Innovative Methodologies of Active Learning to Develop the Competencies of the Future of Work

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International organizations promoting economic growth and global development are increasingly requesting higher education systems to prepare students with the fundamental attitude and skills to be competitive in the future workplace. After conducting two separate literature reviews on active learning strategies and on the most demanded competencies in the future of work, the paper proposes a comprehensive framework of 31 competencies pivotal for future professionals to thrive in an innovative work landscape. In the effort to nurture these skills, it further explores the contributions of the most popular active learning methodologies and delves into the role of digital technologies in enhancing the learning experience. Significantly, the paper reveals that active learning not only develops technical and methodological competencies but also enriches social, personal, and particularly digital skills, positioning students to effectively navigate and contribute to the digital economy. The emergent pedagogies underscore the importance of fostering lifelong learning, self-agency, and the adept use of diverse tools and resources, essential for the professionals of today and tomorrow.

Keywords: active learning, collaborative learning, innovative methodologies, competencies development, future of work

COMPETENCES OF THE FUTURE OF WORK

A competency is defined as a capability or ability (Boyatzis, 1982, 2008; McClelland, 1973, 1985) that consists in related but different sets of behavior organized around an underlying construct called the intent. The Organization for Economic Co-operation and Development (OECD) refer to competencies as something "more than just knowledge and skills, that involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitude) in a particular context". For example, communication competency relies on the individual knowledge of a language, practical information, technology skills and attitude towards whom one is communicating (OECD, 2003).

Organizations such as the OECD are increasingly requesting education systems to prepare students with the fundamental knowledge, attitude, and skills to be competitive in the future workplace, be able to leverage on different technologies, activate critical thinking as well as sophisticated communication and teamwork skills (Chu et al., 2016; Rios et al., 2020; Obi et al., 2021). In particular, the OECD Learning Compass 2030 has identified three "transformative competencies" needed by students to shape the future

with well-being and sustainability (OECD Future of Education and Skills 2030): creating new value such as knowledge, jobs, services, solutions and techniques, reconciling tensions and dilemmas to manage relationships with empathy and respect, and taking responsibility to act with morality towards other people and the planet. Similarly, the World Economic Forum (WEF), in its 2020 report on the Future of Jobs (table 1), has listed the 15 top skills that will be requested of workers by 2025 to cope with the increasing automation and the strong economic impact of the Covid-19 pandemic:

TABLE 1
WEF REPORT ON TOP SKILLS OF FUTURE OF JOBS

1. Analytical thinking and innovation; 2. Critical thinking and analysis; 3. Creativity, originality and initiative; 4. Reasoning, problem-solving and ideation; 5. Complex problem-solving; 6. Leadership and social influence; 7. Persuasion and negotiation; 8. Emotional intelligence;	9. Technology design and programming; 10. Technology use, monitoring and control; 11. Troubleshooting and user experience; 12. Systems analysis and evaluation; 13. Service orientation; 14. Active learning and learning strategies; 15. Resilience, stress tolerance and flexibility.

Besides global organizations, several scholars in the literature have attempted to identify the most critical competences that will be soon requested in the workplace. For example, according to Marope, Griffin and Gallangher (2019), the future competencies considered necessary to include in curricula are lifelong learning, self-agency, interactively using diverse tools and resources, interacting with others and the world, multi-literateness and trans-disciplinarity. Lifelong learning represents the most critical future competence as it consists in the capacity to learn and reinvent oneself on the basis of the changing context. Self-agency is about adaptability to the environment and confidence to apply one's resources at hand, such as knowledge, skills and technology. Interactively using diverse tools and resources requires responsible but also effective and efficient adoption of tools and resources to accomplish tasks. Interacting with others demands collaboration and cohesion to foster creativity and problem-solving while interacting with the world enables people to embrace diversity from different perspectives and act locally and globally simultaneously. Multi-literateness goes beyond the use of basic literacies, such as reading, writing and arithmetic, to include digital, financial, health and media literacies. Finally, trans-disciplinarity requires a basic level of understanding and integration of different disciplines to develop innovative solutions.

With the dynamic development of the manufacturing Industry 4.0, Grzybowska and Łupicka (2017) provided a list of straightforward skills deemed particularly important by contemporary managers to cope with future challenges: analytical skills, creativity, entrepreneurial thinking, efficiency orientation, decision-making, problem solving, conflict solving and research skills. This last competency is associated with continuous learning as it refers to leveraging various sources to learn in fast-changing environments. Hernández de Menéndez et al. (2020) integrated this list with a more comprehensive framework differentiating technical competencies, such as media or coding skills; methodological competencies, such as analytical and research skills; social competencies, such as intercultural and communication skills, and personal competencies, such as flexibility and motivation to learn. Furthermore, a study conducted by Elçiçek and Erdemci (2021) carried out by using single and relational screening models among higher education students revealed that the 21st century skills that will be requested to individuals consist, in part, of traditional skills such as critical thinking and problem-solving, entrepreneurship and innovation, social responsibility, leadership, and career awareness, while the rest can be distinguished between learning strategies, such as self-learning and learner control, and digital skills, such as computer self-efficacy, internet self-efficacy, online communication self-efficacy, motivation for e-learning and information and technology literacy. Also, Jardim (2021) stressed the importance of considering the digital transformation phenomenon for developing a frame of reference that is adequate to the needs of the professionals of the current era. In particular, he pointed to a tripartite model based on novelty management, problem-solving,

and communication, encompassing the following skills: creativity, innovation and spirit of initiative, self-efficacy and resilience, strategic planning, evaluation, resolution of problems and decision-making, transformational leadership, clear and visual communication, digital communication and teamwork and networking.

