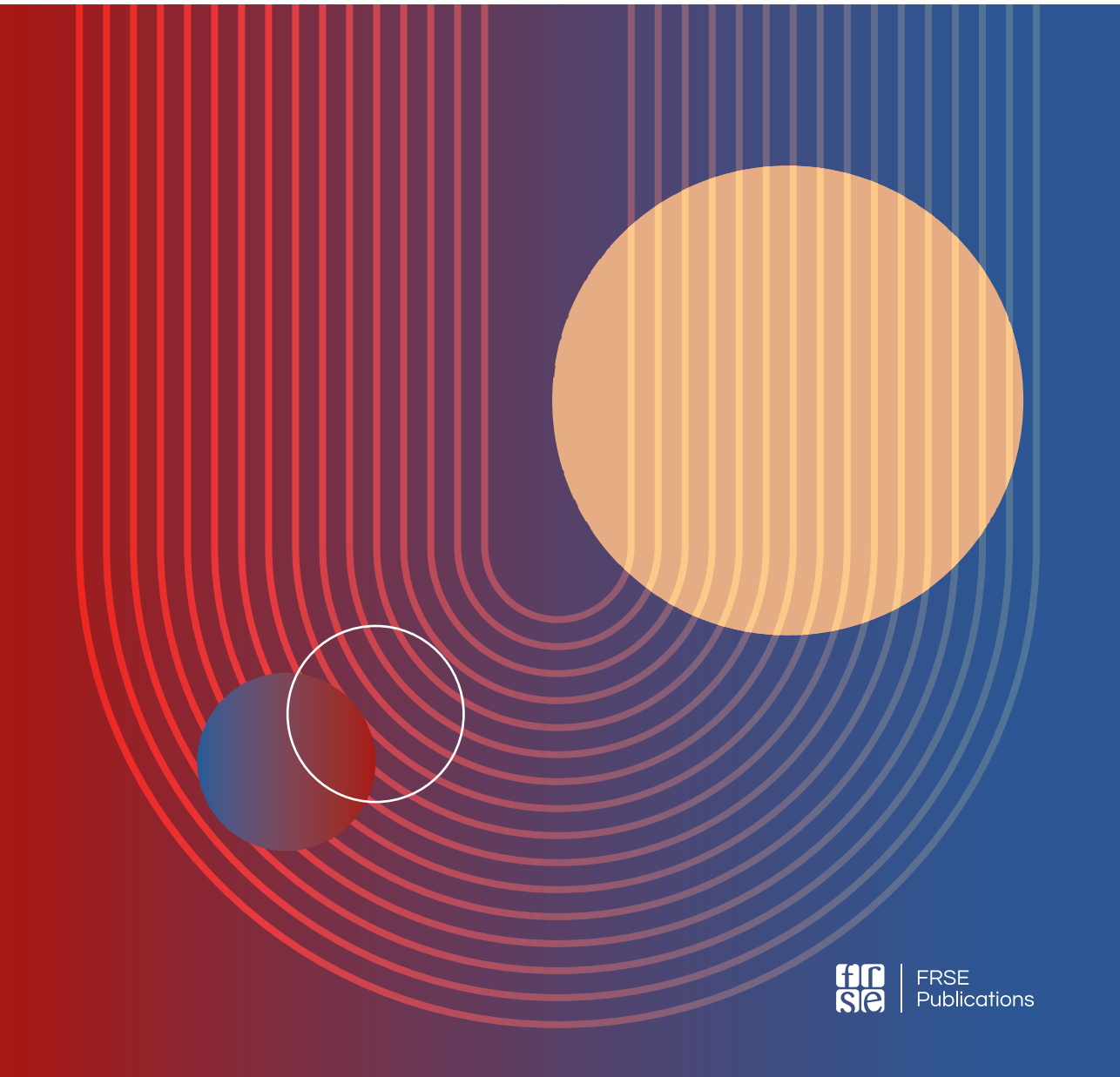
European Universities in Poland

KEY CONCEPTS SERIES

Implementation of development strategy

Edited by
Paweł Poszytek, Anna Budzanowska



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European Universities in Poland. Implementation of development strategy

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Introduction

This work aims to present up-to-date research on the implementation and development of the European Union's idea of European Universities in Poland. European Union Member States have been working for decades to provide their citizens with the best possible and competitive education. One of the main tools to achieve this is the EU's flagship programme Erasmus+ dedicated to all sectors of education. Higher education has always boasted a distinctive position in this programme, especially now with the introduction of the European Universities Initiative whose aim is to put one of the European Commission's key ideas to create a common European Higher Education Area into practice. European Universities are consortia of several higher education institutions which function based on jointly worked-out rules and procedures in all spheres such as didactics, administration and research. This cooperation should lead to forming one legal entity: a European University, which in turn, could offer one European degree, or joint degrees in the intermediary phase of the development of the network. For students and academics, this should provide one platform for developing the educational path and carrying out research on a broader scale. For universities themselves, this should allow and foster the creation of centres of excellence in areas of both didactics and research. All this can be achieved through easier mobility, access to resources and the use of technology including the set up of virtual campuses to implement the idea of blended learning, which is one of the lessons learnt from the COVID-19 pandemic. The idea as a whole is actually based on the already existing business models which proved highly effective, namely that one can achieve a competitive advantage by creating a network of internationally dispersed units which complement each other with expertise and form

a unique mix of competences that allow them to build up excellence in a particular domain, or domains. One of the key factors of the success of such endeavours is the use of technology which provides a platform for effective communication and cooperation by knowledge sharing and enhancing organisational and innovative potential (Borgatti & Foster, 2003; Czakon, 2011; Stańczyk-Hugiet, 2012; Wieland & Wallenburg, 2012; Woźniak-Sobczak, 2015). Research shows that this network and relational paradigm in managing educational innovative projects also proved effective during the COVID-19 pandemic (Poszytek, 2021).

The analogy to already functioning business models and management paradigms is quite relevant here since European universities are supposed to give a new impetus to European Union's sustainable development. In this sense, it is not only European Union's educational agenda which is realised here but it is also EU's broader socio-economic policy that is implemented. The modern, globally competitive economy needs innovative education and, in particular, it needs universities of the future.

According to Ehlers, there are four pillars that define universities of the future, i.e. the universities which can be competitive in the educational labour market and respond effectively to the broader socio-economic context in which they function. These pillars are: (1) lifelong learning model; (2) education based on competences of the future (3) flexible and tailor-made educational offer including the idea of micro-credentials; (4) network-based didactic and research activities (Ehlers, 2019; 2020). The European Commission, the World Bank and the OECD share this view in many aspects. The European Commission also stresses the importance of digital transformation which can be treated here as a prerequisite for creating an effective ecosystem for the functioning of these universities of the future. This is rooted in some documents and recommendations issued by the European Commission such as Digital Economy and Society Index 2022 (European Commission, 2022) but, first of all, in the Erasmus+ Programme's priorities among which digitalisation is of high importance. It must be noted here that the European Universities Initiative is a central action of the Erasmus+ Programme. And in addition to this, the European Commission explicitly states that digital transformation must be a permanent element of building and developing the networks of European Universities, especially in light of the lessons learnt from the COVID-19 pandemic. The European Commission states that:

The COVID-19 shows that there is an urgent need for much deeper cooperation between higher education institutions on education, research and innovation. There is also a huge need to pool together and share on-line courses, data, digital and research infrastructure. The COVID-19 has accelerated this need for a digital transformation of higher education institutions.

(*European Commission, 2020*)

This does not come as a surprise since there are a few contextual factors that require digital transformation as a basis for creating innovative universities of the future. These are (1) the requirements of Industry 4.0 – we live in the era of the fourth industrial revolution characterised by the use of artificial intelligence, automatization of production and service processes, technological advancement on an unprecedented scale and digital transformation as such, which is why innovative universities must address these challenges not only by preparing students to work in such environment but also by functioning as digitally transformed organisations; (2) lessons learnt from the pandemic: effective networks cannot function without digital tools (Latusek, 2019; Poszytek, 2022); (3) digitalisation leads to greater effectiveness and competitive advantage (Poszytek, 2021).

Putting all threads together, the European Commission's definition of a fully operational European university network is based on (1) digital EU inter-university campus, with member universities pooling together their online courses to deliver high-quality education sharing operational joint digital learning and teaching environment with common governance tools; (2) fully operational infrastructure and tested methodology for joint blended courses with a strategy for managing both virtual and physical mobility (blended mobility) and recognition mechanisms for staff and students; (3) cooperation with companies, regions and cities in order to provide short learning courses leading to micro-credentials allowing anyone to up-skill and re-skill at any stage of their professional career; (4) challenge-based approach where students, academics, researchers, companies, cities and regions from different countries and disciplines work together to address serious social challenges such as, for example, European Green Deal (European Commission, 2020).

