

# Methodological Issues Around Evaluation: How Do We Know What Difference Professional Development Activities Make?

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QUESTIONI METODOLOGICHE IN MERITO  
ALLA VALUTAZIONE: COME SI FA A CAPIRE  
QUALE DIFFERENZA POSSONO PRODURRE  
LE VARIE ATTIVITÀ DI SVILUPPO PROFESSIONALE?

## ABSTRACT

*It is universally agreed that professional development is important but much money has been spent on training and development activities without a commensurate impact on pupils' learning and wellbeing. With financial constraints hitting education systems across the world, the time is right to try to understand professional development better for as Lawless and Pellegrino (2007) state although the number of opportunities for teachers has increased, our understanding about what constitutes quality professional development, what teachers learn from it, or its impact on student outcomes has not substantially changed. Ascertaining the difference professional development makes is a complex process. Exposure to and participation in development activities may or may not bring about change to individuals' beliefs, values, attitudes and behaviours. These changes to individuals may or may not lead to changes in the classroom and school practice. And these changes may or may not lead to improvement in pupil outcomes. Difficulties in researching this field, some have argued, stem from simplistic conceptualisations of teacher professional learning that fail to consider how learning is embedded in work contexts. This paper seeks to unpack some methodological issues related to evaluating the difference that professional development makes.*

*Keywords:* Professional development, Teacher development, Evaluation, Training, Impact.

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## 1. THE IMPORTANCE OF TEACHER DEVELOPMENT

It has long been recognised that the development and learning of teachers are key to improving education: many reforms depend on them implementing change. Teacher development has considerable implications for the future improvement of pupil outcomes. Hanushek and Rivkin's research suggests that pupils taught by the most effective teacher learn in six months what it takes a year for pupils taught by the average teacher to achieve (Hanushek & Rivkin, 2006 and 2010). Moreover, those taught by the least effective teachers took two years to make the same amount of progress. The McKinsey Report, «How the world's best performing school systems come out on top» (Barber & Mourshed, 2007), cites evidence from Tennessee (Sanders & Rivers, 1996) of the cumulative difference that good teaching can make to pupils from early on in their schooling. Between the ages of eight and eleven, pupils experiencing high quality teaching show a 53 per cent better performance than those experiencing low quality teaching. Matthews (2009) draws on the size of this gap to suggest that a similar model might be proposed for the progressive value of training and development for teachers, especially in the formative early years.

Professional development has a significant part to play in teacher retention for much research chronicles the high wastage rates of new teachers, in particular (Achinstein & Athanases, 2010; Dauksas, Elmhurst, & White, 2010; Jensen *et al.*, 2012; Wechsler *et al.*, 2010). In the USA, for example, approximately 30 per cent of those who enter the profession leave within three years, and up to 50 per cent leave within five years (Darling-Hammond, 1997; Ingersoll & Smith, 2004). This early departure has been attributed to unsupportive schooling conditions (Johnson *et al.*, 2004). Schools with more affluent pupils (in that few were eligible for free school meals) were more likely to have strong professional development than those with high levels of deprivation. This is significant especially in light of the «Schools facing challenging circumstances research» (Lack & Johnson, 2008) which reported that strong emotional and practical support and training were what would make working in a challenging school more attractive to teachers. Thus, particular attention needs to be given to ensuring that professional development is effective in schools located in areas of deprivation (Bubb & Earley, 2009).

## 2. METHODOLOGICAL ISSUES IN EVALUATING IMPACT

However, although the arguments for teacher development are clear, too little is known about how professional learning works or how to evaluate the difference it makes:

