International conference on Competence theory, research and practice
October 19-21, 2016
Wageningen University & Research, The Netherlands
www.competence2016.nl

Organized by the chair group of
Education and Competence Studies
www.wur.eu/ecs
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About the conference theme

The field of competence studies has grown exponentially. It has gained wide interest in all sectors of education, in various types of organizations, in research and in consultancy. Competence-based education, training and development, competence management and core-competence strategy have been blossoming since the 1960s.

What has theory, research and practical experience with implementing competence solutions brought us? What progress has been made so far, and to what extent have competence-based practices resulted in improved sustainable performance?

There has been a lot of criticisms on the competence concept. What have sceptics said; are their concerns valid, or are they outdated and based on the first conceptions and practices of the 1950s and 1960s, when competency-based training was introduced in military training? Is competence-based practice an empty shell in the sense that there is a big gap between competence-as-theory and competence-based-strategy? Are there sufficient operational guidelines to implement competence-based management, education and development practices, which do not follow command-logic as in defence organizations, but demand- and development-logic as in liberal education which emphasises autonomous, critical, and inclusive thinking and decision making.

In current educational and management sciences and practice competence-based strategies are common place. Actually we can say that competence-based education is a worldwide innovation. But are the claims of proponents of all competence modelling, assessment and development, which is going on right now, justified? Is there sufficient evidence of the efficacy of competence-approaches in management and education?

There is much talk about theories and definitions of competence, and there are many different perspectives. The earliest scientific contributions on competence-based education come from educational science. This resulted in proposals and practices of competence-based teacher education. Theories behind this on mastery learning and modularization were later heavily criticized. Can theories behind competence practice be combined and integrated? Some speak about exclusive epistemologies by which competence-based practices are being framed as a technical-instrumental; others contend that those practices are integral or holistic, and based on a variety of different knowledge theories.

Various alternative concepts have been brought to the fore to express what is needed to be successful in personal growth, education, employment and societal participation: capabilities, attributes, expertise, talents, excellence and more. The boundaries of these concepts are not clear. Some state that they are just positions on a proficiency scale which ranges from no, via mediocre to excellent competence. Indeed, professional competence can leave much to be desired, but can also exceed what can be expected. Was the rescue of Apollo XIII a matter of superior expertise, brilliant capability or extreme competence? The question is, does this word game really matter? Essential is that the crew of the mission returned to planet Earth safely. And that all involved were able to solve life threatening challenges.

In this melting-pot of contradicting interpretations, is there room for convergence and synthesis? Can different approaches, which seem opposite and unbridgeable, be reconciled? These, and more, questions will be raised during the international conference on competence theory, research and practice.
About the conference theme

The Scientific Organization Committee invited contributions on the following themes:

Competence-based strategy and management
1. The (in)competent society;
2. Core competence of organizations;
3. Generic competency frameworks;
4. Competence and performance improvement;
5. Competence and sustainable development;
6. Competence assessment of trainees, employees and management;
7. Competence domains (entrepreneurship, leadership, innovation, transformation, etc.);
8. Competence and talent development (training, workplace learning, personal development, etc.);
9. Competence, expertise, capability and attributes;
10. Competence and the learning organization.

Competence-based education
1. National and international education policy agendas;
2. Competence frameworks of teachers (in elementary, secondary and higher education);
3. Competence domains in higher education (services, health care, engineering, economy, etc.);
4. Competence-based vocational and professional education strategies;
5. Competence domains in elementary education;
6. Competence profiling and modelling;
7. Competence assessment and measurement;
8. Competence and knowledge development;
9. Competence-based curricula;

Competence Domains as goal
1. 21st century skills;
2. Problem solving competence;
3. Intuition as competence domain;
4. Mindfulness competence;
5. Transformational leadership competence;
6. Social competence;
7. Language competence;
8. Communicative competence;
9. Science and technology competence;
10. Competence for interdisciplinary teamwork.

Most of these themes are addressed in the conference papers. Based on the submissions, a programme is composed which includes papers on the following themes:

- Competence management and development, with presentations on management and leadership competence, training and development, team learning and performance improvement;
- Competence-based education systems, including competence in crisis, challenges in reform in VET systems, legislation and its effect, occupational science, and permeability of VET and HE;
- Competence assessment, such as for modeling and measurement of teachers’ competence, and computer-based assessment of problem solving competence;
- Emerging developments in competence domains such as argumentation competence, 21st century skills, oral presentation, entrepreneurship and creativity;
- Boundary crossing competence and their learning environments, including the role of inter- and transdisciplinary research;
- and Sustainability competence and transition in school and work settings and in higher education.
Scientific Organizing Committee

- Frank Achtenhagen, University of Gottingen, Germany
- Kirby Barrick, University of Florida, USA
- Harm J.A. Biemans, Wageningen University & Research, The Netherlands
- Vincent Blok, Wageningen University & Research, The Netherlands
- Dine Brinkman, Wageningen University & Research, The Netherlands
- Ludger Deitmer, ITB, Bremen, Germany
- Agnes Dietzen, Bibb, Bonn, Germany
- Karen Fortuin, Wageningen University & Research, The Netherlands
- Michael Gessler, ITB, Bremen, Germany
- Stan van Ginkel, Wageningen University & Research, The Netherlands
- Samuel Greiff, University of Luxembourg, Luxembourg
- Judith Gulikers, Wageningen University & Research, The Netherlands
- Geoff Hayward, Faculty of Education, University of Cambridge, United Kingdom
- Frank de Jong, Stoas Vilentum, Wageningen, The Netherlands
- Kees Kouwenaar, Vrije Universiteit Amsterdam, The Netherlands
- Thomas Lans, Wageningen University & Research, The Netherlands
- Sabine Manning, Wifo, Germany
- Martin Mulder, Wageningen University & Research, The Netherlands (chair)
- Petri Nokelainen, University of Tampere, Finland
- Omid Noroozi, Wageningen University & Research, The Netherlands
- Vitaliy Popov, University of San Diego, USA
- Piety Runhaar, Wageningen University & Research, The Netherlands
- Vidmantas Tülys, Vytautas Magnus University, Lithuania
- Arjen Wals, Wageningen University & Research, The Netherlands
- Renate Wesselink, Wageningen University & Research, The Netherlands
- Jonathan Winterton, Curtin University, Sarawak, Malaysia

Management-support team

- Jolanda Hendriks-Ruisbroek, Wageningen University & Research, The Netherlands
- Nicolette Tauecchio, Wageningen University & Research, The Netherlands
Conference venue
On Wednesday and Thursday the conference takes place in Forum. On Friday the conference takes place in Orion.

