

THE ROLE OF SOFT SKILLS AND COMPETENCIES FOR A SUCCESSFUL CAREER IN THE IT SECTOR

(REVIEW ARTICLE)

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Abstract: — What are soft skills and why do they matter? Soft skills are all non-specific skills, such as leadership, communication, teamwork skills, conflict avoidance and resolution skills, confidence building, time management, decision making, negotiation skills, etc. The list is long. Unlike hard skills, which are directly related to the profession of the individual, soft skills are much more difficult to measure and establish, but at the same time very useful in the work.

Keywords:— *soft skills, hard skills, leadership, success indicators.*

I. INTRODUCTION

The aims of this article are to give an overview of current thinking on the theme of soft skills and competencies for a successful career in the IT sector.

Soft skills are becoming increasingly important in our jobs and many researchers have worked in this field to give them a definition and practical application.

On the other hand, the information technology is attracting more and more attention as one of the fastest growing sectors, with very high pay levels and good working conditions. Gradually, the IT sector is becoming increasingly important for the world economy as a whole, and the development of the sector in the future may be decisive for the growth of prosperity.

II. WHAT ARE SOFT SKILLS

What are soft skills and why do they matter? Soft skills are the general habits and competencies that make for an effective employee, such as showing up to work on time and working cooperatively with others. These skills can be applied broadly and are often seen as complement to “hard” or “technical” skills – skills that can be formally taught and are sometimes specific to a sector and or occupation. Examples of hard skills

include computer programming and machine operation. [1]

Soft skills - what are we talking about? Soft skills are all those skills which are not related to a specific profession skills and that could be called as “hard” skills. Developing both hard and soft skills is important for a successful career. Soft skills are additional knowledge, skills and personal qualities. They are not so much dependent on the specifics of a particular job, but they help build a career. Unlike hard skills, there are no instructions for mastering soft skills. A person either has a certain quality from birth (friendliness, calmness, etc.), or acquires it with experience.

Why to develop them? Nobody is perfect. Even with the most successful selection, over time the business requires the use of more and more soft skills and companies need to think about developing them in the employees. Moreover, there are professions, such as engineering or IT, for which the rule is that those who practice them generally have less developed soft skills. At the same time, modern business requires them for the team and the whole company to be successful. Soft skills, like hard ones, can be learned. No one is a “born communicator” or taught by birth how to spend their time. According to the needs companies can include their employees in the appropriate external trainings, performed by specialized companies. The training, of course, could be internal, if we have the right specialists in our company. [5]

Raluca Florea and Viktoria Stray list the soft skills as follows:

Communication skills - The ability to convey information so that it is well received and understood;

Interpersonal skills - The ability to deal with other people through social communication and interactions;

Analytical and problem-solving skills - The ability to understand, articulate and solve complex problems and make sensible decisions based on available information;

Team player - The ability to work effectively in a team environment and contribute toward the desired goal;

Organizational skills - The ability to efficiently manage various tasks and to remain on schedule without wasting resources;

Fast learner - The ability to learn new concepts, methodologies, and technologies in a comparatively short timeframe;

Ability to work independently - The ability to carry out tasks with minimal supervision;

Innovative - The ability to come up with new and creative solutions;

Open and adaptable to changes - The ability to accept and adapt to changes when carrying out a task without showing resistance;

Others - Soft skills that do not fit any of the above categories [3]

In this light it is important to know to which degree cognitive skills are important, and to what degree non-cognitive skills play a role. There is rising evidence that non-cognitive skills play a role in predicting academic and economic success (Almlund et al., 2011; Borghans et al., 2008). However, in their study of the various cognitive achievement tests applied by US college admission committees, Heckman and Kautz (2012) highlight that these generic achievement tests do not capture non-cognitive skills, also known as “soft” skills. These soft skills, such as teamworking and verbal communication skills, predict success in many facets of later life and career (Heckman and Kautz, 2012). In the human resources literature, the emphasis is increasingly shifting toward “soft,” non-cognitive skills in addition to “hard,” cognitive skills (Andrews and Higson, 2008). Being an important predictor of success, these soft skills must be valued highly by employers, in addition to technical hard skills. Therefore, it is important to find out the role of soft skills in a technical field such as IT, and to which degree these soft skills complement hard skills. [2]

