

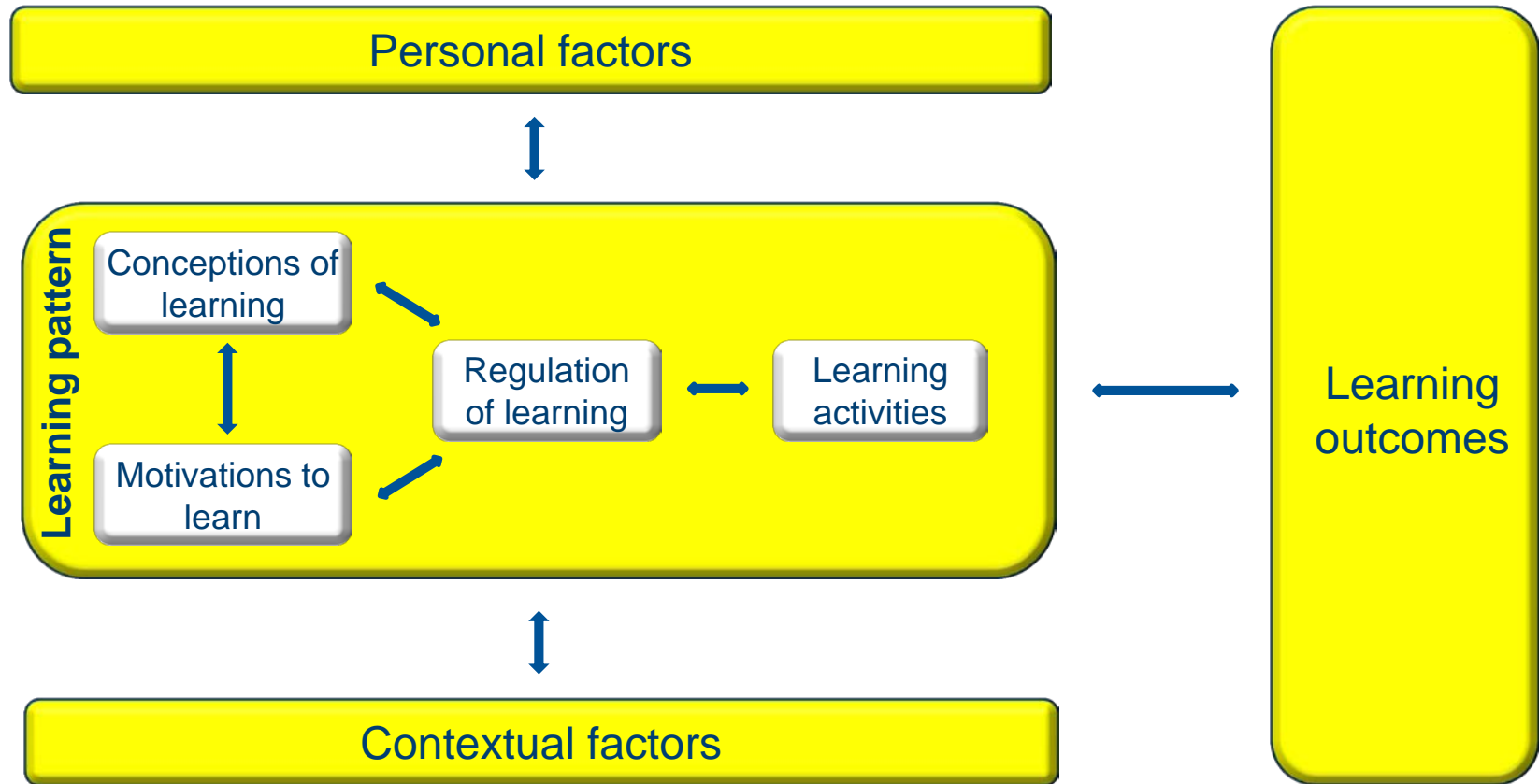
Education research and the professions

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5th November 2015

Faculty of Education

Processes and outcomes of student learning



Vermunt, J.D., & Vermetten, Y.J. (2004). Patterns in student learning: relationships between learning strategies, conceptions of learning, and learning orientations. *Educational Psychology Review*, 16(4), 359-384.