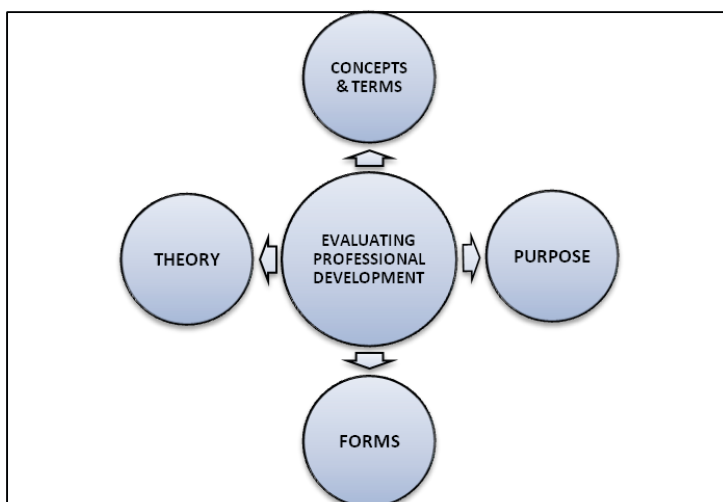
Although the number of professional development opportunities for teachers has increased, our understanding about what constitutes quality professional development, what teachers learn from it, or its impact on student outcomes has not substantially increased. (Lawless & Pellegrino, 2007, p. 576)

Ascertaining the difference professional development makes is not easy. Changes in teacher practice may or may not lead to improvement in pupil outcomes (Bubb & Earley, 2010). Many factors influence children and young people's achievement and it is difficult to find evidence that isolates the link between professional development and achievement. There is also a lack of clarity about the link between professional development, school development and knowledge creation and transfer (Frost, 2012). Most research studies have focused simply on teacher satisfaction and their intention to innovate rather than actual change in practice and its impact (Desimone, 2009). Few studies have used the impact on pupil outcomes or progress as a measure of effectiveness because it is not easy to find convincing evidence about how teacher learning is linked to student learning. It is important to avoid claims based on spurious links or narrowing outcomes to those that can be easily measured (Ingvarson, Meiers, & Beavis, 2005, p. 4).

This paper seeks to explore the methodological issues related to evaluating the difference that professional development makes. There are different ways of viewing the world (ontology) and the nature of knowledge (epistemology) so it is important that issues surrounding methodology are made explicit, recognised and addressed. Used here to mean «the strategy, plan of action, process or design lying behind the choice and use of particular methods» (Crotty, 1998), methodology is fundamental to any research into professional development. Positivist and interpretivist paradigms are essentially concerned with understanding phenomena through two different lenses. Positivism strives for objectivity, measurability, predictability, controllability ... and the ascription of causality; the interpretivist paradigms strive to understand and interpret the world in terms of its actors (Cohen, Manion, & Morrison, 2007, pp. 27-28). I would argue that research into a field as complex as professional development cannot use either a positivist or an interpretivist approach alone, but both. Mixed methods are more likely to address the complexity of the topic.

### 3. CONCEPTUAL FRAMEWORK FOR EVALUATION

In order to answer the question, «How do we know what difference professional development activities make?» it is important to look at the main concepts, ideas and issues within the field. The conceptual framework (see Figure 1) for this paper considers concepts and terms, purpose, forms of professional development activity and theories underpinning the field. Terminology – the words people use – is an important starting place for investigating how professional development is conceptualised because the language in this field is a fundamental source of confusion. Terms such as professional development, professional learning, professional development, training and development, INSET are sometimes used interchangeably and at other times carry specific meanings for there are significant differences between them. It is vital that there is a common language, especially amongst the research community, so that people agree on exactly what is being studied. Much of the confusion around terminology results from a lack of clarity about the purpose of professional development. What is it trying to achieve? Who is it for? There is not universal agreement on answers to these apparently simple questions. The complexity around purpose and terminology is seen in the different forms that professional development activities take. There are many theoretical perspectives implicit in the field and these need to be understood in order for any evaluation to be meaningful.



*Figure 1. – A conceptual framework for evaluating professional development.*

### *3.1. Concepts and terminology*

The field of professional development lacks a coherent conceptualisation and this makes research problematic. This is seen in the plethora of terms: professional development, continuing professional development, inset, training and development, professional learning to name just some. Fashions in terminology come and go. «Inset», meaning in-service education and training, is a term that has gone out of fashion in the research world and which some see as representing an old fashioned approach to development (Porritt, 2010), although it is still in everyday parlance in schools as the «Staff development outcomes study» (Bubb, Earley, & Hempel-Jorgensen, 2008) found. England's seminal James Report of 1972 defined INSET as: «[...] the whole range of activities by which teachers can extend their personal education, develop their professional competence and improve their understanding of education principles and techniques» (James, 1972). Such a definition is impressive and certainly not old-fashioned.

