SOFT SKILLS IN KNOWLEDGE-BASED ECONOMICS

Abstract. This paper summarizes the main arguments within the scientific discussion on the issue of the soft skills in knowledge-based economies. The main purpose of this research is to reflect on the role of Higher Education Institutions in the training of soft skills, as well as to improve the academic curriculum. This subject appears as a consequence of some inadaptability of the graduate students to the working market as referred by employers. This work pretends to draw attention to other teaching-learning methodologies, based on holistic learning and multiple intelligences, where the emotional, social and civic skills are underlined. The starting point is the following question: «which are the distinctive and competitive skills in a knowledge-based society?» and its objectives are: to reflect on intangible dynamic skills, contrasting them to traditional skills, which are mainly based on technical and scientific domains. Therefore, the academic curriculum should be focused on learning to learn and learning to unlearn. According to the literature and the organizations’ desires, this is strategic in a based knowledge economy, because learning should be interactive, cognitive, emotive, relational, emotional and evolutionary. Currently, individuals require a skills pack that combines technical-scientific skills with those which support instrumentals, such as social and emotional skills. The latest is the additive with multiplicative properties of professional and social performance and which facilitate the consolidation of both intrapersonal and interpersonal skills. However, as the emotional and social aspects have not been enhanced in higher education curriculum projects, the present study aims to identify frailties in graduate students regarding distinctive skills in a knowledge-based society. The methodological tools of the research are based on the literature review, and on some developed works on the subject. According to this purpose, we pretend to underline the need towards the superior academic curriculum in order to decrease the existing gap between the technical and soft skills and on the other hand to improve the workers’ performance. This work also reflects on the skills available on offer at higher education, with the aim to identify relational, social and emotional skills in graduate students. The results of the research can be useful for society in general, because it allows improving values such as attitudes, behaviours, relationships, engagement, ethics, responsibility, performance, among others.

Keywords: distinctive skills in a knowledge-based economy, higher education curriculum, innovative education, intrapersonal and interpersonal skills, professional and social performance, university mission.

Introduction. In the last decades, technological evolution has abruptly changed human ways of being, feeling, relating and behaving. Likewise, it has influenced the organizational and social world and how performance and productivity are seen. It has influenced the more complex skills that the labour market has been requiring and teaching institutions have started to adapt their courses to the professional profiles and to the new challenges of a society immersed in information, knowledge and know-how. The reforms that have been taking place in higher education since the late 20th century, named after the Sorbonne and Bologna Declarations, signed in 1998 and 1999 respectively, are examples of the concerns regarding professional profiles and additional skills for the consistency of knowledge economics. As of these Declarations, higher education has been regarded a hub for development, inclusion and as the backbone of knowledge-based economics (Bergan, 2009; OIT, 2005; U.S.-Department of Education, 2006; Vazquez Garcia, 2008). This process of adjusting academic profiles to the challenges of this new reality is an example of the influence of technological evolution in everyday life. This is stated by Roing Cotada and Villarreal Rodriguez (2008) when they approach skills with a triple perspective, by grouping them as (i) specific skills, (ii) instrumental skills and (iii) generic skills which meet organizational needs looking for

non-traditional abilities. According to Durbin (2004: iii), those abilities can fall into three types: (i) **entrepreneurial skills**, (ii) **management skills** and (iii) **employees’ technical skills**. Entrepreneurial skills are meant to act as an entrepreneur, namely through the increase of sensitivity to promote the understanding of the windows of opportunity that present themselves along the way. Such sensitivity is ever more visible due to the economic evolutionism which has made companies start to look at organizational learning as a strategic investment, without confounding this learning process with business routines. Such concerns follow the evolution of the informational revolution that has been revitalizing the knowledge-based economy and creating the **learning economies** (Lundvall, 2003; Lundvall and Nielsen, 2007). At the same time, «other» organizational typologies with new cultures adapted to informational revolution have emerged. In this process, the **learning organizations**, seen as learning molecules, have arisen. This name is a social construct where learning is achieved by the spontaneity of social relationship (Chiva et al., 2007). These are based on dialogue and on relationships, which are more specific, contractual, and involving (Pedler and Burgoyne, 2017). Just as it happens with the **organizational individualship behaviour** (OCB) structure (Organ, 1997), in a **learning organization** commitment and learning are mutually reinforced. It is the organizational typologies that cultivate values such as persistence, respect for others and an open mind. These values have converted into skills that improve economic, social and psychological performance (Organ, 1997). There is between them a correlation and they contribute to creating a happier, more humane and productive society. Therefore, a society based on learning organizations is structured on the balance between job satisfaction and satisfaction towards society. They promote positive attitudes and guide co-workers towards mutual assistance, cooperation, honesty, commitment and responsibility. They are organizations driven by job satisfaction and by the change of labour relations, where unselfishness is a capital value and where morality is replaced by responsibility, assistance and cooperation values. In this framework of competences towards the improvement of personal and organizational performances, this article underlines the need to improve the discussion on the superior academic curriculum in order to serve the knowledge-based economy the skills and higher education role on its production and dissemination.

