**Higher Education Research**
2022; 7(1): 1-9
http://www.sciencepublishinggroup.com/j/her
doi: 10.11648/j.her.20220701.11
ISSN: 2578-9341 (Print); ISSN: 2578-935X (Online)

# The Challenges of Higher Education and its Contribution to Sustainable Development

**Garcia Jordi, Alvado Anna, Sorribes Joan, Boyra Josep**

Escola Universitària Formatic Barcelona, Universitat de Girona, Barcelona, Spain

**Email address:**
jordigarcia@formaticbarcelona.com (G. Jordi), annaalvado@formaticbarcelona.com (A. Anna), jsorribes@formaticbarcelona.com (S. Joan), josepboyra@formaticbarcelona.com (B. Josep)

**To cite this article:**
Garcia Jordi, Alvado Anna, Sorribes Joan, Boyra Josep. The Challenges of Higher Education and its Contribution to Sustainable Development. *Higher Education Research*. Vol. 7, No. 1, 2022, pp. 1-9. doi: 10.11648/j.her.20220701.11

**Received**: October 8, 2021; **Accepted**: October 29, 2021; **Published**: January 24, 2022

**Abstract:** This research article deeps on higher education institution challenges in terms of governance, internationalization, research, student engagement and sustainability within an innovative and adaptative higher education academic framework necessary to achieve the challenges ahead in a highly competitive and technologically changing environment. With this purpose a series of university strategic challenges are reviewed and analyzed in order to tackle and establish the expected degree of quality and excellence that these higher education institutions must achieve and maintain over time. The main objective of this research article is to demonstrate from a deductive approach the hypothesis that a consistent and successful student professional development is based on the fulfillment of a demanding and stimulating academic experience through critical spirit awareness, research capacity empowerment and the acquisition of skills and knowledge delivered by an academic institution capable to ensure student engagement along with specific in-company training as fundamental components for achieving a graduate's lasting professional competitiveness able to cope with the current environmental, economic and social challenges ahead.

**Keywords:** Higher Education Governance, Research, Internationalization, Student Engagement, Sustainability

## 1. Introduction

During lockdowns due COVID-19 students are been following their courses by online and digital means as international mobility has been drastically reduced due to travel restrictions. Higher education institutions have been obliged to swiftly adapt operating differently as they used to. The pandemic has had the effect of reinforcing the need for universities to adopt a series of mechanisms and operational systems that are fully embedded within the so called 4.0 industrial revolution environment characterized by the rise of artificial intelligence as a central element of this transformation. Indeed, the growing accumulation of large amounts of data, big data, the use of algorithms to process them, and the massive interconnection of digital systems and devices tend to modify the means and processes of production of goods and services bringing many organizational challenges to companies. Therefore, universities should provide students a high-quality learning process with fulfilling challenges, innovative learning and valuable contents.

Meanwhile and additionally, higher educational institutions have to address and propel curricula with a more sustainable development outlook introducing paradigmatic patterns of learning and training that are necessary and indispensable to ensure abilities and skills contributing to develop less harmful environmental impacts due to still inefficient means of production and consumption that alter the natural characteristics of the Earth. Consequently, and taking into account the Agenda 2030 strategy, universities must act accordingly by reviewing and restructuring curricula to the best of their ability to meet future challenges as the next research and innovation program of the EU (2021-2027), underscores precisely [10] the central role of international educational and scientific collaboration for achieving its 17$^{th}$ Sustainable Development Goals.

## 2. The University Governance Challenges

Although the university system in Europe is well developed, there is still much to improve to propitiate a greater impact on promoting a change in the model of production and consumption in society.

Despite Europe has a strong knowledge community carded in a huge number of excellent universities, as a whole, their strength in research, education and innovation could be strengthened, and their autonomy reinforced by increasing R&I international co-operation and adopting new indicators to move towards more sustainable higher standards spreading for example alternative rankings systems that measure universities' contributions towards the 2030 Agenda sustainable development goals.

Europe has some 30% of the world's top 100 universities. However, around half of these are located in the UK and in Switzerland, both of which are outside the EU-27. Universities in the EU need to overcome the lack of a sufficient coordinated network with other sectors and partners that can lead to the risk of duplication of research efforts as ensuring a stronger and more cooperative R&I performance essential in a rapidly-changing world where the way we live and work forces us to tackle multifaceted challenges. Likewise, the university sector has to support more actively the emergence of innovative and sustainable initiatives and enterprises.

