New Competence-Based Vocational Education Policy Making in the Global Economy: Problems and Pespectives.

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Global ICVT policy development goal: preparing competent human resources ...

- Doctors
- Nurses
- Pilots
- Nuclear energy plants personnel
- Workers in the food industry
- Etc. etc

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The new meaning of competence: a working definition

- integrated abilities
- 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
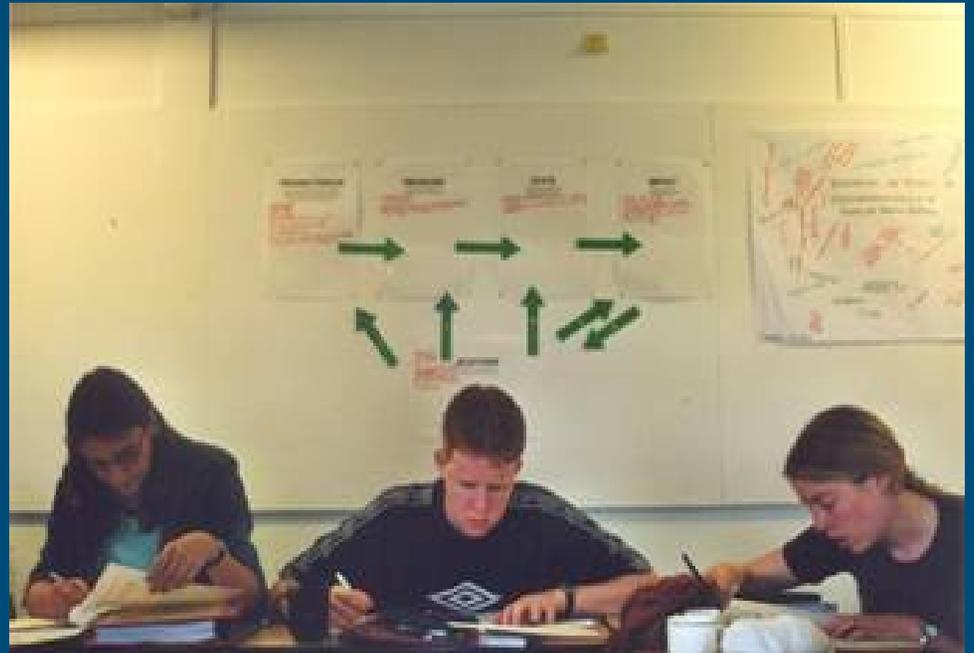
Competence (2007): an example

From reductionist occupationalism (70s-80s) to

holistic professionalism (90s-00s)

E.g. Making a DNA-profile in

Crime Scene Investigations

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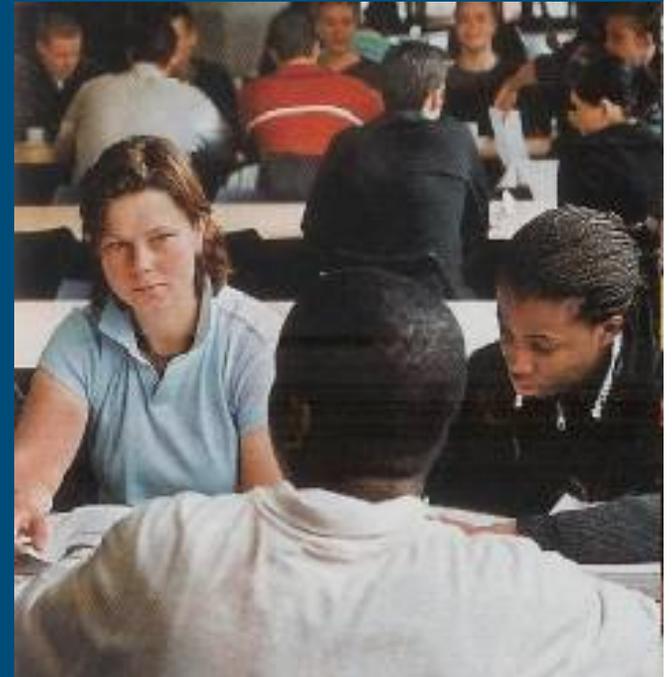 - integrity
- Together that requires professional competence



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Criticism on the old meaning of competence

- Behavioristic
- Fragmented training
- Alienation
- 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 2I5A. 380 B.C.E. Root: ikano or iknoumai, to arrive.
- Epangelmatikes ikanotita = professional/vocational capability

