

Unite! Flexible Study Pathways Report 2021

Survey results on the Unite! Partners' perception of Flexible Study Pathways, namely the degree of flexibility, desirable forms of future flexibility, and the possible challenges of implementation in study pathways within Unite!

Unite! Flexible Study Pathways Report 2021

Survey results on the Unite! Partners' perception of Flexible Study Pathways, namely the degree of flexibility, desirable forms of future flexibility, and the possible challenges of implementation in study pathways within Unite!

TF5 Working Team

Anne Dellabale (Grenoble INP-UGA)

Carlos Castro & Ilaria Tobaldo (PoliTO)

Annette Glathe, Jana Freihoefer & Jochen Hack (TU Darmstadt)

Katrina Nordström & Sven Bossuyt (Aalto)

Miguel Valero Garcia (UPC - BarcelonaTech)

Patrícia Simões, Pedro Brogueira, Isabel Gonçalves e Filipa David (ULisboa)

03-05-2021

Co-funded by the
Erasmus+ Programme
of the European Union



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Content

Introduction.....	6
Goals and Terms of Reference	8
Flexible Study Pathways - State of the Art	9
Challenges in the implementation of Flexible Study Pathways in Higher Education.....	11
Education 2030 Agenda, SDG4 and the UNESCO working paper on Flexible Study Pathways	12
National Webinar on Flexible Learning Pathways in Finnish Higher Education	13
Flexible Learning Pathways in the United Kingdom (UK).....	15
National Qualification Frameworks and the European Standards and Guidelines for Quality Assurance.....	18
The road towards a European Degree	21
Covid19 Pandemic and the need to increase flexibility	21
Flexible Study Pathways Survey	23
The Survey: collecting data regarding Flexible Study Pathways.....	23
Results and discussion.....	24
1. On the reality regarding Flexible Study Pathways, as perceived by Unite! Universities ...	24
1.1. Do participants know the reality regarding FLPs in their own University?	25
1.2. What are the most and less frequent forms of flexibility?	26
1.3. Are there significant differences in perceived realities between types of participants?	28
1.4. Are there significant differences in perceived realities between Bachelor and Master programs?	29
1.5. Are there some special forms of flexibility present in all Unite! Universities and forms present in only one or a few more partners, but not present in all of them?	30
2. On the most desirable forms of flexibility	31
2.1. What are the most desirable forms of flexibility?	31
2.2. Are there significant differences in preferences among the different types of participants?	32
2.3. Are there significant differences in each Unite! University between perceived reality and desired forms of flexibility?	33

3.	On difficulties to implement higher levels of flexibility	34
3.1.	What are the difficulties most frequently mentioned?	34
3.2.	Are difficulties perceived in the same way among the different types of participants?	36
3.3.	Are difficulties perceived in the same way among the different Unite! Universities?	37
4.	On factors that can facilitate the implementation of flexible study pathways	38
Enablers, Obstacles, Recommendations		40
1.	Enablers	40
1.1.	Favorable European setting	40
1.2.	Structural transformation of Higher Education Institutions (HEI's)	41
1.3.	Reciprocal reward system	41
1.4.	Effectively integrated communication	41
1.5.	Embedded Global Competences Course for students, staff and faculty	41
2.	Obstacles	42
2.1.	Miscommunication among the Unite! Partners	42
2.2.	Lost-in-translation effect	42
2.3.	Natural resistance to change from current models of degree structures and teaching models	42
2.4.	National settings and constraints	42
3.	Recommendations	42
3.1.	Achieve a common understanding	42
3.2.	A bond of trust	43
3.3.	Build a common framework	43
3.4.	Take measures to ensure greater levels of flexibility in the near future in Unite! universities making it easier to develop even more Joint Programmes.	45
3.5.	Develop a joint system for student information, guidance and counselling	45
3.6.	Explore new forms of flexibility within Unite!	46
3.7.	Identify legal restrictions at different levels and nationally	46
3.8.	Improve student experience and success and increase responsibility: the path to employability	46
Conclusion		47
Glossary		48

References	50
-------------------------	-----------

Annexes	52
----------------------	-----------

1. Flexible Study Pathways Survey	52
2. Quantitative Analysis of Closed Questions from the Survey	65
3. Qualitative Analysis of Open Questions from the Survey	105
4. Survey's Targeted Respondents (example for ULisboa)	116

Introduction

At the Gothenburg Summit in 2017, European Union (EU) leaders outlined a vision for education and culture, translated into a new initiative, a true ‘quantum leap’ and flagship initiative in the Higher Education (HE) Area. This new European Universities Initiative aims to answer to changes and challenges in the very complex area of higher education, whilst at the same time promoting European values and identity, and revolutionizing the quality and competitiveness of European HE. The aim of this initiative is ‘to bring together a new generation of creative Europeans able to cooperate across languages, borders and disciplines to address societal challenges and skills shortage faced in Europe’. European Universities, an Erasmus+ initiative co-developed by Higher Education Institutions (HEI’s), student organizations and the Commission, encourages the emergence of some twenty bottom-up networks of universities across the EU by 2025. The aim of this initiative is to enable students to obtain a degree through the combination of studies at HEI’s in several EU countries, and in this way, contribute to increasing the international competitiveness of European universities.

The University Network for Innovation, Technology and Engineering (Unite!) was one of the first 17 transnational alliances funded by the EU in 2019 within the scope of the “European Universities Initiative”. Partners of the Unite! Alliance are: Technical University of Darmstadt (TU Darmstadt), Germany, (coordinator); Aalto University (Aalto), Finland; KTH Royal Institute of Technology (KTH), Sweden; Grenoble INP graduate schools of engineering and management, University Grenoble Alpes (Grenoble INP-UGA), France; Politecnico di Torino (PoliTO), Italy; Universidade de Lisboa (ULisboa), Portugal; and Universitat Politècnica de Catalunya - BarcelonaTech (UPC), Spain.

All Unite! partners are active and innovative developers of new teaching and learning formats, and have a strong student-centered focus. Multidisciplinary and multiculturalism are at the heart of our education, as Unite! extends also beyond engineering and science to arts, social sciences, design, architecture and business. Moreover, the partners are leaders in their fields of research and innovation and host some of the most active entrepreneurial ecosystems, which makes Unite! a forerunner to create a European University model which is capable of positioning itself as a truly competitive alliance in the global arena for 2025 and beyond.

In fact, the ambition of Unite! is to become ‘the role model for a virtual and physical European inter-university campus, embedded in a network of innovative regions’, leading the transformation of European HE with ‘innovative and multidisciplinary education, research, and entrepreneurship in co-creation by students and staff’. By 2022, Unite! aims to:

CREATE a long term comprehensive strategy to establish and implement government structures in co-creation with students, staff and faculty to become the owners of a new European University concept;

DEVELOP a pilot framework for a future regulatory harmonization process by removing structural barriers and by generating new frameworks for a European degree;

PIONEER new concepts of education and research in science, technology and engineering through creating novel structures and programs such as the Teaching and Learning Academy;

DESIGN processes and structures such as the Unite! Virtual Campus towards a European University by sharing resources and services in education, research and management;

EXEMPLIFY the role of a (virtual) European inter-university campus that connects the regional innovation ecosystems of its member universities, makes their boundaries fluid and functions as a platform of open interaction and free circulation of ideas;

EDUCATE a new generation of European students in science, technology and engineering transcending the traditional engineering education;

ENABLE, develop and test flexible study pathways and joint curricula with embedded mobility across Europe and the world (adapted from the Detailed Unite! Project Description 2019-2022).

The actions planned for the pilot period 2019-2022 are implemented through Work Packages (WP) by teams of experts from each partner, who work as Task Forces (TF). The work presented in this report has been carried out by the Flexible Study Pathways sub-group, which is part of the TF5 Teaching and Learning Academy initiative on Development of Innovative Pedagogies for Teaching and Learning.

The development of innovative approaches to teaching and learning specifically targets the creation of Unite! Joint Programmes with integrated flexible study pathways, supported by the sharing of good pedagogical practices. Within these contexts we explore embedded mobility and expand beyond the traditional dual and double-degree ideology. Namely, the construction of joint degrees with numerous partner universities will enable students to develop individualized professional profiles, in which they are co-creators of their learning, also requiring from teachers the openness and mentoring skills to develop and embrace innovative pedagogies.

The principles of the European Standards and Guidelines for Quality Assurance (ESG) form the backbone of the development actions. All Unite! partners comply with the ESG, and adhere to the EURACE principles and the European Approach to Quality Assurance in Joint Programmes. The aim is to pilot the broader concept of Joint Programmes and the integration of Flexible Study Pathways. This requires also evaluation and implementation of relevant quality assurance requirements, the alignment of Flexible Study Pathways, and generation of joint curricula in the future. This will allow us to provide the desired future working skills for graduates as European citizens, and for students to develop their individualized professional profiles.

In more specific terms, the tasks for the Flexible Study Pathways team have been defined within the context of Unite! TF5 (Teaching and Learning Academy) framework. This includes the consideration of the National and European limitations with reference to the European Standards and Guidelines, but also the collection of Flexible Study Pathways [perceptions] and definitions from all Unite! partners in order to build a common framework for flexibility that can easily be communicated to students, teachers and non-teaching staff.

Goals and Terms of Reference

What does it mean to have flexible learning pathways in Unite! study programmes? To address this crucial question, the goal of the Flexible Study Pathways task force within TF5 is to propose a working definition for Flexible Study Pathways, and to build a framework that provides Unite! with a common language and guidance for the design of future Joint Programmes. This needs to be developed in accordance with one of the explicit guidelines of the European Universities Initiative – to “offer student-centered curricula jointly delivered across inter-university campuses, where diverse student bodies can build their own programmes and experience mobility at all levels of study”. Flexible Study Pathways were initially considered by the team as including three different complementary types of flexibility:

- (1) **Choice** - student responsibility and free options on what, how, where and when they learn
- (2) **Curricular mobility** - mobility within cycles, credit transfer, joint programs, Erasmus
- (3) **Engagement** - recognition, validation and accreditation of the knowledge, skills and competencies acquired through non-formal and informal education, including upskills and reskills, intercultural experiences and professional experiences.

Flexible Study Pathways - State of the Art

Flexible learning [pathways] and better customized learning environments in higher education contribute to widening participation, improving social inclusion and higher completion rates. They are a key to lifelong learning and essential to address increasing skills demand.

Unger & Zaussinger (2018)

According to Unger and Zaussinger (2018), flexible learning 'provides students with the opportunity to take greater responsibility for their learning and to be engaged in learning activities and opportunities that meet their own individual needs'. Thus, it is associated with student-centered learning, where teaching and learning processes are designed for and often with the student. Flexibility implies offering learners choices in how, what, when, where and at what pace they learn (something echoed in Higher and Further Education 2011 strategy statement, Opportunity, Choice and Excellence in Higher Education), that is, offering them 'high quality, flexible and more individually tailored education paths' (Unger and Zaussinger, 2018). If learner flexibility is what is intended, then, pedagogical flexibility will also be required from higher education institutions, but flexible pedagogies and curricula are not sufficient conditions, albeit necessary, for student flexibility to be obtained.

Flexibility is a complex, multidimensional concept, and its dimensions intersect and overlap in several ways. For example, modern technologies can be relevant both at the level of experience of the students and at the level of national and institutional systems (educational processes dimension); flexibility in educational timeframes can be enhanced both for students on campus and for those engaged in lifelong learning, working outside of higher education institutions (time dimension); flexibility regarding the place where education is happening can also vary enormously, from in class activities, to outside of class learning, from e-learning to blended learning (space dimension). Flexibility regarding teaching and learning in higher education is a complex, rather challenging, albeit very relevant subject in 21st century education (adapted from Barnett, 2014).

In fact, a well-articulated, yet flexible, higher education system can result in efficiency gains. For example, learners can have their prior learning recognized and used for course exemptions or when transferring between study programs, thereby reducing the time and costs that it takes to complete a degree. Flexible educational pathways can also reduce the 'dead ends' in the study process, giving individuals the opportunity to advance to higher levels of learning. On the other end, "flexibility cannot be all things to all persons, interests or institutions" (Barnett, 2014), and choices, at any one point, will have to be made.

In the context of higher education specifically, the European Commission introduced the concept of flexible educational pathways, defining them as measures to implement flexible regimes for study programmes and to enable the previous educational achievements of students to be more widely recognized within the higher education system. This flexibility regarding educational pathways would

allow students to transfer more easily between institutions and study programmes, as their prior achievements can be utilized' (European Commission, 2015: 51). The segmentation of most education and training systems, as well as a lack of coordination, dialogue, and consensus among relevant stakeholders, has been an obstacle to the development of flexible learning pathways (CEDEFOP, 2012).

In the background paper for preparing the Higher Education Expert Conference "The New Student: Flexible Learning Paths and Future Learning Environments", which took place in September 2018 (Unger & Zaussinger, 2018), interest and commitment from the EU in increasing flexibility and permeability into European higher education was described as not being matched by efforts in refinement of concepts or in evaluating or analyzing the impact of initiatives taken from 1996 onwards (the "European Year of Lifelong Learning").

Although 'flexibility' has become a desirable, popular concept in higher education, care should however be taken in defining it more precisely, e.g. applying it more specifically to study pathways, to avoid emptying it of its content. While reviewing the current literature regarding flexible study pathways, we have included both system-related and pedagogical flexibility, two forms of flexibility that can be both complementary and conflicting - not surprisingly. Accordingly, we started by exploring how challenging the implementation of flexibility can be in the higher education realm.

The Education 2030 Agenda and the UNESCO working paper on Flexible Study Pathways were reviewed, complemented with data discussed in the 2020 National Webinar on Flexible Learning Pathways in Finnish Higher Education. We also examined the work of The Higher Education Academy, in the United Kingdom (UK), which also has conducted a deep reflection on increasing flexibility. The UK experience was also presented at the Finnish National webinar 2020, adding another layer of complexity to the understanding and implementation of higher levels of flexibility in higher education.

The National Qualification Frameworks and the European Standards and Guidelines for Quality Assurance were then analyzed in order to assess how they might improve or restrict permeability and flexibility in the European higher education institutions. In our presentation of the State of the Art in the present report, we have focused on identifying a broad range of enablers, obstacles and recommendations regarding the implementation of Flexible Study Pathways in the European Universities, and more specifically for Unite!. Such analyses will deepen our understanding of the issues at hand, but also contextualize the analysis of data collected in the present survey. The road towards a European Degree is also mentioned as a more ambitious proposal of the European Union, and is an initiative that can support the implementation of greater flexibility in higher education. Moreover, we will also reflect shortly on the Covid-19 pandemic, which has been a "call for actions". It has highlighted the need for more flexible ways of delivery of education, as numerous new forms of flexibility in teaching and learning have emerged.

Challenges in the implementation of Flexible Study Pathways in Higher Education

To many higher education systems, including European Higher Education Institutions, the offer of well-articulated and flexible learning pathways in order to accommodate a variety of learning needs is still a challenge. One of the critical prerequisites, amongst others, is the mobility of learners between (sometimes very different) institutions, programmes, and levels of studies.

The complex nature of higher education systems and institutions as well as the fact that they operate in dynamic economic, social, and cultural contexts, under multiple levels and types of governance and steering mechanisms, makes it difficult to introduce articulated and flexible study pathways. The following trends have posed challenges to the provision of flexible learning pathways: growth in demand for higher education, growth in numbers and types of providers, diversification of higher education institutions and programmes including competition amongst them, a more diverse student population, a rapid increase in digital (social) networking and communication, the rapid and incessant technological change with its significant impacts on teaching and learning, to name just a few.

At the same time, some of these trends increase the need for implementing flexible study pathways in higher education. This compels all institutions to find ways to implement an adequate mix of policies and steering instruments, as well as well-designed implementation mechanisms in order to foster flexibility-friendly environments.

Administrative and structural fragmentation in the governance system of education in different countries and the consequential lack of coordination between different levels of education have been identified as factors that constrain articulation and flexible learning in the transition between secondary and higher education. Admission requirements content and foci of curricula, pedagogical approaches and assessment procedures can vary enormously between different HEI's, even in European countries, therefore posing a great challenge in defining a "common currency" for learning outcomes. It is evident that although credit equivalences in EU higher education do constitute a significant step forward towards this goal, such arrangements are still not widely reflected in practice and still largely depend on trust issues between different higher education institutions. By this we mean that even if agreements have been made in advance between the home institution and host institution in which the student pursues other studies of the original degree program, the acceptance of the credits that have been attained can be interpreted to have a higher or lower credit value in the home and the host university. The final interpretation is often only based on mutual trust about shared policies, however the students are often left in the middle to argue their case, and this does not promote motivation for adopting flexibility into studies.

Last but not the least, in light of diversified higher education systems offering multiple study options, students may experience confusion and difficulty in deciding which study pathway best fits their personal and professional goals, with adverse consequences, including retention and dropping out from studies. A lack of, or inadequate, guidance results in difficulties for students to make informed

decisions that would allow them to succeed in their chosen pathway, or to choose alternative pathways where they might do much better and succeed. In general, “adequate information and guidance services can help lower dropout rates, improve retention rates, and support students to make better-informed decisions” (IIEP-UNESCO working papers).

Education 2030 Agenda, SDG4 and the UNESCO working paper on Flexible Study Pathways

The Education 2030 Agenda (namely in the 2015 **Incheon Declaration and Framework for Action**) encourages countries to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”, in alignment with UNESCO’s Sustainable Development Goal (SDG 4). The Agenda emphasizes the role of higher education in providing access to and supporting lifelong learning opportunities for all individuals, as well as in promoting equity and high quality education, a “precondition for the development of inclusive societies, responsible citizenship, and a qualified workforce”. Flexible higher education provision can also improve job prospects and create a sense of fulfilment among those engaged in teaching & learning.

Due to the expansion of today’s higher education, students may have rather diverse motivations and learning needs, since they bring in very different backgrounds and educational experiences. Students entering higher education include both traditional and non-traditional learners, students who need enabling learning environments of technologies, working adults, part-time students, international students, migrants and people returning to higher education, just to name a few. All these groups require flexible, student-centered, and well-articulated higher education provision, including a definition of ‘entry points and re-entry points at all ages and all educational levels’ and a strengthening of the ‘links between formal and non-formal structures, as well as the recognition, validation and accreditation of the knowledge, skills and competencies acquired through non-formal and informal education’ (2030 Agenda).

A highly educated workforce is increasingly recognized as one of the key drivers of economic and social development, including for the implementation of the Sustainable Development Goals. At the same time it is the driving force for helping countries build their competitiveness in the global market and providing the knowledge base for research and innovation.

In 2020, the International Institute for Educational Planning (IIEP) published a working paper regarding SDG 4 - Policies for Flexible Learning Pathways in Higher Education - Taking Stock of Good Practices. Eleven country examples across different UNESCO regions were explored and described in order to illustrate policy-relevant as well as practical approaches relevant to the development of Flexible Study Pathways in higher education, including articulation and transfer policies, legislative and regulatory frameworks and lifelong learning.

From the eleven country examples presented, some exemplify policy frameworks that support Flexible Study Pathways in Higher Education at national level in Europe and globally, including the coordination between different education providers, and among secondary and post-secondary education institutions (e.g. Estonian framework of assessment for Vocational Education and Training, Integrated National Qualifications Framework in Malaysia and South Africa). Some of the examples refer to the existence of information, guidance and counselling services (e.g. validation of acquired experience in France) as a means to support flexibility in higher education. Foundation Programmes at Monash South Africa University are considered a good example of bridging programmes, as they provide a pathway to undergraduate studies for students who do not meet the requirements for admission to a bachelor's programme, complemented by support services for students enrolled. Finally, some examples also explicitly integrate or allow the recognition of online and distance learning (e.g. Open University of China, India's SWAYAM platform for distance learning, recognition of online and blended learning in the Netherlands).

Finland is mentioned in the IIEP-UNESCO papers, as an example of a nation that introduced measures to facilitate credit accumulation and transfer across educational institutions and disciplines [Flexible learning pathways in higher education - Karvi.fi](#). In Finland, the Universities Act explicitly notes that "universities must admit transfer students, i.e. students 'whose right to study is transferred from one higher education institution to another or within a single higher education institution from one degree programme to another'" (Ministry of Education and Culture of Finland, 2009). Finnish universities are also part of the Flexible Study Rights Agreement - [JOO-Flexible Study Rights \(in English\) - JOOPAS ja PURO - Eduuni-wiki](#) (known as the JOO), an agreement which enables graduate and postgraduate students to take courses at other universities and include them into their degrees. Finland also has a strong legal basis for the provision of support and guidance services across all levels of education and training, including higher education.

National Webinar on Flexible Learning Pathways in Finnish Higher Education

The IIEP-UNESCO paper concludes with laying the foundations for future research, including the development of in-depth country case studies and the identification of institutional and country best practices. These steps are taken in order to help other countries by learning from the experiences of those who already have introduced measures to facilitate such pathways.

One such case study was presented in October 2020 in Finland as a joint webinar between UNESCO and the Finnish Education Evaluation Centre [Home - Karvi.fi](#), where three different modalities of flexibility were discussed: flexibility in accessing higher education, flexibility during studies and flexibility towards graduation and employment. Finnish education was chosen as a favored case study due to its strong track record of policies supporting lifelong learning and its focus on equality and equity, but also because of its interesting set of holistic Flexible Study Pathways policies and wide

implementation across HEIs, regarding access (e.g. open studies; bridging studies, transfer between and from different levels), during studies (e.g. cross-study, specializations) and towards graduation. Main enablers, barriers and recommendations for the implementation of flexible study pathways identified by UNESCO in a working paper during the October Webinar are worth summarizing, even though they apply to a particular country/HE system:

- **Enablers:** a high level of consultation leading to a shared vision for the Flexible Study Pathways; government funded projects support the shared vision; thematic and field specific audits by the National Quality Assurance Agency in order to improve cooperation within and across HEIs, including the use of ECTS in defining learning outcomes and students' workload; information and guidance services; flexibility in admissions, during studies and towards employment (including open studies pathways, transfer pathways, enabling flexible curriculum through electives, specializations and internships); focus on equity, accessibility, inclusion and underrepresented groups in the national governments' priorities; monitoring and evaluation of Flexible Study Pathways policies; motivation and positive attitudes of staff to embrace Flexible Study Pathways.
- **Barriers:** a multiplicity of policy actors, policies and goals make it challenging to prioritize certain aspects of Flexible Study Pathways; old funding model that discouraged transfer between HEIs (old models typically rewards HEIs for duly completion of degree programmes, not cross-institutional transfers); information and guidance services at the national level lack specific information on Flexible Study Pathways; limiting academic traditions, specifically in some prestigious fields within HEIs; lack of clear equity targets and follow-up indicators for underrepresented groups; underutilization and lack of systematic data collection; teachers' job descriptions do not consider Flexible Study Pathways responsibilities and lack of support for the implementation of some practices.
- **Recommendations:** need for a comprehensive approach to the implementation of Flexible Study Pathways, including the development of a common definition; there is a need for the government to consider transfer aspects between different higher education institutions when revising the funding model, so that it facilitates seamless transfer and encourages institutional collaboration; need to tailor the national information and guidance services to the needs of learners regarding available flexibilities in the system with emphasis on reaching underrepresented groups; there is a need to mainstream Flexible Study Pathways within the higher education sector to generalize internal study paths between different programmes and open studies, providing more opportunities for specialization and cross-study; need for a clear definition of criteria for underrepresented groups, in order to improve monitoring and evaluation systems to make the impact of Flexible Study Pathways for these groups measurable and the response more targeted; need for investment in human and financial resources in the national monitoring and evaluation system for Flexible Study Pathways (namely, the availability of the following data should be improved: monitoring and evaluation of open entry and alternative study pathways, transfers, continuous learning, cross-institutional studies and progression of underrepresented groups through these paths, graduate employment and competence renewal), in order to improve good practice sharing;

because of increasing heterogeneity of student groups and consequent need to adapt pedagogics, teachers require more support in the implementation of some Flexible Study Pathways through provision of training, clearly describing responsibilities in the teachers' job descriptions and defining Flexible Study Pathways in the institutional strategies.

Flexible Learning Pathways in the United Kingdom (UK)

At the National Webinar on Flexible Learning Pathways in Finnish Higher Education, in October 2020, specialists in Education from the UK were also invited to share their practices, albeit differences between both higher education systems. In contrast to the Finnish binary system of higher education, where courses are free and where there's institutional collaboration, the UK's system is a large and diverse system of largely autonomous universities who operate in a competitive market, and where courses are paid for by student fees. In the Finnish system, national bodies fund and therefore also have a strong impact on the ways in which higher education functions, whilst in the UK system, the national bodies just advise.

The Higher Education Academy (HEA), a British professional institution for learning and teaching in higher education which aims to enhance study success in the UK, has developed a comprehensive description of flexibility in higher education (Figure 1). This description has proven to be also relevant for contextualizing work of the present report and data collected from our survey. Choices of where, how, what and when students learn are at a continuum, related to four different quadrants - technology-enhanced learning, pedagogical approaches, employment, and institutional systems and structures. For each quadrant different types of flexibility are identified, e.g. credit systems and intensity of study are aspects of institutional agility; mobile learning and learning spaces are aspects of technology-enhanced learning; inclusive and lifelong learning, as well as independent and collaborative learning are aspects of flexible pedagogical approaches. These three dimensions have been included in the present report, but perhaps in the future the fourth quadrant should also be considered, namely flexibility related to employment, including work related learning.

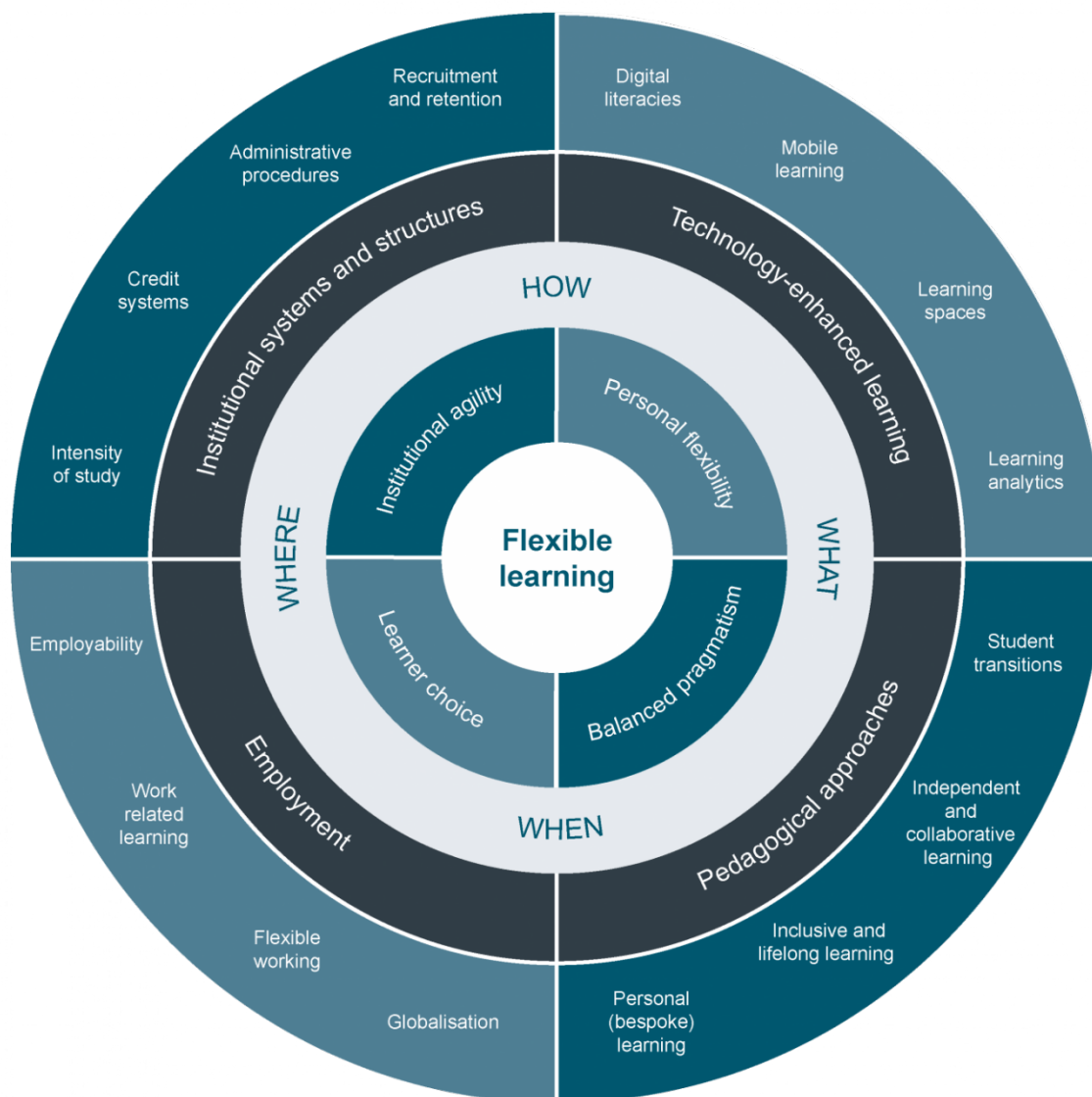


Fig. 1 - Higher Education Academy Framework for Flexible Study Pathways.

