

Skills-4U

Core skills for the 21st century

Questionnaire to detect the core skills for organisations

Part of the Report of the Output 1: Trans-European framework for Core personal skills

Core Skills for 21st Century Professionals

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Intellectual Output 1

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1. Why a questionnaire

CoSki21 project focuses on bridging the skills gaps which are reported between educational institutions and employing organizations. In practice, this means that the level of essential soft skills should be raised in graduates and/or employees. Here several questions evolve. What are the skills that are most essential? Can soft skills be learned/taught (this question is relevant because they are not traditional substances at schools nor universities)? Whose responsibility is it to foster these skills?

The actors in CoSki21 project believe that higher education has both a mission and a capacity to foster skills and thus provide students with skills that are needed in 21st Century organizations. But, as educational professionals, we also realize that this process includes not only one or two, but at least three stakeholders. In addition to educational institutions and students/graduates, also the employing organizations are involved in the process of personal development (Figure 5).

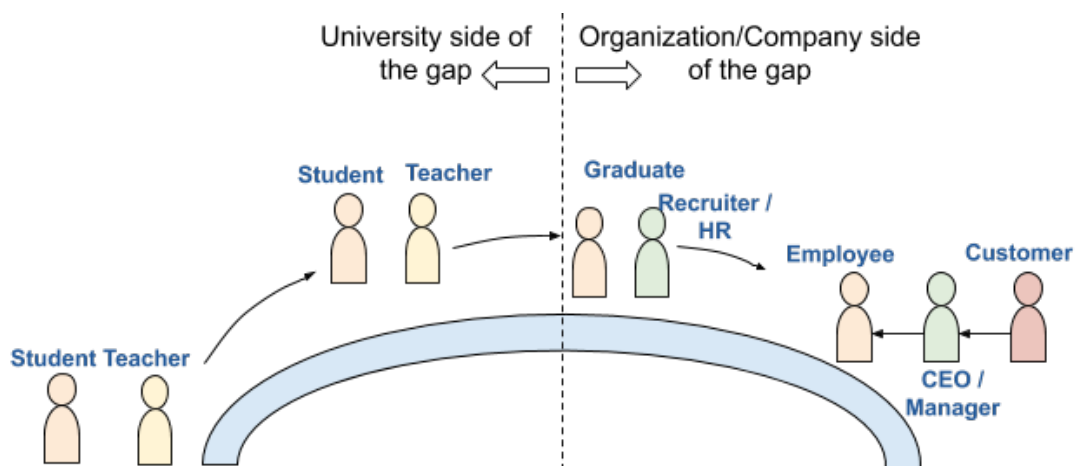


Figure 1 The questionnaire must to facilitate the link between the two different European worlds: universities and organizations.

2. Dimensions of the questionnaire

When searching for the most relevant Soft Skills for a company, different valuations should be considered (Figure 6). For *organizations and companies*, the significance of a particular skill related to specific tasks and positions is a crucial factor. The most necessary soft skills might vary in different positions. For instance, ‘Team work’ might be essential in many work positions, but ‘analytic thinking’ or ‘problem solving’ might be still more important for an ICT system operator.



But can soft skills be learned? If yes, who should be responsible for the fostering and learning processes? As there has been discussion whether soft skills are inborn abilities or whether they can be learned (Bereiter & Scardamalia, 2006; Klaus 2009; Jones et al. ,2017), the survey tool must include an angle that considers the learning potential of soft skills. This information is highly interesting for the educators. This dimension also measures a trust towards educating institutions responsible for fostering these skills.

Finally, what is the *graduate's or employees* level in this skill? This third angle is important, as the state or level of skills is probable to influence his/her performance in the organization. The amount of skills which can be fostered is obviously restricted, and if the level is high enough, then this skills is perhaps not worth of focusing on.