Organization & crew
During the conference there will be several support-team members available to help and answer your questions. Please feel free to ask their assistance! Also, during every parallel session there will be a student available to assist. You will recognize the support-team members by their blue badges.

Registering & information desk
Central registration takes place on Wednesday 19 October 09:00-10:30hrs in the Lobby of Forum. At the registration desk you will receive a conference bag and a badge. The registration desk as well as the information desk are open from Wednesday 09:00 until Friday 15:00hrs. They are located in the lobby of Forum on Wednesday and Thursday, and in the lobby of Orion on Friday.

Parking
Cars can be parked for free at the campus of Wageningen University & Research. Plan for a walk of 5 minutes from the parking to the conference venue, depending where you can park your car.

On site payment
On site-payment will be available at the registration desk during the following hours:

- Wednesday: 09:00-10:30hrs
- Thursday: 08:00-09:00hrs
- Friday: 08:00-09:00hrs

Conference dinner
The conference dinner will take place at Hotel de Wageningse Berg on Thursday October 20. You will receive a dinner voucher during registration (pre-registration required — additional fee applies). Please bring your dinner voucher with you. Afterwards, a free transit by bus to hotel Hof van Wageningen is available.

Wifi
During the conference you can make use of free Wi-Fi at the campus. Follow these steps:

1) Text/SMS the keyword ‘Wifi’ to phone number: +31 6 51 28 71 29;
2) You will immediately receive a return text/SMS containing your personal Wifi username and password
3) Select the eduroam Wifi network on your device and enter your username and password.

Transit on Thursday
On Thursday October 20 free transit by bus is arranged from the conference venue to the Aula where the Farewell Address of Prof. dr. Martin Mulder will take place. The bus will leave the campus at 15:00hrs. The bus will not return to the campus afterwards, but will drive at 19:00hrs to the conference dinner and at 23:00 back to hotel Hof van Wageningen. Registration for this free transit is not required.

Certificates
Certificates for attendance and/or presentation can be requested at the information desk.

Lunch and breaks
On Wednesday and Thursday lunch is provided at the Grand Café in Forum. Coffee, tea and beverages are available during breaks in front of room C222. On Friday lunch is provided at the restaurant east-side in Orion. Coffee, tea and beverages are also available in the this restaurant during breaks. Please make sure you wear your badge.
Conference locations

The conference will take place at the Campus of Wageningen University & Research, mainly in Forum & Orion. Below are all conference locations listed.

**Conference Venue on Wednesday & Thursday**

![Forum, Building 102](image1)
Forum, Building 102
Droevendaalsesteeg 2
6708 PB Wageningen

**Conference Venue on Friday**

![Orion, Building 103](image2)
Orion, Building 103
Bronland 1
6708 WH Wageningen

**Farewell Address Prof. Dr. Martin Mulder & Reception on Thursday**

![Aula, Building 362](image3)
Aula, Building 362
General Foulkesweg 1a
6703 BG Wageningen

**Conference Dinner on Thursday**

![Hotel de Wageningsche Berg](image4)
Hotel de Wageningsche Berg
Generaal Foulkesweg 96
6703 DS Wageningen
Keynote speakers | Mr. Eric de Boer

Korn Ferry HayGroup, Amsterdam, The Netherlands
Senior Consultant HR
Wednesday, October 19, 13:15-14:15hrs

‘Competence development and performance improvement’
In corporate strategy, management, training and development, much attention has been given to the concept of core competence, the development of competence frameworks, competence assessments, personal development plans, and learning opportunities during the last decades. The consultancy industry has strongly supported the implementation of competence development and performance improvement initiatives in organizations. A case study on this will be presented based on an interesting project conducted by Jumbo, which is a key player in the food retail sector in the Netherlands. Korn Ferry HayGroup, well-known for its long-standing history in competence research and development, as main consultancy organization for this project, will present the case.

Keynote speakers | Prof. Dr. Reinhold Weiss

Federal Institute for Vocational Education and Training (BIBB), Bonn, Germany,
Deputy President and Head of the Research
Thursday, October 20, 11:00-12:00hrs

‘Status of competence research in Germany: approaches – results’
During the last decades research on competences and competence development has become a major research issue in Germany. Starting with international comparative studies on general competences like PISA a number of studies have been carried out. Research programmes such as ASCOT have transferred and developed new approaches to the field of vocational education and training. Scientific resources and methodological know-how have been developed. Measurement of competences meanwhile has become an integrated part of educational research. Nevertheless resources invested in VET-research are very limited. At the same time, approaches and results are the object of criticism. Two arguments are of central importance. Competence research has produced a lot of data but only poor results on reasons, instruments and advice on how to improve learning arrangements. Competence research has focused on testing competences on the basis of single items, but it has failed to measure holistic competences and the demands in the complexity of real work.
Mr. João Santos

European Commission Directorate General for Employment, Social Affairs and Inclusion, Acting Head of Unit C5, Vocational training and adult education
Friday, October 21, 11.00-12.00hrs

‘The New Skills Agenda and the development of key competences’