Through 2012-2014, the HEA conducted a major programme regarding the implementation of ‘flexible pedagogies’ in the UK, aligned with this framework (Fig. 1). The results were presented in a series of reports worth mentioning: *New Pedagogical Ideas*, *Technology Enhanced Learning*, *Part-Time Learners and Learning*, *Employer Engagement and Work-Based Learning*. These reports were complemented by a fifth report on credit transfer, highlighting “the importance of having a robust system of credit accumulation in place not only in the UK but also throughout Europe and potentially world-wide that will allow student mobility” (Barnett, 2014, pp 5). Additional publications and practical guides were issued, in order to support the implementation of flexibility, directed at academic staff (Hammersley et al., 2013), students (Bennigton et al., 2013), and new pedagogical ideas (Ryan &

Tilbury, 2013). All the guides are rich with examples, resources, case-studies and even glossary sections.

In 2014, the aforementioned programme of studies ended with a report by Professor Ron Barnett (Emeritus Professor at the Institute of Education, London) presenting a critical analysis of what 'flexible learning' may be and how it might flourish and benefit the UK higher education system. In this analysis, Barnett proposes fifteen conditions of flexibility, referring both to measures that should be put in place in order for flexibility to be implemented in an appropriate manner, and to conditions that could lead to greater responsiveness in the UK's higher education sector.

These conditions (Barnett, 2014, pp 9-10) also have relevance to the present report as follows: "programmes should lead to a qualification that contributes to major awards (such as degrees or their equivalent); offer all students access to suitable materials and appropriate cognitive and practical experiences; offer academic interaction with other students; offer access to tutors, in real-time interaction; offer prompt and informative (formative) feedback from tutors; offer access to other academic services (such as counselling, academic and careers advice); offer financial services (appropriate to the cost to students in financing their studies); enable students to offer feedback on their total experience; provide a pedagogical openness; be academically and educationally structured; offer ladder(s) of progression; be suitably robust and reliable (with built-in safeguards appropriate to the risk); be cost-effective; have sufficient structure so as to enable student completion to be a likely outcome; contain sufficient challenge that students are likely to be cognitively and experientially stretched and to be informed by a spirit of criticality appropriate to each stage of a programme of studies".

The need for greater flexibility in the UK higher education has been driven by the "the emergence of students-as-consumers, exerting wishes for new kinds of educational provision", "the apparent potential (that new educational environments are opening) for widening higher education at reduced unit costs", "the potential of new digital technologies" and, finally, by "the marketisation of higher education". The first three drivers, especially, are also common to the whole of the higher education institutions operating in the European Higher Education Area. Matters of flexibility cannot, however, according to Barnett (2014) be confined to the general educational systems and the way they function, or ought to function in the future - "systems flexibility is not an end in itself but more properly becomes a means to assist in helping students to take on personal forms of flexibility so that they may be better equipped to face and, indeed, contribute to a fluid and unstable world" (pp 27).

To find the 'right amount of flexibility' still is a challenge in higher education, both in the UK, and worldwide: too much flexibility may endanger internal integrity of higher education systems and eventually lead to their fragmentation, increasing the risk of lowering standards and of failing quality measures; too little flexibility, on the other hand, may cripple higher education's capacity to adapt to changes in society and the characteristics of students entering the university, ever more diverse. Another challenge, running deep and eventually parallel to this 'right amount' balance, is power -

“where lies the power to exert leverage in the system either to open or thwart the way to a more flexible environment?” Barnett courageously asks in the report (2014, pp 15).

Moreover, flexibility occurs “amid a complex web of relationships and interests – across providers, students and stakeholders (including taxpayers)”, and sometimes interests from different stakeholders are not aligned, making it necessary to conduct thorough assessments on how flexibility is impacting “the legitimate interests of the manifold interest groups of a particular proposal and their inter-relationships” (Barnett, 2014).

An especially relevant difference between the UK’s higher education institutions and its European counterparts is the amount of hours students’ spend in their studies and the cognitive load they are expected to manage, there is evidence to suggest less is expected from UK’s students (Barnett, 2014, pp 53).

National Qualification Frameworks and the European Standards and Guidelines for Quality Assurance

National Qualification Frameworks, European Standards and Guidelines for Quality Assurance in the European Higher Education Area and Credit Accumulation and Transfer Systems can be used to improve permeability of Higher Education to flexible study pathways. On the other hand; they can also restrict permeability and flexibility in Higher Education, due to the need to adhere to legislation and rules relevant for the trustworthiness between different institutions. To strike a balance between quality, accessibility and flexibility, Quality Assurance Agencies may in some cases only allow a certain percentage of students to access Higher Education through recognition of prior learning or only a certain number of credits to be transferred from one type of provider to another.

National Qualification Frameworks are the most common policy instruments associated with Flexible Learning Pathways insofar as they promote student mobility, focus on learning outcomes and learning pathways towards a qualification, facilitate goal-setting for continuous learning and, finally, describe linkages between qualifications in a given education system. In this sense, national qualification frameworks serve as a code of practice for higher education institutions.

In the UNESCO’s Glossary of Basic Terms and Definitions in Quality Assurance and Accreditation, National Qualifications Frameworks are defined as ‘a comprehensive policy framework, defining all nationally recognized qualifications in higher education in terms of workload, level, quality, learning outcomes and profiles’. National Qualification Frameworks ‘should be designed to be comprehensible through the use of specific descriptors for each qualification covering both its breadth (competencies associated with learning outcomes) and its depth (level). [...] Its purpose is to facilitate: (i) curriculum development and design of study programmes; (ii) student and graduate mobility; and (iii) recognition of periods of study and credentials.’ (UNESCO, 2007: 67–68). In most of Europe, National

Qualification Frameworks are comprehensive, outcome-referenced, and focused on learning outcomes.

As for Quality Assurance and Accreditation, it can, if designed appropriately, also support Flexible Learning Pathways in Higher Education. UNESCO defines quality assurance as ‘an all-embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining and improving) the quality of a higher education system, institutions, or programmes’ (UNESCO, 2007: 74). In Europe, some countries created quality assurance systems during the 1980s, however, quality assurance became a compulsory reform for signatory countries with the implementation of the Bologna Process.

The European Association for Quality Assurance in Higher Education (ENQA), the European Students’ Union (ESU), the European University Association (EUA) and the European Association of Institutions in Higher Education (EURASHE) jointly edited in 2015, the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), one of the main achievements of the Bologna Process. ESG set a ‘common framework for quality assurance systems for learning and teaching at European, national and institutional level’ while supporting ‘mutual trust, thus facilitating recognition and mobility within and across national borders’, among other principles and purposes. Two of the standards defined by ESG (2015) for the internal quality assurance are particularly relevant for justifying and supporting the implementation of Flexible Study Pathways in the Higher Education European Area:

- guidelines regarding the design and approval of programmes
- guidelines regarding student-centered learning, teaching and assessment.

HEI’s should design their programmes so that they ‘meet the objectives set for them, namely the Intended Learning Objectives (ILO’s)’ and they should also ‘ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process’. On a closer look to guidelines regarding student-centered learning, teaching and assessment, ESG (2015) clearly states that Higher Education Institutions should ‘respect and attend to the diversity of students and their needs, enabling flexible learning paths’ including the use of a variety of pedagogical methods.

Credit Accumulation and Transfer Systems (CATS) are another policy instrument that can support flexible learning pathways in higher education. CATS provides a way of measuring, comparing and recognizing learning achievements obtained in different settings, and transferring them from one institution to another (e.g. ECTS credits in the European Higher Education Area). With the help of ECTS, students can spend part of their studying time in another country and earn credits, which they can later on transfer back to their home country.

CEDEFOP (European Centre for the Development of Vocational Training) defines a credit system as ‘an instrument designed to enable accumulation of learning outcomes gained in formal, non-formal and/or informal settings’, facilitating ‘their transfer from one setting to another for validation and

recognition' thus supporting learner mobility. Transferability can be limited if countries do not have a standard system to establish credit equivalences, particularly between different types of provision (such as vocational education/training and general education). Europe, for instance, has been confronted with this problem, where mobility between vocational education and training and higher education is constrained by a lack of compatibility between the credit system for higher education – the ECTS – and that for vocational education and training – the ECVET (European Credit system for Vocational Education and Training), partly because the two credit systems stem from two distinct initiatives. The ECTS was developed as part of the Bologna Process (1999) within the framework of the European Higher Education Area, while the ECVET was developed as a result of the Copenhagen Process (2002). Recognizing this problem, European and national policy-makers are considering moving away from the hours of ECTS and the points of ECVET to a competence-based framework (see TANDEM initiative, 2017). Such a framework would facilitate student transferability between Vocational Education and Training (VET) and higher education by identifying levels of competences that are comparable across study programmes.

At the European level, National Qualification Frameworks from different countries can vary, but European HEI's all comply to the European Standards and Guidelines for Quality Assurance, and those standards do allow a certain degree of flexibility and permeability that most European HEI's profit from, mainly by developing inter-institutional agreements that facilitate student transfer between institutions and programmes. By enabling student transfer through the provision of guidelines and by streamlining credit transfer, these agreements (formal or informal) can appear in the form of:

- articulation agreements
- collaborative agreements
- progression agreements
- transfer agreements
- memoranda of understanding
- memorandum of agreement

Higher Education Institutions can strengthen the provision of alternative learning pathways by organizing and delivering study programmes in a more flexible way and diversifying assessment procedures so that they suit different student learning needs and personal circumstances. In addition to conventional ways of organizing study programmes (i.e. on a full-time basis), institutions can provide part-time, evening, weekend, or external courses, which are particularly important for students who combine studies with work or those who have caring responsibilities. Modularization of study programmes can also support flexibility in higher education by breaking down study programmes into modules that can be taken independently. Modules are defined units of learning, teaching, and assessment and are usually delivered within a specified period of time (e.g. one semester) and usually associated with a pre-determined workload, with which credits are associated. Modular provision allows learners to take one or more modules of interest without being required to register for a full programme of study. Under modular provision, learners can progress at their own pace and if they

wish, they can still earn a degree after completing the required amount of study (European Commission/EACEA/Eurydice, 2015).

Apart from modularization, HEI's can also strengthen the provision of alternative learning pathways by delivering through flexible study modes, such as open or distance learning, or by combining distance learning with face-to-face education. Finally, some institutions have developed Massive Open Online Courses (MOOC) to make higher education accessible to a wider variety of learners.

The road towards a European Degree

We cannot achieve an inclusive, green and digital Europe without providing every young person with a high-quality education. The European Education Area is the answer to that call.

Präsident von der Leyen

The European Degree is “an expansion of cross-border cooperation in higher education” in order to create a “globally recognized degree that will be synonymous for innovative and transformative higher education from multiple institutions in multiple European countries”. A European Degree should stand for embedded mobility, multilingualism, student-centered learning and innovative pedagogies, as well as academic rigor, challenge-based/experiential learning, interdisciplinarity, modularization and flexibility. An European Degree should be aligned with future labor market needs, civic engagement and self-customization of study tracks.

At the end of 2020, the European Commission, Directorate General for Education, Youth, Culture and Sport (DG EAC) commissioned a study with the aim of analysing the feasibility and the potential of a “European Degree”, applicable to all three cycles, available to all joint studies and portable. Other underlying principles proposed for the European Degree include automatic recognition, procedural feasibility, respect for diversity, subsidiarity and proportionality. It should be a clear value proposition and it should be evidence-driven with no additional complexity.

Covid19 Pandemic and the need to increase flexibility

The COVID-19 pandemic accelerated the digital transition, forcing millions of workers and students in Europe to adopt telework and distance learning, or emergency teaching & learning, as some specialists started calling it. This sudden transition accentuated already existing digital skills deficits and created new inequalities. In the European Skills Agenda for Sustainable Competitiveness, Social Fairness and Resilience, published in July 2020, Europe's recovery is connected to cohesiveness, which means “providing equal access to additional up-skilling opportunities for all people, regardless of gender, racial or ethnic origin, religion or belief, disability, age or sexual orientation, including low-qualified/skilled adults and people with a migrant background”. Accessibility for all means all

Europeans should develop the right skills to stay employed and to master job transitions, which means they should have access to attractive, innovative and inclusive learning programmes. The European Skills Agenda proposes a set of 12 actions that constitute a pact between member states in order to increase sustainable competitiveness, social fairness and resilience for a post-pandemic Europe. Actions 5, 6 and 7 are important to mention due to their connection to the need for European universities to increase flexibility.

Action 5 proposes the engagement in the “full rollout of the European Universities initiative under the Erasmus programme (2021—2027) and Horizon Europe”, including the removal of obstacles to effective and deeper transnational cooperation between higher education institutions. European Universities are to set “the standards for the transformation of higher education institutions across the European Education Area and the European Research Area, also making lifelong learning and talent circulation a reality”. The EU is committed to identifying areas of support for Member State action, as well as to explore concrete approaches for a “European degree” and the feasibility of a European University statute (to tackle cross-border legal issues) and for a “European Recognition and Quality Assurance System”.

Action 6, based on lessons learnt from the COVID-19 crisis in areas such as online learning, updated the Digital Education Action Plan (2021-2027), in order to improve digital literacy, skills and capacity at all levels of education and training and for all levels of digital skills, “while fully harnessing the potential of emerging technologies, data, content, tools and platforms to make education and training fit for the digital age”.

Action 7 supports the need to increase the number of STEM (Science, Technology, Engineering and Mathematics) graduates in Europe, as well as the reinforcement of entrepreneurial and transversal skills in graduates, including teamwork, critical thinking, and creative problem solving. Uniquely “human” skills such as empathy and adaptation to change in complex environments are also seen as a priority due to the increasing influence of robots and algorithms on our labor markets, and to the growing silver and care economy, in high demand on the labor market.

As the COVID-19 pandemic swept across Europe and the world during the early months of 2020, the recently launched European Universities Initiative of 2019 had to rapidly adjust to a very new set of challenges, as did the higher education sector as a whole. In a matter of weeks, universities closed their campuses, sent home staff and students, and “scrambled” to transfer learning, teaching and assessment activities online.

On the other hand, driven largely by the emergence of new technologies and digitalization, which create opportunities for skill development at a distance, traditional face-to-face learning had, already before the pandemic, been increasingly provided alongside alternative forms of delivery, (including distance, blended, or e-learning). Moreover, due to the pandemic, flexible types of provision inevitably have become a central part of both teaching & learning and assessment activities in HEIs all across Europe. It remains to be seen how much of this will influence the future of HE once the pandemic is

over, but it is evident that many important steps have been taken forward, this could have great future potential, even though the driver for these positive developments has been a serious and tragic global crisis.

Flexible Study Pathways Survey

The Survey: collecting data regarding Flexible Study Pathways

The development of innovative approaches to teaching and learning specifically targets the creation of Unite! Joint Programmes with integrated flexible study pathways, supported by the sharing of good pedagogical practices in both physical and digitized delivery of education.

The actions planned for the pilot period 2019-2022 for work package five (WP5) included the preparation of two Bootcamps, the first one in Aalto, during the summer of 2020 and the second in Barcelona, during the summer of 2021. In Unite! there are a total of 10 WPs, which work as Task Forces (TF). During the first Bootcamp, subgroups were created within TF 5, of which the present group represents the subgroup for Flexible Study Pathways. This subgroup is dedicated to the “consideration of the National and European Limitations with reference to the European Standards and Guidelines, but also the collection of Flexible Study Pathways [perceptions] and definitions in order to build a common framework for flexibility, that can easily be communicated to students, teachers and non-teaching staff”.

The first ideas concerning the construction of a survey to collect partners perceptions regarding Flexible Study Pathways started right after the first Bootcamp in 2020, when the team developed a first draft of the survey, that was to be edited and discussed by TF 5 leader, Katrina Nordstrom, TF 5 Joint Programmes subgroup leader, Jana Freihofer and Unite! Secretary General, Andreas Winkler.

An example was created for ULisboa of the targeted respondents (see Annex 1), which included informed directors, coordinators, student representatives, administratives and the like (target A) and professors chosen at random, students and administratives (target B), a total of 6 respondents per school (24 in total for each partner). The survey (see Annex 2) was sent to respondents via e-mail through Unite! partner universities representatives and data were collected from October 2020 to first week of January 2021. The aim was to collect an average of 15 answers/respondents from each partner university.

Results and discussion

The survey (see Annex 2) provided us with a large amount of data on what forms of flexibility are already present in the different universities of the Unite! alliance, the forms that would be desirable and the constraints and difficulties to achieve broader levels of, and perhaps more innovative forms of, flexibility. The collected data, however, are perceptions of the reality of respondents, and must be confronted with feedback from academic leadership of partner universities.

A total of 112 answers were received by January 2021, more or less evenly distributed (see 1.1., Annex 3), except for KTH, for which only 4 answers were received, even though the original deadline of the survey was extended. Of all the answers, from all partners, the majority of respondents (47%) were Study Programmes' responsible persons, 24% were students, 16% professors, and represented individuals with different professional backgrounds.

The questionnaire provides us with four blocks of data:

- The Flexible Study Pathways (FLPs) forms, already present in Unite! Universities, as perceived by respondents (section 2 of the survey)
- The most desirable forms of flexibility (section 3 of the survey)
- The perceived difficulties to achieve higher levels of flexibility (section 4 of the survey)
- The factors that can facilitate the implementation of greater flexibility (section 4 of the survey)

For each of these blocks we have answers to both closed (Annex 2) and open questions (Annex 3). Answers are presented in the form of global results and also separated by type of respondents and Universities.

In the following, for each of these blocks we have formulated sets of questions, based on the existing areas of interest and relevance in each of the partner universities, as well as in the National and European settings. Through these questions and the data collected thereof, we strive to provide reasonable answers. When appropriate, selected plots from Annex 2 are included to support the proposed answers. However, there are many other interesting questions, to which the answers to the questions may be different (or more complete) to the questions posed in this section. All the raw data used to elaborate Annexes 2 and 3 is also available online¹, for elaboration and further analysis by interested researchers, who can pose their own questions and find their own answers.

1. On the reality regarding Flexible Study Pathways, as perceived by Unite! Universities

Section 2 of the survey provides data on what forms of flexibility are already present in Unite! Universities, according to the perception of respondents. The survey offered a closed list of possible forms of flexibility, but respondents could also indicate other forms not on this list (see Annex 3 for qualitative analysis of open-ended questions).

¹ https://drive.google.com/open?id=1-QaLGpkYlw7msnXf_zAyiRMnAB7siil_

The possible forms of flexibility are organized into 5 categories:

- Flexibility regarding content of course/programs
- Flexibility regarding format of course/programs
- Flexibility regarding the schedule and time required to attain the Diploma/Degree
- Flexibility regarding mobility
- Flexibility regarding type of student engagement

It should be noted that when answering the questions, respondents were asked to reflect on specific programs they were familiar with. Therefore, different respondents from the same University may have different perceptions (for a list of possible respondents see Annex 1 with an example for the ULisboa). Moreover, the perception of some respondents may not accurately reflect the reality in their institution, due to the lack of a complete knowledge of the programmes.

In the following, we try to answer some questions about the perceived reality of respondents from different partner universities regarding FSPs.

1.1. Do participants know the reality regarding FLPs in their own University?

The grey color in some of the plots in Annex 2 shows that in many cases more than 20% of participants do not know if the corresponding form of flexibility exists in their University (at least in the program they have in mind when answering). Fig. 2 below shows an illustrative example related to the possibility to choose different assignments and/or different subjects in Master program (question 2.1.5):

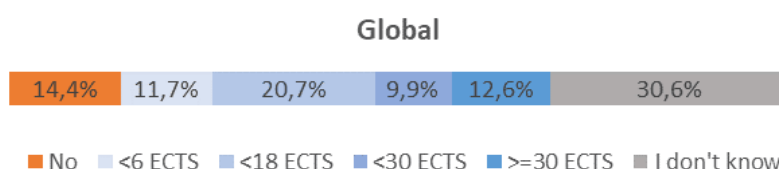


Fig. 2 - More than 30% of participants do not know if students have the possibility to choose between different assignments and/or different subjects within an individual course to deepen the study of specific content in Master programs at their University.

Some answers to open questions show this lack of knowledge (see Annex 3):

"I am not sure if mobility between programs is possible /not possible."

Moreover, there are a few answers to open questions showing that some respondents had difficulties answering this section of the survey. Some of the questions seem to have been difficult to answer due to the way in which they were formulated. This may also be due to differences in interpretation of the English language, which is not the native language for the majority of respondents. The difficulties in answering was seen even with respondents that know well their programs:

“The questions are hard to answer, because much of the M.Sc. requirements also depend on the B.Sc. level studies of the student and where it has been completed. Some of the questions are very complicated.”

“Defining the degree of flexibility in terms of ECTS is very difficult, because one would not estimate this in terms of ECTS, just as part of the course assignments completion.”

“Questions from 2.2.1 to 2.2.4 are difficult to answer. We have such a big academic offer that it is not possible to be precise regarding credit amounts.”

Difficulties seem to be due also to lack of understanding of what is being asked, either due to the overall diffuse terminology of FLPs globally, as well as the different interpretations within the institutions. As mentioned above, translation of the terminology to and from English into the local languages also causes confusion and mismatches in interpretation of the meaning of the terminology. This points out the need to establish a common framework and even a “common language”, i.e. a robust terminology, regarding FLPs among Unite! partners, to clarify the problems as highlighted by the answers:

“I don't understand what is meant by “mobility between programs” so I am not able to answer.”

“I don't understand the question about the possibility of choosing between academic or industry background teaching staff.”

“Why aren't you asking how many ECTS remote?”

These observations regarding lack of knowledge, lack of understanding and different interpretations lead to recommendation 3.1 that can be found in the next chapter of this report.

1.2. What are the most and less frequent forms of flexibility?

According to collected data, the least and most frequent forms of flexibility in Unite! Universities, as perceived by participants, are shown in Table 1 (the number of questions is indicated for an easier reference – see Annex 2).

Table 1 - Less and most frequent forms of flexibility in Unite! Universities, as perceived by participants.

Less frequent	Most frequent
<i>(2.1.3) Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic or offered in a domain that is complementary to the major in order to open up educational and career prospects) (Bachelor and Master)</i>	<i>(2.1.2) Elective courses inside the degree specialization area (choice from a restricted catalog list) (Bachelor and Master)</i>
<i>(2.2.3) Students can participate in research Units collaboration in advanced courses (Bachelor)</i>	<i>(2.1.6) Extra courses a student could take or not (Supplement to the Diploma or similar)</i>
<i>(2.2.4) Students can participate in Industry environments in advanced courses (Master)</i>	<i>(2.2.3) Students can participate in research Units collaboration in advanced courses (Master)</i>
<i>(2.2.6) Students are allowed to choose between remote classes and face-to-face classes or a hybrid system</i>	<i>(2.4.a) Student international mobility inside a Join Programme</i>
<i>(2.2.7) Students are allowed to take part of virtual classes within Unite! universities (or other universities).</i>	<i>(2.4.e) Recognition of credits from different universities</i>
<i>(2.3.a) The allowed time for completing the degree</i>	
<i>(2.5.c) The possibility to choose from different teaching staff background</i>	

It is to be noted that, in general, there is very little flexibility regarding scheduling and time. Some of the respondents included in their answers forms of flexibility that were not in the list provided in the survey. Some of these answers have formed the basis for some of the final recommendations that are presented in the next section of the report.

“Since the start of the COVID19 pandemic situation, remote classes and hybrid teaching has been implemented exceptionally. For the moment it is a temporary measure, but it may open new methodologic possibilities in the next future.”

“We did not offer all that much as remote or hybrid teaching, before the pandemic restrictions forced us to.”

“Face-to-face HAVE TO BE a must in Unite! (much better than online university).”

“For this to work, a clear structure that allows this flexibility needs to be presented to the students since the beginning so they can plan their study path and graduate on time.”

“Provide academic advisors for all these students to ensure that they graduate on time and not lose money and time because of poor planning. Also, there should be different plans and time duration if the students choose to have a double degree, a double specialization, or a double minor.”

“The more ‘à la carte menu’ academic offer (inside Unite!) the better for the students.”

“Credits are possible, but I would not say this is easy by any means. The typical case here would be either exchange studies or open university (paid) credits, at least I as a professor find awarding and recognizing credits from/to other universities difficult. What we often end up doing with partners is give the equivalent credits with [our] own university flexible content course (...).”

“Class format to be more interactive, learning by doing, and more based on projects than on exams.”

“These do [exist], but on a very small scale, typically max 1 course within the entire degree. Not a widespread or easy practice.”

1.3. Are there significant differences in perceived realities between types of participants?

Data show that, regarding content and course/programme formats, professors perceive that there is more flexibility than the study programme’s responsible do and both perceive that there is more flexibility than students do. This is seen both in 1^o Cycle/Bachelor degree and 2^o Cycle/Master degree. This general tendency can be clearly seen in the plots in Annex 2, where the orange color is more frequent for students' answers and less frequent for the answers by professors. A representative example of this tendency is shown in Figure 3 about the possibility to choose minors in the Bachelor in a domain that is complementary to the major in order to open up educational and career prospects (question 2.1.3):

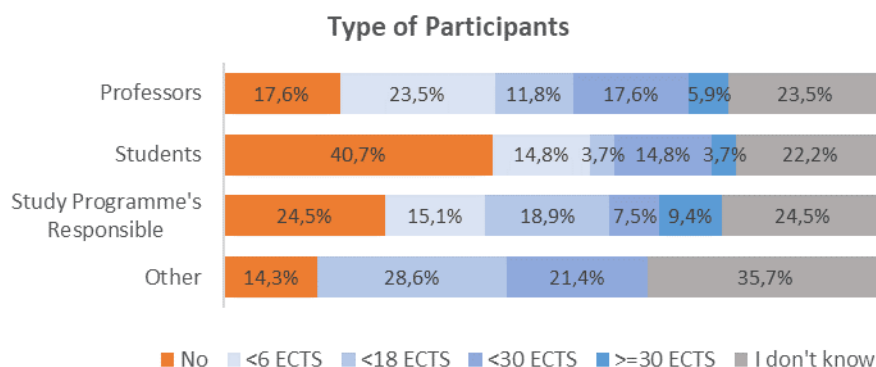


Fig. 3 - Possibility to choose minors (courses with scientific and pedagogical coherence in a multidisciplinary topic or offered in a domain that is complementary to the major in order to open up educational and career prospects) in Bachelor Degrees. Focusing our attention in the % of "No" (orange in the plot) professors perceive more flexibility than study programme's responsible and both perceive more flexibility than students do.

Regarding the schedule and time required to attain the Diploma/Degree, data show that professors and students perceive similar levels of flexibility, but study programme's responsible perceive less flexibility. This can be seen in plot 2.3 in Annex 2.

Finally, regarding mobility and student engagement, professors, students and study program's responsible perceive similar levels of flexibility, as shown in plot 2.4 in Annex 2.

1.4. Are there significant differences in perceived realities between Bachelor and Master programs?

Data do not show major differences between Bachelor and Master Programmes regarding content, except for 2.1.4. (see below), which is more frequent in the data for Master compared to Bachelor degree:

(2.1.4) Alternative courses within the same topic (e.g. project courses, courses in different languages, same topics by different departments etc.)

Flexibility regarding course format is significantly more frequent in Master Programmes, especially in the form of:

(2.2.2) Students are allowed to attend seminar courses (self-chosen topics, literature based and with a presentation)

(2.2.3) Students can participate in research Units collaboration in advanced courses

1.5. Are there some special forms of flexibility present in all Unite! Universities and forms present in only one or a few more partners, but not present in all of them?

The answer to these questions may be of special interest for the Unite! Goals, mainly for the design of Joint Programmes, that should include flexibility forms that are already present in all/many of the Universities participating in a particular Unite! Joint Programme development (see recommendation 3.3 in next chapter of this report).

To identify forms of flexibility present in all partner Universities, we look for plots with a small amount of the orange color ("No") or a high percentage of answers for the different ECTS values (blue color) in all Universities. Figure 4 shows the possibility to choose elective courses from a restricted catalog list inside the degree specialization (question 2.1.2) and is an example of that.

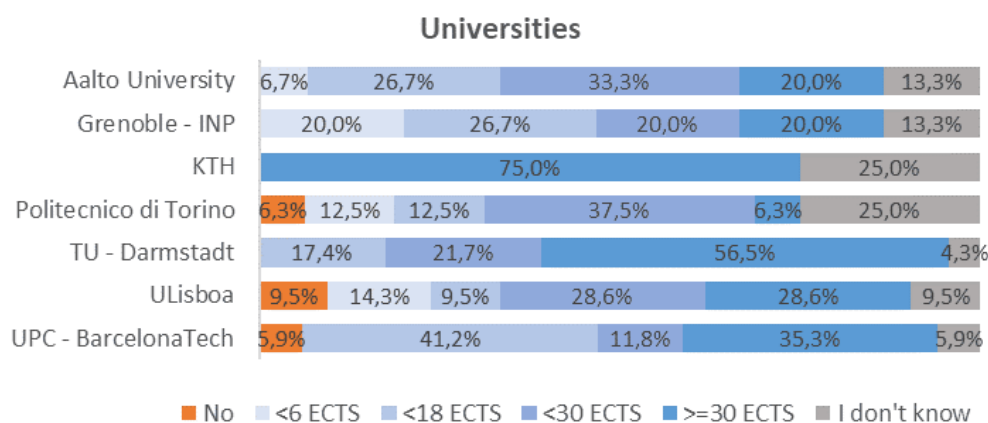


Fig. 4 - Elective courses inside the degree specialization area (choice from a restricted catalog list) in Master Programs. This is a form of flexibility that is quite present in all Unite! Universities.

