CPD Umbrella Review – Technical Summary

Why conduct this review?

This review set out to try and capture and distil from the evidence base approaches to and characteristics of <u>effective</u> continuing professional development and learning, with the hope that the evidence which emerges from this process will be of value both to practitioners and policymakers. The interest in effective CPDL comes as a number of different consultations report that the general state of professional development in England is insufficiently evidence-based, does not focus enough on specific needs of pupils, and is too inconsistent in quality (DfE, *A world-class teaching profession*), and that teachers' experience of professional development is, in some ways, lagging behind that of colleagues elsewhere (OECD TALIS survey, 2013). There are clear gaps in the average quality of CPDL provision and execution in England, and this review attempts to locate them and identify productive means of closing them.

What did the review find?

The review found that carefully designed CPDL for teachers with a strong focus on pupil outcomes has a significant impact on student achievement.

Duration of programmes

To be effective in producing profound, lasting change over the long term, CPDL interventions had to be prolonged, lasting at least 2 terms and more usually a year (or longer). More limited change on specific areas of practice could be achieved through shorter term interventions, but duration was a key feature of interventions which transformed general practice – though longer duration did not automatically mean this kind of transformation could be achieved.

Follow-up and consolidation of programme content

The review found that CPDL programme design needs to create a "rhythm" of follow-up, consolidation and support activities to reinforce key messages enough to have an impact. The specific frequency of these activities varied, but the key aim remained constant – teachers must develop a grasp of the rationale underpinning a strategy being explored through CPDL, and use that understanding to refine practices and support implementation.

Designing for participants' needs

All the reviews included in the larger review found that an essential element of successful CPDL is creating an overt relevance of the content to its participants and their day-to-day experiences with and aspirations for their pupils. All the reviews also noted the importance of CPDL which provides opportunities for recognition of differences between individual teachers and their starting points, and providing opportunities for them both to surface their beliefs and to engage in peer learning and support.

Volunteers or conscripts

The strongest review found that achieving a shared sense of purpose during CPDL is an important factor for success. Whether teachers were forced or had volunteered to take part in CPDL did not appear to be highly significant factor – a positive professional learning environment, sufficient time, and consistency of professional learning experiences with wider context were all more important. Therefore it would appear that CPDL providers should focus on how best to provide course content which can build a sense of purpose. This can be done in a number of ways, and examples were found

during the review, such as building in peer support, using evidence from experimenting with new approaches, and working on *why* things work as well as what does and does not.

What was the content of effective professional development?

 All the reviews found that pedagogic and subject knowledge were of equal importance, and the strongest went on to state that CPDL focussed on generic pedagogy is insufficient, particularly in maths, and that alternate pedagogies for pupils with different needs are also important. In order to achieve their full potential CPDL programmes must consider subject knowledge and pedagogy, and should define pedagogy in broad terms which encompass a variety of teaching and lesson styles.

The review also identified a number of "key building blocks" which should underpin effective CPDL. These building blocks were:

- Subject knowledge
- Pedagogic knowledge
- Clarity around learner progression, starting points and next steps
- CPDL content and activities dedicated to helping teachers understand how pupils learn, both generally and in specific subject areas

It is also important for CPDL content to help participants to grasp the relationships between these building blocks, and to include a focus on formative assessment so that teachers can see the impact of their learning and work on their pupils.

Finally, the reviews collectively identified some other important components of CPDL course content. These included consideration of participants' existing theories, beliefs and practice, an understanding of the rationale underpinning practices being advocated, and the ability to challenge existing theories in a non-threatening way. There were two other points which emerged from the strongest review: the importance of critical engagement from teachers with course content, and the importance of creating room for professional discretion and repeated opportunities to encounter, understand, respond to and reflect on new approaches and related practices.

CPDL providers

External input is a common factor in successful outcomes, sometimes in tandem with internal specialists. In the most successful CPDL, external input includes both providing multiple and diverse perspectives, and challenging orthodoxies. Providers of the most successful CPDL also act as coaches and/or mentors with participants, and there is some evidence to suggest that they are experts in more than one area and their expertise includes both specialist content knowledge and in-depth knowledge of professional development processes and evaluation and monitoring. Successful facilitators encourage and/or help teachers take on a degree of leadership of CPDL, and treat them as peers and co-learners. This relationship enables successful facilitators to share values, understanding, goals and beliefs with participants, but also to challenge them successfully.

