Assessing students’ innovation competences in higher education

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The World is Changing

Innovation society

- Aging of human population
- Environmental problems
- Global economy
- Changes in working life
- Technological development
According to the innovation pedagogy, the whole education must be planned so that both innovation competences and subject-based competences are reached.
Training innovative professionals

- Assessment has a powerful effect on all teaching and learning activities. It provides one of the clearest indication of what the institution gives priority to because it typically frames how higher education students actually learn. (Boud, 2007.)

- Traditional methods of testing focus on written forms are regarded as inadequate to say anything about innovative behaviour because the focus is only too often on knowledge, instead of authentic action (Van der Klink, 2007).

- Therefore, if we want to educate innovative future professionals, we must to rethink our assessment methods and practices.
How to measure the complex cognitive behaviour needed in the creation of innovations?

We think that, if we lack the needed methods, there could be a risk that in higher education only what can be easily and transparently measured is taught or assessed.
Developing the assessment tool to measure innovation competences

- **INCODE 2011-2013**
  - Analyzing the theoretical background and developing and testing the first version of the assessment tool

- **INNOKOMPPI 2012-2014**
  - Validating the tool to the authentic learning environments in Finnish higher education institutions using statistical analyses

- **FINCODA 2014-2017**
  - Developing the barometer to the needs of companies and universities
  - Including practical and scientific validity approaches, e.g., psychometric validation
INNOVATION COMPETENCE MODEL

- Innovation
- Initiative
- Networking
- Critical Thinking
- Competence

© FINCODA UPV-SEE-CSP team (2017). Innovation Competence Model

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The FINCODA Assessment tool
http://fincoda.dc.turkuamk.fi/

Fincoda Survey System
A tool for Universities and other working life organizations for measuring individuals’ innovation competences

Company average score per dimension
How to embed innovation competences in the curriculum

Student involvement

Staff involvement

Contents

Methods

Assessment - degree level
- course or module level

TOOLS

MENTORING

TRAININGS
Curriculum / Assessment
- degree level
- study unit or modul level

Degree level
- electronic assessment tool available on our electronic curriculum (SoleOPS)
- self-assessment in the beginning of studies / annually / in the end of studies
- linked to study unit "University studies and working life skills” 5 (ECTS), extent 3.5-4 years
- lead by tutor teacher, development discussions with students

Study unit or module level
- electronic assessment tool available for all teachers on our learning platform (Optima)
- can be applied to self, peer and external assessment
- can be applied partially and revised to fit for the content of course
Some observations and feedback...

Challenges

- Changing the education (attitudes) takes time!

- For example, some teachers may not perceive innovation competences development as their teaching responsibility and may believe that such things are best taught in additional courses (see also e.g., Bath et al., 2004), as well as, some students may not perceive innovation competences development as an important part of their studies.

- Therefore, the mere training is not enough – it needs lot of discussions and common reflection both with the students and the staff.
Some observations and feedback...

Advantages

- The assessment tool helps teachers to design and develop innovative curriculums or courses, and gives concrete suggestions for counseling their students. It also offers an alternative tool to assess learning outcomes in behavioural level (compare written outputs, e.g., reports or essays).

- With the assessment tool students are able to recognize different kind of learning situations, and describe and reflect not only their innovation competences but also their learning and expertise from versatile perspectives. The tool also raises students’ awareness of the innovation process. (Keinänen & Butter, 2018)
“If you want to change student learning, change assessment”

(Brown, et al. 1997)
Lähteet:


The FINCODA Assessment tool:

Thank you for attention!

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