All above-mentioned aspects and factors that contribute to the development of future innovative universities are analysed in this publication which includes separate research activities commissioned by the Foundation for the Development of Education System and carried out by various research groups touching upon such areas as pedagogical innovations, digital transformation, governance, legal status, networking activities and the influence of the activities of Polish universities within European Universities consortia on public policy. It must be added that the Foundation for the Development of Education System is a national operator of the Erasmus+ Programme in Poland and the European Universities Initiative is a central action of this programme. It is also important to note that the following set of research activities presented and analysed here reflects the issues in question not only from the theoretical but, first of all, from the practical point of view based on the experiences of Polish universities in functioning in European Universities consortia. The research was carried out in the first half of 2023 in relation to all 18 Polish universities participating in European Universities Initiative (see: Appendix I). The number of Polish universities involved in EUI is an evidence of the high activity of higher education sector in Poland, as the total number of EUI initiatives is 50 (Appendix 2).

It is also worth stressing that the COVID-19 pandemic has intensified various processes at universities which lead to better resilience and effectiveness of activities in didactics, research, administration and governance. Accordingly, the research presented in this book reflects this transformation to a substantial extent. This publication gives an insight into changes taking place in innovative higher education in the context of the priorities and post-pandemic requirements of the European Union which call for a reorientation of goals and functions based on new, adaptive and flexible solutions. The book describes the ways and approaches adopted by Polish European Universities to achieve this reorientation and shows, through thorough research, how these universities position themselves on this way in the fast-changing ecosystem. In order to answer the question on how advanced Polish universities are in this pan-European cooperation and formation of common European Higher Education Area, the authors of some of the chapters pose and answer specific research questions with the use of various methodologies and approaches and the others

diagnose certain phenomena to outline the landscape of specific aspects connected with the functioning of Polish universities within European Universities alliances. In this respect, this book addresses an important research gap since the analysis of scientific inventory systems such as Scopus shows that no such attempt has been undertaken so far. Even though some scarce research on the local aspects of Polish European Universities can be found, no overall comprehensive research concerning all Polish universities participating in EUI has been published to date.

The first chapter presents research on how Polish universities allied with European Universities consortia function in these networks and what change it has brought to them. The second chapter discusses managerial and legal perspectives that result from the participation of Polish universities in the European Universities Initiative. The third chapter describes how innovation cultures are fostered at universities as a result of membership of the European Universities Initiative. This chapter also presents examples of good practices in this respect. The fourth chapter diagnoses the level of advancement of digital transformation of Polish universities participating in the European Universities Initiative. The fifth chapter is devoted to the idea of micro--credentials and the flexibility of didactic offer, which is one of the main pillars of constituting a university of the future as already mentioned above with references to Ehlers's model. And finally, the sixth chapter presents conclusions about the transition process of Polish universities towards becoming European Universities.

The Editors

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1

Functioning and Change of Polish Universities within European Universities Initiative

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Introduction

With the European Strategy for Higher Education (European Commission, 2022), there has been a policy shift of the European Commission (EC) from the emphasis on policy coordination at the European Union (EU) level to organisational coordination at the institutional level (Maassen et al., 2022). In 2017, the EC launched the "European Universities" initiative (EUI) aimed at

> *...strengthening strategic partnerships across the EU between higher education institutions and encouraging the emergence by 2024 of some twenty "European Universities", consisting of bottom-up networks of universities across the EU which will enable students to obtain a degree by combining studies in several EU countries and contribute to the international competitiveness of European universities.*
>
> (*December 2017 Conclusions of the European Council on the European Universities initiative*)

European Universities are transnational alliances that were established to revisit the concept of higher education in Europe. After almost seven years since the introduction of the EUI, there are currently 44 transnational university alliances, with over 340 participating higher education institutions (HEIs). From the beginning, Polish universities have actively taken part in this new platform of institutional cooperation. Twenty universities from Poland participate in the alliances, including six from the first call in 2019, five from the second call in 2020 and nine more which joined the already existing networks in 2022.

The EUI has recently become a driving force in the Europeanization of higher education (Jungblut, Maassen & Elken, 2020) attracting considerable research attention. The most recent works are primarily focused on developing the idea of European Universities (Gunn, 2020), theoretically conceptualising the EUI (Maassen, Stensaker & Rosso, 2022) and the mechanisms behind the formation of individual alliances (Lambrechts, Cavallaro & Lepori, 2023). However, little is known about the actual impact of the EUI on the functioning of the participating universities. This study wants to fill this void with the findings of our empirical project about the impact of the EUI on HEIs in Poland.

This chapter aims to elaborate on the impact of the EUI on the structure and functioning of universities in Poland. It also examines how the first Polish members of the EUI have managed to adapt to the governing structure and performance mechanisms of transnational university alliances. It reports the results of an empirical investigation, which sought to explain the reasons behind the strategic decision on joining the EUI and to explore various consequences of EUI membership. It reveals the most important elements of functioning within the EUI as well as sheds light on the (potential) institutional benefits and (real) costs resulting from membership in the EUI. The EUI is a relatively new phenomenon, thus the literature is rather limited, with only a few recent studies (Lambrechts et al., 2023; Maassen et al. 2022) that take a more generic and structural approach by examining the composition and structure of the university alliances.

However, very little is known about the impact of European alliances on the participating institutions. Therefore our investigation is one of the first (if not the first one) to offer a systematic empirical investigation of the impact of the EUI on universities. The study offers a sober assessment of the impact of the EUI on universities in Poland by taking into account the views of major internal stakeholders. It investigates the views expressed by university management, faculty members and administrative staff as well as students directly involved in the work of the EUI.

Methodology

The study reports the results of empirical research conducted in April–June 2022 that included all Polish universities (N = 11) that

became members of the European consortia selected in the first two calls (2019 and 2020). The purpose for targeting these specific institutions was simple – they have the greatest (both positive and negative) experience of working with other European partners within the framework of the EUI. In other words, for the universities under study, the initial phase of enthusiasm related to being part of the winning alliances has already passed and now they are getting on with daily performance mechanisms.

The analysis draws from empirical data obtained from several independent sources. By doing so, it triangulates a wide range of qualitative methods (Denzin, 1978), among which are (1) individual in-depth (N = 11) interviews with representatives of university authorities, who participate or have participated in the creation and management of the EUI consortium, and representatives of students participating in the EUI. Also, the study involved (2) individual in-depth interviews (N = 17) with university staff at different organisational levels involved (in different roles) in daily operations within the alliances. We also examined (3) the content of the (main) websites of the universities under study in order to visually represent the participation in the European alliances. Last but not least important, we conducted (N = 11) individual study visits at each of the universities under study to see how the EUI is communicated on the campus and to map the location of units responsible for the EUI.

The methodology used for this study allows us to build preliminary conclusions about the impact of the EUI on universities in Poland. However, it shall be noted that (a) we investigate an ongoing process that is expected to meander as it evolves. We can have solid knowledge about the present, and speculate about the near future, but we cannot predict the success or failure of the EUI. It should be noted that it is only the beginning of the European alliances and their future remains to be seen. (b) The analysis paints a large picture that looks relatively coherent, but when we focus on individual institutions, some (even substantial) differences are revealed. These differences depend on institutional prestige of the given institution, position in university alliances and, most of all, internal dynamics within the alliances. Notwithstanding the abovementioned limitations, the collected empirical data allows us to draw conclusions regarding the present situation of Polish universities in the EUI.

The Reasons behind Joining the European Alliances of Universities

Internationalisation has been commonly considered one of the main policy drivers for the modernisation of higher education (Antonowicz, 2019; Kehm & Teichler, 2007). The pursuit of internationalisation was also a primary motive behind joining the EUI. It was generally perceived as a unique chance to build networks of stable institutional partners in Europe.

But for us, from the very beginning, it was a way to Europeanise and modernise the university. Europeanisation in the sense that we are looking for partners in Europe and they are strategic partners for us.
[vice-rector, non-metropolitan university]

Having said so, we must also acknowledge that most Polish universities struggle to have full recognition of their academic capacity due to their low positions in international rankings. So, the strategic decision about joining the race for European alliances stood in line with the overall policy trend to build strong international visibility of Polish HEIs.

This idea of somehow shaping our international position has been with us here for years [...]*; in fact, this European university initiative was a godsend. After many years of various attempts of our own, we suddenly got a framework into which we could fit.*
[senior administrator, non-metropolitan technical university]

Applying to the EUI has been a strategic decision for Polish universities. It signalled their strong commitment to European academic values, but also the undisguised ambition to play a more central role in EHEA. Previous studies identified systematic inequalities in the distribution of European Research Council (ERC) grants (Antonowicz, Geschwind & Pinheiro, 2021) and structural disfavouring of universities from the more peripheral countries. It means that engagement in the EUI was not a tactical move calculated for quick financial or reputational gains, but it was part of a long-term institutional strategy. There are also many pragmatic and tangible benefits that Polish universities obtain due to their participation in the European alliances, which include, among

others, access to know-how and networks of institutional partners across Europe in the extremely competitive process of applying for third-party funding from international institutions (mostly ERC). It was difficult for the interviewed representatives of the university management to hide the fact that somewhere in their strategic planning they hoped to extend cooperation in teaching to research, which is perceived as a major driver for institutional prestige. Such a narrative was frequently articulated by the representatives of those universities that previously failed to win the IDUB (Excellence in Research) status.

If a project is created to integrate the potentials of different universities, universities that want to increase their role, their visibility, but also their level of internationalisation, should enter into such projects.

