

The Impact of Soft Skills Management in High-Tech Companies

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Abstract

The purpose of this academic report is to conduct research on the impact of soft skills management, with a special focus on job competencies in high-tech companies. The content of the chapters will be as follows: The first chapter addressed the theoretical foundations related to soft skills management, especially in high-tech companies. In the next chapter, examples of global companies using soft skills management to achieve efficient results were studied. In the last chapter, a diagnosis of workforce management will be made to propose strategies to increase the progress of soft skills.

Keywords: labor Competencies, Soft Skills, High Technology, Efficiency, Diagnostics

INTRODUCTION

Soft skills

Scientific and technological advancements are driving significant changes in social and labor relations. In the current era of technological Darwinism, change is occurring at an unprecedented pace, affecting all types of relationships. Research indicates that job retention is not solely dependent on formal education or training but also on the possession of soft or interpersonal skills (Richa et al., 2021). Effective work performance and social interaction within an organization are facilitated by aspects closely related to personal skills (Gómez-Gamero, 2019). This understanding aligns closely with the concept of personal skills in the workplace.

While technical expertise was traditionally viewed as the sole requirement for workplace success, personal attributes and attitudes have proven equally crucial for effective job performance. “It is clear then that the skills required in the labor market are valued but not only those related to specific and technical knowledge about the job position one wishes to enter” (Gómez-Gamero, 2019, pag 4); These personal aspects also encompass the ability to adapt to organizational changes.

The contemporary workplace values a combination of technical proficiency and interpersonal competencies, recognizing that both are essential for professional success and navigating evolving corporate environments.

Thus, the paradigm on effectiveness in working life has changed in recent times. Contemporary worker effectiveness now establishes a correlation between professional competencies and social skills. In other words, it is no longer enough to aspire to a job by acquiring hard skills, but it is necessary to remain in it and increase productivity by adopting soft or interpersonal skills. This shift reflects a growing recognition that success in the modern workplace requires a balanced combination of technical expertise and social aptitude. Among the most important interpersonal skills we can mention: Leadership, team skills, organizational skills, entrepreneurial skills, and soft skills (Richa et al 2021).

Many human resources analysts consider soft skills to be as important as hard skills when addressing the challenges of a technology-driven society (Espina & Raya, 2022). Employees possessing these skills are valuable assets to companies, as they contribute to improved organizational well-being through personal attributes such as empathy, motivation, and optimism, ultimately leading to enhanced results and productivity. However, current research indicates a significant disparity between the desired levels of soft skills among new

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employees and their actual capabilities (Jackson & Bridgstock, 2018). Addressing these skill gaps is crucial, as they diminish individual work performance and impede the development of future talent pipelines.

In the current job market, individuals with more technical competencies (hard skills) have a higher likelihood of securing employment. However, during the recruitment process, organizational HR specialists also prioritize candidates with adequate soft skills (Bersin, 2019). These intangible qualities are often not evident in job applicants' resumes.

The evolving concept of competence demands individuals with diverse profiles who can work collaboratively and integrate their technical expertise to address challenges within a team setting (Espinoza & Gallegos, 2020).

Objectives of the Study

- Main Objective:

The primary aim of this research is to examine how the development of interpersonal skills impacts individuals pursuing professional careers in high-tech companies and organizations.

- Specific Objective:

This study seeks to contribute knowledge about the interpersonal competencies (soft skills) essential for effective performance in the high-tech sector.

II. Theoretical framework

Soft skills are essential socio-emotional competencies for achieving objectives in both professional and social contexts (Kechagias, 2011). These non-technical abilities are distinct from the technical skills required for job performance.

Some studies define interpersonal competencies as including personality traits necessary for effective workplace performance. However, personality traits such as conscientiousness, extraversion, and introversion tend to remain stable over time and are therefore more challenging to teach. For instance, an introverted individual can be trained to enhance their communication skills without altering their fundamental introverted nature.

Segura et al. (2021) assert that interpersonal skills are crucial for personal growth in various environments, enabling individuals to communicate effectively, negotiate, motivate others, and lead teams within organizations.

The lack of these skills among employees can lead to unfavorable situations and adverse moments, potentially resulting in misunderstandings, disorganization, staff stress, poor service quality, and increased employee turnover, ultimately causing a talent drain (Neri & Hernandez, 2019; Vera, 2016).

Soft Skills And Their Correspondence With Human Talent

Human capital management is considered vital within organizations, encompassing various aspects such as skills, attitudes, and habits of organizational members (Ramos, 2021). Chiavenato (2004) argues that human talent management is contingent and situational, dependent on multiple variables including internal processes, organizational structure, technology, and company type. Modern organizations "invest in people who know them well and who know how to create, develop, produce and improve them" (Chiavenato, 2004, p. 4).

While talent management typically occurs at the corporate level, the academic world plays a crucial role in facilitating and enhancing this process (Richa et al., 2021) through programs designed to increase both technical and personal competencies among trainees.

