice in continuing professional development for English teachers', *English Teaching*, vol. 67, pp. 107–129.
Hiver, P 2013, 'The interplay of possible language teacher selves in professional development choices', *Language Teaching Research*, vol. 17, no. 2, pp. 210–227.
Huang, L & Papakosmas, A 2014, 'The impact of TKT on Chinese teachers' teaching beliefs, knowledge and practice', *Research Notes*, vol. 57, pp. 13–23.
Hung, HT & Yeh, HC 2013, 'Forming a change environment to encourage professional development through a teacher study group', *Teaching and Teacher Education*, vol. 36, pp. 153–165.
Hutterli, S & Prusse, MC 2011, 'Supporting the transfer of innovation into foreign-language classrooms: Applied projects in in-service teacher education',

in J Hüttner, B Mehlmauer-Larcher, S Reichl & B Schiftner (eds), *Theory and Practice in EFL Teacher Education*, Multilingual Matters, Bristol, pp. 145–163.
Johnson, KE 2009a, *Second Language Teacher Education: A Sociocultural Perspective*, Routledge, London.
——— 2009b, 'Trends in second language teacher education', in A Burns & JC Richards (eds), *The Cambridge Guide to Second Language Teacher Education*, Cambridge University Press, Cambridge, pp. 20–29.
Johnston, B 2009, 'Collaborative teacher development', in A Burns & JC Richards (eds), *The Cambridge Guide to Language Teacher Education*, Cambridge University Press, Cambridge, pp. 241–249.
Kabilan, MK & Veratharaju, K 2013, 'Professional development needs of primary school English-language teachers in Malaysia', *Professional Development in Education*, vol. 39, no. 3, pp. 330–351.
Kennedy, M 2006, 'Research genres in teacher education', in F Murray (ed.), *Knowledge Base in Teacher Education*, McGraw-Hill, Washington, DC, pp. 120–152.
Kubanyiova, M 2012, *Teacher Development in Action: Understanding Language Teachers' Conceptual Change*, Palgrave Macmillan, Basingstoke.
Lamb, M 1995, 'The consequences of INSET', *ELT Journal*, vol. 49, no. 1, pp. 72–80.
Leu, E & Ginsburg, M 2001, *First Principles: Designing Effective Education Program for In-Service Teacher Professional Development*, USAID, Washington, DC.
Lin, Z 2014, 'In-service professional development in an online environment: What are South Australian English as an additional language or dialect teachers' views?', *Professional Development in Education*. DOI: 10.1080/19415257.2014.902860.
Mann, S 2005, 'The language teacher's development', *Language Teaching*, vol. 38, no. 3, pp. 103–118.
Martin-Beltran, M & Peercy, MM 2014, 'Collaboration to teach English language learners: Opportunities for shared teacher learning', *Teachers and Teaching: Theory and Practice*, vol. 20, no. 6, pp. 721–737.
McCutchen, D, Abbott, RD, Green, LB, Beretvas, SN, Cox, S, Potter, NS, Quiroga, T & Gray, AL 2002, 'Beginning literacy: Links among teacher knowledge, teacher practice, and student learning', *Journal of Learning Disabilities*, vol. 35, no. 1, pp. 69–86.
Molle, D 2013, 'Facilitating professional development for teachers of English language learners', *Teaching and Teacher Education*, vol. 29, no. 1, pp. 197–207.
Muijs, D, Kyriakides, L, van der Werf, G, Creemers, B, Timperley, H & Earl, L 2014, 'State of the art – teacher effectiveness and professional learning', *School Effectiveness and School Improvement*, vol. 25, no. 2, pp. 231–256.
O'Dwyer, JB & Atli, HH 2014, 'A study of in-service teacher educator roles, with implications for a curriculum for their professional development', *European Journal of Teacher Education*. vol. 38, no. 1, pp. 4–20.
Opfer, VD & Pedder, D 2011, 'Conceptualizing teacher professional learning', *Review of Educational Research*, vol. 81, no. 3, pp. 376–407.
Orr, D, Westbrook, J, Pryor, J, Durrani, N, Sebba, J & Adu-Yeboah, C 2013, *What are the Impacts and Cost Effectiveness of Strategies to Improve Performance*

of Untrained and Under-Trained Teachers in the Classroom in Developing Countries? A Systematic Review, EPPI Centre, University of London, London.
Poehner, P 2011, 'Teacher learning through critical friends groups', in KE Johnson & PR Golombek (eds), *Research on Second Language Teacher Education*, Routledge, London, pp. 189–203.
Richards, JC & Farrell, TSC 2005, *Professional Development for Language Teachers*, Cambridge University Press, Cambridge.
Richardson, V 1996, 'The role of attitudes and beliefs in learning to teach', in J Sikula (ed.), *Handbook of Research on Teacher Education*, 2nd edn, Macmillan, New York, NY, pp. 102–119.
Saunders, M, Lewis, P & Thornhill, A 2012, *Research Methods for Business Students*, 6th edn, Pearson, London.
Schwille, J, Dembele, M & Schubert, J 2007, *Global Perspectives on Teacher Learning: Improving Policy and Practice*, UNESCO, Paris.
Scott, R & Rodgers, B 1995, 'Changing teachers' conceptions of teaching writing: A collaborative study', *Foreign Language Annals*, vol. 28, no. 2, pp. 234–246.
Tasker, T 2011, 'Teacher learning through lesson study', in KE Johnson & PR Golombek (eds), *Research on Second Language Teacher Education*, Routledge, London, pp. 204–221.
Timperley, H 2011, *Realizing the Power of Professional Learning*, Open University Press, Milton Keynes.
Timperley, H, Wilson, A, Barrar, H & Fung, I 2008, *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration (BES)*, Ministry of Education, Wellington.
Tsui, ABM 2011, 'Teacher education and development', in E Hinkel (ed.), *Handbook of Research in Second Language Teaching and Learning*, Routledge, London, pp. 21–39.
Villegas-Reimers, E 2003, *Teacher Professional Development: An International Review of Literature*, International Institute for Educational Planning, Paris.
Walsh, CS, Power, T, Khatoon, M, Biswas, SK, Paul, AK, Sarkar, BC & Griffiths, M 2013, 'The "trainer in your pocket": Mobile phones within a teacher continuing professional development program in Bangladesh', *Professional Development in Education*, vol. 39, no. 2, pp. 186–200.
Wang, Q & Zhang, H 2014, 'Promoting teacher autonomy through university-school collaborative action research', *Language Teaching Research*, vol. 18, no. 2, pp. 222–241.
Waters, AV & Vilches, MLC 2010, '"*Tanggap, tiklop, tago*" *(Receive, Fold, Keep): Perceptions of Best Practice in ELT INSET*', The British Council, London.
Wright, T 2010, 'Second language teacher education: Review of recent research on practice', *Language Teaching*, vol. 43, no. 3, pp. 259–296.
Zeichner, K 1999, 'The new scholarship in teacher education', *Educational Researcher*, vol. 28, no. 9, pp. 4–15.