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Employability Skills – Rethink Your Learning

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Abstract

Technology has been responsible for the digitisation and automation of routine jobs. With the advent of Artificial Intelligence (AI) this trend is likely to continue into more technical or sophisticated work. This gives rise to the question; how can graduates and employees ensure they have a job in the future? A precondition for understanding lifelong learning is to clarify what kind of learning may take place throughout an employee’s career. This paper explores the concepts of employability skills, soft skills, and 21st century skills in an effort to identify where particularly human skills will still be essential. After reviewing research in the area of employability skills, mainly from a labour market perspective, the paper goes on to contextualise the training and development of employability skills in higher education. Following that, reasons for developing and introducing employability skills modules in higher education are discussed and based on the literature, recommendations are made for higher education institutions, tutors, students, and employees.

Keywords: knowledge, skills, competencies, employability skills, higher education, career development

1. Introduction

With computerisation present in all walks of life and AI finding its way into more and more areas, education needs to redefine its role, purpose and means. This is especially true of higher education where students’ entry into the labour market is imminent and where applicants’ decisions often depend on graduates’ rate of employment.

This article is a theoretical research paper based on a review of the relevant literature. It aims to give an overview of research on employability skills while presenting some examples of skills development programmes in higher education. For a wider understanding, it is also important to situate employability skills in the framework of declarative and non-declarative knowledge. The article wishes to highlight the importance of skills and competence development in higher education institutions (HEIs) in the 21st century with a special focus on employability skills and communication skills.
Before the term employability skills is defined, it is important to explain some concepts which are often used in relation to learning. This is in accordance with the proposition made by Cole and Donald (2022, p. 4) that the narrative needs to shift “towards an understanding and language for learning that embraces a more diverse range of outcomes for graduates”.

The most down-to-earth and widely used term is knowledge, which refers to familiarity with theoretical, factual, or lexical information. For example, a learner who has completed secondary education is expected to know that the capital of Australia is Canberra and not Sydney. Knowledge can be acquired in many ways. The learner might read, hear, or watch a video about Canberra and, most of all, needs to be able to remember and retrieve the name of the city. Knowing the capital of a country is a simple example of knowledge. The European Qualifications Framework (EQF) distinguishes eight different levels of knowledge, the highest level of which includes “knowledge at the most advanced frontier of a field of work or study, and at the interface between fields” (European Commission, 2018).

In comparison with knowledge, the term skills refers to the ability to do something. For instance, language programmes often include conversation classes where learners develop their speaking and social skills. Similarly, the same skills may be easily observed at a birthday party. For some, their skills develop naturally and intuitively as they grow older, one example being interpersonal skills. Other skills, especially specific skills, such as the ability to use an application or the ability to conduct online research, can be improved with practice. In the context of the EQF, skills are labelled as cognitive and technical (European Commission, 2018). The Organisation for Economic Co-operation and Development (OECD) Learning Compass 2030 distinguishes between three different types of skills: 1) cognitive and metacognitive skills; 2) social and emotional skills; and 3) physical and practical skills (OECD, 2019).

The term competence or competencies, however, are broader terms. Both are used to mean the ability to do something well. Foreign language competence, for example, is often measured with complex language examinations where different knowledge and skills are assessed, very often in an integrated manner, for instance, mediation, vocabulary, or presentation skills within an oral assessment task. Another example of competencies could be intercultural communication competence, which clearly involves the knowledge and awareness of cultural differences and the adequate skills and behaviour to effectively interact with people who belong to different cultures. According to Vitello and Geatorex (2022), “competence is the ability to integrate and apply contextually-appropriate knowledge, skills and psychosocial factors (e.g., beliefs, attitudes, values and motivations) to consistently perform successfully within a specified domain”. To cite another, more compact and more recently published definition, competence is “an intricate component of knowledge, skills, attitudes, and values” (Crosta et al., 2023, p. 41).

