



THE UNIVERSITY *of* EDINBURGH

## Edinburgh Research Explorer

### Understanding continuing professional development

**Citation for published version:**

Kennedy, A 2014, 'Understanding continuing professional development: The need for theory to impact on policy and practice', *Professional Development in Education*, vol. 40, no. 5, pp. 688-697.  
<https://doi.org/10.1080/19415257.2014.955122>

**Digital Object Identifier (DOI):**

[10.1080/19415257.2014.955122](https://doi.org/10.1080/19415257.2014.955122)

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Peer reviewed version

**Published In:**

Professional Development in Education

**General rights**

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact [openaccess@ed.ac.uk](mailto:openaccess@ed.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.



## Understanding CPD<sup>1</sup>: The need for theory to impact on policy and practice

### Abstract

This article reflects on my 2005 article in this journal, entitled 'Models of continuing professional development: A framework of analysis'. Having been invited to reflect on the original article as part of PDiE's 40<sup>th</sup> anniversary celebrations, I have taken the opportunity to reflect not only on the structure and content of the original framework, but also to position it within the current state of literature in the area of teacher professional learning. In so doing, this article proposes an updated framework for analysis, focusing more explicitly on the purpose of particular models than the categorisations of the models themselves. It then goes on to expand on this by considering how various aspects of CPD policies might be analysed according to what they reveal about underlying perspectives on professionalism. The article concludes with some thoughts on how theory about teacher professional learning might better help us to understand policy and impact positively on practice.

### Introduction

I am delighted to know that my earlier article, 'Models of continuing professional development: A framework of analysis' (Kennedy, 2005), has been the most downloaded article in the journal's 40 year history (Swaffield, 2014, p. 332). Having been asked to reflect on that article as part of the journal's 40<sup>th</sup> anniversary celebrations, I find myself reflecting on why this apparent popularity might be the case, and several possible explanations come to mind:

1. I have struck on a 'clever' title in the sense that the article appears frequently in potential readers' search results?
2. It is accessible in style to a wide range of readers, from policy, professional and academic fields, and therefore appeals to a wider range of readers?
3. It fills a gap in the existing literature?

My own view is that while reasons 1 and 2 might well be the case, the reason for its enduring interest is probably due to the fact that it addresses an area in which there continues to be a paucity

---

<sup>1</sup> I am using the term 'CPD' in part because it is what was used in the original article on which I am now reflecting, but also because it still has common currency across the globe, despite moves in many places to use the term teacher professional learning, or in my own native Scotland 'career-long professional learning'.

of literature. Originally a chapter in my own PhD thesis, the work came about as a result of a need to theorise models of CPD – something that I struggled to find elsewhere in the literature at the time (the original chapter from which the article came was written around 2003/04). So, in the first part of this present article I want to consider the extent to which this gap in the literature has been filled over the last decade. I then want to look at my original 2005 framework with a view to critiquing and reviewing it for the contemporary context, before moving on to propose a means of interrogating not only models of CPD and their purposes, but CPD policies as a whole.

### **The state of the literature in CPD**

Prompted by the invitation to reflect on my own work, I want to argue that the state of the literature on teachers' CPD as a whole is partial in its coverage, is fragmented and is under-theorised. This is not, however, to take away from the many, many excellent articles and books which provide really useful analyses of particular CPD initiatives or policies; rather, it is to take a more holistic look at where we are as a sub-discipline with a view to identifying how we might strengthen our collaborative endeavour in the pursuit of deeper and better understanding of the phenomenon that is teacher learning. It should be acknowledged that such a critique of the literature on CPD has also been levelled at education research more generally. It has been suggested that: it fails to produce cumulative findings and that it is characterised by theoretical incoherence (Tooley & Darby, 1998); it does not provide an evidence-base that can inform practice (Goldacre, 2013); and that it is predominantly small-scale in nature (Tatto, 2013).

