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CHAPTER 1

New world of work – new challenges

Abstract

In an ever-changing world, people and organizations face a growing number of threats with increasing levels of volatility, uncertainty, complexity, and ambiguity. To face this reality, managers and specialists need to be armed with a set of soft and technical skills inherent to their jobs and positions. This reality is recognized by OECD, UNESCO, and others, with Higher Education Institutions increasingly embracing Social Responsibility concerns, job market views, new generation learning styles, and student perspectives on career planning.

Keywords: higher education institutions, soft skills, social responsibility, job market, learning styles, student perspectives

1.1 Understanding the challenges

Our world is changing faster than ever before, with great challenges like globalization and digital transformation happening transversally across the economy and society, revolutionizing the way activities are carried out. Likewise, competition is increasing significantly, and markets are becoming more open with high levels of integration/interdependence.

As a result, new products, services, processes, technologies, and legislation are also continuously changing at an increasing pace, with companies forced to innovate at all levels to survive and develop. In this context, additional challenges are contributing to the disruption of the ways in which people live and work, like climate change, global health concerns like pandemics, and the competition between new value systems, principles, ideologies, and governance systems.

To face these challenges, many paradigms in their initial developing phases are expanding rapidly and new paradigms are emerging constantly, such as new

solutions in artificial intelligence (AI), internet of things (IoT), big data, Industry 4.0, augmented and virtual realities, new materials, recycling, and circular economy, to name just a few. New trends and tools are expanding rapidly in management, sciences, culture, while old paradigms collapse, forcing people and organizations to constantly adapt their working practices.

We refer to the context described above as VUCA, referring to the need for a strategy of adapting to changes in various scenarios. Its acronym in English refers to four keywords:

- V) 'Volatility,' due to frequent changes.
- U) 'Uncertainty,' due to the unpredictable nature of events.
- C) 'Complexity,' due to the multiplicity of factors that can appear interconnected.
- A) 'Ambiguity,' related to the difficulty of understanding complex and unclear situations.

Facing this hazardous context, companies/organizations need to reinvent themselves continuously, to face market changes in order to survive and develop over time.

Whatever the sector of activity under analysis (social, economic, or cultural), the resource that has the central responsibility to create, implement, and control solutions is always the same: people, through their work, regardless of the type/level of work/responsibility performed. Accordingly, with this generic framework, the following question arises:

What type of people and professions are most suitable for facing (and overcoming) the challenges inherent to a VUCA world?

On the basis of our research, we conclude that the most suitable are those who adjust their career throughout their life, developing both hard and soft skills. This is also a challenge for higher education institutions, as they need to move from a one-shot educational period to lifelong learning.

1.2 The European Union context: programs addressing the challenges

As we have seen before, several challenges affected the dawn of our century. They have brought a set of changes to Higher Education Institutions (henceforth HEI) (Varadinov, Cardoso, José, Marques, Guerra 2021) involving a major shift at the European level to include the twenty-first-century skills in academic programs across the board.

Firstly, we must highlight the collective contribution that is identified in *Horizon 2030* and that Akkari (2017) defines as the true agenda for education: that which mobilizes the main agents and actors of education systems, creating

a vision of consensus about the future. Along these lines, *Horizon 2030* manages to bring together studies on the challenges of education from UNESCO, namely the *Incheon Declaration* on inclusive, equitable, and quality education for all in a perspective of lifelong learning (UNESCO 2015), that should be combined with documents from the OECD (2018, 2019a, 2019b) and the World Bank (2018). All these institutions warn about the need to prepare students for the new social and labor market challenges, including the need to develop soft skills.

Education should equip students with the skills they need to lead healthy, productive, meaningful lives. Various countries define these skills differently, but all share some core aspirations that should be embodied in their curriculums. They require higher-order reasoning and creativity that builds on foundational skills, as well as socioemotional skills such as perseverance and the ability to work in teams.

The presently required competencies are intertwined with the need to be able to face new, unexpected situations, for which it is necessary to mobilize knowledge and skills, as well as the values and attitudes that were acquired during the studies. *Horizon 2030* brings to HEI the urgency of empowering students with these new tools so that they can think critically beyond traditional parameters. All this includes skills to carry out projects, implement actions, and insert all these points into strategic planning.