[vice-rector, metropolitan university]

Since building institutional partnerships is one of the key features of the Emerging Global Model (EGM), as Mohrman argues, the "establishment of formal agreements with universities and research institutes in other countries is another indicator of an institution's international scope" (Mohrman, Ma & Baker, 2008). There were well--founded hopes, expressed by the interviewees, that participating in the EUI will help Polish universities to draw heavily on the prestige of more reputable (higher ranked) partners in the European alliances.

Each of our partners is, I would say diplomatically, a lot ahead of us in the rankings, so [...] *it is a great opportunity, because if we want to cooperate, we should cooperate with partners from whom we can learn something, something good, and indeed meetings and visits confirm that we can indeed learn a lot from them, in every sphere.*

[senior administrator, metropolitan university]

Even though it was not the prime motive behind joining the alliances, notably, reputational factors were also at play. Internationalisation has a significant reputational value, strengthening the positive external and internal perception of universities. In addition, the interviewed vice-rectors and other senior administrators pointed to access to

know-how and broad professional networks as key immediate benefits stemming from being partners within the EUI. Notwithstanding, the representatives of the investigated universities declared that being part of European alliances was a strategic commitment to embrace EHEA for their respective institutions.

It is worth mentioning that joining the EUI (in fact being part of alliances that were awarded EU funding) was embraced with great enthusiasm. It was so even though university management had limited knowledge about the implications that would soon entail. Overall, they saw the EUI as a long-awaited fast train to Europe and the leverage for institutional development. It was hoped – at least by those highly committed to the EUI – that close partnership with European universities would also provide the impetus for internal reforms.

[...] *this is an opportunity to pursue the mission of the university, which is the mission to be a cultural institution in Europe and the world.* [...] *You could say it's so much more highbrow, and of the more down-to-earth things, that's why we're in a partnership, to enable our staff and students to interact better, to interact more widely, and to make us work better, to learn and prepare people better for the future, and to do better research.*

[senior administrator, metropolitan university]

Such hopes referred to areas that have traditionally not been considered as an institutional priority (e.g. administrative staff development) or they have been not prioritised due to political or cultural reasons e.g. gender equality issues, or mental health. As the project unfolded, the EUI became a catalyst for a major shift in the working culture that perhaps has only slightly impacted the structural arrangements but massively influenced all the levels of university governance.

It seems that this will really create momentum to put the spotlight on university administration.

[senior administrator, metropolitan technical university]

One of the key elements to achieve it was a mindful selection of institutional partners to avoid (or minimise the chances of) mismatches.

In most cases the selection of institutional partners was logical, understandable, easy to justify and, according to the respondents' declarations, widely accepted. It helped to develop joint initiatives and also to spread good institutional practices across the alliances.

All in all, the rationale for joining the EUI was strategic and it primarily served to foster the internationalisation (Europeization) of universities in Poland. Interestingly, there was a belief that joint educational initiatives were just the beginning and the partnerships would eventually spill over to joint research ventures, including joint grant applications in the programme Horizon 2020 (and now Horizon Europe). The decision to join the EUI was in itself strategic and to a large degree pragmatic as university management hoped for a host of tangible benefits in both short and long perspective.

Structural, Cultural and Social Changes for University Governance

The basic but fundamental finding of the study is that the EUI has had a positive impact on Polish universities. It was unanimously declared by the representatives of all investigated HEIs, though the impact on non-metropolitan institutions appears to be more profound. For them, the EUI has become a real window of opportunity to accelerate and expand the internationalisation of teaching and research. However, the collected empirical evidence indicates that the impact of the EUI was somewhat surprising for the participating institutions regarding both the scope of changes and their dynamic.

European alliances in general were supposed to be such a driver for internationalisation, and indeed they were just that, and in such an unexpected way.

[vice-rector, non-metropolitan university]

The research revealed that the management staff of universities neither had expected how deep, complex and engaging the EUI initiative would be nor had they foreseen the impact it would have on institutional governance. Both the number of participating individuals (faculty members, staff and students) as well as the variety of undertaken initiatives have impacted the work of universities under study. The interviews left no doubt that university management did

not have any prior experience in addressing this type of governance challenges. From the viewpoint of institutional management, it has very much been a learning-by-doing process. For this reason, too, the project became a challenge for rectors and vice-rectors as the concept of the EUI escaped from the traditional (narrow) concept of internationalisation. It has not been internationalisation as they knew it, confined to a mobility program offered to a limited number of individuals, mostly gathered in international offices. In contrast to previous experiences with international institutional partnerships, the functioning of EUIs permeates the structures of universities and resonates on many aspects of their performance.

Initially, the participation of Polish universities in the EUI heavily relied on the personal commitments of rectors, vice-rectors and senior administrators. However, as the project unfolded, it broadened the pool of individuals engaged in the EUI by reaching out to those previously disregarded by the internationalisation programs. This research also suggests that there has been no radical change in the way of thinking about the university's mission and vision during participation in the EUI. The EUI could only make insignificant structural impacts such as establishing new offices related specifically to the EUI initiatives, greater responsibility and new tasks assigned to units in charge of international relations. But the EUI did not involve substantial structural modernisation and can be effectively run within the existing structural arrangements.

However, the study also found that the celebrated concept of university as an institution largely autonomous from social expectations (Dobbins, 2015) at large stays at odds with the concept of a university performing the central role in social and economic development. The latter model entails a different perspective on the university with an emphasis on inclusiveness and social engagement. It has not directly affected university structure but it is likely going to influence its strategic agenda and impact institutional arrangements too. We can expect growing emphasis being put on building strong relations with the local communities, international relations and knowledge transfer which have never been pivotal aspects of Polish universities. Therefore, minor structural modifications and arrangements can also be expected, aiming to facilitate new functions performed by universities. It includes all the structural changes that have happened and are likely to happen in the distant future.

More than structural change, the EUI initiated the cultural transformation in the HEIs under study. It started with directing more attention to the issues of social inclusion that appear not to be prioritised by the management of Polish universities. Poland stands out in Europe as one of the most conservative societies which is why Polish universities, though more progressive than society at large, never really prioritised progressive values in institutional mission statements. Undoubtedly, it has gradually changed under the influence of the EUI, as universities in Poland have put inclusive values at the centre of their institutional agendas.

It wasn't that these issues were unknown to us at all [...] *The fact that gender equality issues need to be regulated was not a novelty to us. It is different when we talk about it as a rectoral team, and different when we have to prepare a document.*

[vice-rector, non-metropolitan university]

However, the greatest impact of EUI membership has been exerted on working culture. Polish universities are hierarchical institutions, run by professors with clear-cut distinctions between senior faculties, junior faculties, and administrative staff. They contrast sharply with, for example, Nordic universities that have flat organisational hierarchies, many blended organisational roles and university administrators with greater leadership role, who are perceived as partners, not subordinates. Obviously, it must have had an impact on the working culture of Polish universities and more specifically on working relations between senior academics and the rest of the academic community. This impact seems elusive to outsiders, but many of the interviewees from different institutions admitted that working within the framework of European alliances put them into more central positions where serious managerial powers are assigned. This is what they had not experienced in their universities before joining the EUI. This is a clear change in working culture that will quite likely gradually diffuse across Polish universities if the cooperation under EUI continues.

Undoubtedly, the sense of belonging to European higher education has been strengthened and the narrative of catching up with Europe was vocal. Regardless of the type of university, joining the consortium has triggered new thinking about internationalisation as a category central

to the university's strategic directions. These are primarily the benefits associated with an increase in the quality of education, an increase in the potential to obtain research funding from (the largest and most prestigious) EU funds and a stronger anchoring in the structures of European higher education.

Intended and Unintended Consequences of Joining the EUI

The introduction of the EUI has affected HEIs in Poland in many ways, though the consequences have not always been anticipated. There are several unintended consequences identified during the study.

First and foremost, the interviews show that real organisational change does not occur as a direct result of joining the EUI, but as a result of the accompanying activities, such as follow-up calls. Thanks to the membership in the EUI, Polish universities acquired access to strategic resources, available to the alliances only. It was important for universities that do not have particularly strong international outreach. Through the EUI, they reach stable institutional partners, manage to build their trust and learn to work with them on a daily basis. It opens a new chapter for Polish universities as some of them took this opportunity and present themselves in the best possible light. They have earned a solid reputation as trustworthy and active partners who are ahead of the game when it comes to building various international consortia. The study shows that it is one of the unintended but massively impactful consequences for Polish universities.

Second, the EUI project was called into life with the intention to boost international education, which turned out to be very challenging due to the COVID-19 pandemic. But it was only a temporary impediment, as real challenges arrived with regulatory problems related to running joint programmes. The so-called European degrees have not been materialised causing a variety of problems for the joint educational programs. Consequently, the energy was diverted to other educational initiatives. Some of them intended to replace joint BA/MA programmes, but others were simply designed to expand the educational offer. Not only has the EUI project become much broader and more versatile, but it is also being implemented at several levels within the university structure. According to the interviewees, both developments came as quite a surprise, especially the depth of the EUI's penetration into the structure of Polish HEIs.