Importance of Soft Skills

The debate on whether soft skills sufficiently impact employability is linked to human capital theory and human development or capability theory (Jonck, 2014). From an organizational perspective, when assessing

job applicants' employability, companies evaluate the skills and knowledge of potential employees. The human capabilities or development theory examines graduate employability based on resources. This theory considers not only technical preparation but also personal competencies as resources or means. Consequently, the acquisition of soft skills is directly associated with job seekers' level of employability.

The Council of Europe (CoE, 2018) proposes a capabilities model comprising 20 competencies categorized into values, attitudes, knowledge and critical understanding, and skills. The skills category encompasses language proficiency, communication, collaboration, adaptability, independent learning, listening and observation, and conflict resolution (Galster et al., 2022).

A prevalent perspective on professional competencies suggests that soft skills can empower individuals to manage their own activities and the work progress of organizational members (Espinoza & Gallegos, 2020). Gruzdev et al. (2018) further define soft skills as encompassing social and intellectual talents, along with any skills specified by an organization or company.

In the current era, where technological advancements often depersonalize human communication, interpersonal skills have become increasingly crucial throughout the personnel selection process. These qualities are so significant that Sosa (2019) notes they are specified for various organizational levels.

Minbaeva and Collings (2013) assert that developing interpersonal competencies is more critical than technical skills on a global scale, highlighting the competency gap as a key concern in talent management. Espinoza and Gallegos (2020) emphasize that "soft skills make the difference between two people, having empathy, good manners, negotiation skills, collaborative spirit, punctuality and a good dose of optimism, provide a special value" (p. 7).

Soft Skills In The High-Tech Industry

A successful career trajectory combines technical and non-technical competencies, knowledge acquisition, and interpersonal skills. Richa et al. (2021) suggest that the development of technical competencies, which bolster professional expertise, has an implicit impact on interpersonal skills. In the context of IT careers, Trauth et al. (1993) propose that success in the field necessitates both types of competencies. Therefore, it is essential to examine various studies to understand the significance of soft skills in professional settings.

Soft Skills And High-Tech Professions (Studies)

Williams (2015) identified the ten most prevalent soft skills in business and IT sectors: communication, critical thinking, decision-making, interpersonal skills, negotiation, compromise, self-confidence, self-management, cooperation, and value ethics. Among these, communication skills emerged as the most influential. While skills like negotiation and critical thinking were recognized as areas for improvement, they were not deemed as critical as the others mentioned. Williams proposed implementing an interpersonal skills training program for students before they enter their professional careers. "Technological advances and globalization drive the need for higher levels of competency in the workforce" (Williams, 2015, p. 29).

Radermacher et al. (2014) observed that recent college graduates struggle with communicating effectively with colleagues and customers, recommending that academic institutions ensure students develop strong problem-solving and communication skills.

In a survey study by Noll and Wilkins (2002), respondents rated the importance of various knowledge and skill areas for different company personnel teams. While technical and business knowledge related to the entire organization was deemed important, it was not as crucial as soft skills. The research highlighted that enhancing interpersonal skills, such as collaborative work and communication, should be a priority for future employees entering the local workforce. Both students and employers recognize these competencies as essential for employability (Singh & Singh, 2008).

Interpersonal competencies in software engineering have been examined from various angles. Richa and Tewari (2016) analyzed software engineering curricula and identified communication and leadership as essential interpersonal competencies for professional growth in this predominantly technical field.

Matturro et al. (2019) cataloged thirty primary categories of interpersonal skills relevant to software engineering, with at least half of the reviewed studies highlighting five key abilities: communication, teamwork, analysis, organization, and interpersonal skills

Furthermore, Daneva et al. (2019) conducted focus group research that identified communication skills, cooperation, and analytical skills as the most crucial interpersonal competencies for aspiring software engineers.

This research highlights that technical proficiency alone is insufficient for success in technology-related careers, with personal attributes such as coping mechanisms, problem-solving abilities, and collaborative skills gaining increasing importance (Galster et al., 2022).

Information technology (IT) firms routinely incorporate assessments of both hard and soft skills in their hiring processes. Consequently, professionals working or aspiring to work in technology companies must possess a blend of these competencies (Ternikov, 2022). As a result, HR recruiters seek candidates with a combination of technical ("hard") and non-technical ("soft") skills that are crucial for a career in IT (Matturro et al., 2019)

Westra (2022) suggests that organizations managing increasingly complex high-tech environments need to incorporate "advanced skills" that are typically not associated with IT professions. These advanced skills encompass soft skills that enable teams to perform beyond their technical expertise, including collaboration, critical thinking, and leadership. Such skills allow teams to leverage technology for organizational benefit. Ternikov (2022) notes that "employers operate with new domains of knowledge" (p. 1), highlighting the evolving skill requirements in the workplace.

Basili et al. (2018) argue that software engineering extends beyond intellectual abilities, emphasizing that it is fundamentally a human-centric task. Consequently, human and organizational factors shape the context in which software engineering procedures and technologies are applied.

