Professional learning: improving learning for teachers and students

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Overview of session

• evaluation questions
• effective professional learning programs
• impact on teachers’ knowledge and pedagogical skills
• impact of student achievement
• three investigations
• summary
Evaluating professional learning programs

Evaluation studies typically address research questions such as:

• What impact has the program had upon the understandings, confidence and teaching skills of participants?

• What has been the impact of the program on the achievements of students in participating schools?

• To what extent has the capacity of participating teachers to support student learning [in specific content areas] improved?
Evaluating professional learning programs (cont.)

• To what extent has the capacity of participating schools to support and sustain students outcomes improved?
• What were the factors critical to the success of the initiative?
• Does the program demonstrate features of effective professional learning as identified in research?
Effective professional learning

• ... results in improvements in teachers’ knowledge and instructional practice, as well as improved student learning outcomes. We emphasize research that links teacher development to student learning. While the impact on student achievement is a critical indicator of the effectiveness of professional development, we believe the impact of professional development on teacher knowledge and instructional practice is also relevant, as these are worthwhile outcomes in themselves that support increased learning for students (Wei, Darling-Hammond et. al., 2009).
Characteristics of successful professional learning programs

Syntheses of research provide consistent conclusions with respect to the characteristics of effective professional development.

Hawley and Valli, 1999: nine principles for the design of effective professional development.
Design Principles

1. The content of professional development (PD) focuses on what students are to learn and how to address the different problems students may have in learning the material.

2. Professional development should be based on analyses of the differences between (a) actual student performance and (b) goals and standards for student learning.

3. Professional development should involve teachers in the identification of what they need to learn and in the development of the learning experiences in which they will be involved.
Design Principles

4. Professional development should be **primarily school-based** and built into the day-to-day work of teaching.

5. Professional development should be organized around **collaborative problem solving**.

6. Professional development should be **continuous and on-going**, involving follow-up and support for further learning-including support from sources external to the school that can provide necessary resources and new perspectives.
Design Principles

7. Professional development should incorporate evaluation of multiple sources of information on (a) outcomes for students and (b) the instruction and other processes that are involved in implementing the lessons learned through professional development.

8. Professional development should provide opportunities to gain an understanding of the theory underlying the knowledge and skills being learned.

9. Professional development should be connected to a comprehensive change process focused on improving student learning.
What does the research show?

The 2009 status report on teacher development from the National Staff Development Council notes that the literature points to some basic principles.

Four basic principles

Professional development should:

1. be intensive, ongoing, and connected to practice
2. focus on student learning and address the teaching of specific curriculum content
3. align with school improvement priorities and goals
4. build strong working relationships among teachers

Darling-Hammond et al, 2009
Empirical research base to support the identification of a core set of features of effective professional development

- the content focus of teacher learning;
- opportunities for teachers to engage in active learning are also related to the effectiveness of professional development;
- coherence, the extent to which learning is consistent with teachers’ knowledge and beliefs;
Features of effective professional development

• intellectual and pedagogic change requires professional development activities to be of sufficient duration, including both span over time over which the activity is spread and the number of hours spent in the activity;

• collective participation of teachers for the same school, grade or department, setting up interaction and discourse which can be a powerful form of teacher learning.

• Desimone, 2009
Impact

... the duration of professional development appears to be associated with stronger impact on teachers and student learning – in part perhaps, because such sustained efforts typically include applications to practice, often supported by study groups and/or coaching.

Darling-Hammond et al, 2009
Research supports professional development that:

• Deepens teachers’ knowledge of content and how to teach it to students.
• Helps teachers understand how students learn specific content.
• Provides opportunities for active, hands-on learning.
• Enables teachers to acquire new knowledge, apply it to practice, and reflect on the results with colleagues.
Research supports professional development that:

- Is part of a school reform effort that links curriculum, assessment, and standards to professional learning.
- Is collaborative and collegial.
- Is intensive and sustained over time.