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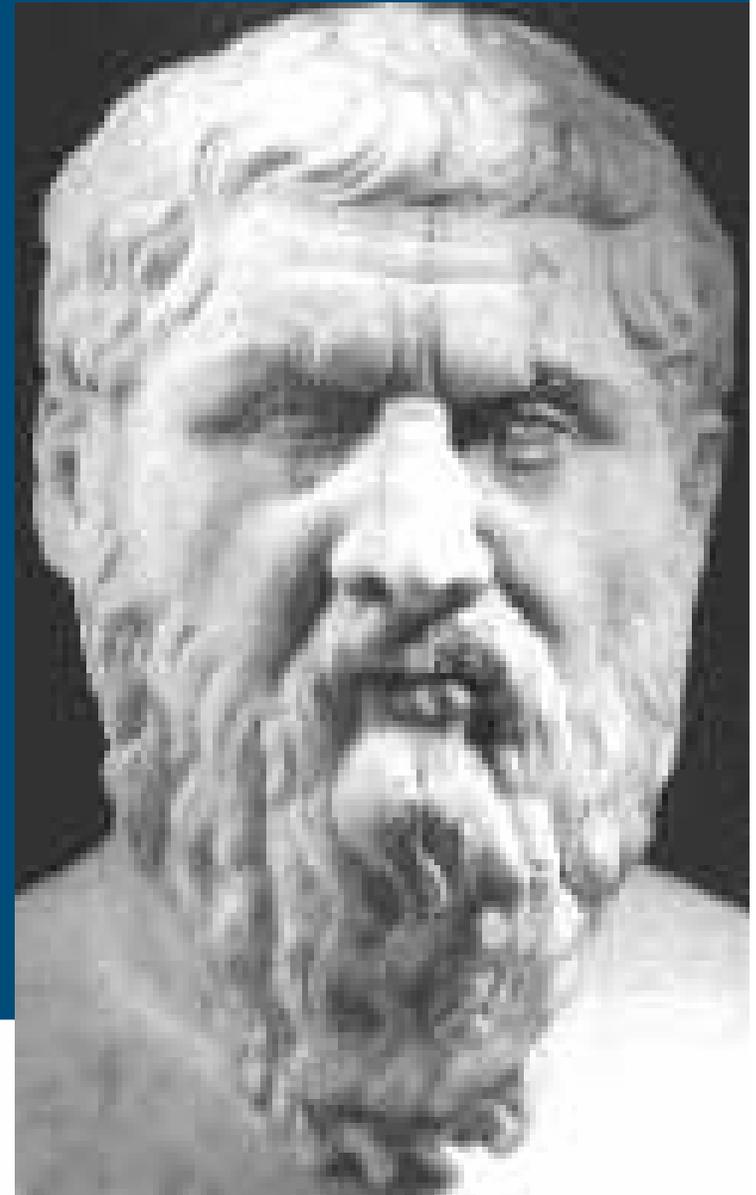
Development of the concept of competence in professional and institutional context

- **Training and development,** Zemke, 1982
  - Zemke applied competence models in the whole field of training and development
- **Self assessment and development,** McLagan, 1983
  - McLagan developed competency models for self assessment and self development
- **Core competence of the corporation,** Prahalad & Hamel, 1990
  - Prahalad & Hamel showed that working with core competence adds value for the organisation
- **Becoming a master manager: a competency framework,** Quinn et al, 1996
  - Quinn et al showed that teams need different competencies, even conflicting ones, to grow and to cope with the different challenges

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Important characteristics of professional competence

- **Holistic**
- **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

Wide application in Vocational and Higher Education

- European Qualification Framework

- Bologna Process; Dublin descriptors

- LLL strategy EU social partners: for qualification and competence development

- Development of CBVE

  - Biemans, H., L. Nieuwenhuis, R. Poell, M. Mulder & R. Wesselink (2004). Competence-based VET in The Netherlands: backgrounds and pitfalls. *Journal of Vocational Education and Training, 56,* 4, 523-538. Biemans, 2004, JVET

  - Mulder, M. (2007). Competence – the essence and use of the concept in ICVT. *European Journal of Vocational Training, 40*, 5-22.

  - Mulder, M., T. Weigel & K. Collins (2006). The concept of competence concept in the development of vocational education and training in selected EU member states. A critical analysis. *Journal of Vocational Education and Training, 59,* 1, 65-85.

  - Weigel, T., M. Mulder & K. Collins (2007). The concept of competence in the development of vocational education and training in selected EU member states. *Journal of Vocational Education and Training, 59,* 1, 51-64.

  - Wesselink, R., H.J.A. Biemans, M. Mulder & E.R. van den Elsen (2007). Competence-based VET as seen by Dutch researchers. *European Journal of Vocational Training. 40,* 38-51.

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Competence-based Vocational-technical education in the Netherlands

- NL vocational-technical education has to become competence-based
- Vocational-technical education redesigned programs into competence-based curricula
- But … are the programs <u>really</u> competence oriented?