The language used to describe the learning of teachers is significant because it can influence people's attitudes to, motivation for and understanding of its purpose. It can also affect agency – the degree to which individuals take responsibility for analysing and meeting their needs so that there is a positive impact on pupils. In the research both for «From self-evaluation to school improvement» (Bubb & Earley, 2008) and the «Staff development outcomes study» (Bubb, Earley, & Hempel-Jorgensen, 2008) discussions with people at all levels in the case study schools suggested that a key obstacle to the impact of professional development lay in the way that it was understood. In most cases people thought of professional development as activities to be engaged in rather than as the actual improvement of their knowledge and expertise, which may (or may not) result from their participation in such activities. They conceived of professional development in terms of inputs and not as the changes effected in their thinking, skills or practice let alone the impact on pupils as a result. Schools in which people had a broad and deep understanding of what professional development means seemed to make more rapid improvement than where CPD was synonymous with «a day off site going on a course». It was interesting to begin interviews with teachers and support staff by asking how they thought their practice has developed. This was a useful first question because it encouraged people to think about what they were better at and the improvements they had made rather than about the activities in which they have been involved. Our follow-up questions asked about what had helped them develop. This example illustrates the kind of change in emphasis required to understand the quality of the development of staff. Without that understanding, professional development

will continue to be regarded merely as a series of courses and other occasions or events, rather than as the change, development and improvement of practice, ultimately for the benefit of learners.

Terminology should clarify understanding but in the field of professional development this is far from the case. The literature shows that there is little consensus as to the definition of specific terms such as «professional development» and no agreement about an overarching definition for all the practices encompassed by these various words (Doecke, Parr, & North, 2008). Although there is a great deal of overlap and similarity, there are subtle and sometimes significant differences between words resulting in conceptual confusion and lack of clarity. At a basic level, for instance, some see professional development as separate to induction and initial teacher education but others view it as an umbrella term inclusive of both of these periods (OECD, 2010, p. 19) and yet others view it as including induction but not ITE (Bolam & Weindling, 2006). The term «induction» is understood by some as a temporal period; by others as programmes and activities: «[...] support, guidance and orientation programs [...] for beginning teachers during the transition into their first teaching jobs» (Ingersoll & Smith, 2004, p. 28); and by yet others as a process. In my publications induction is seen as a process nested within a system that supports everyone within the community to develop.

### 3.2. *Purpose*

A key distinction is between those who see these terms as referring to activities and those who understand them as processes, and this is fundamental to differing views about the purpose of professional development. Who and what is it ultimately for? It is just about teachers' knowledge and skills or their self-efficacy and wellbeing too? Is there an expectation that they do something better in the classroom as a result of their development so that pupils benefit? Dylan Wiliam considers that most professional development provision has been designed to address perceived deficits in teachers' knowledge but has not paid sufficient attention to putting that into practice in the classroom to benefit pupils (Wiliam, 2010).

There is a lack of clarity about the purpose amongst policy makers and researchers. For instance, the OECD report defines professional development as, «activities that develop an individual's skills, knowledge, expertise and other characteristics as a teacher» (OECD, 2009, p. 49) but Chris Day's definition has made a substantial contribution to its conceptualisation as a process:

Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives. (Day, 1999, p. 34)

Various authors have been critical of «professional development» conceived of as something that is provided for or done to teachers. Some (Easton, 2008; Opfer & Pedder, 2011) consider that the term has reinforced the focus on programmes and activities. Fullan (2007) argues strongly that «professional development as a term and as a strategy has run its course» (p. 35) and that it is «a major obstacle to progress in teacher learning» because he considers that it «diverts people's energy into thinking they are doing something valuable» (Fullan, 2007, p. 36). Indeed, Cole went so far as to entitle an article, «Professional development: a great way to avoid change» (Cole, 2004). What both Cole and Fullan appear to be criticising is the strong association of the term with going on a course. As Andy Hargreaves says, it should be more than «a *slick, self-managed portfolio* of certificates and achievements accumulated as individual credits, like frequent flier points» (Hargreaves, 2003, p. 63).

