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A STUDY ON EMPLOYABILITY SKILLS OF ENGINEERING GRADUATES

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Abstract

The professional insertion of graduates from technical universities is a current issue both in the social and university environment. There are several factors that influence the professional insertion of graduates. Among these, the demands of the employers on the labor market and the competences acquired through university programs are emphasized in this paper. The correlation between the curriculum for all study programs with the requirements of the labor market constitutes the major concern of the educational policies. Labour market nowadays are going through a permanent determined changing proccess, influenced by thechnological advancements, the globalisation phenomenon and also by the needs of society. By analyzing entry level job descriptions in the domain of engineering, a certain need of graduates with a high quality professional training, capable of coming up with technical solutions for speciffic social needs has been noticed. Mobility of jobs, obsolete professions and the emergence of new ones determines not only a permanent update on academic training but also anchoring it in the socio-economic reality by correlating with the labour market demands. The paper firstly presented a set of skills, identified based on a documented study regarding the employability skills.Based on this study, a questionnaire was developed that was applied online to students from a technical university in Romania. The questionnaire followed the analysis of the importance that students assign to the employment skills at the end of their studies. The results can be useful for education practitioners and for helping students comprehend the importance of employability skills.

Keywords: Employability skills, competences, engineering graduates, labour market.

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1. Introduction

Engineering plays a vital role in all fields, representing a key element in social and economic development of the modern society. For example, advanced equipment, nano- and biomaterials have a significant contribution in the evolution of medicine, various specialized software are used in all areas of life, automation makes any technological process more efficient, "green" technologies revolutionizes life in all its aspects etc. All of these are supported by important research which contribute to development and technological innovations that bring together people specialized in many different fields. Therefore, engineering is essential to society progress.

The educational process of engineers is extremely important and a special attention should be paid to the correlation that should exist between the educational profiles of graduates and the requirements of the labour market. Moreover, a number of factors such as globalization, increasing professional mobility, decreasing predictability of the career path, multiple career reorientation directions etc. impose new challenges facing graduates on entering the labour market. These changes affect traditional jobs and create new career opportunities (Organisation for Economic Co-operation and Development, 2016a, 2016b).

The consequences of these changes include the gradual "enrichment" of the engineering graduate career profile that is required by employers. Although many of the technical skills and knowledge of basic engineering remain unchanged, they are complemented by employers with numerous skills such as critical thinking, effective communication, creativity, teamwork, etc. These abilities are named in literature “employability skills” and are associated with different terms: key competencies, transferable skills, soft skills, core skills, generic skills, etc. We use “skills” as a generic term due to the variety of terminology used for employability skills and interchangeable use of the terms “skills” and “competencies” in literature (Abdulwahed & Hasna, 2017).

Research has revealed the existence of a gap between graduates and employers' perceptions regarding the employability skills. Employers don’t only look for basic technical skills in graduates; even if these skills are considered mandatory they are insufficient, because employers are focusing on "non-technical" skills (Anastasiu et al., 2017, p. 19).

Therefore, can be considered there is a need for close collaboration between universities and employers, in order to address a pragmatic perspective of the engineering education process, that results in a graduate with specific skills required by his future profession, but also with those complementary skills that the employers are considering while hiring graduates.

1.1. Employability

The concept of employability has been debated for many years and continues to be discussed in the literature; thus, we observed an increasing interest in graduates’ employability (Lowden et al., 2011). Employability is approached either in a broader or narrower perspective the literature.

McGrath (2009) argues that employability is not about graduates that have to meet the conditions required by employers and / or established by governments (through legislation). The author considers that the concept should rather be located "in a multi-stakeholder dialogue" (providers of educational programs, students and communities, companies or governments) (Mcgrath, 2009). According to Glover et al. (2002) the graduates’ employability represents the way that they are assimilated into the national and international

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labour market (Glover, Law, & Youngman, 2002, p. 296). This general characterization of the concept is similar to those presented by Working Group on Employability (2009) which describes the graduates' employability as "the ability to gain initial meaningful employment (…)" (Working Group on Employability, 2009). York's pedagogical approach (2006) covers a wide spectrum, which includes a detailed description of acquisitions related to this concept and its beneficiaries (Stakeholders who take benefits): *"a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy."* (Yorke, 2006).

The above mentioned definitions reflect a degree of generality. Interest for this subject makes it necessary to outline an operational definition of employability (Wibrow, 2011), reflecting the common opinion of stakeholders.

