

Kick-off meeting

“Research into University Teaching & Learning”

Centre for Education & Learning

A joint research centre
based in Leiden University,
Delft University of Technology
and Erasmus University Rotterdam

May 14th 2014
Delft University of Technology



Programme kick-off meeting “Research into University Teaching & Learning”

Centre for Education & Learning

Leiden University – Delft University of Technology – Erasmus University Rotterdam

Date: May 14th, 2014, 3-5 pm

Venue: TU Delft (Faculty of Architecture, Berlage Hall 1&2)

13.30: Registration & coffee and tea

14.00: Welcome by Prof. Henk Dekker, Director of the LDE-Centre for Education & Learning

14.10: Challenges for university education: interviews with members of the executive boards.

‘Research into university education as a catalyst for improving teaching and learning’

What are the main *educational* challenges for our universities at the moment and how do EUR, TU Delft and Leiden University cope with them? What should be the role of educational research in relation to these challenges? What can be the added value of LDE-CEL in this context and what needs to be done to make it work? How will the executive boards stimulate the cooperation between LDE-institutes in educational research?

14.40: Short introductions to research into university education conducted in the three universities
By Gerard Baars (EUR), Jan van Driel (Leiden University) and Pieter de Vries (TU Delft)

15.15– 15.30: Coffee Break

15.30: Round table creative sessions in subgroups, centred around three research themes:

- Study success
- Online teaching & learning
- Selection and matching of students

Goals: getting to know one another, exchange of expertise and finding common ground. What questions and problems are we confronted with? What can be the added value of working together in the LDE-centre and how will we bring about this added value? What are the challenges of working together and how can we tackle them?

16.30: Subgroups present their ideas in a visual way. Their ideas and plans will be discussed with the board members and the community.

16.55: Closing remarks & next steps (Henk Dekker)

17.00: Drinks

Participants

(as of May 12th)

Erasmus University Rotterdam

Executive Board

Prof. dr Huib Pols

Institutional Development Office

Drs. Ronald van den Bos

Drs. Marjo Gallé

Risbo – Research, Training, Consultancy

Dr. Gerard Baars

Erasmus School of Economics

Prof. dr. Ivo Arnold

Faculty of Social Sciences

Prof. dr. Remy Rikers, (tentative)

Prof. dr. Lidia Arends

Dr. Guus Smeets

Dr. Marieke Meeuwisse

Prof. dr Sabine Severiens

Dr. Frans-Bauke van der Meer

Rotterdam School of Management

Bas Giesbers, MSc

Erasmus School of Law

Marit Wijnen, MSc

Erasmus MC

Prof. dr. Axel Themmen

Drs. Mary Dankbaar

Dr. Silvia Mamedes

Dr. Walter van den Broek

Dr. Karen Stegers-Jager (tentative)

TU Delft

Executive Board

Drs. Anka Mulder

Education and Student Affairs

Drs. Timo Kos

Drs. Nellie van de Griend

Michel Beeres, MSc

Faculty of Technology, Policy and Management

Dr. Pieter de Vries

Drs. Maartje van den Bogaard

Ir. Thieme Hennis

Dr. Ebrahim Rahimi

Faculty of Electrical Engineering, Mathematics and Computer Science

Prof. dr. Geert-Jan Houben

Universiteit Leiden**Executive Board**

Prof. dr. Simone Buitendijk

Directorate of Academic Affairs

Drs. Marja Verstelle

ICLON - Leiden University Graduate School of Teaching

Prof. dr. Jan van Driel

Mr. dr. Maarten van de Ven

Prof. dr. Wilfried Admiraal

Dr. Floris van Blankenstein

Indiray Day, MSc

Mayke Vereijken, MSc

Faculty of Social and Behavioural Sciences

Dr. Nadira Saab

Dr. Arjaan Wit

Drs. Anna Zandvliet

Prof. dr. Willem Heiser (also in Faculty of Science)

Leiden-Delft-Erasmus Alliance

Prof. dr. Henk Dekker (Director of LDE-CEL, also Leiden University)

Drs. Jacqueline Dekker, (Project Manager LDE)

Drs. Hilje Papma, (Communications Advisor LDE-Centres)

Prof. dr. Wilfried Admiraal

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Research themes (higher education)

- Teaching in higher education
- Teaching with technology
- Relationship between academe and field work
- Peer assessment

Three key publications

Admiraal, W. (online first). Meaningful learning from practice: Web-based video in professional preparation programs in university. *Technology, Pedagogy and Education*. DOI:10.1080/1475939X.2013.813403.

Berg, I. van den, Admiraal, W., & Pilot, A. (2006a). Peer assessment in university teaching: evaluating seven course designs. *Assessment & Evaluation in Higher Education*, 31, 19-36.

Pol, J. van der, Admiraal, W., & Simons, P. R. J. (2010). Peer evaluation in online anchored discussion for an increased local relevance of replies. *Computers in Human Behavior*, 26, 288-295.

Key question for future research

How should a technology-infused approach in higher education be implemented in order to become effective and efficient?

Quote

‘One of the most helpful things was the videotaping. It was an easy and quick way to show how I teach a class, not to collect all kinds of written sources and reflections. I had to think which clips I wanted to select in order to show my competences. Also, watching myself on videotape. It is so helpful to see how I come across to the kids, how I present myself, what I might have changed in that lesson, realizing that I did not see a lot of what was going on in my classroom at the moment.’ [evaluation by a student teacher]

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Research themes

- Factors determining student achievement
- Early identification of students who drop out in the first year at university
- Research into the effect of curriculum interventions

Key publications

Baars, G.J.A. & Arnold, I.J.M. (2014). Early identification and characterization of students who drop out in the first year at university. *Journal of College Student Retention*, 16(1), 95-109.

