

Integrated Report: The Findings of the Hegesco Project

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1. Introduction

The Hegesco project's qualitative research among HE institutions and employers places emphasis on the issue of required and acquired competencies of young professionals, both from the point of view of employers and HE institutions. The key research questions under investigation are: Which competencies of young professionals are considered important in the world of work by employers and HE institutions, what do institutional stakeholders in the "transition from higher education to work" think is the most advantageous process of acquiring key competencies (who they think is mainly responsible for the development of graduates' key competencies, what they think are the most beneficial teaching and training methods for the development of key competencies), and how cooperation between higher education and companies should be changes in order to improve the effectiveness of the development of graduates' key competencies. Confronting the standpoints of competent decision-makers in higher education and employers' organisations results in highlighting the strengths and weaknesses of existing higher education system structures and exposing the relevant aspects of what is most likely a successful pathway for the further development of higher education systems.

The large-scale survey among young professionals (who graduated 5 years ago) also focuses on the issue of required and acquired competencies from the point of view of graduates themselves. The respondents of the graduate survey were asked about their perception of acquired and required (by employers) key competencies. The large-scale survey among graduates also explores the key characteristics of their experience of higher education teaching and learning methods. A causal analysis of *Chapter 4: The Role of Higher Education in Producing Relevant Competences* of the final Hegesco report explores how special methods of teaching and learning affect selected key competencies. Last but not least, a causal analysis of the large-scale survey data among graduates reveals the causal effect of the characteristics of higher education on graduates' job satisfaction – including the affect of teaching and learning methods in higher education, the theoretical or vocational orientation of education and the perceived cooperation between higher education institutions and employers.

The following chapters try to integrate the above-mentioned relevant results of quantitative and qualitative results. Balancing the perceptions, experiences, conceptions of three stakeholders in the process of transition from higher education to work, as well as the exposed correlation between the relevant aspects of that process and its actors, set us forward to find the best path of the further development of higher education structures and systems in order to offer them guidelines to provide more successful and effective teaching and training.

2. Required and acquired competencies – the viewpoint of competent decision-makers of higher education, graduates and employers

2.1. General importance of work-related competencies

There is **huge agreement** among all three stakeholders in the process of transition from higher education to the world of work that **general competencies**, based on personal proficiency, are most in demand in the graduate labour market. Decision makers in higher education and employers' organisations consider **team work** and **decision making** skills the most important competencies for graduates to function well in the world of work, and **time management** also seems to be considered very important for graduates by institutional stakeholders. Teamwork competencies ("ability to work productively with others") and time management ("ability to use time efficiency") belongs to the top 3

responses among graduates in every participating New and Candidate Member-State (NCMS) country. Some aspects of decision making competencies, such as “ability to make meaning clear to others” and “perform well under pressure” were also considered by graduates as a very important (perceived) acquired competencies in the world of work – these competencies can also be considered as a segment of team work.

2.1.1. Sources of work-related key competencies

It is obvious that these general competencies – which are considered the most important for graduates by all the three actors – cannot be developed by conventional educational methods, such as lectures, theories and paradigms, teacher as the main source of information or just introducing facts and practical knowledge. The development of these key competencies requires a more practice-oriented method of teaching and learning, such as group assignments, participation in research projects, internships and work replacements and study-related work experience.

In the large-scale survey graduates were asked to indicate to what extent different modes of teaching and learning were stressed during higher education. The main results of this research are published in *Chapter 2: Higher Education Experiences* of the final Hegesco report. According to the survey’s results, conventional (frontal) methods of teaching and learning dominate in higher education among Reflex countries – and even more so among NCMS countries. Lectures remain the most emphasized mode of learning in higher education across all countries, and it seems to be stressed somewhat more in the NCMS than in other countries. Additionally, the data shows that higher education profiles in Europe are still very teacher-centred. Although there is also quite some variation between the higher education programs in different NCMS countries, in general the NCMS again seems to be more traditional than most other countries.

There is a large degree of variation between countries in the percentage of graduates having participated in work placements or internships. It ranges from less than 20 % in Lithuania, Czech Republic and Italy, to 60 % in Norway. With the exception of Hungary, work placements and internships are relatively less frequent among NCMS.

In summary, the dominant method of teaching and learning in higher education does not contribute well to the development of key competencies that are considered essential in the world of work by all the three actors in the transition from higher education to the world of work.

Work experience is another possible means of acquiring these key competencies. Graduates can procure work experience parallel to their higher education and/or upon entry into the labour market after their graduation. According to the findings reported in Chapter 2 of the final Hegesco report, there is a large degree of variation between countries in this informal way of gaining skills. The NCMS do not form a coherent group in terms of experience, and are distributed across almost the whole range of experience. On the other hand, there is a strong correlation between study-related and non study-related work activities of students in every country: the dividing line is between “to work or not to work” instead of “study-, or non-study related work”. This means that the general “working habits” of students as well as the structure of individual countries’ labour forces affect the working behaviour of students more than that of the education system.