In psychology, two types of knowledge have been the focus ever since Aristotle described technical knowledge and practical knowledge (Pléh, 2001). By and large, two kinds of knowledge are defined. Declarative knowledge is the knowledge of lexical information, the learning of which is typically school-based. For centuries, the focus was on the retention and storage of information, which explains why studies on how memory works and the use of mnemonic techniques dominated the field. Non-declarative knowledge, which is the streetwise application of knowledge, however, is seen as skills and habits (Kump et al., 2015), which are typically shaped by experience. Access to information in the 21st century is far easier than was
traditionally, therefore, more attention could be paid to skills and competence development both in formal and informal learning contexts. (For a more comprehensive overview of knowledge in knowledge management literature, see Jakubik, 2007.)

In Figure 1, knowledge, skills, and competencies have been illustrated in the context of declarative and non-declarative knowledge. The underlying belief is that an employee would need to activate all the domains of their competencies in order to solve complex work problems.

**Figure 1. Domains of Competencies**

![Diagram showing domains of competencies]

Source: Own compilation

For the purposes of this paper, it is important to clarify the notions of employability skills, soft skills, and 21st century skills as these are very often used synonymously. The term employability skills has been used for long and is seen as “job-readiness skills” (Robinson, 2000, p.1) that help job-seekers find jobs. These skills naturally vary from job to job and field to field. Teachers, doctors, and sales managers, for example, all need presentation and persuasion skills, but teachers and doctors need more empathy than a salesman who will need to sound much more convincing. Employers, too, may make their expectations position-specific by looking for a certain skill set when advertising a position in a team where certain skills are missing. The skills requirements of jobs may also change over time, for example, employees may need more digital skills as the technological context develops. Employability, in the author’s understanding, therefore, is an amorphous and elastic notion.

When it comes to the notion of soft skills, the easiest way to define it is to state what it is not. Very often soft skills surface in comparison with hard skills. Hard skills are skills that we need to do in order to complete a task. For example, a hard skill would be computer programming. In contrast, soft skills include professionalism or work ethic, oral and written communication, teamwork and collaboration skills, critical thinking, or problem-solving skills (US Department of Labor, n.d.). Soft skills could include distinct skills, from dressing properly through speaking politely to leading others. Many of the soft skills belong to the umbrella term of interpersonal or people skills, but not all. Empathy, conflict resolution, and mediating, for instance, do, while critical thinking and problem-solving do not.
Twenty-first century skills, on the other hand, are skills that are not as much work-related as employability skills or soft skills may be. This is a buzzword in education, especially at primary and secondary school levels. Most typically, 21st century skills include four skills: 1) critical thinking, 2) communication, 3) collaboration, and 4) creativity (Batelle for Kids, n.d.). The assumption is that children in the 21st century need a set of different skills from earlier generations because the world has fundamentally changed: it is now a “digitally and globally interconnected world” (Batelle for Kids, 2019). The four skills that belong here are usually supplemented by other skills, such as self-direction, global awareness, innovation, and social and intercultural skills, so it is easy to see why the three terms are so intermingled. In Figure 2, an example of the label of communication skills can be seen in the intersection of the three skills groups, demonstrating the overlap between the three concepts.

Many other terms are used in educational contexts that are related to employability skills, soft skills, and 21st century skills, for instance, applied skills, interdisciplinary skills, or transferable skills. For the purposes of this article, the term employability skills is used primarily, but when cited authors use the terms soft skills or 21st century skills, the original terminology is kept.

In what follows, the first research in the area of employability skills is reviewed, mainly from a labour market point of view. Then, the paper goes on to contextualise the development of employability skills in higher education. Next, the justification for developing and introducing employability skills modules in higher education is discussed. Finally, some recommendations are made for students, tutors, and HEIs.