Proposed Framework of Competences

Overall, the 21st century competencies consist of a broad set of skills and professional attributes including cognitive and interpersonal skills, communicative and collaborative skills, civic and social skills, and digital and technological skills. The authors of the present paper have rearranged and condensed all the competences analyzed through the literature review into a comprehensive set of 31 competences (table 2). Some of them have recently emerged in response to the growth of the Industry 4.0, the increasing globalization and the digitalization process; some others are "not new, just newly important" and represent essential capabilities to deal with the present world (Silva, 2009).

TABLE 2
PROPOSED FRAMEWORK OF COMPETENCES FOR THE FUTURE OF WORK

Analytical thinking and innovation	WEF (2020); OECD (2019); Hernández de Menéndez et al. (2020); Hernández de Menéndez et al. (2019); Ruiz-Cantisani et al. (2019).
Problem solving	WEF (2020); OECD (2019); Hernández de Menéndez et al. (2020); Hernández de Menéndez et al. (2019); Ruiz-Cantisani et al. (2019).
Goal setting	Sedelnikova, I. & Emelyanova, N. (2014)
Creativity and spirit of initiative	WEF (2020); Hernández de Menéndez et al. (2020); Jacinto, J. (2021); Elçiçek, M. & Erdemci, H. (2021); Sedelnikova, I. & Emelyanova, N. (2014); Ruiz-Cantisani et al. (2019).
Leadership, persuasion and social influence	WEF (2020); Hernández de Menéndez et al. (2020); Jacinto, J. (2021); Elçiçek, M. & Erdemci, H. (2021); Ruiz-Cantisani, M. et al. (2019).
Technology use, monitoring and control	WEF (2020); Hernández de Menéndez et al (2020).
Technology design, coding and programming	WEF (2020); Hernández de Menéndez et al. (2020).
Resilience, stress tolerance and flexibility	WEF (2020); Hernández de Menéndez et al. (2020).
Reasoning, decision making and problem-solving	WEF (2020); Hernández de Menéndez et al. (2020).
Lifelong learning and learning strategies	Marope, M. et al. (2019); Hernández de Menéndez et al. (2020); Elçiçek, M. & Erdemci, H. (2021); Ruiz-Cantisani et al. (2019).
Conflict solving, persuasion and negotiation	WEF (2020); OECD (2019); Hernández de Menéndez et al. (2020).
Entrepreneurial thinking and strategic planning	Marope, M., Griffin, P., Gallagher, C. (2019); Hernández de Menéndez et al. (2020); Jacinto, J. (2021); Elçiçek, M. & Erdemci, H. (2021); Levant, Y. et al. (2016); Ruiz-Cantisani et al. (2019).
Networking, coollaboration and transfer of knowledge	Marope, M. et al. (2019); Hernández de Menéndez, M. et al. (2020); Jacinto, J. (2021); Obi, B. & Eze, T. & Chibuzo, N. (2021); Levant, Y. et al. (2016); Sedelnikova, I. & Emelyanova, N. (2014); Al-Shammari, M.M. (2021); Ruiz-Cantisani et al. (2019); Sosa Díaz, M. et al. (2021).
Efficiency orientation	Hernández de Menéndez, M. et al. (2020); Levant, Y. et al. (2016).
Research skills	Hernández de Menéndez, M. et al. (2020).

Language and communication skills (verbal, visual and digital)	Hernández de Menéndez, M., et al. (2020); Jacinto, J. (2021); Obi, B. & Eze, T. & Chibuzo, N. (2021); Levant, Y. et al. (2016).
Intercultural skills	Marope, M. et al. (2019); Hernández de Menéndez, M. et al. (2020); Ruiz-Cantisani, M. et al. (2019).
Multi-literateness and trans-disciplinarity	Marope, M. et al. (2019).
Taking responsibility, self-agency and self-efficacy	OECD (2019); Marope, M. et al. (2019); Jacinto, J. (2021); Elçiçek, M. & Erdemci, H. (2021); Levant, Y. et al. (2016); Sedelnikova, I. & Emelyanova, N. (2014); Sun, X. et al. (2022); Ruiz-Cantisani, M. et al. (2019); Sosa Díaz, M. et al. (2021).
System analysis, troubleshooting and user-experience	WEF (2020).
Process understanding and state-of-the-art knowledge	Hernández de Menéndez, M. et al. (2020)
Critical thinking and analysis	WEF (2020); Elçiçek, M. & Erdemci, H. (2021); Obi, B. & Eze, T. & Chibuzo, N. (2021); McLain, T. R. (2019); Ruiz-Cantisani, M. et al. (2019).
Cognitive intelligence	Al-Shammari, M.M. (2021)
Emotional intelligence	WEF (2020); Bonesso, S. et al. (2015); Al-Shammari, M.M. (2021); McEnrue, M. P. et al. (2009); Landau, J., and Meirovich, G. (2011).
Social intelligence	Bonesso, S. et al. (2015); Al-Shammari, M.M. (2021).
Service orientation	WEF (2020).
Sustainability mindset	Hernández de Menéndez, M. et al. (2020); Ruiz-Cantisani, M. et al. (2019).
Compliance	et al. (2020).
Information and Technology Literacy	Elçiçek, M. & Erdemci, H. (2021)
Career awareness	Elçiçek, M. & Erdemci, H. (2021)
Project Management	Levant, Y. et al. (2016); Sedelnikova, I. & Emelyanova, N. (2014); Ruiz-Cantisani, M. et al. (2019).