Soft Skills vs. Professional Skills (Importance): Many employers emphasized the importance of soft skills during interviews. Also other studies have discussed that many employers spend significant amount of resources to provide employees with training for

improvement in not only technical but also soft skills, for example (Wadhwa, Kim de Vitton, Gereffi, 2008). Therefore, we test the importance of Soft Skills relative to Professional Skills. When discussing soft skills, communication skills are often part of soft skills. Therefore, a variable Soft Skills is created by combining core employability skills with communication skills variables. Then, the following assumption is statistically tested: Employers perceive Soft Skills as more important than Professional Skills. In order to verify the assumption above, a t-test is conducted with a null hypothesis that the mean of soft skills is the same as that of Professional Skills in terms of the importance level. In other words, do employers perceive that soft skills and professional skills are equally important? The result suggests that we reject the null hypothesis and shows that the mean of soft skills is significantly higher than that of professional skills in importance level. The mean of soft skills is higher while that of professional skills is lower. Therefore, data provides support for the assumption above that employers perceive soft skills as more important than professional skills. [4]

Karim Waljee from the University of Liverpool presented a comparative study of the **notions of success** in an IT career from the perspective of students, employers and staff by **success indicators**:

Indicator “**Top 3 soft skills to support success in the workplace**” responses:

Students – Communication, Willingness to Learn. Teamwork/Collaboration;

Employers – Communication. Willingness to Learn Teamwork/Collaboration;

Staff – Communication. Willingness to Learn. Problem Solving;

Indicator “**Perceptions of higher education and academic success in relation workplace performance**” responses:

Students – Valued but not needed. Higher levels of education support in obtaining leadership roles within the workplace;

Employers – Valued but understand that credentials do not reflect performance in entry-level roles within IT. Overall, indifferent to qualifications all else being the same with respect to soft skills;

Staff – Valued but does not necessarily prepare students for work. Emphasis on workplace learning and simulation outweighs qualifications.

Indicator “**Definitions of success**” responses:

Students – Continual learning and professional development. Increased responsibilities on the job. Increased salaries based on performance on the job.

Employers – Validation through promotion and recognition of work. Autonomy to create and ideate to drive success within an organization

Staff – Growth. Grit, perseverance, and small wins.

Indicator “Descriptions and keywords related to perceived success in the workplace” responses:

Students – Increased trust and confidence from individuals. Servicing others and providing value through work. Validation about one’s work in order to achieve higher level roles within an organization

Employers – Level of performance on the job. Motivated to go beyond what is expected

Staff – Showing increased confidence. Showing personal growth. Ability to transfer learning from academic settings into the workplace. [6]

Ulf-Daniel Ehlers from the Baden-Wuerttemberg from the Cooperative State University in his book "Future Skills – Future Learning and Future Higher Education" (2020) considers soft skills as an important part of future skills. He emphasizes that Future Skills should be the skills that enable university graduates to master the challenges of the future in the best possible way.

Future Skills such as creativity, self-organization-abilities, self- and reflection competence or Design Thinking Competence, however, require ingenious forms of learning, teaching and development. It is therefore a question of how the promotion of Future Skills can be anchored in higher education curricula.

Those competencies or skills that are particularly relevant to employability are often transferable and referred to as interdisciplinary competencies, generic competencies, key competencies or soft skills.

In the agenda for future higher education teaching, Future Skills do not replace the transfer of knowledge, but raise knowledge to a higher stage. Future Skills will be equally important in future higher education teaching as concepts of knowledge transfer– this is how the experts of the international Next Skills Delphi assess this aspect.

The classification as soft and hard often suggests that they can be transferred and less transferable, or that it can be tested well and less well. In fact, there seems to be a major barrier to the widespread implementation of a higher education curricula

orientation towards Future Skills – namely in that examination systems have so far been designed primarily for the assessment of knowledge and not for the assessment of capacities to act. [7]

When discussing gaps in assuring quality human resource we need to separate the following aspects: the quantity (as the number of IT specialist ready to work in this field) and the quality, or the capacity to fulfill special tasks using skills. The concept of quality divides in two major group: hard skills and soft skills. Regarding hard skills, it all starts by earning a solid foundation in mathematics, sciences and engineering. Then special technical skills of computer science subjects: data structures, numerical analysis, data management, network science and programming languages. Experts agree that the majority of specialists that work in the IT domains has well developed hard skills and technical knowledge. However, there are a few key skills gap, among them the soft skills. Experience shows that for real success in this sector too, a proper combination of hard and soft skills is required. [8]

III. SOFT SKILLS AND EMPLOYABILITY

It has been emphasized that soft skills play a crucial role in increasing the chances of the candidates to get an employment. Technically, it helps the candidate improve its employability skills. [9]

Employability skills are the non-technical skills needed to get a job. Often referred to as ‘soft skills’, they include skills such as: communication, team work, problem solving, initiative, planning and organizing, decision making, self-management.