As student and researcher cohorts are becoming increasingly internationalized universities have to integrate and support their talent and knowledge within the European Higher Education Area perspective and vision enriching and transforming aspects for research and innovation, including the mainstreaming of Open Science and Open Access approaches to make scientific results and datasets more accessible, reinforcing co-operation with non-academic sectors, attracting, retaining and upskilling talent, and citizen and societal engagement [15].

Likewise, sustainable management and entrepreneurship have become a touchstone and an indispensable attribute of twenty first century post-modern western societies as well as a fundamental objective to be achieve as it is reflected in the Reflection paper - Towards a Sustainable Europe by 2030 [36]. Therefore, entrepreneurship has turn into one of the leading attributes for headhunters and a key driver of socio-economic progress through start-up companies' development.

At the same time, the service sector in industrialized economies has an increasing importance generating a growing amount of income and an extensive number of work placement driving economic development around the world where an ever-growing sheer number of people have access to a larger range and number of services to fulfill their expectations, needs and experiences. It is in this context where higher education institutions have to guarantee the success of their students as future creative and innovative professionals capable of generating profitable business initiatives designed to contribute to promote and implement a more sustainable development model. That is why is so critical that students becoming experts in the use of entrepreneurial and relational skills throughout their higher education studies. Students highly qualified and with an excellent academic profile are at the basis of human resource competitiveness in charge to guarantee business development success in the long term [4].

Researchers as [6-8, 19, 28] have addressed the sustainable development strategy in higher education institutions from different approaches concluding that this strategy needs to be based on cooperation among different stakeholders (international, national and local authorities, economic agents, local communities, employees). In these sense, policies and strategies recommended by international organizations, and then formulated by national, regional and local government authorities have been increasingly addressing environmental and sustainability issues. The difficulty still remains in most cases integrating environmental policies, laws and related regulations with an economic balanced development [25, 27].

In particular, there were two fundamental components to achieve higher degrees of sustainability, the first one is to improve sustainable practices among all stakeholders through awareness and training, and the second is implementing innovation through new operation systems both in the administrations and the companies [5]. Likewise, long-term protection of the environment and local involvement in sustainable development are necessary to achieve long-term fair profitability.

Sustainability can avoid the boom-and-bust cycle that creates over-dependency on a particular economic sector which results in over-development that can exhaust natural resources putting on strain social communities. Sustainable development, in accordance with the particular physical and geographical characteristics of a particular area, can help at a local scale to improve the natural, economic and social environment, contributing to the balance between human activities and its territory on a global long-term scale. In this sense is necessary to highlight that higher education answers are a fundamental component to succeed in managing our common future as students will have to implement after their studies competitive and trained professional practices to run in a responsible and sustainable way all type of businesses if more environmentally friendly production processes and consuming activities wants to be achieved [30].

Higher education is given to new cohorts of students a more critical outlook about the limits of conventional development contributing to spread the consensus that a more sustainable one needs to be achieved in order to preserve the chances of future generations to keep evolving and therefore EU legal instruments must be put in place to foster closer cooperation in research and innovation between universities to strengthen transnational cooperation and contribute towards enhancing research excellence [15]. In the meanwhile, price, ranking and international student employability are likely to become the key measures of a university's value proposition when degree information is simple to compare and most institutions are obliged to

engage with the aggregator sites. A higher education degree turned into a commodity product means a race to the bottom on price if that is where the institution chooses to compete.

Rankings are fickle, difficult to manage and leave the institution's fate in the hands of publishers looking to satisfy their own ends. This is a good moment to really focus on providing the student customer with what they want and find ways to enhance value by proving that the institution provides a route to employability since for most students the purpose of getting a degree is to get a job and to have decent career prospects [31].

Digital revolution impacts as well on universities in terms of how they engage and deliver learning to students and lifelong learners [13]. The more recurrent need to adapt course content to reflect the rapidly-changing dynamics as regards skills needs for jobs in future [34] is another challenge for higher education institutions. There isn't one specific solution to overcome the skills gap issue. Instead, a combination of coordinated strategies must be employed in concert to address current and future issues. Universities, local schools and community colleges have to engage and collaborate more closely with companies to address the skills gap helping them to rethink their talent sourcing and recruiting strategies to attract and invest in new employees through internal training and development [11].