INNOVATIVE METHODOLOGIES OF ACTIVE LEARNING

Active learning refers to a broad range of interactive activities that place the students at the center of the learning process, engaging them as active participants rather than considering them as passive recipients of knowledge from an expert (Burganova et al., 2018; Bosio & Origo, 2020; Center of Educational Innovation, University of Minnesota). The idea is that engagement is not limited to the students' participation in the activity proposed, but requires their involvement meaningfully and from a deeper perspective (Segura-Robles et al., 2020) through which they learn to learn. This inclusion makes students co-responsible in constructing knowledge that is not based on the transmission and memorization of information but rather on its understanding (Carvalho et al., 2021).

Based on the premise that "effective learning is a social task" (Hernández-de-Menéndez et al., 2019), active learning activities are usually classroom-based and require students to work together during class time to better understand and acquire knowledge but may involve individual work and reflection to a certain extent. They can be either short and simple, such as discussing content, answering questions, and solving problems, or long and demanding, such as engaging in role-playing, flipped classrooms, and simulations

(Smith, Sheppard, Johnson, & Johnson, 2005; Prince & Felder, 2007; Center of Educational Innovation, University of Minnesota). Regardless of the approach or the combination of approaches adopted, the core of active learning stands in the use of metacognition and awareness to create knowledge in innovative ways (Freeman et al., 2014), by overcoming the hierarchical role of the educator as 'knowledge giver' and empowering students to be responsible and autonomous learners. By performing meaningful activities and critically thinking about what they are doing, students are highly engaged, become the main protagonists of their learning process, and are more likely to retain and understand knowledge. Teachers are no longer the holders of knowledge and assume the role of facilitators, mentors and evaluators of students' progress (Hernández-de-Menéndez et al., 2019), becoming the mediators between students and knowledge. From a leadership perspective, they switch from transactional leaders to transformational leaders, leveraging on an active and cooperative approach. This builds on the theories of constructivist pedagogy, constructivism, and social constructivism (Freeman et al., 2014).

Active learning activities can be implemented everywhere, gradually and flexibly and with little investment, without abandoning traditional learning activities but rather integrating the two in order to extract the best from them. However, the sole implementation of active learning practices does not lead to effective learning; the planning and setting of educational objectives, the definition and organization of the course content, the choice of the most proper teaching strategies, and the evaluation of the results and benefits achieved are also essential to achieve this purpose.

Although the concept of active learning is not new and has several decades of implementation by pioneer universities, it has received growing consideration in the second half of the last century (Segura-Robles et al., 2020), due to its important benefits from both an academic and practical standpoint. The reason why many universities and international organizations are currently promoting active learning is that it has been proven to achieve better educational outcomes than traditional methods (Laker and Powell, 2011; Oleskow-Szlapka et al., 2020) and prepare students with skills and competencies requested in the rapidly changing business environment, particularly with regards to Higher Order Thinking Skills (Hernández-de-Menéndez et al., 2019). Today, there is an ever-increasing mismatch between the demands of employers and the skills of graduates, to the point that higher education is criticized for the lack of connection with practice, profession, and problems of real life, which have become multifaceted (Goodman et al., 2015; Hart Research Associates, 2015). Higher education institutions should prepare students to act as reflective and critical citizens, capable of using creative and analytical thinking to implement projects and solve problems (Carvalho et al., 2021). According to some scholars, active learning represents the most effective and efficient practice to cope with this problem and develop the most important 21st century competencies employers demand (Obi et al., 2021). The involvement in hands-on activities and the opportunity that students have to activate critical thinking help indeed develop important individual and team competencies (Todeschini & Baccini, 2016; Kuh et al., 2017) that are fundamental to face the challenges of the modern world.

Moreover, the students' engagement in a discovery-learning environment positively affects their motivation by increasing their self-efficacy (Cavenagh, 2016; Owens et al., 2017; Hernández-de-Menéndez et al., 2019; Segura-Robles et al., 2020) and reduces course failure (Prince, 2004). In this regard, Freeman et al. (2014) demonstrated that active learning is particularly effective in small classes, with up to 50 students, where the probability of failure is reduced by 1,5 times concerning traditional classes. From the studies conducted so far, Engineering and, in general, STEM (Science, Technology, Engineering, and Math) have emerged to be the disciplines in which innovative methodologies, including active learning, have mainly been developed and implemented with successful results (Hernández-de-Menéndez et al., 2019; Barbosa Da Silva, 2020; Oleskow-Szlapka et al., 2020).