Research on student learning processes

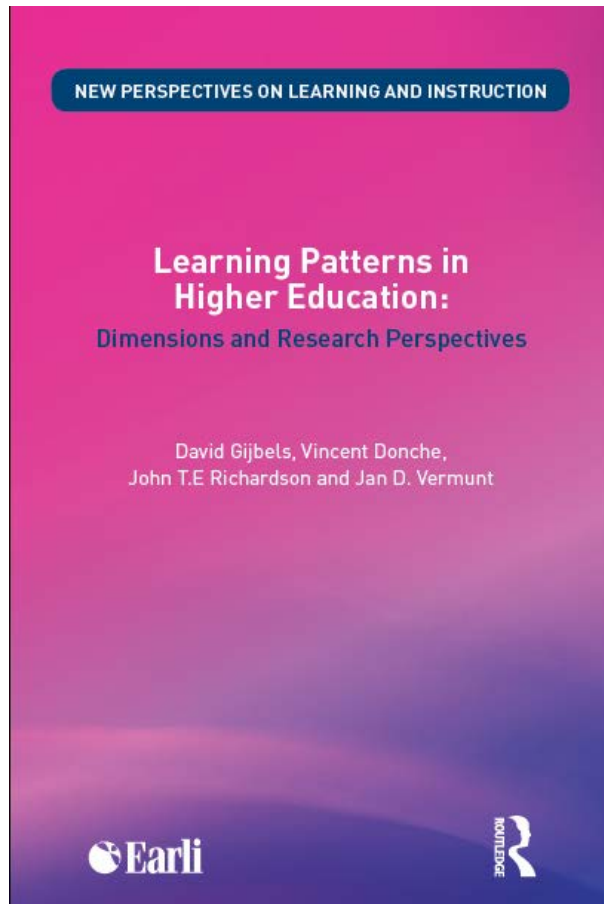
Qualitative different patterns in the way students learn:

- Reproduction-directed learning
- Meaning-directed learning
- Application-directed learning
- Undirected learning

Vermunt, J.D. (1998). The regulation of constructive learning processes. *British Journal of Educational Psychology*, 68, 149-171.

Lindblom-Ylänne, S., & Lonka, K. (1999). Individual ways of interacting with the learning environment - Are they related to study success? *Learning and Instruction*, 9, 1-18.

Recent research on student learning in higher education



Published 2014 by Routledge – 304 pages

Learning Patterns in Higher Education brings together a cutting edge international team of contributors to critically review our current understanding of how students and adults learn, how differences and changes in the way students learn can be measured in a valid and reliable way, and how the quality of student learning may be enhanced.

Areas covered include:

- Cultural influences on learning patterns
- Predicting learning outcomes
- Student centred learning environments and self-directed learning
- Mathematics learning

Comparing studies from different countries and continents

- International student mobility
- Marked differences in the use of learning activities, regulation of learning, type of study motivation, conceptions of learning
- Marked differences and similarities in interrelations among learning practices, motives and conceptions (e.g. shown in underlying dimensions resulting from factor analyses)
- E.g. between Asian and European students
- But also between students from different Asian countries, and between students from different European countries

Vermunt, J.D., Bronkhorst, L.H., & Martinez-Fernandez, J.R. (2014). The dimensionality of student learning patterns in different cultures. In D. Gijbels, V. Donche, J.T.E. Richardson & J.D. Vermunt (Eds.), *Learning patterns in higher education: Dimensions and research perspectives*. New York: Routledge.

Contemporary innovations in teaching and learning in higher education

- Active learning
- Assignment based teaching
- Problem / Case based learning
- Enquiry-based learning
- Project centred learning
- Competency based teaching
- Work-based learning
- Life-long learning

Baeten, M., Dochy, F., & Struyven, K. (2014). Do case-based learning environments matter? Research into their effects on students' approaches to learning, motivation and achievement. In D. Gijbels, V. Donche, J.T.E. Richardson & J.D. Vermunt (Eds.), *Learning patterns in higher education: Dimensions and research perspectives*. New York: Routledge.

Problem Based Learning and how students learn



- Discourages undirected learning
- Discourages reproduction directed learning
- Encourages meaning directed learning
- Application directed learning?
- Encourages cooperative learning
- Independent learning?