## 3. Research Challenges in the European Higher Education Area

Development and strengthening of the ties between research and business and thereby promoting innovation-based economy has been one of the key European policy priorities for a number of years. Already the Lisbon Strategy of 2000 called for a knowledge-based economy in Europe and recognized the significant role played by research in promoting economic growth. To further the knowledge-based economy, among other things, the Lisbon Council called for: the establishment of the single European Research Area (ERA), where better integration and coordination of research activities at national and Union level would increase their efficiency and innovativeness; the creation of a friendly environment for starting up and developing innovative businesses, especially SMEs. Following the 2008 economic and financial crisis, strengthening the connections between business and R&D has further increased its strategic importance and became a top European policy goal. As was emphasized by the Europe 2020 strategy for smart, sustainable and inclusive growth, Europe's relatively low economic growth stems from its low investments in R&D and innovation, insufficient application of recent technologies in business and general reluctance in some parts of society to embrace innovation.

Moreover, as noted in the Strategy, Europe's lower investments in R&D compared to its global partners (the US and Japan in the first place) is mainly a result of lower levels of private investment, whereas a smaller share of high-tech firms explains half of EU gap with the US. Therefore, an additional private and public investment in research and innovation is a key precondition for sustainable economic growth and well-being of Europe. Since it is mainly companies that create jobs, not governments or EU institutions, particular attention should be paid to support innovative (start-up) businesses to boost the European economy based on knowledge and innovation. Europe 2020 Strategy called not only for better quality of education and increasing research performance but also closer inter-sectoral cooperation in R&D including knowledge transfer and innovation, making full use of ICT and ensuring that innovative ideas can be turned into new products and services [14].

Entrepreneurship, together with finance and a greater focus on user needs and market opportunities, were identified as the key preconditions to achieve these changes. Innovation Union, a specific flagship initiative under the Europe 2020 Strategy, further defined the key measures and guidelines for building an innovation-based economy in Europe. The main purpose of this initiative is to improve framework conditions and access to finance for research and innovation, in order to ensure that innovative ideas can be turned into products and services.

To achieve Innovation Union, the initiative called for:

1. Simplification of access to EU programs and enhancement of their leverage effect on the private sector. The EU framework programs must be mobilized to nurture fast-growing SMEs in Europe.
2. Cooperation between the worlds of science and the world of business must be enhanced, obstacles removed and incentives put in place, in order to boost innovation.
3. Agreement on EU patenting rules, better access to finance, particularly for SMEs, affordable Intellectual Property Rights and other actions were identified as the key enablers of entrepreneurs to bring "ideas to market".

Given the increased focus on R&D and innovation in the European economy, policymakers and other stakeholders are increasingly preoccupied with integrating the industry dimension and entrepreneurship into doctoral training programs and strategies. For instance, "Principles for Innovative Doctoral Training" adopted by the European Commission in 2011 and defined by the experts from university associations, among other goals, includes exposure of early-stage researchers to industry and other relevant employment sectors.

This exposure involves a number of possible activities, including placements during research training; shared funding; involvement of non-academics from relevant industry in informing/delivering teaching and supervision; promoting financial contribution of the relevant industry to doctoral programs; fostering alumni networks that can support the candidate and the program, and a wide array of people/technology/knowledge transfer activities. Similarly, in its "Report of Mapping Exercise on Doctoral Training in Europe" the Commission encouraged doctoral candidates to spend some research time in industry or other relevant private/public employment sectors [14].

In the context of inter-sectoral collaboration and innovation promotion, the development of transferable skills of researchers that enable them to use their skills and knowledge in non-research environments is equally important, firstly, in business and industry. For this purpose, the Principles for Innovative Doctoral Training also involve transferable skills training, including communication, teamwork, project management, IPR, ethics, standardization and entrepreneurship of researchers. The involvement of business in the curricula development and doctoral training process is therefore crucial to provide young researchers with exactly those skills that would match industry needs.

Attracting researchers to the private sector in Europe is also increasingly important because of the lack of positions in the academic sector. Holding a PhD degree no longer automatically qualifies a researcher for a teaching or research position at an academic institution. As the academic labor market can no longer absorb all traditional research PhD graduates, there is a growing demand for researchers equipped with the necessary skills to work in industry/business. Consequently, European policy-makers, together with relevant stakeholders, have also been putting significant efforts into improving working conditions and social guarantees of researchers in the private sector.

One of the key initiatives in this area is the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers adopted by the European Commission in 2005. The Charter and Code set the roles and responsibilities of researchers and their employers and funders, as well as ways to make recruitment fairer and more transparent.

More specifically, it has envisaged that researchers in the private and public sectors, as well as those moving between these sectors are guaranteed adequate social security coverage according to their legal status (portability of pension rights, either statutory or supplementary, for researchers moving between sectors and countries).

Moreover, the Charter and Code also encouraged employers and/or funders to ensure that researchers at all career stages reap the benefits of the exploitation of their R&D results through legal protection and, in particular, through appropriate protection of intellectual property rights [14].