Despite the favorable ground of students and Professors reported by many studies (Hernández-de-Menéndez et al., 2019; Segura-Robles et al., 2020; Carvalho et al., 2021) and the urgency in promoting change and innovation in higher education, active learning requires a change in mentalities, continuous training on the side of Professors and a reflective and critical culture (Carvalho et al., 2021). Complementing technical training with competency development demands a profound pedagogical prosess, as Professors need to start leveraging different teaching skills, tools, attitudes and mindsets (Bonesso et al.,

2015). Barriers to active learning can consist in lack of proper resources or physical and technological infrastructure, which may prevent important investments in innovative methodologies, resistance of Professors, who may have achieved great results with traditional learning or may not have enough time to restructure their courses, and finally resistance of students, who may be intimidated or have had negative experiences with such activities. Moreover, some practices may be more suitable for small groups of students, while encountering a certain degree of adversity and obstacles in large classes (Barbosa Da Silva, 2020). Thus, their implementation in certain types of universities may not be easy. Lastly, the ideal spaces for active learning practices are usually open, unstructured and conducive to collaboration, to give students and Professors the freedom to work creatively and innovatively. In some cases, the layout of the rooms and the size of classes should be rethought to remove the main obstacles to implementing these methodologies. For all these reasons, adopting active learning strategies holds great potential while representing a challenge for higher education.

Regarding the various active learning strategies, the authors of the present paper have identified and analyzed the most adopted and effective (table 3) and further studied their relation to the development of the competencies that emerged to be useful in the future of work.

TABLE 3
ACTIVE LEARNING STRATEGIES

Writing	Center of Educational Innovation, University of Minnesota; Al-Shammari, M.M. (2021); McEnrue, M. P. et al. (2009).
Large Group Discussion	Center of Educational Innovation, University of Minnesota; Obi, B. & Eze, T. & Chibuzo, N. (2021); McLain, T. R. (2019); Bonesso, S. et al. (2015); Landau, J., and Meirovich, G. (2011).
Group work	Center of Educational Innovation, University of Minnesota; Oleskow-Szlapka, J., et al. (2020); Carvalho, A. et al. (2021); Ruiz-Cantisani, M. (2019); Obi, B. & Eze, T. & Chibuzo, N. (2021); McLain, T. R. (2019); Hernández de Menéndez, M. Jr A. et al. (2019); Bonesso, S. et al. (2015); Nguyen, K. et al. (2021); Landau, J., and Meirovich, G. (2011).
Peer Assessment	Center of Educational Innovation, University of Minnesota; Obi, B. et al. (2021).
Case-studies	Center of Educational Innovation, University of Minnesota; Oleskow-Szlapka, J. et al. (2020); Obi, B. et al. (2021); McLain, T. R. (2019); Hernández de Menéndez, M. Jr A. et al. (2019); Bonesso, S. et al. (2015); Al-Shammari, M.M. (2021).
Flipped Classroom	Center of Educational Innovation, University of Minnesota; Oleskow-Szlapka, J. et al. (2020); Segura-Robles, A. et al. (2020); Sosa Díaz, M. et al. (2021); Hernández de Menéndez, M. Jr A. et al. (2015).
Quizzes	Hernández de Menéndez, M. Jr A. et al. (2019).
Gamification	Kapp (2012); Watson et al. (2013); Tvarozek & Brza (2014); Hakulinen & Auvinen (2014); Sedelnikova & Emelyanova (2014); Plass et al. (2015); Nicholson (2015); Bonesso et al. (2015); Al-Azawi et al. (2016); Ortiz Rojas et al. (2016); Ha et al. (2020); Belova & Zowada (2020); Barbosa Da Silva (2020); Azzouz & Gutiérrez-Colón (2020); Rincon-Flores & Santos-Guevara (2021); Al Shammari (2021).
Game-based learning	Squire, 2011; Eastwood & Sadler, 2013; Al-Azawi et al., 2016; Jäskä et al., 2022; Prensky, 2007; Hornik & Thornburg, 2010; Qian & Clark, 2016; Echao & Romero, 2017; Pellas & Vosinakis, 2018; Bakhsh et al., 2022; Aydin & Cakir, 2022; Azawi et al., 2016; Cabrera-Solano (2022); Nadolski et al. (2007); Tham & Tham (2012); Troussas et al. (2020); Poonsawad, A. et al. (2022); Obi, B. et al. (2021); Bonesso, S. et al. (2015); Hung et al. (2014).