**Literature Review.** Literature about learning organizations is abundant (Martins et al., 2018). People are willing to learn and facilitate long-life learning to their workers (Chiva et al., 2007; Martins et al., 2017b; Martins et al., 2017d). Just as Pedler and Burgoyne (2017) considered, the Learning Organizations (LO) are still alive, though they manifest through different expressions, such as leadership, shared leadership, innovation, knowledge networks, organizations networks, skills, emotional intelligence, spiritual intelligence, among others. However, according to those authors, the name under which learning organization hides is not important, but its performance and commitment in (re)creating an organization and society is. They continue to be much appreciated because they create material and intangible wealth and have a predominant role in humanizing, intrapersonal, and interpersonal development, which surpasses the material dimension in wealth creation. They are a cocreating society (Chen et al., 2017) and influencing change in organizational culture and philosophy. They empower and give voice to workers and assume that the organization is able to co-create value for the stakeholders and for the shareholders. They are conscious that co-creation is an iterative process, one of constant feedback and of continuous guidance for the effective integration of resources in the process of creation and transformation. (Martins et al., 2017d). Within this context we ask: (i) Which skills do organizations expect graduate students to have? (ii) Which is higher education’s sensitivity to respond to the new organizational needs in terms of training and knowledge?

These questions meet Brunner’s concerns (2009: 19) when he questions: which roles do companies assign to non-traditional skills, such as social skills, leadership, teamwork, stress management, emotional intelligence, among others? With this in mind we also formulated the following questions:

1. Are employers’ expectations being met by universities’ academic curriculum?
2. How is University training students specifically for morality at work?
3. Discipline, responsibility, compromise, commitment, availability for change, loyalty to the organization, respect for ethical codes, admiration and respect towards nature. Are all of these being developed within university curriculum projects?

In the last decades, both inside and outside Universities, there has been a lot of discussion over these topics. The same has happened to learn, to skills, to profiles and professional qualifications for knowledge-based economy (Athey and Orth, 1999; Binks 1996; Civelli, 1997; Fallows and Steven 2000; Garavan et al., 2001; Hawkins and Winter, 1996; Laughton and Montanheiro, 1996; Lauzakas et al., 2009; Martins et al., 2017a; Pereira, 2013a; Pereira, 2013b; Pereira, 2015; Pereira and Costa, 2017). However, are economic agents – employees and employers – aware of the soft dimension of skills in order to perform well? In an economy that is learning, the common denominator is learning to learn and learning to unlearn together, step by step (Martins et al., 2017c). Learning to learn is more important than the whole of the specific skills (Lundvall, 2003). It is of paramount importance to innovate the educational processes to favour the implementation of a passionate and efficient manner of teaching and learning. As such, learning to learn is imperative in an economy that is learning because the life cycle of knowledge is, as a tendency, smaller, and therefore its degree of obsolescence higher. Consequently, embracing an attitude that counters the oxidation of knowledge, translates into searching for dynamic skills towards the dynamics of informational revolution, is that the interaction between collaborators, both in and out of the organization, is a way of learning to learn (Martins et al., 2017c). According to Chiva et al. (2007), the interaction with the external environment involves all agents in society, among which are competitors and economic, social, monetary, political, legal and cultural systems. As knowledge is a collective construction, the interaction, the sharing and group work are the source of creation and consolidation of tacit knowledge. This is subjective and is not presented in a codified way, which raises issues regarding its use, spreading and commercialization. In this sense, Lundvall and Nielsen (2007) understood that the «know-how» knowledge typology, both as a group or as an individual, is key to economic development, which requires adequate management of knowledge.

