
Competence-Based Vocational and Professional Education: Bridging the World of Work and Education

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AERA SIG Workplace Learning Business Meeting

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Themes

1. Competence 3.0
2. Background book project CBV&PE – Springer, 2016
3. General content of the book



I. Competence 3.0



Core competence of the organisation



The image shows a screenshot of the JRC website. At the top left is the JRC logo with the text 'Joint Research Centre'. To the right of the logo is a navigation menu with the following items: 'JRC overview', 'Serving Europe', 'Our org', 'Principal activities' (highlighted in yellow), 'Working with the JRC', and 'News'. Below the navigation menu is a sidebar with a search bar and a list of links: 'Overview', 'Our competencies' (highlighted in yellow), and 'Our work programme'. Below the sidebar are links for 'Search JRC's Websites', 'Contact the JRC', and 'Legal notice'. The main content area is titled 'Our Competencies' and contains a list of five core competencies:

- [Food, chemical products and health](#)
- [Environment and sustainability](#)
- [Nuclear activities](#)
- [Horizontal activities](#)
- [Other activities](#)

Promoting Life Long Learning – Recognition, Validation and Certification of Competencies, PT

QCA III 2000-2006

INDICAÇÃO DO PROGRAMA
OPERACIONAL



DESIGNAÇÃO DA MEDIDA DO PO
EM QUE SE ENQUADRA O PROJECTO

Medida 4 - Educação e Formação ao Longo da
Vida

Acção 4.1. - Certificação de conhecimentos/
competências adquiridas ao longo da vida

DESIGNAÇÃO DO PROJECTO FSE:



Sistema Nacional de Reconhecimento,
Validação e Certificação de
Competências (RVCC)

Objectivos do Projecto e outros elementos considerados relevantes para a descrição do Projecto

O Sistema Nacional RVCC é promovido a partir da instalação de uma rede de Centros RVCC que se organizam a partir de três eixos de intervenção: reconhecimento de competências, validação e certificação. Os

Grupo-alvo do Projecto

Adultos maiores de 18 anos, que não possuem o 9º ano de escolaridade. Privilegiam-se os activos, empregados e desempregados, os activos desempregados de longa duração e as mulheres sem actividade profissional.



Personal Competence Assessment and Development

FORMATION, MODE D'EMPLOI

TIRER PARTI D'UN BILAN DE COMPETENCES



Vous souhaitez donner un nouvel élan à votre vie professionnelle ? Un bilan de compétences vous aidera à faire le point et à définir un projet. Voici quelques conseils pour profiter pleinement de ce dispositif. ■

Lydie Colders



Guidance: Competence and Occupation Directory for the Labour Market, BE

Werk zoeken VDAB

Home | Werk zoeken | Werk aanbieden | Opleidingen | Info | Mijn VDAB

ZOEK | MAP | CONTACT

Home - Werk zoeken - Vind een beroep < Je bent hier

Voor wie werk zoekt

- [Vind een job](#)
- [Jobspot](#)
- [Werk en gemeente](#)
- [Schrijf je in](#)
- [Plaats je cv](#)
- [Mail op Maat](#)

WerkinZicht

- [Solliciteren](#)
- [Vind een beroep](#)**
- [Beroepenfiches](#)
- [Beroepenfilms](#)
- [Beroepsoriëntatie](#)
- [Beroepstesten](#)
- [Internationaal](#)
- [VDAB-diensten](#)
- [Pas afgestudeerd](#)
- [Studentenjobs](#)

Voor wie meer wil

- [Werklinks](#)
- [MaqEzine](#)
- [Discussieforum](#)
- [Stuur een e-kaart](#)
- [Projecten](#)

Vind een beroep

Ben je op zoek naar informatie over beroepen dan ben je hier aan het juiste adres. We bieden **3 hulpmiddelen om jouw ideale beroep te ontdekken**:

Beroepenfiches
Informatie over meer dan 550 beroepen vind je in **CO.BR.A.** (Competentie- en BeroepenRepertorium voor de Arbeidsmarkt - [meer info](#)). Elke beroepenfiche bevat een beschrijving, basisvereisten en specifieke competenties nodig voor het beroep, producten en werkdomeinen en info over de arbeidsomstandigheden.
Je kan zoeken via [categorie](#) of via [trefwoord](#).

Beroepenfilms
VDAB maakte maar liefst 107 [beroepenfilms](#). Elk filmpje toont een beroep in al zijn facetten: een werknemer vertelt wat de job in de praktijk inhoudt en wat de verwachtingen van de werkgever zijn.