Partnerships and mergers with other groups of universities is the norm to create higher added value and be more competitive while each university must develop its specific and particular mission, adapted to its local communities and in line with their global partnerships. This particularity will be the key added value that will bring attractiveness to students, staff and partners [23].

After the worldwide social and economic impact of COVID-19 the European Commission has adopted a vision for a new European Research Area (ERA) to improve Europe's research and innovation landscape, accelerate the EU's transition towards climate neutrality and digital leadership, support its recovery from the societal and economic impact of the coronavirus crisis, and strengthen its resilience against future crises. On September 2020 the European Research Area set out a renewed series of key strategic objectives and actions to improve access to facilities and infrastructure for researchers and to strengthen the mobility of researchers enhancing and increasing the free flow of knowledge and technology across the EU.

Support on investments and reforms in research and innovation, enabling research results to reach the market and the real economy through research career development opportunities as well as gender equality are part of the strategic objectives and actions planned to meet excellence and support an innovative and risk-taking industry to shape a resilient, green and digital future to boost growth, job creation and EU competitiveness in the global scene.

The renewed strategic objectives are defined as followed:

1. Prioritize investments and reforms in research and innovation towards the green and digital transition, to support Europe's recovery and increase competitiveness through the development of programs such as Horizon Europe, the Cohesion Policy and Next Generation EU. Member states should set a target of 3% of GDP to be invested in EU research and innovation and for a target of 5% national public funding to joint research and development programs and European partnerships by 2030. The principle of excellence remains the cornerstone for investments under the European Research Area.
2. Improve access to facilities and infrastructure for researchers across the EU. Horizon Europe will further ensure improved access to excellence through enhanced collaborations with more experienced counterparts. The commission also proposes that member states lagging behind the EU average research and innovation investment direct their efforts to increase their investments by 50% in the next five years.
3. Transfer results to the economy: The commission will encourage and guide the development of common technology plans with industry that will allow crowding in more private investments in key international projects. As part of its initiatives to support the recovery and build a green and digital Europe, the commission, adopted likewise in September 2020 a new Digital Education Action Plan, to adapt education and training systems to the digital age, as well as a Communication on achieving the European Education Area by 2025 as a driver for job creation and growth.

# 4. Higher Education Commitment: The Example of Escola Universitària Formatic Barcelona

European Union higher education and educational policies in general emerge essentially by the aim of carrying out internal market obligations, depending on economic justifications, as instruments to fulfill the demands of equality and justice in society to realize social justice and contribute to economic growth [9, 20]. As a result, the EU

started to attach importance to educational policies by noticing that it had to provide a cultural and social integration for achieving the aim of politic and cultural integration [1].

Academic institutions must face therefore the challenges which means improving the opportunities of internationalization [37] and the benefits of satisfactory inclusive cross-cultural experiences of students around the world. In this sense the Escola Universitària Formatic Barcelona assigned to the University of Girona and a collaborative center of the University of Wales Trinity Saint David faithful to its commitment to society and its proven educational experience based on the standards of the prestigious Catalan higher education system, keep evolving and innovating constantly to ensure the capacity and future performance of their students in today's expanding international economy. The highest competence of students and its responsibility in running businesses in a sustainable way as well as a deep concern and solidarity towards the global community are the main objectives of the educational project of the Escola Universitària Formatic Barcelona. Thanks to that international endeavor, reviewed educational challenges are offered each year to our students with the aim to give them the right tools to succeed in front the challenges of an extremely demanding global, technological and innovating economy.

As an example of continuous improvement, it is necessary to stress the educational value of foreign language subjects design to guarantee not just oral language competencies among our students but to promote as well their inclusive cross-cultural relationships and the internationalization of their profiles as future global economy professionals. In this sense, it must be stressed that beyond the communicative function that languages possess they constitute a sample of the cultural diversity that characterize each human community. Therefore, language is a very powerful tool for approaching the countless cultures and their evolution over time.

Foreign language subjects become therefore a strategic vehicle to broaden the understanding of students about the culture, the history, the geography, the economy of a great variety of territories and their societies giving them a broader knowledge of mankind's history and heritage. Student cross-cultural abilities are then developed and impel by a broader general background and sensibility toward other languages, ways of life, cultures and traditions.

Likewise, foreign language subjects promote among students a better understanding of their own environment on a global scale and the need to preserve the concept of diversity for the next generations not just in terms of culture but also both in terms of preservation of the natural environment and the sustainability of both economy and society.