A significant proportion of the literature on teachers' CPD reports on examples of initiatives in particular local or national contexts. A review of the articles in the most recent issues of this journal illustrate this perfectly: 'Development of teacher leadership: a multi-faceted approach to bringing about improvements in rural elementary schools in Pakistan' (Ali, 2014); 'An innovative model of professional development to enhance the teaching and learning of primary science in Irish schools' (Smith, 2014); 'US urban teachers' perspectives of culturally competent professional development' (Flory et al., 2014). Another closely linked sub-section of the literature considers particular 'types' or 'models' of CPD, for example: 'Developing a model for continuous professional development by action research' (Herbert & Rainford, 2014). This was the very sub-section of literature that formed the basis of my analysis for the 2005 framework article. While there was a plethora of articles exploring particular models or approaches, there was very little that synthesised these models and even less that sought to theorise such syntheses in relation to broader concerns such as policy,

power and professionalism, taking the contribution beyond simply creating typologies of CPD models.

Arising from, or perhaps developing alongside, the literature on specific contexts and specific models, is the body of literature that focuses on conditions for, or characteristics of, effective CPD. This body of the literature lends itself particularly well to meta-analysis of existing studies, and includes some very influential work such as Timperley et al's 'Best evidence synthesis' (2007) and Cordingley's analyses of literature on effective CPD (2003, 2005a, 2005b, 2007).

Another growing, but still relatively limited, sub-section of literature focuses on the impact of CPD, examples of which include a recent article by King (2014) entitled 'Evaluating the impact of teacher professional development: an evidence-based framework', and Guskey's seminal work on teacher change through CPD (2002). Guskey suggests that there are three areas of impact, or 'change', expected as a result of teacher engagement in CPD: 'change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students' (p. 381). Yet much of the emerging literature looking at the impact of CPD adopts a much more narrow view of impact, seeing it primarily as gains in pupil test results. Indeed, some literature goes even further in attempting to measure in economic terms the impact of individual teachers on pupils' earning capacity as adults (Chetty et al., 2012).

Yet another sub-section of the literature sits at the intersection of teacher professional learning and policy studies, reporting on and analysing CPD policies in particular contexts, for example: 'Providing for the professional development of teachers in England: a contemporary account of a government-led intervention' (Burstow & Winch, 2014). However, literature reporting on policy analyses in particular contexts is vastly outweighed by that focusing on individual teachers' experiences of CPD, their beliefs about their own professional learning and the relationship between their own professional identities and their engagement with CPD. Linked to this sub-section of literature is work that considers the concept of professionalism and how it impacts on teachers' CPD engagement. Most of this work, however, focuses on the individual teacher as the unit of analysis, and studies which look at how the concept of professionalism can be mobilised to influence the profession as a whole in relation to CPD is much less evident.

Another apparent gap in the literature, and again something that is mirrored in the education literature more generally, is the almost non-existence of longitudinal studies, something that

perhaps might grow in importance as the emphasis on identifying 'impact' grows. Nonetheless, while there are a few examples of studies which look at teachers across the career lifespan (e.g. Day et al., 2007; Tang & Choi, 2009), these studies tend to take place at one point in time, but with a sample of teachers spanning the career lifespan.

Taking these various sub-sections of literature together: the literature on context-specific initiatives, the literature on particular models of CPD, the literature on characteristics of effective CPD, the literature on the impact of CPD and the literature on CPD policy, would suggest that CPD can be understood as both a pedagogical construct and as a policy construct. In order to be of practical use to the education system as a whole, the literature must be capable of being understood in a range of contexts, suggesting that in relation to CPD research, there is an imperative that theoretical literature can be seen as 'theory in context'. It is this particular synthesis of literature, however, that is so lacking. There still remains scant literature which seeks to build upon the range of models and perspectives, providing theoretical tools for understanding them in context. My original 2005 article sought to do that, as did a subsequent article published with colleagues in this journal in 2007 (Fraser et al.). The 2007 article built up on my original framework for analysis, but in arguing for a more nuanced and sophisticated way to theorise CPD, set the framework alongside Bell & Gilbert's (1996) three aspects of professional learning and Reid's quadrants of professional learning (McKinney et al., 2005) to create what we termed the 'triple lens framework'.

However, the need remains, and indeed is perhaps even more pressing, for us to develop sophisticated but accessible means of understanding CPD more deeply. I suggest this need is even more pressing as the dominant global discourse continues to promote a policy trajectory which promotes good teacher learning as central to good pupil learning. However, national responses to this policy imperative have in some places, resulted in a clear move towards instrumental, managerial approaches to 'measurement' where pupil performance in standardised tests is used as a proxy for teacher quality, as opposed to the more broad-based and varied range of areas outlined by Guskey (2002) in the discussion above

In attempting to respond to my own call to continue to develop theory which helps us to understand and explain CPD, the discussion now moves to consider how the 2005 framework for analysis might be developed further.