Third, it is rather surprising that university representatives see the process of internationalisation in a completely new light now. The internationalisation of Polish HEIs was seen as something new (for some even a fashion) which happened to accompany higher education reforms under the pressure of university rankings. It was also frequently perceived as an end in itself. Some universities viewed foreign students as a substantial source of income that could help compensate for the decrease in the number of fee-paying students. Indeed, the number of international students has recently increased, but mostly due to political turbulences in Belarus and Ukraine and, most recently, the Russian invasion of Ukraine (Sin, Antonowicz & Wiers-Jenssen, 2019). But still, for many (often non-metropolitan) universities, it appears as a form of superficial activity that contradicts the Humboldt university tradition and therefore is decoupled from three main missions: research, teaching and knowledge transfer. Furthermore, previously internationalisation was only fragmentary as it involved only a small group of active researchers and a handful of administrative staff from the international cooperation office. In this way, the EUI engages a broader spectrum of the academic community and reaches out to very different corners of the university, previously overlooked in internationalisation.

It's just some kind of machine that these tentacles are spreading wider and wider, further and further.

[vice-rector, non-metropolitan university]

The unintended outcomes of participation in the EUI caused massive challenges for university management. For this reason, too, the project of EUI is very different from any previous experience and therefore it ultimately becomes a significant managerial challenge for university rectors and senior administrators. The scale and versatility of the EUI project have affected a variety of aspects of university performance and successfully permeated the university structure. Consequently, the EUI has become a strategic challenge, as was noted by many interviewees who also stressed that only the EUI has truly opened the gates to the European Higher Education Area.

Conclusions

For Polish universities, the European alliances emerge as the mean to fully embrace the European Higher Education Area. The study shows that despite being formally embedded in the EHEA, the authorities of universities in Poland shared the sense of being unable to take full advantage of being part of Europe. It was not until joining the EUI that new opportunities opened up that were previously seen as beyond their reach.

Overall, the collected empirical material indicates that both the dynamic development of the EUI, as well as its horizontal character surprised the authorities of universities in Poland. It was not expected to be such a versatile, multifaceted project that spontaneously blossomed in so many unexpected university locations. EUI has become a window of opportunity not only for university as an institution but also for many active individuals scattered across the campus.

Groups of people who have never had anything to do with internationalisation. Whole groups in different administrative, supportive cells like this.

[vice-rector, non-metropolitan university]

It has been so, despite the transboundary crises of the COVID-19 pandemic, which cut across geographic, administrative, functional, infrastructural, cultural and temporal boundaries (Ansell, Boin & Keller, 2010; Head, 2008). The literature defines such crises as low-probability but high-impact events which make them particularly challenging from a planning and governance perspective. The pandemic slowed down the development of the EUI, but the real problems emerged with bureaucratic barriers that specifically undermined the joint educational initiatives. The problem with establishing joint BA/MA programmes, the lack of a European diploma and many other seemingly minor problems turned into highly burdensome legal and administrative impediments. These are the primary reasons why major educational activities (joint BA & MA programmes) within the EUI have not yet managed to gain the expected momentum. Instead, much of the institutional commitment has been shifted to other, smaller educational initiatives and spilt over into European project applications in research and training. These unintended and unexpected developments are generally regarded in Polish universities under study as very positive

and highly appreciated outcomes. As the EUI project gradually evolved, it also gave rise to multiple bottom-up initiatives, many of which transformed into stable institutional collaboration in joint education ventures. It required, however, revisiting the initial expectations regarding the institutional engagement of Polish universities in the EUI.

Finally, as emphasised by the interviewees, participation in the European alliances empowered the most active and internationally-oriented employees, faculties and students, which has become a leverage for the modernisation capacity of the universities under study, with potentially positive outcomes in the future.

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2

Management and Legal Perspectives on the Participation of Polish Universities in the European Universities Initiative

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Introduction

Following the inception of the European Universities Initiative in 2019, 340 European universities (Craciun, Kaiser, Kottmann & Van der Meulen, 2023) have joined forces to create the requisite space for innovative teaching and research projects. Universities in Europe have been working under the banner of the EUI in order to strengthen transnational collaborative partnerships and create better regulatory conditions. Among those universities, there are 21 Polish higher education institutions (HEI), strongly engaged in the co-creation of a new model of European university. The experience of Polish universities reflects the wide range of benefits and challenges that EUI projects present for HEI. Every university participating in the alliance is profoundly influenced in a number of areas, especially in the field of management.

Two recent studies on the EUI requested by the EU, i.e. *Council recommendation of 5 April 2022 on building bridges for effective European higher education cooperation, Council of the European Union, 2022/C 160/01* and *The European Universities Initiative: first lessons, main challenges and perspectives* (Craciun et al., 2023), shed light on the initiative's challenges and attempt to evaluate the EUI's selection criteria, as well as assess the European university alliances in terms of the benefits they bring and the challenges they face in areas such as governance or funding. Despite a growing body of literature on that matter, there is a lack of research on the specific national context of the implementation of projects within the EUI. Therefore, this explorative study aims to examine the two major areas of concern in the implementation of EUI projects at Polish universities: management issues and legal barriers to developing joint study programmes.

The part of the study addressing the issue of management is based on the project lifecycle concept, defined by researchers as the implementation period from design to closure. While this concept is described variously by several authors, we have chosen to focus on the five-stage process of project management (Wyrozębski, 2015). The five stages of project management are as follows: initiating, planning, executing, monitoring, and closing. This concept was applicable in all five stages only to those institutions which successfully completed the first pilot EUI project. Others were surveyed within four stages of project management or fewer, depending on their time of application and the development phase of the project.

Referring to the gap in the literature, the following two research questions were posed:

- → What is the experience of Polish universities involved in the European Universities Initiative in project management and the development of new study programmes?
- → What challenges and opportunities do Polish universities perceive in the management process as they implement EUI projects?

The results of the most recent research on the management process in the implementation of EUI projects are presented in this chapter. The focus is on the legal conditions for the implementation of study programmes and the management process. The research is based on questionnaires and semi-structured interviews on the decision-making process and regulatory issues.

The Concept of the European Universities Initiative

The results of the literature review show that the novelty of the European Universities Initiative (EUI), which started with the first call in the autumn of 2019, has only attracted a limited number of publications on the topic. Most of the available scientific papers and reports on the EUI are devoted to assessing the general challenges faced by the existing European Universities Alliances (EUA) and their future. Given that our study addresses the managing capacity of Polish higher education institutions participating in EUAs, together with the legal burdens related to the establishment of joint programmes, the search was limited to the literature on the management, organisation, and legal aspects of the institutional performance of EUAs. To provide

a reliable overview of published research, three main databases were examined for academic and grey literature: Scopus, ERIC, and Google Scholar. The keywords used were "European Universities Initiative", "European University Alliance" and "European Universities Alliances". Only the literature in English and about Europe was included. The selection criteria involved both qualitative and quantitative peer-reviewed and grey empirical literature published from 2019 onwards, and examined on March 2023. In this process, eleven scientific articles were selected including some aspects of institutional management and legal framework. Moreover, two articles by Polish authors that are not listed in the database of grey literature were cited, as were the reports of several European institutions assessing the EUI.

This literature review will follow a narrative approach to obtain insight into the research topic of management and legal perspectives on the participation of universities in EUAs. It is to be stressed that there is an evident gap in the thematic literature which would render a contribution to an institutional approach concerning the organisation and management of alliances inside universities a truly complex, challenging and demanding task. It should also be emphasised that the literature search yielded some information on legal and administrative barriers but has not provided specific national and transnational legal frameworks for discussion.

Pursuant to the thematic literature review, a number of authors have recognised the EUI as a new and innovative form of alliance formation (Gunn, 2020) and an important instrument for European integration (Craciun et al., 2023), moved to the fore of the university transformation agenda by the European Commission (Estermann, Bennetot Pruvot & Stoyanova, 2021), making the EUI a "game-changer" in transnational collaboration. Nevertheless, the success of this initiative not only relies on smooth coordination at the European Commission level, enabling the development of a coherent framework for EUAs' activities, or merely on the governing bodies of such alliances but also on the relevant operational capacity and resources of a particular university (Craciun et al., 2023). As has been stated by Estermann et al. (2021), the governance and organisational structures of alliances are an evolving matter and vary from one alliance to another. In light of this statement, we can assume that the institutional EUI management and organisational structures are also diversified among universities.

Presumably, the management model and organisation are evolving at the institutional level similarly to the alliance governance. Moreover, institutional management capacity seems to be the same across various types or sizes of universities (comprehensive, technical and life sciences universities). It might be argued that the considerable effort which is expended to create an efficient governing and organisational structure of the alliance is parallel to the institutional managing capacity and, as such, could be neglected in envisioning the future scenario of successful alliances. Maassen, Stensajer and Rosso (2022), demonstrate a number of institutional perils hidden behind the institutional potential of universities to implement the EUI. What is more, it is unclear if institutional leadership is driving alliance development or whether key roles in this process are played by other stakeholders. These aspects are also discussed in our study.