We would like to emphasize that according to the results of causal analyses of *Chapter 3: Transition and Early Career* in the final Hegesco Report, graduates’ general satisfaction with their work is strongly and positively affected by their previous study-related student work activities. Since work

satisfaction is correlated by the balance/harmony of acquired and required competencies, we can conclude that key competencies can be acquired mainly through study-related student work activities.

Introduction to the world of work after graduation is the other possible way of obtaining key competencies of team work, time management and performing well under pressure. For this, employers should consider themselves as an important actor in the development of key competencies. In the next chapter we will highlight whether employers detect and take responsibility for this onto their shoulders or not.

2.1.2. Perceived lack of work-related key competencies

In the large scale survey graduates were asked not only about the perceived requirement of competencies from the side of employers, but also about their level of proper competencies. They were also asked to specify their strong points and weak points from the list of competencies we considered in the survey.

According to the results reported in *Chapter 4: The Role of Higher Education in Producing Relevant Competences* in the final Hegesco Report, a strong positive correlation can be found between the (perceived) required and acquired competencies of graduates. However, for almost all competencies the level of requirement is much higher than that of acquirement. As a result of this, at the aggregate level graduates perceive a huge shortage of competencies. Since work-related key competencies are considered as the most important in the world of work, some of them are also mentioned by a large proportion of graduates as a shortage. The “ability to perform under pressure” and “ability to use time efficiently” belong to the most-frequently mentioned competency shortage of graduates. The perceived huge demand for and lack of work-related key competencies seems to be a robust indicator of structural dysfunction of higher education in the majority of countries participating in the project – and even more important in NCMS.

2.2. Mastery of field or discipline – the second most important and often most missed competence

According to the conviction of all the three stakeholders in the process of transition from higher education to the world of work, competences relating to the mastery of certain fields or disciplines form the second cluster of the most demanded competencies. “Mastery of graduates’ own field of discipline” is first on the graduates’ list of perceived competency shortfalls: 20 % of graduates mentioned it as one of the 3 competencies that they most lack. Similarly, more than three out of five employers report a shortage of field-specific knowledge in newly employed graduates.

2.3. Communication skills are ranked third in their importance

Communication skills form the third cluster of competencies in the rank of importance among higher educational institutions, employers and graduates. Communication skills start to develop during primary education, followed by secondary education and – according to the dominant method of teaching and learning in higher education that seem to be ignored (“just” demanded) – during the period of higher education.

3. Responsibility for the development of graduates’ key competencies

Both employers and managers in higher education were asked about which actors they think are mainly responsible for the development of key competencies. Generally, higher education institutions consider themselves responsible for the development of graduates' competencies, while employers feel that higher education and firms share roughly the same level of responsibility.

At the same time, our qualitative and quantitative research resulted that ***there is huge contradiction between the considered importance of competencies, responsibility-taking and methods of teaching and learning***. While higher education institutions are persuaded that work-related competencies (team-work, decision-making and time-management) are the most important competencies for graduates in the world of work, they are also convinced that traditional (frontal) method of teaching and learning is the most adequate for development of graduates' key competencies. Two out of three interviewed HE institutions considered that lectures and classes are the most suitable means to develop graduates' key competencies. Only half of them mentioned that active learning modes (like team work, problem-based project-method, etc.) play an important role in the development of graduates' key competencies. On the other side, although employers also consider work-related competencies as the most important for graduates in the world of work, they are sure that the best way of acquiring these competencies are introductory programs and mentorship of greenhorns in the firm; only half of them take responsibility for the development of graduates' key competencies – and even less are interested in cooperating with universities for it.

4. Cooperation between HE institutions and employers

Besides individual-level explanatory factors like study-related work experiences (and experiences abroad), strong links between employers and higher education institutions seem to be the most important institutional-level explanatory factor of graduates' general satisfaction with their work. Consequently, strong cooperation between HE institutions and employers would be necessary for both successful and effective development of work-related competencies as well as for graduates' general satisfaction with their work. At the same time neither HE institutions nor employers seem to be aware of the importance of their institutional-level cooperation. Both HE institutions and employers reported that the practical training of students is the most important way they cooperate – that means that they think students' individual-level affects the best way of their cooperation. The majority of employers are not interested in participating in the development of HE curricula, participating in common research projects or in other means of institutional collaboration.

Although there is some correlation between the levels of how much employers are familiar with the content of education and that of HE institutions' vocational-orientation, even the strongly vocational-oriented higher education institutions seem to have only a weak connection with employers (see Chapter 2 of the final Hegesco report).

In summary, while HE institutions, employers and graduates consider the same components of graduates' key competencies to be successful and effective in labour force, the institutions are not ready either to strengthen their cooperation or to change their turn of mind towards a successful way of developing graduates' key competencies. HE institutions place emphasis on theory and scientific knowledge, utilizing traditional methods of teaching and learning, while employers take care only at the individual-level to develop key competencies - mainly only for their own employees.