

INCREASING EMPLOYABILITY OF DOCTORATES IN EMERGING SECTORS WITH SOFT SKILLS TRAINING

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Abstract Soft skills, sometimes referred to as transferable skills are perceived as an important factor of employability by employers from various economic sectors. Due to rapid technological development, companies in emerging sectors demand highly skilled employees, such as Doctorates. However, some studies have shown a skills gap between employers' demands and actual skills levels of Doctorates. Several European universities have decided to develop online training for soft skills, which might aid the employability of Doctorates by improving their soft skills.

Keywords:

soft skills, transferable skills, employability, doctorates, emerging sectors.



University of Maribor Press

DOI <https://doi.org/10.18690/978-961-286-409-5.6>
ISBN 978-961-286-409-5

1 Introduction

As noted by multiple previous studies [1, 2], the area of soft skills training is of extreme importance for the employability of Doctorates in all economic sectors. In previous years, the European Commission has developed guidelines that encourage the employment of Doctorates in industry, as their needs for highly skilled professionals will increase in the following years with further development of technologies. According to them, Doctorates can foster research and innovation of new products and services that can aid in the economic growth of countries. The main reason for the European Commission's decision to encourage the employment of Doctorates in industry is the discrepancy between the numbers of Doctorates employed in industry and in the public sector. In comparison to the United States, in the European Union, the majority of Doctorates prefer to work in the public sector, for example, at universities or public research institutions [3].

In accordance with this strategy, several European Universities have decided to study the effect of soft skills training on the employment of Doctorates and initiated the project OUTDOC (Outplacement support for Doctorates in emerging areas). The goal of the study was to see what employers expect of Doctorates, what they see in them, and what they think needs to be changed in order to employ more Doctorates in industry. Project OUTDOC is focused on increasing employability in emerging economic sectors, such as IT, Waste Management and renewable energy sources by training soft skills. The main goal of the training is to simplify the transition from the PhD Programme to the labour market by reducing the mismatch between expectations of employers and Doctorates' skills. This mismatch has, for some time, been seen as a possible reason for the inadequate distribution of Doctorates who decide to work in academia and industry. The project itself started as an initiative after observing the continuous growth of numbers of Doctorates on the one hand, and stagnation of the numbers of Doctorates employed in industry on the other. Additionally, PhDs often faced the issue of not enough academic positions for all who want to work there. Nevertheless, many Doctorates in all sectors still prefer to work in academia, either due to the desire to work in research, or due to the inability to find employment in industry. Since Doctorates have some crucial competencies that other employees do not have, such as industry-specific knowledge and research skills, they can bring many benefits to the companies, such as innovation mindset, the ability to learn quickly and problem-solving skills.

2 Importance of soft skills

Development of soft skills is important for Doctorates, as these skills can make them stand out during a job search, and offer them a competitive advantage over other Doctorates with similar expertise. Soft skills are essential for the development of their careers, as some skills, such as communication and negotiation skills, make it easier to form relationships with people, create trust and lead teams [4]. This makes them better team workers, which affects the work climate in a company positively. All of these skills are expected of Doctorates, especially since they often occupy managerial positions in companies as this study shows. Nevertheless, leadership and communication skills are also demanded for the majority of positions.

On the other hand, modern workplaces are also often based on interpersonal skills. Society values active listening, collaboration, presentation of ideas and communication with colleagues. Strong soft skills ensure a collaborative work environment, which is crucial in a competitive world. In accordance with this, previous research has also shown that employers demand employees who are better equipped with soft skills. Interestingly, studies show that they believe Universities and other Higher Education Institutions should invest more time in the development of these skills [5, 6]. Most often employers suggested that Universities should add these skills to the existing curriculum. However, some employers also recognise that soft skills need to be trained in companies as well, either by mentoring, or by the principle “learning by doing”.

Previous studies have shown a lack of certain non-academic skills, such as commercial thinking, adaptability and the ability to translate research results to the public [7, 8]. In 2006, a pilot study was done with joint efforts of three European institutions Eurostat, OECD and UNESCO. A few years later, the study was done in most European countries. It was focused on the difference between acquired and required skills. Data were also compared between sectors of employment. The results show that the level of research skills and personal effectiveness are satisfactory, while there is a lack of management, communication and team skills [9].

The issue is not only relevant for Doctoral students, as transferable skills can be used by students at all educational levels. Bennett has conducted a study of over 1,000 job advertisements aimed at graduates. In this study, the aim was to research how the skills requirements were determined, whether the firm offers employees training in personal skills, and what was the perceived level of personal skills of employees as perceived by managers. 18 % of respondents agreed that “today’s graduates commonly possess lower levels of personal skills than are really necessary to do their jobs”, while 21 % of them disagreed that graduates today leave university with lower levels of transferable personal skills than used to be the case. In this study, the skills perceived as the most important were communication, teamwork, IT and organisation. Least important were foreign languages, self-confidence, initiative and numerical skills. Employers evaluated today’s graduates as best at teamwork, analysis, IT and presentation, while the worst at foreign languages, initiative, self-confidence and leadership [10]. A study in Belgium has shown that employers who already employ PhDs value their research skills, scientific knowledge and leadership skills. Those who do not employ them value technical skills, independence and self-confidence [11].