The terms «professional learning» and «professional development» are often used interchangeably. However, sometimes «professional learning» is used to refer to changes in practice brought about by professional development. Others use «professional learning» as a term to encompass learning that is not formally planned and which occurs during everyday work in schools. Yet others conceptualise it as «a product of both externally-provided and job-embedded activities that increase teachers' knowledge and change their instructional practice in ways that support student learning» (Wei, Darling-Hammond, & Adamson, 2010, p. 1). A slight but significant variation on this is Knapp's definition of professional learning, which is «changes in the thinking, knowledge, skills, and approaches to instruction that form practicing teachers' or administrators' repertoire» (Knapp, 2003, pp. 112-113). Timperley (2011) uses «professional learning and development» to describe both formal and informal opportunities for people to deepen knowledge and refine skills that result in changed practice for the benefit of pupils (Timperley, 2011). Opfer and Pedder (2011) use the terms *teacher professional learning* and *teacher learning* because they consider that the term *professional development* has reinforced the focus on activities (Opfer & Pedder, 2011). Easton (2008) believes:

It is clearer today than ever that educators need to learn, and that's why professional learning has replaced professional development. Developing is not enough. Educators must be knowledgeable and wise. They must know enough in order to change. They must change in order to get different results. (Easton, 2008, p. 756)

Berry, Loughran, Smith, and Lindsay (2009) add a further empowerment dimension when they describe professional learning as involving «the sharing of insights about teaching and learning between teachers in order to gain a sense of professional control and ownership over their learning» (Berry *et al.*, 2009, p. 578).

The notion of «development» with its connotations of growth implies that people continuously grow and change in response to their experiences and environment, seems entirely appropriate (Boud & Hager, 2010). The NRDC's view of professional development as a «comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement» (Hirsh, 2009; Mizell *et al.*, 2011) suggests that it is something done to individuals – yet agency is a crucial element. Professional development is not just about becoming more effective for pupils' sakes, important as that is. It is about the all round wellbeing of the member of staff as well. Andy Hargreaves sees it as a «personal path towards greater professional integrity and human growth» (Hargreaves, 2003, p. 63).

With Peter Earley, I defined staff development as being:

[...] an on-going process encompassing all formal and informal learning experiences that enable all staff in schools, individually and with others, to think about what they are doing, enhance their knowledge and skills and improve ways of working so that pupil learning and well-being are enhanced as a result. It should achieve a balance between individual, group, school and national needs; encourage a commitment to professional and personal growth; and increase resilience, self-confidence, job satisfaction and enthusiasm for working with children and colleagues. (Bubb & Earley, 2007, p. 4)

Or, put more simply, professional development is about adult learning, ultimately for the purpose of enhancing the quality of education of children and young people. The process is what is important: development is something that is within the person all the time, not something done to or provided for them. We develop in many ways: through the planned and formal activities as well as the learning through experience, to say nothing of the thoughts that occur while watching a film or which pop into your head in the shower. Thinking about what you're doing is crucial. As Socrates said, «I cannot teach anybody anything, I can only make them think». The goal of all development should be that ultimately things are better for the children and young



people. It encourages a commitment to growth for as Benjamin Britten said, «Learning is like rowing against the tide. Once you stop doing it, you drift back». Working with children and young people can be tough, especially on the emotions so staff need to look after and develop their resilience, confidence – and enjoyment of their work (Bubb & Earley, 2010).

### 3.3. *Forms*

The range of professional development activities is wide. There are many forms of professional learning activity and they can be informal, unplanned and brief or formal and long-lasting. This makes research in the field even more complex. Researchers have attempted to find ways of classifying them. There are off-the-job, on-the-job and close-to-the-job opportunities. Reid speaks of quadrants of professional learning using formal/informal and planned/incidental axes (Fraser *et al.*, 2007, p. 161). Hodgkinson and Hodgkinson (2005) constructed a matrix of learning types which categorizes learning based on planned/unplanned and the degree of the learning's newness. Others have developed this into three dimensions: off the job/on the job; structured/unstructured; and with/without a facilitator (Jacobs & Park, 2009).

