**"Teacher Professional Learning and Development": summary of a very large review of research.**

This paper summarises Helen Timperley et al (2007) "Teacher Professional Learning and Development" which reviews studies of attempts to improve student learning through the Professional Development of teachers. (She includes 97 excellent research studies on INSET, CPD, staff training programmes etc).

Timperley's report made use of research from many nations and was produced for the New Zealand Ministry of Education and is available free on-line:
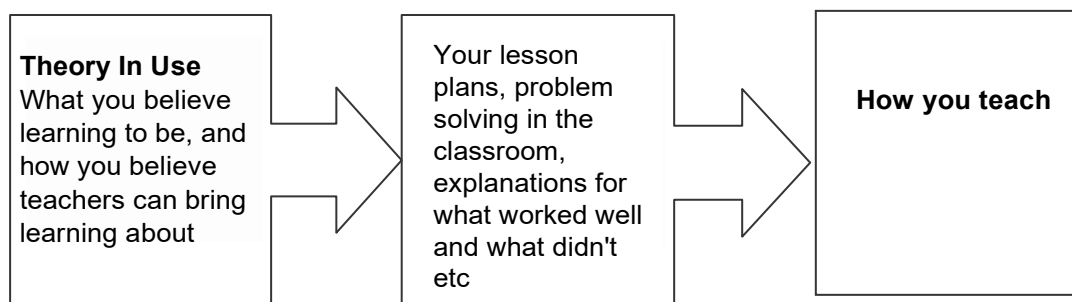www.educationcounts.govt.nz/publications/series/2515/15341

Helen Timperley is one of the world's foremost educational researchers and reviewers.
The average effectiveness of her studies at increasing student achievement through staff training was remarkably high at 0.66. This means students' attainment was improved by the equivalent of more than a grade at GCSE or A level by the training.

Two concepts, 'Theory In Use' and 'Community of Practice' will help us understand her review of research.

**What is a teacher's "Theory In Use"?**
See chapter 46, 'Teaching Today' Geoff Petty
The "Theory In Use" of a teacher, is their own personal theory about what works, it is a personal 'construct' and determines practically everything the teacher does in the classroom.

| **Theory In Use** What you believe learning to be, and how you believe teachers can bring learning about | → | Your lesson plans, problem solving in the classroom, explanations for what worked well and what didn't etc | → | **How you teach** |

**What is a Community of Practice?**
Timperley uses the term **'community of practice'** an important idea in understanding how teachers work. A community of practice is a group of teachers who converse, and who are all teaching similar courses/subjects or students. For example, a teaching team on a science diploma would be a 'community of practice'. This community transfers its ideas to new members, not always deliberately, via peer pressure, expectations etc and so tends to create a common way of thinking. They will agree more than they differ.

Communities of Practice can support and sustain change, or they can resist it, depending in part whether the teachers in it believe in the benefit of change.

Timperley found six characteristics of staff training that were <u>necessary</u>, but not <u>sufficient</u> for CPD to work exceptionally well.  These were:

**1.  An outside expert delivers the training. (Interestingly another influential research review (Joyce and Showers) does not agree experts are necessary as long as the materials and activities are expertly devised.)**

**2.  All teachers in the school or college should take part, not just volunteers**

**3. The content of the training should be from policies, or authorities on what is best practice, rather than based on the whims of the trainer.**

**4. The leaders in the institution should actively lead the learning opportunities, monitoring the implementation of the training by their teachers, and monitoring any improvement in student outcomes.  They should develop a learning culture among teachers.**

**5. Teachers' 'prevailing theories of practice' (Theory In Use) should be challenged, especially if they suggest that some students can't or won't learn as well as others. Timperley calls this 'problematical discourse'.**

**6.  There should be opportunities for the teachers being trained to talk about the implementation of the training over time.  She calls this 'to engage with a community of practice' and 'professional dialogue'.  This should last for at least six months to two years, or even more.**

The aim of the training should be 'sustainability', that is, it should aim to improve, long-term, teachers' planning, problem solving etc.  **This requires that the training should engage with teachers own theories about what works best, what is possible or desirable etc.**

Other observations in the report (which is book length) include:

- **The aim of the training should be to help teachers self-regulate their own learning.  This requires that teachers self-monitor, that is they must identify and diagnose problems with student learning.  They must look at student work and other outcomes to see if teaching methods or learning strategies are working, whether these strategies are old or new.**

- **Like their learners the teachers being trained need informative feedback:**
    - **A 'medal' for what they are doing well**
    - **A 'mission' for how to improve**
    - **The 'medals' and 'missions' need to be in relation to a clear understanding of where they are going. They must have clear 'goals' for their teaching.**

- While dialogue in 'communities of practice' is necessary, this <u>can</u> work against the training. For example it might confirm and defend the status quo against the training.  Timperley thinks expertise from outside the group is needed to challenge the 'communities' assumptions and provide the necessary new perspectives.

- It helps if existing practice is explicitly challenged.  One way of doing this is to provide evidence that produces a 'cognitive conflict'.  That is, evidence that directly contradicts teachers' current ideas and ways of working.

- Teachers learn like students so it is helpful in training to ask them to make use of their existing knowledge.


- Beware of the *'I already do this'* response. Often teachers only adopt the 'surface' features of best practice, they 'tick the boxes' or 'go through the motions' without using the methods and strategies in a 'deep' and effective way. They need to understand <u>why</u> and how methods work if they are to use them satisfactorily.


- The process of learning to teach differently is a trial and error or 'iterative' process where new approaches are used repeatedly with reviews. There is a deliberate attempt to learn from these trials, and to improve the use of the unfamiliar teaching method. Higher expectations will develop slowly as teaching methods are mastered and learning is seen to improve.


- Theory and practice need to be integrated, theory needs to be translated into practice.


**Some references:**

Hattie (2009) Visible Learning: A Synthesis of over 800 metal-analyses relating to achievement, London: Routledge


Marzano, R. J. (1998). *A theory-based meta-analysis of research on instruction.* Aurora, CO: Mid-continent Research for Education and Learning. This can be downloaded from:

http://www.mcrel.org/topics/productDetail.asp?topicsID=6&productID=83


Marzano R. Pickering, D. Pollock, J. (2001) "Classroom Instruction that works" Alexandria: ASCD