Europe’s social market economy, combining economic and social development depends to a large extent on the skills and competences of its population. Skills drive innovation, competitiveness and employability. The European Commission is fully dedicated to addressing the challenges ahead in realizing lifelong learning and competence development. The New Skills Agenda, supporting the Commission’s priority on “A New Boost for Jobs, Growth and Investment”, aims at promoting the development of skills and competences at all levels of education and training. Building on the experience of implementing the 2010 Bruges Communiqué, the Riga conclusions adopted at the Ministerial meeting in Riga on 22 June 2015, defined a set of five medium-term deliverables for the period 2015-2020. These include a new focus on the promotion of work-based learning, quality assurance mechanisms, access to vocational education and training in a LLL perspective, training and professional development of teachers, trainers and mentors, and further strengthening of the key competencies by initial and continuing vocational education and training. In this keynote a review will be given of the initiatives of the European Commission on the New Skills Agenda, and in particular on the development of key competences for the 21st century.
## Conference agenda at a glance | Wednesday, October 19

**Conference venue:** Forum

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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| 09:00-10:30hrs | Registration in the lobby of Forum  
*On site payment available* |
| 10:30-12:00hrs | Parallel Session I                                                                         |
| 12:00-12:45hrs | Lunch in Grand Café of Forum  
*Registration and on site payment available during lunch in the lobby of Forum* |
| 12:45-14:15hrs | Opening of the conference in room C222 in Forum  
Mr. Geert van Rumund, Mayor of Wageningen  
‘Welcome to Wageningen’  
Prof. dr. Arthur Mol, Rector Magnificus of Wageningen University & Research  
‘Welcome to Wageningen University & Research’  
Prof. dr. Martin Mulder, Conference chair  
‘The theme and programme of Competence 2016’  
**Keynote address**  
Mr. Eric de Boer, Korn Ferry HayGroup, Amsterdam, The Netherlands, Senior Consultant HR  
‘Competence development and performance improvement’ |
| 14:15-14:30hrs | Break in front of room C222 in Forum |
| 14:30-16:00hrs | Parallel session II  
*Break in front of room C222 in Forum* |
| 16:00-16:30hrs | Break in front of room C222 in Forum  
*Parallel session III* |
| 16:30-18:00hrs | Parallel session III  
*Conference Reception in Grand Café of Forum* |
| 18:00-19:30hrs | Conference Reception in Grand Café of Forum |
## Conference agenda at a glance | Thursday, October 20

**Conference venue: Forum**

<table>
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<tr>
<th>Time</th>
<th>Event and Details</th>
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| 08:00-09:00hrs      | Registration in lobby of Forum  
*On site payment available* |
| 09:00-10:30hrs      | Parallel session IV |
| 10:30-11:00hrs      | Break in front of room C222 in Forum |
| 11:00-12:00hrs      | **Keynote address** in room C222 in Forum  
Prof. dr. Reinhold Weiss, Federal Institute for Vocational Education and Training (BIBB), Bonn, Germany, Deputy President and Head of the Research  
‘Status of competence research in Germany: approaches – results’ |
| 12:00-13:00hrs      | Lunch in Grand Café of Forum  
*Registration and on site payment available during lunch in the lobby of Forum* |
| 13:00-14:30hrs      | Parallel session V |
| 14:30-15:00hrs      | Break in front of room C222 in Forum |
| 15:00hrs            | **Transit to the Aula**  
*By bus or on your own – free transit by bus is arranged* |
| 16:00-17:00hrs      | **Public farewell address** at the Aula of Wageningen University & Research  
Prof. Dr. Martin Mulder  
‘Competence for Life: A Review and Perspective for the Future’ |
| 17:00-18:30hrs      | **Public Reception** at the Aula of Wageningen University & Research |
| 18:30-19:30hrs      | **Transit to Hotel De Wageningsche Berg**  
*By bus or on your own – free transit by bus is arranged* |
| 20:00-22:30hrs      | **Conference Dinner** at Hotel De Wageningsche Berg  
*Additional fee applies* |
| 23:00-23:30hrs      | **Transit to Conference hotel Hof van Wageningen**  
*By bus or on your own – free transit by bus is arranged* |
**Conference agenda at a glance | Friday, October 21**

**Conference venue: Orion**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08:00-09:00hrs</td>
<td>Registration in the lobby of Orion&lt;br&gt;<em>On site payment available</em></td>
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<tr>
<td>09:00-10:30hrs</td>
<td>Parallel session VI</td>
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<tr>
<td>10:30-11:00hrs</td>
<td>Break at Restaurant east-side in Orion</td>
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<tr>
<td>11:00-12:00hrs</td>
<td>Keynote address in room C1005/1040 in Orion&lt;br&gt;Mr. João Santos, Directorate General for Employment, Social Affairs and Inclusion&lt;br&gt;Acting Head of Unit C5, Vocational training and adult education&lt;br&gt;‘The New Skills Agenda and the development of key competences’</td>
</tr>
<tr>
<td>12:00-13:15hrs</td>
<td>Networking lunch at restaurant east-side in Orion</td>
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<tr>
<td>13:15-14:45hrs</td>
<td>Open space for business meetings at restaurant east-side in Orion</td>
</tr>
</tbody>
</table>
Detailed conference agenda | Wednesday, October 19

Conference venue: Forum

09:00-10:30hrs  Registration in the lobby of Forum
On site payment available

10:30-12:00hrs  Parallel Session I

I.1 Symposium

Session title: Introduction of competence approach in the reform of school-based initial VET-systems: Challenges, Pitfalls, Impacts
Date/time/place: Wednesday October 19, 10:30-12:00hrs; Forum – room C217
Chair: Vidmantas Tūtlys
Discussant: Jonathan Winterton
Papers:
- Introduction of competence-based approaches in the reform of school-based initial VET systems: issues for research
  Jonathan Winterton
- Challenges in understanding and measuring competencies in the school-based VET systems
  Samo Pavlin, Vidmantas Tūtlys
- Impact of the competence approach to the reforms of the initial VET system in Italy and Lithuania
  Giuseppe Tacconi, Vidmantas Tūtlys

