

# A Reinvented Education in Business and Accounting using a GBL Approach for Soft Skills

Susana Bastos, Manuel Silva, Jose-Luis Poza-Lujan and KaiSchleutker

CEOS.PP, ISCAP, Polytechnic of Porto (IPP), Portugal

UPV – Universitat Politècnica de València, Spain

TUAS – Turku University of Applied Sciences, Finland

[susanass@iscap.ipp.pt](mailto:susanass@iscap.ipp.pt)

[mdasilva@iscap.ipp.pt](mailto:mdasilva@iscap.ipp.pt)

[jopolu@upv.es](mailto:jopolu@upv.es)

[kai.schleutker@turkuamk.fi](mailto:kai.schleutker@turkuamk.fi)

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**Abstract:** The vulnerable, dynamic and digitalizing working environments of the 2020s obviously propose new types of ‘newcomer’ skills. The character of these ‘soft skills’ is inherent, whereby their learning forms a challenge for educators. Researchers around the world are on the same question: how to make the learning tools and rebuilt the classroom (virtual and face-to-face) in order to cope with this digital generation? This change needs to incorporate new Skills; these skills, called Core Skills, are changing the way to teach and to learn. Motivation is the essential key to have in mind. Creating mind-sets under a strong cognitive engagement is education for the future of professionals. Gamification, Game-Based Learning (GBL), Simulations, Virtual classrooms, digital platforms with contents and many other methods are in use all around the world to change, with motivation, the perspective of students towards their own learning path. The VUCA (volatility, uncertainty, complexity and ambiguity) world brought Higher Education Institutions the discussion of the future for an education of excellence. This article intends to present a case study as a solution to combine Simulation and GBL to promote the Core Skills that students and teachers need to achieve success on the process of teaching and learning. The solution is innovative due to the main scope: the perfect connection of humanity and empathy through the use of Simulation-GBL in higher educational institutions.

**Keywords:** game-based learning, core skills, personalized learning, accounting education

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## 1. Introduction

Several researches (Mourshed et al., 2014; WEF 2016; Bughan et al., 2018) indicate that the skills of graduates do not fully match with the needs of organizations and employers. This phenomena, known as ‘skills mismatch’ (OECD, 2016) or ‘skills gap’ (Mourshed et al., 2014), causes problems both for the organizations as well as graduates and young employees. For organizations, it means a deficit in organizational competence, which may deteriorate business success or customer relationships, whereas for graduates lack of skills may cause problems in their employability and career development.

In a study covering eight European countries (Spain, France, Italy, Germany, Portugal, Sweden, Netherlands and Greece) of McKinsey (Mourshed et al., 2014), over 3000 employers and managers were asked to rate skills that would probably be needed by employees by the year 2030, whereby they were also asked to assess the biggest gaps in existing skills by graduates and young professionals. According to the results, the most notable skills gaps were in soft skills (problem-solving, oral presentation, team working and creativity). These skills relate especially to the levels 4 and 6 in the EQF classification, and to the transversal skills defined in the European ESCO classification, elaborated during 2013-20.

Soft skills are non-domain-specific skills that are reported to improve interactions, work performance, critical thinking and career prospects (Heckmann and Kautz, 2012; Anthony and Garner, 2016). As education should be able to equip graduates and employees with the needed skills, the skills shift has created a challenge also for educational institutions and HR experts. The right skills and competencies should be taught and learned at educational institutions. Regarding soft skills specifically, it seems that their role has not fully been acknowledged in curricula (García-Aracil and van der Velden, 2008; Tedesco, Opertti and Amadio, 2014).

The present work is based on the research made in CoSki21- Core Skills for 21th-Century Professionals, in all the multiplier events and in the practice of two curricular units in Portugal and Finland. In Portugal 18 years after the launch of the Management Simulation (MS) on the 3rd year of the Accounting and Administration Course at IPP-ISCAP (Polytechnic of Porto) 9 of research, on the innovative approach of MS as a methodology to teach and

learn based on technology, active methods and assessment “by doing”, led to interesting outcomes and conclusions, produced improvements and changes implementation always seeking continuous improvement. At TUAS (Turku, in Finland), business studies have been conducted in a learning environment called *Bisneskatemia* (BA). The BA involves project-based learning in close cooperation with companies, whereby student teams carry out promotion and marketing tasks and events in assignments from companies. The students favour *Bisnes Akatemia* (BA) learning environment as (...) they seem to like the way of learning by doing (...) as well as working in teams. “The learning environment enables holistic learning where students have an opinion to develop both substance skills and their soft skills (...). It also creates the need to learn and it motivates effectively personalized learning.” (Bastos, Schleutker & Azevedo, 2018). In Spain, the students learn soft skills only in concrete masters curricula, and as an optative subject. Teachers act as facilitators, coordinating sessions and guiding the students’ activities.