1.2. Employability skills

The literature presents different approaches on employability skills, revealing the employability skills' dynamics and determining the employability skills scale (Table 1). According to Wibrow (2011), employability skills are multidimensional, enforcing a mental complexity: *""Employability skills tend to require a high order of mental complexity since they involve an active and reflective approach to life"* (Wibrow, 2011). The National Network of Business and Industry Associations (2014) details a common employability skills framework *" for all jobs"*, grouping employability skills in four main dimensions (Table 1): personal skills, people skills, applied knowledge, workplace skills (National Network of Business and Industry Associations, 2014). U.S. Department of Education Office of Career, Technical and Adult Education Division of Academic and Technical Education presents a comprehensive approach to employability skills expanding their importance not only for the employment itself (entry-level jobs) but also for the success in all labour market sectors. These skills are grouped in (Table 1): effective relationships, workplace skills and applied knowledge (American Institutes for Research, 2016).

In a recent study, Abdulwahed and Hasna (2017) presents a large set of 21st century engineering competencies, comprising 22 engineering skills. In shaping this set of engineering competencies, the authors analyzed studies both in engineering and other STEM fields. Thus, the skills grouped under four main dimensions by the authors include a number of specific engineering skills forming the first dimension (*Core knowledge and practice*) and a number of global engineering skills grouped in the other three dimensions (*Cognition and thinking; Professional and interpersonal; Business and management*) (Abdulwahed & Hasna, 2017). Even if, Abdulwahed and Hasna (2017) do not clearly characterize these global engineering skills as employability skills, they include them in a comprehensive set of 21st century engineering competencies. As it can be seen in Table 1, most of these global engineering skills are found in the common employability skills proposed by de National Network of Business and Industry Associations (2014) and American Institutes for research (2016).

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Table 01. Approaches on employability skills highlighted in the studied literature

Common employability skills framework by (National Network of Business and Industry Associations, 2014)	**Employability Skills Framework by (American Institutes for Research, 2016)**	**The global set of twenty-first-century skills for engineering by (Abdulwahed & Hasna, 2017)**
Personal skills: Integrity; Initiative; Dependability and reliability; *Adaptability; Professionalism* **People skills:** *Teamwork; Communication;* Respect **Applied knowledge:** Reading; Writing; Mathematics; Science Technology; *Critical thinking* **Workplace skills:** Planning & organizing: *Problem solving; Decision making;* Business fundamentals; *Customer focus;* Working with tools and Technology	**Effective relationships:** Interpersonal skills; Personal qualities **Workplace skills:** Resource *management*; Information use; Communication skills; *Systems thinking;* Technology use **Applied knowledge:** Applied Academic skills; *Critical Thinking skills*	**Core knowledge and practice:** Sciences knowledge (math, physics, and science fundamentals); Disciplinary engineering fundamentals; Interdisciplinary engineering fundamentals; Multidisciplinary knowledge; Practical skills; ICT skills **Cognition and thinking:** Lifelong learning; *Problem solving; Decision making; System thinking; Critical thinking;* Innovation; Design skills **Professional and interpersonal:** *Professionalism;* Ethics; *Adaptability; Communication; Teamwork;* Foreign language **Business and management:** *Management;* Leadership; *Entrepreneurship*

Considering the aforementioned information, the complexity of the recent study conducted by Abdulwahed and Hasna (2017), and the fact that it relates to engineering, research part of this paper was started based on the global set of set of 21st century engineering competencies presented by the authors.

2. Problem Statement

Recent researches highlighting the existing gap between labour market requirements and competencies of engineering graduates support the future studies on this matter.

The familiarization of students with the employers' requirements and the importance that students give to the employability skills play an important role in acquiring these skills during their studies. Thus, Booth (2004) includes in the definition of learning "the importance of learned work" and the "awareness": "*Learning is about coming to understand something of importance in a way that is a qualitatively more in line with desired goals, and that is a matter of expanding awareness to embrace greater wholes, more parts within the wholes, and stronger relations between parts - and, in particular, the critical aspects can be brought into focus*" (Booth, 2004). In conclusion, we could appreciate that the awareness of students on the importance of employability skills could be a motivating factor in learning, increasing their attention in learning and submitting a greater effort in these skills acquisition. Awareness and, the increased emphasis on acquiring employability skills enable students to identify their usefulness (Briggs, 2014). Also, the importance of the employability skills can be favorable reason for a robust transfer of knowledge (Goldstone, 2012, p. 149) and can contribute in achieving the future employment goals (Briggs, 2014).