Baars, G.J.A. (2009). *Factors related to student achievement in medical school (dissertation)*. Den Haag: LEMMA. (ISBN: 978-90-5931-521-1).

Baars, G.J.A., Wolff, R., Godor, B., & Hermus, P. (2013). *Uitgebreide Pilot "Nominaal = Normaal" aan de Erasmus Universiteit Rotterdam: Instroom en BSA-rendement voor en na invoering van N=N*. Rotterdam: Erasmus Universiteit Rotterdam, Risbo.

Key question for future research

How can university education be designed in other ways so that more students will be successful?

Key quote:

'70% of the students who drop out in the first year do not participate in the first exams or do not manage to pass at least 50% of the first exams.'

Drs. Maartje van den Bogaard

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Research themes

- Student success in higher education
- Learning analytics and academic analytics
- Online learning and authentic learning environments

Research challenge

To explore and integrate new methods for data analysis and new approaches that help create more realistic and action-oriented models and policies that help make a difference to success in higher education.

Publications

Forsman, J., Mann, R., Linder, C., Van den Bogaard, M.E.D. (2014). Sandbox University: estimating influence of institutional action. *PlosOne.org*, in review.

Forsman, J., Van den Bogaard, M.E.D., Linder, C., Fraser, D., Verbraeck, A. (2013). Considering student retention as a complex system: A possible way forward for enhancing student retention. *European Journal of Engineering Education*, in review.

Van den Bogaard, M. E. D., Verbraeck, A., & De Graaff, E. (2013). Modeling student success with students. In *41th SEFI Conference 16-20 Sept 2013 Leuven, Belgium* (pp. 16–20). Leuven: SEFI/ KU Leuven.

De Vries, P. & Van den Bogaard, M. (2013). The Use of Social Media to Augment an Authentic Learning Environment in Engineering Education. *5th International Symposium on Project Approaches in Engineering Education*. Eindhoven: TUE/ University of Minho.

Van den Bogaard, M. E. D. (2012). Explaining student success in engineering Education at Delft University of Technology: a literature synthesis. *European Journal of Engineering Education*, 37(1), 59–85.

Van den Bogaard, M. E. D. (2011). A qualitative inquiry into first year engineering student success. In W. Hernandez (Ed.), *Research in Engineering Education Symposium 2011* (pp. 70–77). Madrid.

Walter W. Van den Broek, MD, PhD

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Main research interest

- ICT and medical education
- Funding of research in medical education
- Clinical reasoning

Key question for further research

Does ICT in its broadest sense have additional value to medical education and if so, how?

Increased clinical demands and decreased available time have accentuated the need for cost-effective, efficient and flexible education of students and residents. There also is a new emphasis on more challenge-based and active learning in education. In the last decade, research and interest in the potential of ICT on learning has exploded and became very diverse. A positive effect of ICT on medical education has been established in some publications, but not in general.

Quote

‘In terms of “mismanagement”, the introduction of new technologies usually forces re-examination of the assumptions that underpin less productive processes.’

Drs. Mary Dankbaar

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Research themes

- Effectiveness of online learning formats
- Serious gaming en simulation programs (design, effectiveness)
- Assessment of skills

Two main publications

Dankbaar, M.E.W., D.J. Storm, I.C. Teeuwen, S.C.E. Schuit, 2014. A blended design in acute care training: similar learning results, less training costs compared with a traditional format. In: Perspectives on Medical Education, 2014 Jan 30, Springer.

Dankbaar, M.E.W., K. Stegers-jager, F. Rutten, F. Baarveld, J. van Saase, J. van Merrienboer, S.C.E. Schuit, in review. Assessing the assessment: the risks of checklists in emergency care skill assessment,

Key research question for future research

How effective are online training formats such as serious games and simulation programs to train skills and which design features are most relevant for learning?

Quote from own research

‘Blended training design offers a effective and attractive training solution, leading to a significant reduction in costs.’

(Dankbaar et al, 2014)

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Research Themes

- Intermediate assessment
- Study success

Relevant Publications

None at this time

Key question for future research

What are the most optimal conditions for intermediate assessment?

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Research themes

- Teaching – Research Nexus
- Internationalization
- Online Teaching and Learning

Social media

- http://www.researchgate.net/profile/Henk_Dekker/?ev=hdr_xprf
- https://www.linkedin.com/profile/view?id=20723017&trk=nav_responsive_tab_profile
- https://www.facebook.com/henk.dekker.779?ref=tn_tnmn

Key question for future research

What makes university education the most successful?

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Research Themes

As a researcher, I have developed international profiles in three different areas of educational research: science education, teaching & teacher education, and higher education. In all of these three domains, I have supervised PhD students, and published in the respective top journals. In particular, I am being regarded as one of the leading scholars in the world in research on teachers' pedagogical content knowledge (PCK). Since I think educational researchers should engage in issues of policy and practice, I have always published in professional journals for teachers, teacher educators and consultants, mostly in the Netherlands (e.g., *NVOX*, *Levende Talen*, *Onderzoek van Onderwijs*). In addition, I continue to give lectures and keynotes at conferences for teachers, and at schools.