The information revolution is forming a learning economy (Lundvall, 2003), which makes Lundvall and Nielsen (2007: 208) claim that «knowledge management is more of a «social art» than a scientific discipline; knowledge management cannot be reduced to a set of techniques». For these authors, «Know-how» is a typology of knowledge which is more relevant in an informational economy, although it is the sort of knowledge which raises more difficulties and barriers to those close to it, due to its subjectivity and the fact that it is not coded. This way, it is urgent that the organization removes its curtain of silence, so that collaborators feel they are part of the organization and give themselves to it unconditionally. However, when within organizations hard cores are formed, that concentrate central skills, the difficulties in spreading, imitating, and using can increase (Collis and Montgomery, 1995; Ethiraj et al., 2005; Haas and Hansen, 2005; Hatch and Dyer, 2004; Mahoney and Pandian, 1992; McEvily and Marcus, 2005). Such difficulties underline the strategic importance that tacit knowledge takes on in performance, it is said that the main organizational resources are intangible, being technological know-how fundamental, stand taken by Nonaka and Takeuchi (1995). Nevertheless, tacit knowledge does not arise solely from knowledge acquired through routines and learning by doing. It also arises from social and cognitive skills, from the investment in organizational structure and the systems that create dynamics in organizational routines (Canoy et al., 2006). This way, in organizations, it is important to invest in organizational development, because there lies a source of tacit knowledge production (McEvily and Marcus, 2005), an approach that points towards organizational investment in «learning by doing» and in sharp investments in the learning that is hard to imitate (Ethiraj et al., 2005; Hatch and Dyer, 2004). This perspective reflects the deliberate and evolutionary character of the investment process, with the objective of spreading to the tacit knowledge dimension. This is part of distinctive skills that promote economic-social sustainability.
Therefore, the economy needs to intensify and diversify their skills to speed change processes (Lundvall and Nielsen, 2007). Within this context, we ask: which are the distinctive skills for a knowledge-based society?

The answer that question is to train the individual in all their dimensions (Martins et al., 2017a) because investing in people is as important as investing in physical capital and in financial and technological domains (Vikaraman et al., 2017). Teaching being an intrinsically social activity, social and emotional skills should have a central role in any a job (Orts, 2011), because: (i) the emotional skills encompass intrapersonal skills, such as self-knowledge, self-control, self-esteem, self-motivation, resilience, an assertive communication style, among others and (ii) social skills bring together interpersonal skills such as assertiveness/mutual respect; communication, empathy, conflict management, influence/power, negotiation, among others. Nonetheless, skills acquire new boundaries and the individual, both in their job and in their role in society, should know how to observe and listen actively, convince, excite, captivate and maintain others attention, to warn, to go along, to direct, to respect, to make others respect, to argue, to forgive, to make decisions, wait, tolerate, renounce, understand and to plan (Hawkins and Winter, 1996; Orts, 2011). As such, technical-scientific skills are important for organizations and society, but it is the social, the emotional and the spiritual skills – such as motivation, empathy, optimism, cooperation, tolerance, respect, commitment, resilience, enthusiasm – that improve performance and output. Within this range of skills, attitudes and behaviours, it makes little sense to think singly or to divorce the different institutions – schools, universities, companies and organizations, because of such behaviour impacts on the production of new and dynamic skills. This way, a closer relationship between those institutions seems to be the best way for cooperation, for the tuning and synchrony in the new society.

