

## LABOUR MARKET EXPECTATIONS TOWARDS HIGHER EDUCATION

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### ABSTRACT

*The competency research has received great attention in the last few decades since in the societies based on market economy it has been important to specify those features that distinguish high-performing, efficient employees from the less efficient ones. The ongoing challenges that employees face are whether one can adapt to the continuous changes of technique- technology, moreover whether one can vindicate one's right to work so to say one can get the necessary workplace to make ends meet, finally, whether one can fit into the narrower and wider environment so to say to be able to keep one's workplace or not.*

**Keywords:** Soft-skills competences, higher Education, labour market research

### 1. INTRODUCTION –Competency research in higher education

At the labour market in order to hold a profession it is necessary to specify different competences for that job. The specification should help us choose the suitable person for given scope of work, it should set a base for performance evaluation and define the further development. The Recommendation of the European Parliament on key competences for lifelong learning states 'That Member States develop the provision of key competences for all as part of their lifelong learning strategies, including their strategies for achieving universal literacy, and use the 'Key Competences for Lifelong Learning' (2006/962/EK).

The Reference Framework sets out eight key competences that can be defined into two competency-package: Knowledge and feature system. The effective work performance can be defined using these two dimensions: task oriented competences (hard), and emotional based ones (soft). The technical competences are easier to recognise and identify since they are objective so they are measurable. By contrast the social competences much more subjective and hard to define. The latter competences are in first place as the criteria of performance evaluation among big companies because they recognised that in the performance these skills count. (Molnár-Benedek, 2014)

Everyone has social competences (soft-skill) in certain level but typically not everyone can use them consciously. Elements of these competences are inherited others are determined by nurture but in the development of a competence reflections of people in reference play important role.

### 2. COMPETENCY EXAMINATION

This survey is to find answer for what expectations the companies in Hungary nowadays formulate towards newly graduated engineers, what competences are needed mainly in the field of soft skills for effective and successful work, and what competences are needed to strengthen to succeed. The reason of the importance of this examination is because today in Hungary a

major reform is going in higher education. The base of every change is in-depth exploration of reality, acknowledgement of it and the recognition of ordinary but less efficient operations and find, integration and application of improving solutions. One of the general aims of this project the exploration of the every-day reality of the university: How do we educate today? and What are our students like? What problems do we face and how does it affect our students' human quality? (Mészáros, 2005)

When our students get into the university the first two factors of their social competences, the inherited and nurtured ones are given but we can rely on the third formulating element. In higher education, the reference people for the students are the tutors, officers at the departments and other students.

In our performance- oriented higher education the stress is put on to provide our students more and more scientific knowledge (to develop hard-skills). The development of social competences become incidental relying on tutors' personal attitude whether he/she regards pedagogy vital at this age group.

This is detrimental to students as after graduation they will not possess adequate level of knowledge in the field of soft skills, moreover their individual professional aptitude, active qualities are less than their future workplace expects.

Higher education's real performance measurement can be based upon the feedbacks of outside institutions, companies. Other questions concerning us are: What level of knowledge do our students have after finishing university? What is their professional competence? What human qualities do they have after finishing the university? How will they get on in their profession? How prepared are they for life?

The general objective of this project to examine this 'soft' scope in all 5 engineering majors and to draw up what competences are beyond profession that are equally important to achieve good professional performance.

### **3. METHOD**

Fields of survey:

1. Examination of soft-skill competences at industries (What soft-skill competences do engineers need?)– workshops, questionnaires.
2. Examination of soft-skills in all 5 BSc engineering majors at the university.
3. Structured interviews with tutors. A survey was made about the interviews and later a problem-solving discussion was held on education and competency development. During the procession of problems, the engineering field was divided into three parts:
  - a. BSc. Mechanical, Mechatronic, Vehicle engineering
  - b. BSc. Transportation, Electronics, Logistic engineering.
  - c. BSc. Architectural, Building and Environmental engineering
4. To build Soft-skill competences into different Bsc engineering majors (The differences in soft-skill competences of inner university and outer company released in surveys)

In this study, only the results of the first survey are published.

### **4. RESULTS OF THE SURVEY**

The survey of soft-skill necessary competences at industries. The aim is to assess the soft-skill competences needed at industries about the different BSc. engineering majors and create the expected soft-skill competence profile.