Currently, I am chair of the board of ICO and vice-chair of the ICL (Interuniversity centre for teacher education). In addition, I have been and am a member of the editorial boards of a range of (inter-)national scholarly journals (e.g., *Journal of Research in Science Teaching*, *International Journal of Science Education*, *Pedagogische Studiën*).

Selection of publications about higher education

Van Driel, J.H., Verloop, N., Werven, H.I. van, & Dekkers, H. (1997). Teachers' craft knowledge and curriculum innovation in higher engineering education. *Higher Education*, 34, 1, 105-122.

Van Driel, J.H., & Berry, A. (2012). Teacher Professional Development Focusing on Pedagogical Content Knowledge. *Educational Researcher*, 41, 1, 26 – 28.

Visser-Wijnveen, G. J., Van Driel, J. H., Van der Rijst, R. M., Verloop, N., & Visser, A. (2012). Relating academics' various ways of integrating research and teaching to their students' perceptions. *Studies in Higher Education*, 37 (2), 219-234.

Knol, M.H., In 't Veld, R., Vorst, H.C.M., Van Driel, J.H., & Mellenberg, G.J. (2013). Experimental effects of student evaluations coupled with collaborative consultation on college professors' instructional skills. *Research in Higher Education*, 54, 825-850.

Prof. dr. Christine Espin

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Research themes

Most of my work is with secondary-school students with disabilities. But I will be working on a small project in the future related to University Education. In addition, my work *could* potentially be extended to the University level to help students with disabilities. Themes related to university education are:

- Meeting the diverse needs of students with disabilities in a university classroom
- Ongoing progress monitoring for students with disabilities in academic learning

Key publications (see note above)

Espin, C.A., Busch, T., Lembke, E.S., Hampton, D., Seo, K., & Zukowski, B.A. (2013). Curriculum-based measurement in science learning: Vocabulary-matching as an indicator of performance and progress. *Assessment for Effective Intervention*, 38, 203-213.

Chung, S., & Espin, C.A. (2013). CBM progress monitoring in foreign-language learning for secondary-school students: Technical adequacy of different measures and scoring procedures. *Assessment for Effective Intervention*, 38, 236-248.

Espin, C.A., Wallace, T., Lembke, E., Campbell, H., & Long, J.D. (2010). Creating a progress measurement system in reading for middle-school students: Monitoring progress towards meeting high stakes standards. *Learning Disabilities Research and Practice*, 25, 60-75.

Key questions for future research

How can we make effective teaching effective for everyone: How can we best meet the needs of students with disabilities in the University classroom?

From my own research findings

Systematic monitoring of student progress can enhance performance of students with disabilities if the data are used to evaluate and modify instruction.

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Research themes

- Technology enhanced learning
- Online collaborative learning
- Synchronous and asynchronous communication in online learning
- Academic motivation
- Learning analytics

Key Publications

Giesbers, B., Rienties, B., Tempelaar, D., & Gijssels, W. (2014). A Dynamic Analysis of the Interplay between Asynchronous and Synchronous Communication in Online Learning: The Impact of Motivation. *Journal of Computer Assisted Learning*, 30(1), 30-50. doi: 10.1111/jcal.12020

Giesbers, B., Rienties, B., Tempelaar, D., & Gijssels, W. (2013). Investigating the relations between motivation, tool use, participation, and performance in an e-learning course using web-videoconferencing. *Computers in Human Behavior*, 29(1), 285-292. doi: 10.1016/j.chb.2012.09.005

Rienties, B., Giesbers, B., Tempelaar, D. T., Lygo-Baker, S., Segers, M., & Gijssels, W. H. (2012). The role of scaffolding and motivation in CSCL. *Computers & Education*, 59(3), 893-906. doi: 10.1016/j.compedu.2012.04.010.

Key question for future research

Which questions should be asked as a basis for a methodologically sound and practically useful development of learning analytics application that empowers students to increase their study performance?

Quote

'[...] using synchronous communication may level the differences between learners with autonomy-oriented motivation versus those with control-oriented motivation regarding the quantity and quality of messages posted in the asynchronous discussion forums.'

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Research themes

Analysis of multivariate categorical data using multi-dimensional scaling and classification techniques. As a member of the Gifi-group, he co-authored many publications, and contributed to the Categories package distributed by IBM/SPSS.

Prediction and forecasting, especially in educational processes. Examples from the past are a project entitled “M&T Learning Lab for Problem Driven Teaching” in the period 1998-2001, sponsored by the Ministry of Education, and a cooperation with CITO in a project called “Mathematical Proficiency in Primary Education: Cognitive Processes and Predictability” in 2006-2010. Currently, he is supervisor of the project “Prediction of Academic Performance of Leiden University Students: Monitoring the Teaching and Learning Alliance”, sponsored by the Executive Board of Leiden University.

Selected publications:

Hickendorff, M., Heiser, W.J., van Putten, C.M., & Verhelst, N.D., Solution strategies and achievement in Dutch written arithmetic: Latent variable modeling of change. *Psychometrika*, 74 (2009), 331-350.

Stevenson, C.E., Hickendorff, M., Resing, W.C.M., Heiser, W.J., and de Boeck, P.A.L. (2013), Explanatory item response modeling of children’s change on a dynamic test of analogical reasoning. *Intelligence*, 41, 157-168.

Stevenson, C.E., Bergwerff, C.E., Heiser, W.J. & W.C.M. Resing (2014), Working memory and dynamic measures of analogical reasoning as predictors of children’s math and reading achievement. *Infant and Child Development*, 23, 51-66.