Another study in Finland has researched the academic engagement and industry-specific competence of Doctorate holders. Results show that PhDs were most often hired for their research skills, while employers also valued industry-specific knowledge. Other important skills were teaching, analysis, management and interaction skills. Employers claimed that industry-specific knowledge can be acquired through work experience, but the shortage of this knowledge was also the reason for not employing PhDs with no work experience [12]. Due to this, Doctoral students need to gain industry-specific knowledge by working in companies in their research area. Studies have also shown that company size is related to the employment of PhDs, as smaller companies do not have funds to employ PhDs, and prefer all-round employees instead of PhDs with specialist skills [13, 14].

Due to their value, soft skills are sometimes called employability skills. According to Jerome and Anthony, these skills are essential in every workplace, and are highly valued by employers. Employers’ demands have changed with time, as skills such as creativity were once avoided, but are not recognised as essential for employees who work in high-performance industries. As employability skills are generic, they can be

used in various positions and industries. Due to this, another term to describe soft skills is transferable skills [15].

3 Soft skills demands by employers

The main goal of project OUTDOC was to reduce the mismatch between employers' demands and expertise of Doctorates, while identifying employers' needs. The reason for choosing Doctorates is that they possess unique skills sets and capabilities that employees with other educational levels do not have. One such example are research skills, that are developed thoroughly during Doctoral studies due to the nature of the work. Additionally, emerging economic sectors are believed to employ increasingly more Doctorates who currently work predominantly in academia. It is predicted that in the following years over one million jobs will be created in those sectors that will require highly skilled researchers. In order to apply, Doctorates need to develop their soft skills, which has been shown to increase employability effectively. One of the ways how soft skills can increase the employability of Doctorates is by improving the first impression that the employer gets, as those with good communication skills present themselves better.

Students sometimes question the importance of soft skills in comparison to “hard skills” (also known as technical skills). Findings presented in the Wall Street Journal show that 92 % of nearly 900 surveyed executives perceive soft skills as equally or more important than technical skills, yet 89 % of them said they have a “very or somewhat difficult” time finding employees with those skills [16]. Other studies that were done in various industries also found the high importance of soft skills [17].

Even though many studies have shown the importance of soft skills in comparison to hard skills, there is still not a specified list of the most important soft skills that should be trained. Additionally, it is also unclear who should be held responsible for the training of these skills; should it be universities or companies?

Jones found that, although university teachers are aware of the importance of soft skills, they decide not to teach soft skills for several reasons:

- They do not see soft skills as part of their discipline.
- They think soft skills should not be taught by them.

- They have difficulties defining soft skills training.
- They do not have experience in teaching soft skills, or do not feel qualified to do so.
- They encounter practical difficulties, such as too many students in classes or shortage of time [18].

As some participants in the said study noted, it is difficult to train soft skills such as critical thinking or communication. Training of such skills is not always systematic, but rather in other forms. Additionally, critical thinking is often assessed in essay form, which puts a high workload on the teachers who grade the submissions [18].

4 About project OUTDOC

As already mentioned, this review was done as part of project OUTDOC. This project has started as an initiative of several European universities after recognising the skills mismatch/skills gap that both employers and Doctorates experience when the latter search for employment. As previous researchers have noted, modern workplaces value interpersonal skills such as listening and collaboration with co-workers, while also presenting ideas and communicating with colleagues. Apart from employers, employers in customer service industries also need strong “people skills” in order to communicate with customers effectively and efficiently [15].

Due to this, researchers and companies have decided to utilise a novel approach, and develop an online soft skills training programme for Doctorates. In order to suit it best to the needs of employers, it will include ten soft skills which had the highest discrepancy between demanded and perceived skills levels, as these skills need to be trained the most. Development of the training programme is still in progress, but it is planned that the first Doctoral students will test it in the following months. It will be done partially online and partially as real-life workshops. The testing period will be followed by a mobility period at participating companies, where employers will get the chance to see the soft skills of Doctorates, while Doctoral students will see a different work environment. International mobility, such as the Erasmus mobility programmes have been shown to benefit the students. According to a study done by the European Commission, 64 % of employers consider mobility important for the recruiting process, and 92 % demand skills such as openness to and curiosity

about new challenges, problem-solving and decision-making skills, confidence, tolerance towards other personal values and behaviours. Additionally, more than one-third of Erasmus students who did a job placement abroad were hired or offered a position by their host company. The researchers also noted that Erasmus students are half as likely to experience long-term unemployment compared to those that do not go abroad [19]. After the project, the training programme will hopefully be implemented as part of Doctoral Schools at all participating universities.

5 Conclusion

To sum up, employers are aware of many benefits that employees with strong soft skills bring to the work environment, and consider it during the recruiting process. Many studies have been done in previous years and, as some noted, findings can also be difficult to interpret due to the language barrier, such as the use of synonyms when defining the skills. Nevertheless, as Doctoral Schools are intended to prepare students for work environments, soft skills training should become part of their curriculum to improve the employability of doctorates further.

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