### **Reviewing the framework 10 years on**

In reviewing my 2005 framework it is important first to recognise that the world has moved on in the intervening 10 or so years. In particular, policy on teacher learning, or CPD, has risen in prominence

internationally, driven in no small measure by the global hyper-narrative that tells us (and tells governments in particular!) that improving teacher quality will improve pupil outcomes which will increase nation states' economic competitiveness (Loomis et al., 2008). One of the key means identified through which teacher quality can be enhanced is CPD (OECD, 2005; Mourshed, Chijioke & Barber, 2010). Against this background it is perhaps not surprising to see an increase in performative ideologies, supporting what Sachs (2001) would term a 'managerial' view of teacher professionalism. Conversely, the attention paid to more social-democratic ideologies which view teachers as change agents, are perhaps less evident in official policy developments. Herein lies a dilemma, and one that I was acutely aware of when developing the original framework: in order to make real progress teachers do need to have autonomy and the ability and space to exert agency. However, the more common policy approach to the development of 'sophisticated' CPD systems and programmes has been to tie them up in bureaucratic, managerial knots which squeeze out autonomy and instead seek and reward compliance and uniformity.

In reviewing my 2005 framework, there are two key aspects that I wish to address here: first, there is a need to consider the extent to which the component parts of the framework have stood the test of time, and second, there is a need to develop the conceptual basis of the framework further to enable a more systematic and contextually appropriate analysis of CPD policies. I would hope that in developing this second aspect, it would be able to sit alongside an updated version of the original framework to provide analytical tools for interrogating both models/means of CPD and CPD systems more generally, thereby supporting analysis of both policy and practice.

### **Standing the test of time?**

The original framework identified nine models of CPD that were prominent in the literature at the time; these are discussed in some detail in the original 2005 article (also reprinted in this journal in 2014):

1. training;
2. award-bearing;
3. deficit;
4. cascade;
5. standards-based;
6. coaching/mentoring;
7. community of practice;
8. action research; and

## 9. transformative.

The first point to make about these as labels is that some of the terminology is perhaps a little dated, or at least other terms have gained in popularity. For example, the term 'action research' seems to have been relegated somewhat in favour of the increasingly popular, and more broadly encompassing, 'professional inquiry', and 'communities of practice' are perhaps more commonly called 'learning communities' or 'teacher learning communities', maybe reflecting a more explicit emphasis on learning as opposed to simply practice. Much of the more contemporary literature describing specific models of CPD emphasises the positives of collaborative professional inquiry models such as Timperley et al's (2007) 'inquiry and knowledge-building cycles', something akin to a combination of both communities of practice and action research, using the 2005 model terminology, but with a more deliberate focus on problematising practice within a shared, local context. It is important to recognise that such approaches to CPD must fundamentally be teacher and student-driven (albeit they might be supported by external facilitation), otherwise they risk being used as a form of contrived collaboration which serves to promote externally-imposed interests (Kennedy, 2014, forthcoming).

Perhaps more importantly than the detail of individual models, however, is the extent to which the categories of 'purpose' identified across the spectrum, are still appropriate. In work that has drawn on the 2005 framework, a transmission/transformational dualism seems to have been much more widely used than the notion of these categories being different ends of a spectrum. The middle category, labelled as 'transitional' in the original framework, has been much less widely used; perhaps because of the tendency to see transmission/transformational as illustrative of undesirable/desirable CPD (to put it rather crudely) but perhaps also, because the label itself does not really convey the essence of the meaning that I intended. I think that this middle category is perhaps the most important one as it acknowledges that one particular type or model of CPD can be used to different ends depending on the intended (or unintended?) purpose(s). For example, mentoring can be used to support, encourage autonomy, creativity and independence, but equally can be used as a powerful means of professional socialisation to encourage conformity to the status quo. On reflection, I wonder if this category of purpose might more aptly be labelled 'malleable'. In adapting the framework slightly, and in seeking greater consistency and coherence, I would also suggest 'transmissive' and 'transformative' as categories, rather than 'transmission' and 'transformational'.