Business simulations	Mahapatra, G., & Dash, S. (2021); Barbosa Da Silva, A., V. (2020); Obi, B. et al. (2021); McLain, T. R. (2019); Bonesso, S. et al. (2015); Levant, Y. et al. (2016); Nguyen, K. et al. (2021); Sedelnikova, I. & Emelyanova, N. (2014); Landau, J., and Meirovich, G. (2011).
Role playing	Center of Educational Innovation, University of Minnesota; Mahapatra, G., & Dash, S. (2021); Obi, B. et al. (2021); McLain, T. R. (2019); Bonesso, S. et al. (2015); Sun, X. et al. (2022); McEnrue, M. P. et al. (2009); Landau, J., and Meirovich, G. (2011).
Jigsaw discussion	Center of Educational Innovation, University of Minnesota; McLain, T. R. (2019); Bonesso, S. et al. (2015).
Problem-based learning	Center of Educational Innovation, University of Minnesota; Mahapatra, G., & Dash, S. (2021); Barbosa Da Silva, A., V. (2020); McLain, T. R. (2019); Hernández de Menéndez, M. Jr A. et al. (2019); Bonesso, S. et al. (2015); Poonsawad, A. et al. (2022).
Project-based learning	Segura-Robles, A. et al. (2020); Carvalho, A. et al. (2021); McLain, T. R. (2019); Hernández de Menéndez, M. Jr A. et al. (2015).
Site visits	Center of Educational Innovation, University of Minnesota; Ruiz-Cantisani, M. et al. (2019); Bonesso, S. et al. (2015).
Learning by doing	Oleskow-Szlapka, J. et al. (2020); Ruiz-Cantisani, M et al. (2019); Obi, B. et al. (2021).
Debate	Obi, B. et al. (2021); Bonesso, S. et al. (2009); Landau, J., and Meirovich, G. (2011).

Writing – It can be a reflection on a topic covered during class, a question that students are asked to answer in few minutes (i.e. minute paper) or the redaction of a scientific paper to present to an audience. In all cases, the aim is to help students uncover and then confront their conceptions (or misconceptions) of course content to have track of their understanding and knowledge retention. Collaborative writing involves multiple authors for the co-production of a written work concerning all aspects of content, structure and language, with even more benefits than sole writing deriving from group dynamics. Larkin and Budny (2005) emphasize the role of writing in improving language and communication skills and develop research skills, while Sawyer et al. (2017) that of promoting critical thinking and analysis. According to McEnrue et al. (2009) and Al-Shammari (2021), collaborative writing also helps develop emotional, cognitive and interactive competencies.

Large Group Discussion – Within the academic setting, it represents an extremely valid opportunity to stimulate reflection, share ideas, and foster social interaction (Thompson, 1992). Students are requested to have an active role, although subordinated to that of the Instructor, who is in charge of facilitating and guiding the discussion. According to Obi et al. (2021), this methodology fosters the competences of networking, collaboration and transfer of knowledge as well as language and communication skills in learners. Landau and Meirovich (2011) showed that students attending classes where professors foster participation through discussions are more prone to utilize their emotional competencies than students in traditional classroom settings. A study conducted by Bonesso et al. (2015) confirmed that this learning strategy greatly affects emotional competences, particularly those related to understanding and managing others.

Group work – It creates the opportunity for dialogue and exchange of information while requesting students to perform specific assignments collaboratively. It can consist of multiple-step exercises or research activities that engage students on the basis of different team dynamics (Hernández-de-Menéndez et al., 2019). It is usually based on high complexity to promote collaborative learning, boost team and interpersonal skills and achieve significant results. Its main objectives should consist in the facilitation of knowledge construction, exchange of ideas and opinions as well as cooperation to achieve a common purpose (Hyadt, 2006). Collaborative learning requires the intervention of all team members in decision-

making and is based on their level of interaction and interdependence, their accountability and responsibility towards the group goals, and their commitment to mutual help (Oleskow-Szlapka et al., 2020). Unlike cooperative learning, it does not presuppose a division of tasks and overcomes hierarchical differences through mutual work. According to Obi et al. (2021), group work is a required learning activity for developing the competencies of networking, collaboration and transfer of knowledge as well as language and communication skills in business education students. Landau and Meirovich (2011) showed that in classes where participation through teamwork is encouraged, students are more likely to rely on their emotional competencies than in traditional classrooms. Finally, in their study, Bonesso et al. (2015) showed that this practice has a high effect on emotional competencies that are useful for managing relationships.

Peer assessment – It consists in students providing timely and constructive feedback about the work of their colleagues. It can be of various type and can play a range of role in the educational process, but it is usually applied to writing-related tasks rather than tests, marks or grades (Archmiller et al., 2016). It helps students develop critical and analytical skills by analyzing external sources and determining the quality of work of their colleagues (Hernández-de-Menéndez et al., 2019). This has also been shown to foster networking, collaboration and transfer of knowledge as well as language and communication skills in business education students (Obi et al. 2021).

Case-studies – It consist of the instructor presenting a real, fictional or adapted case related to the content of the course and opening a class discussion to address a specific problem and stimulate reflection (Oleskow-Szlapka et al., 2020). The narrative serves as the object of study in the classroom with the final aim of putting into practice the knowledge acquired by the students on a specific topic (Carvalho et al., 2021). This method allows to activate of higher-order thinking and stimulates the competencies of decision-making, problem-solving (Carvalho et al., 2021) and critical thinking and analysis (Obi et al. 2021). Furthermore, it has a high effect on cognitive, social, and emotional competencies related to the management of relationships (Bonesso et al., 2015; Al Shammari, 2021) and trains students to face multi-faceted problems that they may encounter in their professional careers (Harman et al., 2015).