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Research and policy themes

- MOOCs as research objects and research instruments
- Applying motivational/psychological concepts in online education
- Teacher innovation, teaching analytics, (online) course design
- Crowds and communities: concept of value, identity, trust and reputation, decentralized knowledge sharing and construction, collaboration
- Project-based, inquiry-based, self-directed & DIY learning, social/collaborative and networked learning, connectivist, creative learning, game-based learning
- Methods: Big Data analysis, learning analytics, case study research, action research
- Projects: i.) edX/DelftX MOOCs & Open Courseware ii.) Alternative pedagogies (EU); iii.) OER & remote experiments (EU), & more

Publications

Vries, P. de, & Hennis, T. (2013). Social Media to Foster Self-organized Participatory Learning for Disengaged Learners. *International Journal of Advanced Corporate Learning (IJAC)*, 6(1), 36–41. doi:10.3991/ijac.v6i1.2211

Hennis, T. A., Lukosch, S., & Veen, W. (2011). Reputation in Peer-Based Learning Environments. In O. C. Santos & J. G. Boticario (Eds.), *Educational Recommender Systems and Technologies* (pp. 95–128). Hershey, PA: IGI. doi:10.4018/978-1-61350-489-5.ch005

Hennis, T. A., & Kolfschoten, G. L. (2010). Understanding Social Mechanisms in Online Communities. In G. De Vreede (Ed.), *Proceedings of the 11th Group Decision & Negotiation Conference*. Delft, the Netherlands: Center for Collaboration Science

Veen, W., Staaldin, J.-P. van, & Hennis, T. A. (2010). Informal Self-regulated Learning in Corporate Organizations. In G. Dettori & D. Persico (Eds.), *Fostering Self-regulated learning through ICTs* (pp. 364–379). Genova, Italy: Institute for Educational Technologies Italy's National Research Council. doi:10.4018/978-1-61692-901-5.ch022

Watson, R. J., Braumann, A., Coble, A. R., Hennis, T. A., & Kraft, M. (2010). Sustainable Management of Industrial Collaborations in E-Lab Learning. In *REV2010 Conference* (p. 7)

Sjoer, E., & Hennis, T. A. (2008). User Experiences with Open Course Ware. In *SEFI 36th Annual Conference*.

Key research questions for future research

- How to sustain engaging and effective learning in participatory learning environments?
- How to address diversity in open online learning environments?
- How to influence and develop mindsets for learning?

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Research themes

- The transition from secondary to higher education
- First-year academic achievement at university
- Psychosocial skills and study skills
- Study choice behavior
- Student diversity
- Quantitative and qualitative research methods

Publications

No publications available yet.

Key question for future research

How can an education institution both have an efficient business model (low dropouts rates, high retention rates) and be a place where young adults have the time to develop personally and academically?

Quote

‘Preliminary results show that a pre-academic programme, focused on self-regulated learning, interpersonal communication and goal setting, can enhance an efficient start at university. Commencing students of Erasmus School of Law who participated in its pre-academic programme, study harder, show more pro-active communication with peers and staff, and attain higher (+0.5) grades in the first course than students who did not attend the programme.’

Prof. dr. Geert-Jan Houben

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Research interests

- Web Science & Engineering
- User Modelling & Adaptation
- Learner Modelling

FP7 Projects related to e-learning

- GRAPPLE – learner model interoperability
- ImREAL – web-based augmentation of learner models

Key research theme related to online education

Usage of Web data and Web-based interaction to augment online education platforms.

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Research theme

The effects of formative feedback on student learning and performance in higher education.

More specifically, focusing on larger groups of students

- To what extent can contingent, formative feedback in lectures, facilitated by web-based ICT, increase students' self-efficacy, engagement, and performance?
- What are the effects of different matching principles on the quality of students' feedback and performance, in the context of peer feedback on written assignments?

Relevant publications

No publications yet

Key question for future research

What are effective approaches to facilitate formative feedback to larger groups of students in two educational settings: peer feedback on written work, and lectures.

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[Scoop-it: MOOC-SCOOP](#)



Expertise

- Quality assurance
- Open & online education

Publications

- Rapport Surf: '[Open & Online Education en de toekomst van het NL'se HO](#)' (2013)
- Rapport Commissie Onderwijstijd: '[De waarde van een norm](#)' (2008)
- [MOOC-SCOOP](#) (my personal online repository where I try to keep up with articles published on MOOCs & Open Education)

Questions for future research

- In which innovative ways can online social connection & interactions be used to enhance active learning, both for online students as for blended learning by on-campus students?
- How can digital exercise environments & game-based learning be used to increase active learning in online & blended learning?
- How can online testing be made fraud-resistant?

Quote

‘Excellent education is inspiring & challenging’

‘MOOCs are a hype, especially from a USA media perspective. One of the explanations for the enormous media attention is the education bubble theory of Peter Thiel. Furthermore MOOCs are also a potential disruptive innovation, as defined by Clayton Christenson. This disruption could lead to the emergence of a new global market for online education, and possible even the unbundling of higher education as we know it.’

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Research themes

- Problem-based learning
- Motivation
- Students' study strategies
- Factors determining students' study success

Key publications

Wijnia, L., Loyens, S. M. M., Deros, E., & Schmidt, H. G. (accepted). *Do students' topic interest and tutors' instructional style matter in problem-based learning?* Manuscript accepted for publication in *Journal of Educational Psychology*.