To face situations that cannot be anticipated, HEI must prepare their students and provide tools involving cognitive and meta-cognitive skills (critical thinking, creative thinking, learning to learn, and self-knowledge); social and emotional skills (empathy, personal effectiveness, and collaboration); and practical and physical skills (namely the use of information and communication technologies).

While working at this level, we also prepare students to use a set of values that include trust, motivation, virtue, and respect for diversity, which will be applied at different levels: personal, local, social, and global. We assume that education, as advocated by the OECD, should ensure more than just the knowledge or training required by the labor market. Higher education has another clear and fundamental mission: to prepare young people to become active, responsible, and committed citizens.

This OECD project establishes the coordinates of a common, dynamic, and flexible international curriculum, with a connection between topics and disciplines, in which the student can follow his/her learning path according to his/her skills and talents (Varadinov, Cardoso, José, Marques, Guerra 2021).

Pereira (2007) emphasizes that universities aim to train professionals with skills, abilities, and competencies to understand life and become an individual or collective actor characterized by active awareness, which means that teaching is both an educational and a social process. Pereira lays the foundation for cultivating the modern university's relationship to social responsibility, to remind us that universities need to teach students to analyze the present, but also to look to the

future. Therefore, the mission of universities must combine education with a sense of social responsibility (Pereira 2007).

Vallaeys (2009) argues that HEI influence the training of future professionals in terms of values and ethics which have an impact on social actions, so it is important to assess whether HEI carefully consider their actions, the way they train their students, and how they can positively affect the community and its development. It also highlights that HEI must create networks, connecting the values and mission of universities with an effective intervention in the environment that surrounds them. Moreover, it falls to them to look for solutions to problems and take concrete actions that combine the training of students with scientific innovation so that important knowledge is created for the good of the society. A Higher Education Institution must take into consideration that its mission not only involves the core activity of education but goes further in preparing people for the exercise of citizenship. It is crucial to develop students' flexibility to be aware and involved in different views of the world, as they can effectively learn to be socially responsible citizens.

1.3 Learning styles for a new generation

Higher Education Institutions must be up to date regarding social and cultural changes, as we analyzed before, but another major influence is modifying their policies. In fact, in a time when it is already quite difficult for people to imagine daily life, interactions, and relationships without the presence of digital technologies, it becomes relevant to discuss modern society. More and more people are connected and organized in social networks that communicate via smartphones or computers. The Internet creates a model of networked individualism, a structure that protects us and, at the same time, exposes us.

Individuals increasingly use technologies that over time have modified a large number of habits and forms of interaction by taking into account individual preferences. People are integrating technologies into their lives to be able to satisfy their needs and desires. In this context, schools and companies are currently facing the great challenge of navigating and managing heterogeneous teams shaped by the various characteristics of all the unique individuals involved. People who were born within the same period can have similar experiences that shape their world view, but can also differ greatly in their values, beliefs, and motivations about the businesses to which they belong and about their goals regarding their career and work behavior.

Commonly, in education classrooms, students and lecturers from the three generations (X, Y, and Z) share identical learning environments. Generally, baby boomers and Generation X teachers, educated by traditional modalities, aim to

train students, mostly from generations Y and Z, with learning designs and world perceptions that are altogether different.

Generation Y, also known as the Internet Generation, was born between 1979 and 1992 and was marked principally by the digital access to the means of consumption. This allowed them to be recognized for the work they have developed and maintain a constant balance between personal life and a skilled career, prioritizing what characterizes them as individuals who aim for professional success. Moreover, they grew up in contact with technology, are more individualistic and readily defend their opinions. Generation Y students tended to demand from the teacher displays of proximity [and equality?], and in general refused any hierarchy. With the introduction of the latest technologies within the classroom, their learning was characterized by a balance of interaction, sharing, and the rise of brand-new data or observations (Smola, Sutton 2002).