Flipped Classroom is a blended learning methodology based on the role reversal between instructor and learner. It requires students to work independently before class to acquire part of the knowledge, which is then retrieved, expanded and put into practice by the lecturer during class time requesting students' active participation. Rather than introducing the course material, the Instructor can therefore work with the students' difficulties (Carvalho et al., 2021). The main activities proposed during class time consist in asking questions and discussing actively, problem solving, projects development, the application of ideas, experiments and evidence-based learning (Sosa Díaz et al., 2021; Carvalho et al., 2021) based on the contents already studied. Several studies report that the flipped classroom has positive effects on the educational process, allowing for a better understanding of the course content, favoring commitment and motivation and reducing the failure rate (Sosa Díaz et al., 2021). While relying on an autonomous methodological approach outside the classroom, this practice fosters a collaborative learning environment in class, which facilitates relationships and help clarify doubts. According to Kong (2015) and Hanson (2016), the flipped classroom develops competences such as critical thinking and creativity. Sosa Díaz et al. (2021) demonstrated that it contributes to increasing networking, collaboration and knowledge transfer as well as taking responsibility, self-agency and self-efficacy. According to Bonesso et al. (2015), this practice also greatly affects emotional competencies, particularly those related to understanding and managing others. Finally, Garner & Chan (2019) found that it is more effective for improving language and communication skills. However, there may be some form of resistance to the flipped classroom approach by those students who may not have much time and a high level of self-motivation and organizational skills, as it is a practice that requires an intensive and proactive approach.

Quizzes – Through quizzes, learning, and reasoning are consolidated during class by answering meaningful questions related to a specific topic and receiving instant feedback through a collective discussion. This allows Professors to assess whether students are learning and determine their level and quality of understanding from time to time. Quizzes are usually based on instruments of Instant Polling such as Wooclap or Mentimeter. Bonesso et al. (2015) demonstrated that this method stimulates the development of emotional competencies, particularly those related to understanding and managing others.

Gamification refers to the integration or addition of game-design elements, game mechanics or game thinking in non-game contexts (Plass et al., 2015; Al-Azawi et al., 2016; Ha et al., 2020). In this practice, the main benefits derive from the combination of learning and fun and the union of theory and practice. Gamification aims to turn the learning process into a game to foster students' engagement in the designated activities (Al-Azawi et al., 2016). The literature reveals that this methodology fosters students' motivation and engagement (Azzouz & Gutiérrez-Colón, 2020; Rincon-Flores & Santos-Guevara, 2021). Moreover, it positively affects students' performance, attendance, goal orientation and attitude, especially toward STEM subjects (Ortiz Rojas et al., 2016); it enhances analytical thinking as well as social and emotional competencies for managing relationships (Bonesso et al., 2015; Al Shammari, 2021); it makes students apply their creativity, improves cognitive skills and fosters competences such as goal setting, decision making, teamwork, project management, taking responsibility, self-agency and self-efficacy (Sedelnikova & Emelyanova, 2014) and problem-solving (Kapp, 2012; Nicholson, 2015).

Game-based learning (GBL) – It aims to develop and use games or game-like environments for the sake of learning outcomes with a focus on a certain learning activity (Aydin & Cakir, 2022). Unlike gamification, GBL does not turn the learning process into a game but rather adopts the game as part of the learning process (Al-Azawi et al., 2016). Two types of academic games can be distinguished: simulation and non-simulation. In the first ones, learners are invited to play in a simulated environment representing an exciting and competitive context reproducing a real organization and its main processes; in the second one, the game is based on different dynamics. Moreover, games can be virtual or real-time, computer-based or not. Examples of business games can consist in the creation and sale of a product, or in the reproduction of the manufacturing process, such as the procurement of raw materials and the management of their flows. So far, research on GBL and its benefits for learning and motivation mainly concerns virtual games. The literature indicates that GBL provides an enjoyable learning experience that nurtures students' intrinsic motivation and active engagement, promoting effective learning (Gee, 2003; Felicia, 2010; Tham & Tham (2012); Hartt et al., 2020; Troussas et al., 2020). Moreover, several studies highlighted the effectiveness of game-based learning in fostering the development of 21st-century skills such as critical thinking, problem-solving, creativity, collaboration, communication, and information technology skills (Nadolski et al., 2007; Squire, 2011; Eastwood & Sadler, 2013; Al-Azawi et al., 2016; Jäskä et al., 2022; Prensky, 2007; Hornik & Thornburg, 2010; Qian & Clark, 2016; Echao & Romero, 2017; Pellas & Vosinakis, 2018; Bakhsh et al., 2022).

