

SOFT SKILLS, EDUCATION AND EMPLOYABILITY: CHALLENGES AND OPPORTUNITIES IN THE 21ST CENTURY

Author(s) / Szerző(k):

Hüber, Gabriella Margit (Drs)
University of Pécs (Hungary)

E-mail:

hubergabriellamargit@gmail.com

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Abstract

This study examines the role of soft skills in the context of twenty-first-century labour market expectations and the challenges faced by education. Drawing on Hungarian and international literature, it analyses the competencies most valued by employers and explores the competency gap between education and labour market demands. The results indicate that communication, collaboration, adaptability, and problem-solving are essential competencies that require deliberate educational development. The paper highlights the importance of systematically integrating soft skill development into higher education curricula in order to enhance graduate employability and support successful transitions from education to employment.

Keywords: soft skills, competency development, education, employability

Discipline: pedagogy

Absztrakt*SOFT SKILLEK ÉS FOGLALKOZTATHATÓSÁG:
KIHÍVÁSOK ÉS LEHETŐSÉGEK A 21. SZÁZADBAN*

A tanulmány a soft skillek szerepét vizsgálja a 21. századi munkaerőpiaci elvárások és az oktatás kihívásainak összefüggésében. Hazai és nemzetközi szakirodalmak áttekintésével elemzi a munkáltatók által leginkább elvárt kompetenciákat, valamint feltárja az oktatás és a munkaerőpiac közötti kompetenciahiány jelenségét. Az eredmények rámutatnak, hogy a kommunikáció, az együttműködés, az alkalmazkodóképesség és a problémamegoldás fejlesztése kiemelt pedagógiai feladat. A tanulmány hangsúlyozza a soft skillek tudatos és strukturált integrációjának szükségességét a különböző képzetekben, mely elengedhetetlen a hallgatók foglalkoztathatóságának és sikeres munkaerőpiaci beilleszkedésének támogatása érdekében.

Kulcsszavak: soft skillek, kompetenciafejlesztés, oktatás, foglalkoztathatóság

Diszciplína: neveléstudomány

Globalization, the accelerating pace of technological development, and the continuous transformation of the socio-economic environment have significantly changed the functioning of the labour market. Today, employers expect not only a high level of professional knowledge but also competencies that enable individuals to adapt to change, collaborate effectively, and manage complex problems successfully. This poses new challenges for educational systems as well, as students need to be equipped with skills that will support their long-term success in the labour market.

In the academic literature, the concept of soft skills appears in various interpretations; however, it is generally accepted that it encompasses personal, social, and behavioural competencies that determine how individuals relate to their

environment and cooperate with others. One group of these skills consists of intrapersonal competencies, which are related to self-regulation, self-management, and personal effectiveness. These include, for example, time management, stress management, and creative thinking. The second group comprises interpersonal skills, which support the successful management of social relationships, such as communication, motivation, and negotiation skills (Galla, 2021).

A considerable body of research has indicates that educational systems are often unable to fully meet the expectations of the modern labour market. According to Hungarian literature, the educational system primarily emphasizes performance and the development of cognitive abilities, while the development of non-cognitive competencies receives less attention

(Németh, 2020; Szepesi & Herczeg, 2017; Bihari, 2022). Consequently, it has become increasingly important to examine the extent to which educational institutions can respond to employers' growing expectations, which have been confirmed by numerous international studies (Horváth-Csikós & Juhász, 2021).

The investigation of labour market competency expectations has become a prominent area of research in recent years. The aim of the present study is to review the available literature in order to identify the soft skills considered most important by employers and to explore their significance in terms of employability, education, and labour market success.

Literature Review

Soft Skills Development in Education: Responding To Labour Market Challenges

One of the most comprehensive reviews of the topic was conducted by Christian Villegas in 2024. In his research, He analysed publications indexed in the Scopus database between 2013 and 2023 that focused on the relationship between soft skills and employability. The systematic review examined 45 English-language studies, allowing the author to map the most important research themes within the field. VOSviewer software was used for the analysis, enabling the exami-

nation of keyword occurrences and their interrelationships.

The results demonstrated a continuous increase in the number of studies investigating the relationship between soft skills and employability over the past decade. The most intensive period was between 2017 and 2021, during which an average of six new studies were published annually on the topic. Villegas identified four major research streams. The first group examines opportunities for student soft skill development, with particular emphasis on experiential learning and self-reflection. The second research stream analyses employer expectations, according to which communication, collaboration, leadership, and problem-solving skills are highly valued alongside professional expertise. The third area focuses on identifying key soft skills, among which creativity, critical thinking, emotional intelligence, and adaptability appear consistently. Finally, the fourth group addresses methodological issues related to measuring employability.