The milestone that characterized this group was the advent of data technology (above all, the expansion of the Internet, social networking sites, and virtual games). Once they are connected to the virtual world, mastering the technological tools they have had since childhood, this generation brings a new culture, and a new dynamic to behavioral patterns. The professionals of this cluster represent the youngest section active in the present labor market, and they're represented as being more socially active than the previous generation, with a preference for operating in corporations that set themselves as a reference point in terms of ethics and social responsibility. This could be the most connected generation yet. Whether via PC or cell phone, they access social media, email, and text messages frequently. As a result, they have grown up in an environment with a huge amount of data available and are more tuned in to all the problems in the world than any preceding generation (Vrabie 2015).

Known as the 'Silent Generation,' the members of Generation Z include people who were born between 1990 and 2010. Generation Z are the most natural users of the Internet as a result of its prevalence – indeed, omnipresence – when they started writing. With the emergence of smartphones during their youngest years, it feels natural for them to be 'online' and their newsfeed diet results in them often being anxious concerning the environment and social responsibility. This generation has grown up with computers and smartphones. Being hyper aware of all the types of communication that offer them the feeling of involvement, they have the impulse to actively participate, give feedback, and feel useful. This group's attention span is even shorter than that of preceding generations, with most of them giving an average of eight seconds to any given communication. It is noteworthy that this generation has a superb capability for interactivity. In other words, they engage in many activities at the same time. Their relationship with employment remains unclear, however, as these individuals have difficulties with traditional school structures and interpersonal relationships. Generation

Z students need varied pedagogical proposals which take into account that the technologies are extensions of the brain and body. In addition, the teacher should be connected through social networks and technologies to be able to post and clarify content (Christensen, Eyring 2011).

Thus, the learning styles adopted by generations X and Y are characterized by their preference for brevity in the acquisition of information, which conjointly includes the accuracy of this process. This can lead these students to a dependence on the utilization of electronic tools. The blending of generations in cultural and technological heterogeneity brings pedagogical challenges and sparks discussions concerning the characteristics of the educational methods, considering that each generation possibly has different ways of understanding and transmitting information (Christensen, Eyring 2011).

The activity patterns of students from Generation Y demonstrate the predominance of resilience with the power to beat the constraints imposed by previous generations. Generation Z uses technology as an extension of their bodies, permitting the execution of many activities at the same time and requiring differentiated pedagogical proposals supported by technological mechanisms (Benamati, Lederer 2010).

The new paradigms in education indicate that schools ought to have the ability to assess issues and obtain solutions, discuss concepts, and propose new theories, be more influential and accountable, and be able to quickly adapt to societal changes.

The teachers' and students' roles have also changed. Teachers have to act as facilitators in the teaching-learning process, besides participating in coaching programs, updating their knowledge, and adapting to the new technologies that are at their disposal. With the expansion of communication technologies within the teaching and learning process, relationships have also been transformed. On the one hand, the presence of different generations in the same environment creates diversity, integration, and knowledge; on the other hand, it could lead to imbalances and conflicts, insofar as each generation establishes a particular relationship with its environment.

One of the simplest challenges within these contexts nowadays is to align generations so that each one is engaged in the same purpose. The educational preferences attributed to generations X and Y maintain the requirement for the use of Internet resources; however, they are allied in their preference for interactive models of education in favor of reducing ineffective time in analysis. This connects them to specific resources and therefore develops crucial thinking and analysis capacity, necessities that guarantee success throughout the research and learning process (Rhode 2009).

Success is crucial not only in HEI but also in the labor market, when the students initiate their careers. In fact, the characteristics of the students who belong to the most recent generation show that employers will be hiring a new

type of employee. Furthermore, the job market has also been affected by the social, cultural, and technological shifts we have been highlighting, so this new set of challenges must also be addressed.

1.4 New challenges from the labor market

As stated, some of the most important economic trends in the world include the Industry 4.0 revolution and the digital transformation of enterprises accelerated by the COVID-19 pandemic. Both trends fundamentally change the nature of work, the way business is conducted, and society itself (Hirschi 2018). The digital era brings new professional challenges and opportunities. The rapid growth of digital transformation and the massive amount of digital data present significant challenges to all who will enter the labor market in the near future, as well as those who will be changing jobs (Tsui 2018).