Taking the above points into consideration, the table below presents a slightly amended 'Spectrum of CPD models' which takes a more mediated approach to the allocation of specific models under

specific categories, emphasising the importance of the categories of purpose as analytical devices, and positioning the models more explicitly as examples which illustrate the features of the three categories.

***[Insert Table 1 here]***

In addition, I have also taken the opportunity to move one model to another category of purpose, and to remove another model altogether. The ‘award-bearing model’ was originally placed in the transmissive category owing to the context and environment in which much award-bearing CPD was being promoted at the time of writing, particularly in Scotland. However, with the increasing emphasis on Masters-level learning as a means of enhancing teacher criticality and autonomy, but still acknowledging the capacity for it to be ‘prescribed’ by Governments (Bailey & Sorensen, 2013), I now consider it to be more accurately placed in the ‘malleable’ category, illustrating its responsiveness to contingent factors such as who is paying and what the motivation is for study, but also acknowledging that in many cases Masters-level award-bearing CPD can be liberating, empowering and a significant contributory factor to enhancing teacher agency.

I have removed altogether what was termed the ‘transformative model’ as an illustration within the transformative category, as this was acknowledged in the original version as being more a combination of experiences and contextual factors rather than a model itself. And instead of using ‘action research’ as an illustration, I have chosen to illustrate the transformative category through ‘collaborative professional inquiry models’. By collaborative professional inquiry (CPI) I mean all models and experiences which include an element of collaborative problem-identification and subsequent activity, where the subsequent activity involves inquiring into one’s own practice and understanding more about other practice, perhaps through engagement with existing research. In many ways this is perhaps more of an orientation to professional learning than it is a specific CPD model, but specific examples of CPI include Timperley et al’s (2007) ‘teacher inquiry and knowledge-building cycle’, Elmore’s ‘instructional rounds’ (City et al., 2009), and the more generic ‘professional learning communities’, which Stoll et al (2006) claim to be an effective route to enacting education reform at individual, school and system level.

Another seemingly minor, but to me fundamental, amendment to the original framework is the inclusion of ‘teacher agency’ in the box which indicates increasing capacity for professional autonomy. It strikes me that while there might be increasing capacity for professional autonomy as one moves down the framework categories, this autonomy is only ever transformative if it is translated into agency, that is, it must be enacted in some way as to make a positive change to



practice. It also, I think, helps to make the point that autonomy is both an individual construct that can contribute to teacher agency, and a profession-wide construct that shapes the ways in which teachers are governed, regulated, trusted and respected as a professional group.

The illustrative examples in the adapted framework above are identified principally in order to illustrate more explicitly the kinds of CPD activities that I understand to fit most naturally under the categories of purpose. It is the categories of purposes themselves that seem to be more important in terms of supporting or limiting professional autonomy and agency, at both individual and profession-wide levels. However, it is absolutely essential to acknowledge that no one individual model of CPD on its own can be seen to support a particular purpose of CPD, rather, the categories are designed to help us to analyse patterns and trends in our own CPD experiences as individuals and to analyse institution-wide and system-wide approaches. I am not suggesting that all CPD experiences must be transformative in nature, rather that a transformative purpose, or orientation, will privilege particular models of CPD, while still acknowledging that some skills may well be best learned or refreshed through more transmissive approaches to learning. This idea leads us naturally to consider not only the individual CPD models or experiences, but the wider policies within which these experiences are situated.

### **Developing a framework for the analysis of CPD policies**

While the spectrum of models discussed and amended above is helpful in terms of analysing the likely or possible outcome of specific models in terms of their capacity to support teacher autonomy, there is also a need to consider the wider, systemic picture. This is increasingly the case as the global context promotes a meta-narrative which focuses on CPD as a means of enhancing teacher quality in order to improve pupil attainment, and ultimately, to increase nation states' economic competitiveness. Individual nation states' responses to this global policy trajectory vary, however, and it is therefore crucial that we explore the context within which CPD systems are developed, and that we interrogate the underpinning perspectives on professionalism that serve to shape the development of individual countries' or states' CPD policies.