I.2 Paper session

Session title: Competence theory, management and leadership
Date/time/place: Wednesday October 19, 10:30-12:00hrs; Forum – room C221
Chair: Hildert Zoethout
Papers:
- Improving Leadership Competencies and Performances with a Microteaching Approach
  Andreas Rupp
- Beyond a new language for competence: a discussion on how to implement the idea of competence
  Giuditta Alessandrini, Claudio Pignalberi, Valerio Massimo Marcone

I.3 Symposium

Session title: Getting a Grip on Boundary Crossing Learning
Date/time/place: Wednesday October 19, 10:30-12:00hrs; Forum – room C214
Chair: Carla Oonk
Discussant: Ilya Zitter
Papers:
- Learning across boundaries during the design and implementation of a hybrid learning configuration
  Petra Cremers
- Stimulating students’ boundary crossing learning in the multi-stakeholder Regional Learning Environment
  Carla Oonk, Judith Gulikers
- Teaching and learning reflexivity in problem-oriented inter- and transdisciplinary research
  Karen Fortuin, Kris van Koppen
Detailed conference agenda | Wednesday, October 19 continued

I.4 Symposium

**Session title:** Changing the paradigm of Master’s admission in Europe  
**Date/time/place:** Wednesday October 19, 10:30-12:00hrs; Forum – room C218  
**Chair:** Kees Kouwenaar  
**Discussant:** Kees Kouwenaar  
**Papers:**  
- Development and testing of competency-based admission  
  *Kees Kouwenaar*  
- Evidence base of master’s admission: facts and perceptions on master’s admission for internal, domestic and international applicants  
  *Irina Ferencz*  
- Developing tools to support Master’s admission for a diverse classroom in the Lithuanian Higher Education system  
  *Inez Meurs*  
- Case study Vrije Universiteit Amsterdam  
  *Adrian Verkleij*

I.5 Symposium

**Session title:** Computer-Based Assessment of Transversal Competences: The Case of Problem Solving Competence  
**Date/time/place:** Wednesday October 19, 10:30-12:00hrs; Forum – room C317  
**Chair:** Christoph Niepel  
**Discussant:** Christoph Niepel  
**Papers:**  
- Computer based Assessment [CBA]: An appropriate approach to measure professional problem-solving competence for the occupation of electronics technicians for automation technology [ETAT]?  
  *Felix Walker, Nico Link, Stephan Abele, Reinhold Nickolaus*  
- Do the constructs complex problem solving, comprehension skill, technological knowledge and general cognitive ability explain task success in a performance-based ICT skills test?  
  *Lena Engelhardt, Johannes Naumann, Frank Goldhammer, Andreas Frey, Katja Hartig, Holger Horz, Kathrin Kuchta, S. Franziska C. Wenzel*  
- The role of ICT usage in problem solving achievement: Findings from the PISA 2012 data  
  *Maša Pavlović, Christoph Niepel, Samuel Greiff*

I.6 Symposium

**Session title:** Fostering Argumentation Competence in Higher Education  
**Date/time/place:** Wednesday October 19, 10:30-12:00hrs; Forum – room C314  
**Chair:** Omid Noroozi  
**Discussant:** Harm Biemans  
**Papers:**  
- Effects of Computer-Supported Argumentation Scripts on Students domain specific knowledge gain and attitudinal change  
  *Omid Noroozi, Hans Tramper*  
- Enhancing the Quality of Argumentation in National and International Food Law through Argumentation-Based Computer-Supported Collaborative Learning (ABCSCL)  
  *Kai Purnhagen, Omid Noroozi*  
- Examining the Impact of Modern Teaching Methods in Creating Argumentation Competency among Entrepreneurship Students  
  *Khoshghadam Khaledi, Mohammad Chizari*
I.7 Symposium

Session title: Encouragement of sustainable behaviour in school and work settings
Date/time/place: Wednesday October 19, 10:30-12:00hrs; Forum – room C521
Chair: Vincent Blok
Discussant: Renate Wesselink
Papers:
- To increase employees’ PEB both the management and organisational level should be put in place
  Renate Wesselink, Vincent Blok, Jenno Ringersma
- Encouraging Students Pro Environmental Behaviour
  Piety Runhaar, Klaartje Wagenaar, Renate Wesselink
- Integrating sustainability in education: stimulating active involvement of stakeholders for an integrated vision
  on sustainability in vocational education
  Anne Remmerswaal, Renate Wesselink, Arjen Wals

12:00-12:45hrs  Lunch in Grand Café of Forum
Registration and on site payment available during lunch in the lobby of Forum

12:45-14:15hrs  Opening of the conference in room C222 in Forum
Mr. Geert van Rumund, Mayor of Wageningen
‘Welcome to Wageningen’
Prof. dr. Arthur Mol, Rector Magnificus of Wageningen University & Research
‘Welcome to Wageningen University & Research’
Prof. dr. Martin Mulder, Conference chair
‘The theme and programme of Competence 2016’
Keynote address
Mr. Eric de Boer, Korn Ferry HayGroup, Amsterdam, The Netherlands,
Senior Consultant HR
‘Competence development and performance improvement’

14:15-14:30hrs  Break in front of room C222 in Forum

14:30-16:00hrs  Parallel session II

II.1 Symposium

Session title: Competence in crisis
Date/time/place: Wednesday October 19, 14:30-16:00hrs; Room C217
Chair: Jonathan Winterton
Discussant: Michael Gessler
Papers:
- Restructuring and the crisis of competence
  Jonathan Winterton
- Skills mismatches across the European Union
  Samo Pavlin, Ivan Svetlik
- Skilled migration in the European Union
  Vidmantas Tutlys, Jonathan Winterton
- Skills implications of migration and irregular labour in ASEAN
  Kenneth Cafferkey, Tony Dundon, Jonathan Winterton
II.2 Paper session

