A Research-based Change Approach in the Further Implementation of Research into Undergraduate Education

As part of the international symposium: Institutional policies to stimulate research-based education in traditionally teaching-intensive environments

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BOOK OF ABSTRACTS

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(around 1 page) reflective report in each tutorial in weeks 3-8. These can be short written documents, diagrams and/or sketches. They comprise 50% of the mark. A final 6-page report that details design outcomes, drawing together all the threads from the course material and interactions with the community. This can incorporate written, diagrammatic and sketched elements alongside documentation from the process. This comprises 40% of the mark.

For the symposium, examples of student work produced for the course will be exhibited and reflections offered on the challenges and benefits of running such a research-based learning module. Specific challenges of interest include: philosophical challenges of teaching highly inter- or post-disciplinary courses; bureaucratic and legal issues universities face when partnering with external institutions, especially schools; and pedagogical challenges – both theoretical and practical, for example working across different university departments, using both make-spaces and laboratories.

34. Symposium. Institutional policies to stimulate RB education in traditionally teaching-intensive environments
Irene Hermans, An Verburgh, Miriam Losse, Kris Thienpont, Bram Van Baarle, Anne Vanschoor, Ria Bollen, Didi Griffioen, Jean Tillie, Mick Healey

Research-based education (RBE) is an important characteristic of higher education, in traditionally research-intensive as well as in teaching-intensive institutions worldwide (Karseth & Solbække, 2016). Although RBE is often loosely defined (Trowler & Wareham, 2008) it generally pertains to the development of research competencies, to the involvement of students in research(-like) activities and to the learning of content that is based on research. Authors differ in opinion whether a combination of these competencies is necessary in order to speak of RBE.

Despite the fact that research is becoming more prominent in traditionally teaching-intensive institutions, the development of RBE policies and the implementation into RBE practice, involves major challenges in these institutions (Griffioen & De Jong, 2015; Heggen, Karseth, & Kyvik, 2010). A first challenge is aligning RBE with the orientation of the programmes. In the Netherlands and in Flanders the traditionally teaching-intensive institutions offer programmes with a professional or vocational orientation. The development of professional competencies is the main aim of these programmes. Often, research competencies are considered relevant as long as they are in line with the professional competencies. Increasingly, and in line with the general logic of the Bologna reform, research competencies are seen as central in the competence profile of higher education graduates including those in professional degrees. A close connection between teaching and research is perceived as essential to achieve these competences of students (Healey, 2015). However the precise meaning of research competencies within each specific vocational degree needs to be defined. The same need for professional relevance counts for involving students in research or in RBE: the activities need to be directly or indirectly relevant for the profession.

A second challenge is convincing the labour market of the value of research competencies and research activities of graduates of professional programmes. Again, at the EU level the argument towards the teaching-intensive institutes is clear in stressing research competencies as essential to the competency profile of professionals in knowledge societies. That insight is not yet universally permeated at the regional level though.

A third challenge concerns the human resource base required for a solid implementation of RBE in higher education. Staff members have a pivotal role and RBE hinges on their (self-)efficacy of guiding students in research activities. Lecturers were traditionally hired for their experience in the profession and their educational ambitions and not for doing research or helping students in developing research competencies (Griffioen & De Jong, 2015). Hence, setting research examples, as well as providing research supervision often causes a serious challenge.

Given these challenges, developing supporting policies is of crucial importance to enact RBE in traditionally teaching-intensive institutions. Organisational alignment with the professional needs of programmes helps to stimulate RBE (Jenkins, Healey, & Zetter, 2007). In this symposium four institutions describe institutional approaches to stimulate RBE.

The first case study by An Verburgh, Anne Vanschoor and Ria Bollen describes the process of developing an institution wide vision on intertwining research, education and practice. Anchoring RBE in the institutional mission statement is the prime condition to even start working on it. In the second case study Didi Griffioen and Jean Tillie report on the institutional programme at Amsterdam UAS, in which all 70 bachelor programs were assigned to reformulate their vision on research in the profession, and provide for curriculum change accordingly.

Research competencies of lecturers and relevant HRM developments are the focus of the third case study by Kris Thienpont and Bram Van Baarle. This case focuses on the institutional policies in recruitment and professional development concerning staff research competencies. And finally, Miriam Losse discusses in the fourth case study the institutional support offered to programmes in order the help them to enact a research-based curriculum.