There are not many such forms of flexibility:

(2.1.2) *Elective courses inside the degree specialization area (choice from a restricted catalog list) (Masters)*

(2.4.a) *Student international mobility inside a join program*

(2.4.e) *Recognition of credits from different universities*

The following are forms of flexibility that are not present in some of the Universities:

(2.1.3) *Alternative courses within the same topic (e.g. project courses, courses in different languages, same topics by different departments etc.)*

Not present in **ULisboa**

(2.2.3) *Students can participate in research Units collaboration in advanced courses.*

Not present in **KTH**

(2.2.7) *Students are allowed to take part of virtual classes within UNITE! universities (or other universities).*

Not present neither in **PoliTO** nor in **TU Darmstadt** nor in **ULisboa**

(2.4.b) *Student international mobility with Erasmus.*

Not present in **Aalto**

(2.5.c) *The possibility to choose from different teaching staff backgrounds.*

Not present in **PoliTO**

This is one case where checking ‘the reality’ through a validation round with responsible persons in partner Universities will be important and will help us to better understand the data. It is possible that respondents’ perceptions do not accurately reflect reality, and merely represent a lack of information.

2. On the most desirable forms of flexibility

In section 3 of the survey, respondents had to choose their 10 more desirable forms of flexibility, among the same closed list of forms of flexibility used in section 2. They also had the possibility to indicate other forms not considered in the proposed list.

2.1. What are the most desirable forms of flexibility?

Plots in the Annex 2, section 3, show clearly the level of preference for each form of flexibility. Figure 5 is a representative example of these plots.

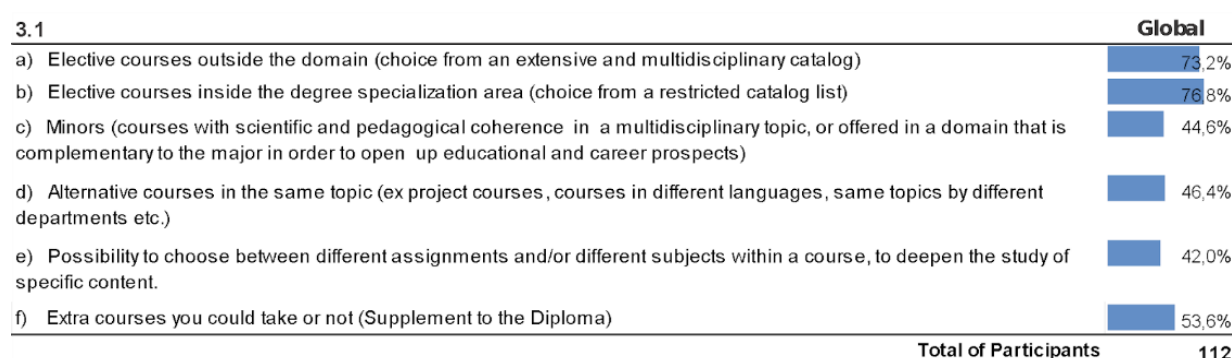


Fig. 5 - Level of preferences for each form of flexibility regarding content of course/programs.

We can conclude that the most desirable forms of flexibility are those shown in Table 2.

Table 2 - Most desirable forms of flexibility for each category.

Most desirable forms of flexibility

Regarding content	(3.1.a) Elective courses outside the domain (3.1.b) Elective courses inside the degree
Regarding format	No favorites (or all of them)
Regarding schedule and time	(3.3.a) Part-time studying (3.3.b) Program modularization
Regarding mobility	No favorite (or all of them)
Regarding type of engagement	All except (3.5.c) Possibility to choose from different teaching staff backgrounds

Here are some interesting answers to the open question regarding desirable forms of flexibility.

“Courses that break the classical teacher/student relationship (...)”

“The key is the possibility for recognition of the studies from abroad in [one's] own degree and preferably in major / basic obligatory studies which proceed the graduation. Prerequisite definition, scheduling, study path recommendations to support flexibility are needed.”

2.2. Are there significant differences in preferences among the different types of participants?

Some plots show clearly the differences in preferences among participants. Figure 6 is a representative example.

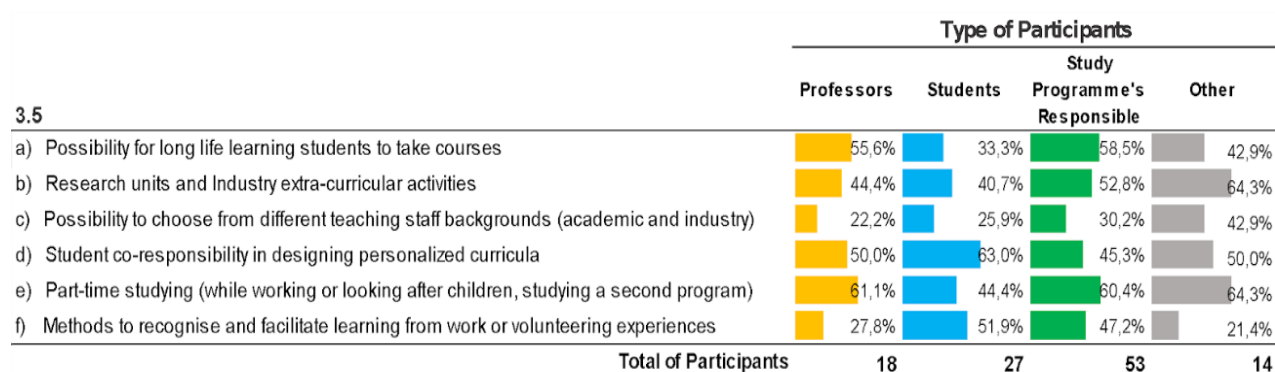


Fig. 6 - Differences in preferences among type of participants on forms of flexibility regarding type of engagement.

Data show that there were no major differences, except for the following forms of flexibility:

(3.3.d) *Special time frame for flexible courses to be shared.*

Much more preferred by **professors** than by **students**

(3.5.f) *Method to recognize and facilitate learning from work or volunteering experiences*

Much more preferred by **students** than by **professors**

2.3. Are there significant differences in each Unite! University between perceived reality and desired forms of flexibility?

The answer to this question can be useful for Universities in order to take actions to reduce the gap between perceived reality and desired or preferred forms of flexibility (see recommendation 3.4 in next chapter of this report).

To answer this question, we must compare plots showing the perception of reality with plots showing desires, for each form of flexibility and each Unite! University.

According to collected data, the answers to the question can be summarized in Table 3.

Table 3 - Unite! Universities and forms of flexibility were a greater difference between perceived reality and desires can be found.

Regarding content	Coincidence in all Universities
Regarding format	<p>Reality far from desire in TU-Darmstadt for <i>(3.2.c) Research Units collaboration in advanced courses</i> <i>(3.2.g) Possibility to take part of virtual classes</i></p> <p>Reality far from desire in ULisboa for <i>(3.2.c) Research Units collaboration in advanced courses</i> <i>(3.2.d) Industry collaboration in advanced courses</i> <i>(3.2.e) The possibility to choose for the final project/thesis between academic/research unit/industry environment</i></p> <p>Reality far from desire in UPC - BarcelonaTech for <i>(3.2.e) The possibility to choose for the final project/thesis between academic/research unit/industry environment</i></p>
Regarding schedule and time	<p>Reality far from desire in Aalto, Grenoble INP-UGA, ULisboa and UPC - BarcelonaTech for <i>(3.3.a) Part-time studying</i> <i>(3.3.b) Program modularization</i></p>
Regarding mobility	<p>Reality far from desire in ULisboa and UPC - BarcelonaTech for <i>(3.4.b) Student international mobility with ERASMUS</i></p>
Regarding type of engagement	<p>Reality far from desire in Grenoble INP-UGA for <i>(3.5.a) Possibility for long life learning students to take courses</i></p>

3. On difficulties to implement higher levels of flexibility

Section 4 of the survey asked respondents to identify the difficulties and barriers to achieve higher levels of flexibility. A closed list of possible difficulties was offered to choose from. Respondents could also list additional difficulties. In the following, we answer three questions regarding these difficulties and barriers.

3.1. What are the difficulties most frequently mentioned?

The plot in Figure 7 shows the answers to this question.

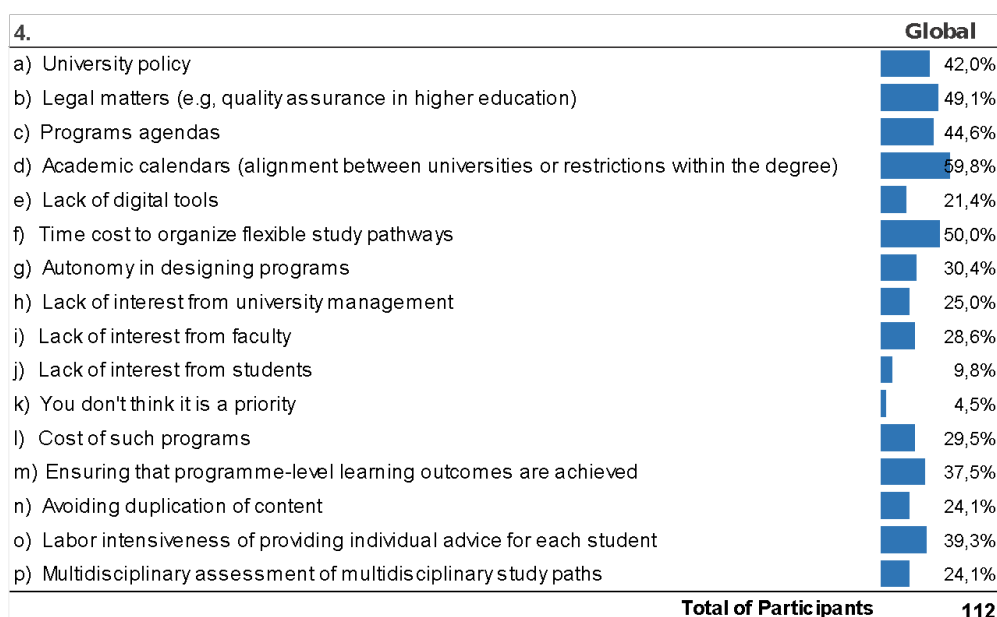


Fig. 7 - The most frequently mentioned difficulties to achieve higher levels of flexibility.

It can be seen that, among the difficulties in the closed list, the most frequently mentioned are:

(4.d) *Academic calendars*

(4.f) *Time cost for organizing flexible study pathways*

Some of the answers to open questions may help to clarify the nature of some difficulties. These answers are grouped in the following into four categories.

Resources and commitment [Total N = 6]

"A kind of inertia, which wants to keep an old teaching model." & "Difficult to change habits and way of doing things!"

"Staff resources (academic and administrative)."

"The difficulty in our department is that there's too little staff."

Procedures [Total N = 5]

"The difficulty of merging 7 different systems into one, that would be the biggest challenge."

"Getting two or more universities to match in a joint program is the problem more than within-university flexibility. Joint courses (technically offered separately by partner universities, coordinating with involved faculty) a lot easier to organize than joint programs and degrees, because on a program/degree level, the planning cycles, requirements etc. vary so widely and are rarely in the hands of individual faculty but require school/university level involvement on both sides."

Legislation and funds [Total N = 3]

“National legislation on some study programs that qualify for professional practice.”

“A broad range of electives requires a faculty that covers a wide range of research topics. This is, however, not desirable for attracting third-party research funding, which usually incentivizes a focused, tightly collaborating faculty. My university always puts funding first and shapes its faculty accordingly. Thus, it can only offer courses in the few sub-fields which their faculty specializes in. Naturally, this effect is most significant in smaller fields.”

“University funding model in Finland puts quite a lot of pressure on students graduating in-time. Therefore, cooperation should be modular, and something that students can easily choose without losing the momentum to graduate on time.”

Uncategorized [Total N = 2]

“The students may be anxious to fail; impact on the “ranking”/result (and impact on the first job); For teachers: lack of knowledge about the programs in partner Universities; For administrative staff: a lot of work, no control on the calendar.”

3.2. Are difficulties perceived in the same way among the different types of participants?

Table 4 shows the difficulties most frequently mentioned by each type of participant. A common problem identified by all partners are the differences in the timing of academic calendars which hinders the implementation of flexibility.

Table 4 - The most frequently mentioned difficulty by each type of participant.

Professors	(4.f) Time cost for organizing flexible study pathways (4.d) Academic calendars
Students	(4.a) University policy (4.d) Academic calendars
Study Programme's responsible	(4.d) Academic calendars (4.b) Legal matters
Others	(4.b) Legal matters (4.m) Ensuring that the program level learning outcomes are achieved (4.o) Labor intensiveness of providing individual advice for each student

3.3. Are difficulties perceived in the same way among the different Unite! Universities?

Answers for this question may be useful for benchmarking, that is, identifying some good practices that could inspire some Universities to overcome certain types of difficulties (see recommendation 3.4 in next chapter of this report).

The plot in Figure 8 can be used to identify significant differences among Unite! Universities regarding the difficulties perceived to achieve higher levels of flexibility.

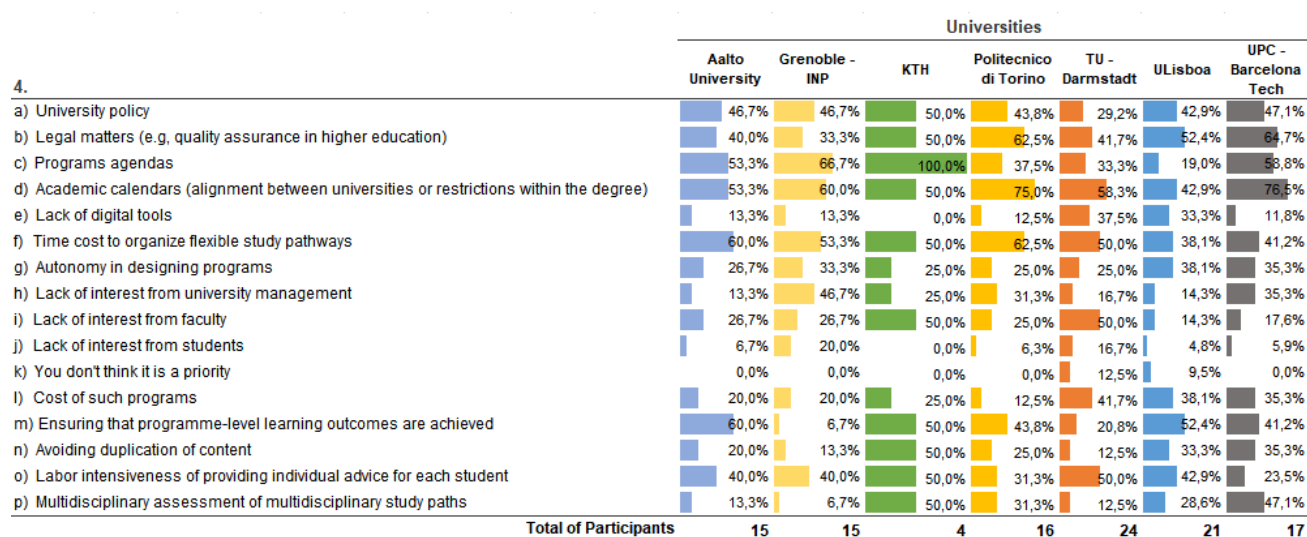


Fig. 8 - Differences among Unite! Universities regarding the difficulties perceived to achieve higher levels of flexibility.

The following is a summary of the most interesting points:

(4.a) University policy

Less frequent in **TU Darmstadt**

(4.c) Program agendas

Less frequent in **ULisboa**

(4.e) Lack of digital tools

More frequent in **Aalto** and **ULisboa**

(4.h) Lack of interest from University management

More frequent in **Grenoble INP-UGA**

(4.i) Lack of interest from faculty

Less frequent in **ULisboa** and **UPC - BarcelonaTech**

(4.m) Ensuring that the program level learning outcomes are achieved

Less frequent in Grenoble INP-UGA

(4.n) Avoiding duplication of content

Less frequent in Grenoble INP-UGA and **TU Darmstadt**

(4.p) Multidisciplinary assessment of multidisciplinary study pathways

Less frequent in **Grenoble INP-UGA**

This is another case where checking ‘the reality’ through a validation round with responsible persons in partner Universities will be important and will help us to better understand the data.

4. On factors that can facilitate the implementation of flexible study pathways

The last open question of the survey asked participants to identify factors that could facilitate the implementation of flexible study pathways. The following is a selection of representative answers organized into six categories. These answers have been very helpful in preparing some of the recommendations that are made in the next chapter of this report.

Cooperation and coordination [Total N = 29]

Participants mentioned that it is important to guarantee good communication among the academic community (students, professors, researchers, staff) and within universities, to improve cooperation. Industry was also seen as being an important partner in developing options for flexible study pathways, and so to encourage also more flexibility of incorporation of work-related skills, internships and other activities into the degree program. The need of coordinating processes and procedures (ECTS system, applications, curricular plans, etc.) was also referred to. Some participants suggested the creation of a Unite! system or identity.

“(…) a common understanding for a common learning space.”

“1) Communication and common rules in the administration of the different Universities to seamlessly recognize ECTS taken in other Universities. 2) Provide students with the UNITE! identity, [on top] of the local University.”

“More interconnection and cooperation between academic advisors and administrative staff from different universities; collecting advice from students on how to implement these pathways and their wishes, common data Platform.”

Resources [Total N = 25]

The responses to the inquiry contain references to several resources that are fundamental to the implementation of FLP, such as: human resources, financial resources, technological and IT resources, pedagogical materials and training sessions.

“Specific Resources: Economical and Human.”

“Financing would allow the improvement of facilities (e.g. rooms for project [based] learning and co-working, laboratories with enough material and capacity for each student to have the opportunity to engage in all the activities and to develop their own projects) and digital tools. The recruitment of more teaching assistants would enable a broader variety of assignments and pathways, once students would have better personalized support. Human resources would also need to be strengthened, since a larger flexibility generates personalized pathways which require higher levels of implementation/ processing/ validation back-office work.”

“Open shared teaching materials (...).”

Commitment [Total N = 11]

Participants considered that the universities, including every person involved in this process (students, professors, researchers, staff), and the stakeholders need to be committed to the program.

“Main universities' authorities (Rectors and so on) public and explicit commitment. External stakeholders' commitment (they have to realize the added value for industry and others).” & “Political and Academic will, on one hand, stimulus for students, in the other (...).”

“Light administrative structure: trust in the students! easy information system; strong commitment of the institution; good communication for/with teachers: students trust in their [advice]; develop contact for operative staff.”

Good practices/pilot experiences [Total N = 6]

Knowledge about examples of good practices from other universities and implementing pilot experiences, were also considered as useful strategies.

“Have a pilot experience and feedback.”

“Sharing information between different universities could offer ideas on how to manage or implement flexible study pathways.” & “Best practice examples.”

Autonomy [Total N = 4]

Some participants considered that the implementation would be easier if the universities (including teachers and students) had more autonomy to create and manage the courses.

“Allow time in the bachelor program for other courses instead of lab work thus giving students more freedom to study in a flexible pathway.”

“Faculty autonomy [in] how courses are organized, a tradition of offering students choices in courses, projects to choose from etc.”

“Autonomy in designing programs; interest from students and faculty.”

Uncategorized [Total N = 9]

“Try do not add more possibilities but integrate into existing courses the UNITE! opportunities.”

“The individual universities need to be open to be flexible with the students who are taking this path, especially at the beginning when the system is still on its trial run, and the kinks are still being figured out. The most important thing is not to make the students feel they are victims of an experiment, because of course, at the beginning there would be problems. So, the most important thing is to ensure the students' welfare and [support] them.”

Enablers, Obstacles, Recommendations

From the analysis of the survey, and state of the art data, the team elaborated a list of enablers, obstacles and recommendations regarding the implementation of FSP's within the Unite! European University. The general idea is to support and create empowerment for enablers, to find ways to overcome obstacles, and in general to try to implement recommendations in the future.

1. Enablers

1.1. Favorable European setting

In order to achieve its objectives, Unite! sees that there is a need for an effective compromise between the European University Alliances (EUAs) Initiative, and the European Union (EU). There are many potentially conflicting objectives which should become harmonized and agreed on. Inevitably, how much change there will/can be within the European Education Area (EEA), depends on how much the different stakeholders are willing to compromise. Top-down support at all levels (from legal to financial) would certainly pave the way for the right developmental conditions of bottom-up initiatives.

1.2. Structural transformation of Higher Education Institutions (HEI's)

Structural transformation of European HEI's would facilitate the implementation of Flexible Study Pathways as can be corroborated from the survey results and as intended by Unite! from the start. However, the road is long and subject to courses of action taken by policy-makers at both national and European level (as mentioned above). In this sense, our recommendation is that the report serves as technical support to show and promote the kind of change that would be needed to make the actions feasible within the HEI's setting. Moreover, this report paves the way to developing a more unified understanding of flexibility and is recommended as a basis for planning of e.g. Unite! Joint Programmes and novel virtual for credits joint offers.

1.3. Reciprocal reward system

Unite! as a European University intends to “enable students to obtain a degree by combining studies in several EU countries”, insofar as the partner members themselves can recognize the added value of any potential Unite! study program. In other words, part of the international competitiveness of Unite! would be subject to the robustness of its academic offer. An offer that must be benchmarked against that of leading non-European institutions. In this sense, partner universities must work together to develop Unite! Joint Programs as its flagship. The benefits for partners reside in the idea that Unite! should be more than just the sum of its parts.

1.4. Effectively integrated communication

Unite! is made up of seven partner universities working together for common goals. The complexity of managing so many different teams, working groups and sub-groups requires the channels of communication to always remain open and clear. The often-subtle connection between so many ongoing activities may go unnoticed thus hindering their development. To address this issue, effectively integrated communication within the Unite! community is key to the progress of activities but also to avoid possible overlaps in seeking solutions. For instance, seemingly insurmountable legal constraints for the development of Flexible Study Pathways may be bypassed or solutions may be found by collaborating with other working groups such as the Unite! Joint Programmes or the European Degree team. Bottom line, the Unite! community must remain informed at all times, and information flow vertically and horizontally internally and externally must be transparent and clear.

1.5. Embedded Global Competences Course for students, staff and faculty

It would improve collaboration and increase the effectiveness of communication within the Unite! community. Such a course has already been proposed (Multilingual & Global Competence Course) but requires more support for its implementation, and an alignment with all task forces involved.

2. Obstacles

2.1. Miscommunication among the Unite! Partners

A rather high percentage of respondents did not know whether there is flexibility with regards to format of course/program. The difference between type of participants' answers regarding lack/excess of flexibility is rather significant. In this sense, the results require validation. On the other hand, this issue is rather complex, as it primarily reflects the internal current situation of each partner, and Unite! as an alliance that offers new possibilities for flexibility through exchange programs and virtual online courses, that may as yet be not as well known to all respondents.

2.2. Lost-in-translation effect

Multilingual/multicultural teams often face the issue of having to produce clear messages that can reach all speakers/readership alike. Respondents' comments of the "I-don't-understand" nature is evidence that the message may not have been "crystal clear" to all participants. The identification of a common language of communication (English in the case of Unite!) does not necessarily guarantee messages will be delivered effectively. An additional effort must be made to reduce the subtleties connected with languages when it comes to the production of material, such as a survey, intended to provide input/feedback. The purpose is to minimize misinterpretation by the multilingual speakers of the Unite! Community (see point 5 of Enablers).

2.3. Natural resistance to change from current models of degree structures and teaching models

Degree, program, and course requirements evolve at a rather gradual speed, and in a sense, Universities are large ships that are not easily rerouted. Therefore, responding rapidly to changes in society and tailoring to expectations for graduate skills and knowledge is a challenge. Accordingly, this leads to a certain type of inertia and reluctance to make major changes in the existing structures, requirements and methods, as a University is also legally responsible to carry out a curriculum which is the basis of awarding the degree.

2.4. National settings and constraints

Results show that practical issues such as academic calendars are a major obstacle to flexibility. This aspect is worth exploring since "practical issues" are oftentimes tied to "legal constraints".

3. Recommendations

3.1. Achieve a common understanding

A high percentage of respondents did not know whether there is flexibility or not in their programs. Moreover, apparently some of them did not completely understand what was being asked in the questionnaire. It could be convenient to carry out actions to improve a common understanding of the

concept and to have clarifying examples of what each of the forms of flexibility means. Accordingly, using examples to highlight the goals of the question might have been helpful, and can serve as something to consider in the future while trying to reach a common understanding within Unite!. To this end, a glossary may prove useful to initially support the Unite! community when future development of Flexible Study Pathways takes place. The idea would be to express the different notions of flexibility present throughout our university communities with a “Unite! pidgin”.

We recommend the production of guidance documents, FAQ’s, interactive tools, workshops and other creative ways of visualizing information to smooth out differences and build a common understanding between students, teachers and services’ perception regarding flexibility in the choice of pathways allowed in courses/institutions within Unite!. A common understanding, and a robust terminology regarding flexibility must be shared with all ‘players’ within the system.

3.2. A bond of trust

Students’ perception of a lack of flexibility contrasts with that of professors, who see almost too much flexibility. Instead, the perception of study Programmes’ responsables seems to be somewhere in the middle between the two former groups in terms of how much flexibility is actually possible. Students seem to want much more flexibility regarding choices compared to professors. This could have a big impact on students’ engagement and satisfaction.

A strong commitment of partner institutions towards flexibility, a bond of trust between all players, transparency of procedures and a seamless administrative structure could all contribute to the development of more flexible study pathways better suited for the ongoing and future transformation of higher education.

The successful implementation of Flexible Study Pathways could start with well-planned pilots, which would be based on frequent and common forms of flexibility already present at partner Universities. These pilot initiatives should then be thoroughly assessed, by collecting data from students, professors and non-teaching staff, on what was successful, and what still needs improvement. Results should then be disseminated within Unite!

3.3. Build a common framework

The data shows the kinds of flexibility already present at most of the Unite! universities. These kinds of flexibilities could become the building blocks for pilot Unite! Joint Programmes. During the process of accreditation of Joint Programmes, diversity and flexibility should be considered and encouraged, especially the kinds of flexibility that different partners have already tried out. It would be reasonable to think that one way to meet the aforementioned is the following course of action:

Flexible Study Pathways → Unite! Joint Programs → European Degree

Examples of possible flexibility that should be fostered and/or are recommended (starting from the most frequent):

- a) Alternative courses during the 2nd Cycle, including a high ratio of Elective Courses (within and outside the domain) compared to Compulsory Courses
- b) Alternative courses within the same topic (namely in different languages)
- c) Students' participation in research units in advanced courses
- d) Student international mobility should be embedded in Unite! programmes. In fact, embedded mobility for both students and faculty is one of the criteria for the Unite! Joint Programmes.
- e) Recognition of credits by different universities. In addition, each partner university has already undertaken to do so when awarded the Erasmus Charter for Higher Education (ECHE) 2021-2027 (in fact, universities awarded the ECHE must: "Ensure full automatic recognition of all credits (based on the European Credit Transfer and Accumulation System – ECTS) gained for learning outcomes satisfactorily achieved during a period of study/training abroad, including during blended mobility")
- f) Different pedagogical methods exploiting the diversity of backgrounds of Unite! Faculty
- g) Minors (as a way to broaden main scientific areas and endorse embedded mobility by encouraging students to pursue them within Unite! at the same time contributing to an increased collaboration between partner universities to explore new and emergent areas with potential great impact in the labor market, technology, societal challenges, etc.)
- h) Different modules offered by the same university or between different partner universities (facilitating students' choice without losing the momentum to graduate on time)
- i) Seminar courses
- j) Collaborative/multidisciplinary project/thesis which would also contribute to meeting one of Unite!'s Quality goals

Flexible Study Pathways is a pivotal element of the transformation of higher education in Europe and on the top of the list of priorities of the European Universities Initiative. Accordingly, FSPs are at the core of the education development activities in Unite! and essential to the implementation of Joint Programs. It is unlikely that Joint Programs with seven partners can be successfully launched without significant elements of flexibility in the study pathways.

3.4. Take measures to ensure greater levels of flexibility in the near future in Unite! universities making it easier to develop even more Joint Programmes.

The sharing of information and resources (e.g. teaching materials, pedagogical approaches, creative virtual spaces, metacampus) between partner universities could offer ideas on how to manage or implement flexible study pathways - the sharing of best practices should be encouraged.