Thus, knowing students' opinion on the importance of employability skills can be useful in several directions. It can be a starting point for further research conducted in order to achieve curriculum updates;

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it can be also a support for teachers in rethinking integrated instructional strategies that explicitly target these skills. Among educational partners can support practice tutors that are able to present various real contexts in which students may apply those skills that are rated to be less important.

3. Research Questions

As a consequence of the information previously presented, the following questions are emerging: (1) Is there a significant difference between the importance that students assign to each dimension of the employability skills? (2) Is there a relationship between gaining work experience while studying and the students' perception of the importance of employability skills?

4. Purpose of the Study

Therefore, the study aims to investigate engineering graduates' perception towards employability skills. To achieve this goal, there has been analyzed students' perception on the importance of employability skills while studying.

5. Research Methods

In the present paper a survey questionnaire has been used for research. The research instrument was based on the global model of the 21st century skills (Abdulwahed & Hasna, 2017), which was partially adopted. Thus, the questionnaire includes only three global dimensions of the model (Abdulwahed & Hasna, 2017) (Knowledge, mentality, thinking; Personal, interpersonal; Business and management) along with associated skills. The dimension of basic engineering skills was not included in this research; it may be the subject of future research. The questionnaire included 16 items corresponding to skills associated with the three dimensions of the model. In addition to these items there were included six items referring to student demographics (gender, age, faculty, year of study, branch of high school graduated, county) and two items assessing experience while studying and working. The questionnaire was applied online, and data were collected through Google Forms. Items corresponding to three dimensions were assessed using a Likert scale of 5- point scale, where 1 is not important and 5 is extremely important.

The data collected from the questionnaires were statistically analyzed with SPSS Statistics Version 25. The quality metrics of questionnaire was calculated through Cronbach's Alpha. Cronbach's alpha (α) coefficient (α = .765) indicates a good internal consistency of the questionnaire. Also, there were realized the frequency distribution analysis, calculated the standard deviation (S.D.), statistical analysis of the relationship between the variables (the Pearson correlation and the correlation coefficient, *r*, the contingency coefficient $\boldsymbol{x^2}$ (chi square).

The study was conducted on a group of 30 subjects ($N_{students}$ = 30), studying at four faculties of the University POLITEHNICA of Bucharest. In terms of gender, girls predominate in the study group (73.3%). This could be related to the high percentage of respondents from the Faculty of Applied Chemistry and Materials Science, where female students predominate. We also appreciate that results are relevant, because 83.3% of respondents are in the third and fourth years of study, leading to the assumption that they already have studied the specialized disciplines and their opinion is pertinent.

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6. Findings

A first dimension analyzed is related to **"Knowledge, mentality, thinking".** As it is shown in Figure 1, regarding the skills associated with this dimension, students are more interested in *Problem-solving* (76.7%), *Lifelong learning* (66.7%) and *System thinking* (66.7%). Regarding the **Design skills**, students are less interested (46.7%). All these results are confirmed by parametric statistical analysis (Mean, S.D.). Thus, students have a pragmatic vision where the problem solving is essential, but they are also aware that lifelong learning has become a necessity.

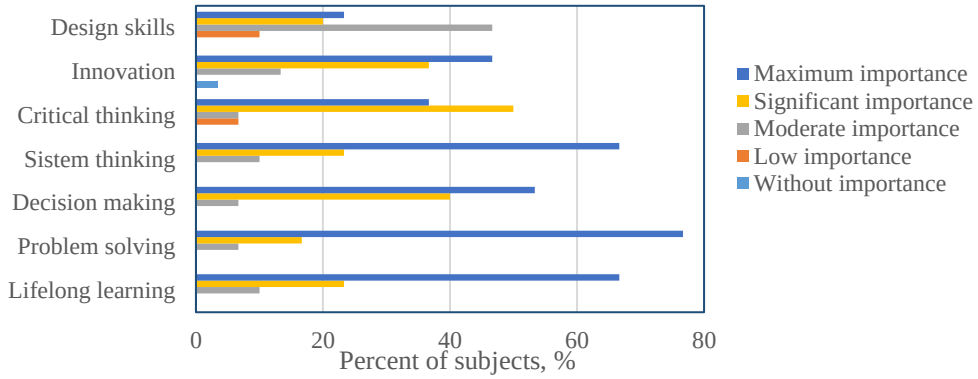

Figure 01. The perceived importance for the skills associated with the "**Knowledge, mentality, thinking"** (D1) dimension (*N = 30*)