Support from specialists

The review identified a series of types of activity which specialist support should, according to the evidence analysed, lead to successful outcomes:

- Making the public knowledge base, theory and evidence on pedagogy, subject knowledge, and strategies accessible to participants
- Introducing new knowledge and skills to participants

- Helping teachers (particularly those from schools where achievement is depressed over time) believe better outcomes are possible (according to the strongest study)
- Making links between professional learning and pupil learning explicit through discussion of pupil progression and analysis of assessment data
- Taking account of different teachers' starting points and (from the strongest review) the emotional content of the learning

Specialists should also support teachers through modelling, providing observation and feedback, and coaching. However, the exact nature of effective specialist support varies depending on the subject specialism involved – for example, in maths and science opportunities to be observed and receive feedback were not always prerequisites for successful CPDL. What was consistent across subjects was that facilitators and specialists had to balance support and challenge while building relationships with participants. Finally, some evidence suggested that effective specialists mobilised, encouraged and guided teacher peer support, and also offered remote support in a variety of media such as e-networking and provision of instructional and other materials.

Encouraging effective collaboration

What makes collaboration effective is still contested – the review only found one common feature across all the reviews analysed. All reviews found that peer support, with all participants having an opportunity to work together to try out and refine new approaches, was a common feature in effective CPDL. In addition to this, the strongest review included found that collaboration was necessary, but not sufficient, being linked to both positive and negative outcomes. There is some evidence to suggest that access to some form of collegial support for solving important problems is essential, along with input from an expert leader, establishing common goals and new approaches for achieving them, and with joint effort focused on learning of pupils with similar needs.

Activities associated with effective CPDL

All reviews noted certain activities, or types of activities, which featured in successful CPDL strategies. Explicit discussions about how to translate CPD content to the classroom took place following initial input, and teachers in the successful courses implemented what they had learned by experimenting in the classroom. Teachers in successful CPDL engaged in analysis of and reflection on underpinning rationale, evidence and assessment data, and this reflection and analysis was important for bringing about and embedding change in practice.

The strongest review made a number of observations regarding activities involved in successful CPDL – the design of successful professional development programmes is aligned with the pedagogic processes being promoted and the ways in which professional learning is structured. This also includes mechanisms during activities out of schools, which helped teachers translate new practices into their own classroom contexts.

Alignment in CPDL

While it is necessary to have a variety of activities to reinforce messages and test things through different lenses, no single particular form of activity was shown to be universally effective. What mattered was a combination of a logical thread between the various components of CPDL, and the provision of opportunities for teacher learning which are consistent with the principles of student learning being promoted. No particular configurations were crucial to success, but aligning goals,

activities, experiments in classrooms, engagement with evidence and underpinning rationale does matter alongside multiple perspectives and angles.

Leadership of CPDL

Although leadership of CPDL was not our focus we did surface some contextualising evidence about this important topic.

The review concluded that "effective leaders did not leave the learning to their teachers – they became involved themselves". Leaders took some form of personal involvement in most programmes associated with substantial changes in teachers' practice being achieved, though there was no single pattern of the nature of their involvement.

The review also identified four core roles for school leaders in effective CPDL, which were adapted according to the school context and the nature of changes being implemented:

- Developing vision – includes helping teachers believe alternative outcomes are possible, creating coherence so teachers understand the relevance of CPD to wider priorities
- Managing and organising – includes establishing priorities, resolving competing demands, sourcing appropriate expertise and ensuring appropriate opportunities to learn are in place
- Leading professional learning – includes promoting a challenging learning culture, knowing what content and activities are likely to be of benefit, and promoting "evidence-informed, self-regulated learning"
- Developing the leadership of others – includes encouraging teachers to lead a particular aspect of pedagogy or of the curriculum

What doesn't work

All the reviews involved in this meta-analysis offered a number of clear statements about forms of CPDL that do NOT lead to positive outcomes for participants or students. A didactic model in which facilitators simply tell teachers what to do, or give them materials without giving them opportunities to develop skills and inquire into their impact on pupil learning is not effective. Neither is professional development which does not have a strong focus on aspirations for students and assessing the impact of changed teacher practices on pupil learning. Where professional learners are not given structured, frequent opportunities to engage with, understand and reflect on the implications of new approaches and practices, neither extended time nor greater frequency of contact were sufficient to make substantial changes to teacher practice or improve student outcomes.