Business simulation - It consists of a simplified representation of the reality of an organization that defines a set of inputs and outputs as well as their relationships to be managed by students. It represents an innovative instruction model for active and collaborative learning that involves learners in direct experience, making them interact with the environment to discover the meaning of concepts and face the consequences of their decisions and actions (Levant et al., 2016). This practice has often been used in management, finance and strategy courses with different levels of difficulty, ranging from simple and general simulations that involve few variables to more in-depth and immersion games focused on a particular subject or area of the business or based on a complex contest that is more representative of the real-life (Levant et al., 2016). It seems that business simulations activate the use of skills and competencies advocated by profession. In the study conducted by Obi et al. (2021), this methodology emerged to foster critical thinking and analysis, while in work conducted by Levant et al. (2016), it contributed to the development of competencies related to taking responsibility, self-agency, and self-efficacy, project management, networking, collaboration and transfer of knowledge, efficiency orientation, entrepreneurial thinking, and strategic management, as well as language and communication skills. Moreover, Landau and Meirovich (2011) showed that in classes that leverage simulations, students are more likely to rely on their emotional competencies compared to traditional classrooms. Notably, Bonesso et al. (2015) demonstrated that this method stimulates the development of the emotional competencies related to understanding and managing others.

Role-playing – It involves a simulation technique where students engage in relevant scenarios by performing a role and then switching characters to take on responsibilities, learn how to coordinate, and gain cognitive, affective, and behavioral understanding (Hernández-de-Menéndez et al., 2019; Teaching

and Learning Innovation, University of Tennessee Knoxville). To be of significant utility, it requires the clarity of the content and the educational objectives to be defined in advance (Carvalho, 2021). Being an activity that intensively involves emotions, faculty members should pay particular attention to division into groups to avoid conflicts and unpleasant situations. Rosnow (1990) pointed to role-playing as a means of fostering critical thinking, while Nestel (2007), Magos and Politi (2008) and Heyward (2010) studied how this practice improves both language and communication skills. According to Obi et al. (2021), role-playing stimulates the competencies of networking, collaboration and transfer of knowledge as well as language and communication skills in students of business education. McEnrue et al. (2009) and Landau and Meirovich (2011) assessed that this practice also fosters the development of emotional competencies, especially those for managing relationships (Bonesso et al., 2015). Lastly, Sun and Li Lei (2022) showed that role-playing significantly impacts self-planning, self-monitoring, self-regulation and self-evaluation of learning resources.

Jigsaw discussion – It is a cooperative learning activity that compels students, divided into groups of 5 or 6 members, to analyze part of a topic individually and then present it to the rest of the team. The instructor becomes a facilitator guiding learners while the accountability of peer learning helps increase the engagement and responsibility of the single learner (McLain, 2019). At the end, learning is consolidated through an individual quiz. This methodology fosters critical thinking (Fitriana et al., 2023) and the emotional competencies related to understanding and managing others (Bonesso et al., 2015).

Problem-based learning – It consists of a learning method that leads students to face challenging situations and stimulates their thinking process to analyze, discuss and identify a solution to a given problem by working in small groups.

It requires setting clear objectives, researching data, integrating theory and practice, and applying knowledge and skills. By not receiving prior details on the problem itself, students are responsible for searching for information and thinking of possible resolutions. At the same time, the instructor contributes solely as a facilitator of reflection and dialogue in the process of solving the case. As a result, students become active promotors of their learning process, fostering their creativity, their ability of analytical and critical thinking (Hernández-de-Menéndez et al., 2019; Carvalho et al., 2021; Poonsawad, 2022), problem-solving, networking, oral language skills (Hmelo-Silver, 2004; Hernández-de-Menéndez et al., 2019) as well as emotional competences (Bonesso et al., 2015).

Project-based learning – It is based on combining knowledge previously acquired with knowledge generated through the collaborative development of a project (Hernández-de-Menéndez et al., 2019). The project to be developed usually consists of a real need posed by an external client or agent to students are asked to respond by leveraging different sources of information and delving into knowledge from various disciplines (De Los Rio et al., 2010). The coordination of the project itself requires the definition in advance of a logical structure, including different phases of project formulation and evaluation, which are strongly connected. According to De Los Rio et al. (2010) and Hernández-de-Menéndez et al. (2019), this methodology improves skills such as problem-solving, analytical and critical thinking, networking, responsibility, project management and language skills, both written and oral. Moreover, it fosters emotional competences related to the understanding and managing of others (Bonesso et al., 2015).

Site visits – A field trip to a local organization or production site allows students to better understand and appreciate a business process and strategy, a product or service. A site visit can be considered a "live case study" providing even more insights into organizational complexity, culture, structure, and personalities. This technique has an impact on the development of emotional intelligence competencies, particularly those related to self-awareness and self-management (e.g. self-control, adaptability, initiative, and achievement orientation), based on the study conducted by Bonesso et al. (2015). Moreover, it helps develop the ability of entrepreneurial thinking and strategic planning and learning strategies such as taking greater responsibility for learning and integrating learning across management disciplines (Cragg, 1998).