Restrictions within a programme regarding compulsory requirements is a key issue preventing flexibility. Possibilities to add to more options for fulfilling the compulsory requirements, should be explored, encouraging mobility by offering a wider option to students. However, at the same time regulation of degree requirements must be taken into account, as well as quality and standards for teaching and learning. Exploring new methodologic possibilities, using the experience gained from the COVID19 pandemic situation, namely remote classes and hybrid/blended teaching should also be encouraged. This complements the offer between partner universities in Joint Programmes (reaching over borders), at the same time improving inclusiveness. Also, care must be taken in order to offer high quality education while at the same time increasing flexibility. Access to suitable materials and appropriate cognitive and practical experiences should be ensured, as well as academic interaction with other students, at the same time increasing the chances of student completion on time by offering well structured pathways. Pedagogical openness should be encouraged, but at the same time the academic experience should contain sufficient challenge, so that students are likely to be cognitively and experientially stretched, their creativity and critical thinking stimulated in each stage of a programme of studies.

The harmonizing of academic calendars, e.g., creating pre- and post- periods before terms, would allow adjustments both in terms of the different academic and administrative requirement procedures, paving the way to more flexibility. To this end, mobility management officers from Unite! universities are already working towards the common definition of key dates/periods for the development of virtual exchange credit activities. The outcome of this may provide the basis for a feasible Unite! academic calendar.

3.5. Develop a joint system for student information, guidance and counselling

A clear structure for the implementation of flexible study pathways is critical and should be presented to all players from the start, as it supports students' choices and allows them to succeed in their chosen pathway. This increases the possibilities for students to develop more individualized professional pathways that are adaptable to the future job market.

A joint system for student information, guidance as well as counselling and mentoring is also recommended. A wider choice for pathways and greater flexibility can make it harder for students to make informed decisions. Academic advisors and tutors, both at home universities and at partner universities could help ensure that students graduate on time and thus save time and money by appropriate planning. Also, there should be different plans and time duration if the students choose to

have a double degree, a double specialization, or a double minor. A joint system for student information in the future would be needed, within the Unite! Joint Mobility Center and /or Student Engagement and Welcome Center, which are also part of the development actions in Unite! during 2019-2022.

3.6. Explore new forms of flexibility within Unite!

It is recommended that any future mobility within the alliance should explore new forms, e.g. blended learning, telecollaboration globally networked learning environments, Collaborative Online International Learning (COIL), Global Virtual Teams E-tandem / Teletandem, Online International Cultural Exchange (see EVOLVE: evolve-erasmus.eu). New mobility options, which utilize the digitalization of educational offers, made more available due to the COVID19 pandemic, are becoming more attractive and a good vehicle for flexibility. These new mobility options are not meant to replace traditional mobility, they could co-exist, complement or even represent new venues for teaching & learning.

3.7. Identify legal restrictions at different levels and nationally

The implementation of Flexible Study Pathways within Unite! demands a thorough investigation regarding legal constraints both at local and national level, as well as at European level, since their viability is subject to compliance with diverse legislation and regulation. Professional certification both nationwide and internationally should also be considered when implementing FSPways. There may be other European initiatives which may help remove some of the legal restrictions (e.g. creation of the European Degree) meaning that collaboration with people involved in these other activities is fundamental.

3.8. Improve student experience and success and increase responsibility: the path to employability

Most respondents felt that part-time studying and program modularization are good criteria for defining criteria for flexibility. Therefore partners should be encouraged to examine the restrictions regarding compulsory requirements for taking a course within a programme, and offer more alternatives for fulfilling the requirements. In fact, flexibility in this sense might encourage mobility by offering a wider option to students and by fostering responsibility regarding choices made.

Moreover, Unite!'s offer of Flexible Study Pathways, could increase inclusiveness by attracting students with diverse backgrounds. This could give them the opportunity to develop an individual profile or to better adapt their studies to external conditions (family, job, COVID19!) and therefore we recommend this idea to become developed as a toflagship for Unite!'s unique offer and marketing strategy.

Conclusion

Being an open and emergent field, the matter of flexibility can never be exhausted. New possibilities will continually arise. New horizons will open. New situations can be glimpsed. What it is to be flexible in higher education, accordingly, is as much a matter of the imagination as it is about bringing about a particular change in actions and systems in given situations.

Barnett, 2014, pp 33

Unite!, European University Alliance, considers that offering Flexible Study Pathways to its students is a priority, especially, but not exclusively, while preparing the implementation of Joint Degrees. On the other hand, to start driving down this curvy and bumpy road, Unite! partners need a 'common map' of the territory, and a destination. Also, Unite! has to accept that "not all hopes that pass under the banner of flexibility can, in any one situation, be met" (Barnett, 2014) - pleas for 'greater flexibility' in higher education will probably entail somewhat differing and even conflicting hopes, expressing different values and different priorities, including economic, cultural, social, personal and institutional expectations. Management of flexibility then becomes, at least partially, the management of conflicting interests regarding the implementation of specific forms of flexibility.

At the same time, and leaving out the intricacies of implementing flexibility in higher education, Unite! partners will have to decide if this is a challenge and a risk worth taking in this ever more complex and indeed fluid 21st century. Responsiveness, inclusiveness, openness to change and indeed flexibility are not optional any more, they have become prerequisites for operational activities within the higher education arena of Europe. To be able to offer meaningful experiences to students-as-individuals, and to prepare them for the future, stretching them cognitively and experientially, demands that all of us are committed to development of new avenues for generating new solutions for teaching & learning in higher education.

Under the banner of flexibility, new conceptions of the university might emerge, new senses as to what it might be to be a student, and new ideas as to what authentic learning and personal development might look like. (Barnett, 2014)

Glossary

Aalto	Aalto University, one of the partner universities in Unite!, in Finland
CEDEFOP	European Centre for the Development of Vocational Training
ECTS	European Credit Transfer System
ERASMUS	the EU's programme to support education, training, youth and sport in Europe, particularly offering opportunities to study abroad
ESG	European Standards and Guidelines for Quality Assurance, adopted in the Bologna Process
EURACE	an accreditation label of the European Network for Accreditation of Engineering Education
EU	European Union
FAQ	Frequently Asked Questions
FLP	Flexible Study Pathway or Flexible Learning Pathway, used interchangeably
INP-UGA	Grenoble INP graduate schools of engineering and management, University Grenoble Alpes, one of the partner universities in Unite!, in France
HE	Higher Education
HEA	Higher Education Academy, a British professional institution for learning and teaching in HE
HEI	Higher Education Institution
IIEP	International Institute for Educational Planning, part of UNESCO
KTH	KTH Royal Institute of Technology, one of the partner universities in Unite!, in Sweden
Polito	Politecnico di Torino, one of the partner universities in Unite!, in Italy

SDG	Sustainable Development Goal, specifically one of the 17 adopted in UNESCO's 2030 Agenda for Sustainable Development
TF	Task Force, specifically one of the task forces in the Unite! project
TU Darmstadt	Technical University of Darmstadt, one of the partner universities in Unite!, in Germany
WP	Work Package, specifically one of the work packages in the Unite! Project
ULisboa	Universidade de Lisboa, one of the partner universities in Unite!, in Portugal
UNESCO	United Nations Educational, Scientific and Cultural Organization
Unite!	University Network for Innovation, Technology and Engineering, a transnational alliance funded as part of the EU's European Universities Initiative
UPC	Universitat Politècnica de Catalunya - BarcelonaTech, one of the partner universities in Unite!, in Spain

References

Barnett, R. (2014) Conditions of Flexibility Securing a more responsible Higher Education. The Higher Education Academy, York

Beverley, B., Tallantyre, F. & Le Corno, A. (2013) Flexible Learning: a practical introduction for students. The Higher Education Academy, York

Curaj, A. (2015) The European Higher Education Area – Between Critical Reflections and Future Policies. Springer: N.Y. & London

Denning, T. et al (2016) Exploring and Extending Flexibility – a reflective framework. The Higher Education Academy in Partnership with Keele University, York

Education 2030 Incheon Declaration – Towards inclusive and Equitable quality education and Lifelong Learning for all (2015), World Education Forum

European Commission/EACEA/Eurydice, 2015. Adult Education and Training in Europe: Programmes to Raise Achievement in Basic Skills. Eurydice Report. Luxembourg: Publications Office of the European Union.

European Skills Agenda for Sustainable Competitiveness, Social Fairness and Resilience (2020) <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&furtherNews=yes&newsId=9723> retrieved 11/04/2021

Flexible Education and Training Systems, European Centre for the Development of Vocational Training (CEDEFOP) - <https://www.cedefop.europa.eu/en/toolkits/vet-toolkit-tackling-early-leaving/intervention-approaches/flexible-education-and-training-systems> (retrieved 20/02/2021)

Godonoga, A. & Martin, M. (2020) SGD4 – Policies for Flexible Learning Pathways in Higher Education – Taking Stock of Good Practices Internationally. IIEP – UNESCO Working Papers

Gordon, N. (2014) Flexible Pedagogies: technology-enhanced learning. The Higher Education Academy in Partnership with the University of Hull, York

Gover, A. (2020) External Quality Assurance in the Time of Covid19. European Association for Quality Assurance in Higher Education (ENQA)

Hammersley, A., Tallantyre, F. & Le Corno, A. (2013) Flexible Learning: a practical guide for academic staff. The Higher Education Academy, York

Implementing Joint Degrees in the Erasmus Mundus action of the Erasmus+ Programme (2020)
Education, Audiovisual and Culture Executive Agency (EACEA) of the EU, Brussels, Belgium

Li, C. & Lalani, F. (2020) The Covid19 pandemic has changed education forever – this is how. World Economic Forum - <https://www.polyu.edu.hk/sllo/hackathon/index.php/library/50-the-covid-19-pandemic-has-changed-education-forever-this-is-how>, retrieved 20/02/2021

Martin, M. & Furiv, U. (2020) Covid19 shows the need to make learning more flexible. University World News - <https://www.universityworldnews.com/post.php?story=20200324115802272>, retrieved 20/02/2021

Moitus, S. et al (2020) Flexible Learning Pathways in Higher Education – Finland’s Country Case Study for the IIEP – UNESCO SDG4 project in 2018-2021. Finnish Education Evaluation Centre (FINEEC)

Promoting Equity of Opportunity through Flexible Learning (2016) The Higher Education Academy in partnership with the University of Birmingham, York

Ryan, A. & Tilbury, D. (2013) Flexible Pedagogies: new pedagogical ideas. The Higher Education Academy, York

Standards and Guidelines for Quality Assurance in the European Higher Education Area - ESG (2015)
Brussels, Belgium

TANDEM - Shaping Flexible Learning Pathways (2017) Flexible Pathways connecting Vocational Education and Training (VET) and Higher Education (HE) taking into account the labour market. The European Association of Institutes for Vocational Training (EVBB)

Unger, M. & Zaussinger, S. (2018) The new student: Flexible Learning Paths and Future Learning Environments. Institute for Advanced Studies (IHS), Vienna

Vlasceanu, L. et al (2007) Glossary of Basic Terms and Definitions in Quality Assurance and Accreditation, UNESCO, Bucharest. <https://unesdoc.unesco.org/ark:/48223/pf0000134621> retrieved 20/02/2021

Annexes

1. Flexible Study Pathways Survey

9/10/2020

Flexible Study Pathways

Flexible Study Pathways

Flexible Study Pathways is a subtask in the TF5 "Teaching and Learning Academy". Our goal is to propose a working definition for the concept and even generating a framework that provides us with a common language and a guide to help us design our future joint programs, as well as to generate clear communication to staff and students.

As a first step, we want to collect experiences and examples from UNITE! Universities regarding flexible study pathways that could help us advance our task. For that purpose we have elaborated the following questionnaire to be answered by representatives from UNITE! Universities.

Flexibility may be present in different dimensions:

- Choices in how, what and when students learn
- Choices regarding mobility among programs
- Flexibility regarding the type of student engagement

In the questionnaire, you will find many different specific ways to implement flexibility in each of these dimensions. Please, tell us

- (a) Which of these are common in your programs already (if needed focus on one specific program),
- (b) Which ones are the most desirable ones in the UNITE! context from your point of view, and
- (c) What are the difficulties to implement higher levels of flexibility in your University.

Your answer will be very valuable information to complete our task successfully. Thank you.

* Required

1. 1.1 From which partner University are you within UNITE ?

Mark only one oval.

- ☐ Aalto University
- ☐ TU - Darmstadt
- ☐ Politecnico di Torino
- ☐ Grenoble - INP
- ☐ KTH - Royal Institute of Technology
- ☐ Universidade de Lisboa
- ☐ Universitat Politècnica de Catalunya · BarcelonaTech (UPC)

9/10/2020

Flexible Study Pathways

2. 1.2 How would you describe yourself?

Mark only one oval.

- ☐ Student representative/student counselor/student delegate/student vice rector
- ☐ Student at decision level/pedagogical council or other
- ☐ Study Programme Scientific/Academic Coordinator/Manager
- ☐ Joint programme Faculty/Teacher/Lecturer
- ☐ Mobility Office Staff
- ☐ Quality Assurance of Study Programmes Faculty or Staff
- ☐ Other

3. 1.3 What do you think a flexible study pathway is for?

Which of these criteria for
Flexible Study Pathways are
possible in your University?

This section refers to students responsibility and free options - i.e. choices offered to learners in how, what, when and where they learn

Flexibility is considered regarding five different perspectives:

- 2.1. Flexibility of content of courses /programs and the amount of choice that is allowed to students
- 2.2. Flexibility with regard to format of course/programs
- 2.3. Flexibility regarding the schedule and time required to attain the Diploma
- 2.4. Flexibility regarding mobility
- 2.5. Flexibility regarding student engagement

2.1 Flexibility regarding content of courses/programs

In the questions below, we would like to know what courses (or assignments) can be taken, what's the amount of credits, and the degree within which this is possible (B.Sc., M.Sc.) . You should consider electives, minors, alternative courses with the same topic, possibilities concerning choice of assignments and possible extra courses.

9/10/2020

Flexible Study Pathways

4. 2.1.1 Elective courses outside the domain (choice from an extensive and multidisciplinary catalog) *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. 2.1.2 Elective courses inside the degree specialization area (choice from a restricted catalog list) *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. 2.1.3 Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic or offered in a domain that is complementary to the major in order to open up educational and career prospects) *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9/10/2020

Flexible Study Pathways

7. 2.1.4 Alternative courses within the same topic (e.g. project courses, courses in different languages, same topics by different departments etc.) *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. 2.1.5 Possibility to choose between different assignments and/or different subjects within an individual course to deepen the study of specific content. *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. 2.1.6 Extra courses a student could take or not (Supplement to the Diploma or similar)

Mark only one oval.

☐ Yes

☐ No

9/10/2020

Flexible Study Pathways

10. 2.1.7 Other

2.2 Flexibility regarding format of courses/programs

In the questions below, we would like to know how much freedom students are allowed to have in the choice of assignments, means of delivery of lessons, final project or thesis subject, seminars offered and participation in industry and research units.

11. 2.2.1 Students are allowed to choose the assignment in Challenge-based / Problem-based / Project-based / Research-based learning courses *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. 2.2.2. Students are allowed to attend seminar courses (self chosen topics, literature based and with a presentation) *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9/10/2020

Flexible Study Pathways

13. 2.2.3 Students can participate in research units collaboration in advanced courses *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. 2.2.4 Students can participate in Industry environments in advanced courses *

Mark only one oval per row.

	No	Yes: <6 ECTS	<18 ECTS	<30 ECTS	>=30 ECTS	I don't know
1st cycle/bachelor degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2nd cycle/master degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. 2.2.5 Students are allowed to choose, for the final project/thesis, between academic/research unit/industry environments. *

Mark only one oval.

- ☐ No
☐ Scientific targeted
☐ Industry Driven
☐ Collaborative/Multidisciplinary (Capstone)

9/10/2020

Flexible Study Pathways

16. 2.2.6 Students are allowed to choose between remote classes and face-to-face classes or an hybrid system

Mark only one oval.

☐ No

☐ Yes

17. 2.2.7 Students are allowed to take part of virtual classes within UNITE! universities (or other universities).

Mark only one oval.

☐ No

☐ Yes

18. 2.2.8 Other

2.3 Flexibility regarding the schedule and time required to attain the Diploma/Degree

In the questions below, we would like to know how much freedom students are allowed to have regarding the schedule and time required to attain the Diploma

9/10/2020

Flexible Study Pathways

19. 2.3.1 Please check all that apply

Check all that apply.

- ☐ The allowed time for completing the degree (attaining the Diploma) is fixed, and no extensions are possible
- ☐ Part-time studying is possible (while working or looking after children or even studying a second program)
- ☐ Program modularization is available - Chronological order of courses not fixed within a program
- ☐ Taking exams in a different semester than the course is possible
- ☐ Special time frame for allowing flexible courses to be shared among different degrees and universities

20. 2.3.2 Other

2.4 Flexibility regarding mobility

In the questions below, we would like to know how much freedom students are allowed to have regarding mobility between cycles, credit transfer, joint programs and Erasmus participation

21. 2.4.1 Please check all that apply

Check all that apply.

- ☐ Student International mobility inside a joint program is possible
- ☐ Student international mobility with ERASMUS
- ☐ The possibility to study with international guest teachers
- ☐ Mobility between programs
- ☐ Recognition of credits from different Universities
- ☐ The possibility to get credits/certification for parts of the program

9/10/2020

Flexible Study Pathways

22. 2.4.2 Other

2.5 Flexibility regarding type of student engagement

In the questions below, we would like to know how much freedom students are allowed to have regarding recognition, validation and accreditation of the knowledge, skills and competencies acquired through non-formal and informal education

23. 2.5.1 Please check all that apply

Check all that apply.

- ☐ Possibility for lifelong learning students to take courses
- ☐ Research units and Industry extra-curricular activities
- ☐ Possibility to choose from different teaching staff backgrounds (academic and industry)
- ☐ Students can have co-responsibility in designing personalized curricula
- ☐ Methods to recognise and facilitate learning from work experience or volunteer work

24. 2.5.2 Other

3. Choose approximately 10 criteria that would be the most desirable in a flexible program in the European University context (e.g. UNITE!)?

In this section we would like to know your personal opinion regarding desirable flexibility in an European University context for example UNITE! European University, regarding format of courses/programs, amount of choice allowed to students, schedule and time required to attain the Diploma, mobility and extent of student engagement.

9/10/2020

Flexible Study Pathways

25. 3.1 Flexibility regarding format of courses/programs

Check all that apply.

- ☐ Elective courses outside the domain (choice from an extensive and multidisciplinary catalog)
- ☐ Elective courses inside the degree specialization area (choice from a restricted catalog list)
- ☐ Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic, or offered in a domain that is complementary to the major in order to open up educational and career prospects)
- ☐ Alternative courses in the same topic (ex project courses, courses in different languages, same topics by different departments etc.)
- ☐ Possibility to choose between different assignments and/or different subjects within a course, to deepen the study of specific content.
- ☐ Extra courses you could take or not (Supplement to the Diploma)

26. 3.2 Flexibility regarding the amount of choice allowed to students

Check all that apply.

- ☐ Students choosing the assignment in Challenge-based / Problem-based / Project-based / Research-based learning
- ☐ Seminar courses (Self chosen topics literature based and presentation)
- ☐ Research units collaboration in advanced courses
- ☐ Industry collaboration in advanced courses
- ☐ The possibility to choose for the final project/thesis between academic/research unit/ Industry environment.
- ☐ Possibility to choose between remote classes and face-to-face classes or a hybrid system
- ☐ Possibility to take part of virtual classes within UNITE! universities (or other universities)

27. 3.3 Flexibility regarding the schedule and time required to attain Diploma

Check all that apply.

- ☐ Part-time studying (while working or looking after children, studying a second program...)
- ☐ Program modularization - Chronological order of courses not fixed within a program
- ☐ Taking exams in a different semester than the course
- ☐ Special time frame for flexible courses to be shared

9/10/2020

Flexible Study Pathways

28. 3.4 Flexibility regarding mobility

Check all that apply.

- ☐ Student international mobility inside a joint program
- ☐ Student international mobility with ERASMUS
- ☐ The possibility to study with international teachers
- ☐ Mobility between programs
- ☐ Recognition of credits from different Universities
- ☐ The possibility to get credits / certification for parts of the program

29. 3.5 Flexibility regarding type of student engagement

Check all that apply.

- ☐ Possibility for long life learning students to take courses
- ☐ Research units and Industry extra-curricular activities
- ☐ Possibility to choose from different teaching staff backgrounds (academic and industry)
- ☐ Student co-responsibility in designing personalized curricula
- ☐ Part-time studying (while working or looking after children, studying a second program)
- ☐ Methods to recognise and facilitate learning from work or volunteering experiences

30. 3.6 Other

4. What makes it difficult to implement flexible study pathways in your university?

In this section we would like to inquire about the constraints that you know of that might present as a difficulty in the implementation of flexible study pathways in an European University context for example UNITE!

9/10/2020

Flexible Study Pathways

31. 4.1 Please choose all that apply

Check all that apply.

- ☐ University policy
- ☐ Legal matters (e.g. quality assurance in higher education)
- ☐ Programs agendas
- ☐ Academic calendars (alignment between universities or restrictions within the degree)
- ☐ Lack of digital tools
- ☐ Time cost to organize flexible study pathways
- ☐ Autonomy in designing programs
- ☐ Lack of interest from university management
- ☐ Lack of interest from faculty
- ☐ Lack of interest from students
- ☐ You don't think it is a priority
- ☐ Cost of such programs
- ☐ Ensuring that programme-level learning outcomes are achieved
- ☐ Avoiding duplication of content
- ☐ Labor intensiveness of providing individual advice for each student
- ☐ Multidisciplinary assessment of multidisciplinary study paths

32. 4.2 Other

Tell us factors that can facilitate the implementation of flexible study pathways in your university

In this section we would like to inquire about factors that you know of that might facilitate the implementation of flexible study pathways in an European University context for example UNITE!

9/10/2020

Flexible Study Pathways

33. 5.1

This content is neither created nor endorsed by Google.

Google Forms

2. Quantitative Analysis of Closed Questions from the Survey

Content

Introduction	65
Questionnaire results	66
1. Universe	66
2. Which of these criteria for Flexible Study Pathways are possible in your University?	70
3. Choose approximately 10 criteria that would be the most desirable in a flexible program in the European University context (e.g. Unite!)	94
4. What makes it difficult to implement flexible study pathways in your university?	102

Introduction

The Unite! TF5 Flexible Study Pathways is a subtask in the TF5 "Teaching and Learning Academy" which is composed of three subgroups, namely Flexible Study Pathways, Joint Programs and Good Pedagogical practices, which are all working to achieve the creation of joint activities under the overall umbrella of the "Teaching and Learning Academy" of Unite!. The TF 5 work also extends into the development of innovative technologies, virtual learning and teaching spaces and innovative pedagogies. In the Flexible Study Pathways subgroup, as well as in all the TF5 subgroups there is a need to generate common terminology, processes and overall understanding of the ways in which the individual partners view these key issues, and how they become reflected at the level of Unite! Simply stated, there is a need to generate a common language to be able to define more clearly, in the Unite! context, these very broad concepts.

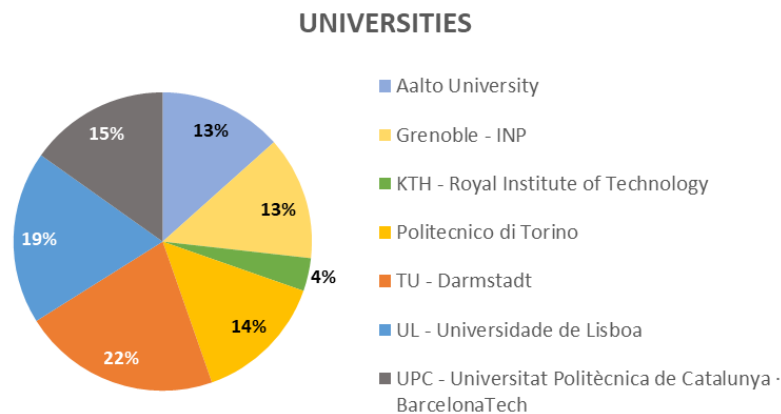
Accordingly, the goal is to propose a working definition for the concept of Flexible Study Pathways and even generating a framework that provides Unite! us with a common language and a guide to help integration of flexibility into the designing of Unite! future joint programs, as well as to generate clear communication to staff and students.

As a first step, the aim was to collect experiences and examples from Unite! Universities regarding Flexible Study Pathways. In order to do so, a questionnaire was developed and answers were collected by representatives of Unite! Universities. The questionnaire was developed during the fall of 2020 and launched in October 2020. The data collection was carried out during October- end of December 2020. Data analysis and writing the report was carried out during January 2021 - April 2021, with a final validation of the report with individuals in the university who had been named as having the highest expertise for evaluating the robustness of the data and the conclusions with regards to perceived vs. reality in their university. These individuals had not answered the questionnaire and represented either individuals in leading positions on curriculum design/and or international affairs at the highest level of the university, or individuals such as Vice Presidents for education or international affairs. Accordingly, the survey, the report and the validation of the report coincides with the point at which Unite! has been operational for half of the full funding period (2019-2022).

Questionnaire results

1. Universe

1.1. *From which partner University are you within Unite?*



All partner Universities participated in the survey (with a total of 112 answers). The response rate was rather similar among the partners (ranging from 13-22%) except for one partner with less than 13% response rate.

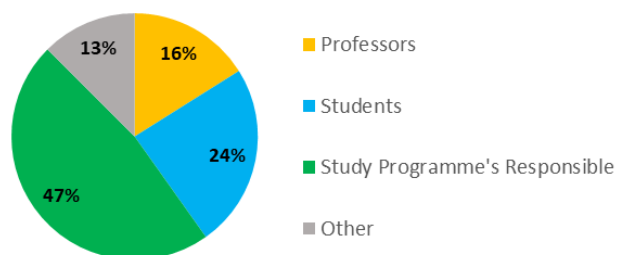
It is to be noted that this survey is a pioneering attempt to chart the ways in which 7 different Universities, from North to South, view Flexible Study Pathways. Moreover, the FSP concept and the terminology, as well as the practices within each university have most likely also influenced the ways in which individuals have interpreted the questions and answered the questionnaire. These considerations, together with the differences in the response rates, must therefore be taken into account when interpreting the results, even though there seems to be a general trend of the respondents to indicate that there is limited flexibility in study programmes.

Abbreviations used in throughout this document appear always in the same order:

- Aalto [Total N = 15]
- Grenoble INP-UGA [Total N = 15]
- KTH [Total N = 4]
- PoliTO [Total N = 16]
- TU Darmstadt [Total N = 24]
- ULisboa [Total N = 21]
- UPC - Barcelona Tech [Total N = 17]

1.2. How would you describe yourself?

TYPE OF PARTICIPANTS



Definition of type of participants:

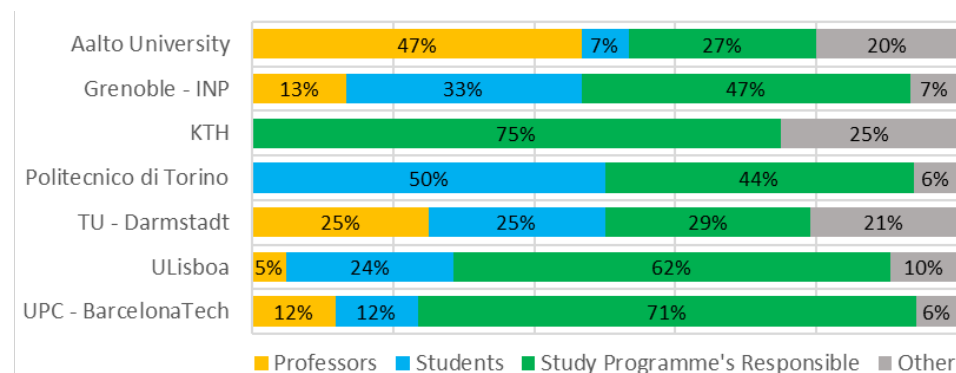
- **Professors:** Joint programme Faculty/Teacher/Lecturer.
- **Students:** Student at decision level/pedagogical council or other; Student representative/student counselor/student delegate/student vice rector.
- **Study Programme's Responsible:** Mobility Office Staff; Study Programme Scientific/Academic Coordinator/Manager.
- **Other:** Quality Assurance of Study Programmes Faculty or Staff; Other.

The respondents comprised of the following groups as follows: nearly half (47%) were in the category of Study Programme Responsible, nearly a quarter (24%) were students, and the remaining 26% consisted of professors (16%) and individuals representing the category "other" (13%)

It is evident that the response rates from different categories of individuals is uneven, even though the attempt was made to assure that the questionnaire was sent out to an equal number of individuals in each of the categories. However, it is possible that the individuals who sent out the survey in each university did not reach the same number of respondents for each category. Moreover, it is also possible that the respondents in the groups were not as easily identified for each partner, as the titles and the job descriptions and duties may also vary between the universities.