Analyzing the answers for the items associated to the second dimension, **"Professional, interpersonal"** (Figure 2), we found that: From the perspective of students all the skills associated to the second dimension are considered to be of significant importance (Mean> 4.00). However, students believe that the essential skills associated to this dimension are *Professionalism* (66.7%), *Teamwork* (63.3%) and *Adaptability* (63.3%). These opinions can be explained by the fact that, while in college, students are aware that, in order to get a job more easily, have to be professional at work, to co-operate with others and to demonstrate their adaptability in a changing labour market. All these results are confirmed by parametric statistical analysis (Mean, Standard Deviation).

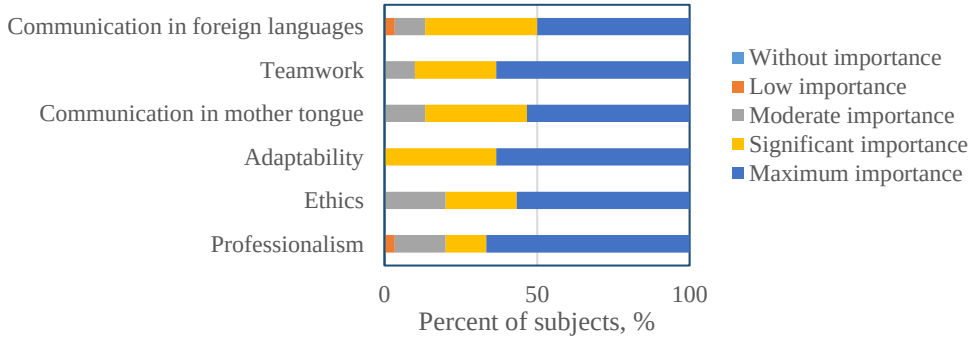

Figure 02. The perceived importance for the skills associated with the **"Professional and interpersonal"** (D2) dimension (*N = 30*)

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Regarding the third dimension**" Business and management"** (D3), students are very interested in Entrepreneurial skills (43.3%) and Leadership skill (33.3%) compared to their shown to Management skills (16.7 %) (Figure 3). All these results are confirmed by statistical parameters (Mean, S.D.)

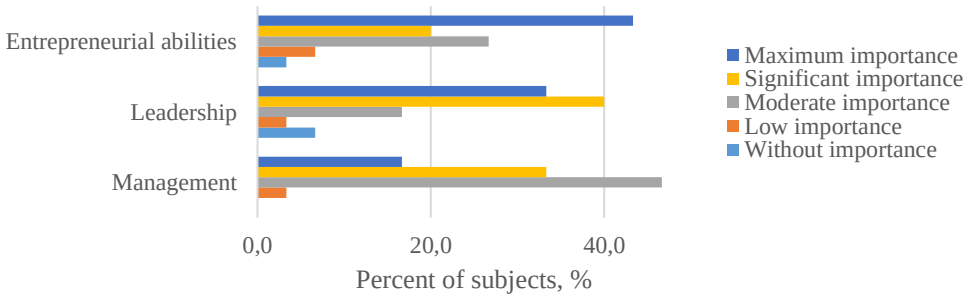

Figure 03. The perceived importance for the skills associated with the "**Business and management**" (D3) dimension (*N = 30*)

Overall, **the frequency distribution analysis** shows that students are very interested in all employment skills (Mean = 4.28, St. Dev. = .8). The values of the statistical indicators obtained in the first two dimensions, "**Knowledge, mentality, thinking"** (D1) and **"Professional, interpersonal"** (D2) show a relatively high response homogeneity ($S.D._{D1}$ = .76, $S.D._{D2}$ = .73) and students' interest towards these skills ($Mean_{D1}$ = 4.32 $Mean_{D2}$ = 4.45) compared to the **"Business and management"** (D3) dimension where there are a lower response homogeneity ($S.D._{D3}$ = 1.03) and also a lower interest shown by students towards these skills ($Mean_{D3}$ = 3.82).