De Koning, B. B., Loyens, S. M. M., Smeets, G., Rikers, R. M. J. P., van der Molen, H. T. (2012). Generation Psy: Student characteristics and academic achievement in a three-year problem-based learning Bachelor program. *Learning & Individual Differences*, 22, 313-323. doi: 10.1016/j.lindif.2012.01.003

Loyens, S. M. M., Magda, J., Rikers, R. M. J. P. (2008). Self-directed learning in problem-based learning and its relationships with self-regulated learning. *Educational Psychology Review*, 20, 411-427. doi: 10.1007/s10648-008-9082-7

Key question for future research

How can instruction in higher education be adjusted to keep up with technical advancements on the one hand and to foster effective learning strategies and outcomes on the other hand?

Key quote

'Observed learning activities of students (i.e., how well they were prepared for classes and participated in them), high school grades, conscientiousness, and verbal ability were most strongly and consistently related to academic achievement in the bachelor.'

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Main research interests

- Clinical reasoning and decision making in medicine with emphasis on the sources of diagnostic errors and how they can be minimized
- Clinical education with emphasis on educational strategies for the development of medical students' and residents' clinical reasoning
- Reflective practice and experiential learning in continuous medical education

Publications

Mamede S, Van Gog T, Van den Berge K, Rikers RMJP, Van Saase JLCM, Van Guldener C, Schmidt HG. Effect of availability bias and reflective reasoning on diagnostic accuracy among internal medicine residents. JAMA.2010;304(11):1198-1203.

Mamede S, van Gog T, Moura AS, de Faria RMD, Peixoto JM, Rikers RMJP, Schmidt HG. Reflection as a strategy to foster medical students' acquisition of diagnostic competence. Med Educ. 2012;46:464-72.

Mamede S, Van Gog T, Sampaio A, de Faria RM, Peixoto JM, Schmidt HG. How can students' diagnostic competence benefit most from practice with clinical cases? The effects of structured reflection on future diagnosis of the same and novel diseases. Acad Med. 2014 Jan;89(1):121-7. doi: 10.1097/ACM.0000000000000076.

Key question for future research

How can we generate teaching strategies that can be adopted in clinical teaching to help medical students and residents learn most from exposure to clinical problems?

Quote

'Taken together, our findings suggest that students can learn more from practicing with clinical cases when they engage in structured reflection to diagnose these cases than when they simply give a diagnosis or even when they generate a differential diagnosis, as they are usually recommended to do during clinical practice.'

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Research themes related to university education

- Education strategies in post-experience MPA programs
- Teaching and learning reflection/reflexivity
- Linking research and teaching
- Impact of selective first year

Publications

Meer, F.B. van der & P. Marks, Teaching and learning reflection in MPA programs: towards a strategy. *Teaching Public Administration* **31** (1), p. 42-54, 2013

Vermeulen, L., A. Scheepers, M. Adriaans, L. Arends, R. Van den Bos, S. Bouwmeester, F.B. van der Meer, L. Schaap, G. Smeets, H. van der Molen & H. Schmidt, Nominaal studeren in het eerste jaar. *Tijdschrift voor Hoger Onderwijs*, **30**, 204-216, 2012

Meer, F.B. van der en A.B. Ringeling, An education strategy for practitioners in public administration master's programs. *Journal of Public Affairs Education* **16** (1), p. 77-93, 2010

Meer, F.B. van der en A.B. Ringeling, Study and work experience: delinking and relinking. In C.F. Bonser (ed.) *Adapting Universities to the global society – a trans-Atlantic perspective*, LIT- Verlag, Berlin, 2009, p. 65-81.

Key question for future research

How do measures to enhance study success influence the nature of learning (and teaching)?
How does the design and context of initial courses influence student's attitudes towards academic learning?

Key insight from my research

The nature and quality of learning processes (knowledge, skills, academic autonomy, ability to apply insights) depend very much on students' attitudes (critical approach, responsibility), which in turn are influenced by the design and approach of educational programs, especially in the early stages (acculturation).

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Research gate: https://www.researchgate.net/profile/Marieke_Meeuwisse

Research themes

Marieke Meeuwisse is Assistant Professor of Education at the Erasmus University Rotterdam. She earned her doctorate from the Erasmus University Rotterdam with a research project on the role of psychosocial factors in study success. Her main research theme is (ethnic) diversity in higher education, with a special interest in the learning environment, students' (study)time investment and the role of different life domains related to students' academic success.

Key publications

Meeuwisse, M. (2012). Being smart is not enough. The role of psychosocial factors in study success of ethnic minority and ethnic majority students. Erasmus University Rotterdam: dissertation.

Meeuwisse, M., Born, M. Ph., & Severiens, S. E. (2011). The Family-Study Interface and Academic Outcomes: Testing a Structural Model. *Journal of Educational Psychology*, 103(4), 982-990.

Meeuwisse, M., Severiens, S. E., & Born, M. Ph. (2010). Learning Environment, Interaction, Sense of Belonging and Study Success in Ethnically Diverse Student Groups. *Research in Higher Education*, 51(6), 528-545.

Quote

'The social network of family plays a role in predicting students' grade point average'.