The study concluded that employability is a complex phenomenon determined by multiple factors, and its precise definition and measurement continue to present challenges. Nevertheless, there is broad consensus in the literature that soft skills play a crucial role in workplace success. Employers increasingly expect higher education institutions to address the development of these competencies in a conscious and systematic manner, as such skills enable effective collaboration, adaptation

to change, and the successful management of workplace challenges. At the same time, the author highlights that a considerable gap remains between labour market demands and the training provided by higher education institutions. To reduce this discrepancy, greater emphasis should be placed on interactive teaching methods, project-based learning, and experiential learning opportunities connected to real work environments. Internships, industry collaborations, and programmes aimed at developing communication and leadership skills may all contribute to preparing students more effectively for entering the world of work.

The role of soft skills has received increasing attention within STEM (Science, Technology, Engineering and Mathematics) fields in recent years. Although engineering and science programmes have traditionally focused on the acquisition of professional and technical knowledge, labour market changes have made it increasingly evident that technical expertise alone is no longer sufficient for a successful career. Digitalization, automation, and rapid technological advancement have created a work environment in which communication, collaboration, and adaptability are at least as important as professional competencies.

This issue was examined by Holik, Sanda, and Molnár (2023), whose research focused on the importance and development opportunities of engineering students' soft skills. The study was based on the assumption that expectations towards

engineering professionals have changed significantly and that employers increasingly seek employees who possess not only technical expertise but also highly developed personal and interpersonal competencies. The study, conducted in 2022, involved 208 engineering students who participated in an online questionnaire survey. The aim of the research was to explore perceptions regarding the importance of various soft skills and students' evaluations of their own competencies. According to the results, respondents considered problem-solving ability, reliability, resilience, communication skills, and independent working skills to be the most important competencies. Based on self-assessments, students generally perceived themselves as responsible and reliable. However, they also identified several directions requiring further development. Deficiencies were particularly evident in relation to self-confidence, stress management, and assertiveness. According to the authors, these areas deserve special attention, as they are closely linked to successful professional role performance, leadership potential, and the effective management of workplace challenges.

The literature reviewed within the study also suggests that higher education continues to prioritize the development of professional knowledge, while employers frequently identify communication, leadership, and teamwork skills as areas of weakness among recent graduates. This finding indicates the persistence of a significant discrepancy between educational

outcomes and labour market expectations. To improve the situation, the authors propose several developmental directions. They emphasize the importance of integrating courses and training programmes into engineering curricula that focus on argumentation and negotiation skills, time management, stress management, self-awareness, and career planning. Furthermore, they highlight the need to develop conflict management and leadership competencies.

According to the study, student-centred teaching methods are particularly effective in achieving these objectives. Project-based learning, cooperative problem-solving, and experiential educational approaches provide opportunities for students to practice and develop the competencies they will need in their future professional careers within authentic contexts.

The study ultimately concludes that the development of soft skills in engineering education serves not only to enhance labour market competitiveness but also constitutes a fundamental component of students' personal development. Future professionals will require not only advanced technical knowledge but also self-reflection, adaptability, effective communication, and collaborative skills. Consequently, higher education programmes should strive to achieve a balanced integration of professional and personal competency development throughout the educational process (Holik, Sanda, & Molnár, 2023).

Another study examined the issue of soft skill development by focusing on university students' competency levels, developmental needs, and possibilities of institutional support. The aim of the investigation was to explore the extent to which students feel prepared to meet labour market expectations and to identify the role played by the higher education environment in this process.

The research was conducted through a questionnaire survey involving students from several higher education institutions. The competencies examined included communication skills, teamwork, problem-solving, leadership competencies, time management, critical thinking, and emotional intelligence, all of which are considered highly relevant to employability.

