



# Honors Conference 2013

Learning to Innovate  
Evoking professional Excellence in Higher Education

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**Proposal**

## **Increasing student's autonomy and sense of ownership: an example**

Type of presentation **Poster presentation**

Submission type **Good practice**

Theme of first choice (choose the track that best covers the content of your proposal)

**1. Designing learning environments for the development of professional excellence (learning to innovate) and / or multidisciplinary academic competences**

Theme of second choice (choose the track that second best covers the content of your proposal, optional)

**4. Renewal of educational theory and teaching methods in pre-higher and / or higher education**

Title of (first) proposal

**Increasing student's autonomy and sense of ownership: an example**

### **Why is the theme of your research study or good practice important and relevant for the honours education community?**

Several described characteristics of gifted students demand an adaptation of the educational environment. To stimulate motivation and creativity these students require teaching methods that stimulate them to make connections, and encourage them to explore more complex questions. In addition, gifted students profit from a less structured environment which leaves room for personal initiative and space for experimentation (Scager 2008, Wolfensberger 2012). This autonomy and students' sense of ownership has been associated with an increase in intrinsic motivation, greater interest, more creativity and a better conceptual learning (Deci and Ryan, 1987). In traditional education the importance of students' sense of ownership is often underestimated and there is scarcely room for initiatives and input from students. In this study an example will be presented from the Pharmacy curriculum of Utrecht University, The Netherlands, in which student autonomy was successfully encouraged by the use of Inquiry Based Learning (IBL) and open assignments.

### **What is unknown about the theme so far by theory or practice?**

Research on the characteristics of gifted students and the educational approaches that would most benefit these students has been reviewed by Scager (2008) and Wolfensberger (2012). Publications on innovative course design and the effect thereof on gifted students in Higher Education are, however, scarce. More research is therefore needed on effective course design to evoke excellence in Higher Education, and to provide more evidence on the effectiveness of different educational approaches for gifted students.



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Announce what your present research study or good practice descriptively and/or purposively will add to the indicated gap/niche.

The good practice example describes the course 'Development of New Drugs', a 7.5-credit hour course for excellent students dedicated to an introduction into Drug Discovery and Preclinical Drug Development. In order to stimulate, challenge and motivate students the course offers plenty of room for initiatives and input from students, and the course is designed according to the principles of Inquiry Based Learning (IBL). It is expected that through the autonomy in this course students experience a great sense of ownership and are highly motivated. This good practice example will increase the knowledge about educational designs suitable for gifted students, and in particular the role of autonomy. It can stimulate teachers to develop better and more evidence based educational settings for their own honours students.

Summarize methods, announce the (expected) principal outcomes, state the value and originality of your research study or good practice

The course 'Development of New Drugs' consists of four group assignments and one individual assignment. The students have a large amount of freedom to determine the subject and contents of their assignments. They are asked to design and develop a drug for a disease of their own choice and, during each step of the development process, they can determine what they further want to investigate. Students evaluated the course with a standard evaluation form with 40 items, which students score on a 5-point Likert scale, and 5 open-ended questions.

The student evaluations of three consecutive years, 2008 - 2010, show a high appreciation of the course ( $7.7 \pm 0.7$  on a 10-point scale (90% respondents,  $n=47$ )). The students are highly motivated for the course and stimulated into critical thinking. The results therefore underpin the value of giving students more autonomy.

## References

Deci, E.L., Ryan R.M. (1987) The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53, 1024-1037

Scager, K (2008) Vragen talentvolle studenten ander onderwijs? *Onderzoek van Onderwijs*, 37, 66-69

Wolfensberger, M.V.C. (2012) Teaching for Excellence. *Honors Pedagogies Revealed*. Waxmann, Munster.

## How are you going to make your session interactive?

The concept of students' autonomy, sense of ownership and the good practice example will be highlighted. Subsequently participants will be stimulated to discuss how students' sense of ownership can be introduced in their own courses, and they will be challenged to come up with alternative ways to improve sense of ownership.