Session title: Training, Development and Portfolios  
Date/time/place: Wednesday October 19, 14:30-16:00hrs; Forum – room C221  
Chair: Thomas Lans  
Papers:
- Investigating Instructional Design Competencies in a Fast-paced Changing Environment  
  William J. Rothwell, Aileen Zaballero, Tutaleni Asino, Jessica Briskin, Kristopher Newbauer  
- Does training improve skill match?  
  Francesca Sgobbi  
- The influence of values on competency models in the profession of Training and Development  
  Saul Carliner  
- Social Competences as Part of the Professional Competence Portfolio and its Implementation in Practical Surroundings by the Example of Medical Assistants  
  Tanja Tschöpe, Moana Monnier, Agnes Dietzen

II.5 Paper Session

Session title: Competence assessment and measurement  
Date/time/place: Wednesday October 19, 14:30-16:00hrs; Forum – room C317  
Chair: Glen Shinn  
Papers:
- Competence assessment in early vocational orientation  
  Carolin Kunert  
- The PIAAC Italy survey  
  Fabio Roma, Gabriella Di Francesco  
- Soft skills as most significant predictor of getting job: Evidence from using new measurement tool  
  Jiri Balcar, Lenka Filipova

II.6 Symposium

Session title: Fostering 21st Century Skills in Higher Education  
Date/time/place: Wednesday October 19, 14:30-16:00hrs; Forum – room C314  
Chair: Omid Noroozi  
Discussant: Stan van Ginkel  
Papers:
- Becoming Globally Competent through Student Mobility  
  Dine Brinkman, Vitaliy Popov  
- The effects of First-Order And Second-Order Scaffolding on Computer-Supported Collaborative Argumentation: A Systematic Review  
  Anahuac Valero Haro, Omid Noroozi, Harm Biemans  
- Towards a Set of Design Principles for Developing Oral Presentation Competence in Higher Education  
  Stan van Ginkel, Judith Gullikers, Harm Biemans, Martin Mulder
II.7 Symposium

Session title: Competence, sustainable development and higher education  
Date/time/place: Wednesday October 19, 14:30-16:00hrs; Forum – room C521  
Chair: Renate Wesselink  
Papers:
- Design principles for Living Lab’s aiming at sustainable development: The role of higher education in Living Labs  
  Loes Witteveen, Rik Eweg, Toine Smits, Wiepke Voskamp-Harkema  
- Higher Education and Competence for Responsible Research and Innovation (RRI): Towards a Research Agenda  
  Valentina Tassone, Hansje Eppink, Vincent Blok, Renate Wesselink  
- Competencies for interdisciplinary teamwork in agroecology: Norway and India  
  Anna Marie Nicolaysen, Parthiba Basu, Geir Hofgaard Lieblein, Anshuman Das, Tor Arvid Breland, Barbara Smith

16:00-16:30hrs  Break in front of room C222 in Forum

16:30-18:00hrs  Parallel session III

III.1 Paper session

Session title: Developments in Competence-based Agricultural Education and Extension  
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C217  
Chair: Thomas Lans  
Papers:
- Conceptualizing Bachelor’s Degree Agricultural Education Curricula for 2050  
  Glen Shinn, Gary Briers, David Knauft, Maria Navarro  
- Design of a competency based learning (CBL) curriculum for Agricultural Training Institutes (ATIs) in South Africa: A Community of Learning and Action (COLA) approach  
  Bernd Lutge, Petronella Chaminuka, Juan Ceballos, Charles Andrew Francis, Edvin Ostergaard  
- Agricultural Extension Professionals’ Perceptions of Core Competencies in Nepal  
  Ramjee Ghimire, Murari Suvedi

III.2 Paper session

Session title: Competence, performance, commitment and pay  
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C221  
Chair: Hildert Zoethout  
Papers:
- Competencies, Job knowledge, Personality and Performance  
  Rendel de Jong, Charlotte Koppen de Neve, Paul Boer  
- Supporting Temporary Agency Workers’ affective commitments: exploring the role of expected and fulfilled opportunities for competence development  
  Nienke Woldman, Piety Runhaar, Renate Wesselink, Martin Mulder  
- Soft-skills and labour market outcomes: the case of young French graduates  
  Ines Albandea, Jean-Francois Giret  
- Gaps between actual and preferred career paths among professional employees  
  Michal Biron, Ravit Eshed
Detailed conference agenda | Wednesday, October 19 continued

III.3 Paper session

Session title: Learning environments at the boundaries between work and education
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C214
Chair: Loek Nieuwenhuis
Papers:
- Education at the boundary of school and work: a typology of learning environments in vocational education
  *Erica Bouw, Ilya Zitter, Elly de Bruijn*
- Investigating perceptions of learning environments and apprenticeship in the Finnish context
  *Heta Rintala, Petri Nokelainen, Laura Pylväs*
- Workplace learning in competence-based TVET
  *Loek Nieuwenhuis*

III.4 Symposium

Session title: Mind the Gap! From competence based measurement to competence based teaching
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C218
Chair: Geoff Hayward
Discussant: Hubert Ertl
Papers:
- Back to work bridging the gap between input and output
  *Peter Sloane*
- Competence Development - From mind the gaps to mind the steps
  *Bernadette Dilger*
- Competence in England and the legacy of NVQs
  *Geoff Hayward*

III.5 Paper session

Session title: Competence assessment and measurement continued
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C317
Chair: Machiel Bouwmans
Papers:
- Structure modelling and achievement scales for electronics technicians’ knowledge at the end of vocational training
  *Leo van Waveren*
- Self-perceptions of the match between acquired and required competences and their antecedents
  *Jan Nijhuis*

III.6 Symposium

Session title: Fostering Oral Presentation Competence in Higher Education
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C314
Chair: Stan van Ginkel
Discussant: Stan van Ginkel
Papers:
- Fostering Oral Presentation Performance: Does the Quality of Feedback Differ When Provided by the Teacher, Peers or Peers Guided by Tutor?
  *Stan van Ginkel, Judith Gulikers, Harm Biemans*
- Practice and improve using the Presentation Trainer
  *Jan Schneider, Dirk Börner, Peter van Rosmalen*
- A Multimodal System For Public Speaking Anxiety: A Positive Computing Perspective
  *Fiona Dermody, Alistair Sutherland*
III.7 Symposium