Darling-Hammond & Richardson (2009)
Connections

What are the links between teachers’ professional learning and

- Changes in professional knowledge
- Changes in teaching practices
- Improved student achievement
Impact studies of professional development

Desimone, 2009

Core features of high quality professional development

(a) there is enough empirical evidence to suggest that there is in fact consensus on a core set of features

(b) these key features should be included in studies of the effectiveness of professional development
Timing

Regardless of the PD being studied, careful attention is needed to the timing of outcome measurement.

Timing is important because moving from providing PD to obtaining an impact on achievement involves traversing a number of causal links, and each of these may take time to unfold.
Timing

• How long do teachers need to think about what they have learned in order to put it effectively into practice? Once practices are put in place, are they sustained over time? And how long does improved instruction take to effect observable increases in students’ learning?

• Wayne et al, (2008)
Three investigations

1. A review and investigation of the links between teacher professional learning and improved student outcomes
2. A two-year evaluation of the impact of a system-wide professional learning initiative
3. A retrospective exploration of factors involved in successful school based professional learning
1. Improved student learning

- National study of the links between teacher professional development and student learning outcomes, 2001-2003

Literature review

• Growing, but relatively small body of research on links between professional development and improved learning outcomes
• Need to ensure that assessments of student achievement align with purposes of the professional learning
• Supported three stage model – teacher PD, professional learning, changed practice, improved student learning
• Longitudinal research needed
Scope of the study

- School based trials of 10 PD programs – national, 70 schools, all sectors
- Collected evidence of teachers’ experience of the programs, and the impact on their practice
- Complex and multi-layered, variations across schools
- Assessment instruments aligned as closely as possible to purposes of the PD
- Repeated assessment over time, value-added analysis
Issues and implications

1. Student outcomes broadly defined: specific outcomes, e.g., early years numeracy, and general outcomes – enhanced general engagement with learning.

2. A wide range of evidence of improvements, including teacher observations
Issues and implications

3. Longitudinal view of change

4. Evidence of change in students’ learning as an incentive for taking changed practice further.

5. Design: significance of emphasis on content.

6. School contextual factors
2. Impact of a system initiative


Appointment of Literacy or Numeracy Specialist teachers to schools for two years to work ‘shoulder to shoulder’ in classrooms.

Collaborative identification of students’ learning needs and planning activities to move them forward.

High quality training for Specialist Teachers over two years.
Evaluation data

- School visits
- Interviews
- Observations
- Two surveys of teachers, principals, and Specialist Teachers over two years.

Focus of the evaluation

• Implementation of the strategy
• The training for specialist teachers
• Patterns of working ‘shoulder to shoulder’
• Impact on professional knowledge
• Sustaining the benefits
• Effective conditions for in-class support
Effects of in-class support: associations

• The amount of time spent in planning with the Specialist Teacher was important
• most likely to affect the outcomes when this work was focussed on individual student outcomes, and
• when the school supported a collegial culture.
Effects of in-class support: associations

The time the classroom teacher spent with the Specialist Teacher was more likely to lead to a positive outcome, if there was

• a focus on individual students, and
• if the Specialist Teacher provided modelling of effective teaching practices.
3. Factors in successful professional learning programs

Five identified successful whole school professional learning programs
What factors contributed to the successful implementation of these programs?
Spaced interviews and observations in the year following implementation.
Whole school initiatives, involving all staff in a common enterprise.
Themes

1. The development and strengthening of professional learning communities.
2. Effective professional leadership
3. Programs of professional learning extending over time (one to three years)
4. Content and quality of the program. Access to high-level expertise and to specific knowledge and skills.
5. Direct links between the content of the professional learning program and curriculum implementation in the school.

6. **Resourcing** of school-based programs - physical context, time, funding.

7. **Sustainability** of gains – planning for long-term programs, whole-school focus, ongoing support form changes practices.

8. Critical role of **education system support**.
Themes

These eight themes were integral to the success of these coherent, multi-faceted programs.

Questions and strategies

A variety of strategies for finding out about the impact of professional learning:

- reviewing research literature,
- investigation of links between PD and student learning,
- evaluation of impact,
- identifying factors leading to success.

Complexity and challenges
References


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