Distribution of type of participants by University:

Type of participants	Universities							Total
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - BarcelonaTech	
Professors	7	2	0	0	6	1	2	18
Students	1	5	0	8	6	5	2	27
Study Programme's Responsible	4	7	3	7	7	13	12	53
Other	3	1	1	1	5	2	1	14
Total	15	15	4	16	24	21	17	112

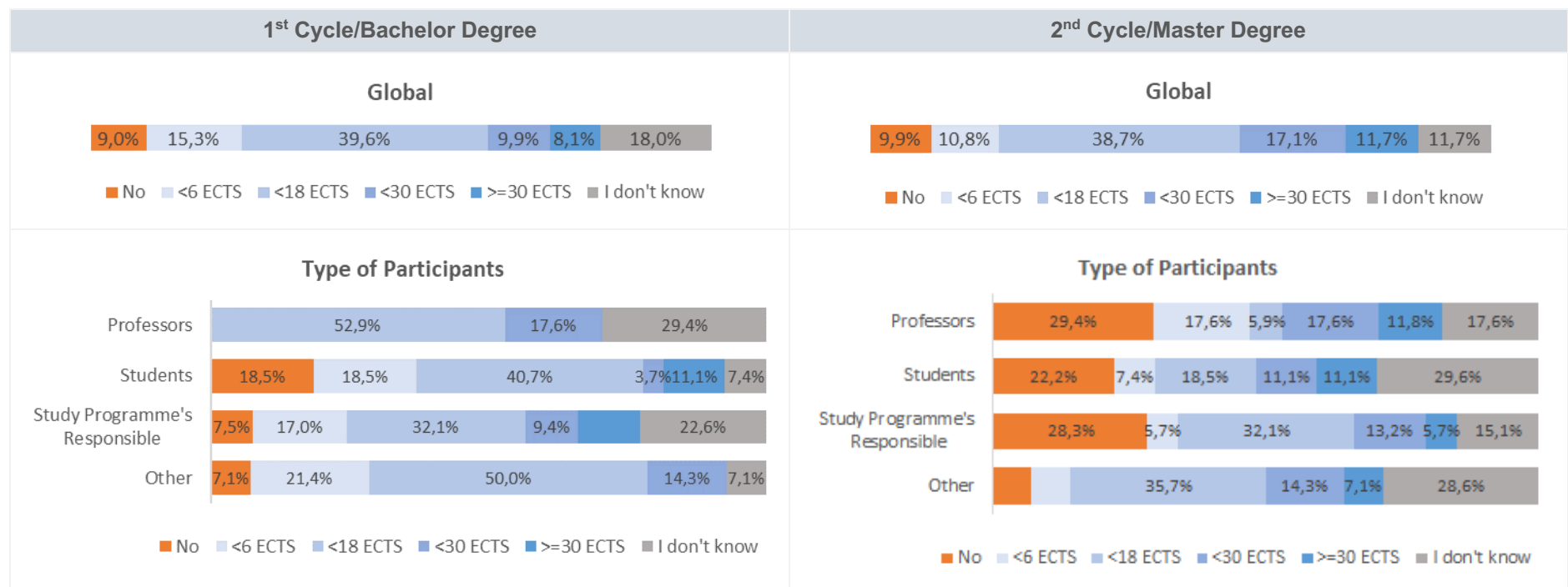


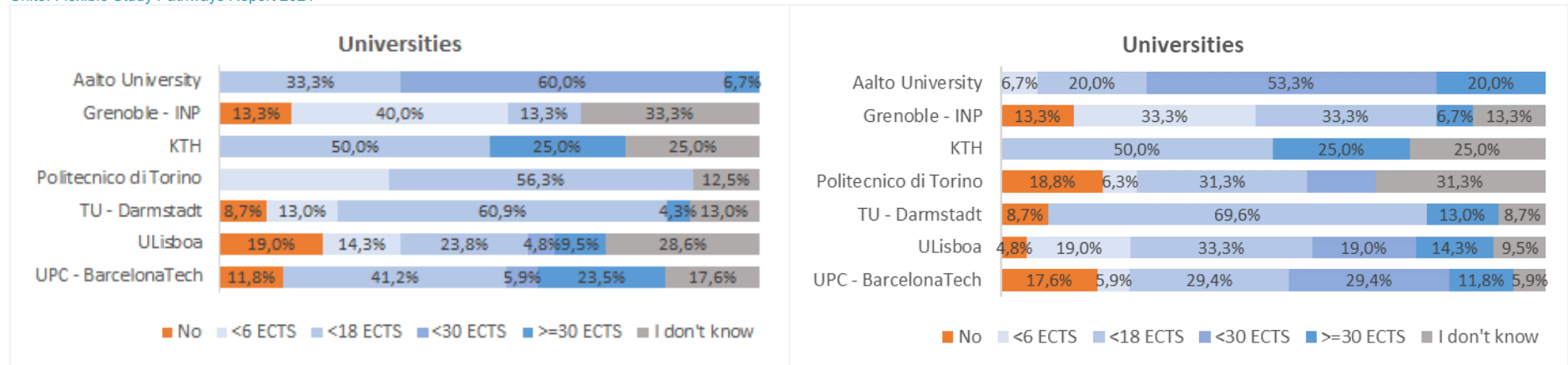
The distribution of the respondents representing the different categories was uneven. Aalto had the largest participation of professors with 47% but the lowest student participation at 7% whereas Politecnico di Torino had no professor participation but it had the highest participation of students (50%). Generally speaking, the highest number of participants were study programme responsible persons ranging from 27% for Aalto to 71% for UPC) (for KTH this was 75%, but considering the low number of respondents, this percentage is not reliable. It is likely that the differences in the responses from the different categories will have influenced the data, and interpretations need to be made keeping this in mind.

2. Which of these criteria for Flexible Study Pathways are possible in your University?

2.1. Flexibility of content of courses /programs and the amount of choice that is allowed to students

2.1.1. Elective courses outside the domain (choice from an extensive and multidisciplinary catalog)



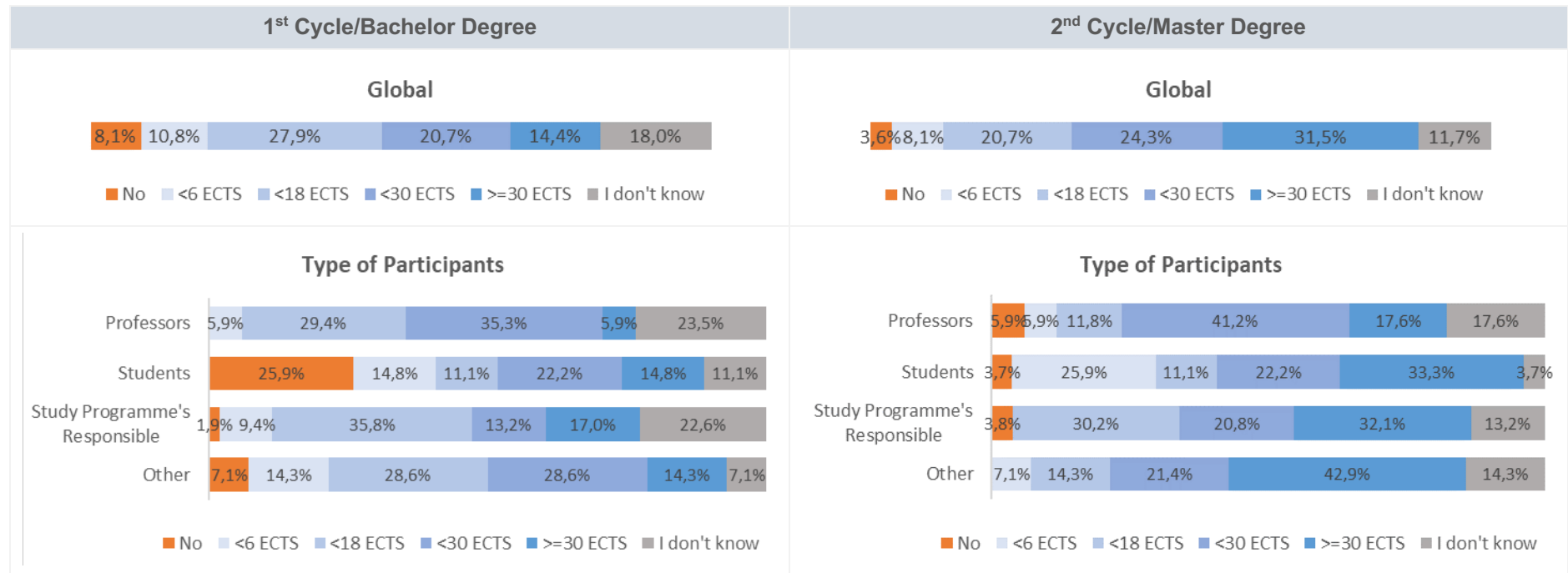


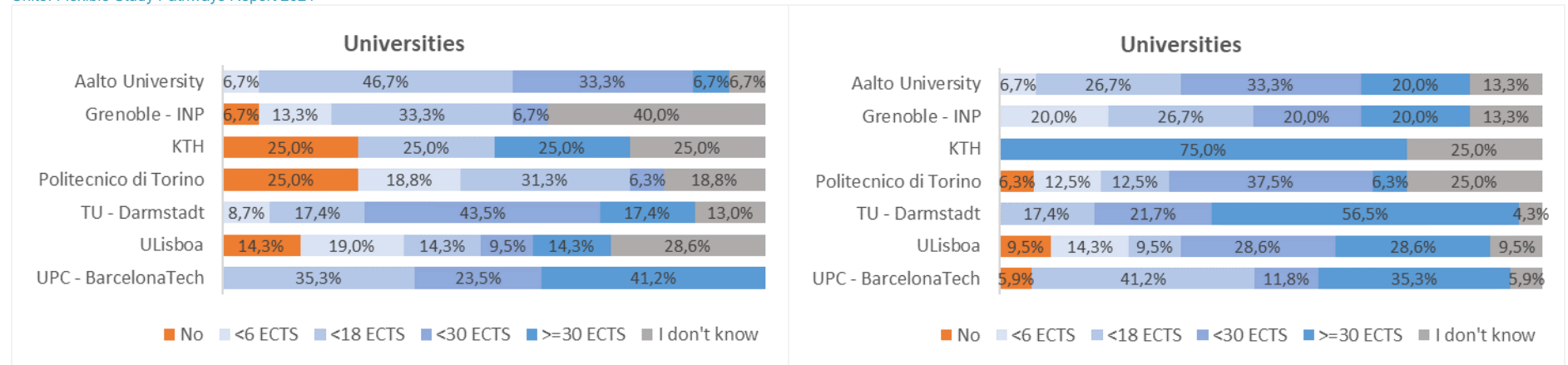
The majority of the results of the survey are divided into three graphical representations: global, type of participant and universities. The descriptions are mostly of the global representation. However, descriptions by type of participant and universities were made when deemed meaningful.

In general, the criteria for Flexible Study Pathways possible at each partner University falls within the <18 ECTS category for both 1st and 2nd Cycles. Thus, flexibility of content of courses/programmes is more likely for <18 ECTS. It is worth mentioning that a significant number of participants answered they did not know, 18% and 11.7% for 1st and 2nd Cycles respectively.

Elective courses outside the domain seem to show potential for the organization of flexible study pathways. In addition, they would meet the criteria of multidisciplinary which is one of the objectives of unite!, broadening the field of studies and adding complementary study areas.

2.1.2. Elective courses inside the degree specialization area (choice from a restricted catalog list)

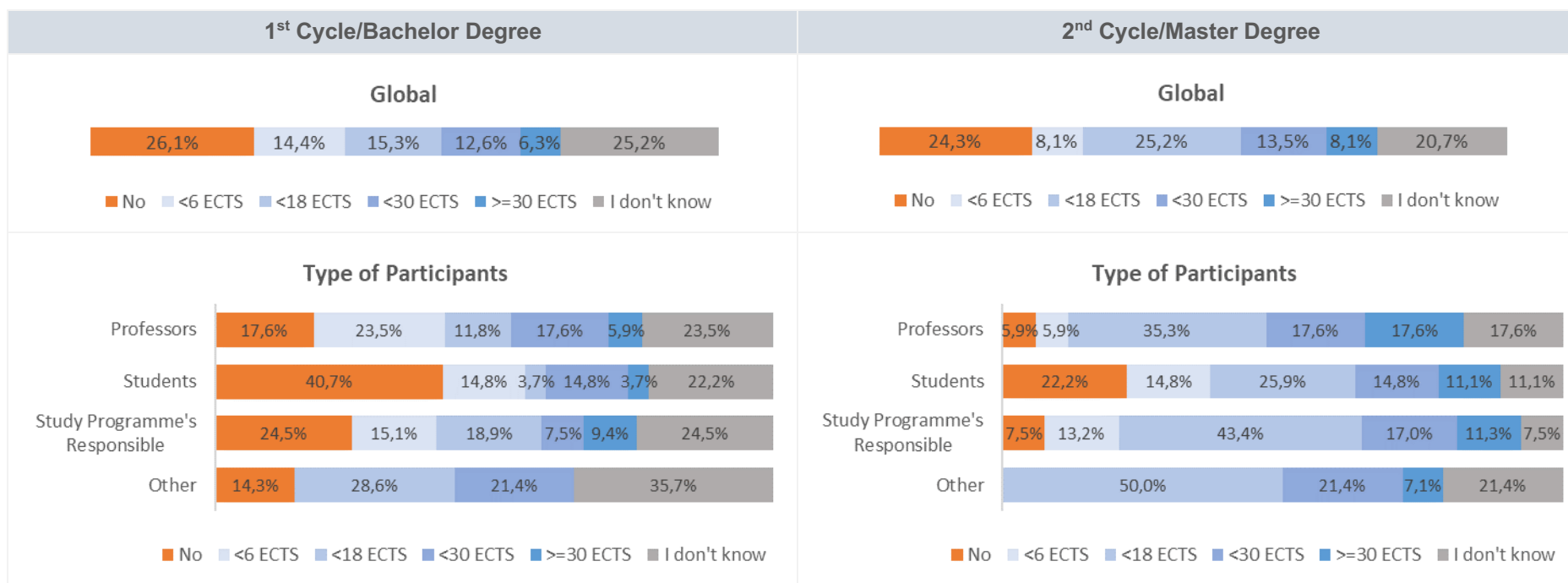


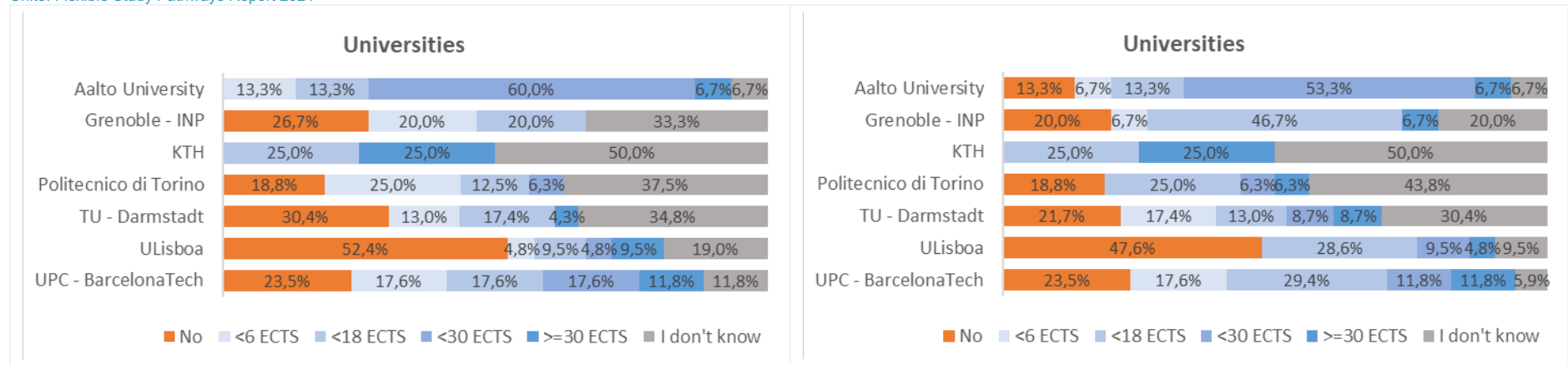


There seems to be more flexibility for elective courses at 2nd Cycle level as ≥ 30 ECTS was the answer of 31.5% respondents. Conversely, 1st Cycle level is less flexible with 27.9% in the <18 ECTS category.

Elective courses from a restricted catalog list are associated with less flexibility of study programmes during 1st Cycle which is in line with the idea of fundamentals formative years as opposed to greater flexibility during the 2nd Cycle when the tendency is the diversification study pathways for each student, towards their specialization within a branch of the scientific area.

2.1.3. Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic or offered in a domain that is complementary to the major in order to open up educational and career prospects)



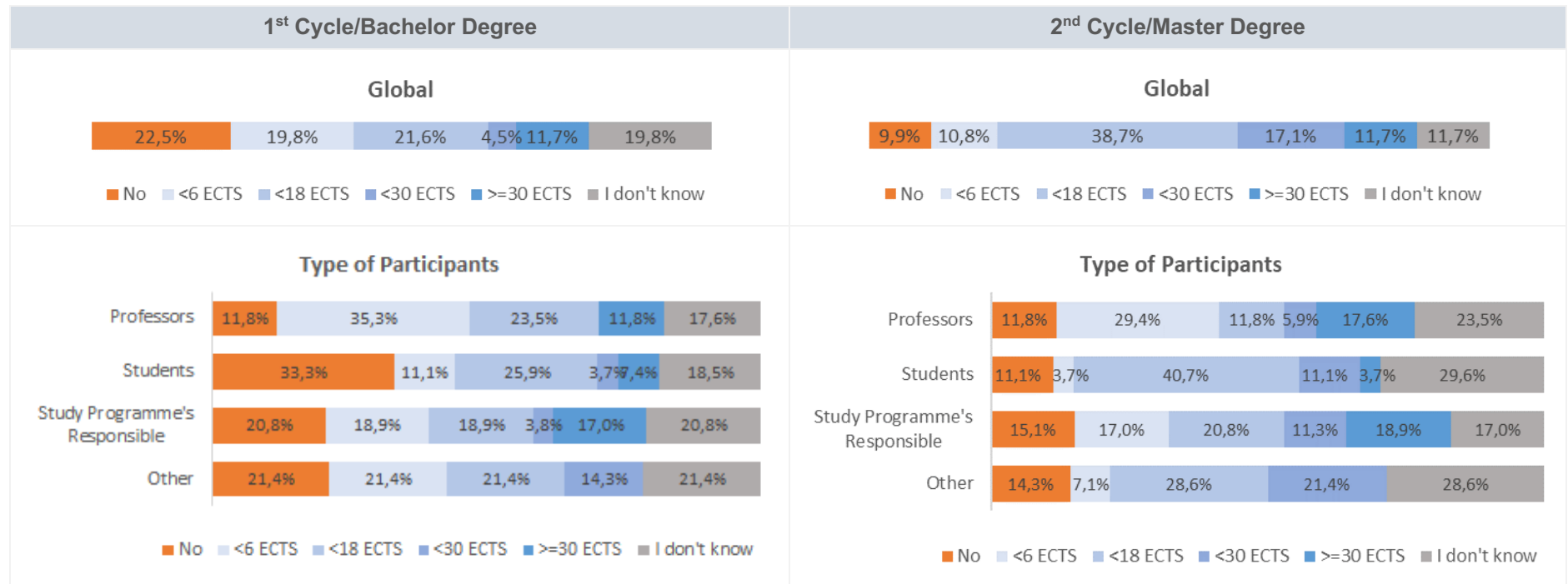


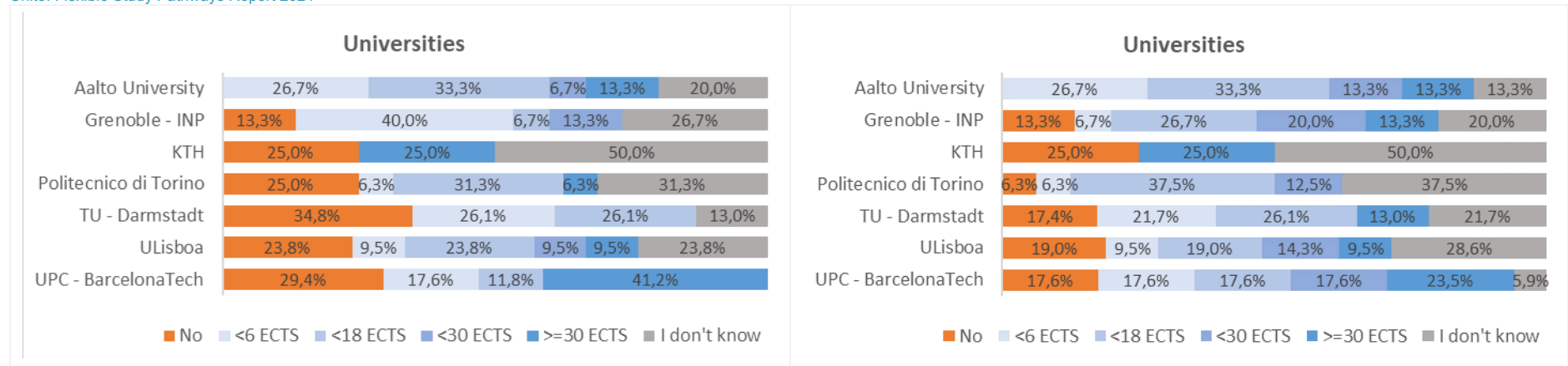
Results show that Minors do not seem to be integral options for both 1st and 2nd Cycle levels according to approximately 26 and 24 percent of participants. However, approximately 25 and 21 percent of participants did not know the answer to the question. It could be stated that only half of the participants see Minors as an option at their respective universities.

All partner universities seem to be open to the possibility of offering Minors to their students, but clearly Aalto is the most open to this possibility, and ULisboa the least open. Minors offer a good opportunity to broaden and complement main scientific areas. To this end, the development of both joint programs or other joint initiatives is recommended within Unite!

Minors would endorse embedded mobility by encouraging students to pursue them within the Unite! offer.

2.1.4. Alternative courses within the same topic (e.g. project courses, courses in different languages, same topics by different departments etc.)

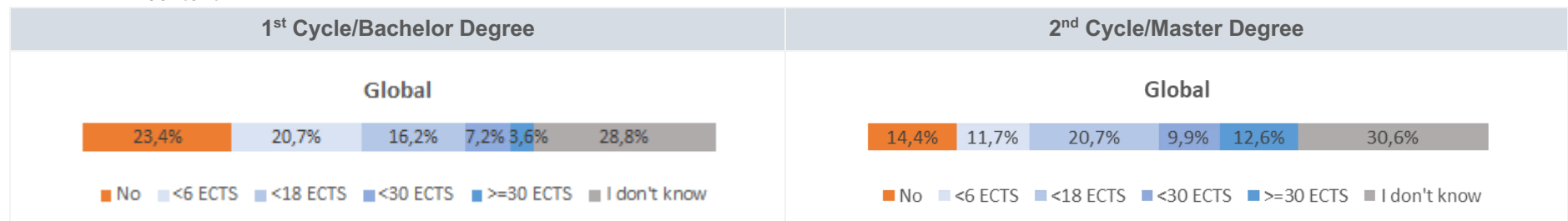


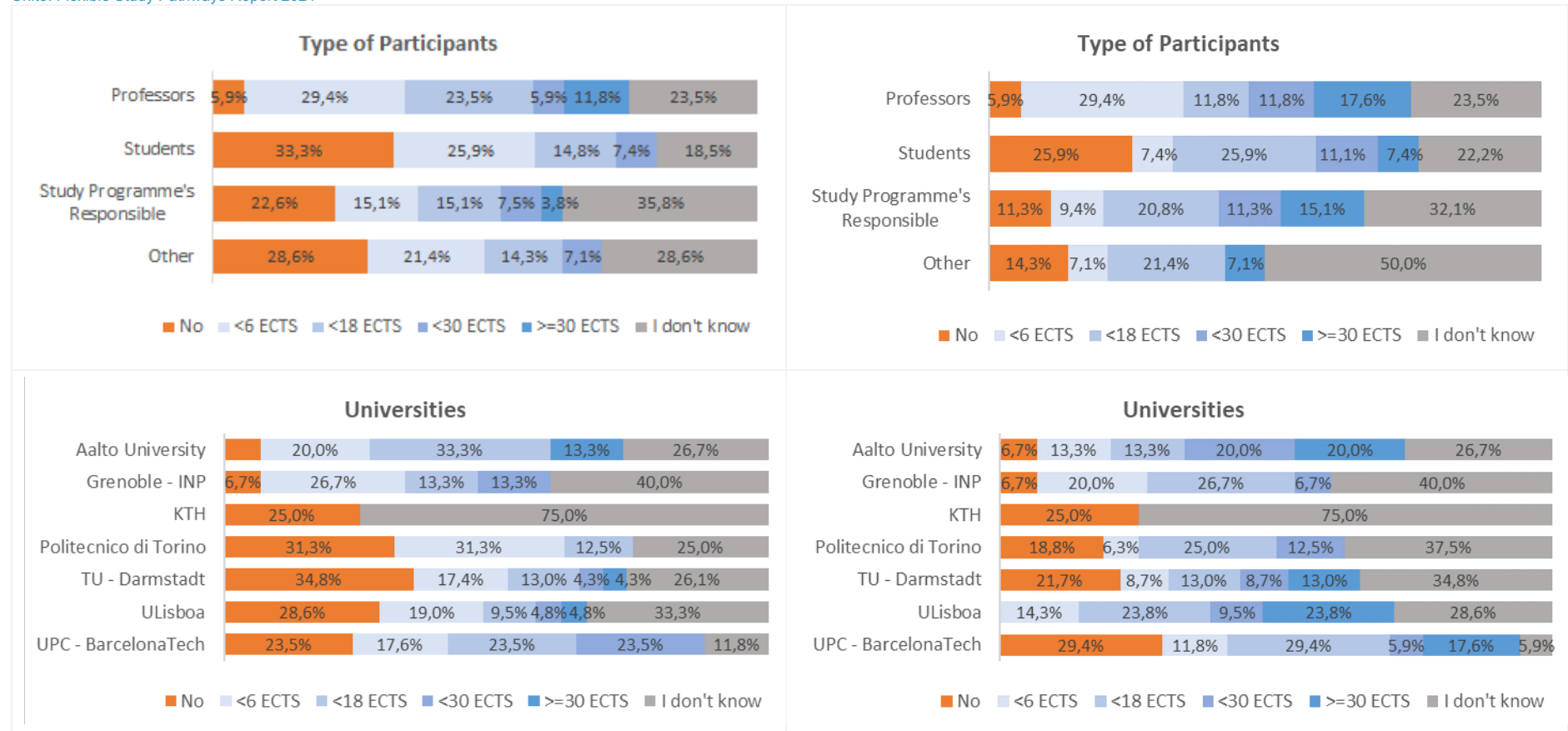


Alternative courses within the same topic are less likely for 1st Cycle, as 22.5% said it was not an option while nearly 20% did not know. Conversely, they are more likely at 2nd Cycle at approximately 39% (for <18 ECTS).

Alternative courses during the 2nd Cycle have more flexibility compared to the 1st Cycle, which means they could represent an option that could be introduced at unite! level. Considering the possible flexibility regarding the offer of alternative courses within the same topic, namely in different languages, different pedagogical methods or different departments, would facilitate joint programmes by allowing students to choose the best option to meet their needs (student based choice of a pathway).

2.1.5. Possibility to choose between different assignments and/or different subjects within an individual course to deepen the study of specific content

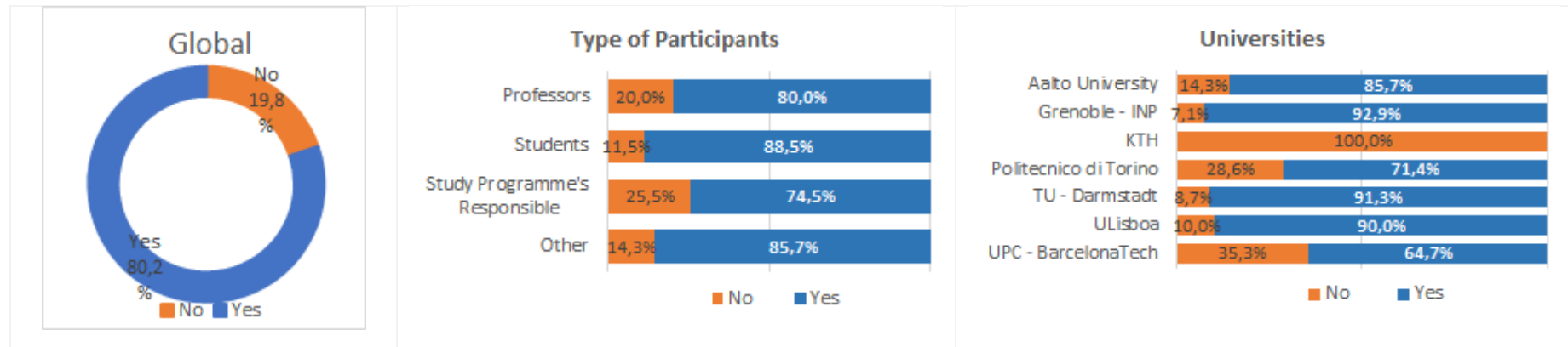




The possibility to choose between different assignments and/or different subjects within an individual course is less likely at 1st Cycle level (23.4%) as opposed to the 2nd Cycle level (20.7% for <18 ECTS). However, nearly 30% of participants for both 1st and 2nd Cycle levels did not know.

It is difficult to determine the amount/type of flexibility allowed by different partner universities, however, and similarly to the previous question, the possible flexibility regarding the choice between assignments and/or different subjects would facilitate joint programmes by allowing students to choose the best option to meet their needs (student based choice of a pathway).