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To help operationalisation and implementation: A matrix of competence-based education was developed

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

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Characteristics of new competence-based vocational education

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

Overarching philosophy of CBL

- Realising **inspiring** learning processes

Principles for CBL

1. The competencies that are basis for the curriculum are defined.
2. Vocational core problems are the organising unit for (re)designing the curriculum.
3. Competence-development of students is assessed frequently (before, during and after the learning process).
4. Learning activities take place in several authentic situations.
5. In learning and assessment processes knowledge, skills and attitudes are integrated.
6. Self-responsibility and (self)reflection of students are stimulated.
7. Teachers both in schools and practice fulfil their roles as coach and expert in balance.
8. A basis is realised for a lifelong learning attitude for students.

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Matrix of competence-based vocational education

Implementation levels

Principles	None	Start	Partly	Complete
• Competence profiles	0	0	0	0
• Core problems	0	0	0	0
• Competence assessment	0	0	0	0
• Authentic learning	0	0	0	0
• Integration of KSA	0	0	0	0
• Self-responsibility	0	0	0	0
• Expert + coaching role	0	0	0	0
• Lifelong learning	0	0	0	0

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1. **Competence profile:** The competencies, that are the basis for the study program, are defined.

- The complete implementation of the principle means that a job competence profile is put together with participation of actors in the sector and occupation, and that this profile is frequently aligned with regional and local actors in practice including and reviewed against the major trends. This job competence profile has been used during the (re)design of the curriculum.

2. Professional core problems: Professional core problems are the organising unit for (re)designing the curriculum (learning and assessment).

- The maximum implementation of this principle is that core professional problems have been specified and that these are leading for the (re)design of the whole curriculum of a training program

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3. Competence assessment: Competence-development of students is assessed before, during and after the learning process.

- The maximum implementation of this principle is that assessment takes place before, during and after the learning process. Assessment is used for both summative and formative evaluation. Students determine moment and format of assessment themselves, in consultation with the teaching staff and assessors.

4. Authentic learning: Learning activities take place in different authentic situations.

- The maximum implementation of this principle is that learning activities take place in a diversity of authentic settings to a large extent, and that they are clearly related with the learning activities in practice, at internship places or based on learning and working contracts.

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5. Integration of KSA: In learning and assessment processes, knowledge, skills and attitudes are integrated.

- The maximum level of implementation of this principle is that integration of knowledge, skills and attitudes is the starting point for both the learning and assessment process, and specified in that sense.

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6. Self-responsibility: Self-responsibility and (self)-reflection of students are stimulated.

- The maximum level of implementation of this principle is that students are responsible for their own learning process based on their own learning needs

7. Balancing the expert and coaching role:

Teachers and trainers both in school and practice fulfill their role as expert and coach in balance.

- The maximum level of implementation of this principle is that teachers stimulate students to formulate learning needs and to manage their own learning processes based on careful self reflection.

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8. Lifelong learning: Students have acquired a positive attitude towards lifelong learning.

- The maximum level of implementation of this principle is that during learning trajectories the development of learning skills and (labor) identity are integrated, and that reflection on the future career of the students has taken place.

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Experiences with pilot-test of matrix

- The matrix as
  - empowerment tool
  - stimulus for discussion
  - positioning present curriculum
  - deliberation about curriculum development policy
  - tool for further research and development

Topics for further research

- Conditions for use
  - personal teaching epistemologies of teachers
  - who has a total overview of the curriculum?
  - understanding of the principles
- What generation of the curriculum?
- What (part of) the curriculum?
- Contamination of classification categories?
- Unobtrusive verification points?
- Fidelity of the profile versus practice
- Consistency of perceptions between teachers and between teachers and students
- Links between school development and quality management, formal regulations and competence-based curriculum (re)design

Avoiding pitfalls

- Competence is a homonym
- The link between competence and performance is not direct
- Danger of neglecting knowledge component
- Danger of too few contact hours
- Avoid over-attention to portfolio building and assessment
- Over-reliance on standardisation
- Integrating learning in schools and workplaces is difficult
- Competencies do not specify effective learning activities
- Assessment of competence is expensive
- Roles of teachers and students change
- Structural attention to competence development of teachers and school managers is needed

Cooperation in the global development of ICVT

- **Tools and principles of ICVT Policy development**
  - Qualification frameworks
  - Validation of non-formal and informal learning
  - Quality assurance
  - Information provision
  - Career guidance
  - Overcoming barriers in VET Teacher Training

After: Patrycja Lipinska, Eleonora Schmidt & Manfred Tessaring (2007). *Zooming in on 2010. Reassessing vocational education and training.* Luxembourg: Office for Official Publications of the European Communities

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Themes for cooperation

- Working on image of VET
- Open and flexible pathways
- Improving governance of VET
- Improving financing of ICVT
- Developing good statistics and indicators
- Identification of skill needs
- Life long learning divide
- Enhancing student-mobility

Source: Patrycja Lipinska, Eleonora Schmidt & Manfred Tessaring (2007). *Zooming in on 2010. Reassessing vocational education and training.* Luxembourg: Office for Official Publications of the European Communities

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