

(NATIONAL) POLICY MAKERS AND SCIENTIFIC COMMUNITY (Document 4)

1. Contextualisation of the Hegesco findings and related sources of information

We recommend to policy makers and researchers in the field to consider reading the full reports of the Hegesco project and contributions collected at the international conference Decowe (Development of Competencies in the World of Work and Education that was attended by most of the Reflex and Hegesco consortium partners, see web domain <http://www.decowe.com>), related documents of the Hegesco project, such as the Hegesco Statistical Outlook, the matrix of key questions related to competence developed during the Decowe Conference, or the Hegesco and Reflex databases (please follow the link <http://www.fdewb.unimaas.nl/roa/reflex/>). Some of the findings we consider as relevant are included below.

**2. General considerations from the Large Scale Graduate Survey of the HEGESCO project –
*Competencies and Early Labour Market Careers of Higher Education Graduates*¹**

Strengthen links between higher education and the world of work

We have found strong evidence that graduates of study programmes in higher education with strong links to the labour market enjoy a smoother transition to the world of work and greater success and satisfaction in their early career. Programmes that are strongly anchored in the world of work are also highly effective in enhancing the level of discipline-specific knowledge and skills of graduates.

Encourage the acquisition of relevant work experience during higher education

Links between higher education and work are especially beneficial when graduates are able to acquire relevant work experience during higher education. This applies especially to work experience that is formally not part of the study programme, but that is nonetheless strongly related to the content of the study. Although less evidence was found that work experience that is part of the study programme – work placements, internships – produce competences and facilitate a smooth and successful transition to the world of work, this does not mean that such formal activities are not important. Because such activities are compulsory for many study programmes, it is difficult to distinguish their positive effects from the general labour market prospects of graduates who followed the programmes in question. By contrast, there is little evidence that spending time on non-relevant work during higher education is useful apart from providing students with additional income during study.

¹ This section is taken from the summary on the Large Scale Graduate Survey of the HEGESCO project – *Competencies and Early Labour Market Careers of Higher Education Graduates*, HEGESCO PROJECT 2009, (eds. Allen, Velden).

Create incentives to make higher education more demanding

Demanding higher education programmes foster the development of all kinds of competences, particularly discipline-specific knowledge and skills. However, since graduates are rewarded more for the links that the programme has with the labour market and for its general level of academic prestige, higher education institutions often lack a direct incentive to make programmes more demanding, since this may discourage some potential students from enrolling. Consequently, there is a role for governments in creating an incentive structure that rewards institutions for excellence as well as volume.

2. Which are the most important competences of graduates to function well in the workplace and society?

In the graduates' survey in NCMS we have found evidence that the most required competences in tertiary level jobs are ability to use computers and the internet, ability to use time efficiently, ability to work productively with others, ability to make your meaning clear to others and ability to perform well under pressure. When entering the world of work graduates in NCMS in tertiary level jobs lack mastery of own field or discipline, ability to perform well under pressure, ability to use time efficiently, ability to negotiate effectively and ability to assert your authority.

In the survey among HE institutions and employers in NCMS, the most stressed competences were a) mastery and field specific knowledge, b) competences related to learning with the major distinctive subcategories identified as self learning and continuous learning, c) personal proficiency with major distinctive subcategories identified as team work and time management, d) communication skills with foreign language as the main distinctive subcategory and ICT skills. One of the most crucial questions identified during the field work relates to how to balance and integrate professional expertise (mastery and field specific knowledge) with other general competences.

3. How competences can be best developed in HE and the world of work? Findings from the survey among HE institutions

In the survey among HE institutions and employers in NCMS, we found an indication that HE should consider the balance between various types of teaching and training, among which the most stressed were lectures and classes, discussions/meetings, active learning, laboratory classes, team work, assignments and evaluation, presentations, project work, conferences and seminars, practice classes and practical training and internships. In addition, the HE institutions should consider constant improvements to program creation, forging links with employers, stress lectures with practitioners, implement research projects, strengthen and institutionalise their informal contacts with the world of work and involve practitioners in final theses and common bodies and further develop career centres.

4. Some other major concerns from the large scale graduates survey: policy Makers at the national level should also consider the following HE aspects that should contribute towards graduates' early career success [In brackets we provide some relevant data at the general EU level.]

Study program characteristics²

Which fields of study are the most demanding? [These fields are related to science, mathematics and computing.]

Which fields of study are employers the most familiar with? [These fields are related to health and welfare.]

Which fields of study allows the most freedom in composing own study programmes? [These fields are related to humanities and arts.]

Which fields of study are the most vocationally oriented? [These fields are related to health and welfare.]

Which fields of study are considered academically prestigious? [These fields are related to science, mathematics and computing.]