Lieberman (1995) classified development activities into three types: direct teaching e.g. courses, workshops; learning in school e.g. peer coaching, critical friendships, mentoring, action research, planning; and out of school learning e.g. learning networks, visits to other schools, school-university partnerships (Lieberman, 1995). Others make a distinction between professional training, e.g. short courses, workshops and conferences emphasising practical information and skills; professional education, e.g. long courses and secondments emphasising theory and research-based knowledge; and professional support, e.g. activities that aim to develop on the job experience and performance (Bolam & McMahon, 2004).

Activities can also be categorised into four overlapping groups: individual, within school, cross-school networks and external, with activities such as the ones listed below.

1. *Individual* – Thinking; reading books, periodicals and the educational press; research and enquiry; self study; watching video clips of teaching; keeping a learning log or reflective diary.
2. *School-based* – Working with others; talking to other staff (peers and those with expertise); coaching/mentoring; development days; staff/team meetings; being observed; discussing a lesson; observing; collaborative planning; team teaching; listening to pupils' views; observing some lear-

- ners; tracking a pupil; action research groups; trying things out and doing things differently; taking on a new role; shadowing colleagues, training others; attending governing body meetings; chairing a meeting; leading working groups; attachments to the senior team, etc.
3. *Cross-school networks* – Formal and informal networks; training; visiting other schools, similar to or different from yours; reading and talking to others on on-line communities; working with people from other schools; networks of local schools or ones set up for a specific project; developing people from other schools.
  4. *External expertise* – One day events; longer courses; conferences; working with community groups, consultants, local authorities, universities, government agencies or subject associations (Bubb, 2007).

In practice, some activities occur in more than one of these so it can be useful for methodological considerations to visualise them as intersecting sets (Figure 2). There are blended learning programmes that involve some external expertise in the form of lectures, cross-school networks for discussion, school-based projects and individual reading and reflection.

By and large, non-formal learning is under-appreciated and under-researched. The school culture is fundamental to professional development: the quality of the team, community, department or workgroup can contribute considerably to individuals' professional learning. As Judith Warren Little said (Little, 1990; quoted in Fullan & Hargreaves, 1991): «Imagine that you can become a better teacher just by virtue of being on the staff of a particular school; just for that fact alone». It has been argued that weak professional environments rob teachers of the opportunity to achieve their full potential, or lead them to move to schools with a stronger professional community or out of the teaching profession entirely (Goldrick *et al.*, 2012).

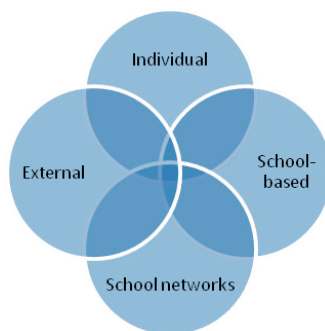


Figure 2. – Interlinking forms of development.

### *3.4. Theoretical perspectives*

Any evaluation of professional development should consider the theoretical perspectives underpinning activities and approaches such as adult learning; change; complexity theory; school improvement; knowledge management; work-based learning; and top-down or bottom-up paradigms. In notions of top-down professional development, knowledge and skills tend to be seen as «imported» from an external source and «delivered» or «transmitted» to teachers. In bottom-up professional learning teachers are seen as generating knowledge in association with external sources.

Considerations of «andragogy» (how adults learn) are important because, for instance, we know that adults,

- will commit to learning when they believe that the objectives are realistic and important for their personal and professional needs;
- want to be responsible for their own learning and should therefore have some control over the what, who, how, why, when, and where of their learning;
- need direct, concrete experiences for applying what they have learned to their work;
- do not automatically transfer learning into daily practice and often benefit from coaching and other kinds of follow-up support to sustain learning;
- need feedback on the results of their efforts;
- come to the learning process with self-direction and a wide range of previous experiences, knowledge, interests, and competencies (Speck & Knipe, 2005).

Complexity theory suggests that different changes can lead to similar outcomes and changes that seem identical can have different outcomes. One innovation that is presented to ten teachers may result in ten different shapes, each reflecting the different conditions in which they work (Knight, 2002, p. 235).

