

The challenges of economic competition and societal complexity and the development of vocational education in Europe and China

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China's education policy is vibrant

- The international forum on Vocational and Technical Education in Tianjin, September 2007
- There are many opportunities for cooperation



EU context on VET policy development

- **Lisbon declaration**
 - Reference knowledge economy in 2010
 - Social model
 - Sustainable
- **Copenhagen process of VET**
- **Bologna process of HE**



EU – Australia – Latin America – Asia - Africa

- Competence-based vocational and professional education is hot
- Oriented towards outcomes
- Overcoming pure knowledge orientation, disciplinary overspecialization and fragmentation



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For quality of life

Major developments

- Global competition is ever increasing
- New products and technologies are developed
- More sustainable production is needed
- Migration of workers
- Complexity of society
- Uncertainty, stress, conflict



Major developments in EU VET policy

- European Qualification Framework
- Quality assurance – increase mutual trust
- Transparency of qualifications
- Parity of esteem
- Recognition of non-formal and informal learning
- Professional identity



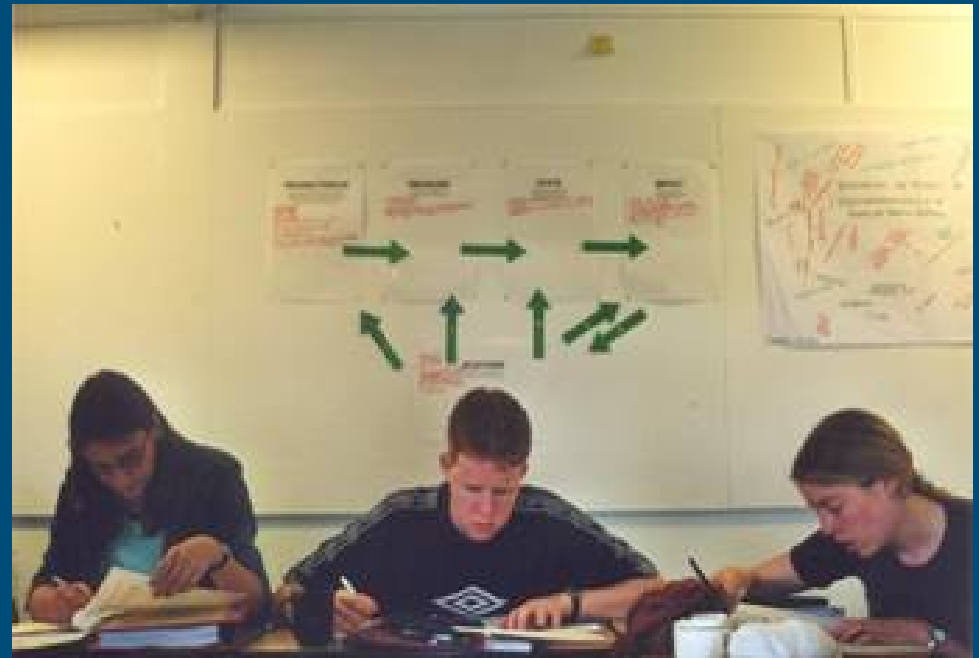
All professionals need to be competent in issues regarding climate change

- Researchers
- Designers
- Engineers
- Policy experts
- Politicians
- Administrators
- Managers
- Consultants
- Small business owners
- Quality managers
- Extension officers
- Teachers
- Etc. etc.



Competence is:

- integrated ability
- consisting of clusters of knowledge, skills, and attitudes
- conditional for task performance and problem solving
- and for being able to function effectively
- in a certain profession, organisation, job, role and situation



Professional Competence: an example

E.g. Making a DNA-profile in a Crime Scene Investigation

- Requires knowledge
 - (inter) disciplinary knowledge
- Requires skills
 - working with artefacts
 - communication skills
- Requires attitudes
 - accuracy
 - coping with pressure
 - integrity
- Together that requires professional competence