2. Research on Employability Skills - What Employers Demand

The theme of employability skills was identified as the third most important one in the area of career research by Akkermans and Kubasch following career success and career decision making (2017). Employability skills, in other words, “job-readiness skills” (Robinson, 2000, p.1) help young graduates find jobs, fit into their work context, and keep their jobs. The present article may be useful for students, graduates, and professionals wishing to improve their employability since a more recent definition of employability skills emphasises that
employability skills also include the skills needed at later stages of their careers, for instance, in order to get promoted, face change, or change jobs (Fajaryati et al., 2020). Since HEIs cannot promise to prepare graduates for their entire career, students are regularly encouraged to become lifelong learners because tutors are aware that in the era of unstoppable technological development and volatile labour market trends, lifelong learners and innovators are needed on the job market. When students transition into the workforce, again, there are various training programmes with the same aim: to update graduates’ knowledge or widen their skill sets (Hagel III, 2021). A daunting finding of the World Economic Forum (WEF) is that 60% of workers will require training before 2027 (WEF, 2023a) because of the restructuring of available jobs. Let us look at what exactly employability skills consist of.

In a large-scale interview study in the United Kingdom in 2015, researchers found that employers believed complex analytical skills, time management, management and leadership, sales, and customer handling skills were the skills that employees lacked (Vivian et al., 2018). In fact, a more recent publication says that “analytical thinking is considered a core skill by more companies than any other skill” (WEF, 2023a). More specifically, in the business sector, for example, Vivian et al. found that employees lacked the ability to manage their own time and prioritise their own tasks, while in the financial sector, they lacked the ability to persuade or influence others (Vivian et al., 2018, p.160). In addition to job-specific skills, the most missing skills identified were planning and organisation, customer handling, oral communication, problem-solving, and written communication (Vivian et al., 2018, p.161).

In the United States (US) context, after collecting data from 1,251 job recruiters with MBA recruitment experience at 547 companies, Bloomberg identified the most looked-for skills in the financial sector; for example, the two “most desired but least available skills” were communication skills and strategic thinking (Levy & Cannon, 2016). The sweet spot is the name given to the skills that are not available but in high demand, including communication skills, strategic thinking, leadership skills, and creative problem-solving for all industries. In another 2017 US study, having studied almost 700,000 online job ads researchers found that for the skilled technical workforce, the top eight skills were communication skills, planning, writing, problem-solving, organisation skills, research skills, using MS Office and MS Excel (Lancaster et al., 2019, p. 11).

As part of a European research project, through interviews and online surveys with labour market actors and academics in five countries (Bulgaria, the Czech Republic, Italy, Spain, and Turkey), Crosta et al. (2023) found that the two most important employability skills were communication skills and collaboration with some differences between the countries. However, with the help of questionnaires, they also identified the lack of competency-based assessment in tertiary education: 63% of the 156 higher education students from Bulgaria, the Czech Republic, Spain, and Turkey stated that they had never been evaluated using competencies as a framework (Crosta et al., 2023, p. 48). It was particularly salient in the qualitative summary of expert responses in Spain that “higher education tends to assess students based on content rather than competencies” (Crosta et al., 2023, p. 46) which is not an uncommon feature of programmes in HEIs in Europe. In fact, Crosta et al. found that 21st century skills surface in many educational documents in the above five countries, but “education systems are lacking in terms of teaching these skills and there is still a long way to go” in terms of implementation (Crosta et al., 2023, p. 53).
In a review article, Fajaryati et al. (2020) concluded that the skills most often found to be missing in young employees by relevant studies are problem-solving skills, communication, teamwork, and IT skills. In an earlier review article, Suleman (2016, p. 173) stated that “there is no one best way to examine the set of skills that makes a graduate more employable”, while acknowledging that there was consensus on the importance of interpersonal skills, communication and team-work skills, perhaps because these are easily observable.

In addition to these specific employability skills, Römgens et al. (2020), while reviewing higher education and workplace learning literature on employability, also mention career management skills, movement capital, and career competencies, which seem to be skills that employees need to manage their skills development and learning in their active years. Indeed, with constant changes concerning technology and the labour market, one has to take ownership of and proactively manage their own career, especially in the context of a protean career (and not a traditional one) in which the individual needs to “repackage…[their] knowledge, skills, and abilities in line with the changing work environment to remain employable” (Donald et al., 2019, p. 602).