It is useful to think about a series of links leading to improvements in student learning: for example, the provision of teacher professional development, leading to changes in professional learning, leading to changes in professional practice, which ultimately impact student achievement (Mayer & Lloyd, 2011, p. 3). A common way of looking at impact is that staff learning, attitudes or beliefs change first which leads to a change in their practice, resulting in an improvement in student learning or wellbeing. However, Guskey (2000) considers that it rarely happens that way in practice because it is experience that shapes the attitudes and beliefs. People change when they see that the new skills they try out make a difference to pupils. However, change in one area of influence but may not lead to change in another: teach-

ers may change their beliefs but not their practices or change their practices but not their beliefs, and ultimately may not improve student learning.

The key message from this is that the most important element to consider in evaluating professional development is not the initial activity but putting things into practice and follow-up support. Joyce and Showers (2002) also concluded that for training to be truly effective it needs to include the following five components:

1. theory – where the new approach is explained and justified;
2. demonstration – to give a model of how this can be put into practice;
3. practice – so that the new approach can be tried;
4. feedback – on how well the new approach is working;
5. coaching – to discuss progress in a supportive environment and consider how practice might be improved.

Their research showed that, without the opportunity to receive feedback and coaching, there is no measurable impact on classroom practice. However, once these two components are added, in particular the final coaching stage, there is a large and measurable impact on practice as can be seen in case studies written about the impact of coaching in a special school and support staff training in a secondary school (Bubb, 2009a and 2009b).

#### 4. IMPACT EVALUATION

Impact evaluation is recognised as the weakest link in the training and development cycle (OFSTED, 2010). Notions of causality are problematic. It cannot be taken for granted that participating in training and development activities will automatically result in better teaching and learning. The «Staff development outcomes study» found that much evaluation is impressionistic and anecdotal – «we just know that things are better». The impact of professional development was rarely evaluated against the intended impact and any unplanned gains. In general, people just completed an evaluation form after a training event (Bubb *et al.*, 2008).

Researchers should consider how many people have been involved in different forms of professional development activity and for how long and at what level. The OECD (2009) report compared perceived impact with participation rates and found that research was perceived to have the most impact but it was only an activity that a third of respondents did (see Figure 3).

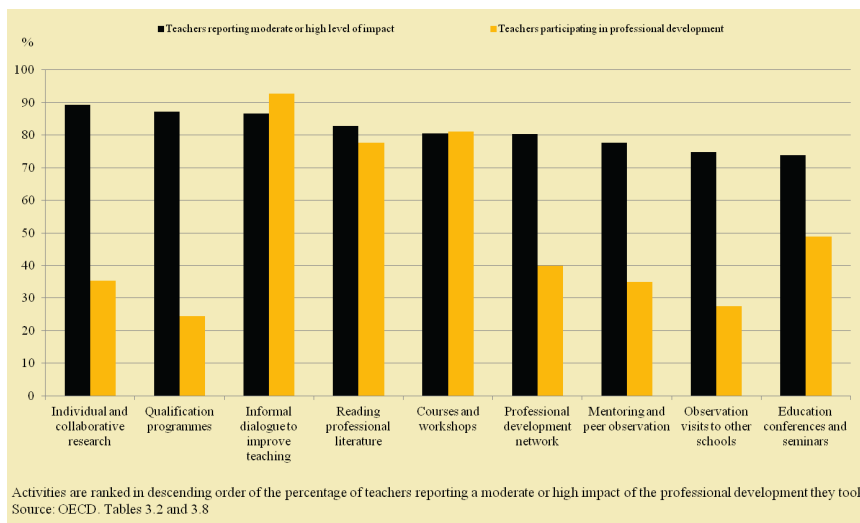


Figure 3. – Comparison of impact and participation by types of development activity (OECD, 2009, p. 77).

There is a complex array of possible outcomes of professional development activity. Cochran-Smith and Lytle describe three types of knowledge: «for practice», «in-practice» and «of practice knowledge» (Cochran-Smith & Lytle, 1999). Harland and Kinder (1997) suggested the following nine possible types of outcomes of CPD:

*Materials and resources* – Provisions for teaching, such as worksheets or activities.

*Information* – Fact-based information, e.g. about new policies or schemes.

*New awareness* – A perceptual shift, teachers becoming aware of new ideas and values.

*Value congruence* – The extent to which teachers' own values and attitudes fit in with those which the CPD is trying to promote.