A new organizational philosophy, as is the case of LO and OCB, have also been conquering psychosocial prominence. They are important because the learning economy is iterative, cognitive, emotive, relational and evolutionary. They spread tacit knowledge, cooperation and teamwork values and are examples of efficient organizations, which contribute to increase society’s knowledge base. Nevertheless, economic development is scarred by inhumanity and the world needs human organizations fed by positive energy because they have multiplicative effects in value creation (Conti, 2017). However, skills for employability are still underlined and are associated with technical-scientific skills. Boltanski and Chiapello (2002), Brunner (2009), Sennett (2000) also underline skills for employability. The focus here is on a post-modern labour market characterized by the imperative of flexibility, renewal and continuous change, erosion of labour traditions, reduction or loss of labour privileges and benefits, proliferation of precarious employment, subcontracting, job outsourcing, diminished solidarity at work, knowledge obsolescence, internalization and individualization of success and failure. These concerns respond to the training of workers committed to a knowledge-based economy, with a fairer society, more environmentally friendly and with individuals sensitive to collective well-being. This perspective encompasses all institutions – both individual and collective. Consequently, Alonso et al. (2009), state organizations should pursue excellence based on a new corporate culture, in new organizational sketching, in group work and network and in the ability to internalize exterior knowledge, as argued by Nonaka and Takeuchi (1999). In this regard, higher education is also showing concern by adapting their curriculum to the professional profile the market is flagging.

«Educating is being a personality craftsman, an intelligence poet, a seeder of ideas» (Cury, 2015: 57). In a knowledge-based society, people’s performance and productivity must be put into a systemic and dynamic point of view (Pereira, 2008), as the personal character of the individual is damaging for society and makes it harder to go from a Welfare State to a Workfare State – or Entrepreneur State (Alonso et al., 2009). In turn, business institutions look for abilities in their employees which have not been explicitly covered in curriculum plans, as is the case of social skills, leadership, ability to work within a group, stress management, emotional intelligence, among others (Alonso et al., 2009; World Economic Forum, 2016).
Consequently, Universities cannot take on the role of a mere «factory of knowledge», but the role of knowledge incubator, one that structures the new economy, often called knowledge economy, or know-how economy or even cognitive-cultural economy, because useful and applicable knowledge is the pillar of the welfare society. In this regard, Garcia and Muniz (2008) state that non-cognitive training – effective values, social behaviour and personal development values – should be an active part of the educational process, along with cognitive training – intellectual dexterities and specific knowledge. Nonetheless, in higher education, non-cognitive training – formative-affective area – has not been valued, which makes it harder for the student's personality to develop according to the needs of a knowledge-based economy. However, these issues have been discussed in the literature for decades, as is the case of Cohn et al. (1975) that have drawn attention to the training of self-esteem skills, control of the environment, understanding difference in others, tolerance, individualship (with responsible attitudes and practices, initiative and democratic principles), vocational development, among others. Such a perspective embraces holistic education, from which social skills are part of, namely regarding those at the level of (Lopes et al., 2006): (i) positive relationships with others, (ii) social cognition adequate and appropriate to age, (iii) absence of inadequate behaviour, (iv) effective social behaviour.

Inadequate social skills prevent cooperation among peers (Lopes et al., 2006), are an obstacle to organization performance and the balance of society. Employees should know how to interpret, decode, use and spread information. Therefore, they should also know how to process social information, namely at the level of its codification, interpretation, understanding, case assessment, awareness and self-control, tasks which are part of their conceptual model for social interaction. However, individuals who struggle with social relationships have low social plasticity. Here we come across an element that dulls individual performance, with negative externalities over the group and organizational performance, because it feeds on hostility, avoidance, isolation, inappropriate behaviour and on aggressive behaviour. These are antisocial factors that undermine collaboration and performance. Notwithstanding, if on the one hand there is more and better information, on the other hand, there is an ever larger void, an absence, divergences, obsessions, phobias in the midst of society. Therefore, we ask: why does the individual belittle the treatment of their fears, anguishes, phobias and social tumours while still maintaining their focus on the development of their technical and instrumental skills?

The goals of higher education are to prepare people for demanding and creative professions and that may meet the needs of employers (Brainer, 2008; Nabi and Bagley, 1999) by means of observing their social responsibility and understanding that the University is not an agency for the training of manpower for companies (Brainer, 2008). The Universities’ mission should be the education of «thoughtful and balanced human brains». Therefore, innovation in education helps to structure the education system. Novelty may bridge the gap between the education system and society and shed light upon the social responsibility and civic maturity of all players involved.