Companies in the digital age need a well-prepared workforce that can continuously develop new skills and is able to meet the challenges of an increasingly unpredictable environment. The *Future of Jobs* report (WEF 2016) has shown that by 2020, more than one-third of the desired skills in the job market will be ones that were not considered essential in the past. More surprisingly, 65% of today's young people will be in occupations that have not yet been developed (Karacay 2018). In the US, according to the Bureau of Labor Statistics (BLS), the average number of lifetime jobs among baby boomers is 12, according to a 2019 survey (US Bureau of Labor Statistics 2020).

Not only are the profiles of the HEI and the students changing, but the labor market that is going to receive them is also in flux. The OECD predicted that by 2019, 14% of existing jobs could become fully automated (OECD 2019c), and automation continues to spread. It is predicted that by 2025 the number of hours worked by machines and humans will be roughly the same. Some 85 million jobs are expected to be replaced by automation, mainly those involving manual or repetitive tasks (WEF 2020).

The *Future of Jobs* (WEF 2020) report also predicts the emergence of 97 million new jobs by 2025. The most sought-after positions in future job markets include data scientists and analysts, AI and machine learning specialists, robotics engineers, software and application developers, digital transformation specialists, information security analysts, and IoT specialists, which can be broadly grouped into the ten emerging job clusters explored in the report.

Alongside technological development, we are also witnessing the emergence of alternative work models (temporary, freelancers, etc.), cultural changes resulting from the generational divide, and a growing focus on the development and evolution of professional skills (Deloitte 2021). Thus, the future of work should be reflected in three dimensions: work, workforce, and workplace.

The labor market needs to reinvent itself by initiating a successful digital transformation that cannot consist exclusively in the adoption of new technologies but involves the challenging component of reskilling and adapting people to new ways of working. In a new labor market reality, it is also necessary to invest in the development of results-oriented behavioral skills, including the training of people for teamwork and project context, but also for work models with greater autonomy, remote team management, and individual accountability. This new reality will also demand greater flexibility from employees to take on extra functions.

The new labor markets will require a combination of soft and hard skills (WEF 2020). The following ten skills are considered to become the most important by 2025:

- analytical thinking and innovation
- active learning and learning strategies
- complex problem-solving
- critical thinking and analysis
- creativity, originality, and initiative
- leadership and social influence
- technology use, monitoring, and control
- technology design and programming
- resilience, stress tolerance, and flexibility
- reasoning, problem-solving, and ideation.

The *Future of Jobs 2020* report (WEF 2020) is a call to action to accelerate a reskilling revolution in economies. It highlights the growing urgency to support displaced and at-risk workers as they navigate toward the 'jobs of tomorrow.' The current moment offers an opportunity for business, government, and public policy leaders to focus common efforts on enabling workers to thrive in the new economy. In short, the concepts of work, workforce, and workplace are not crystallized and may continue to evolve (Deloitte 2021).

The modern labor market has the following main characteristics: high unemployment rate, an imbalance between supply and demand in the labor market of young employees, social and professional uncertainty felt by the youth, employment not within their specialty, and gender inequality. The global youth labor market faces some problematic trends, like the active informatization of business processes impacting the rising unemployment figures, the difficulties in motivating Generation Z, and the low interest among young people in working in the real sectors of the economy (production, agriculture, etc.), young people's preference for remote work (as freelancers), and the spread of a phenomenon of people who want neither to work nor to study (Mizintseva et al. 2017). However, young people are one of the most promising groups in the working-age population, due among other reasons to the fact that they have flexibility, the ability to study quickly, and easy mobility across the world, mainly in the EU countries.

A survey developed by Mizintseva et al. (2017) has identified the trends and problems in the labor market felt by young people: a significant percentage who do not plan to do the job they were trained for; the importance of informal communications in the job search; a lack of work experience as a frequently cited reason for refusing to employ students and graduates from modern universities; and insufficient wages offered to youth. These elements constitute serious challenges in HEI, because a more demanding labor market requires adequate curricula design and career planning, so that students can rapidly adapt to evolving circumstances, namely the need to have specific tools to undertake a career path.