I find Sachs' (2001) discussion of perspectives on professionalism to be particularly helpful in facilitating understanding of the ideological and political driving forces which inform CPD policies. Her delineation of managerial versus democratic professionalism in many ways provides a conceptual framework for understanding the 'transmissive' and 'transformative' purposes categorised in the amended CPD framework outlined above. Sachs (2001) claims that 'values of

managerialism have been promoted as being universal: management is inherently good, managers are the heroes, managers should be given the room and autonomy to manage and other groups should accept their authority', going on to suggest that 'These ideologies have found themselves to be prevalent in education bureaucracies as well as in schools themselves, especially in the management practices found in schools' (p. 151). This managerial perspective on professionalism privileges efficiency and compliance, and externally-imposed accountability features highly. Democratic professionalism, on the other hand, positions teachers as change agents and 'seeks to demystify professional work and build alliances between teachers and excluded constituencies of students, parts and members of the community on whose behalf decisions have traditionally been made either by professions or by the state' (p. 152). This perspective privileges collaboration, openness, teacher agency and an overt commitment to social justice.

In seeking to offer a framework which aids the analysis of CPD policies, I draw on these two perspectives on professionalism, using them to unpick and illustrate how various aspects of CPD policies might present themselves at system-level.

***[Insert Table II here]***

It is not suggested that any one national CPD policy would necessarily fit wholly under either the managerial or the democratic categorisation, rather that CPD policies are complex and multi-faceted, and that there is a need to interrogate the component parts in order to see how the system is positioned as a whole. However, in unpacking various aspects of CPD policies, it might be possible for a school, local government area, state or country to identify key aspects of their own policy which appear incongruent with their overall perspective on professionalism. I also believe stridently that such frameworks for understanding particular policy phenomena help to provide a shared language for discussion and debate that might otherwise not be accessible.

### **Concluding comments**

In the foregoing discussion, I have indulged in the opportunity to reflect on my earlier work in relation to more recent literature and policy developments. I would not, however, claim that either the amended framework for analysis of CPD models, or the framework above which seeks to understand the intricacies of CPD policies better, are in any way the finished article. The dynamic political and global influences on teacher learning mean that the pursuit of adequate theory which helps us to understand and shape it is an ongoing one.

However, as I hope I illustrate in the earlier part of this article, there is a real need for us to develop a coherent and wide-ranging body of theory which will serve both to impact on practice and to interrogate policy. In particular, I want to challenge the dominance of the 'what works' policy-borrowing approach to the development of policy to promote teacher learning. It is simply not sufficient to identify high performing countries and to seek to replicate key aspects of their policies without understanding first what our own particular 'problems' are and without understanding why particular solutions might work. I hope that the reflections and propositions in this article might contribute to our collaborative ability to develop tools for making better sense of CPD policy and practice.

## References

- Ali, T. (2014). Development of teacher leadership: a multi-faceted approach to bringing about improvements in rural elementary schools in Pakistan. *Professional Development in Education*, 40(3), 352-375.
- Bailey, M. & Sorensen, P.(2013). Reclaiming the ground of master's education for teachers: lessons to be learned from a case study of the East Midlands Masters in Teaching and Learning, *Journal of Education for Teaching: International research and pedagogy*, 39:1, 39-59.
- Bell, B. & Gilbert, J, (1996). *Teacher development: a model from science education*. London: Falmer Press.
- Chetty, R., Friedman, J., and Rockoff, J., 2012. The long-term impacts of teachers: teacher value-added and student outcomes in adulthood [online]. Cambridge, MA: University of Harvard, NBER Working Paper No. 17699. Available from: [http://obs.rc.fas.harvard.edu/chetty/value\\_added.pdf](http://obs.rc.fas.harvard.edu/chetty/value_added.pdf) [Accessed 17 June 2014].
- Cordingley, P., Bell, M., Rundell, B. & Evans, D. (2003). 'The impact of collaborative CPD on classroom teaching and learning', in *Research Evidence in Education Library*, EPPI-Centre, Social Science Research Unit: Institute of Education, University of London.
- Cordingley, P., Bell, M., Evans, D. & Firth, A. (2005a). 'The impact of collaborative CPD on classroom teaching and learning. Review: What do teacher impact data tell us about collaborative CPD?' in *Research Evidence in Education Library*, EPPI-Centre, Social Science Research Unit: Institute of Education, University of London.
- Cordingley, P., Bell, M., Thomason, S. & Firth, A. (2005b). 'The impact of collaborative continuing professional development (CPD) on classroom teaching and learning. Review: How do collaborative and sustained CPD and sustained but not collaborative CPD affect teaching and