The individual, regardless of being or not in the performance of their duties, should know how to observe and listen actively, convince, excite, captivate and maintain others attention, to warn, to go along, to direct, mediate, to respect, to make others respect, to argue, to forgive, negotiate, to make decisions, wait, tolerate, renounce, understand and to plan (Orts, 2011). For such, it is imperative to train individuals and workers committed to an intensive knowledge economy and to a fairer society, more environmentally friendly and with individuals sensitive to collective well-being. This is Walker’s et al. spirit, (2003) who consider that the development of social skills enriches curriculum plans. To this end, it is urgent to innovate and devise alternative methodologies in the teaching and learning system. Walkers’ opinion is that teaching social skills should have similar guidelines for teaching academic technical-scientific skills. If the society of knowledge needs practice-oriented vocabulary, one that is oriented towards citizenship, social and professional integration, then which is the importance attributed to higher education, to the training of emotional intelligence as a complement to students’ cognitive and instrumental intelligence? This issue is
linked to the fact that Universities are closed to «out-of-the-box» knowledge production. Although these are quintessentially production centres, they could also be knowledge of castration centres if their educational system is institutionalized and concerned with a unifocal transmission of knowledge (Cury, 2017). However, social skills should be crafted at curriculum units (Lopes et al., 2006), because social rules are learnt and trained behaviours. Walker et al., (2003) also consider that teaching social skills should imply an orientation identical to that of teaching academic skills and that a positive correlation between teaching social skills and changing behaviours can be found, which leads to considerations that teaching should be oriented towards the production of effective and wanted results.

The University also carries a role of inclusion and of promoting employability. As such, education agents should take on teaching-learning with a critically imperative, interpretative, participative and conciliatory spirit. It is in this regard that Herber (2008) considers that the excessive focus on the preparation of the individual for market inclusion, on the labour market and business world demands can be dangerous as it withdraws attention from personal development and from learning to be a person. The recent world events regarding corruption and economic and financial scandals have shown us that men's focus on the business world and on the labour, the market can be disastrous for both society and mankind. Economic criteria guidelines are necessary; however, they should be accompanied by human values and by ethic principles because economic development, personal development and democratic living are all part of the same group of assumptions of society's sustained development.

The purpose of the article. The present article takes as a starting point the question: «which are the distinctive and competitive skills in a knowledge-based society?» and its objectives are: to reflect on intangible dynamic skills, contrasting them to traditional skills, which are mainly based on technical and scientific domains. Therefore, we will discuss the role of Higher Education Institutions in the training of soft skills. With this reflection, we want to draw attention to other teaching-learning methodologies, based on holistic learning and multiple intelligences, where the emotional, social and civic skills are underlined. With this orientation, the global moulding of the individual is more sustainable and engaged with society. It also feeds the entrepreneur spirit towards the creation of dynamic organizational forms, learning forms and also friendlier towards stakeholders and the surrounding environment.

Methodology. This work draws on secondary data and is based on a qualitative methodological path. It is based on a literature review and on studies about soft skills. Reflects on the skills available on offer at higher education, with the aim to identify relational, social and emotional skills in graduate students. Based on this discussion, we pretend to increase the reflexion on soft skills, because the perception of the employers still shows an existing gap, which brings some difficulties in the graduates and in the organisation performance.

Results. Economic and social development is influenced by individuals' emotional development. This way, the teaching system cannot be conditioned by technical-scientific skills, because knowing how to work within a team and knowing how to communicate, empathise, and control impulses. Establishing adequate relationships are valued skills, sought out by the labour market (Guillen, 2017). Nonetheless, social and emotional skills do not replace cognitive skills, but they contribute to a harmonious, global development of an individual. For this reason, education must be seen as learning for life process and not a process of learning for specific moments in life. In this sense, emotional education aims at forming individuals that can face everyday situations accordingly. There are several strategies to innovate the education system rationally and establish the bridges with the real world, as it is the case of curricular innovation that includes modules for the production of skills for employability while involving people, the production institutions and the students (Cranmer, 2006). Therefore, social-emotional education is centred on the production of intra and interpersonal skills. These are at the foundation of healthy, cooperative, conciliatory and tolerant relationships which are the backbone of excellent performance. For this,
according to Bisquerra (2000), the aims of emotional education are surgical towards economic-social development and undergo:

1. Promoting the individual's whole development.
2. Knowing their own emotions better.
3. Developing skills to regulate their own emotions.
4. Identifying negative emotions and treating them accordingly.
5. Preventing the damaging effects of negative emotions.
6. Developing positive skills.
7. Developing self-motivation skills.
8. Developing skills for a positive life.
9. Developing interpersonal skills.
10. Developing skills for personal and social well-being.
11. Developing skills to prevent stress anxiety and depression.
12. Becoming aware of subjective elements that influence well-being.
14. Developing resilience towards depression.