“Before each class we will send links to some videos and readings to the students in order that they can prepare in advance part of the contents. Later, during the class we will propose several activities and case of study for promoting the interaction between the students. These will be carried out in groups. A student at each group will be responsible for lead the tasks. Additional content will be given to her in order to arrange the tasks in advance. This role will change on a regular basis within each group. Later, some time is reserved for exchanging ideas with the all the students altogether. Finally, a summary of the contents and main ideas will be done again in groups. These contents will be gathered either in diaries or blogs. The use of blogs will facilitate to include media content and the interaction between different groups. We will also foster that the students choose 2 or 3 books from the bibliography for going deeper in one theme of their own interest. The professors will help the students in the choice of the material”. (Conejero, J. A., et al 2015:3017)

The focus of the present work are the Skills for the 21st-century professionals, according to the framework defined in the *Coski21* Project, described below.

Considering the increasing need for skills such as teamwork, innovation and adaptation (Mourshed et al., 2014; OECD 2016; WEF 2016, in Bastos, Schleutker & Azevedo, 2018), business students should possess this kind of skills in order to proceed and give added value to the labour market. Therefore, learning environments should be designed in a way that enables personalised learning and training of these kinds of person-related skills.

To a better understanding of the *Coski* project, let’s start by presenting its challenges, aims and specific objectives.

The *Coski* Project has defined as challenges the following ones: overcome the lack and maladjustment of basic and transversal skills; create new and innovative teaching and assessment methods; create new and innovative curricula for the courses; and encourage lifelong learning in an intercultural and intergenerational way.

The main objective of *Coski* Project is to improve the quality and importance of the students’ knowledge and skills. The primary goal is to empower higher education institutions to make graduates and professionals with the personal skills needed for the 21st century.

*Coski* Project defined five specific objectives: first, to develop a common framework of key personal competencies required by companies, including methods to collect and develop them; second, develop a toolkit to teach and to assess these key competencies in order to improve and sharpen the personal experience, the learning process and the personal growth. This toolkit is valid both for students and enterprises. Third, to develop an international platform that acts as a bridge between higher education institutions and, companies using active teaching methods. Forth, foster learning and personal improvement to strengthen and give visibility to students' key competencies, properly assessed, stimulating the search for a job that suits their personal profiles.

## **2. The framework of Core Skills for 21st-century professionals**

What competencies should the students have in the 21st century? This question rises nowadays interesting discussions among the involved in the educational system and in companies.

A generation ago, teachers had the expectation that what they taught students would be valid throughout life. Today, schools have to prepare students for a faster socio-economic change than ever before, for jobs that haven't even been created yet, to use technologies that don't exist yet and solve problems that we still don't know will arise.

Educational success no longer lies predominantly in the reproduction of contents, but in extrapolating what we know and in its creative application to new situations. In other words, the world no longer rewards people only for what they know – Google knows everything – but for what they can do with it. Therefore, education has more and more to do with the development of creativity, of critical thinking, problem-solving and decision making; and with forms of work that imply communication and collaboration.

If we spend our whole life locked in a single subject, we will not be able to develop the competencies to realize from where will the next big invention appear.

In the 21st century, we have to go further and recognize that knowledge and competencies are not enough per se. The bankers who ruined our financial system were, probably, highly creative people and with critical thinking. In addition, some of those with the most entrepreneurial spirit are at the head of mafia organizations, instead of serving their country. Therefore, we also have to take into account wider qualities in terms of character, such as empathy, resilience, curiosity, courage, leadership and values. Do this in a thoughtful and systematic way is what most distinguishes the 21st-century curriculum from traditional teaching.

The role of ethics as a regulatory element to take into account in today's global digital business. Ethical and behavioural attitudes are considered soft skills that should have a special emphasis in teaching today.

Portuguese students have more school hours than in Finland, the European country with the best performance in PISA (OCDE, 2020). This proves that more hours is not synonymous of more success.