Table 1. The expected competences from engineering students by industries. (workshop results) (source: own research)

Soft-Skill		Hard-Skill	
<i>personal</i>	<i>social</i>	<i>methodical</i>	<i>vocational</i>
<ul style="list-style-type: none"> <li>• have a sense of responsibility</li> <li>• able to bear strains</li> <li>• able to put oneself into new unknown situation</li> <li>• very effective with little</li> <li>• able to learn from mistakes</li> <li>• able to evaluate his/her abilities and present them</li> </ul>	<ul style="list-style-type: none"> <li>• able to put in his/her knowledge and pass it on too</li> <li>• able to understand others and make him/her understood</li> <li>• able to ask questions if sg is not clear</li> <li>• able to express oneself briefly and clearly</li> <li>• able to join a group and work there effectively</li> <li>• able to reach consensus</li> <li>• able to give and accept constructive criticism</li> <li>• able to have coequal relationship and partnership</li> <li>• work effectively in a group</li> </ul>	<ul style="list-style-type: none"> <li>• able to plan the process to resolution and put it into practice</li> <li>• able to plan and finish the tasks in time and according to the content</li> <li>• independence</li> <li>• accurate/precise</li> <li>• goal-oriented</li> <li>• motivated and curious</li> <li>• environment conscious</li> </ul>	<ul style="list-style-type: none"> <li>• able to put theory into practice in specific situations</li> <li>• mother tongue literacy written and oral</li> <li>• numeracy skills</li> <li>• technical sense</li> <li>• use of IT</li> <li>• manual skills</li> <li>• practical thinking</li> <li>• profession-oriented</li> <li>• analytical specific, practical</li> <li>• logical</li> </ul>

According to the result of competency hunt in the line of the expected competences from the labour market it is seen that the rate of soft and hard skills is the same. This result reflects the importance of role of soft-skills among even the BSc. technical engineering majors. The most important competences that all the three engineering majors regard vital are seen in Table 2.

Table 2. The most important competences that all the three engineering majors regard vital (source: own research)

Competency group	Competency Type
<i>Personal</i>	<ul style="list-style-type: none"> <li>• responsibility(sense of duty)</li> </ul>
<i>Social</i>	<ul style="list-style-type: none"> <li>• follow orders</li> <li>• cooperation skill</li> <li>• communication</li> </ul>
<i>Methodical</i>	<ul style="list-style-type: none"> <li>• motivation</li> <li>• good problem solving</li> <li>• ability to learn</li> </ul>
<i>Vocational</i>	<ul style="list-style-type: none"> <li>• good linguistic expression</li> <li>• use of IT</li> <li>• profession oriented</li> </ul>

Company representatives in the group emphasized that the competences they expected from the graduates also profession dependent, e.g.: one profession needs ability to follow order, while others require creativity and independent thinking. At the same time, there are some competences that can be expected from the employer and independent from the profession. The members of the group highlighted the responsibility competency as this is the base of other competences e.g.: reliability, precision, self-determination. The ability to follow orders and the

sense of reality are also vital parts, mainly at big companies, employees at different departments follow orders of the centre or apply proven procedures and do not apply own ideas.

Among the social competences, the participants emphasized the ability of cooperation that is necessary at work in departments or in collaboration with other company parts. Among the vocational competences the company representatives emphasized the need of good linguistic expression. According to their experiences the new employees lack of good linguistic expression. They are not able to express themselves clearly and sophisticatedly since maybe at university exams are mainly written not oral. Oral exam is very rare. The lack of clear linguistic expression is a drawback at the job interview because the interviewee cannot make the interviewer believe that he/she is suitable for that position. Among the methodical competences the motivation and problem solving skill were mentioned by the group members because these are great help for efficient work. The ability to learn is also an important competence as employers look for trainable employees who are open to new challenges.

## 5. COMPETENCY-BASED QUESTIONNAIRE – RESULTS OF ONLINE QUESTIONNAIRE

The questionnaire comprises 5 topics: partner data, the most important 3 and necessary 11 competences given by the companies. these were scored.

1. The necessary competences (given by the representative of the company)
2. How important is the given competency for the company? (scores from 0-5)

- |                     |                           |                |                       |
|---------------------|---------------------------|----------------|-----------------------|
| a. goal-orientation | b. conflict management    | c. stability   | d. stress management  |
| e. responsibility   | f. communication skill    | g. cooperation | h. self determination |
| i. flexibility      | j. personal effectiveness | k. creativity  |                       |

For the evaluation, the weighted average method was used.

### 5.1. Evaluation methods

People evaluated the competences in a direct test on 0-5 scale. The most important competency's value was 5, the not important one was 0. The competences were evaluated in two categories. First: the importance of it, second: the lack of competency at the workplace.

At the weighted average method, we weighted the rate of the person who chose the score with the given score, in this way it resulted an average value. The weighted score was one of the benchmark of the competences.

### 5.2. Comparison

In the first part of the questionnaire three competences were to enumerate which are expected, necessary for that profession or job as an engineer at the company, and finally, minimum three competences that are missing from the applicants and employees. The table 3. summarises the necessary and expected competences according to the 38 questionnaires.

Table 3. The necessary competences (online questionnaire) (source: own research)

vocational knowledge	creativity	cooperation skill	flexibility
self- determination	team work	problem solving skill	reliability
organising skill	communication	desire for learning and development	responsibility

The scores from 4 and 5 question groups were first summarised from 0 to 5 categories. First, we evaluated the 4. category (table 4.) where companies evaluated the 11 competences to choose from 0-5 scores.