The aims of emotional education underline their importance for the individual's global and harmonious development. However, why is it that individualism, selfishness and displeasure continue to grow among young people, as happens with parents and adults? And what images do these youngsters keep of such behaviours? If «educating means being a personality craftsman, an intelligence poet, a seeder of ideas» (Cury, 2015: 57), then emotional education seems to be essential to the curriculum because some of its content is (Aierdi, 2008):

1. Emotional intelligence.
2. Knowledge of people's emotions.
5. Empathy.
6. Conflict resolution.
7. Skills for life.
8. Social skills.
9. Understanding and regulating emotions.

An innovative education is focused on soft skills. For that matter, it should not only be concerned with economic return, but also with the level of equity, social justice and inclusion. This perspective adds value to the students' human and social capital and these are an asset for employability (Tomlinson, 2008). It enhances and renders the academic curriculum more robust and consistent and it gives prominence to the student and elevates his/her self-esteem and motivation. However, what can be seen when one reads through the orientation reference boards for higher education? According to Bologna's classification, skills are a group of knowledge and abilities acquired by the student throughout their graduation and which can be grouped into three blocks: (i) specific skills, (ii) generic skills or instrumental skills and (iii) transferable skills (see figure 1).

The typification of skills is grouped by branches. Thus:

1. Specific skills are directly related to the graduate course's practical and professional knowledge. They're branched in (i) Technic knowledge, (ii) Social-economic knowledge and (iii) Supporting knowledge.
2. Within Generic skills or Instrumental skills the following can be found: (b1) languages, (b2) writing and speaking skills, (b3) creativity and innovation, (b4) communication and expression skills, (b5)
ability to work within a group, (b6) adapting to more turbulent work environments, (b7) adapting to change, (b8) working under pressure, (b9) time management, (b10) ethic values.

3. Within Transferable skills, there are: (c1) theory/practice relationship, (c2) education market and labour market, (c3) cooperation with companies (c4) internships, visits to companies, (c5) real environment simulation.

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**Figure 1. Bologna and skills classification**
Source: Based on the concepts of Hortale and Mora (2004)

Regardless of how important that perspective is in skills training, civic and emotional training is not explicit, which foresees a potential gap when training the student. The same is true when reflecting on the universal skills of Libro Blanco (n/a), as can be seen in figure 2.

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**Figure 2. Universal Skills**
Source: Based on the concepts of Libro Blanco (2018)
However, the underlying spirit to those orientations in skills construction still faces, in its essence, both specific and generic skills, branched into Instrumental skills, Interpersonal skills and into Systemic skills (Gonzalez and Wagenaar, 2003; Libro Blanco, n/a), as seen in figure 3.

![Figure 3. Skills in the Tuning Project](source: Based on Gonzalez and Wagenaar (2003); Libro Blanco (2018))

Thus:

1. The following are included in Instrumental skills (a1) ability to analyse and synthesize, (a2) ability to organise and plan, (a3) oral and written communication in native language, (a4) oral and written communication in a foreign language, (a5) computer knowledge (at user level), (a6) ability to analyse and seek information using a variety of sources, (a7) ability to solve problems and (a8) ability to make decisions.

2. From the set of Interpersonal skills: (b1) the ability to work within a team, (b2) working with a cross-disciplinary team, (b3) working within an international context, (b4) personal relations skills, (b5) ability to work in diverse and multicultural environments, (b6) critical and self-critical skills, (b7) ethic commitment towards work and (b8) working under pressure.

3. In the systemic skills group, there is (c1) autonomous learning skills, (c2) ability to adapt to new circumstances, (c3) creativity, (c4) leadership, (c5) initiative and entrepreneur spirit, (c6) motivation towards quality and (c7) sensitivity towards environmental topics.