When we look at the relationship between the number of hours of classes and the educational outcomes, within each country, we find a positive relationship. That is, schedules more filled compensate. However, when we make comparisons between the different countries, we see that there is no relationship between the two things. That tells us that the educational results are always result of the quantity and quality of teaching. In Finland, the quality of educational experiences is very high, so students can get good results, even though they have a shorter schedule than other countries.

One of the problems HEI's and companies are facing for a long time is the skills gaps. Coski Project defined a common framework for soft skills that included the needed by organizations and the required for the educational curricula. As soft skills are "newcomers" in curricula, Coski Project also provided the guidelines for evaluating and assessing them.

The framework, created from the revision of existing skills maps and competence management systems, which resulted in the outlining of the most commonly used. The project leaned over soft skills in business, so the focus groups of the surveys were managers, recruiters, teachers and graduates, but also business professionals and entrepreneurs. "Entrepreneurial learning takes place both inside and outside the classroom, in dynamic environments where knowledge intersects with doing and creative experimentation, where students and faculty learn together through the productive application of knowledge" (Bastos, *et al.*, 2019).

The 21 skills emerged from the study grouped in 12 skills (table below):

**Table 1:** The set of the 12 Core Skills

Nr.	Core skill	Skills integrated
1	Adaptability and Flexibility – Self-control – Flexibility and change management – Self-confidence	8, 9, 11
2	Motivation – Initiative	1
3	Managing responsibility – People management – Leadership – Networking – Customer orientation	5, 6, 15, 16
4	Time management – Planning and Organization	3
5	Communication skills – Communication	12
6	Team working – Work in team and in cooperation – Commitment to the organization	7, 10
7	Conflict management – Negotiation	14
8	Service skills – Concern about order and quality – Empathy	4, 13
9	Decision making – Orientation to goals – Planning and organization – Strategic orientation	2, 3, 19
10	Problem solving – Learning and use of knowledge	17
11	Creativity and Innovation – Creativity	18
12	Critical and structured thinking – Analytical thinking – Conceptual thinking	20, 21

As an example, adaptability and flexibility is a skill that in itself encompasses the skill self-control (8), flexibility and change management (9) and self-confidence (11), as shown in the table above.

According to the research carried out in Portugal, Spain and Finland, three of the countries involved in the project, and according to the European literature on the subject, Coski has identified the top eight soft skills considered the most important for the student career development and to manage the working life.

The study in accounting and business education held in Portugal and Finland showed that implementing skills-based curriculum instead of mere substance-base curriculum, and was the cornerstone of change. The top 8 soft skills characterized in Coski project have been used for some years now in both BSP – ISCAP, BA – TUAS and Soft Skills – UPV.

Defined the top eight soft skills, how do we teach and assess them? Moreover, what are the appropriate learning environments? Bastos (2018:2) warned to the need “to modernise pedagogical methods (...) to produce competencies and skills”.

In the learning environment already in use at Bisness Akatemia (Bastos, 2018:5) “lectures are given only exceptionally in cases where a lecture is considered the best way of learning”. For two years students work in a team with the orientation of a coach whose main function is to facilitate “a positive team spirit and constructive relationships between team members and encouraging personalised learning and formation of individual soft skills”.

In the learning environment in use at Business Simulation Project (BSP), students can “appropriate knowledge acquired in previous curricular units” (Bastos, 2016). The learning environment is still much centred in “classes”, and, although they are of a practical character, the teacher guides the students in pretty much the whole process. The teacher is not yet (and only) a coach. Educational culture must change in its essence. Learning