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Slideshare: <http://www.slideshare.net/ebrahim1354>

ResearchGate: http://www.researchgate.net/profile/Ebrahim_Rahimi2

Research Themes

- Personalization of learning process using technology
- Competency development
- Facilitating self-regulated and self-directed learning
- Designing and developing Personal learning environments using Web 2.0

Publications

Rahimi, E., Van den Berg, J., & Veen, W., A learning model for enhancing the student's control in educational process using Web2.0 personal learning environments, Accepted in British journal of educational technology (BJET), in press.

Rahimi, E., van den Berg, J., & Veen, W (2013). Investigating teachers' perception about the educational benefits of Web 2.0 personal learning environments. eLearning Papers, no:35.

Rahimi, E., Van den Berg, J., & Veen, W., Developing and evaluating a theory-based model for enhancing students' control using Web 2.0 personal learning environments, submitted to Computers & Education journal.

Research question for university education

How to integrate and facilitate personalizing learning processes in university curriculum using technology?

Quote from research findings

'The development of a technology-based personal learning environment requires a redefinition of the accepted roles of teachers and students in educational process.

Both teachers and students should be assumed as learners and should try to learn together how to continually develop and improve their teaching/learning process.'

Roeland van der Rijst, PhD

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Research Themes

- Inquiry based teaching and learning
- Teacher professional development

Many of his projects are strongly connected to the field of teaching and learning in higher education. Among others he is treasurer of the Netherlands Education research association (VOR), board member of the VOR division 'Higher Education', coordinator of the theme group 'Higher Education' at ICO, and associate editor of Research into Higher Education Abstracts published by the Society for Research into Higher Education.

Key publications

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (in press). 'And never the two shall meet'? Comparing Chinese and Dutch university teachers about the role of research in teaching. *Higher Education*.

Van der Rijst, R. M., Visser-Wijnveen, G. J., Verloop, N., & van Driel, J. H. (in press). Speech act theory as an instrument to capture university science teachers' discourse. *Teaching in Higher Education*.

Mainhard, M. T., Van der Rijst, R. M., Tartwijk, J., & Wubbels, T. (2009). A model for the supervisor-doctoral student relationship. *Higher Education*, 58(3), 359-373.

Question for future research

What are effective teaching approaches to stimulate students' critical thinking and to develop core research competences?

What are effective teacher professional development approaches which do improve instruction and learning at university?

Quote

"Iedere poging om de verwevenheid tussen onderzoek en onderwijs te versterken kan worden opgevat als een poging om docenten zich bewust te laten worden van de waarde van hun ervaringen als onderzoekers voor het leren van studenten." (van der Rijst, 2009)

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- <http://www.human.nl/programma-45546-oba-live>
- <http://www.psyweb.nl/index.php?idPage=14057>
- <http://blog.youngworks.nl/blog/nieuwe-technologie-biedt-onderwijs-veel-kansen-om-flexibel-in-te-spelen-op-verschillen>

Expertise/research areas

- Clinical reasoning in Medicine: How do doctors solve problems in their area of expertise and how can they be trained to become more proficient as a clinician? How can we help them to reduce mistakes in their daily practice?
- Expertise development: For many years there has been a debate about the origin of exceptional performance. Is an individual born to excel in a domain or is it “simply” a matter of practice, and if practice is important, which types of practice are effective to improve performance?
- Instructional Design: Helping students to increase their level of performance is not only a matter of improving their learning strategies or to encourage them to work hard. The role played by the learning environment is equally important, and hence it should be optimally designed to support students in each phase of their development.

Relevant publications

Loyens, S.M.M. & Rikers, R.M.J.P. (2011). Instruction Based on Inquiry. In R.E Mayer & P.A Alexander (Eds.), *Handbook of Research on Learning and Instruction* (pp. 361-381). New York: Routledge Press.

Koning, B.B. de, Tabbers, H.K., Rikers, R.M.J.P. & Paas, F. (2010). Attention guidance in learning from a complex animation: Seeing is understanding? *Learning and Instruction*, 20, 111-122.

Gog, T. van, Ericsson, K.A., Rikers, R.M.J.P. & Paas, F. (2005). Instructional design for advanced learners: Establishing connections between the theoretical frameworks of cognitive load and deliberate practice. *ETR&D-Educational Technology Research and Development*, 53(3), 71-83.

Future research

The one size fits all approach has never worked in education. Therefore, we need to become more sensitive to the differences between students in terms of their knowledge, skills and aspirations. Using modern instructional technology to train our students will enable us to provide them with personal, detailed, and timely feedback on their performance, and this will eventually turn them into more competent individuals.

Quote

‘Supporting talented students doesn’t make much sense if we don’t understand what talent is.’

Nadira Saab, PhD

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Research themes related to university education

- Collaborative learning / CSCL
- Virtual Research Environments (VRE's)
- Academic Writing
- Motivation
- Formative assessment
- Peer feedback
- Interactive lectures
- MOOCs

Publications

Research related to university education is still work in progress.

Question for future research

'How can we make a powerful learning environment for all students?'

Prof. dr. Sabine Severiens

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Sabine Severiens is professor of Educational Sciences at the Erasmus University Rotterdam as well as at the University of Amsterdam. She earned her doctorate in 1997 from the University of Amsterdam with a research project on educational inequality. Between 2011 and 2012, she has been working as a researcher and between 2004 and 2011 as the general director of Risbo, a research institute at the Erasmus University Rotterdam.

Main research themes

Diversity and educational inequality, from the perspective of motivation, integration and the learning environment.