New teachers' roles and skills

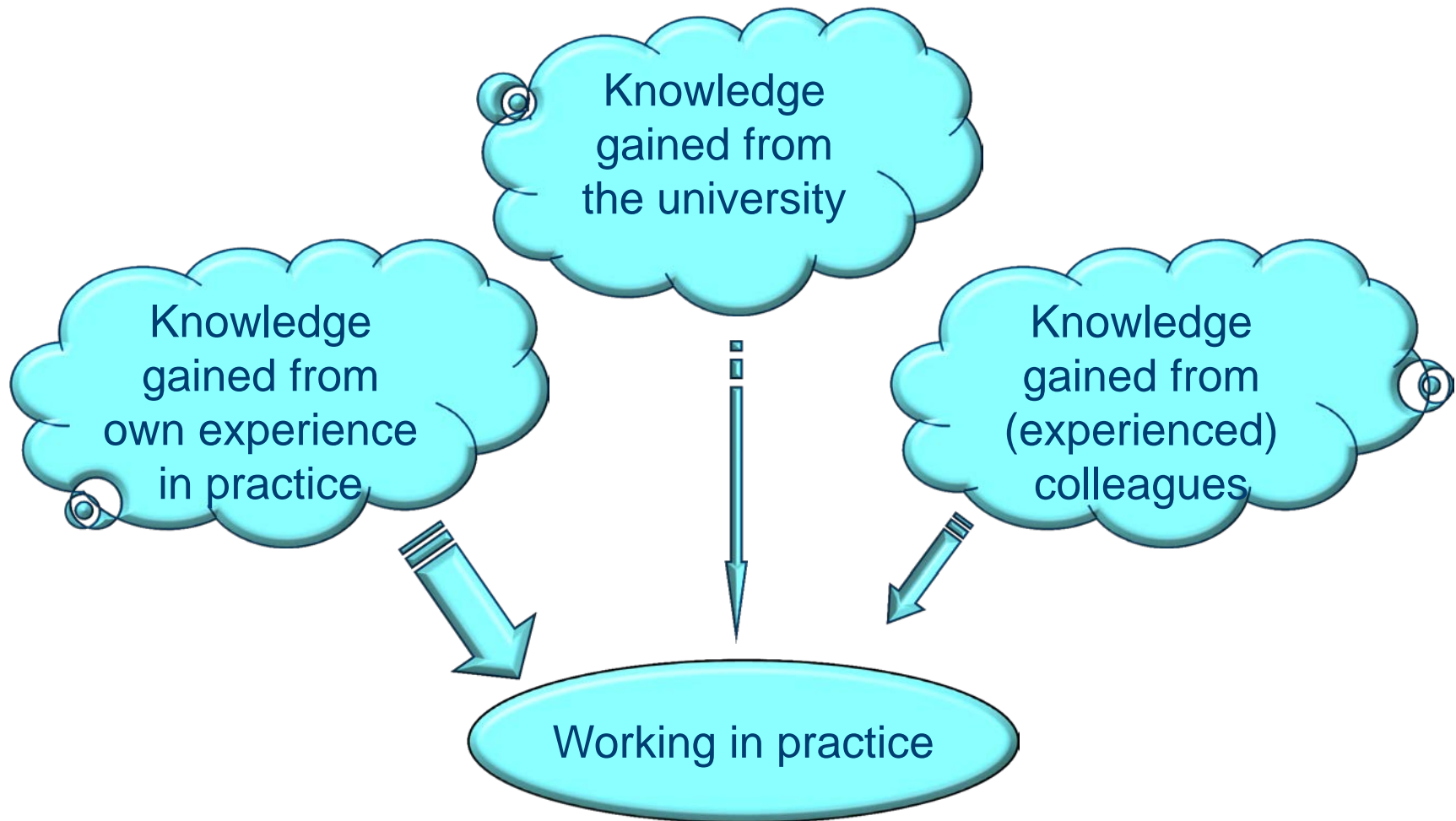
- Explain subject matter well, ...
- Make assignments, feedback,...
- Tutor, block coordinator, ...
- Coach cooperative learning, ...
- Assess competencies, ...
- Mentor, portfolio supervisor, ...
- Model, activator, reflector, ...