Session title: Designing higher education learning environments to develop key competencies for sustainability
Date/time/place: Wednesday October 19, 16:30-18:00hrs; Forum – room C521
Chair: Petra Cremers
Discussant: Karen Fortuin
Papers:

- Approaches of science-practice interaction: How to relate multi-stakeholder knowledge and science knowledge?  
  *Roland Scholz, Gerald Steiner*
- Designing Learning Environments for Transboundary Competence as a Key Competence in Higher Education for Sustainable Development  
  *Joop de Kraker*
- Shaping a mode 2 concept of university education to tackle real life problems  
  *Ulrike Gelbmann, Anton Peskoller*
- The role of preconceptions of sustainable development for perceived professional relevance and the development of inter- and transdisciplinary competencies among first year students  
  *Anna Sundermann, Daniel Fischer*

18:00-19:30hrs Conference Reception in Grand Café of Forum
Detailed conference agenda | Thursday, October 20

Conference venue: Forum

08:00-09:00hrs  
**Registration** in lobby of Forum  
*On site payment available*

09:00-10:30hrs  
**Parallel session IV**

**IV.1 Paper session**

**Session title:** Competence-based education: legislation, realisation and effects  
**Date/time/place:** Thursday October 20, 09:00-10:30hrs; Forum – room C221  
**Chair:** Harm Biemans  
**Papers:**
- Federal Legislation and the Potential Impact on Competency-based Education in the U.S.  
  Kirby Barrick  
- Realization of Competence-based Education and Training: Teachers’, Students’ and Graduates’ Perspectives  
  Getachew Habtamu Solomon, Renate Wesselink, Omid Noroozi  
- Exploring Connections of Teacher Interpersonal Behaviour, Student Motivation and Competency Level  
  Zainun Misbah, Judith Gulikers, Wahyu Widiharso, Martin Mulder

**IV.2 Symposium**

**Session title:** Human Resource Management in schools. Exploring its potential for enhancing teachers’ competence, motivation and opportunities to perform  
**Date/time/place:** Thursday October 20, 09:00-10:30hrs; Forum – room C213  
**Chair:** Piety Runhaar  
**Discussant:** Ton Bruining  
**Papers:**
- Beyond induction; a comprehensive view on novice teachers’ induction in Dutch secondary education  
  Piety Runhaar, Judith Gulikers, Renate Wesselink  
- Linking principals configuration of a bundle of HR practices for new teachers to teacher outcomes  
  Eva Vekeman, Geert Devos  
- Teacher assignment in secondary education: a mixed method study  
  Melissa Tuytens, Geert Devos  
- Explaining teachers’ career competence. Exploring the roles of teachers  
  Piety Runhaar, Marjan Vermeulen, Evelien Loeffen

**IV.3 Symposium**

**Session title:** Competence development for inter- and transdisciplinary research  
**Date/time/place:** Thursday October 20, 09:00-10:30hrs; Forum – room C226  
**Chair:** Carla Oonk  
**Discussant:** Joop de Kraker  
**Papers:**
- Inquiry based research in action  
  Marjolein Zweehorst, Wanda Konijn  
- Learning to design for the unknown: educational designing in an undergraduate transdisciplinary setting  
  Tanja Golja  
- What are universities for? - Integrative Design-Based Inquiry as one possible answer  
  Binbin Pearce, Christian Pohl
IV.4 Symposium

Session title: Formative assessment with effect
Date/time/place: Thursday October 20, 09:00-10:30hrs; Forum – room C318
Chair: Judith Gulikers
Discussant: t.b.a.
Papers:
- What are methods and conditions of formative assessment that are effective for learning? A review study
  Dominique Sluijsmans, D. Joosten-ten Brinke, Cees van der Vleuten
- A systematic review of prerequisites for implementing formative assessment in classroom practice
  Kim Schildkamp, Wilma Kippers, Fabienne van der Kleij, Maaike Heitink, Inge Hoogland, Anne Dijkstra,
  Bernard Veldkamp
- Teachers’ formative assessment practices in the classroom with effects on students
  Judith Gulikers, Liesbeth Baartman

IV.5 Paper session

Session title: Professional competence in finance and health
Date/time/place: Thursday October 20, 09:00-10:30hrs; Forum – room C317
Chair: James Lindner
Papers:
- Financial Literacy: A fuzzy construct. A comparison and evaluation of the conceptualisations and
  measurement models in the financial domain
  Sabrina Patitz, Marina Haves, Thomas Retzmann
- A Comparison of Defining Nursing Competence in Europe and the United States
  Jessica Shearer, Johanna Lasonen, Ritta Meretoja
- The Influence of Emotional and Social Competencies on Collaboration in Cross-Cultural Healthcare Settings
  Aileen Zaballero, William J. Rothwell

IV.6 Symposium

Session title: Entrepreneurship Education with Impact: Learning from European Experiences
Date/time/place: Thursday October 20, 09:00-10:30hrs; Forum – room C314
Chairs: Marge Täks, Marco van Gelderen
Discussant: Marge Täks
Papers:
- The impact of entrepreneurial competency training
  Marco van Gelderen
- The effects of education for and through entrepreneurship: Different approaches, different outcomes
  Kåre Moberg, Pernille Berg
- Development and Application of the Opportunity Identification Competence Assessment Test (OICAT) in
  Higher Education
  Yvette Baggen, Ana Naia
- The influence of learning orientation and context on market orientation of small holding farmers
  Emilio Pindado, Thomas Lans
IV.7 Symposium

Session title: Transition thinking Planet, People, Profit and related competence
Date/time/place: Thursday October 20, 09:00-10:30hrs; Forum – room C521
Chair: Frank de Jong
Discussant: Niek van den Berg
Papers:
- Transitioning toward healthier dietary patterns
  Esther Nederhof
- Competence for transformative business: The role of new business models in the agricultural transition
  PJ Beers, Erwin Bouwmans
- Valorisation of food waste in different stages of the food production value chain
  Koen Dittrich, Geert Sol, Maud Smits, Mandy van Vught
- Responsive and responsible education: eco-semiotic learning competence
  Frank de Jong