Beroepsoriëntatie
Nieuwsgierig welk beroep bij je past? De [VDAB-beroepsoriëntatie](#) helpt je op weg. Door het invullen van deze **test** kom je te weten welke beroepen er

<http://vdab.be/cobra/>

Competence Center for female craft workers



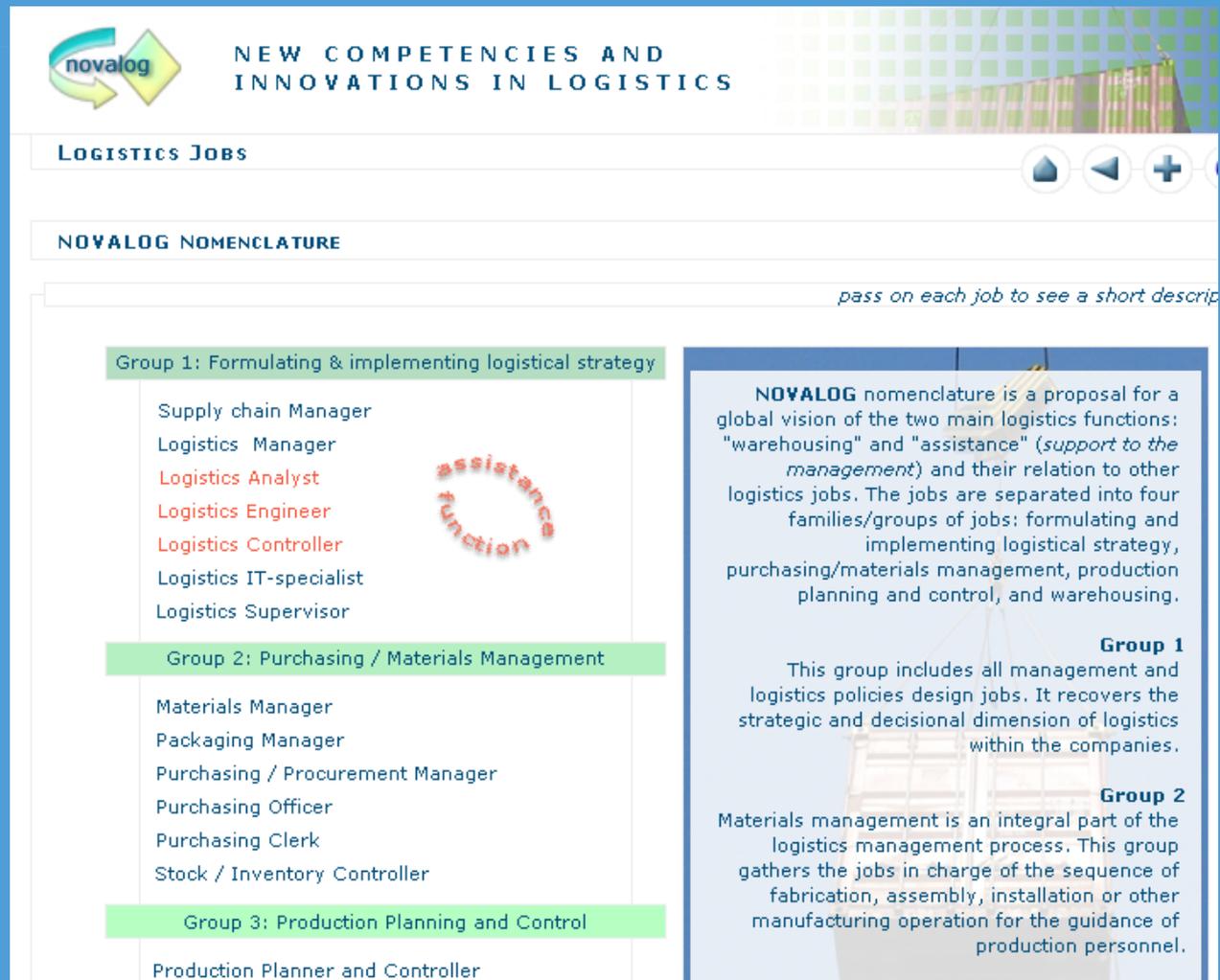
Germany, 2005



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Source: Punkt, 14, 68, 3-4

New Competences and Innovations in Logistics at EU level



The screenshot displays the NOVALOG website interface. At the top left is the NOVALOG logo, a stylized 'n' with a green arrow. To its right is the text 'NEW COMPETENCIES AND INNOVATIONS IN LOGISTICS'. Below this is a navigation bar with 'LOGISTICS JOBS' and a search icon. The main content area is titled 'NOVALOG NOMENCLATURE' and includes a sub-header 'pass on each job to see a short description'. The content is organized into three groups, each with a green header bar. Group 1 is 'Formulating & implementing logistical strategy' and lists jobs like Supply chain Manager, Logistics Manager, Logistics Analyst, Logistics Engineer, Logistics Controller, Logistics IT-specialist, and Logistics Supervisor. A red circular stamp with the text 'assistance function' is overlaid on this list. Group 2 is 'Purchasing / Materials Management' and lists Materials Manager, Packaging Manager, Purchasing / Procurement Manager, Purchasing Officer, Purchasing Clerk, and Stock / Inventory Controller. Group 3 is 'Production Planning and Control' and lists Production Planner and Controller. To the right of the job lists is a text box explaining the NOVALOG nomenclature as a proposal for a global vision of warehousing and assistance functions, separated into four families/groups: formulating and implementing strategy, purchasing/materials management, production planning and control, and warehousing. It then provides detailed descriptions for Group 1 (management and design jobs) and Group 2 (materials management jobs).