The World Economic Forum (WEF, 2020) identified key competencies expected to be crucial by 2025, categorized into four areas:

1. Problem-solving (including creativity, initiative, ideation, analytical thinking, and innovation).
2. Self-management (such as resilience and active learning).
3. Working with others (encompassing leadership and social influence)/
4. The use and development of technology.

Similarly, The European Commission (2020), in its European Skills Agenda, acknowledges the importance of certain skills for corporate development. These transversal skills encompass abilities in collaboration, conceptualization, and creative problem-solving. The agenda also highlights the need to cultivate competencies related to human attributes, such as adaptability to technological changes and interpersonal affinity. The initiative aims to foster sustainable competitiveness, social fairness, and resilience by emphasizing the development of these crucial skills across various sectors

III. Applied cases of soft skills in nations and companies

New Zealand case

Galster et al. (2022) found that job advertisements in New Zealand companies explicitly reference soft skills, with communication skills being the most sought-after.

The New Zealand software industry, though relatively small, is experiencing rapid growth and is a significant export contributor (Wang & Galster, 2018). Due to a shortage of skilled personnel, the industry relies heavily on offshoring. To perform effectively, software engineering professionals in New Zealand need to enhance their interpersonal skills.

Galster et al. (2022) conducted a study on the importance of interpersonal skills in software industry job applications by analyzing advertisements on SEEK NZ, the country's largest technology job portal. Using integrated search criteria, they identified 2,904 software engineering-related job postings on February 22, 2022, providing insights into the skills required for various software-related positions.

The research yielded a series of tables highlighting the most sought-after interpersonal skills in the industry. Galster et al. (2022) suggested that these findings, along with contextualized descriptions of interpersonal skills, could assist recruitment professionals, particularly managers, in designing role requirements. Additionally, the study provides a benchmark for professionals to assess their interpersonal competencies against standardized software engineering knowledge. The research corroborates previous studies on soft skills in demand within the software industry, thereby strengthening the empirical evidence supporting the importance of soft skills in software engineering (Galster et al., 2022).

Malaysian case

The Malaysian technology industry faces a significant challenge due to the lack of interpersonal skills among university and college graduates (Ministry of Higher Education Malaysia [MOHE], 2012). Many graduates enter the workforce unprepared, lacking both interpersonal skills and the ability to manage projects independently. The low employability rate of graduates has been attributed to a mismatch between university education and industry requirements (Tapsir, 2017). Hence, the current Malaysian labor market demands more competencies and interpersonal skills from technology graduates. While the selection of human resources with strong soft skills is crucial for organizational growth, a substantial portion of Malaysian graduates still lack adequate soft skills, such as communication, leading to increased unemployment (Hairi et al., 2011).

The gap between academic preparation and industry requirements is partly attributed to educational institutions' inadequate preparation of students for real-world business challenges (Trauth et al., 1993). Enhancing students' employability requires comprehensive professional development at the academic level (Lovos, 2022). The employer-educator conflict highlights that higher education institutions are falling short in providing both technical and soft skills training to graduates (Fadhil et al., 2021). This conflict shifts the responsibility to employers, who are expected to provide timely opportunities for workplace experience. Consequently, the primary responsibility for developing future high-tech specialists' interpersonal skills rests with educational institutions.

IBM Case

A 2019 IBM study involving 5,800 executives from 50 countries sought to identify the skills business leaders would require in the coming years (Bersin, 2019). The executives' responses indicated that workers needed a combination of digital and soft skills, also referred to as behavioral skills, to succeed in the labor market (LaPrade et al., 2019).

This represents a significant shift from the 2016 "Facing the Storm" global skills report, where executives heavily emphasized digital skills. The earlier report noted that six out of ten executives considered fundamental and advanced technical skills in mathematics, mathematical sciences, science, and computer science as crucial for job development (LaPrade et al., 2019).

The 2018 study revealed a significant shift in the skills prioritized by global executives, with behavioral competencies surpassing technical skills in importance (La Prade et al., 2019). The top four core competencies sought after by executives were predominantly interpersonal skills:

- Adaptability and flexibility in response to change
- Time management and prioritization abilities
- Effective teamwork capabilities
- Business communication proficiency

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These were followed by analytics and business acumen, STEM technical capabilities, innovation and creativity, basic computer skills, ethics and integrity, foreign language proficiency, fundamental literacy and numeracy skills, and industry-specific competencies.



Sources: 2016 IBM Institute for Business Value Global Skills Survey; 2018 IBM Institute for Business Value Global Country Survey

CONCLUSION

The economic shifts and challenges associated with globalization necessitate the development of both technical and personal competencies among students and workers. Contemporary organizations across sectors prioritize soft skills in their members to enhance competitiveness and foster growth. While professionals traditionally focus on technical competencies, recent employment concerns increasingly center on the deficiency of soft skills, which are crucial for navigating modern industrial developments (Clarke, 2018). The digital era's labor market presents novel challenges to education systems and potential employees. As companies adapt to evolving technological and competitive landscapes, they demand higher-level skills from employees and candidates. Consequently, university and school curricula must respond to these transformations, enabling students to update not only their technical competencies but also their personal skills.

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