10:30-11:00hrs Break in front of room C222 in Forum
11:00-12:00hrs Keynote address in room C222 in Forum

11:00-12:00hrs Keynote address in room C222 in Forum
Prof. dr. Reinhold Weiss, Federal Institute for Vocational Education and Training (BIBB), Bonn, Germany, Deputy President and Head of the Research
‘Status of competence research in Germany: approaches – results’

12:00-13:00hrs Lunch in Grand Café Forum
Registration and on site payment available during lunch in the lobby of Forum

13:00-14:30hrs Parallel session V

V.1 Symposium

Session title: The Scope and Practice of the so-called Occupational Sciences: An updated VET Science or just a work- and competence-based Research Methodology?
Date/time/place: Thursday October 20, 13:00-14:30hrs; Forum – room C221
Chairs: Ludger Deitmer, Michael Gessler, Lars Heinemann
Discussant: Jonathan Winterton
Papers:
- The Scope of Research
  Ludger Deitmer
- The Practice of OC-Research
  Michael Gessler
- Discussion: Science or Methodology?
  Ludger Deitmer, Michael Gessler, Lars Heinemann
### V.2 Symposium

**Session title:** Team learning in the context of teacher teams  
**Date/time/place:** Thursday October 20, 13:00-14:30hrs; Forum – room C213  
**Chair:** Hildert Zoethout  
**Discussants:** Elly de Bruijn, Ton Bruining  
**Papers:**  
- Team learning in teacher teams: a systematic review  
  *Eva Kunst, Marianne van Woerkom, Hildert Zoethout, Rob Poell*  
- Using transactivity as an analytical framework to understand quality of team learning  
  *Hildert Zoethout, Renate Wesselink, Piety Runhaar, Martin Mulder*  
- The development of distributed leadership through top-down and bottom-up processes  
  *Machiel Bouwmans, Piety Runhaar, Renate Wesselink, Martin Mulder*

### V.3 Paper session

**Session title:** Knowledge, Competence Development and Excellence in Higher Education  
**Date/time/place:** Thursday October 20, 13:00-14:30hrs; Forum – room C226  
**Chair:** Stan van Ginkel  
**Papers:**  
- A unified model of knowledge bases for subject-matter competence in bachelor degree programmes of technical teachers  
  *Kees-Jan van Dorp, Fons Dehing*  
- Whole task instruction as the key to effective competence-oriented learning arrangements  
  *Iwan Wopereis, Jimmy Frerejean, Saskia Brand-Gruwel*  
- Competency Development in Higher Education through Intentional Change Theory and Problem Based Learning: An example from a Spanish Law School  
  *Basak Canboy, Joan Manuel Batista-Foguet*  
- Professional excellence: defining learning outcomes for honours higher education  
  *Melissa Oudshoorn-Fuller, Patricia Robbe, Marca C.V. Wolfensberger*

### V.4 Symposium

**Session title:** Innovative approaches to modelling and measuring teachers’ competence  
**Date/time/place:** Thursday October 20, 13:00-14:30hrs; Forum – room C318  
**Chair:** Judith Gulikers  
**Discussant:** Agnes Dietzen  
**Papers:**  
- Swiss Commercial VET Teachers content and pedagogical content knowledge  
  *Doreen Holtsch, Franz Eberle*  
- Assessing Subject-Specific Competencies in Teacher Education in Mathematics and Economics  
  *Christiane Kuhn, Olga Zlatkin-Troitschanskaia, Hannes Saas, Sebastian Brückner*  
- Important decisions demand cognitive effort: Teachers flexible choice of information processing after changing the accountability of decision situations  
  *Sabine Krolak-Schwerdt, Thomas Hörstermann, Sabine Glock, Ines Böhmer, Cornelia Gräsel*  
- Does Comparative Judgement result in valid scores/rank orders? Evidence from CJ research on argumentative writing and mathematical problem solving  
  *Marije Lesterhuis, Kristof Vermeiren, Sven de Maeyer, Liesje Coertjens, Maarten Goossens, San Verhavert*
V.5 Symposium

Session title: Authenticity and competence assessment
Date/time/place: Thursday October 20, 13:00-14:30hrs; Forum – room C317
Chair: Frank Achtenhagen, Susanne Weber
Discussant: Susanne Weber
Papers:
- Authenticity and competence assessment  
  Frank Achtenhagen
- Regarding the Validity of Competence Based Assessments – Conceptualizations and Examples of Application  
  Viola Klotz, Esther Winther, Julia Sangmeister
- Model-based authentic assessment of trainees’ intrapreneurship competence  
  Susanne Weber, Sandra Bley, Michaela Wiethe-Körprich, Christine Kreuzer
- Authenticity and Efficiency in Assessing Domain-Specific Problem-Solving Competence—Conflicting Goals in Large Scale Assessments?  
  Andreas Rausch, Kristina Kögler

V.6 Paper session

Session title: Emotional, social, critical thinking, complex problem solving and creativity competence
Date/time/place: Thursday October 20, 13:00-14:30hrs; Forum – room C314
Chair: Michiel Hupkes
Papers:
- Reconstructing actors perspectives as additional data source within current diagnostic procedures of social competencies in VET  
  Burkhard Vollmers, Werner Kuhlmeier
- Development of vocational expertise in Finnish apprenticeship training: The actors’ point of view  
  Laura Pylväs, Petri Nokelainen
- Critical Thinking Competence: If We Build it Will they Learn  
  James Lindner, Amy Harder, Nicole Stedman, Robert Strong, Grady Roberts, Kim Dooley, Christopher Stipling, Lisa Lundy
- Unleashing the creative potential of VET students  
  Antje Barabasch

