Embedding evaluation in CPD for effective outcomes and higher impact

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Research principles used in STEM Learning

1. Embedding evaluation in professional learning and post CPD actions to scaffold professional learning

2. Use of Guskey model of impact levels
   - Level 1 participant’s reactions (immediately)
   - Level 2 participants learning from CPD (immediately and after 6-8 weeks)
   - Level 3 organisational support and change (after 6-8 weeks and 6-9 months)
   - Level 4: participants’ use of new knowledge and skills (after 6-9 months)
   - Level 5: Student outcomes (after 6-9 months)

3. Externally commissioned evaluations
STEM Learning internal model of evaluation

Impact Planning and Evaluation: Process Map for CPD participants

CONTINUOUS PROFESSIONAL DEVELOPMENT

BEFORE CPD
- Intended Learning Outcomes (e-form B1)

DURING CPD
- Action Plan (e-form D2)
- Learning & Evaluation Tool (paper form D1)
- Post-CPD Evaluation (e-form or paper form D3)

POST-CPD
- Impact reports
  - (e-form P1) 6-8 weeks after CPD*
  - (e-form P2) 6-9 months after CPD
- Annual department/school impact assessment (online survey - form P3)

SCHOOL / COLLEGE
- Performance management and Teacher standards
- Education inspection criteria
- School Development Needs and Plan of actions

* or during the next residential period for multi-residential courses
How we report on impact

NSLC: Participants' impact report (form P1)  Autumn 2014

How useful was this CPD in helping you to:
(participants, who answered 'to great extent' or 'to some extent')

- meet your professional development needs and objectives
  - 36% 57%
- meet your performance management objectives
  - 50% 36%
- meet priorities and objectives in science (or other relevant STEM subjects)
  - 46% 43%
- meet priorities and objectives in your school
  - 50% 36%
- improve pupil outcomes
  - 64% 21%

Impact Rating reported by CPD participants

impact on Self
- 6% 51% 41%

impact on Pupils/Students
- 11% 52% 31%

impact on Colleagues / School
- 18% 51% 28%
**NSLC: Participants’ impact report (form P1) Autumn 2014**

**IMPACT on PUPILS by SUB-CATEGORY reported by participants**

- Improved students' progress in science knowledge, skills and/or understanding: 56%
- Improved students' attainment in science knowledge, skills and/or understanding: 43%
- Confidence, motivation and engagement in lessons: 81%
- Behaviour and safe working: 18% (n=110)

**EVIDENCE of IMPACT**

- Feedback from colleagues: 64%
- Changes to schemes of work / lesson plans / assessment methods / resources: 56%
- Your perceptions / reflections / reflective journal: 45%
- School developmental plans / documents: 31%
- Student progress / attainment data: 30%
- Student feedback (e.g. 'pupil voice', interviews): 16%
- Feedback from external observations of lessons (e.g. by a colleague, subject leader, Ofsted): 17%
- Increased uptake of science pre and post-16: 7% (n=110)
Impact on teaching and learning

- 92% Impact on education staff’s knowledge and skills
- 88% Impact on education staff’s practice
- 77% Impact on wider school practice
- 76% Impact on pupils
External evaluation of the impact of the National Science Learning Network CPD on schools

Evaluation carried out by Isos Partnership
ISOS partnership model of CPD cycle through which schools maximise the impact of science CPD

1. Strategic planning of the CPD
2. Sharing and embedding what is learned
3. Evaluating impact in the classroom
4. Refining and sustaining the approach

Impact on staff, pupils, the school itself and other schools
## Types of CPD users (school-level)

### Strategic user
- Strong strategic planning that goes beyond the individual and is strongly driven by school / departmental needs
- Strong support and routine processes for participants to implement, share and embed CPD learning
- Clear strategy and processes for baselining and tracking most types of impact

### Planned user
- Well-planned CPD, but largely driven by individual staff needs through a well-run performance management system
- Some support to participants to implement and share, mostly semi-formal sharing
- Some strategy and processes for tracking impact, some understanding of how this is done

### Semi-planned user
- Loosely-planned CPD – slightly hit-and-miss in the way appraisal used to generate CPD choices, heavily influenced by “what is in the brochure”
- Little support to participants, entirely informal sharing
- No specific and explicit processes for tracking the impact of CPD, little understanding of how to track impact of CPD

### Ad hoc user
- Ad hoc planning – no clear rationale or links to annual planning processes
- No process for sharing and no explicit support
- No strategy, not clear how to track most types of impact

### Planning
- Embedding
- Evaluating

**STEM LEARNING**
Isos research findings: super-user schools

**Schools' approaches to CPD**

- **Planning CPD**
  - Ad hoc: 14%
  - Semi-planned: 37%
  - Planned: 49%
  - Strategic: 0%

- **Embedding CPD**
  - Ad hoc: 5%
  - Semi-planned: 15%
  - Planned: 47%
  - Strategic: 32%

- **Evaluating CPD**
  - Ad hoc: 10%
  - Semi-planned: 27%
  - Planned: 49%
  - Strategic: 14%