How was the review conducted?

The review began with a high-level search for reviews through a process described as "connoisseurial accumulation", using experts in the field to highlight known, relevant and valuable reviews. The search was conducted through a variety of digital academic resources including FirstSearch, JSTOR, Google Scholar and others. The search was looking for reviews of CPD and teacher learning published since 2000 in English (mostly – though one Belgian extension of another resource was found and analysed). From an initial search a total of 947 "hits" were identified, and these were then whittled down through a series of screening processes designed to filter out reviews whose evidence base was not deemed sufficiently strong for inclusion.

Eventually a set of reviews were selected which were thought rigorous enough to be used, and these were then sub-categorised into four different groups. The first included a single study which was strong in multiple areas, with research designs which were appropriate for causal inference across studies. A further three studies were found which were robust but more focused on particular areas of practice. Another four studies were found which were less robust in terms of supporting evidence (specifically they showed only correlational and not causal connections), but were tightly focused in the relevant areas and explored pre and post test data in a systematic fashion, making their claims reasonably persuasive. Finally, one additional review was included due to its claims being consistent with the broader evidence base, but which did not directly support its claims with high quality data. The reviews were then analysed separately and their findings were split into a series of claims, which were compared and contrasted with each other and weighted according to the strength of the evidence supporting them, before being grouped thematically.

The net effect of this process was to produce a series of claims which are ranked in terms of the strength of the evidence supporting them, grouped by a number of themes which should prove relevant to policymakers and facilitators, and which are (at the strongest level) equivalent in strength to the four padlocks used in the Sutton Trust-EEF Toolkit.

Implications for school leaders

- It is important to distinguishing sharply between
  - CPDL aimed at operational and procedural knowledge (e.g. how teachers use fire extinguished or comply with legislation or MIS systems) where simple briefings and group discussion may suffice; and
  - professional learning directly aimed at building on teachers' starting points to significantly enhance pupil learning - where the sustained and dynamically interacting mix of activities highlighted by this evidence will be required
- Setting explicit and high expectations of pupil learning oriented CPD providers and facilitators is essential – whether they are colleagues in school, from other schools, from HEIs, from professional networks, private providers or examination boards through for example:
  - discussing specific expectations about potential impact with participating teachers prior to participation
  - interrogating providers (including internal ones) prior to signing up for/ agreeing to CPD programmes about how they;
    - Support identification of teachers' and school leaders' starting
    - use content-specific formative assessment as a CPD goal
    - build planning time for planning change "back at the ranch" into away-from-class or school activities
    - embed collaborative learning and the development of shared understanding and goals within the professional learning process
    - ensure programme providers have access to *in-depth expertise* in the programme goals in relation to teaching and learning and the curriculum content, and in relation to the professional learning process - and have ensured all three are aligned

- ensure programmes provide tools to help teachers and leaders engage critically with evidence about how pupils respond to changes they are making in their day to day work settings

Implications for shaping approaches to CPDL

a. It is important to consider where and how **appropriate external expertise** can be deployed

b. It is important to consider **how schools and alliances can be incentivised to provide the sustained resources and commitment required for effective CPDL**. It is important to emphasise here that time on its own is not the answer – quality is just as important.

c. The skills and knowledge required by **facilitators of CPDL** are particularly key – whether these are internal or external to schools - so there is a need to consider how these might be developed in a more effective way.

d. CPDL should consider **the importance of focussing on generic <u>and</u> subject specific pedagogy**, so it is important to also consider how subject expertise can be developed alongside more generic aspects as part of CPDL.

e. While **peer support and learning** is a fundamental ingredient of effective CPDL, it is not sufficient in its own right.

f. A number of findings emphasise **the importance of the use of evidence**; both evidence from pupils' responses to teachers' developing understanding and practices and to the importance of the strength of the evidence and rationale underpinning the CPDL.