We consider the perspective of the mentioned skills to be relevant. However, we also consider that they do not highlight intrapersonal skills, though they could be hidden. If the studies conducted have revealed that employability’s success is 15 to 25% associated with **hard skills** or technical-scientific skills and that between 75 to 85% to Soft skills or cross-sectional skills (Deepa and Seth, 2013; Jain and Anjuman, 2013; Robles, 2012), why is it that throughout academic education we remain faithful to hard skills and neglect soft skills? In this regard, Portuguese students were inquired about the topic and they consider that higher education institutions mainly prepare them for the development of technical-scientific skills, that is, for roughly 25% only of what could be later on demanded of them in terms of employability (Monteiro et al., 2015). These percentages state that graduates demonstrate fragility in skills such as leadership, taking risks and making decisions, which converges towards the recommendations of the World Economic Forum (2016) that deems as necessary skills by the year 2020 the ability to solve complex problems, critical thinking, creativity, people management, coordination with others and emotional...
intelligence. Likewise, Pereira and Costa (2017), also carried out a study over the importance of cross-sectional skills in higher education, with the collaboration of students from the University of Minho (UM) and of the Instituto Superior de Engenharia do Porto (ISEP), with a sample of 424 students. In this study, students gave little importance to technical skills and primarily valued cross-sectional skills. Results are identical to the ones from the study of Blanco et al. (2012) where interpersonal skills score between 77% and 89% in pre and post-test respectively, which contrasts with the results obtained by technical-scientific skills in pre and post-test: 29% and 15% respectively.

In view of the above, it seems to us that the area of emotional skills in an academic career is meagre. This does make a difference in the graduate's personality, as well as their social-professional performance. As social skills manifest themselves in democracy, injustice, equality, individuals and civil rights, in solidarity, tolerance and in wanting to solve problems from the local community (European Union, 2006), where, in the skills framework from higher education, is the concern for these same skills underlined? These are catalyst and structuring instruments for organizational and social skills and which prevent the fluctuation of the remaining skills. They combine hard and soft skills and sustain workers' performance. Nevertheless, individuals still display distant behaviours regarding the importance of inclusion of these social and emotional components in the curriculum. However, as Vieira and Marques (2014) have identified there are already some initiatives from Portuguese higher education institutions, the most frequent of which is the conducting of internships to connect students to corporate practice. Concurrently, there are other motivating practices of teaching-learning, such as curriculum units that are framed into real projects and within a labour context. This makes it easier to share knowledge produced at higher education and applied to organizations, examples of which are job fairs or specific workshops, the creation of serious games for the development of teamwork, communication, cooperation and collaboration abilities (Araújo et al., 2015; Poy-Castro et al., 2015). The teaching-learning methodology of serious games is relevant to the development of abilities and competencies. The games allow learning how to make decisions, draw strategies, to lead and work within a team, which is conducive to the production of new and distinctive abilities. In this context, higher education, though yet in a very initial stage and in some areas only, has been working to adapt to the needs identified by the labour market, as is argued in the World Economic Forum (2016).

Conclusions. Higher education institutions have a prevailing role in society. They play an important role in training future professionals in various areas of expertise. Their training is highly focused on technical-scientific skills. These are imperative for good performance, but cross-sectional skills, commonly known as soft skills, are valued and much appreciated by organizations. It is in this regard that companies undergoing recruitment and selection processes value ever more holistic abilities of intrapersonal and interpersonal development, which, as a rule, are not explicit in the academic curriculum. This corporate practice has impacted on the behaviour of higher education institutions. However, the efforts to steer educational innovation are still slim, which hinders the development of the process. There is already evidence of some innovative teaching-learning methodologies which meet such changes as for example serious games, round tables, workshops, service learning, projects applied to business context, internships, among others. These methodologies are not yet globally implemented in the Portuguese market, but they are promoting change and challenging the production of useful knowledge for organizations. This reality somehow responds to our question: which skills does knowledge society feed on? And do the teaching-learning processes implemented in higher education help forming competences and abilities at the level of personal development, social results and at the level of individualship results? According to Conway et al. (2009) e Hawkins and Winter (1996), at the level of personal development, abilities range from self-assessment, voluntary motivation, moral development, well-being to career development. At the level of social results, the following abilities should be underlined: the ability to interact with others, ability to understand or tolerate diversity, abilities of belief, knowledge or attitudes towards...
others, towards marginalised people, those excluded from the labour market, from family, from society. At
the level of individualship results, concern focuses on the ability to live individualship in a personal and
responsible way, so as to be a participative element of society, to spread and live within the concept of
individualship oriented towards justice among other things. Thus, looking at the guideline skills at higher
education and at the skills companies consider important, it seems to us that much has to be done at
university so as to balance the demand and supply of distinctive abilities, regardless of some efforts that
have been carried out in this sense.