The Escola Universitària Formatic Barcelona embraces and foster these necessary changes to improve learning results for all students and consequently has adopted and implemented the Culturally Responsive-Sustaining (CR-S) framework designed by the New York State Education Department to create an student-centered learning environment that affirm cultural identities; foster positive academic outcomes; develop students' abilities to connect across lines of difference; elevate historically marginalized voices; empower students as agents of social change; and contribute to individual student engagement, learning, growth, and achievement through the cultivation of critical thinking that educate all students effectively and equitably, as well as provide appropriate supports and services to promote positive student outcomes [32].

# 5. Redefining Excellence

Higher education is experiencing profound change, as new technologies, pedagogies and demands from students and employers on the attributes of university graduates have considerable implications on teaching and learning [35]. Commenting on the vision for the European Research Area (ERA), the European University Association called for the co-creation of a definition of the central concept of research excellence.

"Excellence is not limited to highly cited publications but needs to be based on the many and diverse contributions of the research community, notably including Open Science practices, citizen engagement, and impact on society," the European University Association (EUA) said. It also called on policy-makers to boost funding, especially considering the 'vast aims' of the new European Research Area. EUA Secretary General Amanda Crowfoot said: "EUA is disappointed and concerned to see that the level of ambition for the new ERA is not matched by sufficient investment under the current proposal for Horizon Europe. "This is despite R&I being key contributors to the green and digital transitions, as well as society's recovery from the COVID-19 pandemic." The Guild of European Research-Intensive Universities welcomed the potential of the European Research and Education Area to boost excellence in the European higher education sector at a time when "research, education and innovation are at the heart of Europe's recovery from the current pandemic and its ability to orient our societies towards a more resilient future".

It said the European Research Area is "uniquely placed to strengthen Europe's public science systems in a holistic way, not just in areas where they can support industrial needs". It called for a specific attention within this goal to investments in public universities through their institutional and competitive research funding. It also urged member states to "define strengthening the national frameworks for research excellence as a core ERA objective", as well as acknowledge the essential role of fundamental research in contributing to Europe's capacity to respond and adapt to global challenges, such as the coronavirus pandemic or climate change. "A strategy that invests only in the translation of knowledge while reducing attention to the production of new break-through knowledge will result in a reduced R&I capacity for Europe, and make it less attractive for scientific talent," the Guild warned [33]. Therefore, is crucial to conceive universities not only as places of research and

education but as engines in knowledge and innovation ecosystems, creating and spreading knowledge and skills to meet the 2030 Agenda sustainable development goals.

National and European Qualification Frameworks are positioning different levels of higher education qualifications, broadly corresponding with competences achieved after a bachelor, master or doctoral degree program. A place for qualifications for continuing education and continuing professional development aligned with these European Qualification Framework (EQF-levels) is not yet in place and constitutes a fundamental requirement due the growing need of re- and upskilling of highly qualified work force.

Furthermore, maximum of flexibility should be offered in combining learning with the workplace while developing a micro-credential framework including informal and nonformal learning. Experience should be valorized and recognized in order to raise the employability and career perspectives of people [16].

## 6. Higher Education Students: An Opportunity for Internationalization

Student cohorts obtain each year their higher education award based on a renewed higher educational system endowed with greater transparency and learning based on the student. From these new cohorts more and more students decide to intake a master's program to obtain a PhD degree. Research and knowledge transfer based on master's and doctoral studies are a very significant advance for the future quality of further professional activity.

Systematic and scientific research will undoubtedly increase competitiveness among new future professionals boosting the economic, social and environmental dimensions of development as cornerstones of a more sustainable strategy. Some researchers have identified some critical success factors for higher education programs as international focused through alliances and collaboration agreements with other institutions, the quality of the programs and their degree of specialization [29].

Current program contents and subjects design must ensure therefore the acquisition of sustainable professional skills, economic, social and environmental competencies, stimulating entrepreneurship and networking among students and their future professional national and international organizational links, encouraging good reputation, rigorousness and prestige.

In light of the UN agenda for the achievement of the Sustainable Development Goals internationalization of higher education is entering a new phase where National governments are mobilizing to both leverage and steer internationalization as an important factor in national economic development, trade and reputation [12].

In this context, the European Commission launched over the past two years different initiatives (European Universities, European Student Card Initiative, mutual recognition of qualifications), announcing several other policy actions in this area as creating a ‘transformation agenda for higher education’ by the end of 2021, including all EU initiatives in the field as for example and among others further investigation into the creation of European degrees, strengthen cooperation with strategic global partners, expand the international dimension of the Erasmus program, foster cooperation with Africa and widen the association of non-EU countries to the EEA, especially those of the Western Balkans, by 2025 [26].