Examples of research projects led by Professor Severiens

- stimulating learning environments for ethnic minority students
- drop-out in higher vocational education
- talented urban students continuing from vocational schools to universities of applied science
- study success in the bachelor phase (in cooperation with Groningen university)
- Currently, besides teaching several modules, she leads a work package on Schooling in an EU funded project called Sirius that aims to build a European policy network on education for children with a migrant background.

Publications on higher education

Meeuwisse, M., Severiens, S.E., & Born, M. Ph. (2010), Learning Environment, Interaction, Sense of Belonging and Study Success in Ethnically Diverse Student Groups. *Research in Higher Education*, 51(6), 528-545.

Severiens, S.E. & Schmidt, H. (2009), Social and academic integration and study progress in PBL. *Higher Education* 58(1), 59-69.

Severiens, S.E. et al (2011), *Studiesucces in de Bachelor. Drie onderzoeken naar factoren die studiesucces in de Bachelor verklaren*. Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschap.

Severiens, S.E. & ten Dam, G.T.M. (2012), 'Leaving college. A gender comparison in male and female dominated course programs'. *Research in Higher Education*, 53(4), 453-470.

Severiens, S., Wolff, R. & Herpen, S. van (2014). Teaching for diversity. *European Journal of Teacher Education*. doi 10.1080/02619768.2013.845166.

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Research Themes

- Study progress and retention in medical education, with special focus on ethnic minority and first-generation university students
- Selection of students for medical school and for medical specialties (“dedicated schakel-jaar”), in particular the use of non-academic measures such as situational judgment tests and the effect of different selection criteria on student diversity (‘widening access’)
- Judgment and decision making in workplace-based assessments, in particular to explore why students from ethnic minority groups and first-generation university students achieve lower clinical grades.

Publications

Stegers-Jager KM, Steyerberg EW, Cohen-Schotanus J, Themmen APN. 2012. Ethnic disparities in undergraduate pre-clinical and clinical performance. *Med Educ* 2012;46:575–585.

Stegers-Jager KM, Cohen-Schotanus J, Splinter TAW, Themmen APN. Academic dismissal policy for medical students: Effect on study progress and help-seeking. *Med Educ* 2011;45:987–994.

Stegers-Jager KM, Cohen-Schotanus J, Themmen APN. Motivation, learning strategies, participation and medical school performance. *Med Educ* 2012;46:678–688.

Key question for future research

What are the causes of lower clinical grades achieved by ethnic minority groups and first-generation university students and what are possible interventions for improvement?

Quote from research findings

‘In conclusion, strong ethnic-related disparities exist in medical school performance even after adjustments for age, gender, pu-GPA and socio-demographic variables. A more subjective grading cannot be ruled out as a cause of lower grades in clinical training achieved by students from ethnic minority groups, but other explanations require further investigation. In order to give all students a fair chance of academic success, medical schools must set up support programs that are appropriate for diverse student populations and implement examination systems that take this diversity into account.’

Prof. dr. Axel P.N. Themmen

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Main research interests

- Development of evidence-based university student selection techniques with emphasis on methods that have added value over grade-based systems
- Minorities and widening access in medical education
- Identification of student characteristics that have predicting value for academic success

Publications

Urlings-Strop LC, Stijnen T, Themmen AP, Splinter TA 2009 Selection of medical students: a controlled experiment. Med Educ 43:175-183

Urlings-Strop LC, Themmen AP, Stijnen T, Splinter TA 2011 Selected medical students achieve better than lottery-admitted students during clerkships. Med Educ 45:1032-1040

Stegers-Jager KM, Cohen-Schotanus J, Themmen AP 2012 Motivation, learning strategies, participation and medical school performance. Med Educ 46:678-688

Stegers-Jager KM, Steyerberg EW, Cohen-Schotanus J, Themmen AP 2012 Ethnic disparities in undergraduate pre-clinical and clinical performance. Med Educ 46:575-585

Key question for future research

There is an urgent need to develop evidence-based systems that will predict *for both student and university* whether the student will be academically successful and will develop into a successful professional.

Quote

‘...this controlled study shows that assessing applicants' non-cognitive and cognitive abilities makes it possible to select students whose dropout rate will be lower than that of students admitted by lottery. The dropout rate in our overall cohort was 2.6 times lower in the selected group.’

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Expertise

- Educational Technology in Higher Education
- Design and implementation of e-learning activities
- Courseware design and production
- Educational research
- Management of academic educational centres

Topics of his research include

- didactical principles underlying educational technology
- computer simulations in Higher Education
- methodologies for implementing educational technology and interactive multimedia.

Maarten van de Ven developed several practical trainings on e-learning topics such as online assessment, online collaboration and online discussion. Target groups included teachers, instructional designers and educational managers. In Delft he taught a course on Multimedia. He was the editor of the site [E-pedagogy](#).

Key publications

Van de Ven, M.J.J.M. (1998). *Instructies bij Computersimulaties in het Technisch Onderwijs*. Proefschrift Technische Universiteit Delft. Delft: Delft University Press. (Dissertation).

Van der Wende, M. & van de Ven, M.J.J.M. (eds. 2003). *The Use of ICT in Higher Education: A Mirror of Europe*. Utrecht: Lemma Publishers; ISBN 90 5931 181 7

Brakels, J., van Daalen E., Dik W., Dopper S., Lohman F., van Peppen A., Peerdeman S., Peet D.J., Sjoer E., van Valkenburg, W. and van de Ven, M. (2002). Implementing ICT in education faculty-wide, *European Journal of Engineering Education*, Vol. 27, No. 1, pp. 63-76.