What can be concluded from the literature review above is that in addition to subject content, the importance of skills and competencies cannot be ignored. Communication skills, analytical skills, and strategic thinking and planning seem to emerge as central themes. Naturally, the above sources examine the question of being and remaining employable from a labour market point of view. Academics may find this approach overly pragmatic, practical, and rational since the approach mainly focuses on the role of education in the ecosystem of the economy (Barnett, 2018, cited in Jakubik et al., 2023). This approach may disregard important ecosystems that higher education is also part of, for example, the ecosystem of persons or that of culture (Barnett, 2018, cited in Jakubik et al., 2023). The labour-market-oriented approach may also overlook vital concepts in education, for example, the power of intrinsic motivation, or the importance attached to optimal learning situations (Csíkszentmihályi, 2008).

3. Employability Skills in Higher Education

The European Union (EU) expects its members to have educated populations, although education is left in the hands of member states in accordance with the subsidiarity principle. By 2025, the EU aims to establish the European Education Area and by 2030 member states are expected to increase the rate of 30 to 34-year-olds with higher education qualifications to 50%. In 2020, the rate stood at 40.3% (European Parliament, n.d.). According to the European Commission, “in the period up to 2025, half of all jobs are projected to require high-level qualifications” (2017). Therefore, the EU’s higher education agenda prioritises the following: 1) align skills development in higher education with the needs of the labour market; 2) make higher education widely accessible and more inclusive and increase its societal outreach; 3) boost the innovation capacity of higher education; 4) increase the effectiveness and efficiency of higher education (European Parliament, n.d.). These projections and directives place responsibility on HEIs to develop programmes and frameworks that assist their students in developing skill sets that make them employable.

The commercialisation and marketization of HEIs (Jakubik et al., 2023) also force them, especially private ones, to compete for applicants and their parents’ support. Not only do the institutions wish to offer attractive programmes, but they also need to ensure and demonstrate that their graduates are successful in the labour market. Their graduates’ success greatly helps
them in their own performance: the sooner and the more graduates find jobs, the more and the better applicants they will be able to recruit.

Many HEIs offer their students career advice either at the institution or the faculty level to enhance their employability. This might include mentoring, coaching, liaising with employers, job fairs, or offering workshops or individual consultations on various aspects of applying for jobs. Using case studies in class or employing industry-experienced lecturing staff (Jakubik et al., 2023) also improves students’ chances of finding a job later. However, most employability skills, similarly to all skills, take time to develop, so programmes that include longer-term skills development modules, internships, or work-based projects may be more effective.

Although the focus of universities is traditionally on science, that is, subject-matter knowledge, some have started to measure, monitor, and improve their students’ employability skills. How this is done is not yet in line with the recommendations of the OECD, which states that these skills would need to be tested with the same tools across different institutions (2013). Considering the different competence levels and combinations of skills that graduates in different fields might need, the uniform testing of the relevant skills does not seem feasible. Skills development is also very often intertwined with the subject matter, for example, both doctors and businesspeople need communication skills, but the contexts in which they use these skills are very different. In what follows, three recent examples will be presented where the HEI attempted to incorporate the teaching of employability skills into their curriculum.

The University of Turin introduced a complex soft skills development programme called the Passport Project to promote academic success and work readiness. The project was based on an online platform for the evaluation and enhancement of soft skills; workshops for first-year students; a “Fall School” for outstanding graduates focused on soft skills for employability; and the introduction of soft skills development for faculty members (Emanuel et al., 2021). The project focussed on three areas: 1) task orientation (e.g., making decisions and organising time); 2) self-awareness (e.g., the ability to manage and regulate emotions); 3) motivational area (e.g., coping with stressful events). The responses of a control group of 187 students and an intervention group of 355 students to a skills-specific self-reported questionnaire revealed that the participants who had completed the course presented a statistically significant increase in all the soft skills of the model except for one.