Correlation analysis highlights the correlation with *socio-demographic variables* and *years of experience in a field.* There is no relationship between the three dimensions and ***socio-demographic variables*** such as year of study, gender, faculty and the county where they have graduated high school, as it was confirmed by statistical parameters (p> 0.05, -. 275 <r <.357).

Instead, these parameters reveal significant negative correlations between the variables associated with the three dimensions and socio-demographic variables such as gender and branch, which can be explained as follows:

- the lower is the number of boys, the higher is the interest for Ethics skills. Girls show assign much more interest for this dimension compared to boys. This is evidenced by the significant negative correlation between gender and the Ethics variable from **"Professional, interpersonal**" dimension- D2 ($\chi 2$ (2) = 6.615, p = .046, r = -.373). Perhaps these differences could reflect that girls show a greater interest to moral principles.
- the higher is the number of technological high school graduates, the lower is the students' interest for Entrepreneurial skills and Management skills. This is confirmed by the negative correlation between the variable of the branch of high school graduated and the Management (($\chi 2$ (3) = 15.077, p = .002, r = -.381) and Entrepreneurial skills associated to **"Business and management"** (D3) dimension (($\chi 2$ (4) = 16.607, p = .002, r = -.341). Perhaps these differences can be associated to the subjects taught and learned in theoretical high schools and technological high schools. To note however that girls predominate in the study group (73.3 %).

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In terms of *experience* in a related field (experience of specific activities in different contexts) statistical parameters show a significant negative correlation between student's college *Experience* and three variables associated to **"Knowledge, mentality, thinking"** (D1) dimension: Problem-solving ($\chi 2$ (2) = 11.530, p = .003, r = -.603); Decision-making ($\chi 2$ (2) = 11.531, p = .003, r = -.534) and Critical thinking ($\chi 2$ (3) = 8.700, p = .034, r = -.402).

In conclusion, the lower is the number of students who don't have any experience in the related filed, the higher is the importance of three dimensions. These results allow us to appreciate that creating opportunities for having experience in a related field leads to an increasing interest for the above-mentioned skills.

To investigate the dimensional structure of each dimension there was performed a principal component analysis (PCA). For all three dimensions, the data indicate a good suitability for factor analysis: index KMO = .655 (D1), KMO = .558 (D2), KMO = .702 (D3). The indicators calculated for **"Knowledge, mentality, thinking"** (D1) dimension indicates that this dimension constitute two factors: two eigenvalues greater than 1. These two factors explain 65% of common variance in the manifest variables. All commonalities are higher than 0.5, with the exception of *Innovation* for which the commonality is .306. It is also worth noting that the degree of saturation for the item referred to *Design skills* is negative (-.780). For **"Professional, interpersonal"** (D2) dimension, the indicators indicate that two factors explained 66% of common variance in the manifest variables. All commonalities are higher than 0.5, with the exception of Communication in foreign languages for which the commonality is .494. The indicators calculated for **"Business and Management"** (D3) dimension show that all three items included in this dimension are associated in one factor. Variance of one variable explains 72% of common variance in the manifest variables. All commonalties are higher than 0.5 and no variable has not been ruled out.

Thus, we can appreciate that factor analysis confirms the model used in this research, noting that statistical indicators show a moderate match between the two variables (Innovation and Communication in foreign languages - for which the commonalties were <0.5) and the dimensions that included them.

7. Conclusion

This study aimed to investigate the engineering students' opinions regarding employability skills. The findings of our study, based upon the results obtained, are presented below.

Although students identify differences regarding the importance of the three dimensions, they are not significant. They show a higher interest for the second dimension, **"Professional, interpersonal"** (D2) and the lowest interest for the **"Business and management"** (D3) dimension. This leads us to assume that probably the students perceive the skills associated with the third dimension as being necessary only in leadership positions, without considering that the engineering profession involves activities that require such skills (for example, leading of the technological processes).

Creating multiple opportunities for students to experience specific activities in different contexts could increase their interest for these skills. This point of view is supported by a significant negative correlation between student's college experience and three variables associated to **"Knowledge, mentality, thinking"** (D1) dimension: Problem-solving, Decision-making and Critical thinking.

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These findings have an exploratory value. Considering the group of subjects (N = 30) and their distribution in terms of gender (most of the participants were female - 73.3%) data cannot be generalized to the entire population from which the study group was extracted. Continuing this research can include a comparative study regarding the interest for both technical skills and employability skills. Also, future research can be extended to integrated teaching and learning-strategies that explicitly target these skills.