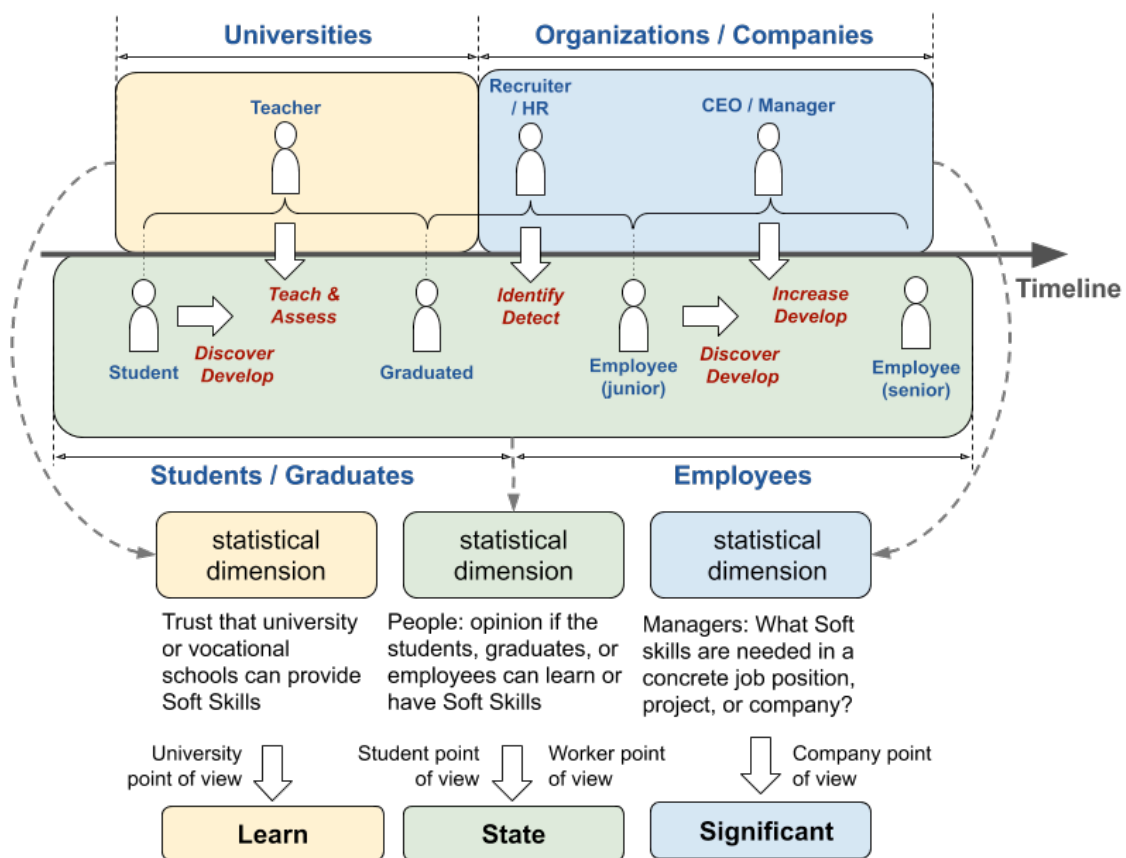


Figure 2 Dimensions used to the questionnaire and to the project framework

Operating and combining variables from these three dimensions are expected to give needed data on the significance and potential of necessary skills in any working environment. This data



is useful for all stakeholders as it enables not only measuring skills status, but it is also prioritizing skills according to their significance and development potential.

3. Questionnaire description

The focus of this research was on soft skills needed by business professionals. The field of business covers different types of positions such as marketing and sales, accounting and administrative work. For identification of positions within these, the ESCO (2013) system was utilized. In order to obtain a representative sample, the aim was to have all levels of professional hierarchy as well as multiple job positions presented among the respondents. Moreover, different fields of business branches and company types (private/public, small/medium/large) were sought. A simplified version of the NACE code classification was utilized to declare the branch of business.

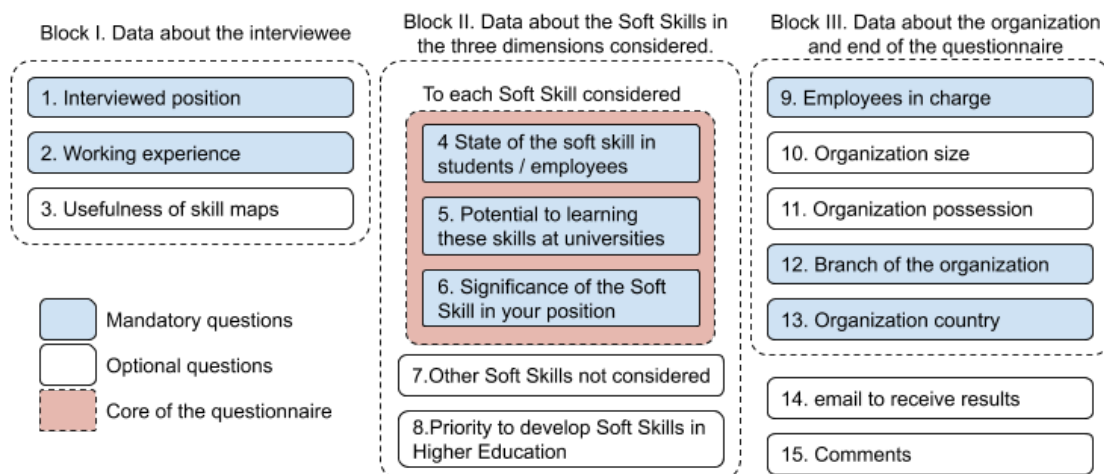


Figure 3 Questionnaire structure

In the main part of the questionnaire (Figure 7), a set of soft skills was to be rated from the respondent’s job position, according to the three dimensions presented in the previous section. Thus, different positions, such as marketing and sales, accounting, and administrative work, were represented.