Sustainability Competence: an example

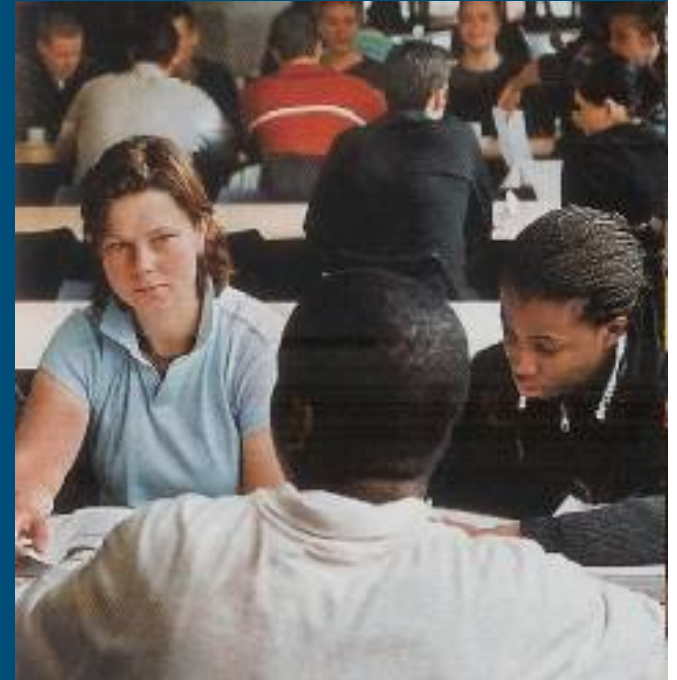
E.g. The Flower Farm; running this in a sustainable way

- Requires knowledge
 - plant science
 - environmental science
 - social science
- Requires skills
 - persuasive communication
 - multi-stakeholder interaction
- Requires attitudes
 - pest management
 - product mileage
 - energy consumption



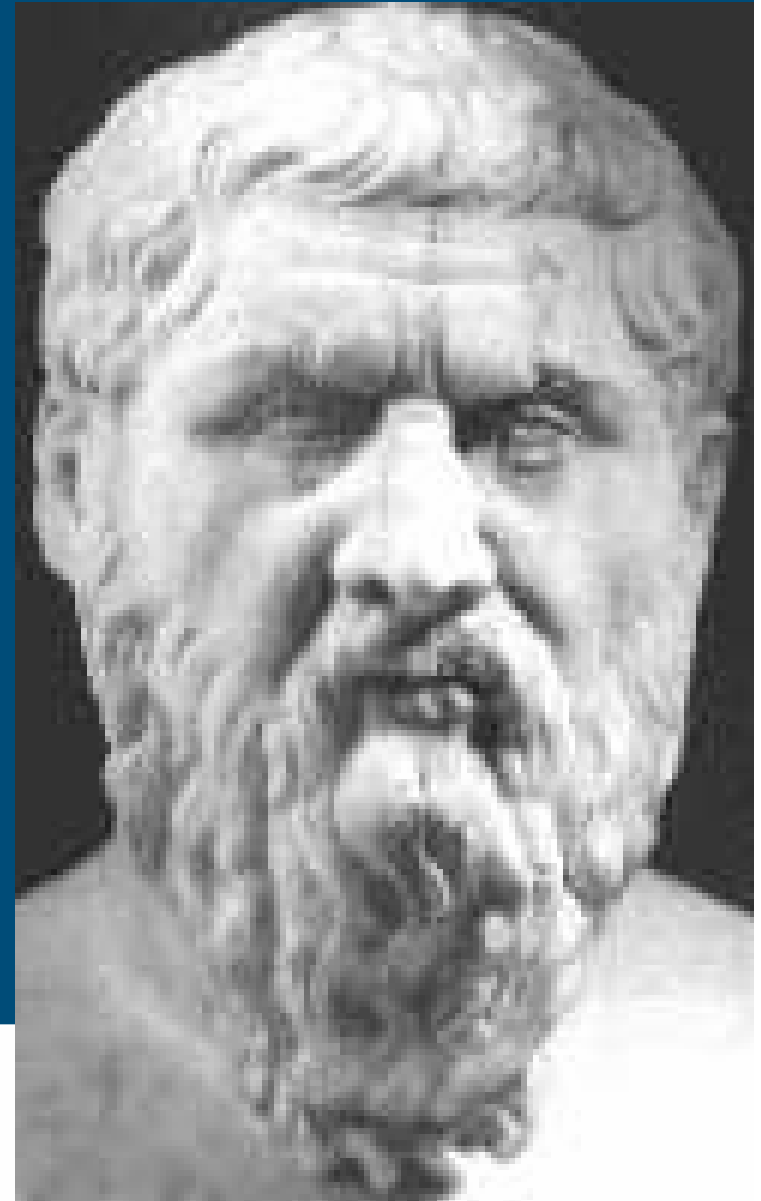
Criticism on the old meaning of competence

- Too behavior oriented
- Too much fragmented training
- Alienation from practice
- Context-irrelevance
- Lack of (self) reflection
- Missing link with personal epistemology
- Limited influence on the development of professional expertise



Plato spoke about competence in 380 BCE

- Ikanotis (ικανότης)- the quality of being ikanos (capable), to have the ability to achieve something; skill.
- The earliest use quoted is from Plato, Lysis 215A. 380 B.C.E. Root: ikano or iknoumai, to arrive.
- Epangelmatikes ikanotita = professional/vocational capability



Code of Hammurabi, 1792-1750 BC



Code de Hammurabi,
roi de Babylone
Basalte
1792-1750 av. J.-C.

