Making Learning Visible: Didactic Potentials Inherent in the Concepts of “Formative Assessment” and “Grading” in Teacher Education

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Drawing on Research from -

Timperley, H. (2012) *Learning to Practise*

As well as:

- Grossman et al. (2009)
- Hammerness et al. (2005)
- Hattie and Timperley (2007)
- Lampert (2009)
- Wiliam (2010)
- Timperley (2011)
Underpinned by an Image of Professionalism

Adaptive experts
(e.g. Hatano & Inagaki, 1986; Hammerness et al., 2005)

- Focused on the moral imperative of promoting the engagement, learning and well-being of ALL students
- Aware of assumptions underpinning their practice, know when these assumptions are helpful for their learners and when to question them, and if necessary, to let them go
Core to professionalism

**Actively** seek knowledge about:

- The content of what is taught and how to teach it effectively

Work with others to:

- Retrieve, organise and apply professional knowledge in response to learners;
- Seek evidence about the impact of their teaching on learners;
- Seek to develop innovative approaches when regular routines are not working for learners
Routine to Adaptive Experts

Routine Experts

• Apply a core set of skills with increasing fluency and efficiency
• Own beliefs taken for granted and not open to scrutiny
• Based on notions of novice to experts – practice makes perfect

Adaptive Experts

• Flexibly retrieve, organise and apply professional knowledge
• Aware of own beliefs underpinning practice and when they get in the way
• Recognise when old problems persist or new problems arise and seek expert knowledge
Adapted from: Bransford et al., 2010
### Comparing routine and adaptive expertise in teacher education

<table>
<thead>
<tr>
<th></th>
<th>Novice</th>
<th>To routine expert</th>
<th>To adaptive expert</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficacy / agency</strong></td>
<td>Self-preservation – surviving the “practice shock”</td>
<td>Developing a sense of self-efficacy that provides novice with the confidence to teach</td>
<td>Agency depends on developing relationships with all learners in ways that promote their learning</td>
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<tr>
<td><strong>Normality</strong></td>
<td>Self as normal: All learners are like them</td>
<td>Some learners are different from them (othering)</td>
<td>All are diverse – means learning how to identify and use cultural and linguistic resources</td>
</tr>
</tbody>
</table>

- **Normality**: All learners are like them.
- **Efficacy / agency**: Developing a sense of self-efficacy that provides novice with the confidence to teach.
An example from assessment of student learners

Routine experts

- Assessment and learning are sequential
- Assessment is about student capability
- Investigating the impact of teaching undermines professionalism

Routine experts

- Assessment and learning are integrated
- Assessment is about the effectiveness of teaching
- Investigating the impact of teaching is essential to improvement
Implications

• Teacher candidates’ learning experiences need to be consistent with developing adaptive expertise
• Graduating standards need to be consistent
Graduating Standards

• Based on the idea of learning to teach
  – See translation

For you to discuss: To what extent is your current practice consistent with developing teacher candidates’ adaptive expertise and meet the standards?
More Implications

• Need to be based on principles of how people learn
Learning Principle 1

Develop knowledge of practice through actively constructing conceptual frameworks within a defensible theory of professionalism and what this knowledge means in practice.
Understanding how co-operative learning involves caring about learner performance

Locating a high leverage practice (e.g. co-operative learning) in a conceptual framework

Understanding how co-operative learning involves creating a well-managed learning environment

Understanding how co-operative learning involves engaging in effective relationships and interactions

Understanding how co-operative learning involves monitoring and reflecting on outcomes

Understanding how co-operative learning involves caring for learners culturally

Example: Cooperative learning

Learning to be an adaptive expert responsive to each learner
Implications for Learning to Practise

• Situate all practice in conceptual frameworks and a defensible theory of professionalism

• Actively engage teacher candidates in constructing conceptual frameworks in which to locate individual practice
Learning Principle 2

Systematically build formal theories of practice by engaging, challenging and/or replacing everyday theories - which means -

- Learning to practise is not about integrating theory and practice but about engaging and integrating different theories of practice.

- If this does not happen, everyday theories will dominate formal theories in practice situations.
Giving feedback to student learners

May trigger ...

Feedback is underpinned by learning relationships, focused on task, process or self-regulation

Practice - consistent with formal theories

More likely to trigger ...

Feedback focused on personal praise because experienced in own schooling

Practice – consistent with everyday theories

Everyday theories about feedback engaged and challenged leading to ...