## 7. The Compliance of Quality Higher Education Standards

A fundamental step towards the consecution of the higher educational challenges ahead is based in universities systematically compliance through internal standards and quality procedures to the continuous improvement of their programs in terms of delivery, student engagement and employability. In Catalonia, the Catalan Higher Education System Agency (AQU) assures the quality of higher education programs in accordance with the Spanish legislation and the international standards of quality. The Standards and guidelines for quality assurance in the European Higher Education Area (ESG) were adopted by the Ministers responsible for higher education in 2005 following a proposal prepared by the European Association for Quality Assurance in Higher Education (ENQA) in co-operation with the European Students’ Union (ESU), the European Association of Institutions in Higher Education (EURASHE) and the European University Association (EUA).

The ESG2005 had a focus on the external quality assurance of learning and teaching, a consequence of the original limitation of the Bologna Process centered in degrees and to degree structures. A revised version of the ESG was adopted by the Ministers responsible for higher education in the European Higher Education Area in May 2015 at the Yerevan ministerial conference [17]. Some higher educational institutions main goals are the institutional quality, the quality of teaching staff and teaching methods, the knowledge generation and transfer, the internationalization, the strategic management and the internal organization. AQU supports higher education institutions watching over the quality of their study programs and their academic staff for which institutions themselves are responsible. Besides, AQU carry out a systematic follow-up process for all university programs in Catalonia through an official guide for the review and the assessment of higher education institutions that takes into account the needs and expectations of all the stakeholders involved with the corresponding award and uses and applies international benchmarks standards and archives for quality enhancement.

This systematic follow-up process contributes to enhancing the quality of all programs as well as the skills and capabilities of the human capital of the university system as a whole in Catalonia. The proposals for new degree programs must be submitted to an ex-ante assessment procedure

(known as verification) and, after a period of four years (for Master's degrees) or six years (for Bachelor's degrees and doctoral programs), be submitted to an ex-post assessment procedure (accreditation) based on the procedure and terms stipulated by the Government of Catalonia considering the framework for the verification, monitoring, modification and accreditation of recognized degree programs.

In this sense, the EUFB's Internal Quality Assurance Systems (IQAS) is a fundamental instrument for program accreditation and as such should be seen as the cornerstone in the process of producing the self-assessment report. This self-assessment report is the fundamental tool to assess the faculty and the degree. The report includes different criteria and standards of assessment as the quality of the training program, the relevance of the public information, the efficacy of the program' s internal quality assurance system, the suitability of teaching staff for the training program, the effectiveness of learning support systems, the quality of program and the learning outcomes among others.

The definitive accreditation report is drafted using as primary source of evidence the external visit report prepared by the external assessment committee. The report may be favorable or unfavorable and, on the basis of accreditation criteria, the outcome may be placed at four possible levels which are favorable report of accreditation with a: progressing towards excellence, b: compliant, c: compliant with conditions and unfavorable report, d: non-compliant.

# 8. Higher Education Student Engagement

A satisfactory degree of student engagement in and out of class is a fundamental component for the success of both students and universities. Therefore, allowing flexibility of learners and offering to the instructors a greater capacity and ability to reach their students are quality standards required in the next future after the irruption of lockdowns.

The urgent need to pivot during the COVID-19 pandemic permitted academic staff to find creative ways to leverage tools to both teach course material and connect with students resulting in a more collaborative higher education where faculty members, learning designers, instructional developers, educational technology consultants, have had additional opportunities to share and discuss what is working and what needs improvement [22]. Beyond the technological advances in course there are three widely accepted dimensions of student engagement in which universities must put their focus monitoring them from the beginning of the studies to its completion; affective, cognitive and behavioral. Behavioral engagement refers to participation in learning activities, including attentiveness, positive conduct, and school attendance. Emotional engagement refers to affective attitudes toward and identification with school and a sense of school belonging. Cognitive engagement refers to self-regulated approach to learning and use of meta cognitive strategies [21].

These engagement indicators are considered particularly important for adolescents during the secondary school years because they correspond to the developmental needs of early adolescents for competency, autonomy, and relatedness in school [38] which will empower and secure their performance throughout their higher studies. Further research is invited in particular into how educational technology affects cognitive and affective engagement, whilst considering how it fits within the broader sociocultural framework of engagement [2].