Topic for future research

Validity and reliability of peer assessment methods in online courses

Quote

‘Well-structured assignments increase the learning outcome of the online learner.’

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Research themes

- Student success in teaching-research nexus; student learning outcomes of research-teaching integration
- Curriculum development and evaluation; investigation curriculum reform in medical education

Publication

Vereijken, MWC., Kruidering-Hall, M., De Jong, PGM., De Beaufort, AJ., & Dekker, FW (2013). Scientific education early in the curriculum using a constructivist approach on learning. *Perspectives on Medical Education*, 2, 209-215.

Key question for future research

How does integrating research in undergraduate education relate to development of understanding of research and discipline specific critical thinking?

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Twitter: [@verstelle](#)

<http://www.scoop.it/t/open-and-online-learning>

Roles

- Programme manager ICT in Education, Academic Affairs Central Office, Universiteit Leiden. The program concerns: (a) MOOCs and online learning, (b) Blended Learning and (c) Virtual Research Environments
- Coordinator Learning Futures and Program leader MOOCs at Centre for Innovation The Hague, Faculteit Campus Den Haag

Recent presentations

- Article 'MOOCs en credits'
- 'MOOCs als bron van inspiratie en innovatie', Marja Verstelle en Edwin Bakker (Universiteit Leiden) op SURF seminar Open Education week 2013
- SURF Onderwijsdag nov 2013; 'MOOCs de stand van zaken', together with TUD, UvA and OU NL
- SURFacademy-seminar MOOC's febr 2013, together with TUD, UvA and OU NL.

Recent Publication

M. Verstelle, H. Jelgershuis en M. Schreuder, *Recognition of MOOCs in the Education Sector*, in [Tendrapport Open Education 2014](#), SURF Special Interest Group Open Education, april 2013.

Key questions for future research into university education

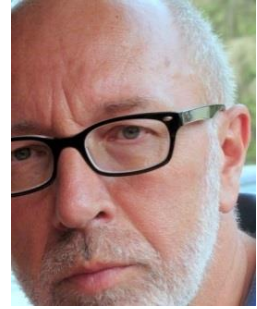
- How can we improve online open education into great learning experiences that stimulate highly the intrinsic motivation of learners?
- In which ways can online open education most effectively enrich curricula?

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Linkedin: nl.linkedin.com/pub/pieter-de-vries/1/827/498/

ResearchGate: https://www.researchgate.net/profile/Pieter_Vries?ev=prf_highl

Research and policy themes

- Advancement of research based teaching and learning
- Online learning in Higher Engineering Education.
- Self-directed learning in an authentic learning environment.
- Micro learning management for informal and experiential learning (at the workplace).

Publications

De Vries, P. (2013). Online Learning and Higher Engineering Education: the MOOC Phenomenon. In: Proceedings SEFI-2013 conference Driving Engineering Education to Meet Future Challenges. Leuven.

De Vries, P. & Van den Bogaard, M. (2013). The Use of Social Media to Augment an Authentic Learning Environment in Engineering Education. The Fifth International Symposium on Project Approaches in Engineering Education. Eindhoven PAEE 2013. ISBN 978-989-5825-21-5.

Vries, P. de, & Hennis, T. (2013). Social Media to Foster Self-organized Participatory Learning for Disengaged Learners. International Journal of Advanced Corporate Learning (iJAC), 6(1), 36–41. ISSN: 1867-5565. doi:10.3991/ijac.v6i1.2211

Sevak, K; Scheel, H. De Vries, P., Thomsen, Chr. (2011). A practical approach for applying online remote experiments: OnPRex. *European Journal of Engineering Education*. Vol 36, no. 1, pp. 21-34. ISSN: 0304-3797 print/ISSN 1469-5898.

Vries, P. de & Lukosch, H. Reengineering the Learning Process in a Transport Company (2010) In: *Barjis, J. , Narasipuram, M.M., & Rabadi, G. (Eds.) Proceedings of the 6th International Workshop on Enterprise & Organizational Modeling and Simulation*, CEUR-WS, Vol 601 ISBN ISSN: 1613-0073.

Key question for future research

How to raise educational productivity through research with a shift from institute to learning ecosystem.

Quote from research findings

‘We always want to do more, but are very hesitant to do less’.

Marit Wijnen, MSc

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Research theme

Problem-based learning

In September 2012, major changes took place at ESL, such as the implementation of problem-based learning (PBL). In PBL, students work together in small groups on realistic problems. They have to find their own literature for information about the topics of the problems and discuss these findings with each other. Before the implementation of PBL, the curriculum consisted mostly of lectures, in which a teacher transmits information to students directly. Within a PBL curriculum, students play a more active role in their own learning process. PBL aims to lead to better understanding of course material, development of skills (e.g., problem-solving) and higher intrinsic motivation in students.

My research focusses on the effectiveness of PBL at ESL. In order to investigate the effectiveness, different aspects of students will be measured, such as knowledge acquisition, skill development, learning activities and motivation. Comparisons will be made between PBL students (cohort 2012) and non-PBL students (cohort 2011) at ESL. However, it would be very interesting to find out if there are differences between law students at ESL and law students of other universities!

Publications

I started as PhD-student last September, so unfortunately, I have no publications yet. However, I have conducted a PBL effect study before and results indicated positive effects of PBL compared to lectures.

Key question for future research

Is problem-based learning (PBL) an effective educational method for law?