The results indicated that the majority of participants were aware of the importance of these competencies; however, they generally evaluated their own proficiency levels as moderate. The most significant deficiencies were identified in the areas of self-confidence, decision-making ability, and time management. This finding suggests that many students recognize the need to improve competencies that directly influence their employability and professional autonomy. One of the study's most important findings was that students did not primarily associate the development of soft skills with formal university education. Instead, they believed that such competencies are developed mainly through extracurricular activities, partici-

pation in student organizations, volunteer work, and practical work experience. This observation implies that soft skill development in higher education often occurs indirectly and is rarely integrated as a consciously designed curricular element. The authors argue that this situation may present long-term challenges, as students do not necessarily possess the tools required to develop these competencies independently and systematically. An additional difficulty lies in the absence of a shared understanding between educators and students regarding the most appropriate methods and frameworks for developing soft skills. Based on their findings, the authors advocate a more deliberate and structured integration of soft skill development into higher education programmes. This should include strengthening interactive and reflective learning approaches, regularly incorporating communication training, role-playing activities, and group problem-solving exercises, as well as creating experiential learning environments. Furthermore, they emphasize the importance of continuous feedback and self-reflection, both of which facilitate the conscious development and internalization of competencies.

Overall, the study concluded that soft skill development still does not receive the level of emphasis within higher education that would be justified by the expectations of students and employers alike. Consequently, one of the most important future challenges will be the creation of

educational environments that consciously support the development of personal and interpersonal competencies alongside the transmission of professional knowledge, thereby contributing to students' holistic development and labour market success (Otermans, Aditya, & Pereira, 2023).

The growing importance of soft skills has led many researchers to argue that the role of higher education institutions cannot be limited to the transmission of professional knowledge alone. Instead, universities must take an active role in developing the personal and interpersonal competencies that are essential for successful labour market participation. According to Dombi (2019), higher education institutions should make deliberate efforts to ensure that soft skill development occupies a prominent place within curricula and educational programmes. The author argues that the transmission of theoretical knowledge alone is insufficient for a successful professional career; therefore, educational methods that support the development of communication, collaboration, and self-management competencies are also required.

Areas identified as particularly important for development include communication skills, negotiation techniques, self-confidence, self-advocacy, and the ability to establish and maintain productive interpersonal relationships. Tobin (2006) emphasizes that these competencies contribute not only to workplace effectiveness but also to individual well-being and professional satisfaction. The effectiveness

of educational programmes depends largely on clearly defined learning outcomes that specify the knowledge, skills, and attitudes students are expected to acquire. Educational processes are most successful when pedagogical methods are aligned with the diverse needs and learning characteristics of students. Consequently, soft skill development should not be regarded as the responsibility of a single course or subject but rather as a perspective that permeates the entire educational process. Traditional educational approaches, such as lectures and seminars, continue to play an important role in knowledge transmission. However, they are often insufficient for developing soft skills. To ensure practical applicability, it is necessary to create learning situations that encourage active participation, experiential learning, and reflective thinking. One potential solution involves integrating non-formal pedagogical methods into higher education, including training sessions, workshops, project-based assignments, and simulation exercises. Such approaches provide opportunities for students to practice and strengthen the competencies that are increasingly valued by employers. In today's labour market, recent graduates often possess similar qualifications and comparable levels of professional knowledge. As a result, employers increasingly rely on competencies that distinguish candidates from one another during recruitment processes. Well-developed interpersonal skills, effective communication, teamwork abiliti-

es, and independent problem-solving capabilities can provide substantial competitive advantages and significantly improve employment prospects.

Consequently, educational programmes that combine professional knowledge development with the conscious enhancement of personal competencies are becoming increasingly valuable. A common characteristic of these programmes is their emphasis on active participation, practical experience, and continuous self-reflection throughout the learning process.

The literature also highlights the importance of self-awareness in soft skill development. Self-reflection enables individuals to identify both their strengths and areas requiring improvement, thereby serving as one of the fundamental prerequisites for personal growth. According to Seetha (2013), competency development occurs most effectively in situations where participants can acquire real-life experiences while collaborating with others and reflecting on those experiences.

Overall, it can be concluded that the development of soft skills has become a strategic priority within contemporary education. Changing labour market expectations and research findings alike indicate that the combined development of professional knowledge and personal competencies provides the strongest foundation for successful labour market integration. To achieve this objective, educational institutions must create learning environments that consciously support the development of communication, col-

laboration, adaptability, and self-management alongside the transmission of disciplinary knowledge.

Discussion

The literature reviewed in this study clearly demonstrates that soft skills have become essential determinants of employability and professional success in contemporary labour markets. Across both international and Hungarian studies, employers consistently emphasize the importance of competencies that facilitate effective communication, collaboration, problem-solving, adaptability, and lifelong learning.