Louvre, Parijs

Épilogue

« Telles sont les décisions de justice que Hammurabi, le roi compétent, a établies pour engager le pays conformément à la vérité et à l'ordre équitable [...] Que l'homme injustement traité, qui est impliqué dans une affaire, vienne devant l'image de moi-même, le roi de justice, et se fasse lire ma stèle écrite, qu'il entende ainsi mes précieuses ordonnances ; que ma stèle lui indique son affaire, qu'il voit son cas, que son cœur s'allège [...] Je suis Hammurabi, le roi de justice, à qui Shamash a octroyé la vérité. »

Laws of justice which Hammurabi, the wise king, established. A righteous law, and pious statute did he teach the land. Translated by L.W. King (1910); Edited by Richard

Major publications on competence

- McClelland, 1973; testing of competence
- Gilbert, 1978; performance improvement
- Grant et al, 1979; competency-based higher education
- Boyatzis, 1982; the competent manager
- Zemke, 1982; competence-based education and training
- McLagan, 1983; competency models for HRD professionals
- Prahalad & Hamel, 1990; the core competence of the organisation
- Spencer & Spencer, 1993; research review
- Dubois, 1993; returned to performance improvement
- Quinn et al, 1996; A competency framework for managers
- Lucia & Lepsinger, 1999; success factors in organisations
- Jones & Voorhees, 2002; review competency-based education in the USA
- Rychen & Salganik, 2003; role of competence in society
- European Commission, 2005; Towards a European Qualification Framework for Lifelong Learning
- European Parliament and of the Council (2006/962/EC); Key competences for lifelong learning
- European Social Partners, 2006; Framework of actions for the lifelong development of competencies and qualifications: Evaluation report



ECS Publications on competence, 2007

- Brinkman, B., et al, *Compare: A journal of comparative education*, 37, 4, 493 – 511
 - Mulder, M. *European Journal of Vocational Training*, 40, 5-22
 - Mulder, M. et al *Journal of Workplace Learning*, 19, 1, 32-44
 - Mulder, M. et al *Journal of Vocational Education and Training*, 59, 1, 65-85
 - Karbasioun, M et al *Journal of International Agricultural and Extension Education*, 14, 1, 31-44
 - Karbasioun, M. et al *Human Resource Development International*, 10, 2, 137-151
 - Karbasioun, M. *Journal of Agricultural Education Online*, 48
 - Weigel, T. et al *Journal of Vocational Education and Training*, 59, 1, 51-64
 - Wesselink, R. et al *European Journal of Vocational Training*. 40, 38-51
- See www.ecs.wur.nl and www.mmulder.nl

Important characteristics of professional competence

- Integral (K + S + A)
- Larger units of work
- Meaning in context
- Essential responsibilities
- Oriented towards core tasks
- Intelligence behind job behavior
- Labor market relevance
- Personal development
- Coping with uncertainty
- Coping with risk
- Related to professional identity



Competence as a marketing concept



To help operationalisation and implementation, a matrix of competence-based education was developed



Wesseling, R., E. van den Elsen, H.J.A. Biemans & M. Mulder (2005). *Matrix voor competentiegericht beroepsonderwijs*. Leerstoelgroep Educatie- en competentiestudies.

Principles of competence-based vocational education

- Competence profile present
- Link with professional core problems
- Competence assessment present
- Authentic learning implemented
- Integration of KSA realised
- Self-responsibility as goal
- Balancing the expert and coaching role
- Lifelong learning attitude stimulated



Pitfalls in competence-based vocational and professional education

- EN
- FR
- DE
- NL
- Wider literature review
- NVQs
- Bilan de compétence
- Learning fields; work process knowledge
- Competence-based Qualification Structure
- A wide range of approaches



Avoiding pitfalls

- Competence and performance
- Competence and knowledge
- Competence and the curriculum
- Competence and instruction
- Competence and assessment
- Competence and organization



Conclusion

- Competence-based vocational-professional education is promising
- An integral perspective is needed, or the approach will fail
- The approach of competence-based education should be embedded in the diverse educational practices