NOVALOG nomenclature is a proposal for a global vision of the two main logistics functions: "warehousing" and "assistance" (*support to the management*) and their relation to other logistics jobs. The jobs are separated into four families/groups of jobs: formulating and implementing logistical strategy, purchasing/materials management, production planning and control, and warehousing.

Group 1

This group includes all management and logistics policies design jobs. It recovers the strategic and decisional dimension of logistics within the companies.

Group 2

Materials management is an integral part of the logistics management process. This group gathers the jobs in charge of the sequence of fabrication, assembly, installation or other manufacturing operation for the guidance of production personnel.



Computer Competence, FR

<http://www.competencemicro.com/>

Compétence Micro

Le plaisir d'apprendre

Nous contacter

Optimisé pour IE5+, NS6, Mozilla

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Bienvenue

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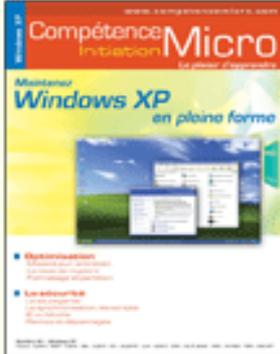
[Le répondeur de Compétence Micro](#)

Nos manuels en d'autres langues

[en espagnol](#)

[en allemand](#)

Voici les trois derniers titres parus.
Cliquez sur le nom de l'auteur pour lire sa notice biographique.
Cliquez sur le titre du manuel pour afficher des informations plus détaillées.



Maintenez Windows XP en pleine forme [Réf. 0509]
([Michael B. Karbo](#))

 Pas d'avis sur ce manuel

Les ordinateurs sont devenus des machines très performantes, mais il est presque certain que nous rencontrerons tous, un jour ou l'autre, un plantage. Un programme qui s'installe mal, un virus qui fait des dégâts, un composant défectueux ou tout simplement Windows XP qui commence à fonctionner moins bien.

Familiarisez-vous avec les fichiers systèmes, utilisez la mise à jour du système, lutez contre la fragmentation, installez une protection anti-virus, un firewall et un anti-

Organisation for the Development of a Competence Field

National Center for Cultural Competence

*Georgetown University Center for Child and Human Development
University Center for Excellence in Developmental Disabilities*

[NCCC Home](#)

[Resource Database](#)

[Consultants](#)

[Web Links](#)

[Products & Tools](#)

[En Español](#)

The mission of the National Center for Cultural Competence (NCCC) is to increase the capacity of health and mental health programs to design, implement, and evaluate culturally and linguistically competent service delivery systems.

[Conceptual Frameworks/Models, Guiding Values and Principles](#)

[Definitions of Cultural and Linguistic Competence](#)

[More about the NCCC](#)

[Tools and Processes for Self-Assessment](#)

ANNOUNCEMENTS

Recent products:

[Cultural Competence: It All Starts at the Front Desk](#)

[Cultural Competence Health Practitioner Assessment \(CCHPA\)](#)

[Bridging the Cultural Divide in Health Care Settings: The](#)



Information Literacy Competence Standards

ALA American Library Association

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Telephone: 800-545-2433, ext. 2523 Fax: 312-280-2520

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Information Literacy Competency Standards for Higher Education

These standards were reviewed by the ACRL Standards Committee and approved by the Board of Directors of the Association of College and Research Libraries (ACRL) on January 18, 2000, at the Midwinter Meeting of the American Library Association in San Antonio, Texas. These standards were also endorsed by the American Association for Higher Education (October 1999) and the Council of Independent Colleges (February 2004). A [PDF of this document](#) is available.

<http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>



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National Organization for Competence Assurance

<http://www.noca.org/index.htm>



The screenshot shows the NOCA website homepage. At the top left is the NOCA logo with the tagline "NATIONAL ORGANIZATION FOR COMPETENCY ASSURANCE". To the right of the logo is a navigation menu with links for "Join NOCA", "Resources", "Contact Us", and "FAQs". Below the logo is a secondary navigation menu with links for "About Us", "NCCA", "Members", "News & Events", "Publications", and "Military & Veterans". The main content area is split into two columns. The left column has a dark blue background with white text and a globe graphic. The right column has a white background with blue and purple text. The left column contains a mission statement, a search directory link, and links to join, find members, and accreditation information. The right column contains three main sections: "Answer This Month's Poll Question", "NOCA Academy - Seminar II" with a registration link, "2005 Sponsorship Opportunities" with a download link, and "NCCA Sample Application Now Available" with a download link.

NOCA
NATIONAL ORGANIZATION FOR COMPETENCY ASSURANCE

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The National Organization for Competency Assurance is the leader in setting quality standards for credentialing organizations.

[Search our members-only membership directory](#)
[Join NOCA now](#)
[Find a NOCA member](#)
[NCCA accreditation information](#)

Answer This Month's [Poll Question](#)

NOCA Academy - Seminar II
[Register](#) for *Making ADA Work for You: Serving your Examinees, Protecting your Exam* hosted by the NOCA Academy on Wednesday, March 23rd, 1:00 p.m. - 3:00 p.m. Eastern time.