These cases offer valuable insights on the complexities of institutional change in general and of research-based education in particular. All four combined, the cases
provide for a more comprehensive insight on building up the RBE in teaching intensive HEI and the institutional policy changes this entails.

**Individual Abstracts**
The development of an institution wide vision on intertwining research, education and practice One of the strategic priorities of the University Colleges Leuven Limburg (UCLL) is the intertwining of research, education and practice. A major obstacle in the pursuit of this strategic priority was the lack of a shared vision, among different partner-institutions and actors. UCLL is the product of a recent merger three university colleges in Flanders. Each partner-institution had its own habits concerning the relation between the three actors: teaching, research and practice. Therefore a process of developing an institution wide shared vision was started in September 2016 and is still ongoing. In this presentation the process, its results and future plans will be discussed. Particular attention will be given on how the lack of a shared collective vision among different partner-institutions and actors was solved.

**A Research-based Change Approach in the Further Implementation of Research into Undergraduate Education**
The current assignment of vocational programs in higher education is to educate future evidence-based professionals. Often is presumed that a substantial connection between research and teaching is needed to achieve this aim with students (Healey & Jenkins, 2015). As an effect in the Dutch institutes for higher professional education there is an increased attention for the connection between research and teaching as a carrier to develop these knowledge related competences. But what does it mean for an institute of higher vocational education to actively strategize towards integrating research and teaching in all bachelor and master programs for 45.000 students, while still standing in the tradition of being teaching-intensive? This paper presents the planning and analysis phases of a large scale institutional change in Amsterdam UAS, including a systematic analyses of vision, curricula, network development, and perceptions in students and lectures of what RBE contains.

**Capacity building as a precondition for research based education**
Connecting teaching and research is a cornerstone of Artevelde University College’s research and teaching policy since several years. Although the teaching-research nexus often rightly focusses on the involvement of students in research it is in fact a policy area relating to several other institutional policy domains. It requires a holistic institutional view on the nature of research, the educational model and all related policy areas. In this paper we will address the specific projects set up within Artevelde University College in order to enhance RBE capacity among the research and teaching staff, in terms of selection and recruitment, staff involvement and training and HR-policy.

**First Student and Tutor Evaluations of a new Perspective for Integrating Research in Curricula into Bachelor Programmes**
The assignment of Dutch higher professional education to deliver professionals with research abilities has catalysed a discussion about what research means in a professional context. Research skills tended to become an end in itself and curricula often missed the professional context of research as a means for decision making and acting in specific professional situations of for example nurses, engineers and business developers. The past three years Saxion has created an institution wide learning community to create new possibilities to contextualise research abilities and to integrate the training of these abilities in the curricula of her bachelor programmes. This paper presents the experiences of students and tutors of the first trial of a new approach in the final year project of one of her educational programmes. The evaluations are based on monitoring through group interviews and on a pretest-posttest-design in measuring the quality of final year projects.

**35. Symposium: Designing a programme around research-based education**
Adam Gibson, Jennifer Griffiths, Rebecca Yerworth and Pilar Garcia Souto
The first students on a new biomedical engineering programme are about to graduate. This new programme was designed to take advantage of global trends in teaching, including students and staff collaborating on the co-creation of knowledge, the development of professional and employability skills, and the use of a wide range of flexible digital technologies, all in the context of research-based education (RBE). The programme provides an example of how such initiatives can inspire the development of brand new programmes or the update of existing ones, exploiting problem-solving, research, design, multidisciplinarity and professional skills as cross-cutting themes which connect the curriculum.

Biomedical engineering is inherently a highly multidisciplinary subject, incorporating aspects of electronic and mechanical engineering, computer science, biology and physics as well as professional, practical and research skills. We exploit this breadth to provide a test case in how to design a general academic programme, showing how cross-disciplinary material can be built in.

In this symposium we will discuss designing a curriculum around RBE, modifying existing modules, developing cross-disciplinary exercises, and creating through-lines of enquiry-based activity. We will describe some of the most important aspects of RBE in the programme, outlining the benefits of RBE while also identifying some of the problems which may occur, and proposing solutions. Some of these problems are practical and easily solved,