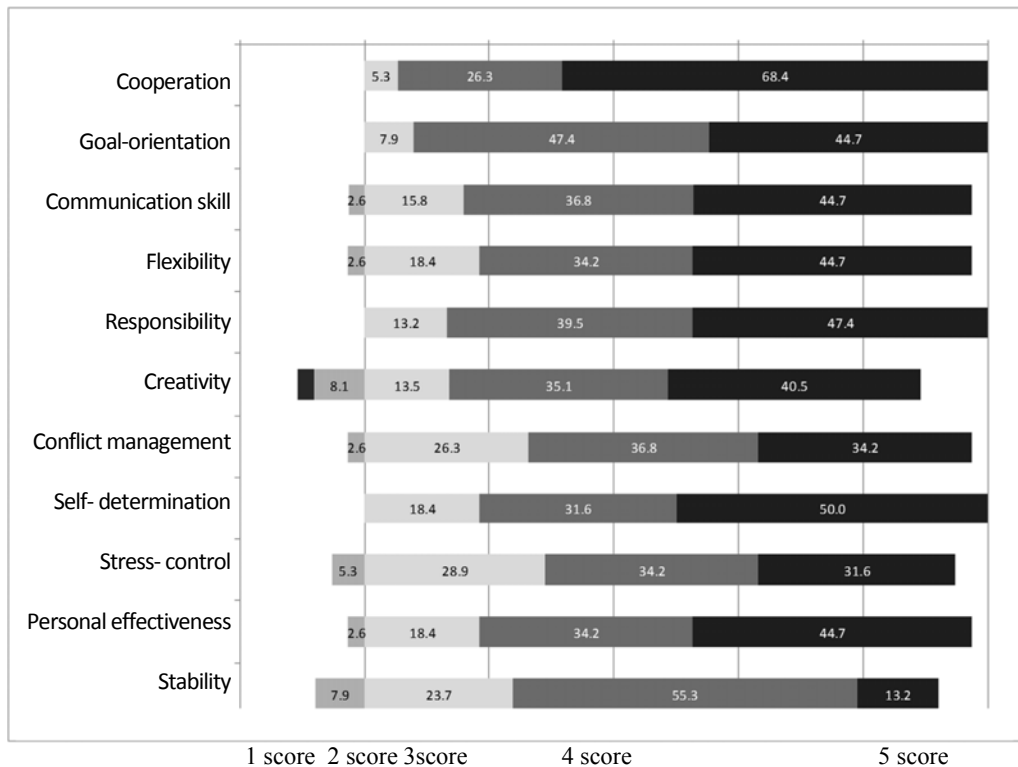


Figure 1. Evaluation of important competences (source: own research)

We marked the rate of per-cent in every score category. It is seen that all the most of the people who answered for the 11 categories regarded them more important than score 3. Four competences in order of importance: cooperation, self-determination, responsibility and goal-orientation. All of them got more than 3. At the 5th category (table 2.) the companies scored 0-5 the available (5) and missing (0) competences.

It is worth noting that companies regard the 11 competences important and necessary as in a scale 0-5, where 5 means very important value, the representatives gave average score 4. The two lowest were: stress management (3.92) and stability (3.74). The highest scores were the most important competences: cooperation (4.63), goal-orientation (4.37), responsibility (4.34), self-determination (4.32), communication skill (4.24), but the rest were scored above score 4.

## 6. SUMMARY

During the workshops the specified soft-skill competences were built in the questionnaire that was formed by company representatives related to BSc. Mechanic, Vehicle, Mechatronic engineering. The employers formulated their claims about soft-skill competences due to experience, expectation, furthermore, how much they value and miss these skills from applicants.

The emphasis changed from major to major, at the Vehicle, Mechanical and Mechatronic major the self-determination was at the top, at the Logistics, Transport and Electrical engineering major the responsibility, conflict management were chosen to improve the most importantly.

The company representatives related to majors chose much more competences to improve compared to the other two majors. For the BSc. Architectural and Build major the self-determination was chosen again as the most important competence to improve.

The most important goal at the higher educational environment is the excellent high standard to be followed education which is suitable for preparing the future generation for life, vocation. The most important conclusion of this study is that the employer companies regard soft-skills very important beside hard-skill competences. (Mészáros, 2013) The message for the university and the academics is that the difference between the expected and real levels of soft skill competences are huge and to reduce the difference, students need great help from the academics. For engineering students, the soft-skill competences are difficult to acquire. So, there should be well planning and active changes to place them into the education. (Mészáros, 2015)

If the university wishes to strengthen the soft-skill competences, they need to review the curriculums. How and where is it possible to build the soft-skill competences into curriculum? As the education of soft-skill competences are difficult and time consuming the experts must make hard decisions if they do not wish to increase the students' workload. In what ways to integrate the soft-skill competences? In most cases at the expense of hard- skills. (Molnár, 2015) A paradigm shift is indispensable at higher education: People need as much attention as teaching vocation. To fit into this complex aim requires huge amount of domestic development

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