Learning by doing is a concept not new in pedagogy, as it has been adopted since ancient times. This strategy is based on learning from experiences resulting directly from actions, rather than from reading, watching others perform, or listening to others' lectures. It is a method of special relevance in the area of projects since it can combine originality, creativity, and common sense with the scientific and technical

knowledge acquired by students during their coursework. As such, it is considered to be one of the most effective learning strategies and includes a wide range of activities. It fosters competence in problem-solving and resilience, stress tolerance and flexibility (Oleskow-Szlapka et al., 2020). According to an experiment conducted by Ruiz-Cantisani et al. (2019), based on one-week immersion into the real-life experience at the Tecnológico de Monterrey (Mexico), learning by doing also strengthens critical thinking and analysis, taking responsibility, self-agency and self-efficacy, analytical thinking and innovation, creativity and spirit of initiative, self-learning strategies, networking, collaboration and transfer of knowledge, problem-solving and intercultural skills. The interaction underlying these experiences helps develop emotional intelligence about the understanding and managing of others, such as empathy, conflict management, leadership, and influence (Landau & Meirovich, 2011).

Debate is an ancient endeavor with roots in Greece and Rome, whose main purpose in the educational process is to communicate ideas and articulate theories or solutions to complex problems (Scannapieco, 1998). It can be formalized when students are asked to prepare for it in advance, or informal, when the discussion is naturally produced or triggered informally (for instance through video-clips). Moreover, it can have a wide range of designs that can be chosen based on the topic and the educational purpose. This practice increases the ability of critical thinking and analysis (Omelicheva & Avdeyeva, 2008; Williams-Brown & Wilson, 2016; Obi et al. 2021), improves communication skills (Scannapieco, 1998) and helps develop emotional competencies (McEnrue et al., 2009). Moreover, according to Landau and Meirovich (2011), it leads students to leverage their emotional intelligence competencies. Last but foremost, according to the study conducted by Bonesso et al. (2015), this technique has an impact on the development of emotional intelligence competences, particularly those related to self-awareness and self-management (e.g. self-control, adaptability, initiative, achievement orientation).

USE OF DIGITAL TECHNOLOGIES IN ACTIVE LEARNING METHODOLOGIES

The present world is characterized by rapid technological advancement, which has deeply affected our lives, how we interact with other people and work. Education is also an area that has been revolutionized by the by the development and spread of Information and Communication Technologies (ICT). Particularly, active learning involves a consistent use of ICT, which assumes a fundamental role in transforming the traditional way of learning and fostering the adoption of innovative methodologies. ICT tools include in-class access to internet, video-cameras, projection technologies, microphones, monitors, interactive whiteboards and the use of different software for instant polling, virtual simulations or collaborative exercises.

However, these technologies solely do not improve the learning process, unless accompanied by suitable pedagogical strategies and meaningful activities (Hernández-de-Menéndez et al., 2019). A revolution in education is needed to exploit the benefits and advantages offered by advanced technologies (Barbosa Da Silva, 2020; Oleskow-Szlapka et al., 2020). The "new educational normality", accelerated by the pandemic of covid-19, requires higher education institutions to redesign learning experiences through a mixed teaching model that significantly incorporates ICT (Sosa Díaz et al., 2021) to support innovative learning strategies.

All the active learning practices analyzed in this paper, except site visits, can be either technology-supported (TS) or non-technology-supported (NTS). Collaborative writing is a straight-forward example: it may be implemented during class time, without the support of technology, or it may leverage on computer-mediated communication (CMC) to overcome the physical and time constraints related to the classroom. The latter strategy seems to represent a more engaging and meaningful process of self-monitoring and peer interaction, facilitate peer feedback and allow to obtain a more effective outcome through a constant potential of collaborative change. Similarly, problem-based learning can be implemented with or without the use of ICT. However, when problems are presented using interactive digital storytelling, images, graphics, animations, and multimedia systems, it is possible to simulate a particular phenomenon or procedure during the lesson (Poonsawad et al., 2022). This represents a more meaningful learning experience compared to traditional problem-based, as it stimulates students' thinking and problem-solving

ability through the use of graphics and animations, voice active and sound effects, and the possibility to interact with multimedia with mouse clicks, screen touch, etc.

CONCLUSION

Future professionals are requested to manage technology well, be able to activate analytical thinking and display human competencies such as empathy and creativity. The development of specific skills characterizing the future of work is highly needed to create a competitive workforce and promote the long-term success of a nation's economy. Today more than ever, education has a vital role in preparing future global citizens and competitive workers who can deal with the challenges posed by the highly mobilized and technology-dominated society (Castells & Cardoso, 2005), the demands of employability and entrepreneurship (Alves et al., 2012) and the need of an increasing level of productivity and innovation in the workplace (Bonesso et al., 2015). Higher education institutions are responsible for developing in students metacognitive and socioemotional skills, as well as an attitude towards collaborative work. It is therefore fundamental to organize the curriculum and restructure higher education courses that set specific learning objectives, integrate the ultimate technologies, and motivate students through interaction so that they can lead their learning process and develop the knowledge and skills requested in the 21st century knowledge-based society.

This literature review provides an overview on the most important approaches of active learning and the competencies of the future of work that can be developed through these methodologies, which are in most cases technology-based. This theoretical work opens avenues for more empirical studies investigating if and how specific active learning strategies can enhance the development of soft and higher-order skills in students and prepare the citizens of tomorrow.

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