2.1.6. Extra courses a student could take or not (Supplement to the Diploma or similar)

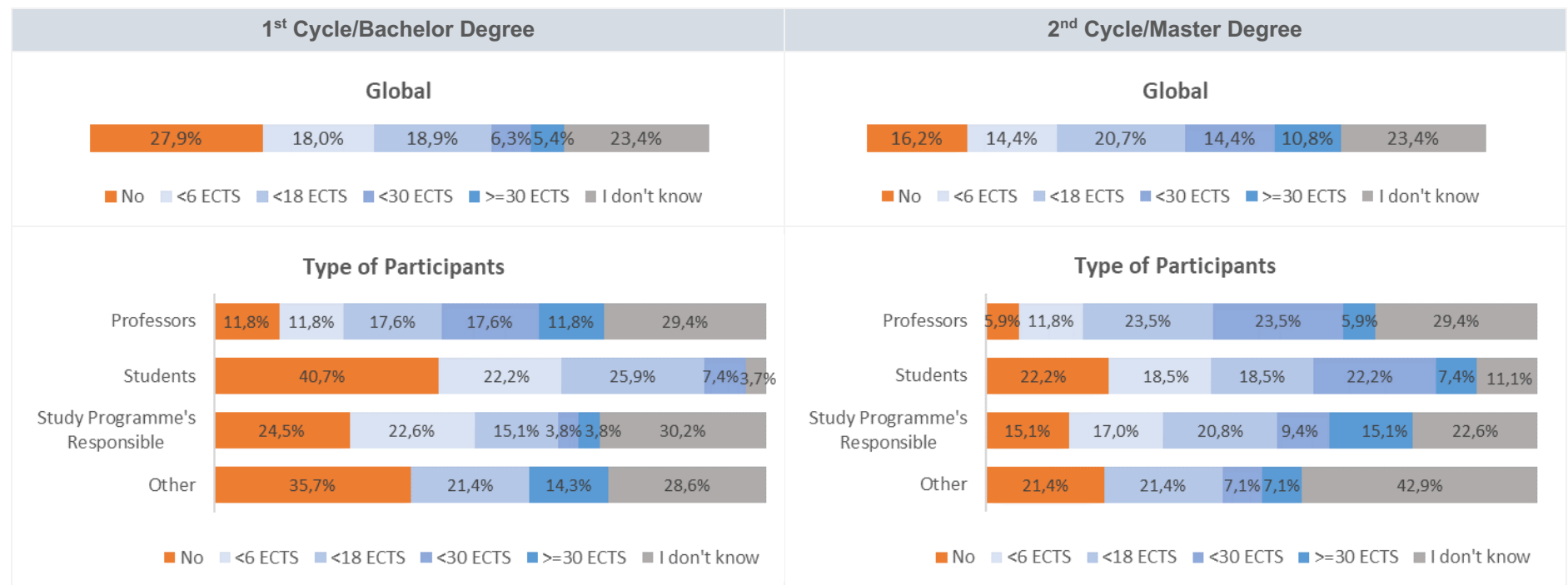


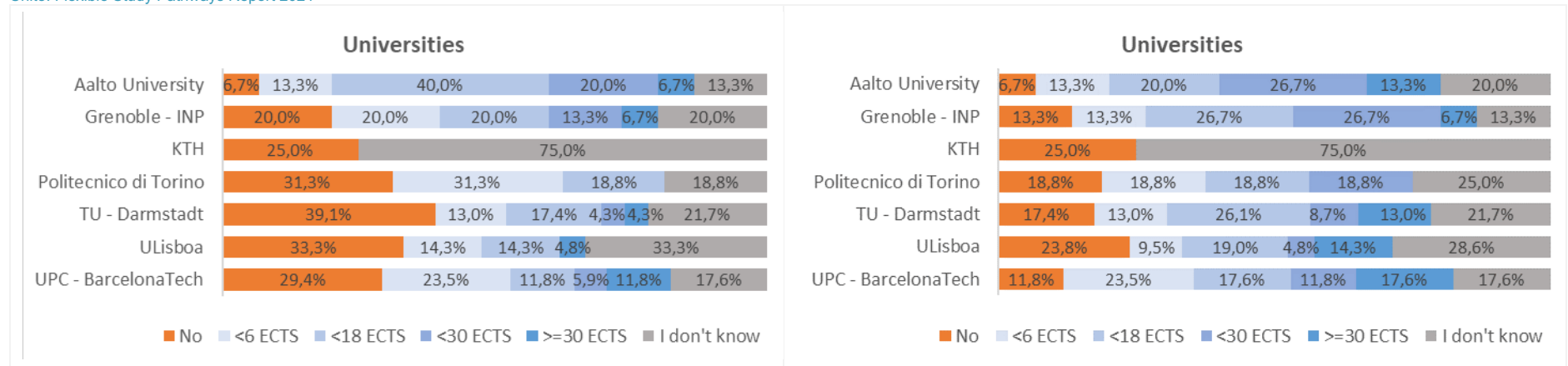
The pie chart shows that students can take extra courses according to 80% of participants. Interestingly, 100% of KTH participants say it is not possible (note the participation rate at KTH is too low to be reliable).

According to results, extra courses could represent an interesting option for flexible study pathways goals.

2.2. Flexibility with regard to format of course/programs

2.2.1. Students are allowed to choose the assignment in Challenge-based / Problem-based / Project-based / Research-based learning courses

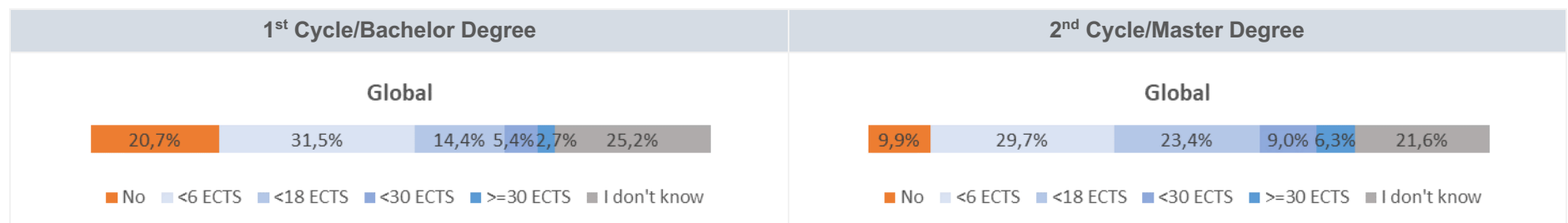


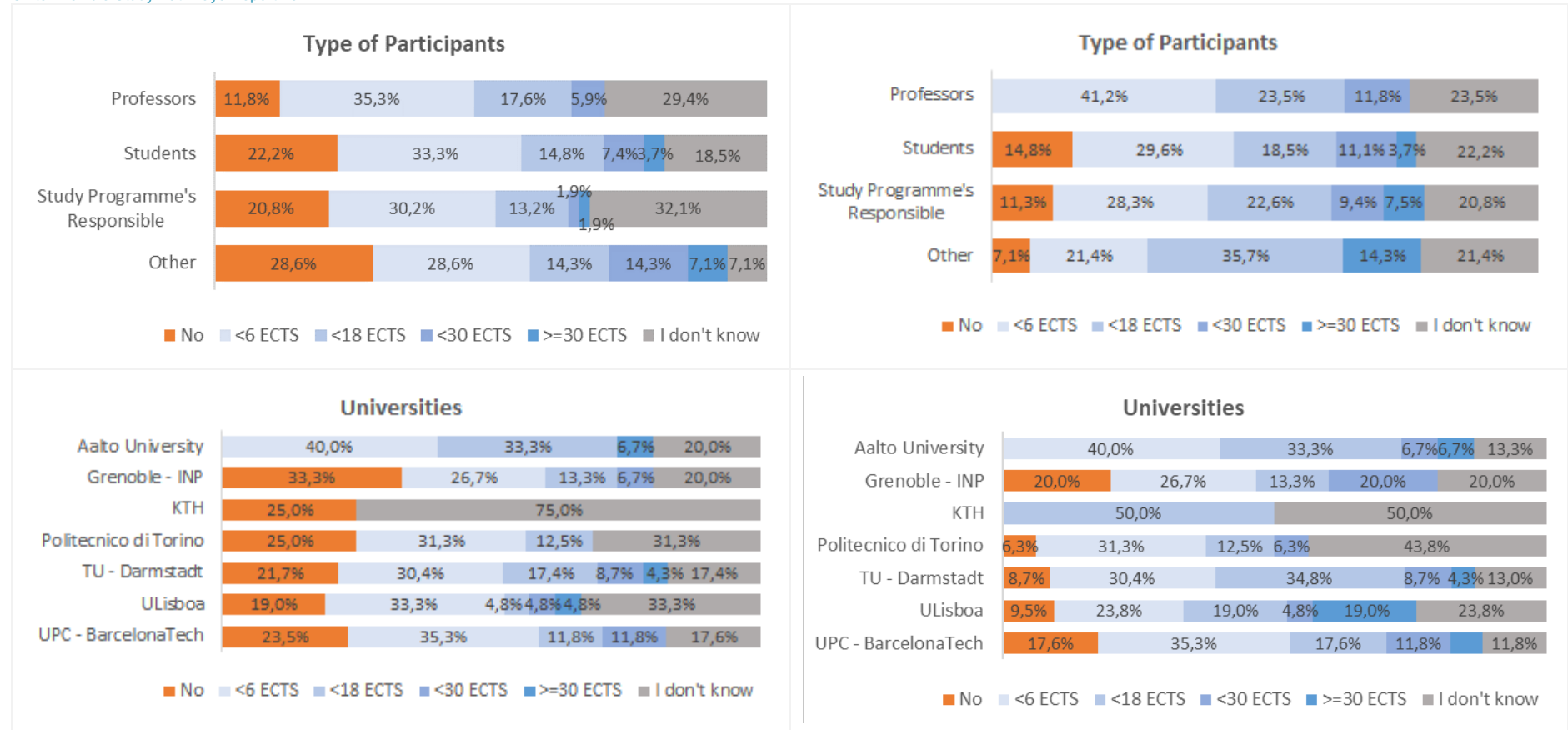


Flexibility in terms of course/programme format is less likely for 1st Cycle level (~28% answered no) whereas 23% did not know. On the other hand, nearly 21% answered there was flexibility for <18 ECTS at 2nd Cycle level, yet 16% answered no and 23% did not know.

A high percentage of respondents do not know whether there is flexibility with regard to the format of course/program. There is a big difference between type of participants answers regarding lack/excess of flexibility to choose the assignment in Challenge-based / Problem-based / Project-based / Research-based learning courses.

2.2.2. Students are allowed to attend seminar courses (self-chosen topics, literature based and with a presentation).

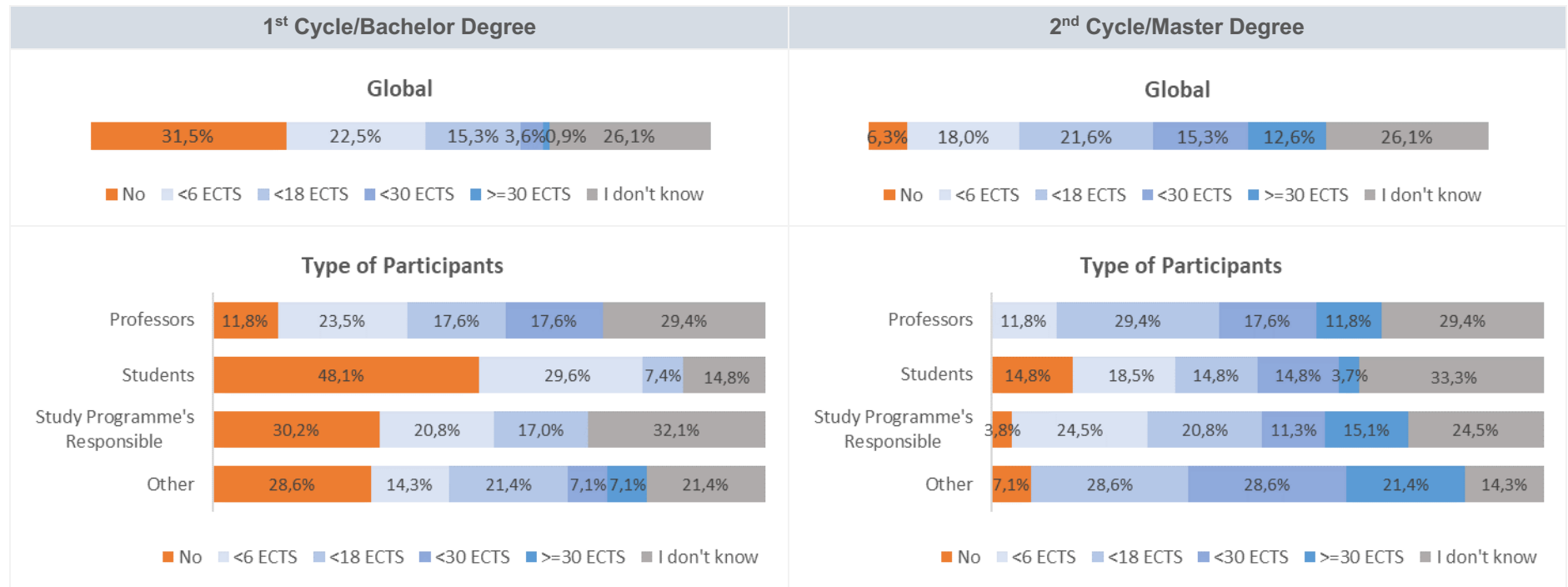


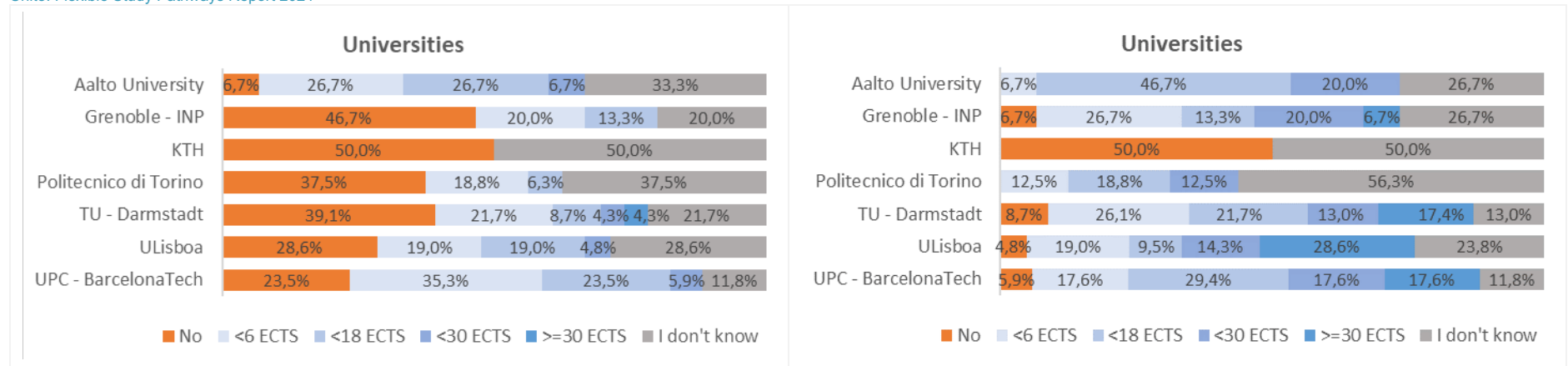


Based on the responses, the possibility of attending seminar courses at 1st Cycle level are: nearly 32% for less than 18 ECTS, 25% did not know and nearly 21% answered not possible. As for the 2nd cycle, 30% less than 6 ECTS, 23% less than 18 ECTS and nearly 22% did not know.

Seminar courses are allowed during the 2nd Cycle to a reasonable extent, which would be a great way of introducing the type of flexibility unite! has set out to achieve.

2.2.3. Students can participate in research units collaboration in advanced courses

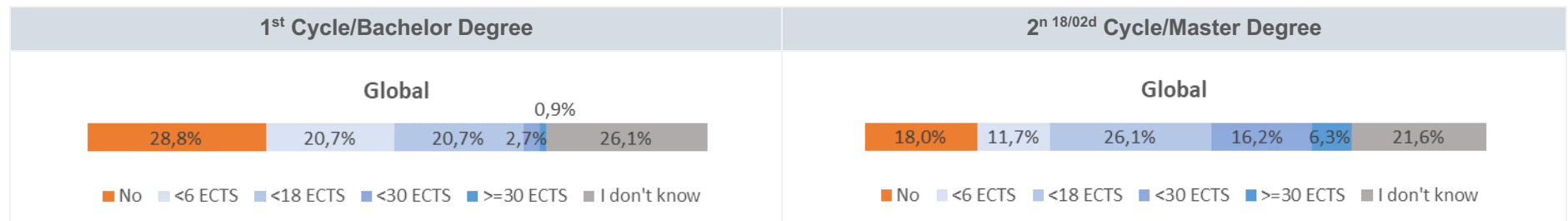


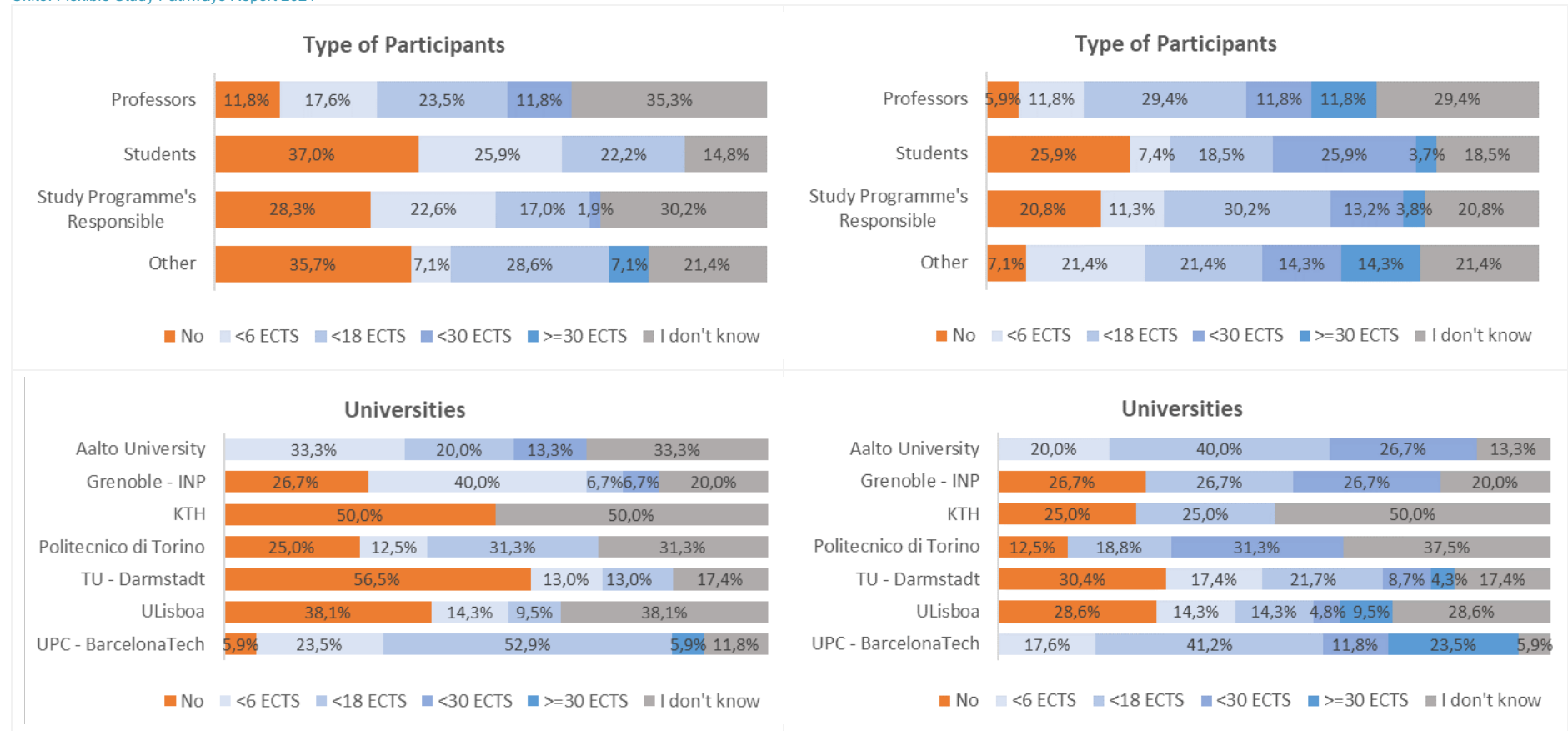


For nearly 32% of participants, students cannot participate in research units at 1st Cycle level whereas nearly 22% for less than 18 ECTS at 2nd Cycle level. However, 26% did not know whether this was a possibility.

Collaboration in research units is more likely during the 2nd Cycle. This shows the relevance of research units during specialization by exposing students to research-based learning thus paving the way for those who want to pursue PhD programs.

2.2.4. Students can participate in Industry environments in advanced courses

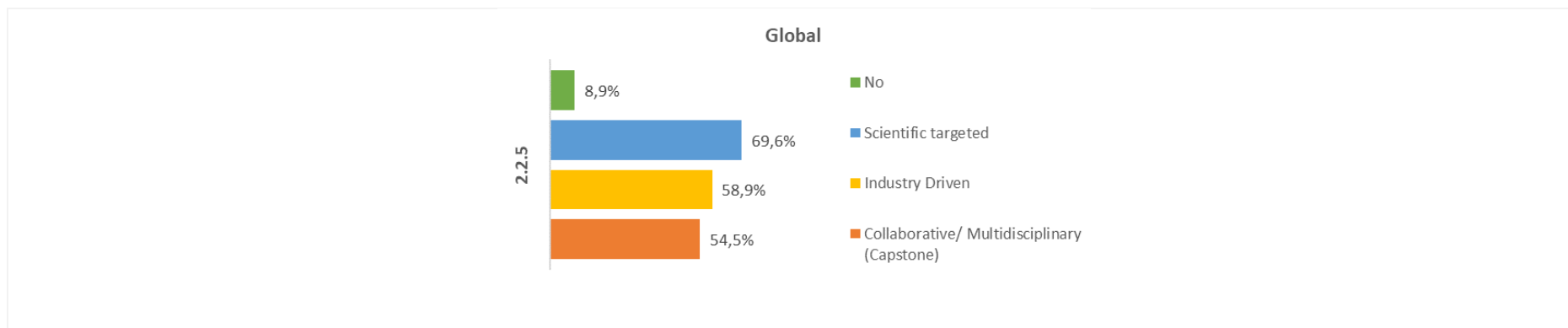


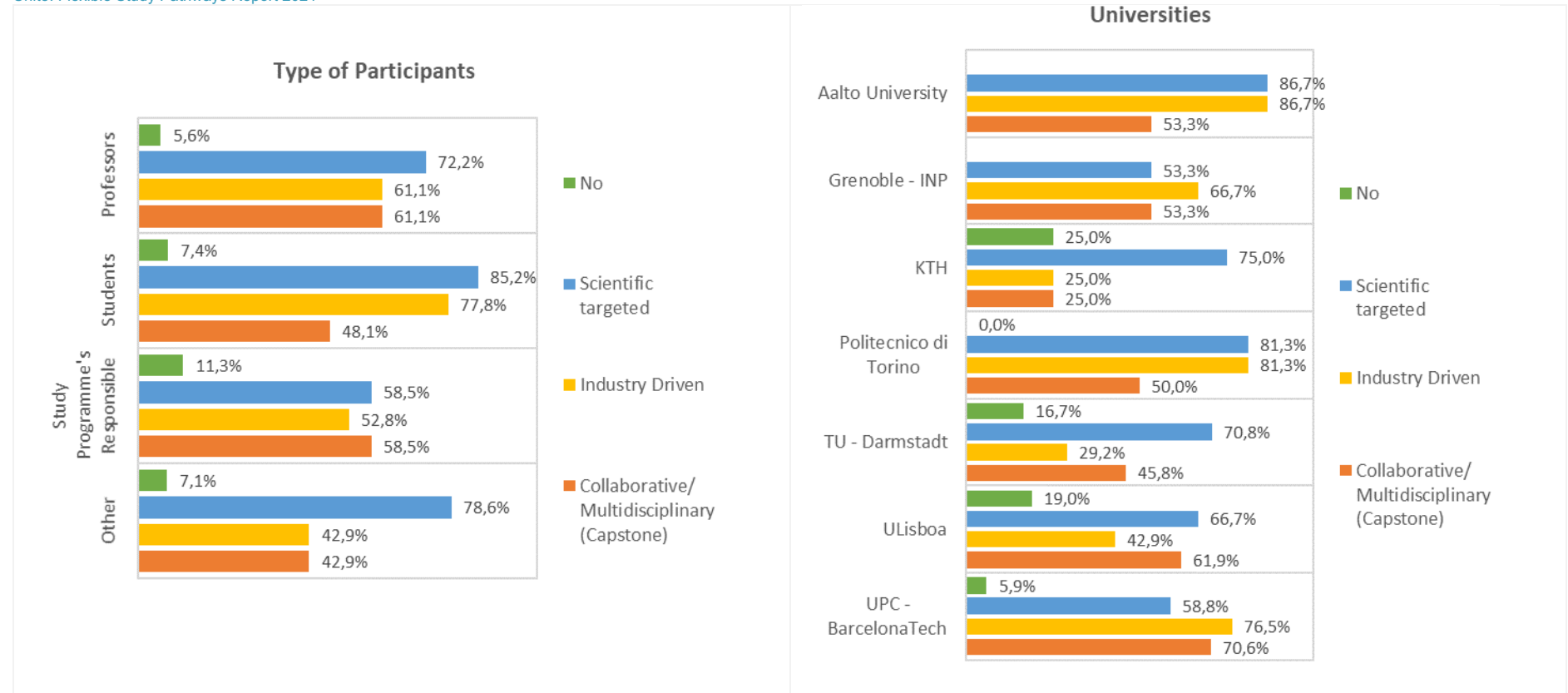


As far as participation of students in industry environment (advanced courses), nearly 29% cannot while 26% can for less than 18 ECTS at 1st Cycle and 2nd Cycle levels respectively. Participants who did not know stand at 26 and nearly 22 percent for 1st and 2nd Cycle levels respectively.

The results suggest more work is needed to provide students with the possibility of advanced courses in Industry environments. Perhaps, it would make sense to work with our Industry external stakeholders to explore how much could be achieved in terms of their involvement, at least as far as 2nd Cycle level is concerned.

2.2.5. Students are allowed to choose, for the final project/thesis, between academic/research unit/industry environments

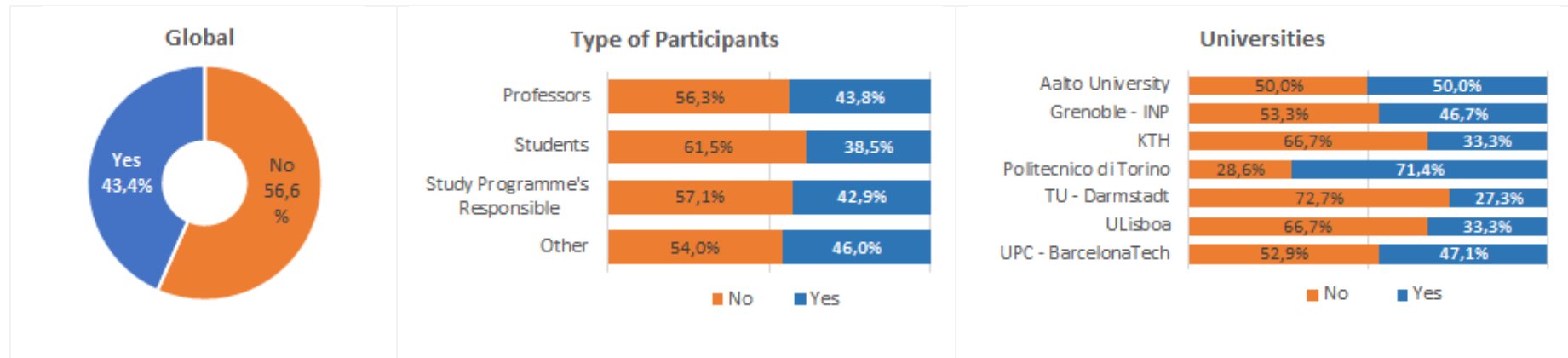




In general, students are allowed the options of academic/research, industry-driven or multidisciplinary collaborations final projects/theses at all partner universities with a 69.6, 58.9 and 54.5 percent ratio respectively. However, these results seem to contradict answers to 2.2.4 and at the same time it appears odd there are Unite! partners which somehow restrict the access to theses in academic/scientific environments.

It might be worth exploring how collaborative/multidisciplinary project/thesis could be encouraged within Unite! joint programmes.

