



Educational Concept: Problem Based Learning

- Key Features**
- Student centered
 - Small groups
 - Working with each other on concrete problems
 - Under guidance of a tutor
 - Supported by selfstudy

Seven-jump

- 7 - Jump**
- 1 Solve difficult terms
 - 2 Define the problem
 - 3 Brainstorm
 - 4 Analyze and criticize
 - 5 Learning objectives
 - 6 Study resources/ self study
 - 7 report and synthesize the newly acquired information

Educational concept: Problem Based Learning (PBL)

Research on PBL: effectiveness

- PBL students are**
- more highly motivated
 - better at problem-solving and self-directed learning
 - better able to integrate basic science into the solutions of professional problems
 - better at collaboration
 - are initially frustrated, feel not confident

Taking PBL one step further

Research Based Learning

- Why?**
- Urge for recognisable innovations in education
 - Offers challenges for staff and (excellent and/or highly motivated) students
 - Stimulation of interdisciplinary and transfaculty climate in both research and education

Key features of Research Based Learning

- Undergraduate research in small groups
- Embedded in the undergraduate curriculum
- Three pillars in each project:
 - Research
 - Societal partners
 - Interdisciplinary or interfaculty

Research Based Learning (RBL)

Maastricht Research Based Learning

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Added value for students

- Extra challenge within the curriculum
- Experiences in carrying out research
- Experience with interdisciplinary collaborations
- Possibility to get to know the scientific world better as well as the business world and one's own ambitions and talents in order to develop them further

Added value

- For Faculties**
- Projects enrich the shaping of both research and education
 - Stimulates multidisciplinary and interfaculty cooperation within the realms of education and research
- For Academic Staff**
- Programme offers involved academic staff a context in which they can enrich their own practice
 - Further generic professionalisation in the area of education

Almost 2 years of experience

Lessons learned

- Take care of early communication
- Take sufficient time for the practical aspects (e.g. Examination Regulation, Scheduling and planning of the interactive sessions (the more important when two or more faculties are involved))
- Start the cooperation with societal partners at an early stage

Plan for 2011

- Develop a plan for each faculty to increase the number of students participating and the number of tutors for supervising and coaching students
- Optimizing interfacultary projects
- Looking for more cooperation in projects with social partners
- Embedding RBL in academic structure (Examination Regulations, planning a fixed for at each faculty)
- Facilitating the creation of a community on RBL

Some numbers

2009: 64 students, 10 different projects
 2010: 151 students, 22 different project (including 'psychology custom made' where each student conducts his own research)

All students who wanted to start a research master, are automatically admitted at the research masters at the UM

In 2009 RBL-students had an average of 8.26 for the project

In 2009 RBL-students had an average of 8.13 for their thesis, as where regular students had an average of 7.4 (GPA)

Some practical obstacles

- Lots of options for students in their curriculum (RBL is just one of these options)
- Civil effects and/or demands for accreditation limit possibilities for implementation of new educational concepts such as RBL
- Faculties maintain mandatory requirements in their curriculum, therefore limiting the possibility for the implementation of new educational concepts such as RBL

First results of RBL at UM

First impressions and results

- There is unity among students who participate in RBL-projects, although few plenary activities are planned;
- The RBL project is for both tutors and students viewed as a search for new knowledge.
- There is more academic interaction between academic staff and students in a small setting.