*Affective outcomes* – How teachers feel emotionally after the CPD, may be negative (e.g. demoralised) or positive (e.g. confidence).

*Motivation and attitude* – Such as enthusiasm and determination to implement changes.

*Knowledge and skills* – Both curricular and pedagogical, combined with awareness, flexibility and critical thought.

*Institutional outcomes* – On groups of teachers, such as consensus, collaboration and support.

*Impact on practice* – the effect on pupils (Harland & Kinder, 1997).

Earley and Porritt (2009) evaluated impact in terms of three separate yet related areas – products, processes and outcomes. Products might include policies or resources and processes are new or improved systems. For example, producing an induction policy for new staff – a product – has the potential to have an impact but is not what makes the difference per se. Rather, it is how staff feel about and use it that may make a difference and the outcome would be the difference their feelings or newly developed practice makes on the way they carry out their role and ultimately, the difference this makes to the learning and experience of the children.

It is useful to consider the different changes we might see in individual members of staff. Frost and Durrant distinguish between three sorts of impact on staff: classroom practice, personal capacity and interpersonal capacity (Frost & Durrant, 2003). Ultimately, of course we want to see a difference in the learning and experience of the children – this is what enables us to say that development of staff has been effective. What sort of impact are we looking for in pupils? We can look at their (Bubb & Earley, 2011):

- enjoyment in learning;
- attitudes;
- participation;
- pride in and organisation of work;
- response to questions and tasks;
- performance and progress;
- engagement in a wider range of learning activities.

In our research (Bubb *et al.*, 2008, p. 46) teachers were asked what impact had their training and development in the last 12 months had on pupils. The most popular response was «better learning» which over half of respondents (55%) selected, followed by «greater motivation» (38%) and greater confidence (28%). Interestingly, only 15 percent thought their training and development had resulted in better test results. Several noted the difficulty in quantifying the effect of professional development on pupils' results or outcomes as «there are too many variables» (p. 46).

## 5. WHERE TO FIND EVIDENCE OF IMPACT

The most common forms of evidence of impact are listed below and divided into qualitative and quantitative sources (see Table 1).

Evaluating professional development and its impact should not be burdensome. One system for evaluating impact that worked well in a primary school was a diary, which teachers wrote fortnightly.

*Table 1. – Forms of evidence of impact of professional development.*

QUALITATIVE	QUANTITATIVE
Evaluation after training	Questionnaires – staff
Notes from meetings	Questionnaires – pupils
Discussions – staff and pupils	Test result analysis
Resources, photos, video	Performance data
School improvement partner / consultant	Analysis of usage e.g. of a VLE
Observation	Pupil tracking records
Pupil work samples	
Performance management reviews	
Departmental reviews	
Self-evaluation forms	
Written reflections / learning journals	

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As well as writing about how pupils were doing, staff wrote about how they were implementing their own learning from development activities and the difference this was making to the children.

This was a valuable way to see what was working, and meant that training needs could be met very quickly, and for the benefit of children. All staff interviewed were happy to write it – and seemed to enjoy both the process and the dialogue it engendered with senior leaders (Bubb, Earley, & Hempel-Jorgensen, 2008). Pupil interviews and questionnaires can be very illuminating. It is useful to have the same tool to use before and after some development activity. Questionnaires can be given to different groups (e.g. pupils and teachers; teachers and support staff) to compare and triangulate responses.

I have designed a model of impact evaluation, linked to a better understanding of the professional development cycle or «logical chain» (OFSTED, 2006). It has 12 stages organised into three sections: preparation, development, improvement.

#### *Preparation*

1. Understand overall aim
2. Identify needs
3. Clear baseline
4. Goal
5. Plan

*Development*

6. Activity
7. New learning
8. Support to change

*Improvement*

9. Into practice
10. Impact on pupils
11. Teacher efficacy
12. Impact on other staff and pupils.

This can be used by researchers to help them choose which stage to evaluate, drawing attention to the other stages. For instance, it is common for evaluations to focus on the professional development activity itself but in the staged approach this is the sixth stage out of twelve. Researchers might want to explore what happened before as well as after, in order to judge whether the time and money devoted to professional development are being used effectively. At each stage, researchers might want to ask different questions and draw upon different research methods to answer them, as shown in Table 2.