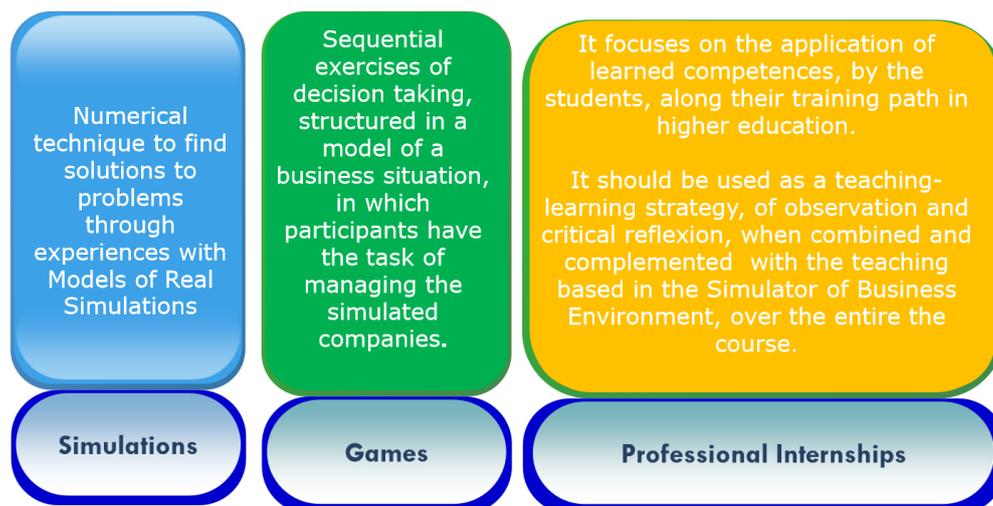
environments must support the development of personal skills – teachers plan the curriculum but students plan the operations – this is the next step.

### 2.1 Business Simulation Project: a GBL combined method to teach soft skills

The resource to the strategy of games, business simulations, professional internships, active methods that includes the combination of flipped classroom, GBL, we defend, notwithstanding, that the complete training of competences areas such as business, accounting, entrepreneurship, marketing and similar, requires an availability of a Simulator of the Business Environment that assures to the student a multifaceted participation, as an intervener agent in the process of conception, development and maintenance of the business reality. (Azevedo, et. al, 2016)

Management Simulation with a technological basis must propitiate a space of learning, based on the simulation of the organizational environment typical of an entity provided with an advanced management profile which involves the student in the application of the knowledge that throughout the course is emerging in a multi and inter-disciplinary form.

The particularity of the skills training process for which the Project Business Simulation (BSP) Course is oriented, shapes the teaching methodology and the evaluation system, which is built on a dynamic basis primarily interested in the progressive effects of the expected changes in students, the learning of complex behaviors, but also concerned with the verification of the hard and soft skills - core skills -, acquired for their final academic certification. Since this is an education and training practice, whose fundamental purpose is to link theory to practice, turning training experience into work experience, where evaluation is interpreted as a process of systematic collection of information to measure student progress. (Soares, 2011)



**Figure 1:** Distinction simulations, games and professional internships. (Azevedo et. al, 2016)

At Management Simulation there is a strong focus in practice of teaching and training, to link theory into practice, transforming the experience of training in professional experience, in which:

- the passive and receptor role of the student gives place to his active role,
- the assessment is interpreted as a process of systematic gathering of information designed to measure the progress of students, and
- for the decision on training readjustments considered necessary.
- the relation between teaching and assessment methods and the “learning” of Soft Skills is an interesting view to explore in order to promote the learning of those skills.

### 3. Teaching methods and soft skills assessment

Soft skills assessment considers and valorises the person’s experience “(...) such as the learning process and personal growth, especially in acquiring and strengthening those skills required by companies, favouring thus their recognition, enhancement and promotion.” (Bastos, Poza, 2019:5).

For achieving a level of proficiency, the project states that "assessment and feedback are two major components of the learning experience; to shape the students' understanding of the curriculum and to determine their proficiency level in a set of skills. The proficiency level is understood as the progress that the student has on his/her learning path, this is, the ability achieved by the student in the performance of the activities proposed. The academic mark is the combination of the proficiency level achieved by the student in a specific skill and the grade attributed by the teacher to the "set of results/products" resulted from the teaching and learning process in a period." (Bastos, Pozan, 2019:5)

The teaching methods identified are Master Class, Laboratory Class, and Management Simulation-GBL ISCAP Method. In addition, for each of the twelve soft skills is described the teaching method as: real work situations; tasks and activities; case studies and teamwork.

**Table 2:** Teaching method and soft skills – Part I

Teaching method (TM)	Adaptability and Flexibility	Motivation	Time Management	Communication skills	Team working	Conflict Management
TM1 Master Class	Real work situations – expositive method					
TM2 Laboratory Class	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods
TM 3 Simulation - GBL (ISCAP Method)	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method

**Table 2:** Teaching method and soft skills – Part II

Teaching method	Service skills	Motivation	Decision making	Problem-solving	Creativity and innovation	Critical and structured thinking
TM1 Master Class	Real work situations – expositive method					
TM2 Laboratory Class	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods	Tasks and activities – active and demonstrative methods
TM 3 Simulation - GBL (ISCAP Method)	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method	Tasks; activities; case studies; teamwork – active method

These tasks are part of the assessment process, as they are object of assessment in all sessions (via feedback) and are at the same time teaching methods (active, demonstrative and expositive):

- 1st: an explanation of the theory behind the thematic in which the tasks are integrated;

- 2nd: an explanation of some tasks;
- 3rd: the realization of the tasks proposed.