Professional learning

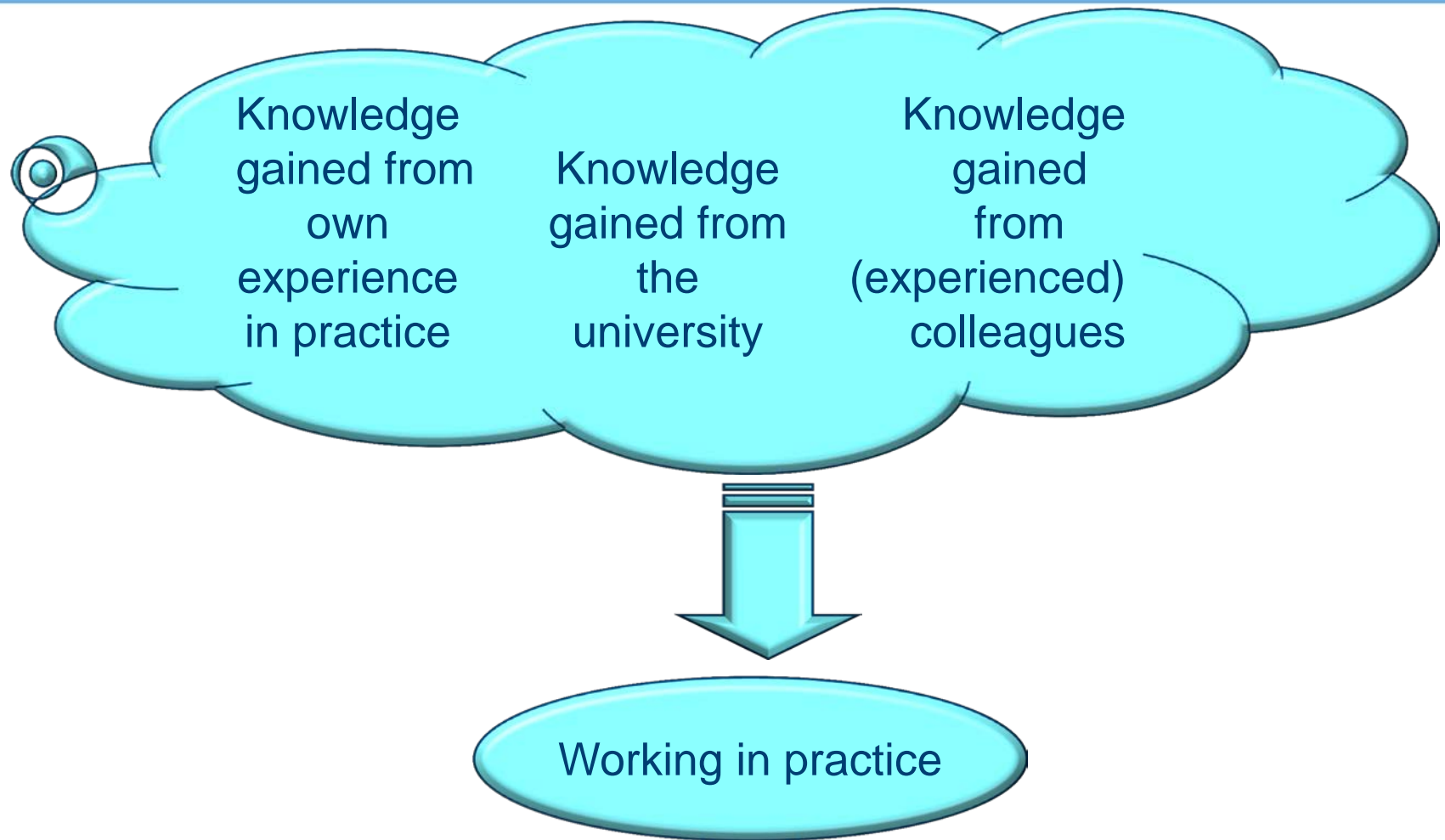
Three important sources to learn from:

- Own practical experiences
- Practical knowledge of (experienced) mentor or colleagues
- ‘Theory’ from educational or professional development institute