Traditional cognitive skills are essential to good performance but are no longer sufficient condition for
organizational success, nor for the balance of society. Social, emotional, spiritual skills are distinctive and
lead to superior performance, but are neglected and hidden in the Curriculum. However, we determined
that at higher education the concern already exits with applying alternative teaching-learning
methodologies to the traditional methodologies for the training of the global individual. Top-down traditional
teaching is giving place to cross-sectoral teaching, concerns being shown with holistic training. It has been
slowly acknowledged that emotional skills are distinctive in professional performance because it expedites
using coding knowledge and cooperation intra and inter groups. This way, the new learning
methodologies, are of service to the building of new individuals pronounced professional, personal and
social ethic codes, with a higher degree of selflessness, companionship, commitment, responsibility and creativity. These traits feed the corporate innovation processes and are of service to
efficiency, productivity and organizational competitiveness.

Author contribution: O. P. and M. R. as producers and researchers conceptualized this work as
they are concerned with the wide-ranging development of students’ skills.

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Комунікативні навички в інноваційній економіці

У рамках даного дослідження узагальнено основні науково-методичні підходи щодо визначення сутності та ролі комунікативних навичок в інноваційній економіці. Головною метою статті є визначення ролі закладів вищої освіти (ЗВО) у формуванні та розвитку комунікативних навичок у студентів, а також визначення напрямів модернізації навчальних програм. Актуальність даного дослідження полягається збільшенням кількості випускників ЗВО, які не відповідають навчальним запитам та вимогам роботодавця на ринку праці. У рамках дослідження авторами пророзглянуто та систематизовано основні методи викладання, що застосовується на комплексному рівні навчання та теорії мислення інтелекту, де особлива увага приділяється емоційним, соціальним та громадянським навичкам. Входячи положенням даного дослідження є аналіз і Ідентифікація відмінних та конкуренційних навичок освіченого суспільства. Авторами визначено сутність, роль та значення нематеріальних динамічних здібностей поряд з традиційними навичками студентів. Визначено, що навчальна програма має бути спрямована на формування навичок у фізіології до концепцій самонасвіту (learning to learn) та вимоги забувати вивчате (learning to unlearn). Відповідно до результатів аналізу наукової літератури та сучасних вимог ринку праці, виконаневедени концепції є основною для розвитку інноваційної економіки, адже навчальний процес має бути інтерактивним, когнітивним, емоційною забезпеченням, відповідним, соціальних та емоційних. Автори наводять, що в даний час особистості потребують відповідь набором навичок, в якому подано навчально-технічні навички та соціальних та емоційних. Ці навички повинні допомогатися мультиплікативними та соціальних здібностей, що сприятиме розвитку внутрішньоосвітніх навичок та комунікативності студентів. Однак автори зазначають, що емоційні та соціальні аспекти у повній мірі не відображено у навчальних планах ЗВО. У статті систематизовано основні слібні місця випускників ЗВО у відповідності до вимог сучасного ринку праці. Методологічну основу даного дослідження склали аналіз літературних джерел та досліджень з даної тематики. Відповідно до поставленої мети, автори наводять на необхідності впровадження високомісного навчального плану, змінити здібності навчання та комунікативним навичкам студентів, з однієї сторони, та підвищити їх конкурентоздатність у майбутньому на ринку праці з іншої сторони. Отримані результати дослідження можуть бути використані ЗВО з метою формування основних цінностей та навичок серед студентів: розуміння та зміцнення їх соціальної позиції у суспільстві, роль та значення їх появлення, формування навичок співробітництва тощо.

Ключові слова: інноваційна економіка, навчальна програма, ЗВО, інноваційна освіта, внутрішньоосвітні навички, комунікативність, професіоналізм, міцність, університет.

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