The findings indicate that soft skills should no longer be viewed as supplementary attributes that merely complement professional expertise. Rather, they have become fundamental requirements for successful participation in increasingly complex and dynamic work environments. Rapid technological advancement, digital transformation, globalization, and evolving organizational structures have significantly increased the value of competencies that enable individuals to respond effectively to change and uncertainty.

At the same time, the reviewed literature reveals a persistent discrepancy between labour market expectations and educational outcomes. While employers increasingly emphasize the importance of soft skills, educational institutions often continue to prioritize the development of professional and cognitive knowledge. As

a result, many graduates enter the labour market with adequate technical expertise but insufficiently developed personal and interpersonal competencies.

Particularly noteworthy are the recurring developmental needs identified in student self-assessments. Across multiple studies, students reported deficiencies in self-confidence, assertiveness, stress management, decision-making, and time management. These competencies are closely associated with workplace performance, career progression, leadership potential, and professional satisfaction. Consequently, their development should be considered a priority not only from an economic perspective but also from the perspective of personal development and well-being.

The literature further suggests that soft skill development is most effective when it is integrated throughout the educational process rather than delivered as a separate curricular component. Interactive, experiential, and student-centred pedagogical approaches, including project-based learning, cooperative learning, simulations, training programmes, and reflective learning techniques, appear particularly effective in fostering competency development.

Moreover, self-reflection, continuous feedback, and authentic workplace experiences play crucial roles in facilitating the practical application and internalization of these competencies. Educational environments that provide opportunities for active participation and experiential learning are therefore better

positioned to support students' professional and personal growth.

These findings demonstrate that educational policy and institutional development efforts should increasingly focus on competency-oriented curriculum design. The development of professional expertise and soft skills should not be viewed as competing priorities but rather as complementary dimensions of higher education. Future graduates must possess a comprehensive competency profile that combines advanced disciplinary knowledge with the interpersonal and intrapersonal skills necessary for effective functioning in modern workplaces.

Conclusion

Based on the reviewed literature, it can be clearly concluded that soft skills have become decisive factors in employability and professional effectiveness within contemporary labour markets. The studies examined consistently demonstrate that employers attach increasing importance to personal and interpersonal competencies alongside professional expertise. Skills such as effective communication, teamwork, problem-solving, adaptability, resilience, and flexibility are increasingly regarded as essential prerequisites for workplace success.

The rapid pace of technological development, digitalization, and ongoing transformations in the world of work have elevated these competencies from desirable attributes to fundamental requirements for employability. As organizations

face increasingly complex challenges and rapidly changing environments, employees are expected not only to possess technical expertise but also to demonstrate the ability to collaborate, adapt, learn continuously, and manage uncertainty effectively.

The reviewed international and Hungarian studies also highlight a significant gap between labour market expectations and educational outcomes. While employers increasingly emphasize the importance of soft skills, many educational institutions continue to prioritize the development of professional and cognitive knowledge. Consequently, graduates often enter the labour market with adequate technical qualifications but without sufficient preparation in several key personal and interpersonal competencies.

Particularly important are the recurring developmental needs identified among students, including self-confidence, assertiveness, stress management, decision-making, and time management. These competencies are closely related to workplace performance, career development, and professional well-being, making their development essential from both economic and personal perspectives.

The literature further suggests that soft skill development is most effective when it is integrated throughout the educational process rather than treated as an isolated educational component. Interactive, experiential, and student-centred pedagogical methods—including project-based learning, collaborative problem-solving, simu-

lations, workshops, and reflective learning activities—can significantly contribute to competency development. Equally important are self-reflection, continuous feedback, and opportunities for authentic workplace experiences, all of which support the practical application and long-term internalization of acquired skills.

In light of these findings, educational policy initiatives and institutional development strategies should increasingly support competency-oriented curriculum reform. Professional expertise and soft skill development should be regarded as mutually reinforcing rather than competing objectives. Future graduates will require a comprehensive set of competencies that integrates advanced disciplinary knowledge with effective communication, collaboration, adaptability, and self-management skills.

In conclusion, the development of soft skills should be viewed not only as a means of enhancing labour market competitiveness but also as a key contributor to personal growth, lifelong learning, and social integration. One of the most important challenges facing education in the future will be the creation of learning environments that consciously support the development of these competencies alongside the acquisition of professional knowledge, thereby contributing sustainable employability and long-term career success.

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