As noted by Klemenčič (2022), in the last three decades, European higher education has experienced more reforms than in any other such (short) period in history. The EUI is compatible with the wide range of current reforms of higher education and reflects its crucial concepts. In order to ensure the effective implementation of the initiative in Polish universities, it is worth providing an empirical study which demonstrates the strengths and weaknesses of managing universities and their organisational capacity, as well as identifying national legal barriers. This publication would complement the available literature with new data and recommendations which would be especially significant for Polish universities and higher education institutions. Moreover, this research would present up-to-date information on the implementation and development of the European Union's idea of European Universities in Poland.

Methods (Participants, Data Collection and Analysis)

"The evaluation of the EUI concept" is a two-phased mixed-method research design. The research aimed to collect the experiences of representatives of Polish universities involved in preparing and implementing European Universities Initiative (EUI) projects. Currently, 21 universities are involved in the EUI initiative in Poland. On this basis, a representative group for the study was selected, taking into account experience in participating in the project and the development of internal procedures and structures, both in terms of management and legal issues.

Particular emphasis was placed on identifying and describing the challenges associated with the EUI project management processes, as well as identifying the legal barriers associated with the launch of study programmes. The research was conducted between January and April 2023, and it consisted in:

- → the qualitative analysis of applicable legal regulations,
- → developing and conducting surveys (legal part),
- → conducting interviews (legal part) with leaders involved in applying for and implementing the EUI at Polish universities.

There were two phases of data collection. The first one was an online survey, with the questionnaires prepared as a form to be completed via the Internet. A link was sent to the above-mentioned leaders from 21 universities, of which 16 universities filled out the questionnaires. The survey questionnaire was divided into four sections to identify the challenges associated with the stage of EUI project application, the legal aspects associated with EUI study programmes, and the work organisation and tools used to implement EUI projects. The purpose of this phase was to determine how frequently the issues we investigated were observed at the universities that took part in the survey. The issues raised in the responses to the closed and open-ended questions enabled the development of questions for the semi-structured interviews which were carried out in the second phase of the study.

We employed purposeful sampling in the research. The university's participation in applying for and/or implementing the EUI project was used in order to select participants for the sample. The semi-structured interview method was used to gather additional data. Representatives of university authorities as well as the academic and administrative/legal staff who were directly involved in the process of applying for and/or managing EUI projects were invited to expert interviews. The total number of experts who were interviewed was 15. They were divided into two groups: experts describing the managing processes and experts reflecting on the legal conditions of study programmes implementation. Eight out of 15 experts took part in interviews on both subjects. There were seven interviews on the managing process and eight interviews on legal conditions. The interviews lasted about 60 minutes each and were conducted via the MS Teams platform. The interviews were recorded and subsequently

transcribed. After transcription, the recordings were destroyed. Before the interview, experts were supplied with an informed consent form with information about the purpose of the study, the rights of interview participants, and how the data generated at this stage of the study would be used. All of the university names were converted into numerical identifiers (R1–R18) that were used in the data analysis process. The thematic analysis was used to analyse the qualitative data from the second phase of the study (management processes). This type of data analysis was particularly useful in identifying key themes and patterns in the data related to how university representatives involved in EUI projects approach and manage various management processes and the legal conditions connected to the implementation of study programmes. First of all, to capture meaningful segments of the data, we generated the following codes, and then we looked for patterns and connections between the codes to create broader concepts (themes).

Table 2.1. Codes and themes of the study

CODES			
– Engagement of university authorities; – Incentives; – Integration of professional and academic staff.	– Good practice in networking and collaboration; – EUI synergies with other networks.	– Internal and external communication; – EUI organisational structure.	– EUI as a new dimension of internationalisation.
THEMES			
Human capital engagement	Collaboration experience	Organisational challenges	Added value of EUI participation

Source: own elaboration.

The Management Process in the Implementation of EUI Projects

As mentioned in the Methods section, this study was divided into two phases: an online survey and semi-structured interviews.

The First Phase of the Study

We examined data from the first phase. We classified higher education institutions into four types, based on the classification of the Polish Central Statistical Office[1]: universities (*uniwersytety*); technical HEIs (*uczelnie techniczne*); agricultural HEIs (*uczelnie rolnicze*); HEIs specialising in economic sciences / schools of economics (*uczelnie ekonomiczne*). These institutions are all located in large and medium-sized Polish cities. The category of comprehensive HE institutions includes five universities with student populations ranging from 20,000 to 40,000. The second category includes seven urban-based technical universities with student populations ranging from 4,000 to 30,000. The third category includes four profiled universities and schools that fall into two categories: life sciences/agriculture and economics. As shown in survey responses, there appears to be a wide range of challenges and activities that are common to all respondents; however, there are some differences depending on the size of the university and its location.

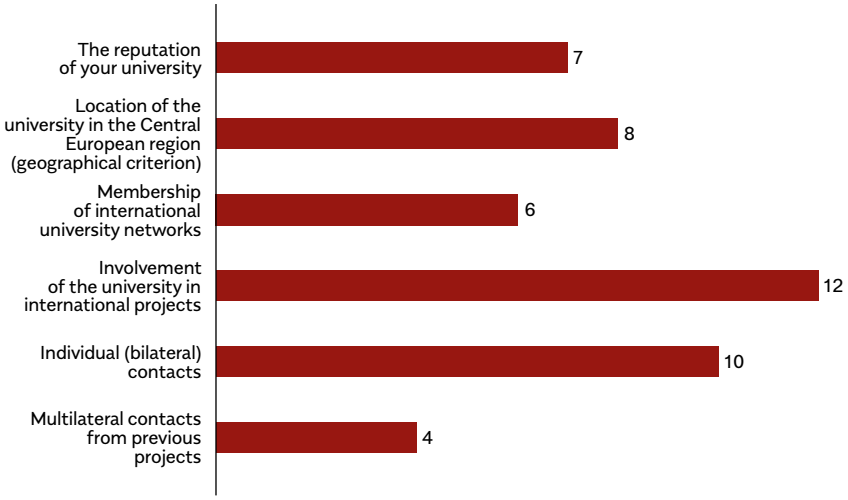
The following were the three main areas of interest:

- → Phase of EUI project application;
- → Work organisation and tools used in the implementation of the EUI project;
- → The consequences and management of the implementation of the EUI.

The first area investigated the reasons for joining the project consortium, the level of participation of Polish universities in the application process, and the category of employees tasked with preparing the application. Most respondents (12) indicated that the participation of universities in other international research and education projects played a significant role in either being invited to or initiating a consortium. Before the formation of the project consortium, ten respondents emphasised the importance of individual contacts among researchers. The geographical location of Polish universities was the third indicator of project participation (8), followed by the institution's recognition in Polish and international environments (7).

1 E.g.: bit.ly/3KoGaLY

Figure 2.1. Answers to the question "What made your university decide to join the project? Please select up to three key answers"

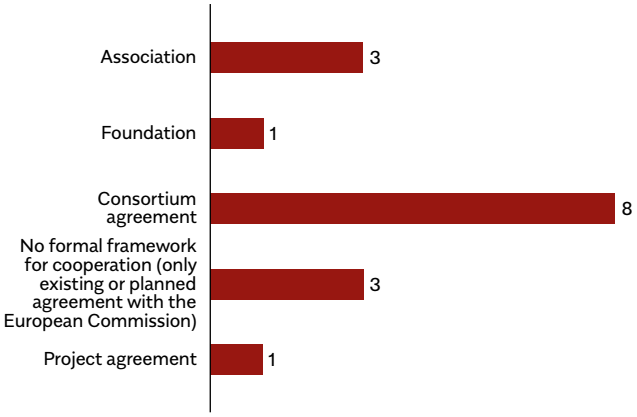


Source: own elaboration based on survey results (*N* = 16).

The development of EUI projects involved the participation of all the Polish universities in question. The university representatives who handled the preparation of the application were divided into academic and professional (administrative) employees who worked in informal groups. The second group involved in the aforementioned procedure were representatives of university administration.

The second area of survey findings shows that eight universities organised project consortiums under the terms of consortium agreements, three universities formed alliances, and the remaining respondents said that their universities collaborated without the aid of any formal legal framework.

Figure 2.2. Answers to the question "What legal form have you adopted for the cooperation within the European University that you co-found with your partner universities?"



Source: own elaboration based on survey results (*N* = 16).

According to the study results, 12 respondents use project management methods. The lean action plan, methods of group decision-making, SWOT analysis, and work division structure are some of the tools that are applied most frequently. The project's planning and implementation phases saw the most extensive use of the aforementioned tools. The survey respondents did, however, list additional IT applications that they utilised to help the development of the project, including MDESK Zoom, Google workplace, MS Teams, Sharepoint, Draft.io, Miro, JIRA, LMS, Moodle, Only Office, Slack, and their own university systems: eCZP, SOD, and DXP.

When questioned about several management topics, the respondents noted a lack of appropriate tools to support project development in the following management areas: communication, project costs, human resources, project quality, project integration, and time management.

The presence of certain internal factors that impacted the success of the implementation of the project was another area that saw notable results. Table 2.2 presents a list of factors in order of importance for project success (up to 10 most important factors). The survey's findings also offer insightful information about the external factors that impede effective project development.