The skills set used was developed by a two-stage process. In a desktop study, previous to the research 32 internet-based sources representing sets of soft skills were reviewed and analysed. As a result, the most used soft skills were identified. In the second phase, skills-sets suitable for business environments were selected. The skills-set to be used in this research was composed mainly from two existing sources, firstly from ESCO (2017) and secondly from Barcelona Activa.



The final skills-set consists of five clusters of soft skills needed in companies (Goal orientation, Self-Management, Communication, Team working and Analytic thinking), counting totally 21 skills. Respondents were supposed to rate each skill in relation to three dimensions, as seen from his/her job position and experience. Firstly, 'How significant do you consider this skill in your work position?' (1 = not significant at all, 5 = highly significant). This angle enables structuring the skills according to their importance in respective business position. In addition, it gives indication on soft skills that should be emphasized in higher education curricula and staff trainings (VAT).

The following dimension was operationalized as 'How possible do you consider developing this skill at a university?' (1 = not possible at all, ...; 5 = highly possible) This dimension aims to give indication to both trust in higher education institutions and in the learning potential of particular skills.

As for the third dimension, the question 'According to your working experience, what is recently graduates' level of this skill?' (1 = extremely low, 5=very high) was presented. This question seeks to highlight possible skills gaps, as well as differences in individuals regarding these levels.

The Soft Skills Status Indicator (3Si) method based on this survey tool and subsequent excel analytic, enables several outcomes related to the level and development potential of any skill. The results indicate the significance of an individual skill in a specific job position, perceived skill level of graduated in respective skills, and additionally the perceived level of learning potential of respective skill. As a secondary outcome, the method indicates differences in the development potential of skills. Except for organizations, HR-bodies and VAT, the method is expected to be useful at universities and other educational bodies.

4. Questionnaire implementation

1.1 The problem to ask about skills maps

The questionnaire has been implemented in Google Forms, due to we used Google Drive as the project management system. A version in English has been developed to be used as a template to the partners. This version can be obtained in this address:

<https://forms.gle/FyErM7X4bcFwr5436>

The questions have been implemented as a classical format (short text, long text, one-option, and so on). But the core of the questionnaire is the three dimensions' opinion about the skills map selected. In this case, we use a matrix of the skill map and the valuation of each skill. Consequently, the result is that interviewee must answer the number SK of skills multiplied by the number of dimensions D.



Please rate the significance of the following skills in your current position: *

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Initiative: React to opportunities and challenge proactively, produce innovative ideas. Make decisions and take actions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal orientation: Act with continuous improvement, set goals and standards and motivate self with goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning & Organization: Prioritize and establish plans of action, optimize resources to reach expected results.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preoccupation with order and quality: Caring for work conditions and results for self and other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 4. Core Skills matrix

In the case of the project CoSki21, we decided to use 21 soft skills' map, consequently interviewee must respond 63 questions. This is the main challenge of the questionnaire. To future projects is important to be have a friendly interface to obtain the dimensions-based skills map questionnaires.

Obviously, our selection of soft skills may not be considered suitable for the interviewee. Therefore, a question was raised about possible shortcomings.



Are there other core skills that should be included in the above list?

Tu respuesta _____

Figure 5. Question to provide other skills.

1.2 The influence of the interviewee

The other important aspect of the questionnaire is the personal opinion, and possible predisposition, of the interviewee about soft skills. There is a general agreement that soft skills are necessary and should be considered for success in companies. However, there are people, generally oriented to an organization of the twentieth century, not twenty-first, who may not agree.

To know the percentage of respondents who might disagree, a question was raised about the point of view of the interviewee. As this aspect is subjective, the question was posed at the beginning of the questionnaire.

Do you find competence maps or skills dictionary useful for your company?
(optional)
If you have no opinion on competence maps, please pass this question.

1 2 3 4 5

Strongly disagree 5. Strongly useful

Figure 6. Question to obtain the opinion of the interviewee about the skills maps.

The CoSki21 survey also has a pedagogical utility. The respondent, to answer the questions of the skill maps, will have read the definitions and, therefore, may have realized their need.

To check whether, after conducting the survey core, the interviewee maintains the opinion or not, a question of similar intention was included at the end of the survey.



To what extent do you agree that developing these skills should be a greater priority in further and higher education?

1 2 3 4 5

Strongly disagree Strongly Agree

Figure 7. Question to know the possible opinion change of the interviewee.



All results of these project can be found at the corresponding section of the long-term webpage:
<http://www.softskills.upv.es>