References

Abdulwahed, M., & Hasna, M. O. (2017). *Engineering and technology talent for innovation and knowledge-based economies*. Cham: Springer International Publishing.

American Institutes for Research. (2016). *Integrating employability skills: A framework for all educators. Handouts.* Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiM-8iJy_fgAhXplosKHfQSDboQFjAAegQIChAC&url=https%3A%2F%2Fccrscenter.org%2Fsites%2Fdefault%2Ffiles%2FEmployabilitySkills_Handouts.pdf&usg=AOvVaw0tyLXNhV7DiiReWPLIzYgS

Anastasiu, L., Anastasiu, A., Dumitran, M., Crizboi, C., Holmaghi, A., & Roman, M. N. (2017). How to align the university curricula with the market demands by developing employability skills in the civil engineering sector. *Education Sciences, 7*(74), 1-23. https://doi.org/10.3390/educsci7030074

Booth, S. (2004). Engineering education and the pedagogy of awareness. In C. Baillie & I. Moore (Eds.), *Effective learning and teaching in engineering* (pp. 9-24). London: Rottledge.

Briggs, S. (2014, October 4). How to make learning relevant to your students (and why it's crucial to their success). Retrieved from https://www.opencolleges.edu.au/informed/features/how-to-make-learning-relevant/

Glover, D., Law, S., & Youngman, A. (2002). Graduateness and employability: student perceptions of the personal outcomes of university education. *Research in Post-Compulsory Education, 7*(3), 293-306. https://doi.org/10.1080/13596740200200132

Goldstone, R. L. (2012). Introduction to new conceptualizations of transfer of learning. *Educational Psychologist, 47*(3), 149-152. https://doi.org/10.1080/00461520.2012.695710

Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). *Employers' perceptions of the employability skills of new graduates.* Retrieved from Education and Employers Organisation website: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjok_SywffgAhXm-ioKHWJLCpUQFjAAegQICRAC&url=https%3A%2F%2Fwww.educationandemployers.org%2Fwp-content%2Fuploads%2F2014%2F06%2Femployability_skills_as_pdf_-_final_online_version.pdf&usg=AOvVaw3l0y4iL2jDK5T9rokffnwF

Mcgrath, S. (2009). What is employability? Learning to support employability project. Retrieved from https://www.researchgate.net/publication/266456393

National Network of Business and Industry Associations (2014). Common employability skills. A foundation for success in the workplace: the skills all employees need, no matter where they work. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjnjPGSyPfgAhUGxYsKHc7BB48QFjAAegQICRAC&url=https%3A%2F%2Fs3.amazonaws.com%2Fbrt.org%2Farchive%2FCommon%2520Employability_asingle_fm.pdf&usg=AOvVaw0L2J2RV1g1MBu3KedkuQIj

Organisation for Economic Co-operation and Development. (2016a). *Enhancing employability. Report prepared for the G20 Employment Working Group.* OECD. Retrieved https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjlqcTd0PfgAhXMo4sKHdX6DEAQFjAAegQIChAC&url=https%3A%2F%2Fwww.o

ecd.org%2Femployment%2Femp%2FEnhancing-Employability-G20-Report-2016.pdf&usg=AOvVaw106n0IiUbdeMC98E_aqQOS

Organisation for Economic Co-operation and Developmen. (2016b). *The future of education and skills. Education 2030.* OECD. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjDkIn00vfgAhXjl4sKHRK8B3QQFjAAegQIChAC&url=https%3A%2F%2Fwww.oecd.org%2Feducation%2F2030%2FE2030%2520Position%2520Paper%2520(05.04.2018).pdf&usg=AOvVaw3rdA4y3AOFQfZKrwFRJ7-b

Wibrow, B. (2011). *Employability skills - At a Glance*. Retrieved from National Centre for Vocational Education Research website: https://www.ncver.edu.au/research-and-statistics/publications/all-publications/employability-skills-at-a-glance

Working Group on Employability. (2009). *Report to Ministers, Bologna Conference, Leuven/Louvain-la Neuve 28-29 April 2009.* Retrieved from European Higher Education Area website: http://www.ehea.info/cid101040/ministerial-conference-leuven-louvain-neuve-2009.html

Yorke, M. (2006). *Employability in higher education: what it is – what it is not*. Retrieved from Higher Education Academy website: https://www.heacademy.ac.uk/knowledge-hub/employability-higher-education-what-it-what-it-not