Additional factors that make career planning difficult are the globalization of the economy, which means the need to compete with workers from other countries; this is especially evident in the digital industry. Employees are staying in the job market longer and longer, and the way they do their jobs changes very often, even within one profession. Social norms are also changing. The former model in which finding a relatively stable job is preceded by a period of education and followed by purchasing a home and starting a family has been replaced by a variety of individual development paths (Savickas et al. 2009). The individual is increasingly influential in the planning and executing of his/her career. Generation Y, for example, has brought new principles to corporations, such as flexible work schedules, more leave of absence, the issue of work-family balance, care for the environment, and many more (Andersen 2021). However, at the same time, the number of jobs has often been reduced. Many companies are hiring part-time or contract workers and using outsourcing services. Future employees should be able to define themselves not in terms of lifetime positions with specific companies, but rather their professional identity. Today, careers are becoming a series of projects and changing roles that serve personal and professional development, and in addition also enhance an individual's creativity, sense of happiness, and professional well-being.

1.5 Challenges in career planning: the labor market and the students' perspective

To achieve success in the labor market, HEI must give their students the instruments for developing a strong career path, and this includes not only the degrees but also specific skills and tools. The career path consists of a set of professional steps and resources that you need to define the path to be followed. That is, it works like an individualized map, tailored to each person's career goals and showing the path to follow to reach the goal(s). In the book *Fundamentals of Organizational Behavior*, authors Schermerhorn Jr., Hunt, and Osborn (2009) define career planning as "[a] process of systematically combining career goals and individual capabilities with opportunities for their achievement." For Balassiano and Costa

(2012), a career means managing one's personal and professional life, taking care of self-improvement and professional relationships. According to Brasil, Felipe, Nora, and Favretto (2011), career planning is a self-assessment process to establish professional objectives and goals to be implemented throughout the academic and professional trajectory. The authors also mention that "preceded by a well-sustained professional choice, career planning creates conditions to improve the student's use of academic space and opportunities, maximizes the chances of successful professional insertion, and guides the actions taken by the student throughout the course of training and professional practice."

The following were some of the topics selected for the agenda of the *World Economic Forum Annual Meeting – Davos 2022*:

- Global talent shortages and how companies can attract diverse talent.
- What workers want: flexibility, purpose, wellbeing, career opportunities.
- New ways of getting work done and leading with empathy, trust, and resilience.
- The rise of ESG to shape a more sustainable, inclusive future.

Following the meeting, the Manpower Group communicated in a statement that shortage of talent is an increasingly prominent reality, considering that in the next 15 years, 60% of companies will not be able to find employees with the skills they need in the labor market. It also mentions that "demographic changes, the need to achieve the right combination of technology and talent, the greater ability of workers to choose, and the growing sophistication of talent management in organizations, drive this transformation." The demands of a complex, rotating, and precarious job market (Antunes 2003) raise the need for life plans to become more thoughtful and conscious. At one time, career development planning and implementation were controlled by the organization, designed to build and maintain the skill sets required to keep the system operating efficiently (Forret, Sullivan 2002).

More than ever, it is imperative and necessary to support students in the identification and development of skills (including behavioral skills, such as soft skills) that allow for achieving self-knowledge through professional guidance and provide innovative experiences that go far beyond the traditional development of the professions currently provided by HEI.

Teixeira and Gomes (2004) state that university students are not being prepared for the transition tasks between higher education and the job market. According to the finding of Alex Bradley, Martyn Quigley & Kate Bailey (2021) in the study on "How well are students engaging with the career services at university?", ability is a key concern for students but low levels of engagement persist with respect to career service events, with typically less than 50% attendance, albeit with increases in attendance throughout the progression of a student's degree. Forret and Sullivan (2002) state that "[i]f you did not distinguish yourself early in your tenure with the company, or if you did not fit their image of the ideal high potential candidate