# 9. Conclusion

Higher Education is a fundamental component to ensure social wellbeing and market performance taking into account different perspectives such as sustainable development, quality, training, skills, abilities, engagement and learning and research outcomes. These are some of the most important issues for the coming years in the educational research field. Nevertheless, higher education functionality, is still a subject of intense debate, with no consensus in what concerns its definition and practical applicability [3].

Higher educational institutions internal quality systems and international cooperation are fundamental to guaranty theoretically and practically student employability and learning outcomes. Following this approach, universities have to deliver higher educational programs based on promoting sustainable development, capitalizing exceptional natural and cultural resources integrally, and improving stakeholder's satisfaction such as the local community's quality of life and the consumer's demands satisfaction.

# References

[1] Besgul, O. O. (2013), AB ve Egitim Politikasi, Istanbul Bilgi Universitesi. http://digitaleurope.bilgi.edu.tr/html/2-4/index.html (Accessed: 20.12.2013).

[2] Bond, M., Buntins, K., Bedenlier, S. et al. Mapping research in student engagement and educational technology in higher education: a systematic evidence map. Int J Educ Technol High Educ 17, 2 (2020). https://doi.org/10.1186/s41239-019-0176-8.

[3] Boyra, J. (2012), El turisme i el seu valor estratègic i científic en segle XXI. *El Pallars Sobirà com a destinació turística Vol. 1*. Escola Universitària Formatic Barcelona. Editorial Astro Uno.

[4] Boyra, J. & Sorribes, J. (2020), Learning and teaching strategic challenges: the educational answers. *Wales Journal of Learning and Teaching in Higher Education*, Volume 2, 22-28 pp. ISSN 2396-7285. University of Wales Trinity Saint David.

[5] Buckley, R. C. (1996), Sustainable tourism, issues and management tools, *Annals of Tourism Research*, London.

[6] Burjalés, M. D., Ricomà, R., Maciá, L., Ballester, D. (2005), Marco europeo, una realidad inminente. Integración de los estudios de enfermería en el espacio europeo de educación superior. *Presencia,* Jul-Dec; Vol. 1, N° 2, pp. 1-6.

[7] Caballero, G., Vázquez, X. H., Quintás, M. A. (2015), Improving Employability Through Stakeholders in European Higher Education: The Case of Spain. *Long Range Planning,* Vol. 48, pp. 398–411.

[8] Ceulemans, K., Molderez, I., Van Liedekerke, L. (2015), Sustainability reporting in higher education: a comprehensive review of the recent literature and paths for further research. *Journal of Cleaner Production*, Vol. 106, pp. 127-143.

[9] Commission of the European Communities (2001), The Concrete Future Objectives of Education Systems, Report from the Commission, 59 final, Brussels.

[10] COM (2019) 22, Reflection Paper Towards a Sustainable Europe by 2030 https://ec.europa.eu/info/publications/reflection-paper-towards-sustainable-europe-2030_en.

[11] Deloitte & The Manufacturing Institute (2015), The skills gap in U.S. manufacturing 2015 and beyond. Deloitte Development LLC.

[12] De Wit H., Deca L. (2020), Internationalization of Higher Education, Challenges and Opportunities for the Next Decade. In: Curaj A., Deca L., Pricopie R. (eds) European Higher Education Area: Challenges for a New Decade. Springer, Cham. https://doi.org/10.1007/978-3-030-56316-5_1.

[13] Dodero, J. M., Artificial intelligence masters' programs - An analysis of curricula building blocks, López Cobo, M. and De Prato, G. editors, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-37417-6, doi: 10.2760/773615, JRC123713.

[14] European Commission (2017), Directorate-General for Education, Youth, Sport and Culture. Directorate C — Innovation, International Cooperation and Sport. Unit C2 — Marie Skłodowska-Curie Actions. *Study of business participation and entrepreneurship in Marie Skłodowska-Curie actions (FP7 and Horizon 2020)*. Final Report. Luxembourg: Publications Office of the European Union.

[15] European Commission (2020), Directorate-General for Research and Innovation. Directorate G – Research & Innovation Outreach. Centre for Strategy & Evaluation Services. *Towards a 2030 Vision on the Future of Universities in Europe*. Policy Report. Luxembourg, Publications Office of the European Union.

[16] EADTU (2020), Europe's leading institutional association for online, open & distance higher education - Message to the Ministerial European Higher Education Area and Bologna Process-EHEA Conference 2020, Rome, 19th November 2020.

[17] European Standards and Guidelines (2015), Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). (2015). Brussels, Belgium. https://www.eurashe.eu/library/quality-he/ESG_2015.pdf.