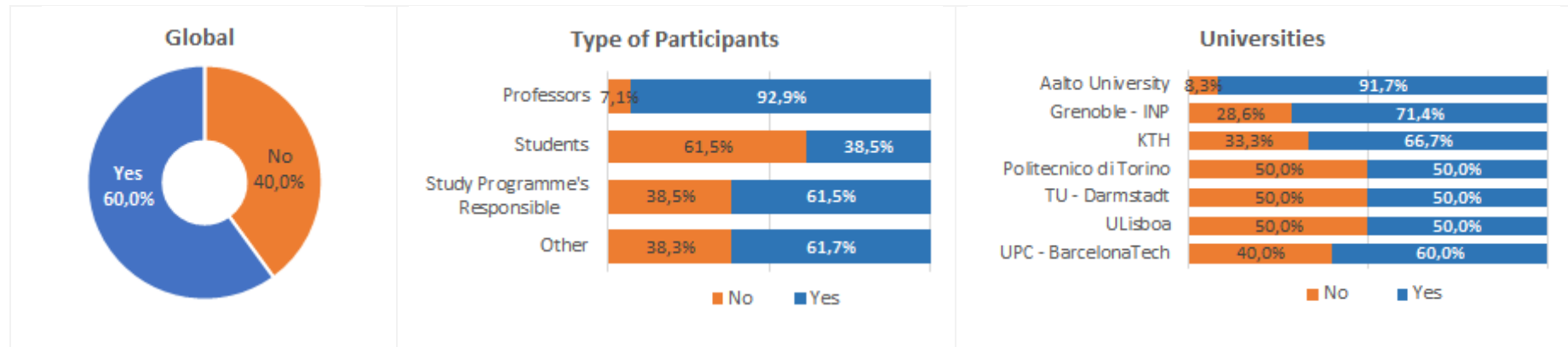
2.2.6. Students are allowed to choose between remote classes and face-to-face classes or an hybrid system



The possibility of students choosing among remote classes, face-to-face classes or a hybrid system is nearly true for half of the participants (43.4%). Among the partners, Politecnico di Torino has the highest rate of flexibility at 71.4 percent while TU – Darmstadt seems to be the least flexible at 27.3 percent chance.

We recommend efforts be made to encourage a hybrid system which would support flexibility among all partners. For starters, this combination has certainly proven more inclusive. It still remains to be seen how remote/online/digitalized educational offers will develop after the Covid-19 pandemic, and what possibilities and options they will offer for more flexibility in studies, however, the expectations are definitely high.

2.2.7. Students are allowed to take part of virtual classes within Unite! universities (or other universities)



Results show 60 percent of participants said students were allowed to take part in virtual classes within Unite! Universities as well as other universities. Aalto participants had the highest affirmative responses at over 90 percent, followed by Grenoble - INP, KTH and UPC – Barcelona Tech at over 60 percent and Politecnico di Torino, TU – Darmstadt and UPC – Barcelona Tech at 50 percent.

The results might be biased by the Virtual Exchange Credit Programme on Energy currently taking place. In fact, taking into account the results from 2.2.6. and 2.2.7., respondents might have been misled, restricting their answers to students already participating in Unite! activities. Thus, it is our recommendation to investigate further onto how much virtual classes are actually an option and, if so, how partners plan to manage them after Covid-19.

2.3. Flexibility regarding the schedule and time required to attain the Diploma/Degree

2.3	Global
a) The allowed time for completing the degree (attaining the Diploma) is fixed, and no extensions are possible	6,3%
b) Part-time studying is possible (while working or looking after children or even studying a second program)	32,1%
c) Program modularization is available - Chronological order of courses not fixed within a program	26,8%
d) Taking exams in a different semester than the course is possible	27,7%
e) Special time frame for allowing flexible courses to be shared among different degrees and universities	14,3%
Total of Participants	112

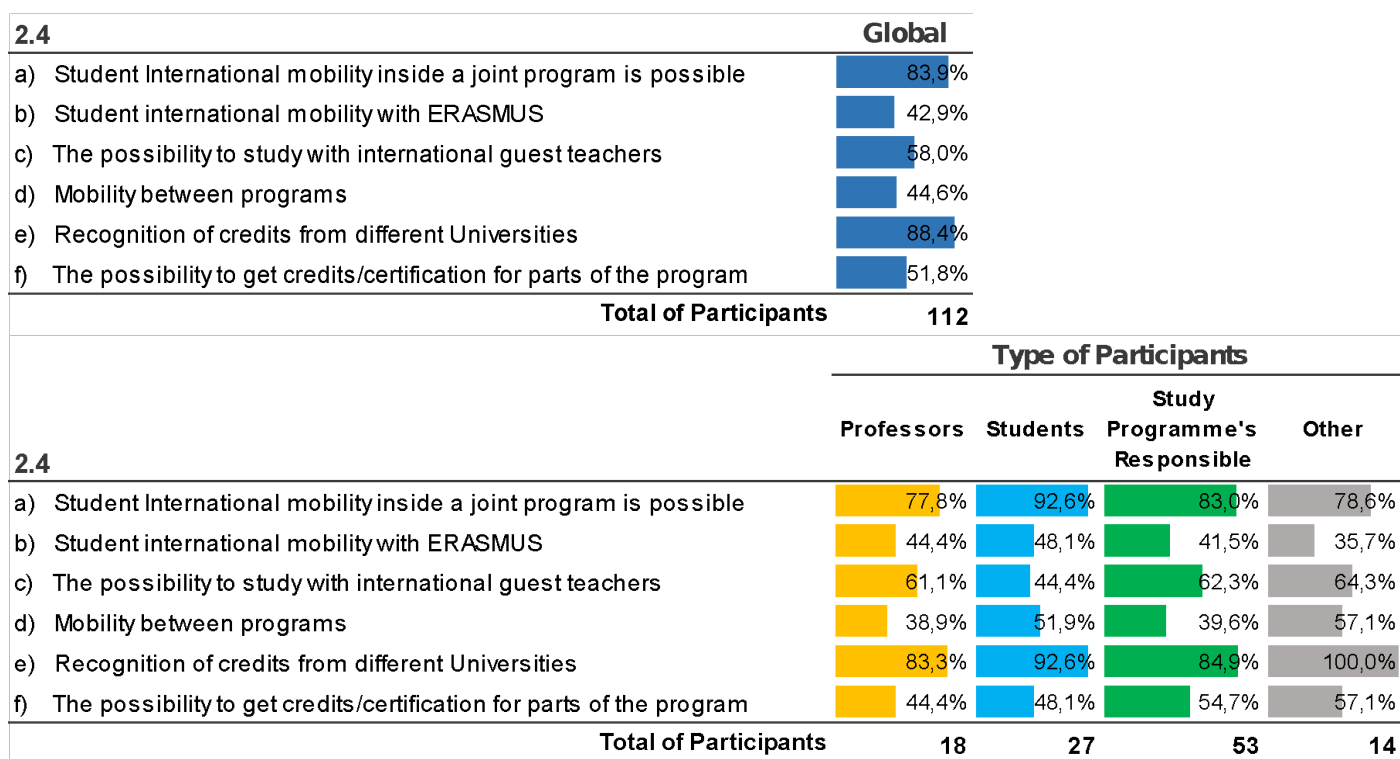
2.3	Type of Participants			
	Professors	Students	Study Programme's Responsible	Other
a) The allowed time for completing the degree (attaining the Diploma) is fixed, and no extensions are possible	0,0%	11,1%	7,5%	0,0%
b) Part-time studying is possible (while working or looking after children or even studying a second program)	38,9%	40,7%	24,5%	35,7%
c) Program modularization is available - Chronological order of courses not fixed within a program	38,9%	37,0%	18,9%	21,4%
d) Taking exams in a different semester than the course is possible	38,9%	40,7%	15,1%	35,7%
e) Special time frame for allowing flexible courses to be shared among different degrees and universities	16,7%	18,5%	11,3%	14,3%
Total of Participants	18	27	53	14

2.3	Universities						
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - Barcelona Tech
a) The allowed time for completing the degree (attaining the Diploma) is fixed, and no extensions are possible	0,0%	26,7%	0,0%	6,3%	0,0%	0,0%	11,8%
b) Part-time studying is possible (while working or looking after children or even studying a second program)	0,0%	13,3%	25,0%	62,5%	75,0%	4,8%	23,5%
c) Program modularization is available - Chronological order of courses not fixed within a program	13,3%	6,7%	25,0%	37,5%	66,7%	9,5%	11,8%
d) Taking exams in a different semester than the course is possible	6,7%	13,3%	25,0%	62,5%	62,5%	4,8%	5,9%
e) Special time frame for allowing flexible courses to be shared among different degrees and universities	6,7%	13,3%	0,0%	31,3%	16,7%	9,5%	11,8%
Total of Participants	15	15	4	16	24	21	17

In terms of flexibility regarding schedule and time needed to get Diploma/Degree, around 30 percent believe either part-time is possible, program modularization is available or taking exams out of course term is possible. TU Darmstadt seems to be the most flexible, and ULisboa and Aalto the least flexible regarding the different dimensions analysed.

There seem to be different perceptions between study programme responsables and students, with students being able to 'build' their own flexibility where there seems to be little or none. In our opinion, that difference may result from constraints mainly linked to academic calendars and internal organization of each partner university, that students learnt to avoid.

2.4. Flexibility regarding mobility



2.4	Universities						
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - Barcelona Tech
a) Student International mobility inside a joint program is possible	86,7%	100,0%	75,0%	100,0%	62,5%	85,7%	82,4%
b) Student international mobility with ERASMUS	13,3%	60,0%	0,0%	62,5%	66,7%	28,6%	29,4%
c) The possibility to study with international guest teachers	73,3%	73,3%	75,0%	50,0%	41,7%	57,1%	58,8%
d) Mobility between programs	40,0%	60,0%	25,0%	43,8%	37,5%	52,4%	41,2%
e) Recognition of credits from different Universities	100,0%	100,0%	100,0%	68,8%	91,7%	85,7%	82,4%
f) The possibility to get credits/certification for parts of the program	73,3%	33,3%	100,0%	50,0%	45,8%	57,1%	41,2%
Total of Participants	15	15	4	16	24	21	17

In terms of mobility, results show over 80 percent believe recognition of credits and mobility within a joint programme are the main flexibility features, followed by the possibility to study with international guest teachers (58%), possibility of getting credits/certification for parts of the program (51.8%), mobility between programmes (44.6%) and student international mobility with ERASMUS (42.9%). Three partner universities seem to be under 30% ERASMUS mobility (Aalto, ULisboa, UPC) and only three above 60% ERASMUS mobility (Polito, TU-Darmstadt, Grenoble).

From data analysis, apparently, the most of the mobility comes from exchanges within the University, not taking full advantage of international agreements, joint programmes and ERASMUS. This perception of survey respondents should be contrasted with data coming from other sources to understand why taking advantage from agreements doesn't seem more frequent. It is recommended that any future mobility within the alliance should explore new forms, e.g. blended mobility, which seems to be included within the upcoming E+ program (2021-2027). It must be said new mobility options are not meant to replace traditional mobility but instead complement it.

2.5. Flexibility regarding student engagement

2.5	Global
a) Possibility for lifelong learning students to take courses	60,7%
b) Research units and Industry extra-curricular activities	62,5%
c) Possibility to choose from different teaching staff backgrounds (academic and industry)	28,6%
d) Students can have co-responsibility in designing personalized curricula	45,5%
e) Methods to recognise and facilitate learning from work experience or volunteer work	45,5%
Total of Participants	112

2.5	Type of Participants			
	Professors	Students	Study Programme's Responsible	Other
a) Possibility for lifelong learning students to take courses	55,6%	51,9%	64,2%	71,4%
b) Research units and Industry extra-curricular activities	61,1%	59,3%	64,2%	64,3%
c) Possibility to choose from different teaching staff backgrounds (academic and industry)	27,8%	25,9%	32,1%	21,4%
d) Students can have co-responsibility in designing personalized curricula	44,4%	55,6%	37,7%	57,1%
e) Methods to recognise and facilitate learning from work experience or volunteer work	55,6%	40,7%	45,3%	42,9%
Total of Participants	18	27	53	14

2.5	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - Barcelona Tech
a) Possibility for lifelong learning students to take courses	73,3%	66,7%	75,0%	56,3%	50,0%	71,4%	47,1%
b) Research units and Industry extra-curricular activities	66,7%	53,3%	50,0%	62,5%	50,0%	66,7%	82,4%
c) Possibility to choose from different teaching staff backgrounds (academic and industry)	20,0%	26,7%	50,0%	12,5%	29,2%	28,6%	47,1%
d) Students can have co-responsibility in designing personalized curricula	80,0%	46,7%	75,0%	37,5%	41,7%	42,9%	23,5%
e) Methods to recognise and facilitate learning from work experience or volunteer work	66,7%	60,0%	25,0%	43,8%	25,0%	33,3%	64,7%
Total of Participants	15	15	4	16	24	21	17

As far as student engagement is concerned, flexibility is seen mostly in relation to research units and industry extra-curricular activities (62.5%). The possibility of lifelong learning students to take courses (60.7%), of being co-responsible for designing a personalized curricula and of recognizing and facilitating learning from work experience or volunteer work (45.5%) is higher than the possibility of choosing from different teaching staff backgrounds (28.6 %).

Based on results, student engagement is an aspect which could still be improved. It remains to be seen how to achieve this.

3. Choose approximately 10 criteria that would be the most desirable in a flexible program in the European University context (e.g. Unite!)

3.1. Flexibility regarding format of courses/programs

3.1	Global
a) Elective courses outside the domain (choice from an extensive and multidisciplinary catalog)	73,2%
b) Elective courses inside the degree specialization area (choice from a restricted catalog list)	76,8%
c) Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic, or offered in a domain that is complementary to the major in order to open up educational and career prospects)	44,6%
d) Alternative courses in the same topic (ex project courses, courses in different languages, same topics by different departments etc.)	46,4%
e) Possibility to choose between different assignments and/or different subjects within a course, to deepen the study of specific content.	42,0%
f) Extra courses you could take or not (Supplement to the Diploma)	53,6%
Total of Participants	112

3.1	Type of Participants				
	Professors	Students	Study Programme's Responsible	Other	
a) Elective courses outside the domain (choice from an extensive and multidisciplinary catalog)	<div><div></div></div> 83,3%	<div><div></div></div> 77,8%	<div><div></div></div> 64,2%	<div><div></div></div> 85,7%	
b) Elective courses inside the degree specialization area (choice from a restricted catalog list)	<div><div></div></div> 72,2%	<div><div></div></div> 63,0%	<div><div></div></div> 83,0%	<div><div></div></div> 85,7%	
c) Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic, or offered in a domain that is complementary to the major in order to open up educational and career prospects)	<div><div></div></div> 38,9%	<div><div></div></div> 40,7%	<div><div></div></div> 43,4%	<div><div></div></div> 64,3%	
d) Alternative courses in the same topic (ex project courses, courses in different languages, same topics by different departments etc.)	<div><div></div></div> 44,4%	<div><div></div></div> 51,9%	<div><div></div></div> 49,1%	<div><div></div></div> 28,6%	
e) Possibility to choose between different assignments and/or different subjects within a course, to deepen the study of specific content.	<div><div></div></div> 66,7%	<div><div></div></div> 48,1%	<div><div></div></div> 37,7%	<div><div></div></div> 14,3%	
f) Extra courses you could take or not (Supplement to the Diploma)	<div><div></div></div> 50,0%	<div><div></div></div> 44,4%	<div><div></div></div> 62,3%	<div><div></div></div> 42,9%	
Total of Participants		18	27	53	14

3.1	Universities							
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - Barcelona Tech	
a) Elective courses outside the domain (choice from an extensive and multidisciplinary catalog)	<div><div></div></div> 86,7%	<div><div></div></div> 80,0%	<div><div></div></div> 75,0%	<div><div></div></div> 68,8%	<div><div></div></div> 62,5%	<div><div></div></div> 85,7%	<div><div></div></div> 58,8%	
b) Elective courses inside the degree specialization area (choice from a restricted catalog list)	<div><div></div></div> 86,7%	<div><div></div></div> 46,7%	<div><div></div></div> 75,0%	<div><div></div></div> 87,5%	<div><div></div></div> 83,3%	<div><div></div></div> 76,2%	<div><div></div></div> 76,5%	
c) Minors (courses with scientific and pedagogical coherence in a multidisciplinary topic, or offered in a domain that is complementary to the major in order to open up educational and career prospects)	<div><div></div></div> 86,7%	<div><div></div></div> 46,7%	<div><div></div></div> 50,0%	<div><div></div></div> 12,5%	<div><div></div></div> 29,2%	<div><div></div></div> 61,9%	<div><div></div></div> 35,3%	
d) Alternative courses in the same topic (ex project courses, courses in different languages, same topics by different departments etc.)	<div><div></div></div> 40,0%	<div><div></div></div> 40,0%	<div><div></div></div> 0,0%	<div><div></div></div> 56,3%	<div><div></div></div> 54,2%	<div><div></div></div> 66,7%	<div><div></div></div> 23,5%	
e) Possibility to choose between different assignments and/or different subjects within a course, to deepen the study of specific content.	<div><div></div></div> 46,7%	<div><div></div></div> 53,3%	<div><div></div></div> 50,0%	<div><div></div></div> 37,5%	<div><div></div></div> 33,3%	<div><div></div></div> 47,6%	<div><div></div></div> 35,3%	
f) Extra courses you could take or not (Supplement to the Diploma)	<div><div></div></div> 40,0%	<div><div></div></div> 80,0%	<div><div></div></div> 25,0%	<div><div></div></div> 31,3%	<div><div></div></div> 62,5%	<div><div></div></div> 71,4%	<div><div></div></div> 35,3%	
Total of Participants		15	15	4	16	24	21	17

At similar rates, 76.8% and 73.2% respectively, elective courses inside the degree specialization area (selection from limited catalogue list) and elective courses outside the domain (selection from extensive and multidisciplinary catalogue) received the most responses for flexibility in relation to course/programme format. These were followed by extra courses you could take or not (53.6%) whereas alternative topics in the same topic, minors and possibility to choose between different assignments and/or different subjects within a course ranged from 46 to 42 percent.

Results show that flexibility is understood best in terms of elective courses. The great majority of respondents believe elective courses (both within and outside the domain) represent a fundamental criteria of flexible programs. Our recommendation is that Joint Programmes should build their Joint Curricula around a significant number of Elective Courses students' might choose from.

3.2. Flexibility regarding the amount of choice allowed to students

3.2	Global
a) Students choosing the assignment in Challenge-based / Problem-based / Project-based / Research-based learning	61,6%
b) Seminar courses (Self chosen topics literature based and presentation)	52,7%
c) Research units collaboration in advanced courses	65,2%
d) Industry collaboration in advanced courses	53,6%
e) The possibility to choose for the final project/thesis between academic/research unit/ Industry environment.	63,4%
f) Possibility to choose between remote classes and face-to-face classes or a hybrid system	44,6%
g) Possibility to take part of virtual classes within UNITE! universities (or other universities)	65,2%
Total of Participants	112

3.2	Type of Participants			
	Professors	Students	Study Programme's Responsible	Other
a) Students choosing the assignment in Challenge-based / Problem-based / Project-based / Research-based learning	66,7%	63,0%	62,3%	50,0%
b) Seminar courses (Self chosen topics literature based and presentation)	61,1%	44,4%	52,8%	57,1%
c) Research units collaboration in advanced courses	77,8%	59,3%	62,3%	71,4%
d) Industry collaboration in advanced courses	55,6%	59,3%	47,2%	64,3%
e) The possibility to choose for the final project/thesis between academic/research unit/ Industry environment.	66,7%	59,3%	60,4%	78,6%
f) Possibility to choose between remote classes and face-to-face classes or a hybrid system	55,6%	44,4%	41,5%	42,9%
g) Possibility to take part of virtual classes within UNITE! universities (or other universities)	66,7%	59,3%	66,0%	71,4%
Total of Participants		18	27	53
				14

3.2	Universities						
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - Barcelona Tech
a) Students choosing the assignment in Challenge-based / Problem-based / Project-based / Research-based learning	60,0%	80,0%	50,0%	68,8%	45,8%	61,9%	64,7%
b) Seminar courses (Self chosen topics literature based and presentation)	60,0%	46,7%	50,0%	50,0%	54,2%	57,1%	47,1%
c) Research units collaboration in advanced courses	66,7%	40,0%	50,0%	50,0%	75,0%	85,7%	64,7%
d) Industry collaboration in advanced courses	60,0%	40,0%	50,0%	62,5%	25,0%	76,2%	64,7%
e) The possibility to choose for the final project/thesis between academic/research unit/ Industry environment.	66,7%	66,7%	50,0%	62,5%	45,8%	66,7%	82,4%
f) Possibility to choose between remote classes and face-to-face classes or a hybrid system	60,0%	33,3%	25,0%	43,8%	41,7%	52,4%	41,2%
g) Possibility to take part of virtual classes within UNITE! universities (or other universities)	66,7%	73,3%	75,0%	62,5%	70,8%	52,4%	64,7%
Total of Participants		15	15	4	16	24	21
							17

Flexibility in terms of degree of choice allowed to students ranged from the 65 percent for research units collaboration in advanced courses and the possibility of taking part in virtual classes within Unite! Universities (or other universities), to a 44 percent for the possibility to choose between remote, face-to-face classes or a hybrid system.

Student choice regarding all of the forms of flexibility identified in the survey were deemed important by all the stakeholders. We recommend that the most flexibility regarding students choice should be favored, something also characteristic of student-driven education.

3.3. Flexibility regarding the schedule and time required to attain Diploma

3.3	Global	
a) Part-time studying (while working or looking after children, studying a second program...)	<div></div>	65,2%
b) Program modularization - Chronological order of courses not fixed within a program	<div></div>	61,6%
c) Taking exams in a different semester than the course	<div></div>	39,3%
d) Special time frame for flexible courses to be shared	<div></div>	33,0%
Total of Participants		112

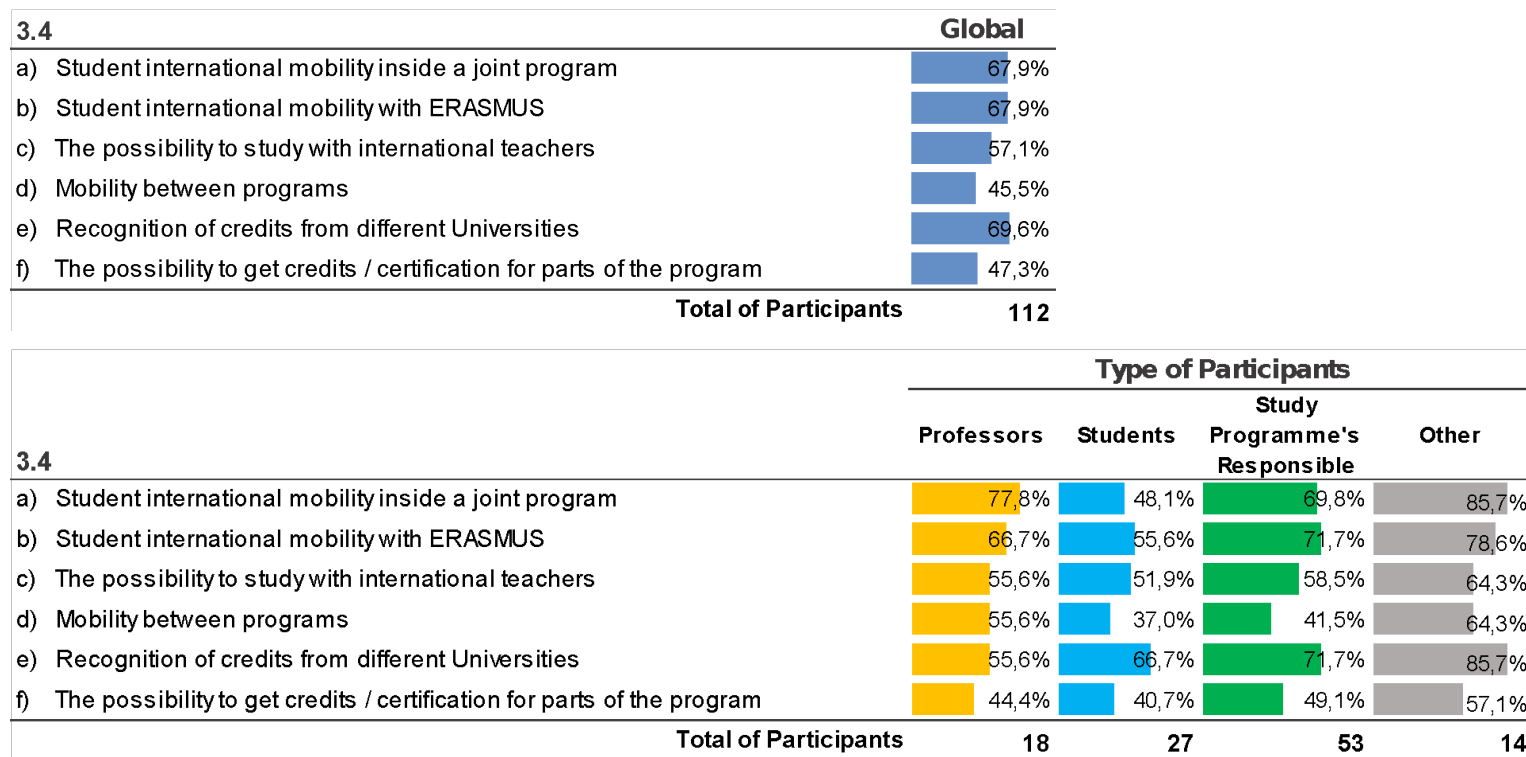
3.3	Type of Participants					
	Professors	Students	Study Programme's Responsible	Other		
a) Part-time studying (while working or looking after children, studying a second program...)	<div><div></div></div> 83,3%	<div><div></div></div> 51,9%	<div><div></div></div> 71,7%		<div><div></div></div> 42,9%	
b) Program modularization - Chronological order of courses not fixed within a program	<div><div></div></div> 72,2%	<div><div></div></div> 51,9%	<div><div></div></div> 58,5%		<div><div></div></div> 78,6%	
c) Taking exams in a different semester than the course	<div><div></div></div> 50,0%	<div><div></div></div> 40,7%	<div><div></div></div> 37,7%		<div><div></div></div> 28,6%	
d) Special time frame for flexible courses to be shared	<div><div></div></div> 50,0%	<div><div></div></div> 22,2%	<div><div></div></div> 30,2%		<div><div></div></div> 42,9%	
Total of Participants		18	27	53	14	

3.3	Universities							
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - BarcelonaTech	
a) Part-time studying (while working or looking after children, studying a second program...)	66,7%	53,3%	50,0%	68,8%	66,7%	71,4%	64,7%	
b) Program modularization - Chronological order of courses not fixed within a program	80,0%	46,7%	25,0%	37,5%	79,2%	76,2%	47,1%	
c) Taking exams in a different semester than the course	40,0%	33,3%	25,0%	81,3%	45,8%	28,6%	11,8%	
d) Special time frame for flexible courses to be shared	40,0%	40,0%	0,0%	37,5%	37,5%	23,8%	29,4%	
Total of Participants		15	15	4	16	24	21	17

The majority of participants felt part-time studying and program modularization were the most favored features of flexibility in terms of schedule and time to obtain Degree/Diploma, with a percentage of 65.2 and 61.6 respectively. Taking exams at a semester other than that of the course and a special time frame for flexible courses to be shared were also favored at a percentage of 39.3 and 33.0 percent respectively.

Most respondents feel part-time studying and program modularization to be defining criteria of flexibility, therefore restrictions regarding compulsory requirements for taking a course within a programme, should be lessened. In fact, flexibility in this sense might encourage mobility by offering a wider option to students.

3.4. Flexibility regarding mobility



3.4	Universities							
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - BarcelonaTech	
a) Student international mobility inside a joint program	<div><div></div></div> 73,3%	<div><div></div></div> 60,0%	<div><div></div></div> 50,0%	<div><div></div></div> 68,8%	<div><div></div></div> 62,5%	<div><div></div></div> 71,4%	<div><div></div></div> 76,5%	
b) Student international mobility with ERASMUS	<div><div></div></div> 60,0%	<div><div></div></div> 53,3%	<div><div></div></div> 25,0%	<div><div></div></div> 62,5%	<div><div></div></div> 70,8%	<div><div></div></div> 85,7%	<div><div></div></div> 76,5%	
c) The possibility to study with international teachers	<div><div></div></div> 73,3%	<div><div></div></div> 53,3%	<div><div></div></div> 75,0%	<div><div></div></div> 62,5%	<div><div></div></div> 45,8%	<div><div></div></div> 57,1%	<div><div></div></div> 52,9%	
d) Mobility between programs	<div><div></div></div> 53,3%	<div><div></div></div> 46,7%	<div><div></div></div> 25,0%	<div><div></div></div> 37,5%	<div><div></div></div> 54,2%	<div><div></div></div> 47,6%	<div><div></div></div> 35,3%	
e) Recognition of credits from different Universities	<div><div></div></div> 73,3%	<div><div></div></div> 53,3%	<div><div></div></div> 25,0%	<div><div></div></div> 75,0%	<div><div></div></div> 70,8%	<div><div></div></div> 76,2%	<div><div></div></div> 76,5%	
f) The possibility to get credits / certification for parts of the program	<div><div></div></div> 40,0%	<div><div></div></div> 46,7%	<div><div></div></div> 50,0%	<div><div></div></div> 50,0%	<div><div></div></div> 50,0%	<div><div></div></div> 47,6%	<div><div></div></div> 47,1%	
Total of Participants	15	15	4	16	24	21	17	

Flexibility in terms of mobility was seen as recognition of credits from different universities in first place at 69.6 percent, followed by student international mobility within a joint programme and student international mobility within ERASMUS at an equal rate of 67.9 percent. Possibility of studying with international teachers, of getting credits/certification for parts of the program and mobility between programmes was followed as a second most desirable at 57.1%, 47.3% and 45.5% respectively.