V.7 Symposium

Session title: Sustainability at a micro level
Date/time/place: Thursday October 20, 13:00-14:30hrs; Forum – room C521
Chair: Renate Wesselink
Discussant: Marco Rieckmann
Papers:
- Leadership and the Creation of CSR  
  André Nijhof
- Developing Corporate Social Responsibility Competence: Considering the Roles of Learning Goal Orientation and Psychological Learning Climate  
  Eghe Osagie, Renate Wesselink, Piety Runhaar, Martin Mulder
- The role of moral decision making in recognizing opportunities for sustainable entrepreneurship  
  Lisa Ploum, Vincent Blok, Thomas Lans, Onno Omta
### Detailed conference agenda | Thursday, October 20 continued

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<td>16:00-17:00hrs</td>
<td>Public farewell address at the Aula of Wageningen University &amp; Research&lt;br&gt;Prof. Dr. Martin Mulder&lt;br&gt;‘Competence for Life: A Review and Perspective for the Future’</td>
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<td>17:00-18:30hrs</td>
<td>Public Reception at the Aula of Wageningen University &amp; Research</td>
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<td>18:30-19:30hrs</td>
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<td>20:00-22:30hrs</td>
<td>Conference Dinner at Hotel De Wageningsche Berg&lt;br&gt;&lt;i&gt;Additional fee applies&lt;/i&gt;</td>
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<td>23:00-23:30hrs</td>
<td>Transit to Conference Hotel Hof van Wageningen&lt;br&gt;&lt;i&gt;By bus or on your own – free transit by bus is arranged&lt;/i&gt;</td>
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**Detailed conference agenda | Friday, October 21**

**Conference venue: Orion**

08:00-09:00hrs **Registration** in lobby of Orion  
*On site payment available*

09:00-10:30hrs **Parallel session VI**

**VI.1 Paper session**

**Session title:** Linking Competence-based vocational and higher education  
**Date/time/place:** Friday October 21, 09:00-10:30hrs; Orion – room C3034  
**Chair:** Harm Biemans  
**Papers:**
- Compatible competence orientation of higher and vocational education? Conceptual considerations and insights for education development  
  *Volker Rein*  
- Promoting Students’ Transitions to Higher Vocational Education  
  *Harm Biemans, Hans Mariën, Erik Fleur, Hilde Tobi, Loek Nieuwenhuis, Piety Runhaar*

**VI.2 Symposium**

**Session title:** Competence in crossing sociocultural boundaries  
**Date/time/place:** Friday October 21, 09:00-10:30hrs; Orion – room C3015  
**Chair:** Frank de Jong  
**Discussant:** Renate Wesselink  
**Papers:**
- Boundary practices of educators and researchers collaborating on professional issues  
  *Niek van den Berg*  
- Cross-cultural competence as a basis for intercultural communication in the classroom  
  *Toon van der Ven*  
- Competence development of internationally mobile students  
  *Hans Corten, Frank de Jong, Rolf van der Velden*  
- Developing research behavior competence by crossing school and business borders  
  *Frank de Jong*

**VI.3 Paper session**

**Session title:** Personal growth, argumentation and visual research  
**Date/time/place:** Friday October 21, 09:00-10:30hrs; Orion – room C4014  
**Chair:** Kirby Barrick  
**Papers:**
- Searching for a theoretical framework: the role of the experienced meaningfulness and personal growth needs in competence development  
  *Rainer Hensel*  
- Effects of a Digital Guided Peer Feedback on Students argumentation competence learning and satisfaction  
  *Omid Noroozi, Javad Hatami*  
- Video for Data Collection; Exploring the development of a visual research competence  
  *Angela Pachuau, Loes Witteveen*
Detailed conference agenda | Friday, October 21 continued

VI.5 Paper session

Session title: Competence frameworks for professional development in extension  
Date/time/place: Friday October 21, 09:00-10:30hrs; Orion – room C3030  
Chair: Hansje Eppink  
Papers:  
- Organizing Human Capacity Development in Extension using a Priority Competency Framework  
  Amy Harder, James Lindner, Alan Hodges  
- Developing and Validating a Competence Profile for Development Agents: A Case Study  
  Chalachew Tarekegne Anteneh, Renate Wesselink, Harm Biemans, Martin Mulder  
- Perceptions of Core Competencies of Agricultural Extension Workers in Cambodia  
  Murari Suvedi, Ty Channa, Ramjee Ghimire

VI.6 Symposium

Session title: Multiple methods of developing intercultural competence  
Date/time/place: Friday October 21, 09:00-10:30hrs; Orion – room C4016  
Chair: Dine Brinkman  
Discussant: Vitaliy Popov  
Papers:  
- Development of intercultural competencies during international internships using a rubric  
  Judith Gulikers, Piety Runhaar, Dine Brinkman  
- English at Work: an international virtual collaboration project  
  Joelle Hietbrink, Julia Huisman, Ivan Berazhny, Liisa Wallenius  
- The effect of a blended learning tool on intercultural competence development  
  Pauline Vromans

VI.7 Symposium

Session title: Sustainability Competence: meanings, possibilities and constraints  
Date/time/place: Friday October 21, 09:00-10:30hrs; Orion – room C4030  
Chair: Arjen Wals  
Discussant: Arjen Wals  
Papers:  
- Are competences appropriate for educators of sustainability  
  Paul Vare  
- Critical emotional awareness as a key competence in education for a sustainable future  
  Maria Ojala  
- Developing Anticipatory Competence in Higher Education for Sustainable Development  
  Senan Gardiner, Marco Rieckmann  
- Environmental Literacy: Combining Sustainability Competences in Knowledge, Attitudes and Behaviour  
  Franz Bogner, Florian Kaiser

10:30-11:00hrs Break at restaurant east-side in Orion

11:00-12:00hrs Keynote address in room C1005/1040 in Orion  
Mr. João Santos, Directorate General for Employment, Social Affairs and Inclusion  
Acting Head of Unit C5, Vocational training and adult education  
‘The New Skills Agenda and the development of key competences’

12:00-13:15hrs Networking lunch at restaurant east-side in Orion

13:15-14:45hrs Open space for business meeting at restaurant east-side in Orion
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