



New work competences

ProWo –

**Promoting Working Life Competencies
in University Education**

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Aims of this study / review

- The aim of the review is to clarify what kind of new work life competencies higher education students should possess when finishing their studies.
- Our focus is in the *new* work competencies related to knowledge work and knowledge society; our understanding is that these consist of such as collaborative knowledge creation competencies, digital competencies, team work competencies.
- With the review, we support our main interest: to investigate and promote the core elements of effective practices, pedagogies and technologies for promoting collaborative knowledge creation in higher education.



Background of the need for thinking competencies 1/2

Work in progress

Several types of reasons why new competences are argued to be promoted for higher education students:

- 1) Societal backgrounds: The changing labor market and the changes in work & professions: new professions, new competence for existing professions, outsourcing and entrepreneurship as new challenges (Work, 2006). However, also critical approaches to “knowledge society”, “knowledge work” (Fornstorp, 2007).



Background of the need for thinking competencies 2/2

Work in progress

- 2) The challenges and expectations which the knowledge society and globalized world put on higher education (e.g., Aggarwal, 2011), which can also be thought as a vocational perspective, pushed by employees and their representatives (Goodyear & Zenios, 2007).
- 3) Some specific demands or challenges: e.g. the Internet and other types of new technologies (e.g., Bernardo, 2007); the new technology brings also changes in *work practices* (Paavola et al., 2011)
- 4) Personal, individual needs, e.g., for changing careers



Students' perspectives: experiences in work

Work in progress

- Students' experiences after studies: their working life skills were inadequate, and they had learnt the necessary skills at work (Tynjälä, 2008); need for negotiation skills, organisation and co-ordination skills, team work and social skills, presentation skills as well as project management skills (Lindholm, 2011).
- Those students who work already during their studies were well employed because of their work life experiences (Kivinen & Nurmi, 2011).



Our approach: focus on knowledge work 1/2

We concentrate on knowledge work and knowledge workers, those who graduate from the university and whose work is strongly dependent, e.g., on using, applying, and creating new knowledge.

What kind of general, work-related competencies doctors, dentists, teachers, biologists should have?

Already a limited amount of articles reviewed introduced numerous competencies:

work in teams, deal with abstract problems, think across disciplines, measure the quality of information for research, formulate and defend their own views, be more globally minded, conversant in different languages, to have good communications skills, be numerate, capable with IT, ability to learn to learn, etc.



Our approach: focus on knowledge work 2/2

Instead of searching for competency definitions, should we try to answer the question about how to cope in the future: act in an uncertain world and work life, with continuous adjustments, changing circumstances & people, incomplete and imperfect outcomes?

Promotion of students' academic competence is a possible answer: A good theoretical framework will give students the bases for a long-term perspective (Aggarwal, 2011).



Hypotheses for learning knowledge work competencies: **Design principles for dialogical knowledge practices 1/2**

1. *Organizing activities around shared “objects” (e.g., wiki pages, documents and models).*
2. *Supporting integration of personal and collective agency and work through developing shared objects (e.g., combining participants' own interests and shared assignments).*
3. *Emphasizing development and creativity in working on shared objects through transformations and reflection (e.g., examine knowledge in various forms, apply declarative and conceptual knowledge in practical problems, and explicate tacit knowledge).*



Hypotheses for learning knowledge work competencies: Design principles for dialogical knowledge practices 2/2

4. *Fostering long-term processes of knowledge advancement with shared objects (e.g., building on previous achievements, or making several iterative revisions).*
5. *Promoting cross-fertilization of knowledge practices and artefacts across communities and institutions (e.g., students' real collaboration with professionals in the field).*
6. *Providing flexible tools for developing artefacts and practices (e.g., tools that support integrated organization and co-construction of shared artefacts and practices). (Paavola et al. 2011).*



References

- Aggarwal, R. (2011). Developing a Global Mindset: Integrating Demographics, Sustainability, Technology, and Globalization. *Journal of Teaching in International Business*, 22, 51–69.
- Anderson, M. (1992). *Intelligence and development. A cognitive theory*. Oxford/Cambridge: Blackwell.
- Bernardo, T. M. (2007). Harnessing collective knowledge to create global public goods for education and health. *Journal of Veterinary Medical Education*, 34(3), 330-334.
- Dreyfus, H. L., & Dreyfus, S. E. (1986). *Mind over machine: the power of human intuition and expertise in the era of the computer*. Oxford: Blackwell.
- Eraut, M. (1994/2001). *Developing professional knowledge and competence*. London: Forster, P-A., (2007). Who's Colonizing Who? The Knowledge Society Thesis and the Global Challenges in Higher Education. *Studies in Philosophy and Education* 27, 227–236.
- Goodyear, P. & Zenios, M. (2007). Discussion, collaboration and epistemic fluency. *British Journal of Educational Studies* , 55 (4), 351-3368.
- Korthagen, F. A. J. (2004). In search of the essence of a good teacher: towards a more holistic approach in teacher education. *Teaching and Teacher Education*, 20(1), 77-97.



References

- Kivinen, O. & Nurmi, J. (2011). Opiskelun nopeus ja työmarkkinarelevanssi–korkeakoulupolitiikan dilemma? *Yhteiskuntapolitiikka*, 76 (5), 687-691.
- Lindholm, H. (2011). *Maisterit, farmaseutit ja lastentarhanopettajat työmarkkinoilla . Vuonna 2005 Helsingin yliopistossa ylemmän korkeakoulututkinnon, farmaseutin ja lastentarhanopettajan tutkinnon suorittaneiden sijoittuminen työmarkkinoille viisi vuotta tutkinnon suorittamisen jälkeen*. Urapalvelut, Helsingin yliopisto.
- OECD (2005). The OECD Program Definition and Selection of Competencies (2005). The definition and selection of key competencies. Executive summary. 30. June, 2005. Retrieved January 11, 2011, from <http://www.oecd.org/dataoecd/47/61/35070367.pdf>
- Paavola, S., Lakkala, M., Muukkonen, H., Kosonen, K., & Kalgren, K. (2011). The roles and uses of design principles in a project on dialogical learning. *Research in Learning Technology*, 19(3), 233–246.
- Rolf, B. (1995). *Profession, tradition och tyst kunskap* [Profession, tradition and tacit knowledge]. Lund: Nya Doxa.
- Tynjälä, P. (2008). Perspectives into learning at the workplace. Review. *Educational Research Review* 3, 130–154.
- Westera, W. (2001). Competences in education: a confusion of tongues. *Journal of Curriculum Studies*, 33(1), 75-88.
- Work, (2006). *Futurist*, 6, 9-9, World Future Society