- learning?' in *Research Evidence in Education Library*, EPPICentre, Social Science Research Unit: Institute of Education, University of London.
- Cordingley, P., Bell, M., Isham, C., Evans, D. & Firth, A. (2007). 'What do specialists do in CPD programmes for which there is evidence of positive outcomes for pupils and teachers? Report', in *Research Evidence in Education Library*, EPPI-Centre, Social Science Research Unit: Institute of Education, University of London.
- City, E., Elmore, R., Fiarman, S. & Teitel, L. (2009). *Instructional rounds in education: A network approach to improving teaching and learning*. Harvard Education Press: Cambridge, MA.
- Day, C., Sammons, P., Stobart, G., Kinton, A. & Gu Q. (2007). *Teachers matter: Connecting work, lives and effectiveness*. Maidenhead: Open University Press.
- Flory, S., McCaughtry, N., Martin, J., Murphy, A., Blum, B. and Wilson, K. (2014). US urban teachers' perspectives of culturally competent professional development. *Professional Development in Education*, 40(2), 282-294.
- Fraser, C., Kennedy, A., Reid, L. & McKinney, S. (2007). Teachers' continuing professional development (CPD): contested concepts, understandings and models. *Journal of In-Service Education*, 33(2), 153-169.
- Herbert, S. & Rainford, M. (2014). Developing a model for continuous professional development by action research. *Professional Development in Education*, 40(2), 243-264.
- Goldacre, B. (2013). *Building evidence into education*.  
<http://media.education.gov.uk/assets/files/pdf/b/ben%20goldacre%20paper.pdf>
- Guskey, T. (2002). Professional development and teacher change. *Teachers and Teaching: theory and practice*, 8(3/4), 381-391.
- Kennedy, A. (2005). Models of continuing professional development: A framework of analysis. *Journal of In-service Education*, 31(2), 235-250.
- Kennedy, A. (2014). Models of continuing professional development: A framework of analysis. *Professional Development in Education*, 40(3), 336-351.
- Kennedy, A. (2014, forthcoming). What do professional learning policies say about purposes of teacher education? *Asia-Pacific Journal of Teacher Education*, (In press).
- King, F. (2014). Evaluating the impact of teacher professional development: an evidence-based framework. *Professional Development in Education*, 40(1), 89-111.
- Loomis, S., Rogríguez, J. & Tillman, R. (2008) Developing into similarity: Global teacher education in the twenty-first century, *European Journal of Teacher Education*, 31(3), 233-245.

- McKinney, S., Carroll, M., Christie, D., Kennedy, A., Reid, L. & Wilson, A. (2005). AERS: Learners, learning and teaching Network Project 2 – progress report. Paper delivered at the *Scottish Educational Research Association Conference*, Perth, Scotland, 24-26 November.
- Mourshed, M., Chijioke, C. & Barber, M. (2010) *How the world's most improved school systems keep getting better*. London: McKinsey & Company.
- OECD. (2005). *Teachers matter*. Paris: OECD.
- Tatto, M.T. (2013). *The role of research in international policy and practice in teacher education*. London: BERA/RSA.
- Timperley, H., Wilson, A., Barrar, H. & Fung, I. (2007). *Teacher professional learning and development: Best Evidence Synthesis Iteration*. Auckland: New Zealand Ministry of Education.
- Sachs, J. (2001). Teacher professional identity: competing discourses, competing outcomes. *Journal of Education Policy*, 16(2), 149-161.
- Smith, G. (2014). An innovative model of professional development to enhance the teaching and learning of primary science in Irish schools. *Professional Development in Education*, 40(3), 467-487.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M. & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221-258.
- Swaffield, S. (2014). Models of professional learning and the global imperative of professional development in education. *Professional Development in Education*, 40(3), 331–335.
- Tooley, J., & Darby, D. (1998). *Educational research: A critique*. London: Office for Standards in Education.