Work experiences acquired during higher education

In which fields of study do students acquire the most study-related work experience? [This is reported most in fields related to health and welfare.]

In which fields of study do students acquire the most non study-related work experience during higher education? [This is reported most in fields related to humanities and arts.]

In which fields of study do students most commonly hold positions in student or other voluntary organisations? [This is reported most in fields related to agriculture and veterinary.]

In which fields of study do students most commonly acquire experience abroad? [This is reported most in fields related to humanities and arts.]

What shortens the search duration when looking for a job?

[We have found evidence that extra work above that which is required to pass exams and study related work experiences help graduates to find a job faster.]

Where are the highest and lowest levels of unemployed graduates 5 years after graduation?

[The European countries with the highest unemployment rates are Turkey, Spain and France. The lowest unemployment rates are found in Estonia, Poland and Belgium.]

² Illustrative examples from EU level are given for first level programmes.

How many hours do graduates spend at work in their early career?

[The European countries where graduates have the longest working hours in their current job are in Switzerland, Turkey and Slovenia. Graduates have the shortest working hours in Portugal, Germany and France.]

How many graduates work in a job that fully utilizes knowledge gained in their field of study?

[In Portugal and Finland most graduates work in a job at their own level or at a higher level.]

How much do graduates earn?

[The highest hourly wages are reported in Switzerland and Germany. The lowest hourly wages are reported in Lithuania and Czech Republic.]

Which countries offer the best career prospects?

[There are large variations between fields of studies, however at the EU level the best career prospects are in general reported by Czech and UK graduates.]

Which countries offer the most permanent job positions in their first job?

[Again there are large variations between fields of study, but the highest proportion of permanent work positions are reported by graduates in Estonia, Lithuania, and Czech Republic.]

Evaluation of study programme as a basis for work, career and everyday life

Which fields of study do graduates evaluate to be a good basis for starting work and their future careers? [Graduates in the field of health and welfare most often evaluate their programme as a good basis for starting work and their future careers.]

Which fields of study do graduates evaluate to be a good basis for further learning on the job and their personal development? [Graduates in the field of health and welfare most often evaluate their programme as a good basis for further learning on the job and their personal development.]

Which fields of study do graduates evaluate to be a good basis for performing current work tasks? [Graduates from the field of health and welfare most often evaluate their programmes as a good basis for performing current work tasks.]

Required competences of those working in tertiary level jobs in NCMS countries

Which are the most important competences that are required by graduates for work in tertiary level jobs? [The 'ability to use time effectively', the 'ability to perform well under pressure' and the

'ability to work productively with others' are the most important competences that are required to perform in tertiary level jobs.]

Which are the most important competences that graduates report a shortage of for work in tertiary level jobs? [The most important competences that graduates report a shortage of when performing work in tertiary level jobs are the 'ability to use time efficiently', the 'ability to negotiate effectively' and the 'ability to assert your authority'.]

Which are the most important competences that graduates report surplus of for work in tertiary level jobs? [The most important competence that graduates report a surplus of when performing work in tertiary level jobs is the 'ability to write and speak in a foreign language', the 'willingness to question own ideas and others' and the 'ability to use computers and the internet'.]

Which programme characteristics in EU countries strengthen the most important competences? ['Demanding programme', 'vocationally oriented' and 'broad focus' as the determinants that strengthen the competences of graduates.]

Effect of modes of teaching and learning on selected competencies

Which mode of teaching and learning has the greatest impact on the ability to use time efficiently? [These are 'facts and practical knowledge', 'lectures' and 'multiple choice exams'.]

Which mode of teaching and learning has the greatest impact of the ability to work productively with others? [These are 'group assignments' and 'facts and practical knowledge' and 'oral presentations by students'.]

Which mode of teaching and learning has the greatest impact of the ability to perform well under pressure? [These are 'theories and paradigms', 'teacher as a source of information' and 'oral presentations by students'.]

Which mode of teaching and learning has the greatest impact on the mastery of one's own field or discipline? [These are 'written assignments', 'facts and practical knowledge' and 'lectures'.]

Which experience during higher education has the greatest impact on the most important competences of HE graduates?

[The experience that has the greatest impact on the most important competences is 'relevant work experience during HE'.]

Which characteristic of work organisations has the greatest impact on the most required competences?

[The characteristic of work organisations that has the greatest impact on the most important competences is 'competition' and 'innovation (at the organisational level)'.]

Which job characteristic has the greatest effect on the required level on the most important competences?

[The job characteristic that has the greatest impact on the most important competences is 'managerial character of jobs' and 'professional character of jobs'.]

Which organisational characteristic is most influential for the utilisation of graduates' human capital?

[The organisational characteristics that are most influential in the extent to which graduates' knowledge and skills are utilised in their current work is 'innovation (at the organisational level)' and 'quality orientation'.]