The connection between teaching and assessment methods must exist, otherwise it is not possible to assess skills – hard or soft, the only assessment possible is to “assess the knowledge apprehended by students”, and even so it is not possible to assess their level of proficiency, once there is not, usually, a clear identification of the main goals intended to achieve with a specific set of information worked with teachers and students.

**Table 3:** Teaching method and assessment method

Teaching method vs Assessment method	AM1: Multiple choice	AM2: Problem-solving	AM3: Management Simulation ISCAP-IPP Method
TM1 Master Class	Evaluation test/exam	Distribution of tasks (individual and in group)	Distribution of tasks (individual and in group)
TM2 Laboratory Class	Evaluation test; oral presentations; group work	Activities to develop in lab classes	Activities to develop in lab classes
TM 3 Management Simulation - GBL (ISCAP Method)	Evaluation test at class no. 30	Activities and tasks to develop in classes - Creation and development of all the bureaucratic activities of a company	Activities and tasks to develop in classes – continuous evaluation (all sessions are evaluated, so that the students know and are able to correct their mistakes and understand the errors)

Through the explanation of the above table, we can see that the relation between Master class (TM1) and Multiple choice (AM1) results in a unique evaluation moment: the day and hour of the exam. By relating Master class (TM1) with Problem-solving (AM2), it is implicit that the students can work individually or in a group and that, a set of tasks distributed among students to solve the problem. The right solution is the one that has a mark.

The main conclusion of the results of the relation between Master class (TM1) with Multiple choice (AM1), Problem-solving (AM2) and Management Simulation – ISCAP method (AM3) is that there are specific moments of evaluation and it results in an academic mark to the student.

When we analyse the relation of Laboratory class (TM2), the assessment methods and its results are quite different. There is a wide range of “ways to evaluate or to assess” such as oral presentations, group work, development of activities at the Laboratory in the schedule of the class.

The Assessments methods related with Management Simulation GBL – ISCAP method (TM 3) result in an exam, several activities/tasks to accomplish by the students during the period of the class and a continuous evaluation by the gathering of the results obtained by the students on their performance of the activities made in each session.

**Table 4:** Assessment methods and the set of the 12 Soft skills – Part I

Assessment method	Adaptability and Flexibility	Motivation	Managing responsibility	Time Management	Communication skills	Team working
AM1: Multiple choice	Do more than a task in a defined period of time (activities)	Positive thinking and attitude (tasks; activities)	Delegation of tasks enhances self-confidence (tasks; activities)	Do a large number of tasks in a short period of time (tasks; activities)	Written communication (reports...)	Organization ability (tasks; activities)
AM2: Problem-solving	Behaviour* (activities)	Immediate feedback (tasks; activities)	Meeting to review the tasks already done and those that have not yet been done (tasks; activities)	Division of work (teamwork) (tasks; activities)	Oral presentation (Theme, reports)	Delegation of tasks (tasks; activities)
AM3: Management Simulation	Self-confidence (tasks; activities)	Be proactive (tasks; activities)	Give responsibilities to others (tasks; activities)	Manage oral presentation (tasks; activities)	Knowing how to be in a classroom (behaviour)	Active listening (tasks; activities)
AM3: Management Simulation	---	---	Promote workers' autonomy (teamwork)	Make action plans (task)	Transmit information clearly (task)	Accept different opinions
AM3: Management Simulation	---	---	---	---	---	Mutual help (tasks)