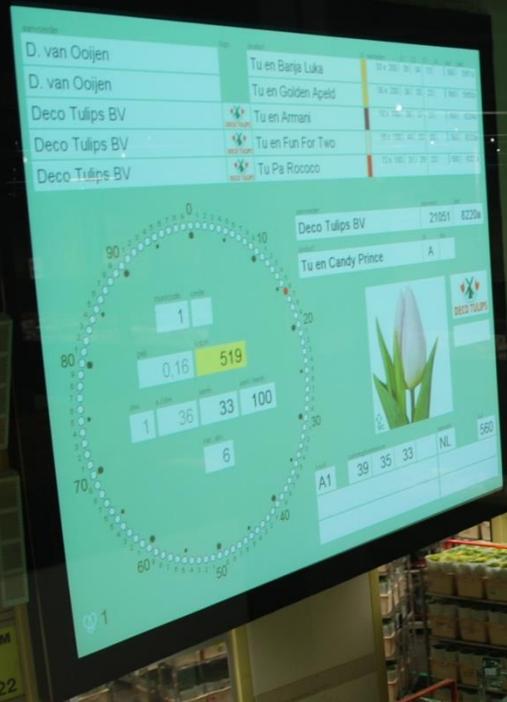
2005 Sponsorship Opportunities
Attention Sustaining and Affiliate members: The 2005 Sponsorship Opportunities are now available. [Download](#) a sponsorship packet today. Fax completed forms to 202/367-2165.

NCCA Sample Application Now Available
[Download](#) a FREE copy of the [NCCA Sample Accreditation Application](#). The guide provides examples of the type of documentation expected to demonstrate compliance with the *NCCA Standards for the Accreditation of Certification Programs*.





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Trading at Flower Auction

Requires:

- Knowledge
 - product quality
 - market
- Skills
 - multi-tasking
- Attitudes
 - stress-tolerance
 - feeling for sales
- Together that is
professional competence



Three components of competence

1. Technical competence: lot of technical knowledge; work-process oriented, task-related - **WHAT?**
2. Occupational competence: Knowledge, Skills, Attitudes acquired and integrated in body of knowledge – core-task oriented – integrated view on competence - **HOW-WHY?**
3. Professional competence: competence situated in practice; professional identity; pride; social context – organizational environment oriented – situated view on competence - **IN WHAT SITUATION?**



Recent definitions (2014)

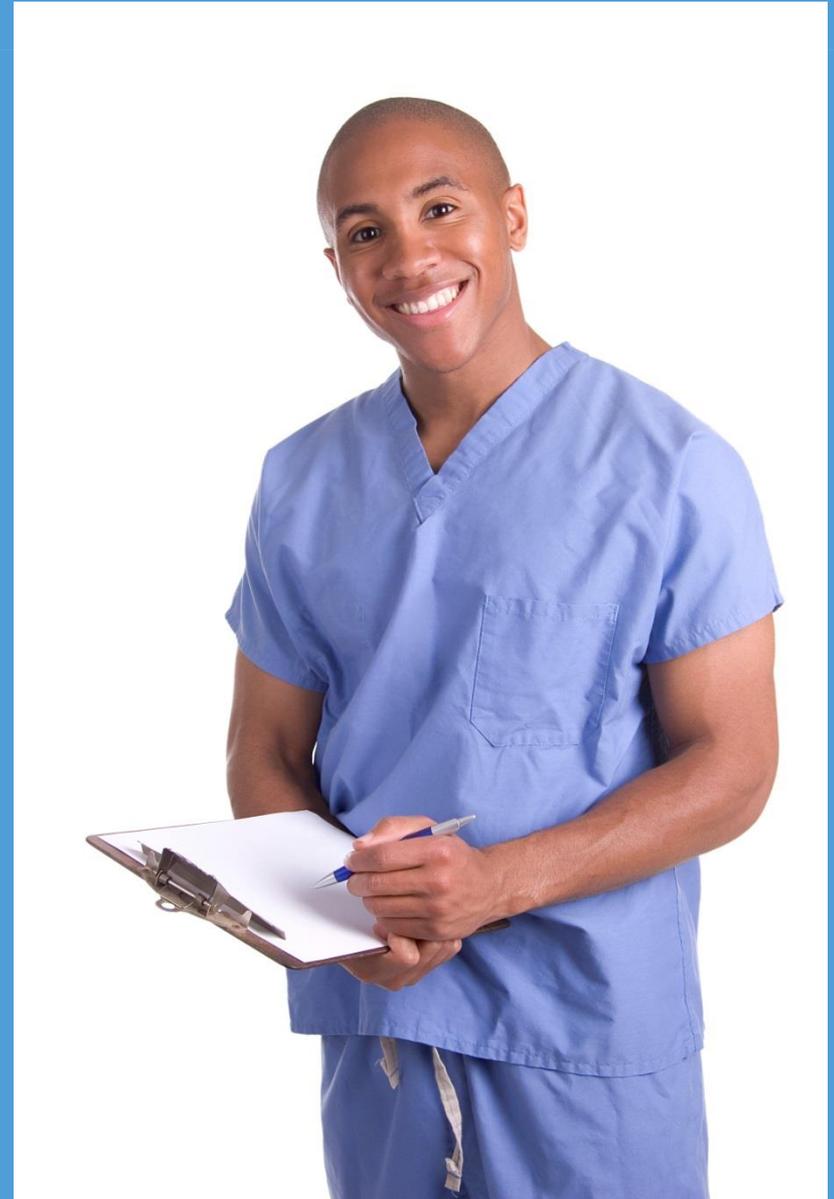
Competence is the state of being able, or the generic capability which is a necessary requirement to perform; the set of characteristics which enable performance