Theories of practice that integrate the formal and everyday

Informed practice of an adaptive expert
Implications for Learning to Practise

• Examine how personal everyday theories differ from / are the same as formal theories of teaching and learning
• Intentionally resolve the tensions between everyday theories and formal theories.
Learning Principle 3

Promote meta-cognition, co- and self-regulated learning
- which means -

developing awareness of one’s own learning, taking control in ways that lead to ongoing inquiry into the effectiveness of practice for diverse learners, and making appropriate changes.

FUNDAMENTAL TO DEVELOPING ADAPTIVE EXPERTISE
Implications for learning to practise

• Provide learning experiences that are consistent with promoting development of metacognitive and self-regulated learning
Learning Principle 4

Integrate cognition, emotion and motivation

- which means -

personal support to meet the challenges of learning to practise are framed in terms of a developing sense of professionalism as an adaptive expert, focused on benefitting learners, not just those learning to teach them.
Implications for Learning to Practise

• Support teacher candidates through ‘practice shock’ by situating their experiences within an adaptive expert framework

• Support the shift from focus on self to focus on students by situating it within a defensible framework that both students and teacher benefit
Learning Principle 5

Situate learning in carefully constructed learning communities
- which means -

Promote learning through engagement in communities both within the teaching profession and those that cross community – professional boundaries focused on the active construction and critique of knowledge and practice.
How do these principles compare with how you teach as teacher trainers?

1. Develop knowledge of practice within conceptual frameworks and a theory of professionalism
2. Build formal theories by engaging / challenging personal theories
3. Promote meta-cognition, co- and self-regulation
4. Integrate cognition, emotion and motivation
5. Situate learning in carefully constructed learning communities
Each of the principles has implications for assessment

• Supports the development of conceptual rather than itemised knowledge and skills
• Includes analysis of everyday personal and formal theories of practice
• Promotes meta-cognition, co- and self-regulated learning
• Requires actively engaging with diverse views

All contribute to developing adaptive expertise
Formative assessment and Grading

Formative Assessment
• Provides information to reduce discrepancies between current knowledge and performance and a desired goal (graduating standards)

Grading
• Identifies discrepancies between current knowledge and performance and a desired goal (graduating standards)
• Does not give information about reducing the discrepancy
Answers three questions
Where are we going? Goal
How are we doing? Feedback
Where to next? Feed-forward
The goal: “Where am I going?”

- The teacher candidate and trainer must have a shared understanding of the criteria for goal success
  - Usually in the form of standards or descriptions of effective teaching
  - Usually has descriptive steps of a developmental sequence towards the goal
- Through the formative feedback process, deeper understanding of the goal is achieved
Feedback: “How am I doing?”

• Needs to given information –
  – The tasks involved in reaching the goal
    (e.g. “Your planning doesn’t have enough
detail on on ...”)
  – The process involved in reaching the goal
    (e.g. “I noticed when you were writing on the
board, the students were ....)
  – Promoting self-regulated learning (e.g. “I want
to understand why you set up the task in this
way, focusing on how you hoped the
students would respond)
Feed-forward
“Where to next?"

• Provides information about -
  – The task: “Your planning needs to include more on …”
  – The process: “We need to think of some ways you could keep the students’ attention better when you are doing …”
  – Promoting self-regulated learning, (e.g. “I want you to use this material to work out how you might have achieved an improved response from the students and why it might be a better way to do it”)
**Effective Feedback**

**Purpose** – to reduce discrepancy between current understandings and a desired goal

**Ways to reduce the discrepancy**
Increase effort or abandon goal

**Answers three questions**
*Where am I going? How am I going? Where to next?*

- **Task**
  - ✔

- **Process**
  - ✔

- **Self-Regulation**
  - ✔

- **Self**
  - ✗
Each feedback question works at four levels

- **Task level**: How well the tasks are understood / performed
- **Process level**: The main processes needed to understand / perform tasks
- **Self Regulation**: Self-monitoring, directing and regulation of actions
- **Self level**: Personal evaluations and affect (usually positive) about the teacher candidates
Feedback can be detrimental

- When it does not give information about how to improve, for example:
  - Grades with no comments about how to improve

Feedback associated with extrinsic rewards

You are doing very well

Personal praise / criticism that distracts from the task
Some Practicalities

To promote learning and improvement:

• All observations of practice involve formative discussions and written comments that provide information about:
  – Which aspects of practice are consistent with the graduating standards
  – Which aspects of practice need improvement
    • And particularly include information about where to next

• The standards form criteria that are met / not met (not A,B,C)
What next?

• Which ideas are relevant to teacher education in Hessen?
• What will you do to bring about the change in those ideas in Hessen?
Thank you for listening and participating.

- Helen