These skills are highly valued by employers and industry. So your ability to provide examples of how you developed these skills is valuable when you’re looking for work. [10]

It is evident therefore, that employability is an extremely complex, and somewhat vague, concept that is both difficult to articulate and define. However, by synthesizing the available literature, it is possible to identify key ‘transferable’ soft skills and competencies integral to graduate employability:

- Professionalism;
- Reliability;
- The ability to cope with uncertainty;
- The ability to work under pressure;
- The ability to plan and think strategically;

- The capability to communicate and interact with others, either in teams or through networking;
 - Good written and verbal communication skills;
 - Information and Communication Technology skills;
 - Creativity and self-confidence;
 - Good self-management and time-management skills;
 - A willingness to learn and accept responsibility
- (Adapted from: McLarty, 1998; Tucker et al., 2000; Nabi, 2003; Elias and Purcell, 2004). [11]

Lack of employability skills is one of the problems employers face with graduates or their future employees. Candidates may have the qualifications and hard skills needed to be able to manage the job but, without a well-honed set of soft skills, employers are less inclined to hire. [12]

Employability or 'soft' skills (sometimes also called 'people skills' or 'life skills') are the skills, personal qualities and values that enable you to quickly adjust to a new workplace. By demonstrating these skills to an employer, you will show them that you will be able to work well with others and help the employer meet their business goals. [13]

Employability skills can be developed in many areas of your life, including at school, at work, and through hobbies and sport. [10]

IV. CONCLUSION

As can be seen, according to many researchers, soft skills are universal skills which are not related to a particular profession or specialty. They reflect personal qualities: the ability to communicate with people, effective organization of time, creative thinking, decision making and taking responsibility.

Soft skills are the skills of the 21st century, skills of the future.

Soft skills are the basis by which it will be easier for any employee of any level to develop and move up in career. Very often people with a low level of hard skills but with good personal qualities go higher in their career than professionals who do not work for their self-development. Therefore IT companies often hire employees whose soft skills are at the highest level.

REFERENCES

- [1] Kelsey Schaberg, Teaching Soft Skills in Workforce Programs: Findings from WorkAdvance Providers, September 2019.
- [2] Melvin Vooren, Carla Haelermans, Wim Groot, Henriette Maassen van den Brink, "Employers' preferences for IT-retrainees: evidence from a discrete choice experiment", The Netherlands, 2019, www.emeraldinsight.com/0143-7720.htm
- [3] Florea R., Stray V. (2018) Software tester, we want to hire you! An analysis of the demand for soft skills. Proceedings of the 19th International Conference on Agile Processes in Software Engineering and Extreme Programming (XP 2018), Porto, Portugal, 21–25 May 2018 (eds. J. Garbajosa, X. Wang, A. Aguiar).
- [4] Employability and Skill Set of Newly Graduated Engineers in India, Andreas Blom, Hiroshi Saeki, The World Bank, South Asia Region, April 2011, <http://documents.worldbank.org/curated/en/455881468267873963/pdf/WPS5640.pdf>.
- [5] Soft skills - what are the benefits of them, how to discover and develop them, JobTiger.tv, 19th April 2016 (in Bulgarian).
- [6] Karim Waljee, Determining Success Factors, Essential Skills and Employability of Young Adults Entering the IT Workforce, University of Liverpool, 2018.
- [7] Ulf-Daniel Ehlers, Future Skills – Future Learning and Future Higher Education, 2020.
- [8] Székely Szilárda, Adriana Benedeka, Lucian Ionel-Cioca; Soft Skills Development Needs and Methods in Micro-Companies of ICT Sector, SIM 2017 / 14th International Symposium in Management, Procedia - Social and Behavioral Sciences 238 (2018) 94 – 103.
- [9] Anju Shukla and Gopika Kumar, Essential Soft Skills for Employability – A Longitudinal Study, Advances in Economics and Business Management (AEBM) p-ISSN: 2394-1545; e-ISSN: 2394-1553; Volume 4, Issue 6; April-June, 2017, pp. 362-367.
- [10] What are employability skills? <https://myfuture.edu.au/career-articles/details/what-are-employability-skills>, February 25, 2021.
- [11] Jane Andrews and Helen Higson, Graduate Employability, 'Soft Skills' Versus 'Hard' Business Knowledge: A European Study, Article in Higher Education in Europe, December 2008.
- [12] Manuela Rozalia Gabor, Petruta Blaga and Cosmin Matis, Supporting Employability by a Skills Assessment Innovative Tool—Sustainable Transnational Insights from Employers, MDPI, Basel, Switzerland, 2019
- [13] <https://www.sarinarusso.com/what-are-employability-or-soft-skills/>