**Table 5:** Assessment methods and the set of the 12 Soft skills – Part II

Assessment method	Conflict Management	Service skills	Decision making	Problem-solving	Creativity and innovation	Critical and structured thinking
AM1: Multiple choice	Know how to negotiate (activities)	Organization of work and of the workplace (teamwork)	Define clear and realistic objectives (self-motivation) (tasks; activities)	Analytical and structured thinking (tasks; activities)	Solve problems in non-traditional ways (tasks; activities)	Develop analytical thinking (activities)
AM2: Problem-solving	Control emotions (activities)	Effort to get good results (individually and in group) (teamwork)	Take initiative (tasks; activities)	Critical analysis of situations (tasks; activities)	Do things differently (tasks; activities)	Develop conceptual thinking (activities)
AM3: Management Simulation	Be cordial in the relationship with others (activities)	Empathy (feelings and concerns of others) (teamwork)	Personal and professional growth (tasks; activities)	Identify the problem (what is wrong) (tasks; activities)	Discuss ideas with others (tasks; activities)	Scrutiny of one thing in each of its parts (activities)
AM3: Management Simulation	Active listening (activities)	---	Make plans of action (plans; activities)	Enunciate various solutions (tasks; activities)	Ask and listen to others' opinions (tasks; activities)	Identify key issues and patterns in situations and relationships (activities)
AM3: Management Simulation	Assertive communication (activities)	---	---	Decide quickly (tasks; activities)	Think "outside the box" (tasks; activities)	---
AM3: Management Simulation	Gather consensus (activities)	---	---	Apply the solutions (tasks; activities)	---	---

\*Behaviour: the student has to behave within the rules of the curricular unit. If he/she breaks the rules, he/she has a penalization on his/her classification (individual assessment).

Set of the seven behaviours: not answer or use the phone in classes; arrive on time; keep the workplace clean and organized; ethics and attitudes; collaborate with the colleagues in the team's best interest; organize and divide the teamwork between all members.

### 3.1 Teaching method vs Soft Skill

The main issue here is how we can relate the teaching method with a given soft skill. As we can see in the table below, using Master class (TM1) and Laboratory class (TM2), the process of teaching and learning soft skills is based on expositive, active and demonstrative methods.

The use of active methods to teach soft skills is presented in Management Simulation GBL – ISCAP method (TM3). The question is what is assessed with these teaching methods and what cannot be assessed.

To make sure that the Motivation skill or other skills are correctly assessed the student has to participate in his/her own learning process, by using active methods in this process, a portion is guaranteed, but only a small portion.

To have a transparent process of assessment of the soft skills we must have pieces of evidence such as documents, videos, discussion among students, reports, even small exams in order to give the student the possibility to practice the knowledge obtained in a school environment. In addition, the teacher has to change his/her role and must become a coach in this process of creating in students the awareness of the existence of someone who, while at school, is there to help them. Moreover, this “help” from teachers is materialized by the constant feedback given by the teacher to each student in order to allow him/her to reflect and to correct the mistakes.

**Table 5:** Teaching methods and the set of the 12 Soft skills

	1 - Adaptability and Flexibility	2 – Motivation	3 - Managing Responsibility	4 - Time Management	5 - Communication Skills	6 - Team working
TM1: Master Class	Expositive method	Expositive method	Expositive method	Expositive method	Expositive method	Expositive method
TM2: Lab Class	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method
TM3: Man. Sim. GBL	Active method	Active method	Active method	Active method	Active method	Active method
	7 - Conflict Management	8 - Service Skills	9 - Decision Making	10 - Problem-solving	11 - Creativity and Innovation	12 - Critical and Structured thinking
TM1: Master Class	Expositive method	Expositive method	Expositive method	Expositive method	Expositive method	Expositive method
TM2: Lab Class	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method	Active and demonstrative method
TM3: Man. Sim. GBL	Active method	Active method	Active method	Active method	Active method	Active method

The study carried out at ISCAP-IPP had as main conclusions:

- The method to assess Assessment Method 3 is not enough to assess soft skills;
- The linkage between Teaching Methods, Assessment Methods and Soft skills has to be developed;
- The solution lies in a new methodology to teach and assess soft skills.

### 4. Skill Boxes – new methodology to teach and assess soft skills

Skill box is the methodology proposed to train and assess soft skills throughout the teaching and learning process. This innovative methodology brings in it some aspects to consider in the teaching and learning process at Higher Education Institutions.

It is essential to diagnose which are the soft skills needed to develop in formal education to meet the needs of the labour market. With this diagnosis' guidelines, it is imperative to train teachers/trainers in these soft skills, since the use of the acquired skills is required to be successful in the profession.

*"The skill box methodology emerges in this context. It is fundamental to have "material" to train soft skills. There are contents, books, media and other means to teach/train hard skills."* (Bastos, Pozan, 2019)

The skill box methodology is based on the triangle: Inspiration - Action – Reflection.