(n=104)
Findings: planning

Three criteria:
- How much importance is given to CPD
- How much importance is given to subject-specific CPD
- How clear a school is about why they access particular CPD

How much importance is given to CPD?
- Primary Schools: 9% Very Low, 22% Low, 69% High
- Secondary Schools: 4% Very Low, 47% Low, 49% High

How much importance is given to science-CPD?
- Primary Schools: 6% Very Low, 34% Low, 41% High, 19% Very High
- Secondary Schools: 4% Very Low, 24% Low, 42% High, 31% Very High

How clear was your school about why you…
- Primary Schools: 6% Very Low, 35% Low, 58% High
- Secondary Schools: 6% Very Low, 18% Low, 38% High, 38% Very High
Findings: embedding

a significant mismatch between the expectation that staff would share the learning of their CPD and the support that they actually received to do so

Reasons:
lack of time, competing priorities, and the absence of routines for dissemination + for science subjects – lack of understanding from school SLT about the complexity of teaching sciences
Findings: evaluating

- Lack of confidence about how to track the impact of specific CPD (especially on student learning)
- Low priority to the evaluation of impact
- Part of bigger picture of the absence of evidence-based approach to T&L

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<tr>
<th></th>
<th>ad hoc</th>
<th>semi-planned</th>
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<tbody>
<tr>
<td><strong>Primary schools (n=32)</strong></td>
<td>35%</td>
<td>40%</td>
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<tr>
<td><strong>Secondary schools (n=72)</strong></td>
<td>15%</td>
<td>23%</td>
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<tr>
<td><strong>All schools</strong></td>
<td>10%</td>
<td>27%</td>
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More ‘strategic users’ among primaries than secondaries
## Characteristics of strategic users of CPD

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<th>Sustaining</th>
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<td>• Establishing clear priorities to guide CPD, informed by frank self-evaluation</td>
<td>• Giving staff encouragement and time to implement CPD learning in their classroom</td>
<td>• Being clear, in advance, about the difference you expect from the CPD</td>
<td>• Using regular planning cycles to refine and improve new ideas and practice</td>
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<td>• Pro-active planning, aligning school, subject and staff development priorities</td>
<td>• Regular routines for structured, practical sharing of learning with colleagues</td>
<td>• Is practice changing? Seeing first-hand the difference in the classroom</td>
<td>• Turning CPD champions into leaders to embed and improve teaching and learning</td>
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<td>• Identifying the right people to champion and lead CPD learning in school</td>
<td>• Supporting staff to embed CPD learning in their planning and practice</td>
<td>• Using a range of measures to judge the impact on pupils’ learning and engagement</td>
<td>• Celebrating and showcasing success within and beyond the school</td>
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## Recommendations for CPD participants, school leaders, CPD providers

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<td><strong>School and subject leaders</strong></td>
<td><strong>Create regular opportunities not only to share, but to embed, CPD and support staff to plan and implement this in the classroom.</strong></td>
<td><strong>Be clear, in advance, about the difference you want to see from the CPD, how you will know, and then track impact in the classroom.</strong></td>
<td><strong>Celebrate success and create a cycle of continually evaluating and improving practice to foster a learning culture in your school.</strong></td>
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<td><strong>Teachers and technicians</strong></td>
<td><strong>Set a target to achieve within a week of the CPD, including how you will influence at least one colleague’s classroom practice.</strong></td>
<td><strong>Be clear, in advance, about the difference you expect to see in your classroom – establish a baseline and check for improvements.</strong></td>
<td><strong>Seek out opportunities to report on effective new practices to colleagues, leaders, governors and peers in other schools.</strong></td>
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<td><strong>CPD providers in the Network</strong></td>
<td><strong>Choose CPD that aligns your own professional development and the school’s or department’s strategic priorities – be selective.</strong></td>
<td><strong>Ensure CPD activities focus not only on what the participant will do differently, but on how they can support colleagues to do the same.</strong></td>
<td><strong>Foster subject-specific collaboration between schools through Science Learning Partnerships and cluster-based approaches.</strong></td>
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- **Planning**
  - Develop a clear plan for CPD, informed by honest self-evaluation and pick the right people to enthuse others.
  - Be clear, in advance, about the difference you want to see from the CPD, how you will know, and then track impact in the classroom.

- **Embedding**
  - Create regular opportunities not only to share, but to embed, CPD and support staff to plan and implement this in the classroom.

- **Evaluating**
  - Be clear, in advance, about the difference you expect to see in your classroom – establish a baseline and check for improvements.

- **Sustaining**
  - Celebrate success and create a cycle of continually evaluating and improving practice to foster a learning culture in your school.
  - Seek out opportunities to report on effective new practices to colleagues, leaders, governors and peers in other schools.
Discussion

- How could this model of “strategic users” be useful to schools to improve the impact of their CPD in STEM subjects or in general?
- What implications does it have for you in your work in/with schools?
To find out more – visit our Research Collection

https://www.stem.org.uk/elibrary/collection/94077/education-research-stem-subjects-main-collection