Mobility regarding joint programmes, student international mobility, as well as the possibility of studying with international teachers and of getting credits/certification are considered such an essential feature of flexibility, that maybe they should be embedded in unite! programmes.

3.5. Flexibility regarding type of student engagement

3.5	Global
a) Possibility for long life learning students to take courses	50,0%
b) Research units and Industry extra-curricular activities	50,0%
c) Possibility to choose from different teaching staff backgrounds (academic and industry)	29,5%
d) Student co-responsibility in designing personalized curricula	50,9%
e) Part-time studying (while working or looking after children, studying a second program)	57,1%
f) Methods to recognise and facilitate learning from work or volunteering experiences	42,0%
Total of Participants	112

3.5	Type of Participants			
	Professors	Students	Study Programme's Responsible	Other
a) Possibility for long life learning students to take courses	55,6%	33,3%	58,5%	42,9%
b) Research units and Industry extra-curricular activities	44,4%	40,7%	52,8%	64,3%
c) Possibility to choose from different teaching staff backgrounds (academic and industry)	22,2%	25,9%	30,2%	42,9%
d) Student co-responsibility in designing personalized curricula	50,0%	63,0%	45,3%	50,0%
e) Part-time studying (while working or looking after children, studying a second program)	61,1%	44,4%	60,4%	64,3%
f) Methods to recognise and facilitate learning from work or volunteering experiences	27,8%	51,9%	47,2%	21,4%
Total of Participants	18	27	53	14

3.5	Universities						
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - BarcelonaTech
a) Possibility for long life learning students to take courses	73,3%	66,7%	50,0%	50,0%	16,7%	71,4%	35,3%
b) Research units and Industry extra-curricular activities	53,3%	26,7%	75,0%	43,8%	29,2%	61,9%	82,4%
c) Possibility to choose from different teaching staff backgrounds (academic and industry)	40,0%	40,0%	0,0%	12,5%	29,2%	28,6%	35,3%
d) Student co-responsibility in designing personalized curricula	60,0%	66,7%	50,0%	50,0%	41,7%	57,1%	35,3%
e) Part-time studying (while working or looking after children, studying a second program)	66,7%	53,3%	25,0%	43,8%	54,2%	66,7%	64,7%
f) Methods to recognise and facilitate learning from work or volunteering experiences	60,0%	46,7%	25,0%	50,0%	25,0%	33,3%	52,9%
Total of Participants	15	15	4	16	24	21	17

Flexibility in terms of type of student engagement was seen as the possibility of part-time studying, 57.1%, followed almost equally at 50 percent by student co-responsibility in designing personalized curricula, possibility for long life learning students to take courses, research units and industry extra-curricular activities, and methods to recognize and facilitate learning from work or volunteer experiences. In last place, participants found the possibility of choosing from different teaching staff backgrounds the feature to be least representative of flexibility at 29.5 percent.

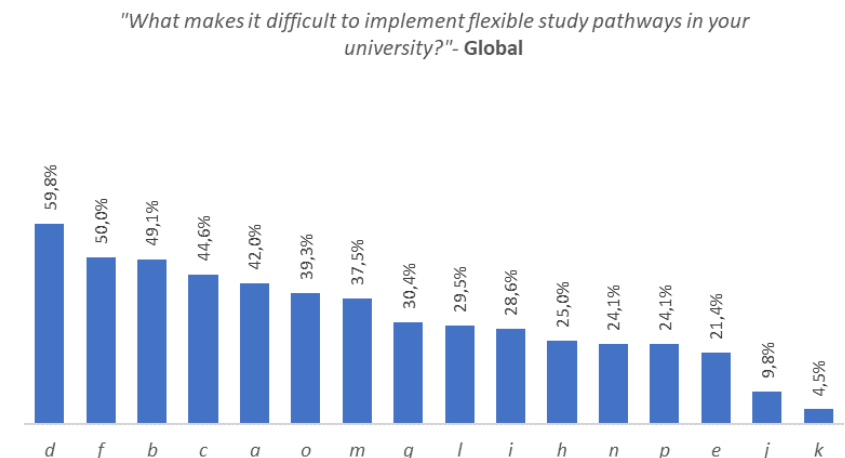
Most options were considered similarly relevant to flexibility, with the exception of the possibility to choose from different teaching staff backgrounds (academic vs industry). Perhaps we could recommend encouraging the choice from different teaching staff backgrounds as part of an increased flexibility regarding student pathways.

4. What makes it difficult to implement flexible study pathways in your university?

Table - Responses' distribution sorted in order of appearance.

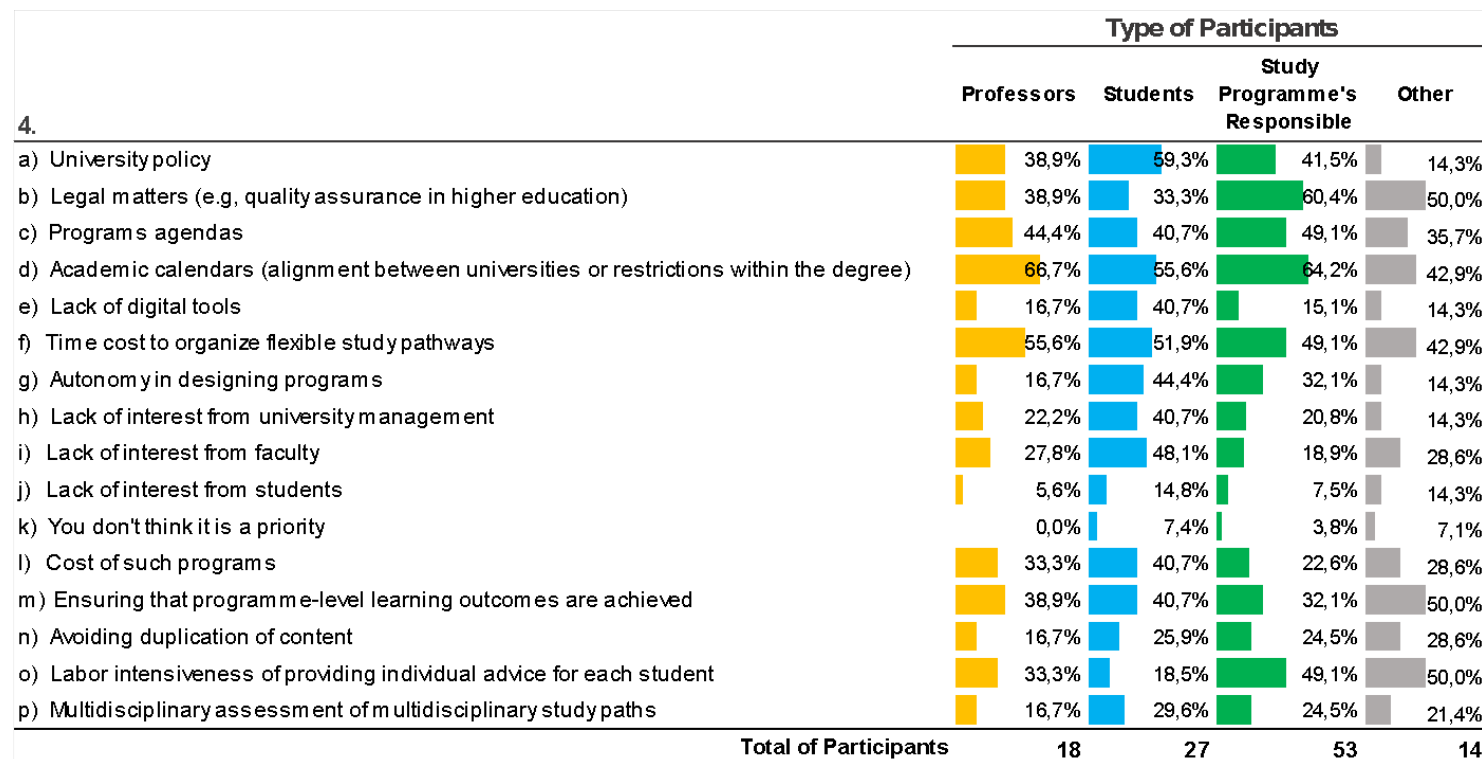
4.	Global
a) University policy	42,0%
b) Legal matters (e.g. quality assurance in higher education)	49,1%
c) Programs agendas	44,6%
d) Academic calendars (alignment between universities or restrictions within the degree)	59,8%
e) Lack of digital tools	21,4%
f) Time cost to organize flexible study pathways	50,0%
g) Autonomy in designing programs	30,4%
h) Lack of interest from university management	25,0%
i) Lack of interest from faculty	28,6%
j) Lack of interest from students	9,8%
k) You don't think it is a priority	4,5%
l) Cost of such programs	29,5%
m) Ensuring that programme-level learning outcomes are achieved	37,5%
n) Avoiding duplication of content	24,1%
o) Labor intensiveness of providing individual advice for each student	39,3%
p) Multidisciplinary assessment of multidisciplinary study paths	24,1%
Total of Participants 112	

Fig. - Responses' distribution sorted in descendent order of proportion.



The academic calendar was seen as the major difficulty of implementing flexible study pathways at each university by participants with a 59.8 percent rate. Time cost to organize flexible study pathways and legal matters are second (50 and 49.1 percent respectively), closely followed by the programme's agenda and university policies (44.6 and 42 percent respectively). At the bottom of the list, lack of interest from students (9.8 percent) and flexible study pathways not seen as a priority with 4.5 percent.

Results show that practical issues such as academic calendars are a major obstacle to flexibility. To this end, it might be worth investigating how joint programs could harmonize calendars in a way that there are pre- and post- periods before terms that would allow adjustments both in terms of the different academic and administrative requirement procedures. Respondents seem to believe that time to cost to organize flexible study pathways and legal matters would be easier to solve than academic calendar.





4.	Universities						
	Aalto University	Grenoble - INP	KTH	Politecnico di Torino	TU - Darmstadt	ULisboa	UPC - Barcelona Tech
a) University policy	46,7%	46,7%	50,0%	43,8%	29,2%	42,9%	47,1%
b) Legal matters (e.g. quality assurance in higher education)	40,0%	33,3%	50,0%	62,5%	41,7%	52,4%	64,7%
c) Programs agendas	53,3%	66,7%	100,0%	37,5%	33,3%	19,0%	58,8%
d) Academic calendars (alignment between universities or restrictions within the degree)	53,3%	60,0%	50,0%	75,0%	58,3%	42,9%	76,5%
e) Lack of digital tools	13,3%	13,3%	0,0%	12,5%	37,5%	33,3%	11,8%
f) Time cost to organize flexible study pathways	60,0%	53,3%	50,0%	62,5%	50,0%	38,1%	41,2%
g) Autonomy in designing programs	26,7%	33,3%	25,0%	25,0%	25,0%	38,1%	35,3%
h) Lack of interest from university management	13,3%	46,7%	25,0%	31,3%	16,7%	14,3%	35,3%
i) Lack of interest from faculty	26,7%	26,7%	50,0%	25,0%	50,0%	14,3%	17,6%
j) Lack of interest from students	6,7%	20,0%	0,0%	6,3%	16,7%	4,8%	5,9%
k) You don't think it is a priority	0,0%	0,0%	0,0%	0,0%	12,5%	9,5%	0,0%
l) Cost of such programs	20,0%	20,0%	25,0%	12,5%	41,7%	38,1%	35,3%
m) Ensuring that programme-level learning outcomes are achieved	60,0%	6,7%	50,0%	43,8%	20,8%	52,4%	41,2%
n) Avoiding duplication of content	20,0%	13,3%	50,0%	25,0%	12,5%	33,3%	35,3%
o) Labor intensiveness of providing individual advice for each student	40,0%	40,0%	50,0%	31,3%	50,0%	42,9%	23,5%
p) Multidisciplinary assessment of multidisciplinary study paths	13,3%	6,7%	50,0%	31,3%	12,5%	28,6%	47,1%
Total of Participants	15	15	4	16	24	21	17

3. Qualitative Analysis of Open Questions from the Survey

Content analysis

Question 1.3 – What do you think a flexible study pathway is for? [Total N = 103]

The participants responses were grouped into the following categories:

Customize curriculum	Connect universities	Customize schedule	Develop skills	Diversify teaching/ learning formats	Employment preparation	Uncategorized
73	34	20	14	13	8	7
Total: 169*						

*There are more responses than participants because some of the responses contemplated more than one category.

1. Customize curriculum [Total N = 73]

Most replies reflected that this is seen as the possibility of students having more freedom in choosing their curricular plan. Some participants said that a part of the study plan should be mandatory. It was also referred the importance of having teachers and/or tutors available to support and guide students in their choices.

Examples:

“Students can organise their study programme according to their changing individual interests without losing much time.”

“It can be chosen by students from various disciplines. Certain general learning objectives are defined, but there is flexibility in specific learning objectives for individuals. As every learning project is unique, so are the specific learning goals for engineering, design and business students.”

“Flexible learning pathways give students an opportunity to adapt their studies to their individual situation (e. g.: individual goals, schedule restrictions, family situation).”

2. Connect universities [Total N = 34]

The responses included in this category, mentioned the mobility of students and professors, within universities of the same country or abroad. It was also referred the importance of simplifying processes, such as credit recognition (from other universities) and applications. Besides the mobility programs, participants suggested the creation of more joint courses, improving the collaboration of educational institutions.

One of the concerns, involves the coordination of several aspects, within universities: “pre-requisites, time consistency, practical possibility of changing university campus, pedagogical consistency.”

Examples:

“A flexible study pathway is necessary to offer the possibility to explore other universities’ educational offers or those from outside the educational bubble (Private or Public sector).”

“International exchange of students and teachers.”

“To facilitate studying in the different universities of UNITE! without worrying about credit transfer and delays in graduation.”

3. Customize schedule [Total N = 20]

Consists of the opportunity to adapt the timings of the learning process, to the students’ needs. This facilitates the participation in other activities (work, projects) and the necessary adjustments regarding the family situation, for example.

Examples:

“The purpose of a flexible study pathway is to allow students to choose a personalized study program, both in terms of content and completion time, allowing them to take subjects outside the degree they are studying, being able to adapt it to their personal and professional interests. It also allows students to take courses outside of their university, offering them the opportunity to enrich themselves with another educational and cultural vision.”

“Adaptation to the learning process and student interests - Choices in how, what and when students learn.”

“A flexible study pathway allows students to pursue studies considering their interests and career goals, as well as to manage timings and schedules.”

4. Develop skills [Total N = 14]

The participants focused, also, in the development of several skills, such as: soft skills (responsibility and autonomy), research skills and culture knowledge.

Examples:

“To improve students’ employability. To improve students’ soft skills.”

“Developing research skills.”

“To promote the exchange of knowledge/science, lecturers and students, but also to broaden the skills of trainees.”

5. Diversify teaching/learning formats [Total N = 13]

It was mentioned that the FSP includes different teaching/learning strategies, to customize the learning process for each student and to help develop a variety of skills.

Examples:

“It's a program where each student can build its own curricula with an offer of pedagogical elements (courses, projects, internships, workshops, etc, offered of unite!) in different places, at different times with different modality.”

“I think that a flexible study pathway is useful for students to give them the possibility to study something they really like, but this means that the pathway has to offer a large number of courses: frontal lessons, practical experiences, challenges.”

“It allows to deepen student's interests on specific subjects and also to learn in different ways.”

6. Employment preparation [Total N = 8]

Some participants said that the FSP allows students to be more prepared for their professional future.

Examples:

“A way to make choices in my training to prepare for my future job or to explore job possibilities.”

“Flexible study pathways give students a more structured opportunity to gain a more complete and international educational experience, to increase the value of their cv and, as a consequence, have more chances to enter successfully in the labour market.”

“Possibility for a student to follow his/her special interests and to gain knowledge and capabilities necessary for mastering the wealth of practical requirements in industry and academia.”

7. Uncategorized [Total N = 7]

Examples:

“To improve student's learning and to reduce teacher workload.”

“Ensuring all students have pathways towards graduation.”

“I think its goal is to create a common guide that each university can follow for future programs.”

Question 2.1.7 – Other (in Flexibility regarding content of courses/programs) [Total N = 14]

The participants responses were grouped into two categories:

1. Courses/Assignments [Total N = 9]

Some of the options mentioned were: bachelor project or master thesis, internships, research groups seminars (with ECTS accreditation), study project (15 ECTS) and extracurricular courses.

Examples:

“Have the possibility to attend to Research Groups seminars with ECTS.”

“M. Sc. Students can absolve self-organized so called Study Project (15 ECTS) with a focus on a different discipline. They can also do a free Master Thesis.”

“Extracurricular courses designed and held by other students (Autonome Tutorien, AStA TU Darmstadt).”

2. Uncategorized [Total N = 5]

Examples:

“The questions are hard to answer, because much of the M.Sc. requirements also depend on the B.Sc. level studies of the student and where it has been completed. Some of the questions are very complicated.”

“Note that there is much variety within Aalto degree programs in the ECTS amounts set in 2.1.1.- 2.1.5.”

“My bridging programmes are up to 2 years, with a lot of room for students' own choices, but not leading to a degree, so not really a great fit for this form I'm afraid.”

Question 2.2.8 – Other (in Flexibility regarding format of courses/programs) [Total N = 18*]

*Some of the responses contemplated more than one category [Total n = 19].

The participants responses were grouped into three categories:

1. Online/hybrid classes [Total N = 6]

Participants referred that this methodology was adopted due to the pandemic.

Examples:

“Since the start of the COVID19 pandemic situation remote classes and hybrid teaching has been implemented exceptionally. For the moment it is a temporary measure, but it may open new methodologic possibilities in the next future.”

“We did not offer all that much as remote or hybrid teaching, before the pandemic restrictions forced us to.”

“Usually 2.2.1 would be a choice from a list of topics/project challenges/sponsors, but in some courses the students can bring their own topics as well. 2.2.6 has been introduced during covid in some courses, although the majority are now running temporarily fully online.”

2. Options and suggestions [Total N = 6]

The responses in this category mentioned some of the current options available for students and some ideas to consider.

Examples:

“Face-to-face HAVE TO BE a must in UNITE! (much better than online university).”

“For this to work, a clear structure that allows this flexibility needs to be presented to the students since the beginning so they can plan their study path and graduate on time.”

“Mandatory Construction Site Internship (Minimum duration of 30 days) for B.Sc. Students; Mandatory Architect's Office Internship (Minimum duration of 60 days) for M.Sc. Student.”

3. Uncategorized [Total N = 7]

Examples:

“Defining the degree of flexibility in terms of ECTS is very difficult, because one would not estimate this in terms of ECTS, just as part of the course assignments completion.”

“Questions from 2.2.1 to 2.2.4 are difficult to answer. We have such a big academic offer that it is not possible to be precise regarding credit amounts.”

“Why aren't you asking how many ECTS remote?”

Question 2.3.2 – Other (in Flexibility regarding the schedule and time required to attain the Diploma/Degree) [Total N = 5]

Responses:

“Bear in mind hybrid lecturing is possible due to the current health alarm. In general, though, lecturing is face-to-face at FIB. However, as I said, this door is currently open.”

“Provide academic advisors for all these students to ensure that they graduate on time and not lose money and time because of poor planning. Also there should be different plans and time duration if the students choose to have a double degree, a double specialisation, or double minor.”

“The flexibility concern only the top athlete and the high level artist. For the other student, the only possibility is to take one year off (gap year?) to make something else.”

“Modularization: In part. There is a dependency graph between compulsory and conditionally elective courses. Specified in "specific prerequisites" for every course.”

“Programmes don't lead to degree/diploma, just transcript of passed courses.”

Question 2.4.2 – Other (in Flexibility regarding mobility) [Total N = 7]

Responses:

“The more "à la carte menu" academic offer (inside UNITE!) the better for the students.”

“Joint mobility programs are possible in other Arch postgraduate Degrees.”

“I am not sure if mobility between programs is possible /not possible.”

“Credits are possible, but I would not say this is easy by any means. The typical case here would be either exchange studies or open university (paid) credits, at least I as a professor find awarding and recognizing credits from/to other universities difficult. What we often end up doing with partners is give the equivalent credits with an own university flexible content course, which is not ideal.”

“I don't understand what is meant by "mobility between programs" so I am not able to answer.”

“Free-Mover; Collaborative Programs (for Example DAAD)”

“The "not checked" possibilities are also possible in theory, but almost never done.”

Question 2.5.2 – Other (in Flexibility regarding type of student engagement) [Total N = 8]

Responses:

“Answer to 2.5.1 refers to internships which are integrated into the study program.”

“In Aalto we can have some credits from work experience or voluntary work but not much.”

“I don't understand the question about possibility to choose between academic or industry background teaching staff.”

“Class format to be more interactive, learning by doing, and more based on projects than on exams.”

“These do exists, but on a very small scale, typically max 1 course within the entire degree. Not a widespread or easy practice.”

“KTH is a programme university. This means that only programme enrolled students are allowed to take courses. There are no other courses in my department. The latter may not be true in other departments who are deeper involved in industry co-operation.”

“A few special courses for Lifelong Learning Students are offered by the department; External Project Work in the Master program: students work for 3 months at an industrial company on a project and get 6 ETCS for this project, which will then count towards the degree and show up on the degree certificate.”

“Only as a guest without the possibility of taking exams.”

Question 3.6 – Other (in Choose approximately 10 criteria that would be the most desirable in a flexible program in the European University context (e.g. UNITE)) [Total N = 3]

Responses:

“Courses that break the classical teacher/student relationship, including ecological issues for instance.”

“The key is the possibility for recognition of the studies from abroad in ones own degree and preferably in major / basic obligatory studies which proceed the graduation. Prerequisite definition, scheduling, study path recommendations to support flexibility are needed.”

“I mentioned only those points which are wishful and not already doable by the existing means.”

Question 4.2 – Other (in What makes it difficult to implement flexible study pathways in your university?) [Total N = 15*]

*Some of the responses contemplated more than one category [Total n = 16].

The participants responses were grouped into four categories:

1. Resources and commitment [Total N = 6]

Examples:

“A kind of inertia, which wants to keep an old teaching model.”

“Staff resources (academic and administrative).”

“The difficulty in our department is that there's too little staff.”

2. Procedures [Total N = 5]

Examples:

“Difficult to change habits and way of doing things!”

“The difficulty of merging 7 different systems into one, that would be the biggest challenge.”

“Getting two or more universities to match in a joint program is the problem more than within-university flexibility. Joint courses (technically offered separately by partner universities, coordinating with involved faculty) a lot easier to organize than joint programs and degrees, because on a program/degree level, the planning cycles, requirements etc vary so widely and are rarely in the hands of individual faculty but require school/university level involvement on both sides.”

3. Legislation and funds [Total N = 3]

Responses:

“National legislation on some study programs that qualify for professional practice.”

“A broad range of electives requires a faculty that covers a wide range of research topics. This is, however, not desirable for attracting third-party research funding, which usually incentivises a focused, tightly collaborating faculty. My university always puts funding first and shapes its faculty accordingly. Thus it can only offer courses in the few sub-fields which their faculty specialises in. Naturally, this effect is most significant in smaller fields.”

“University funding model in Finland puts quite a lot of pressure in students graduating in-time. Therefore cooperation should be modular, and something that students can easily choose without losing the momentum to graduate on time.”

4. Uncategorized [Total N = 2]

Responses:

"The students may be anxious to fail; impact on the "ranking"/result (and impact on the first job); For teachers: lack of knowledge about the programs in partner Universities; For administrative staff: a lot of work, no control on the calendar."

"See next reply."

Question 5.1 – Tell us factors that can facilitate the implementation of flexible study pathways in your university [Total N = 65]

The participants responses were grouped into the following categories:

Cooperation and coordination	Resources	Commitment	Good practices / pilot experiences	Autonomy	Other
29	25	11	6	4	9
Total: 84*					

*There are more responses than participants because some of the responses contemplate more than one category.

1. Cooperation and coordination [Total N = 29]

Participants mentioned that is important to guarantee a good communication among the academic community (students, professors, researchers, staff) and within universities, to improve cooperation. The industry play an important role as well. The need of coordinating processes and procedures (ECTS system, applications, curricular plans, etc.) was also referred. Some participants suggested the creation of a UNITE! system or identity.

Examples:

"Personal contact of the acting persons essential to build-up a common understanding for a common learning space."

"1) Communication and common rules in the administration of the different Universities to seamlessly recognize ECTS taken in other Universities. 2) Provide students with the UNITE! identity, in top of the local University."

“More interconnection and cooperation between academic advisors and administrative staff from different universities; collecting advice from students on how to implement these pathways and their wishes, common data Platform.”

2. Resources [Total N = 25]

The responses to the inquiry contain references to several resources that are fundamental to the implementation of FSP, such as: human resources, financial resources, technological and IT resources, pedagogical materials and training sessions.

Examples:

“Specific Resources: Economical and Human.”

“Financing would allow the improvement of facilities (eg. rooms for project base learning and co-working, laboratories with enough material and capacity for each student to have the opportunity to engage in all the activities and to develop their own projects) and digital tools. The recruitment of more teaching assistants would enable a broader variety of assignments and pathways, once students would have better personalized support. Human resources would also need to be strengthened, since a larger flexibility generates personalized pathways which require higher levels of implementation/ processing/ validation back-office work.”

“Open shared teaching materials, e.g. in Wikis.”

3. Commitment [Total N = 11]

Participants considered that the universities, including every person involved in this process (students, professors, researchers, staff), and the stakeholders need to be committed with the program.

Examples:

“Main universities' authorities (Rectors and so on) public and explicit commitment. External stakeholders' commitment (they have to realize the added value for industry and others).”

“Light administrative structure: trust in the students!; easy information system; strong commitment of the institution; good communication for/with teachers : students trust in their advices; develop contact for operative staff.”

“Political and Academic will, on one hand, stimulus for students, in the other hand.”

4. Good practices/pilot experiences [Total N = 6]

Knowing examples of good practices from other universities and implement pilot experiences, were also considered as useful strategies.

Examples:

“Have a pilot experience and feedback.”

“Best practice examples.”

“Sharing information between different universities could offer ideas on how to manage or implement flexible study pathways.”

5. Autonomy [Total N = 4]

Some participants considered that the implementation would be easier if the universities (including teachers and students) had more autonomy to create and manage the courses.

Examples:

“Allow time in the bachelor program for other courses instead of lab work thus giving students more freedom to study in a flexible pathway.”

“Faculty autonomy how courses are organized, a tradition of offering students choices in courses, projects to choose from etc.”

“Autonomy in designing programs; interest from students and faculty.”

6. Uncategorized [Total N = 9]

Examples:

“Try do not add more possibilities but integrate into existing courses the unite! opportunities.”

“Summer education with UNITE could solve the problems when some aalto students has been offered courses and some has not.”

“The individual universities need to be open to be flexible with the students who are taking this path, especially at the beginning when the system is still on its trial run, and the kinks are still being figured out. The most important thing is not to make the students feel they are victims of an experiment, because of course, at the beginning there would be problems. So the most important thing is to ensure the students' welfare and supporting them.”

4. Survey's Targeted Respondents (example for ULisboa)

At ULisboa the survey could be answered by:

Target A: Informed directors, coordinators, student representatives, administratives, ...

ULisboa Rectory

1. Vice-rector for education, student and academic affairs

Schools of ULisboa

Engineering school (Técnico)

2. Executive Board - Vice president for education and student affairs
3. President of Pedagogic Council
4. Student Vice-President of Pedagogic Council
5. Bachelor and Master course coordinators (1 from a "traditional" engineering degree: civil, mechanical, electrical, chemistry,...)
6. Student course representatives coordinators (1 from a "traditional" engineering degree: civil, mechanical, electrical, chemistry,...)
7. Bachelor and Master course coordinators (1 from an emergent or broader engineering degree: aerospace, biology, physics,...)
8. Student course representatives coordinators (1 from an emergent or broader engineering degree: aerospace, biology, physics,...)
9. Member of the Admissions Office
10. Head of Registration and Enrolment Office

Medical School (FMUL)

11. Executive Board - Vice president for education and student affairs
12. President of Pedagogic Council
13. Student member of the Pedagogic Council
14. Bachelor and Master course coordinators
15. Student course representative coordinator
16. Member of the Admissions Office
17. Head of Registration and Enrolment Office

School of Arts and Humanities (FLUL)

18. Executive Board - Vice president for education and student affairs
19. President of Pedagogic Council
20. Student member of the Pedagogic Council
21. Bachelor and Master course coordinators
22. Student course representative coordinator
23. Member of the Admissions Office
24. Head of Registration and Enrolment Office

School of Economics & Management (ISEG)

25. Executive Board - Vice president for education and student affairs
26. President of Pedagogic Council
27. Student member of the Pedagogic Council
28. Bachelor and Master course coordinators
29. Student course representative coordinator
30. Member of the Admissions Office
31. Head of Registration and Enrolment Office

Target B: Random professors, students, administratives

6 per school (24 in total)