Table 2.2. Internal and external factors with the impacts

INTERNAL FACTORS		EXTERNAL FACTORS	
– Support of professional staff; – Effective communication; – Human capital capacity; – Regular meetings and feedback on project progress; – Grant resources as well as institutional funds used in project implementation; – Management skills; – Popularisation of the project at the institutional level; – Capacity of the university to implement joint study programmes, high quality of education and research projects; – Competences of academic teachers.	– IT tools supporting project implementation and teamwork; – Popularisation of the project outside the university.	– National and institutional legal aspects.	– Current economic situation of the country; – Position of the university in international and national rankings; – Political aspects and limitation of university autonomy; – Consequences of the coronavirus pandemic.

Source: own elaboration.

The controlling procedures of EUI implementation were also an area of interest in the study. When asked about the specific procedures used to monitor project development, respondents reported the importance of such procedures as project scheduling, cost control and control of preparation for specific tasks, risk and quality control of a project, control of the exploitation of resources, as well as the control of project collaboration. However, when asked about the impact of the controlling procedures on the changes in project implementation, the results showed that seven respondents did not implement any modifications to the project. One scenario involving the quality control of the courses provided to students within the project led the respondents to adopt a two-stage control, first at the local level and then at the consortium level. Six respondents noted changes in the project team and communication management.

The European University Initiative was included in the development and internationalisation plans of 14 Polish universities that participated in our study. This illustrates how important the project is to the participating universities. Following that, respondents (13)

emphasised that the EUI creates a community with unique features, such as a greater emphasis on the internationalisation of research and education, a new standard of collaboration between higher education institutions, stronger student collaboration, high institutional engagement in fostering the local communities, as well as the development of novel educational formats.

Overall, the survey findings offer insightful information on how crucial are EUI initiatives implemented within Polish universities. Even though most of the respondents are aware of the project's importance, and are strongly engaged in its implementation, they do reveal certain obstacles brought on by the university's organisational culture, as well as by local or national legal requirements or a lack of access to funding and project management resources. The true potential of the project might be realised fully with improvements in these areas, as well as the expansion of the international cooperation of Polish universities in a new dimension that is horizontally distributed within the organisational structure of each institution.

The Second Phase of the Study

Several themes emerged from expert interviews, reflecting the various challenges and experiences encountered while managing a given EUI project at Polish universities. The organisational challenges at universities, as well as human capital engagement, were two significant and interconnected themes. In most cases, special offices were established to handle the administration of the EUI project. These units are embedded in the divisions under the auspices of vice-rectors for education or vice-rectors for international cooperation. In some cases, a rector's representative for the consortium was appointed to oversee the work within the project. Most of the participants described the initiative as top-down, with a strong initial and ongoing engagement of rectors or vice-rectors. One of the respondents, for example, stated:

The authorities believe that this is an important project. [...] *We are in a consortium with good universities, rich universities, very demanding, so I also believe that this is important for us,* [...] *fortunately, the authorities are so involved in supporting these initiatives.*

[R7]

Another participant reported:

The Rector is very interested. Both in terms of education and research. The Rector attends all meetings of this board, where decisions are made, and plans are discussed.

[R14]

The respondents emphasised the importance of involving the existing university units in the implementation of the project. International cooperation departments, project service departments and faculties were among the most frequently mentioned units. One of the respondents noticed the need to harmonise internal collaboration:

This takes on a new dimension because it is a completely different type of collaboration [...] *I guess the big goal is to harmonise as many of these areas as possible. Because I don't want to say «communitise», but rather harmonise, and that's probably where it'll go in our case, we haven't dealt with this type of collaboration with partners before.*

[R7]

In the sphere of organisational challenges, internal and external communication was evidenced as one of the demanding factors. It was agreed that smaller universities have easier internal lines of communication than larger ones, but the former face more problems related to insufficient human resources (this aspect also referred to some of the larger universities), less experience in and capacity of networking and joint collaboration, as well as less financial resources. Some respondents mentioned that external communication was initially rather difficult (R12) and later became smooth and some emphasised (R9) that communication with Western European universities was much harder than with their Eastern partners. All respondents agreed that there was excessive bureaucracy resulting from overlapping duties related to project administration (the need to adapt to consortium leader rules as well as national and institutional ones).

Another recurring topic was the importance of engaging university employees (both professional and academic staff) in the implementation of the EUI project. Respondents emphasised the importance of

establishing a formal unit to support the implementation of project tasks. The majority of respondents cited financial incentives as a motivator (supplements to salary). Two respondents (R7 and R12) raised the possibility of including teaching hours from study programmes (created within the EUI) in academic teachers' workload. One respondent mentioned the novelty of EUI projects and the willingness to become involved in a new initiative as a motivating factor for employees. However, this respondent pointed out that the initial enthusiasm of employees may fade over time and that other solutions will be required:

I am also aware that in order to sustain this enthusiasm, we will need to provide something to employees, [...] *to sustain this involvement so that people want to continue to be creative and very active in it.* [...] *I'm not sure if it will be money or something else. It's difficult for me to say, while it will undoubtedly be required, because adding more responsibilities to the current ones may cause more frustration than the desire to work.*

[R14]

In addition, interviewees indicated that EUI projects resulted in improved integration of professional and academic staff at universities. Particularly noteworthy is the fact that some alliances paid particular attention to the increasing role of the professionalisation and expertise of administrative staff by treating them as partners and equal contributors to the EUI instead of the formerly exclusive role limited to supporting the academic staff. Thus, one of the respondents (R1) highlighted the fact that the employees in university administration should be referred to as "professional staff" rather than "administrative staff" and, perhaps most importantly, one of the alliance's initiatives is intended to develop a wide range of skills and competences within this group.

Furthermore, several interviewees shared a similar perspective on the integration of professional and academic staff. They perceived it as being partners in project implementation (R7, R12) and partners in terms of joint decision making. Other respondents perceived EUI projects as a common success (R5), a new aspect of staff networking (R14) or a partnership with common goals (R1). It was notable that all respondents described both groups of employees as complementary to the success of projects.

Another theme, namely the collaboration experience, addressed issues related to best practices in collaboration together with synergies of the EUI with other networks. Several interviewees mentioned the importance of institutional experience in participating and collaborating with university networks featuring global partner universities as the basis for ensuring the rapid process of joining the consortium, preparing the EUI application or creating the organisational structure of EUI projects (R7, R1, R9), while others (R17, R5, R12, R14) emphasised the uniqueness of EUI projects.

We have identified a fourth theme as an added value deriving from the participation of a university in the alliance. Respondents frequently mentioned the EUI as having been significant to the changing perception of internationalisation:

The EUI is something different, a different relationship between partners, positive value, increasing the number of international students, new didactic methods and leadership in courses.

[R12]

The EUI is perceived as an entirely new perspective of internationalisation that goes beyond traditional student exchanges or bilateral cooperation. It was stressed (R1, R17) that Polish universities which will not have the chance to be members of an alliance, will maintain a different approach to internationalisation than EUI members. On the one hand, this may create a risk that there will be an immense gap in internationalisation between Polish universities, but on the other hand, EUI member universities will stimulate the non--members to engage in various joint collaborations with other European partners or even to establish alliances despite the lack of EU funding. One of the respondents expressed a strong belief that Polish universities should actively participate in EUI:

I really believe that our place is in Europe, in projects in European consortia, and that this is the only way to avoid being left behind in terms of scientific advancements and progress. I have no doubt that this was the only way. It is worth building a consortium with strong and very good universities, learning from better ones and being open

and easy going in personal relations, social networks and social capital as a resource.

[R17]

According to this phase of the study, we can see that the EUI is a great opportunity for Polish universities, especially in the area of internationalisation, but at the same time, universities need more bureaucratic flexibility and more professional staff engaged in managing the project and being able to stay active in the adaptive landscape.

The Legal Aspects of the Implementation of EUI Projects

Legal Forms of Cooperation within the EUI

As a result of the conducted research (surveys and interviews), the research team has found that in the vast majority of cases, cooperation between Polish universities participating in a given EUI is based on the principles set out in a consortium agreement (this form was indicated by nine Polish universities: R3, R6, R7, R8, R9, R10, R11, R12 and R18). In three cases, for the purposes of cooperation, associations based on foreign law were founded (R1, R2, R14) and in one case, a foundation (also based on foreign law – R15) was established. In the remaining cases (R4, R5, R13, R16), EUI cooperation has not yet taken on any formal legal framework beyond the concluded agreement with the European Commission (Grant Agreement). Out of these, one university, currently without a formal cooperation framework, indicated in the survey that for the needs of the alliance in which it participates, a foundation under foreign law is to be established in 2023. During the interviews, it was also found that within one of the European Universities, which is currently operating on the basis of a consortium agreement, the establishment of an association is planned. However, this initiative is currently suspended due to legal restrictions encountered by one of the partners from outside of Poland.