Competence

Professional competence is the generic, integrated and internalized capability to deliver sustainable effective (worthy) performance (including problem solving, realizing innovation, and creating transformation) in a certain task situation, professional domain, job, role, and organizational and societal context

E.g. He has the competence of being a good nurse



Competent

Competent is being adequate or qualified and having the abilities or qualities to function and develop

E.g. she is a competent cardio-vascular surgeon



Competency

Competency is an element and characteristic of competence

E.g. this researcher has as a binding leadership ability.

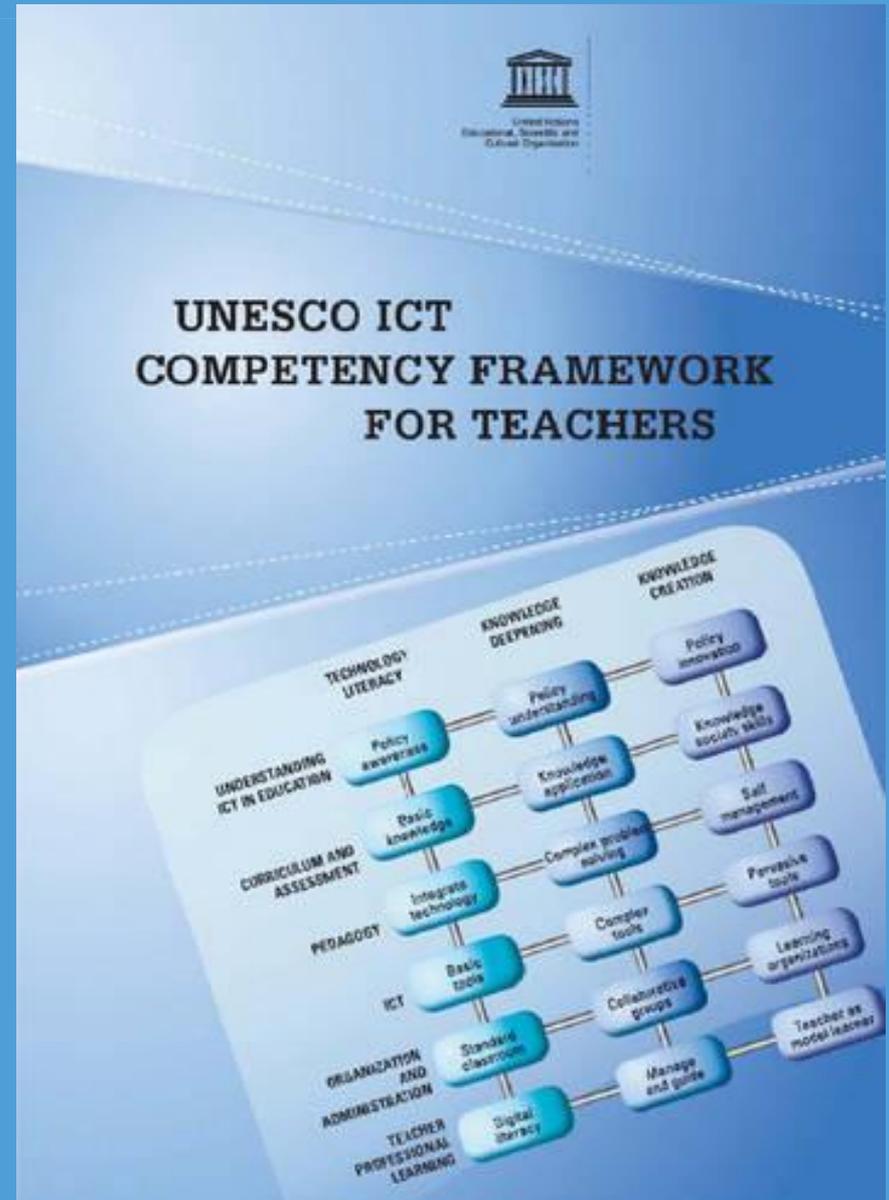
In other words: a competency is a part of generic competence; it is a coherent cluster of knowledge, skills and attitudes which can be utilized in real performance contexts



Competencies

- **Competencies** is the plural of competency

E.g. the framework of competencies of teachers



- We do not define **'competences'**, although it is used in policy-oriented literature, because we define competence in itself as the generic state of being competent.



Competences of the European Union



Competence has always been a binary concept

- Proficiency, mastery
 - Capability to perform
 - Ability
 - Being able to ...
- Authority, licensure
 - Judicial, institutional, organizational or cultural regulated right, power, approval or assignment to act, decide, (dis)approve or regulate
 - Power-responsibility
 - Being authorized to ...