## 6. CONCLUSION

This paper has attempted to explore the complexity of issues that need to be considered in drawing up a methodology for evaluating how professional development makes a difference. We need to address the concern that teachers are more knowledgeable as a result of professional development, but no more effective in practice. With financial constraints hitting education systems across the world, the time is right to try to understand what constitutes quality professional development, what teachers learn from it, and its impact on student outcomes. Ascertaining the difference professional development makes is a complex process. Exposure to and participation in activities may or may not bring about change to individuals' beliefs, values, attitudes and behaviours. These changes to individuals may or may not lead to changes in the classroom and school practice. And these changes may or may not lead to improvement in pupil outcomes. Researchers need to explore how teacher learning is embedded in professional practice and affects pupils.



*Table 2. – Research methods for different stages of impact.*

STAGE	RESEARCH QUESTIONS	POSSIBLE RESEARCH METHODS
A. PREPARATION		
1. Overall aim	Did people understand the overall aim and rationale?	Interview; questionnaire
2. Identify needs	How were needs identified?	Interview; action plan; questionnaire
3. Clear baseline	What were things like before?	Interview; action plan; questionnaire; documentary analysis; performance data
4. Goal	What was the goal/target? How was it related to student improvement?	Interview; action plan; questionnaire
5. Plan	What was the plan?	Interview; action plan; questionnaire
B. DEVELOPMENT		
6. Activity	What training and development activity occurred, over what period?	Observation; interview; action plan; training evaluation sheet; questionnaire
7. New learning	What new learning was there? Knowledge, skills, understanding, attitudes, networks, confidence enthusiasm, etc.	Interview; questionnaire; training evaluation sheet; observation
8. Support to change	What support was there to put new learning into practice?	Interview; documentary analysis
C. IMPROVEMENT		
9. Into practice	What differences occurred? When? To what effect?	Observation; self-report (e.g. reflective journal); interview pupils
10. Impact on pupils	What was the effect on pupils?	Pupils' work; interview pupils; test results
11. Teacher efficacy	How did the teacher feel?	Interview; questionnaire
12. Impact on other staff & pupils	Did the improvement spread to other staff? What was the impact on them? What was the impact on pupils? What was the impact on the team/school/system?	Interview with staff, leaders, pupils, parents; questionnaire; documentary analysis; performance data

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## RIASSUNTO

*Si è tutti d'accordo su quanto sia determinante lo sviluppo professionale dei docenti, tuttavia si osserva anche che l'investimento economico realizzato in questo ambito non ha un impatto corrispondente sull'apprendimento e il benessere dei ragazzi. Oggi che la crisi economica colpisce i sistemi educativi in tutto il mondo, è forse giunto il momento per comprendere più a fondo che cosa si intende per sviluppo professionale. Infatti, come osservano Lawless e Pellegrino (2007), nonostante le opportunità di sviluppo professionale a disposi-*

*zione degli insegnanti siano notevolmente aumentate, non è cambiata sostanzialmente la nostra comprensione di ciò che costituisce qualità in un'attività di sviluppo professionale, di che cosa imparano i docenti, e di qual è l'impatto sugli studenti. In effetti è un processo complesso quello che può portare a capire in che misura lo sviluppo professionale fa la differenza. Essere coinvolti e partecipare ad un'attività di sviluppo professionale può portare o non portare cambiamenti nei singoli a livello di convinzioni, valori, atteggiamenti o comportamenti. I cambiamenti individuali possono poi tradursi o meno nella pratica della vita di classe e di scuola e possono o meno portare ad un miglioramento nei risultati degli alunni. Le difficoltà che si manifestano nella ricerca in questo ambito, come alcuni sostengono, dipendono dalle modalità semplicistiche con cui si affronta l'apprendimento professionale, senza considerare che l'apprendimento è strettamente connesso al contesto di lavoro. Questo articolo cerca di affrontare alcune questioni metodologiche che si incontrano nel valutare come lo sviluppo professionale può fare la differenza.*

*Parole chiave:* Impatto, Sviluppo del docente, Sviluppo professionale, Training, Valutazione.