During the interviews, the respondents were asked about the benefits of closer cooperation within the existing, planned or hypothetically possible separate legal entity (association, foundation,

or company – although none of the universities indicated company during the interviews). The answers can be divided into three categories:

- → the establishment of a separate legal entity would allow for greater integration of partners, closer cooperation and more prospective planning for future actions, not limited only to thinking in the category of a project/projects (this answer was indicated by the leaders of three universities: R3, R14 and R18),
- → the establishment of a separate legal entity is considered redundant, as it would generate additional and unnecessary costs (including salaries for employees hired by such an entity) – this answer was indicated by the leaders from one university (R11),
- → it is hard to say – this was the answer given by leaders from the remaining four universities. In three cases (R7, R8, R10) it was indicated that at the current stage, relevant analyses are being carried out within their European University alliance, but no decision has yet been made on this subject. In one case (R1), the person participating in the interview was not directly involved in the process of establishing the association, and is not currently directly involved in its functioning, therefore had no knowledge about the reasons for adopting such a strategy.

It is worth noting that as part of the answer indicated as 1), leaders from one university stated that their assessment of the benefits of establishing a separate legal entity has recently changed. While initially, together with partners from foreign universities, they did not recognise the need to formalise their cooperation, now they perceive the establishment of such a legal entity as a chance for the continuation of the EUI even when/if the European Commission ends financial support for the project.

According to all interviewees, the idea of European Universities is recognised as a great opportunity for Polish universities, which is why it should not be limited to thinking in terms of project implementation only, but provide for the continuation of inter-university cooperation even in the absence of another grant or the end of the systemic financing of the EUI by the European Commission. According to most of the respondents, establishing a separate legal entity is a guarantee of continued cooperation also in the context of obtaining other sources of financing and long-term cooperation.

Since the study focused on identifying legal barriers within the Polish legal system, respondents were also asked about the need of changing the provisions of Polish law which would enable Polish universities and their EU partners to form associations under Polish law. While the Polish Act on Foundations[2] does not contain restrictions on the creation of foundations by legal persons, including those with their registered office outside the Republic of Poland, the Act on Associations[3] does not allow legal persons (including foreign ones) to establish associations. Also, the Act on Higher Education and Science[4] which could be considered as *lex specialis* to the aforementioned acts in this regard, does not provide for it as of now. When asked, none of the respondents answered in the affirmative at present to the question of whether such possibilities would facilitate their cooperation within the EUI. Regardless of whether a given university cooperates within the EUI on the basis of an already functioning legal entity (association) or whether it is just considering establishing a separate legal entity, in all cases, the responses indicated that the partners either have decided to establish or are considering establishing such an entity under foreign law. At the same time, Belgian law was indicated as the most favourable by Polish and foreign partners within the given EUI.

Financing

Leaders of all interviewed universities indicated that at the stage of applying for funding under the EUI, their universities received financial support from the Ministry of Education and Science that was equal to their own contribution. This funding turned out to be genuine support appreciated by all universities. Nevertheless, all the universities whose leaders were interviewed perceive the idea of developing international cooperation between universities in broader terms than just the implementation of programmes implemented by the European Commission. In connection to the above, all universities reported the need to develop a financial support programme at the national level which would enable Polish universities to continue cooperation

2 In Polish: Ustawa z dnia 6 kwietnia 1984 r. o fundacjach, see: References.

3 In Polish: Ustawa z dnia 7 kwietnia 1989 r. Prawo o stowarzyszeniach, see: References.

4 In Polish: Ustawa z dnia 20 lipca 2018 r. Prawo o szkolnictwie wyższym i nauce, see: References.

with foreign universities under the EUI even after or despite the end of funding from the European Commission.

Conducted and Planned Didactic Activities

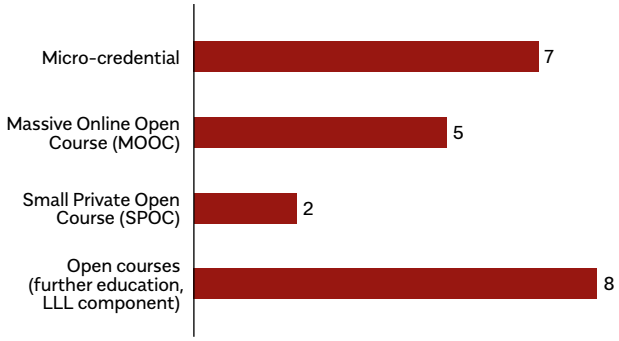
During the survey, university leaders were also asked about didactic activities conducted within the EUI, broken down into joint study programmes (3 types), joint education of doctoral students and single courses. Respondents answered about both current and planned activities. According to the answers provided,

- four universities already conduct joint first-cycle programmes; eight more universities have plans to conduct such programmes,
- four universities conduct joint second-cycle programmes; nine more universities plan for such studies,
- none of the higher education institutions currently runs joint uniform master's programmes; two are planning to commence such programmes,
- four universities conduct joint education of doctoral students; nine more universities have such programmes in their plans,
- fourteen universities run single courses; two other universities are planning such didactic activities in the future.

In a further part of the survey, among the other indicated conducted or planned didactic activities, the following activities were mentioned:

- micro-credentials,
- Massive Open Online Course (MOOC),
- Small Private Online Course (SPOC),
- open courses (training, LLL element),
- workshops,
- summer and winter schools,
- shared courses, joint courses,
- language courses,
- blended intensive programme (BIP),
- open lectures,
- individual learning paths.

Figure 2.1. Answers to the question "Please indicate other teaching activities conducted by the university as part of the EUI. You can select multiple answers"



Source: own elaboration based on survey results (*N* = 16).

The survey also included more detailed questions about the role of the university in joint study programmes, solutions adopted and the barriers already encountered or potential unknowns which were further analysed during the interviews. Based on the information obtained, the research team identified legal barriers or not yet fully identified risks described below, which hinder or prevent the implementation of joint study programmes, joint education of doctoral students or other didactic activities.

In connection with the above, two general remarks can be made:

- → Polish universities perceive the domestic legislation as quite flexible in comparison to the legislation of some partner universities from other countries, which does not mean that Polish legislation is sufficiently prepared to implement the EUI without any obstacles.
- → In many cases, Polish universities have problems with the proper interpretation of legal provisions, in particular, the Act on Higher Education and Science – if something is not prohibited, but also not explicitly allowed by regulations, then there is a natural fear of applying a particular solution; universities are cautious about using purposive, systemic or functional interpretation if the linguistic interpretation does not dispel doubts as to the applicability (or non-applicability) of a given provision, as this could trigger certain, also financial, consequences to them.

Other Teaching Activities

Within this scope of activities of European Universities, Polish universities as a rule do not identify barriers or legal restrictions. In the case of two universities (R3, R10) whose leaders were interviewed, only the need to regulate the micro-credential formula in the Polish legal system was indicated. Respondents pointed out that the lack of regulation of micro-certifications in the Polish legal system (e.g. under the Act on Higher Education and Science) does not prevent this form of education as it causes that:

- first, the university itself must find funds for such activities or look for alternative sources of financing. The lack of statutory regulations concerning this form of education in the Act on Higher Education and Science makes it impossible to finance it within the higher education system,
- secondly, micro-credentials are currently outside the qualification framework. In such a situation the question arises of how to encourage students to take courses that they cannot make use of.

The leaders of both types of universities highlighted the fact that a special team addressing these issues had already been established at the Ministry of Education and Science, therefore it should be assumed that work on the statutory regulations concerning micro-credentials is in progress.

Joint Studies

As part of the preparation or implementation of joint study programmes, the following existing or potential legal barriers were mapped (based on the collected surveys and interviews).

No Clear Study Programme Rules

There are no clear rules as to whether a Polish university may conduct joint study programmes by incorporating already existing programmes (within their university) into joint programmes. According to Art. 60 sec. 2 point 1) of the Act on Higher Education and Science, a Polish higher education institution may conduct joint study programmes if it has established them pursuant to Art. 53 sec. 7 of this Act. According to some leaders (R3), this means that existing programmes cannot be included as joint study programmes and new ones should

be created. Irrespective of whether the functional interpretation of this provision would allow for its different understanding, it is postulated to amend it accordingly.

Problems with Differences between Recruitment Procedures for Students from Poland and from Abroad

According to Art. 72 sec. 2 of the Act on Higher Education and Science, a person is admitted to a university through entry on the list of students while the rules for determining the conditions and procedure of recruitment are set out in Art. 70 of the aforementioned Act. On the other hand, according to Art. 323 sec. 1 point 6) of the said Act, foreigners may undertake studies on the basis of an administrative decision of the Rector. Pursuant to point 2) of this provision, such a basis may also be constituted by an agreement concluded by a Polish university with a foreign University. However, this possibility does not change the fact that the admission procedure remains different depending on the student's country of origin. Meanwhile, a joint study programme may stipulate that recruitment for the first year is carried out by a Polish university for all students (and then the mobility path is selected). Therefore, there is a need to amend Art. 72 of the Act, e.g. to enable the admission of a Polish student to a study programme also based on the Rector's decision or an agreement with a foreign university which would enable (under the EUI) Polish universities to apply uniform recruitment rules for all students interested in participating in a particular programme.