In a project aimed at data driven course development at the International Business School (IBS) in Hungary, approximately 100,000 job advertisements were studied: the full 2015-16 job advertisement database of Professon.hu. Data came from job adverts for positions that required university or college degrees (The Upskill Programme Handbook, 2022). The most important requirements identified in job postings were communication skills, problem-solving skills, and the use of the MS Office Suite. Precision, writing skills, teamwork skills, and the ability to work independently were also looked for by employers.

Therefore, six innovative employability skills modules were introduced for second year business and management Bachelor programme students in IBS (See also Soproni, 2023). The six modules were the following: written communication skills, oral communication skills, quantitative skills, analytical skills, organisation, and information technology (IT) skills. Similarly to a model discussed by Fajaryati et al. (2020, p. 600), IBS students are given personalised training based on their specific needs. For example, an oral communication skills score is computed for each student on the basis of three first year subjects and they are allocated
to an oral communication group of adequate level for them specifically. Given the fact that IBS has a diverse student body and its students are likely to work in various contexts, the oral communication skills module also includes familiarisation with cultural differences.

One Finnish Master’s programme embraced work-based learning (WBL) by requiring a Master’s thesis that is based on a work development project (Jakubik, 2020). The institution is the University of Applied Sciences (UAS), which puts heavy emphasis on “a more practical education, which aims to respond to the needs of the labour market” (p. 434). The work development project requires the student, the university-based academic, and the work-based tutor to form a learning community, to interact and solve a real-life business problem. In this case study, evidence was found through the analysis of keywords from over 100 Master’s students and from 91 business advisors that the students had expected to develop their skills during the work development project while business advisors had thought the students’ competencies would develop the most. The author emphasises that the WBL project contributed to the development of students’ workplace skills: “In this collaborative ecosystem of academia and business, the students’ leadership, communication, problem-solving, networking and teamworking skills” developed (Jakubik, 2020, p. 443).

The importance of skills in general is further demonstrated by the fact that the WEF propagates a skills-first approach that “emphasizes a person’s skills and competencies – rather than degrees, job histories or job titles”. This approach would exclude HEIs, but the WEF estimates that this way 100 million people could be recruited in many economies around the world where there are labour shortages at the moment (WEF, 2023c).


A document published by the OECD, an international organisation whose members include all the countries mentioned above with the exception of Bulgaria, a candidate for accession (OECD, n.d.), emphasised the importance of cognitive, metacognitive (e.g., learning to learn), social, emotional (e.g., empathy), practical, and physical skills (e.g., using communication technology devices) as a result of the changes expected in the labour market (OECD, 2019). The OECD’s prediction was that more and more routine jobs would be done by computers and technological devices, especially with the help of artificial intelligence (AI), and more and more non-routine jobs would be created for humans with highly developed interpersonal and emotional skills as well as creativity (OECD, 2019).

Indeed, similar projections are made by other organisations. The WEF (2023, p. 5), for instance, stated that “technology adoption will remain a key driver of business transformation in the next five years”. Labour market churn is expected to be around 23% between 2023 and 2027, which means that 83 million jobs are predicted to be lost and 69 million are to be created, thus, a quarter of the workforce will have to be reallocated (WEF, 2023a, p. 28). The reasons cited are advancing technology adoption and increasing digitisation (WEF, 2023b).

Therefore, the importance of digital skills is and was forecast to increase (OECD, 2019), with the warning that digital skills are also the most vulnerable to becoming obsolete, which highlights the value of lifelong learning. This view is shared by many, for example, Laukkonen et al. (2018) believe that in comparison with machines and AI tools, the greatest asset of humans may be their adaptability to change through learning in today’s volatile, uncertain, complex, and ambiguous (VUCA) world. According to the WEF (2023, p. 5), “more than 75% of
companies are looking to adopt these [AI] technologies in the next five years”, which means more traditional jobs are likely to be done by AI-powered tools and more employees with AI handling skills will be needed.

