#### Experiences with Problembased Learning: Insights from the Classroom

#### WATERLOO

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"The learning paradigm ends the lecture's privileged position, honoring in its place whatever approaches serve best to prompt learning of particular knowledge by particular students."

Barr and Tagg (1995:14)



# Workshop goals?

- Experience of problem-based learning
- Transfer of knowledge about PBL
- Themes from qualitative data
- Course design for your discipline

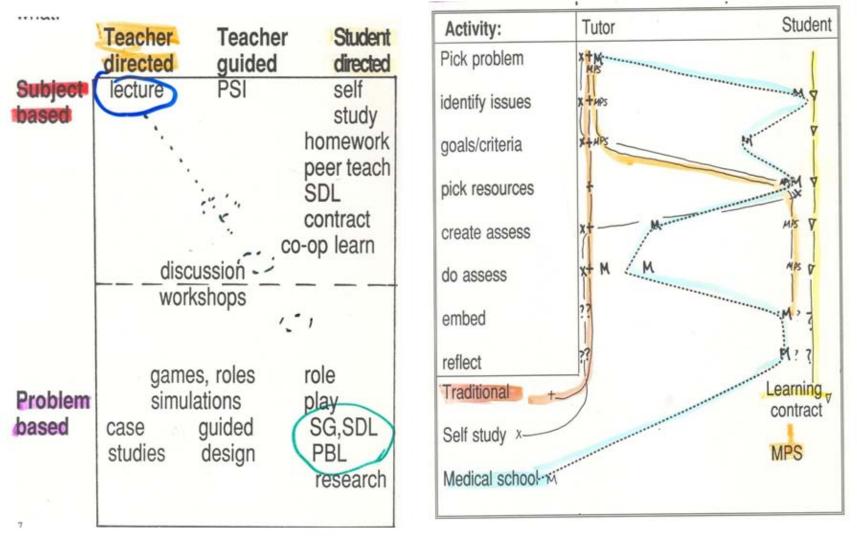


## "Why use PBL?"

The traditional sequencing of learning does not reflect real life interaction with the material (Neufeld & Barrows 1974, 1043)

"PBL... is really about knowledge, learned in the context in which it will later be used so that hopefully transfer can be facilitated." (Norman 1997, 264)

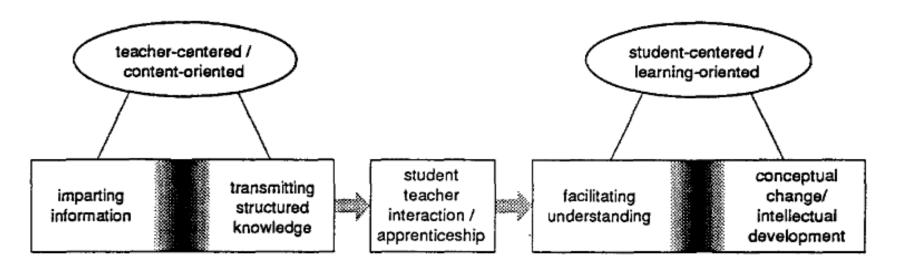




(Woods, Cornell Univ. keynote Jan 2012)







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Figure 2. A multiple-level categorisation model of conceptions of teaching.



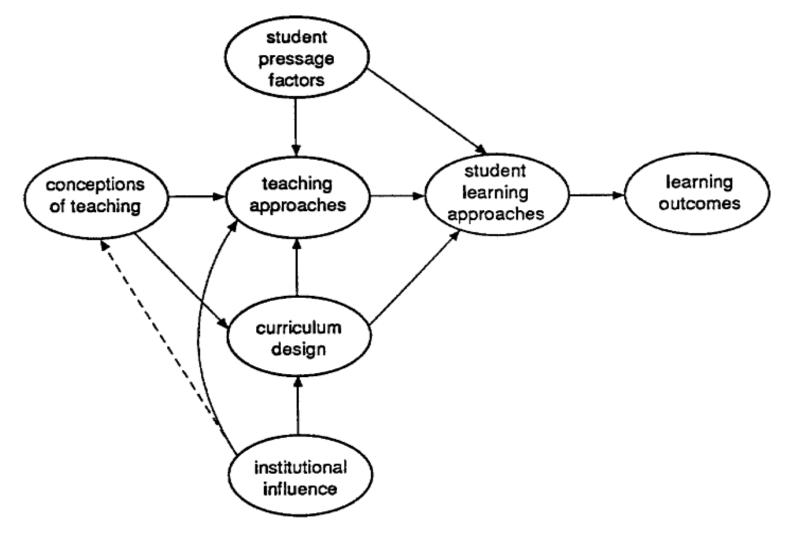
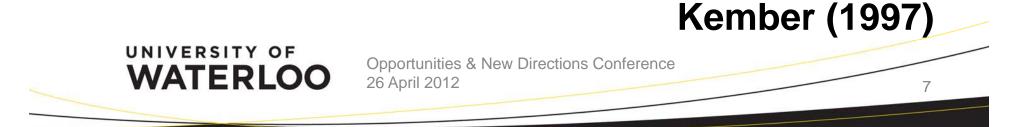


Figure 3. The relationship between conceptions of teaching, teaching approaches and learning outcomes.



#### **Qualitative Data**

"How have the experiences in this course enhanced understanding of international events?

What do you need to do to respond in an informed way in future?"



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## **Qualitative Data**

"How have the experiences in this course enhanced understanding of international events?

What do you need to do to respond in an informed way in future?"

- Telephone interview data



#### **Prominent themes**

- Novelty curiosity and enthusiasm
- Paradigm shift
- Retention of the material
- Community



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# **Final thoughts**

- Challenging and rewarding
- Think "learning first"
- Takes time to transition Communicate
  - Why the course is being taught this way
  - Expectations (repeat!)
  - Formative feedback
  - Meta-message: safe to take risks in learning



#### References: Barb Bloemhof

Barr, R. B. & Tagg, J. 1995. "From teaching to learning – a new paradigm for undergraduate education," Change (Nov/Dec), 13-25.

Barrows, H. S. 1996. Problem-based learning in medicine and beyond: a brief overview," New Directions for Teaching and Learning, 68 (Winter), 3-12;

Biggs, J. B. 1989. "Enhancing teaching through constructive alignment," Higher Education 32(3), 347-364.

Bloemhof, B. 2012. "Assessing Outcomes of Problem-based Learning in Economics," In Poikela & Poikela *Competence & Problem Based Learning*. Rovaniemi, Finland: Rovaniemi Univ. Publication A#3, 52-66.

Jones, A. 2007. "Looking over our shoulders: critical thinking and ontological insecurity in higher education," London Review of Education 5(3), 209-222.

Kember, D. 1997. "A reconceptualization of the research into university academics' conceptions of teaching," Learning and Instruction 7(3), 255-275.

Neufeld, V. R. and H. Barrows. 1974. "The 'McMaster Philosophy': An Approach to Medical Education," Journal of Medical Education 49(11), 1040-1050.

UWaterloo Senate. 2008. "Degree-level expectations" Academic Reviews. Available 4 April 2013 at http://uwaterloo.ca/academic-reviews/undergraduate-programs/degree-level-expectations Woods, D.R. 2012. "Product-based learning, problem-oriented learning, problem-based learning, problem-based synthesis and project based learning. What's best for you?"

Presentation CTE Cornell University, Ithaca NY.

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