The Inspiration phase is the starting point – the student preparation phase, which precedes the Action "...used to learn or develop the soft skill in question (...)" (Caggiano, 2019:94), when the student has to work, put in practise what he has learned in Inspiration phase, and then he has to reflect upon the actions taken. "Reflection implies action and inspiration in this skill-based process." (Bastos, Poza, 2019). Of this reflection process results in companies portfolio, a blog or a book (Production) where are assembled all the results students have achieved, the tasks made and the activities promoted. "(...) Moreover, each stage is connected to the previous and the next one and this generates a continuous improvement." (Caggiano, 2019:93)

The Skill-box Methodology is created to teach and assess soft skills such as leadership, decision-making, and communication, among others.

The great difficulty is how to evaluate and determine parameters to analyse blogs or books. The use of quantitative and qualitative approaches is advocated. Concerning the quantitative approach, Bloom's taxonomy was used to analyse the contents taking into account knowledge, comprehension and application that are the minimum requirements. And, to determine if the skill box was useful to students, an analysis, evaluation and synthesis are made.

With regard to the qualitative approach, comments are used to determine whether students have learned the concepts. "(...) The final grade is a combination of the two approaches." (Caggiano, 2019:95).

## **5. Skill box Leadership applied to accounting and management**

In order to understand the skill box methodology, let's see the example of the skill box leadership applied to accounting and management.

Skillbox description: Leadership is not only about to be on the top of a hierarchy and to guide an organization or a group. In medium and large organizations, there is not a unique and solid pipeline of work.

Different projects arise, start, and evolve until a consolidated process is reached. In that process, people from different areas and backgrounds join together to work on them.

There is not always a unique leader for all the projects. Depending on the content, this can change. Workers have to know when to take a step forward and lead and how to facilitate others too.

Inspiration: The "inspiration" is giving ....

There is a myriad of authors that have studied leadership and/or have proposed different leadership styles. We have chosen some of them:

- James C. Hunter. His short novel illustrates a radically different approach in which the leader is serving and backing other acts. This contrasts with the misconception of a leader to be the only guide of the group.
- Daniel Goleman. After showing that there is not a unique style, we show the different styles proposed by Goleman. These styles are illustrated with shots of different movies such as *Gladiator*, *Invictus* or *Dead Poets Society*.

Action: Before the inspiration is presented, participants think of different people whose leadership has impressed them. After leadership styles are presented, we share the names of those people and we propose them to group them and to identify which leadership styles they practice.

Participants are also asked to think about concrete actions conducted by them where they acted as a leader. What was the context and the problem, what did they do, and what was the outcome presented to the others? Participants can ask for further information or to discuss other actions to be taken and their possible outcome.

Reflection: After the session, participants are invited to think about situations in which they have led and what is their particular style. They are also invited to think if other styles would have been more effective, what will be the pros and cons of each of them.

## **6. Conclusion**

One of the problems HEI's and companies are facing for a long time is the skills gaps. Coski Project defined a common framework for soft skills that included the needed by organizations and the required for the educational curricula. As soft skills are "newcomers" in curricula, Coski Project also provided the guidelines for evaluating and assessing them.

The teaching and assessment methods identified by Coski project for each one of the twelve soft skills were applied and studied namely in the ISCAP-IPP Accounting and Administration Course, and they've come to the conclusion that the assessment methods used are not enough to evaluate soft skills.

A link must be developed between teaching, assessment methods and soft skills development.

The solution presented is a new methodology to teach and assess soft skills: the skill box that matches Management Simulation-GBL (ISCAP-IPP), BA (TUAS), Skills Methods (UPV). The result is the Skill Box Method that combines teaching and assessment methodologies with a personal academic path.