Three conceptual approaches:

- 1.0 functional behaviourism (the 1970s)
- 2.0 integrated occupationalism (1990s)
- 3.0 situated professionalism (2010s)



Two practical approaches:

- Behaviour-oriented generic competence (for an example in the management profession see Bartram, 2005);
- Task-oriented specific competence (not necessarily narrowly defined) (for an example in the medical profession see Frank, Jabbour, et al, 2005).



Bartram – The great eight Competency Framework

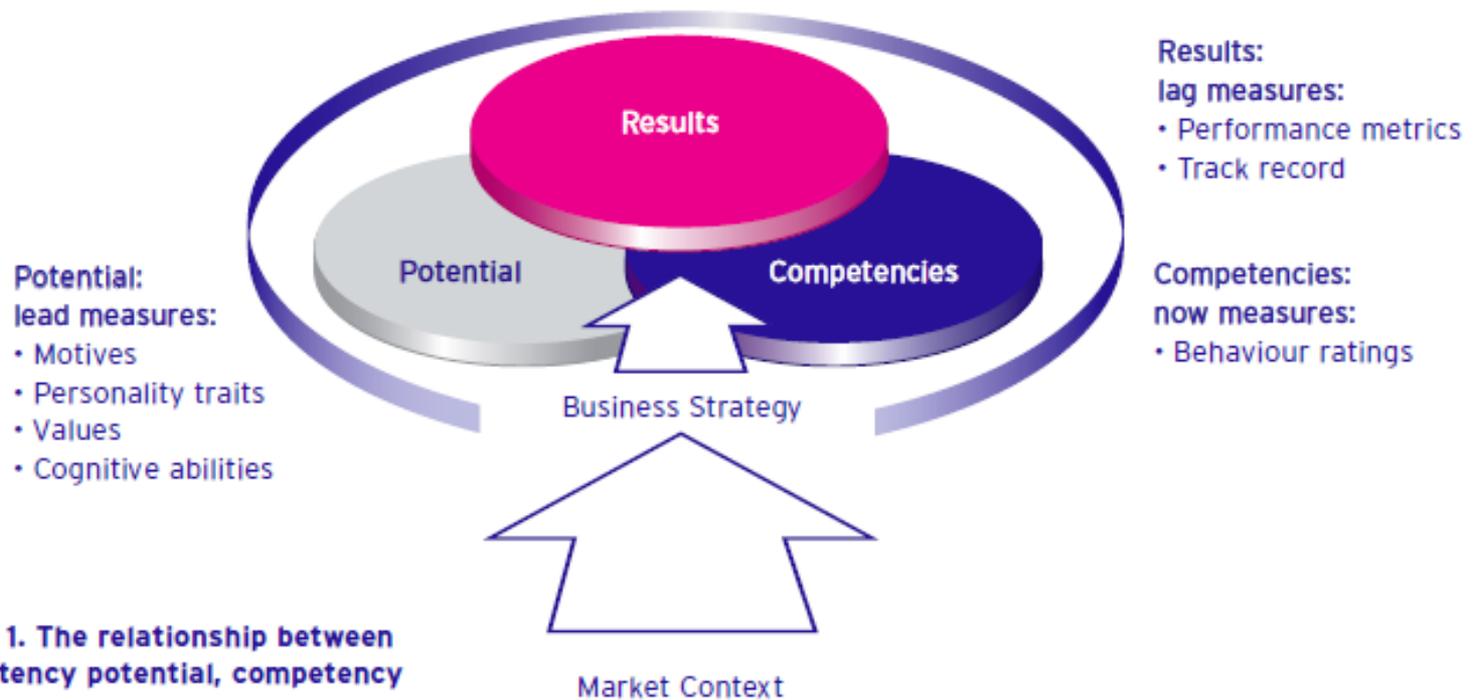


Figure 1. The relationship between competency potential, competency requirements and competencies.

Source: <http://www.shl.com/OurScience/Documents/SHLUniversalCompetencyFramework.pdf>



The great eight competencies

- Leading and Deciding
- Supporting and Co-operating
- Interacting and Presenting
- Analysing and Interpreting
- Creating and Conceptualising
- Organising and Executing
- Adapting and Coping
- Enterprising and Performing



Competence Framework Medical Expert



ROYAL COLLEGE
OF PHYSICIANS AND SURGEONS OF CANADA

CANMEDS

CanMEDS 2005 Framework

MEDICAL EXPERT



Key Competencies: *Physicians are able to...*

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical and patient-centered medical care;
2. Establish and maintain clinical knowledge, skills and attitudes appropriate to their practice;
3. Perform a complete and appropriate assessment of a patient;
4. Use preventive and therapeutic interventions effectively;
5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic;
6. Seek appropriate consultation from other health professionals, recognizing the limits of their expertise.