Petty, G. (2006) Evidence Based Teaching 2nd Ed, Cheltenham: Nelson Thornes.
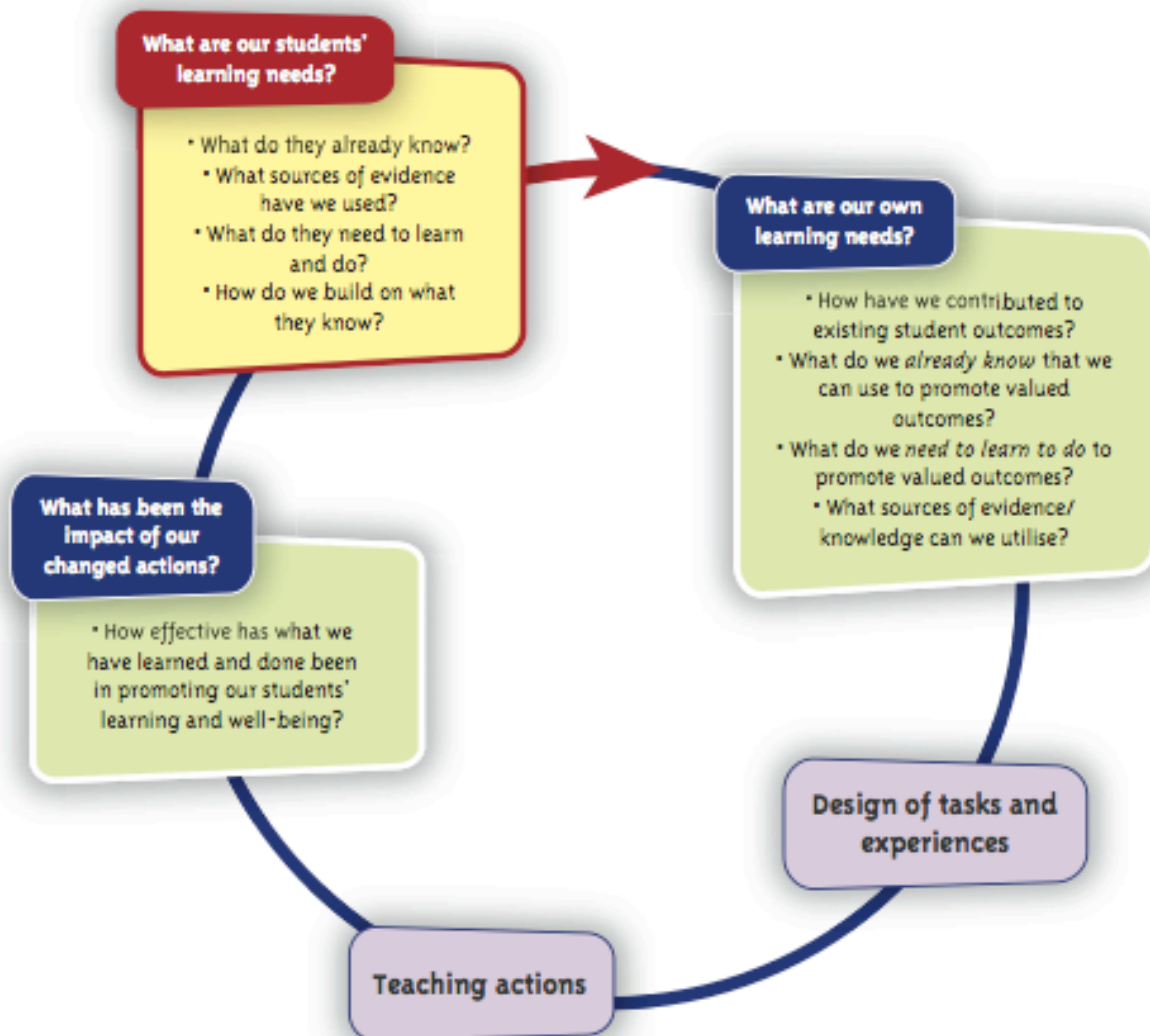
**Helen Timperley et al (2007) "Teacher Professional Learning and Development"
available free on-line:
www.educationcounts.govt.nz/publications/series/2515/15341**
**Timperley suggests a process for designing CPD:**

**Below is the cycle that Timperley recommends in her study:**
**www.educationcounts.govt.nz/publications/series/2515/15341**

### Teacher inquiry and knowledge-building cycle to promote valued student outcomes.

**What are our students' learning needs?**

- What do they already know?
- What sources of evidence have we used?
- What do they need to learn and do?
- How do we build on what they know?

**What are our own learning needs?**

- How have we contributed to existing student outcomes?
- What do we *already know* that we can use to promote valued outcomes?
- What do we *need to learn to do* to promote valued outcomes?
- What sources of evidence/ knowledge can we utilise?

**What has been the impact of our changed actions?**

- How effective has what we have learned and done been in promoting our students' learning and well-being?

**Design of tasks and experiences**

**Teaching actions**

**Evidence Based Professional Development**

'Evidence Based Teaching' by Geoff Petty (2006)

Institutional support for experiments e.g. meeting time used for Peer Coaching

The iterative engine of development

The teacher's experience

Do

Apply

Review

Learn

Supported Experiments

Research reviews on **professional development**

The teacher's **'Theory in Use'**

The teacher's **'Community of Practice'**

**Managers monitor the quality and quantity of implementation of the training.**

**Teacher Practice**

**Improved student attainment**

**Accreditation?** E.g. Edexcel Evidence based CPD modules 2010

**Methods of transmission of research:**
CPD and INSET;  expectations e.g. Institutional  initiatives; some books e.g. Marzano 2001, Petty 2006

# Research

Syntheses of reviews of **Quantitative Research:** e.g. Marzano 1998 Hattie 2008

Syntheses of reviews of **Qualitative Research:** e.g. Bransford 2000 (Surface & deep)

Syntheses of reviews of research on **school (and teacher) effectiveness and improvement**

Syntheses of summaries of **Action research**

**contradicts**

**affirms**

# Opinion

Government initiatives
Most books
Most websites
Much expert opinion
Most current CPD
Teaching Standards
All initial teacher training
etc

**Reviews and Meta-studies of research**

**Educational Research on what affects learning**

Selective membrane