[18] Ferrer-Balas, D., Lozano, R., Huisingh, D., Buckland, H., Ysern, P., Zilahy, G. (2010), Going beyond the rhetoric: system-wide changes in universities for sustainable societies. Journal *of Cleaner Production*, Vol 18, pp. 607–610.

[19] Fleaca, E., Fleaca, B., Maiduc, S. (2017), Modeling Stakeholders Relationships to Strengthen the Entrepreneurial Behavior of Higher Education Institutions. *Procedia Engineering*, Vol. 181, pp. 935–942.

[20] Fontaine P. (2007), What is the EU? Turkey: European Union Information and Communication Support Program.

[21] Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59–109.

[22] Glantz, E., Gamrat, C., Lenze, L., Bardzell, J. (2021), Improved Student Engagement in Higher Education's Next Normal. EDUCAUSE Review, March 16, 2021. https://er.educause.edu/articles/2021/3/improved-student-engagement-in-higher-educations-next-normal.

[23] Gomez, S. & Colella. Ch. (2020), *The world of higher education after COVID-19. How COVID-19 has affected young universities*. Young European Research Universities (YERUN). Brussels.

[24] Grand, J., Cummings, M. P., Rebelo, T. G., Ricketts, T. H., Neel, M. C. (2007), Biased data reduce efficiency and effectiveness of conservation reserve networks, *Ecology Letters* p. 364-374, accessed on the 15 September 2017 at http://www.worldwildlife.org.

[25] Hardin, G. (1968), *The tragedy of the commons*. Science. 162: 1243-1248. Washington.

[26] Heriard, P., Prutsch, M. J. & Thoenes, S., 2021, Research for CULT Committee – Making the European Education Area a reality: state of affairs, challenges and prospects, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

[27] Kleven, T. (1997), Environment, knowledge and planning - notes on some difficult links. In: Proceedings of the Athens International Conference on Urban Regional Environmental Planning and Informatics to Planning in an Era of Transition. 22-24th October, Athens pp. 429-438. Editors: Timos Sellis & Dimitri Georgoulis. Athens.

[28] Larrán, M., Herrera, J., Calzado, M. Y., Andrades, F. J. (2015), An approach to the implementation of sustainability practices in Spanish universities. *Journal of Cleaner Production,* Vol. 106, pp. 34-44.

[29] López-Pastor, V. M., Castejón, J., Sicilia-Camacho, A., Navarro-Adelantado, V., Webb, G. (2011), The Process of Creating a Cross-university Network for Formative and Shared Assessment in Higher Education in Spain and its Potential Applications. *Innovations in Education and Teaching International*, Vol. 48, N° 1, pp. 79-90.

[30] Lozano, R., Ceulemans, K., Scarff, C. (2015), Teaching organizational change management for sustainability: designing and delivering a course at the University of Leeds to better prepare future sustainability change agents. *Journal of Cleaner Production,* Vol. 106, pp. 205-215.

[31] Nicol, L. & Preece, A. (2021), *Go compares – The emerging threat to higher education*. University World News. The Global Window on Higher Education. https://www.universityworldnews.com/post.php?story=20210517102802250.

[32] NYSED (2018), New York State Education Department: Culturally Responsive-Sustaining Education Framework http://www.nysed.gov/common/nysed/files/programs/crs/culturally-responsive-sustaining-education-framework.pdf.

[33] O'Malley, B. (2020), EC sets out vision for future of European Research Area University World News (2020). https://www.universityworldnews.com/post.php?story=20201002103601210.

[34] Simón, J.; Mirabet, S.; Fernández, J. (2020), Projects with added value to increase competitiveness and student satisfaction. Case study: The renewal of the BA in Advertising and Public Relations. University of Girona. Editorial Universitat Politècnica de València. 1027-1035. https://doi.org/10.4995/HEAd20.2020.11189.

[35] The Guild (2020) Recommendations for developing the European Education Area. The Guild of European Research-Intensive Universities and Bern Open Publishing. DOI: 10.7892/boris.145050.

[36] Timmermans, F. & Katainen J. (2019), Reflection paper - Towards a Sustainable Europe by 2030. European Commission.

[37] Vann, J., Pacheco, P., Motloch, J., (2006), Cross-cultural education for sustainability: development of an introduction to sustainability course. Journal of Clean Production, Vol 14, pp. 900-905, http://dx.doi.org/10.1016/j.jclepro.2006.01.002.

[38] Wang, M.-T., & Eccles, J. S. (2012), Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *Journal of Research on Adolescence*, 22 (1), 31–39. https://doi.org/10.1111/j.1532-7795.2011.00753.x.