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## **References**

- Anthony, S., Garner, B. (2016). Teaching soft skills to business students: An analysis of multiple pedagogical methods. *Business and Professional Communication Quarterly* 2016, 79(3), 360–370.
- Azevedo, L, Oliveira, H., Bastos, S. (2016). How To Embrace The New Challenges Of Education? The Use Of An Innovative Methodology In The Teaching-Learning Process, in the Assessment and in the Relation Teacher-Student vs.. Student-Teacher based on the Simulator of Business Environment Technology. *TOJET: The Turkish Online Journal of Educational Technology – November 2016, Special Issue for INTE 2016*, ISSN: 1303 - 6521.
- Bastos, S. et al. (2019). A New Era for Education: Student 5.0. *III International Conference on Education. Universidade Católica Portuguesa*, Julho, Porto, Available at <<http://www.fep.porto.ucp.pt/>>.
- Bastos, S. et al. (2019). Soft Digital Skills in Higher Education Curricula: HEI's 5.0. Aalborg University Copenhagen, Denmark. ISBN 1479-4403. Available at <<http://www.ejel.org/>>.
- Bastos, S., Schleutker, K. and Azevedo, L. (2018). How to facilitate development of soft skills in business studies? Description of a Portuguese and a Finnish pilot. *AMK-LEHTI. UAS Journal, Journal of Finnish Universities of Applied Sciences*. [e-journal] Published on 27 June 2018. Available at: < <https://uasjournal.fi/in-english/development-of-soft-skills-in-business-studies/>>.
- Bastos, S.; Schleutker, K.; Azevedo, L. (2017). "Technology using active methods and self-evaluation to promote effectiveness in Higher Education". 12th EAPRIL Conference – European Association for Practitioner Research on Improving Learning, that took place on the 29<sup>th</sup> November till the 1<sup>st</sup> December of 2017 at Häme University of Applied Sciences, Hämeenlinna, Finland. ISSN 2406-4653 (URL: <https://www.eapril.org/search/node?keys=EAPRIL+2017>).
- Bastos, S.; Azevedo, L.; Oliveira, L., (2016) Challenges to the Higher School. Innovative Methodology in AE. Germany: New Academic Editions. ISBN 978-3-330-74927-6.
- Bastos, S.; Azevedo, L.; De Oliveira, H., (2016), "How to Embrace the New Challenges of Education? The Use of an Innovative Methodology in the Teaching-Learning Process, in the Assessment and in the Relation Teacher-Student vs. Student-Teacher", *Turkish Online Journal of Educational Technology*, No. Special Issue, November, vol. INTE 2016, pp. 1130-1148. Turkish, University of Sakarya: TOJET. ISSN/ISBN: 1303 - 6521. Indexada SCOPUS (URL: [http://www.tojet.net/special/2016\\_11\\_1.pdf](http://www.tojet.net/special/2016_11_1.pdf)).

- Bughin, J., Hazan, E., Lund, S., Dahlström, P., Wiesinger, A. & Subramaniam, A. (2018). Skills Shift. Automation and the Future of Workforce. McKinsey & Company.
- Caggiano, V. (2019). *Hard Work on Soft Skills. Teaching and Learning Ways to be Happy*. Rome: Anicia.
- Conejero, J. A., Poza, J. L., & Seoane-Sepúlveda, J. B. (2015). Teaching me softly: A syllabus for a subject on soft skills. INTED2015 Proceedings, 3014-3020.
- Coski Project (2019). Core Skills Assessment set for level of proficiency. Core Skills for 21st Century Professionals. 2017-1-ES01-KA203-038589. Intellectual Output 2.
- ESCO. European Skills/Competences, qualifications and Occupations. <https://ec.europa.eu/esco/portal/home>
- García-Aracil, A., & Van der Velden, R. (2008). Competencies for young European higher education graduates: labor market mismatches and their payoffs. *Higher Education*, 55 , 219–239.
- Heckman, J. J., & Kautz, T. (2012). Hard evidence on soft skills. *Labour economics*, 19, 451–464.
- Mourshed, M., Patel, J., & Suder, K. (2014). Education to employment: Getting Europe's youth into work. McKinsey & Company.
- OECD (2018). *The future of education and skills: education 2030: the future we want*. Available at: < [https://www.oecd.org/education/2030/E2030%20Position%20Paper%20\(05.04.2018\).pdf](https://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf) > [Accessed 29 February 2020].
- OECD (2020). PISA *in focus* (February 2020). Programme for International Student Assessment: Are students' career expectations aligned with their skills? <https://doi.org/10.1787/22260919>
- Soares, S., 2011. O Ambiente Empresarial de base Tecnológica na Formação de Competências. Aveiro.
- Tedesco, J. C., Opertti, R., & Amadio, M. (2014). The curriculum debate: Why it is important today. *Prospects*, 44 , 527–546.
- World Economic Forum (2016). *The Future of Jobs Report*, ISBN 978-1-944835-18-7.