Fellows also argued that the employability agenda cannot be ignored. In his view, the employability skills described earlier need to be incorporated into higher education curricula not only because capitalism demands it. He asserts that universities cannot disregard the socioeconomic reality that students will enter as graduates, but also, it is the teaching of the very same skills that allow educators to develop students’ social awareness and sense of civic autonomy. He stressed that employability skills development creates opportunities where “competence and character development lend themselves as readily to the development of critical social engagement as to professional efficacy” (Fellows, 2023, p. 10).

A further argument in favour of fostering employability skills in HEIs could be their transferable nature. Not only are these skills relevant in the 21st century workplace, but they are also a good investment since they are transferable to other sectors and technologies (OECD, 2016). With younger employees spending less time than before at one given workplace in the European Union (Bussolo et al., 2022), the likelihood that graduates will make use of these transferable job-readiness skills is high.

5. Conclusion

With the instant availability of information on the internet, the presence of computer-assisted ways of working and AI-powered tools, educational institutions have to redesign their programmes and students have to reframe their learning. The skills desired by employers, such as problem-solving skills, leadership skills, analytical skills, communication skills, and organisation skills, have to be better incorporated into training programmes without compromising subject-matter knowledge if graduates are to easily transition into the labour market.

One direction that HEIs could take is increasing collaboration with industrial actors to co-develop and co-deliver skills-based training (OECD, 2016; WEF, 2023c) in graduate, postgraduate, and on-the-job programmes. The ideal programme needs to balance the short-term requirements of higher education with the long-term goals of preparing students for a protean career. Needless to say, HEIs need to be responsive to the ever-changing skills demands of the labour market. HEIs in different fields need to make informed choices as to what programmes and teaching methodologies for employability they apply and “adapt their employability tactics” (Jakubik et al., 2023, p. 22).

In a similar vein, tutors need to keep up-to-date with labour market trends and better integrate skills and competence development and competency-based assessment into their classes. Tutors themselves might benefit from skills training, as was the case in the Passport Project in Turin (Emanuel et al., 2021). Self-development could better prepare tutors to assist their students in adapting to a world in which VUCA situations are likely to be more frequent.

The future may demand the use of soft and hard skills that we have little knowledge about at the moment. The focus is likely to be on skills in which employees can surpass machines and AI, for example, in interpersonal and emotional skills. In addition, students and employees also
have to take more responsibility for their own learning (Akkermans & Kubasch, 2017) and develop the sweet spot of their present and future employers if they wish to consciously influence the path their careers take.

Taking ownership of their careers is a skill that students cannot learn from their parents, who lived in a different era and did not have to prepare for a protean career. Taking ownership of one’s career is primarily the individual’s responsibility. However, it is the responsibility of educational institutions as well to assist their students and to embrace and continually update their employability skills training so that graduates can become “individuals who are tolerant of uncertainty” and who are ready to engage with lifelong learning and “see VUCA situations as opportunities for learning” (Laukkonen et al., 2018, p. 17).

As far as students are concerned, a prerequisite for making adequate decisions about their own learning is to know which area of their knowledge, skills, or competencies needs to be developed. Therefore, knowing oneself, knowing what forms of knowledge there are, and monitoring and evaluating one’s own learning are vital. Students need to be aware that learning is “not a homogeneous activity: it comes in many different shapes and sizes” (Claxton, 1999, p. 5). Each learning opportunity is also a step toward becoming a better learner, or as Claxton (1999, p. 9) puts it, “learning to learn is the lifelong shadow of learning itself”.

Non-declarative knowledge is not only important because employers demand recruits to possess different constituents of it, for example, organisation skills or analytical skills. Skills, especially communication skills are also important since they enhance the informal or “osmosis learning” (Jones, 2021) that is going on at the workplace where “knowledge is co-created by individuals … through continuous verbal and non-verbal communication… [and] mainly through co-experience” (Kump et al., 2015). Through the cooperation and communication of different professionals, more interdisciplinary learning could be going on. This way, a new way of looking at learning could focus on innovation, especially in the workplace, where “real learning — the creation of new knowledge, not just the handoff of existing knowledge” (Hagel III, 2021) would be taking place.

References


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