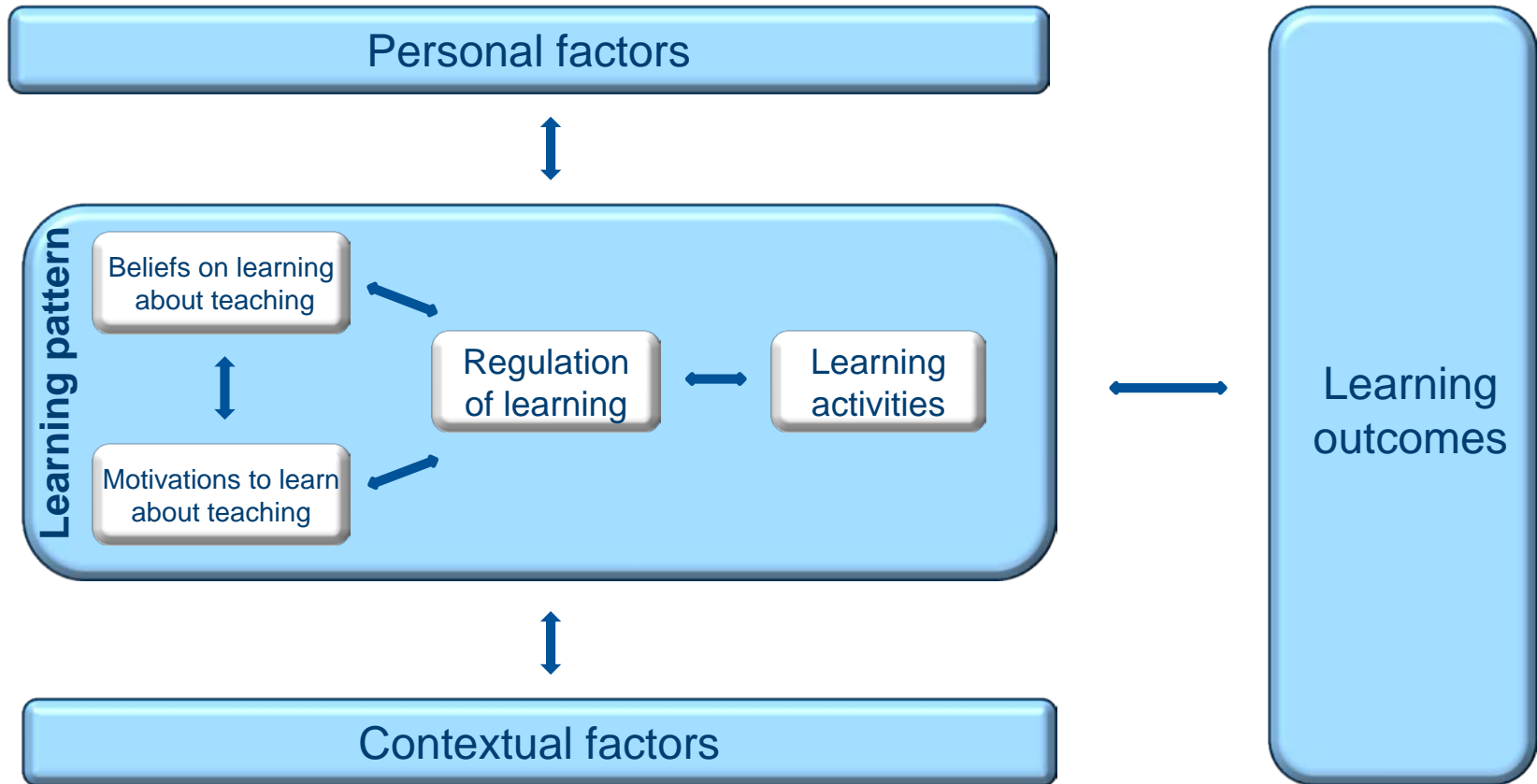
Different separate knowledge bases



An integrated theory of practice



Processes and outcomes of teacher learning



Vermunt, J.D. & Endedijk, M.D. (2011). Patterns in teacher learning in different phases of the professional career. *Learning and Individual Differences*, 21(3), 294-302

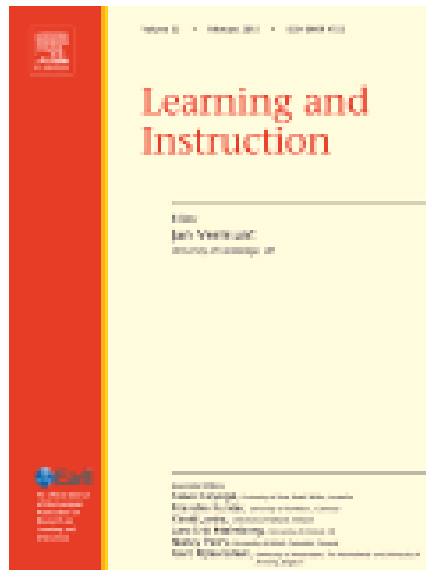
Some examples of education research in the professions

- Use of portfolios in medical education and teacher education to foster reflective learning
- Student learning patterns in traditional medical education in Finland
- Introducing problem-based learning in medical education in Sri Lanka
- Comparing student learning outcomes in traditional and project-based learning

Some examples of education research in the professions - continued

- What are the effects of learning-oriented teaching on student learning outcomes and processes?
- Combining knowledge from different sources in work-based learning.
- Professional identity of clinical teachers
- How to make the practical knowledge of experts educative for novices?
- How to assess medical competencies?

The journal *Learning and Instruction*



- As an international, multi-disciplinary, peer-refereed journal, *Learning and Instruction* provides a platform for the publication of the most advanced scientific research in the areas of **learning, development, instruction and teaching.**
- <http://www.journals.elsevier.com/learning-and-instruction/>

Some references

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- Bakkenes, I., Vermunt, J.D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction, 20*, 533-548.
- Marambe, K.N., Vermunt, J.D., & Boshuizen, H.P.A. (2012). A cross-cultural comparison of student learning patterns in higher education. *Higher Education, 64*, 299-316.
- Gijbels, D., Donche, V., Richardson, J.T.E., & Vermunt, J.D. (2014). *Learning patterns in higher education: Dimensions and research perspectives*. New York: Routledge.