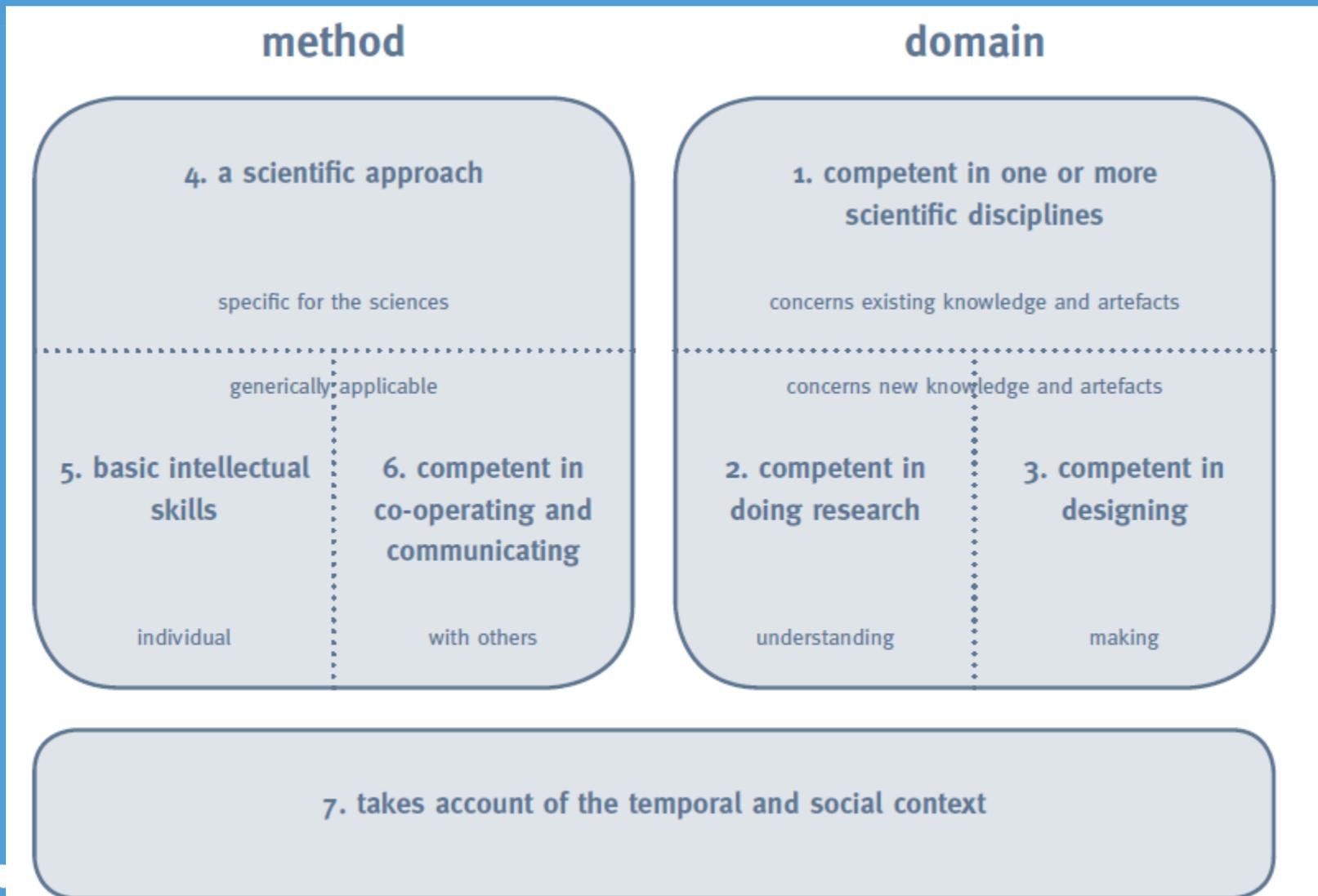


ad 3. Perform a complete and appropriate assessment of a patient

- Effectively identify and explore issues to be addressed in a patient encounter, including the patient's context and preferences
- For the purposes of prevention and health promotion, diagnosis and or management, elicit a history that is relevant, concise and accurate to context and preferences
- For the purposes of prevention and health promotion, diagnosis and/or management, perform a focused physical examination that is relevant and accurate
- Select medically appropriate investigative methods in a resource-effective and ethical manner
- Etc.



Competence Framework for Technical University Education – Tue and 3 TUs Netherlands (2005)



II

Core ideas behind Book in process:
*Competence-Based Vocational &
Professional Education* – Springer, 2016



Competence needed – but how to achieve that?

- Society needs a competent workforce. Raven and Stephenson (2001) stated that we are far away from that and that much has to be done to achieve that.
- Everybody agrees on the idea that education should not produce incompetent graduates.
- However, there is a *mer-a-boire* of theories, conceptions, strategies and methods to model, develop and assess competence.



Objectives of the book

- To display the variety in the competence theory and research literature
- To raise essential questions on competence and CBV&PE
- To unravel debates about pros and cons of the competence movement during the last 50 years
- To deepen the understanding of the inherent and specific characteristics of CBV&PE
- To answer the question whether CBE is promising innovation on the rise, or an eroded and utterly failed approach
- To draw conclusions for policy making, management, teaching practice, research and theory development



MARLETTE © 2003
ECLAIRASSIE DÉMOCRAT



Key questions addressed: what are/is...

- key drivers for the competence movement?
- key dimensions of conceptions of competence?
- distinct regional/national approaches (US, Europe, Australia, Asia)?
- international and national policy debates?
- the role of competence frameworks and standards?
- models for competence assessment?
- the value added of competence-based education?
- the state of research?



Linking the book to Key publications

- Motivation psychology – White (1959)
- Intelligence testing for selection – McClelland (1973)
- CBE – Grant et al (1979)
- Competence and worthy performance – Gilbert (1978)
- Competence and superior performance – Boyatzis (1982)
- Core competence and corporate strategy - Prahalad and Hamel (1990)
- Generic competencies; Great Eight - Bartram (2005)
- Competence modelling and measurement of competencies in higher education – Blömeke et al (2013)



Linking the book to Reviews and critiques

■ Reviews

- Ellström, 1997
- Rothwell and Lindholm, 1999
- Hager, 2004
- Delamare le Deist and Winterton, 2005
- Mulder, 2014

■ Critiques

- Westera, 2001
- Hyland, 2006
- Mulder, Weigel and Collins, 2007



"I'm sorry, but you have a very impressive resume, and at this company, we find competence threatening."



General content of the book



- Preface
- Introduction
- Part I Theory
- Part II Competence-based Education as a Global Innovation
- Part III Competence and Key Aspects of Education Systems
- Part IV Competence Domains
- Conclusions, Discussion and Future Trends
- Author index
- Subject index



Part I Theory



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I.I Conceptual Foundations

1. Competence and professional expertise
2. Developing domains of occupational competence:
Workplaces and learner agency
3. Competence, qualification and action theory
4. The epistemology of competence-based education
as outcome-based education



I.II Behaviouristic Roots and Theoretical Objections

5. Competence-based education in the USA
6. Competence, mindfulness and higher order learning
7. Competence-based education and teacher professional development



I.III Emerging Perspectives

8. The integrated view on competence

9. Competence, capabilities and graduate attributes

10. Competence and the alignment of education and work

11. Thinking through the changes: work, neoliberalism
and the economy



Part II Competence-based Education as a Global Innovation

1. The competence debate in the context of the development of vocational education within the European Union
2. Competence development and workplace learning: enduring challenges in the interplay of policy and practice in the UK
3. The National Vocational Qualifications and competence approaches in the UK
4. The competence development agenda in France



5. Competence Domains and Vocational-Professional Education in Germany
6. Knowledge in Competence-Based Vocational and Professional Education
7. Competence-based education and educational effectiveness in Austria
8. The concept of competence in the education reforms and development in two transitioning EU member states



-
9. Competence-Based Training in South Asia
Competence-based education in China's Polytechnics
 10. Competence-frameworks as benchmarks in Vocational and Professional Education in Japan
 11. Harmonizing and translating occupational standards into TVET standards
 12. Competence and TVET-Innovation in Sub-Saharan Africa; the case of Rwanda



Part III Competence and Key Aspects of Education Systems

1. Comparing Recognition of Prior Learning (RPL) across countries
2. Competencies in Higher Education; experience with the Academic Competencies and Quality Assurance (ACQA) framework as an example
3. Professional education based on a task-oriented competence framework in the medical profession
4. Areas of Learning: The shift towards work and competence orientation within the school-based vocational education in the German Dual Apprenticeship System



5. Evaluating vocational curricula with principles of competence-based education
6. '4C your way': a competence framework for measuring competence growth from secondary vocational to higher education and curriculum design
7. Self-regulated learning in competence-based education
8. Competence assessment as learner support in education



9. IRT-based competence assessments as an approach to quality assurance
10. Modelling and Measurement of Professional Competence of Pre-service Teachers in Business and Economics Education
11. Quality management of competence-based education
12. Factors influencing professional development in teacher teams within CBE contexts
13. Software tools for competence-based vocational, professional and higher education



Part IV Competence Domains

1. Modeling, measurement and development of professional competencies in industrial-technical professions
2. Competence modelling and measurement in engineering mechanics
3. Green skills as the agenda for the competence-movement in TVET
4. International mobility, student exchange, and global competence
5. Labour market uncertainty and career perspectives: entrepreneurship, competence and education



5. Social competence research: a review
6. Social competence and employability
7. Computational thinking as an emerging competence domain
8. Complex problem solving in a changing world: Bridging domain-specific and transversal competence demands in vocational education
9. Intuition as crucial component of professional competence: Its relevance for competence-based Vocational and Professional Education and Training



Conclusions - questions

- Do we agree that creating incompetence is not the goal of education?
- Is CBV&PE a mistake? Or a hidden disaster?
- Does it add value to think competence?
- Does competence yield confidence – empowerment – self efficacy – professional identity?
- Do employers, does society want competence?
- Do we need to move from competence to excellence?
- To what extent is entrepreneurial and transformative competence needed?
- What research is needed on competence?



- CBV&PE requires competence management of staff
- An integral or comprehensive view on competence needed
- Core tasks and problems as building blocks of curriculum and learning; subjects need to follow that logic
- Research needed on actual implementation and long-term effects
- Advocates and opponents of CBV&PE agree that education should not teach incompetence



The floor is yours!



Mission Control Center during the Apollo 13 oxygen cell failure (Photo: NASA)