Lack of Clear Accreditation Rules

Regardless of whether a Polish university may conduct joint study programmes based on Art. 60 sec. 2 in connection to Art. 53 sec. 7 of the Act on Higher Education and Science, it may be necessary to obtain accreditation (e.g. in connection with the willingness of a foreign university to participate in the programme, where accreditation is required under national procedures). If a given programme were to be run by a Polish university, such an institution would have to obtain accreditation in accordance with the European Approach for Quality Assurance of Joint Programmes procedure, allowing for the recognition of Polish accreditation in the countries of partner universities. It is possible to choose a foreign accreditation agency

in this case, but there is no reason why a domestic university could not apply for accreditation by the Polish Accreditation Committee (PKA), which would be able to use the European Approach procedure under the guidelines of the European Quality Assurance Register.

The research team found that at least one university is currently conducting preparatory activities to determine the path of proceedings leading to obtaining PKA assessment of a joint study programme created under the EUI. The problem it faces is the lack of clear rules as to how to carry out such a procedure, which was also pointed out by leaders from other universities, among others in the context of applying for funding for an Erasmus Mundus Joint Master (EMJM) project. In particular, uncertainties concern the question of how to start such a procedure (since it is a university with autonomy over its programmes and in principle does not need *ex-ante* accreditation), how long the procedures will take, etc.

Considering the above, in order to facilitate the functioning of Polish universities within the EUI, it would be desirable for the Polish Accreditation Agency to develop a set of such rules (akin to guidelines). They would be extremely helpful, especially if Polish universities would be willing to take on the role of leaders in a given programme/format implemented under the EUI. At the moment, they assume that obtaining accreditation in Poland in accordance with the European Approach procedure is possible, but it is not clear how to achieve it, especially in line with Polish procedures.

During the interviews, attention was also drawn to the lack of clear regulations which would explain what the assessment of joint studies conducted with a foreign university (universities) should look like. In this regard, clarification of Art. 249 of the Act on Higher Education and Science would prove to be very helpful. Above all, it would be beneficial to assess whether the evaluation procedure would differ based on whether the Polish university is the leader of that particular programme (leading university) or only one of the partners.

Problems Related to the Issuing of Joint Degrees

According to Art. 60 sec. 4 of the Act on Higher Education and Science, a graduate of a joint programme (conducted with a foreign university) may receive a joint diploma that meets the requirements set out in the regulations issued on the basis of Art. 81 (to the extent

referred to in Art. 81 point 9). The Regulation on Studies[5], in force as of the date of this publication, defines, among others, requirements for a university degree (§ 32) and for a joint degree (§ 33).

Pursuant to § 33 sec. 1 of the aforementioned Regulation, in the case of joint studies, referred to in Art. 60 sec. 1 of the Act (Act on Higher Education and Science), a joint diploma shall be issued by the higher education institution indicated in the agreement referred to in that provision. In turn, sec. 2 of the above-mentioned provision lists the necessary elements of the joint diploma, on the one hand requiring that it should contain the necessary elements indicated in § 32 and, on the other hand, adapting the content of the joint diploma to its unique characteristics. In accordance with § 33 sec. 2 point 4) of the Regulation on Studies, in the case of study programmes conducted with a foreign entity, the information "issued in the Republic of Poland" is not a necessary element of the diploma. The above provisions of the regulation directly indicate the possibility of issuing a joint diploma by a foreign university outside the territory of the Republic of Poland. Nevertheless, as a leader of one of the interviewed universities pointed out, there are doubts as to whether the Minister exceeded the statutory delegation, as the Act on Higher Education and Science itself does not indicate the entities authorised to issue a joint diploma (since this was indicated in a lower-level act). This is one of the examples when universities have problems with regulations, as pointed out previously in this study. Therefore, it seems desirable to clarify Art. 60 sec. 4 of the said Act and there is a need for a clear indication that such a joint diploma may be issued by a partner university (according to the statutory legal regulations of their country).

Another doubt signalled by university leaders is the question of the possibility of applying § 33 of the Regulation on Studies in a situation where in accordance with the concluded agreement, the joint diploma was to be issued by a partner university, i.e., a university from outside of Poland. Here, the position presented in the letter of the Foundation for the Development of the Education System, the Polish National Agency for the Erasmus+ Programme

5 Regulation of the Minister of Science and Higher Education of 27 September 2018 on Studies (in Polish: Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 27 września 2018 r. w sprawie studiów, see: References).

and the European Solidarity Corps [MS3] may prove to be helpful. According to them:

[...] *diplomas prepared and issued by foreign universities (also in the case of joint studies with a Polish university) are subject to the provisions of the above-mentioned regulations that do not apply. The diploma supplement shall be drawn up and issued by the higher education institution which draws up and issues the diploma.*
[adapted from *Informacja na temat podstaw prawnych...*, 2023]

In light of the above, it is unclear to whom the provisions of the regulation are addressed in a situation where the joint diploma is to be issued outside the Republic of Poland. Should it be the responsibility of the Polish university to ensure that the agreement referred to is in line with Art. 60 sec. 1 of the Act on Higher Education and Science? It seems that in such a case, the provisions of the Regulation on studies should include an appropriate clarification that will help to dispel similar doubts.

A major problem signalled by one of the universities might also derive from the content of § 22 sec. 2 of the Regulation on Studies, according to which the name of the university in a copy of a diploma is left in its original wording and the professional title, together with the result of graduation, is in Polish. According to the interviewed leaders, this may hinder the development of the idea of joint diplomas as partner universities may not be interested in issuing professional title copies in Polish. In light of the above, it would be desirable either to remove this limitation from the provisions of the Regulation on Studies or to introduce an exception in the case of joint studies, so that copies can be issued together with the translation of the professional title into a foreign language. Since under the agreement on a given programme/format (joint field of study), the partners use the title in English, then ultimately the person on whom the title is conferred should be able to receive a translation of the diploma issued by a Polish university with the title specified in Polish.

It should also be noted that in addition to the legal barriers listed above, while the Act on Higher Education and Science and the Regulation on Studies provide the opportunity to issue joint

diplomas, in practice it may turn out to be impossible due to the content of Art. 77 sec. 2 of the Act. According to this point, the university must issue a diploma with a supplement to the diploma and two copies within 30 days of the date of graduation. Observing this deadline seems to be unrealistic, if not impossible, especially in the context of potentially different regulations in the legislation of the countries of partner universities (where the diploma process may be different, and the diploma procedures may take place at different times). Therefore, the introduction of appropriate changes to Art. 77 of the Act on Higher Education and Science is postulated, which in the case of joint studies would allow extending the time for issuing a diploma, precisely due to the legal differences between various national legislations.

In summary, it should be noted that currently the above-mentioned barriers and doubts have led to a situation where, as a rule, the possibility of issuing joint diplomas is generally not used in the surveyed EUI and is not considered in the near future. Only one university (R1) indicated that it had concluded an agreement on joint studies, where joint diplomas are to be issued (the study programme was launched in the academic year 2023/2024), and another two universities (R9, R12) indicated that they would strive for such a solution together with their partners. The rest of the surveyed universities stated that, at the moment, separate diplomas issued by each partner university are provided for under the EUI. (However, not only due to doubts concerning restrictions deriving from Polish law but also due to restrictions deriving from the national legislations of the partner universities). In some Polish universities, this problem has not been analysed in depth so far because, to date, their EUIs had not foreseen the creation of joint studies.

Joint education of doctoral students

Regarding the topic of the joint education of doctoral students, the research team identified the following existing or potential legal barriers.

No Possibility of a "Joint Ph.D. Degree"

As pointed out by one of the universities (R1), there are numerous obstacles deriving from the Polish legal system concerning the creation of joint Ph.D. programmes. One of the important aspects is that Polish

law does not currently recognise the concept of a "joint academic degree" or a "joint Ph.D. degree". It should be noted that ten of the surveyed universities supported the introduction of the "joint Ph.D. degree" into the Polish legal system (R1, R4, R5, R8, R9, R11, R12, R13, R14, R15).

Polish regulations provide for joint proceedings, for example, a joint doctoral dissertation based on an agreement, by councils of organisational units including foreign (non-Polish) ones if they are authorised to award the doctoral degree in the disciplines in which the doctoral procedure is conducted. However, the possibility of conducting a joint procedure should be distinguished from the concept of a "joint Ph.D. degree", which does not exist under Polish law. The possibility of jointly awarding a degree means that in effect each partner university awards its own degree.

If the contract provides for the issuance of a joint diploma, it should also regulate which entity is responsible for introducing data to the POL-on system, the diploma template and the manner of bearing the costs of the procedure. In all cases, the doctoral diploma must meet the formal requirements of Polish law, which can cause problems regarding compliance with foreign legal requirements.

Additionally, a Ph.D. degree is awarded in a discipline. The disciplines are determined by the Minister in the order of the Minister of Science and Higher Education of 11 October 2022 on the Areas of Science and Scientific Disciplines and Disciplines in Arts. At present, there are some discrepancies between the disciplines recognised in Poland and those in other countries.

Problems Concerning Admissions to Doctoral Schools

Moreover, there are also legal obstacles concerning the joint education of foreign Ph.D. students in Polish doctoral schools. Polish regulations foresee only one option – a person admitted to a doctoral school must be receiving a scholarship throughout the duration of their studies. This, together with the common situation that in other countries Ph.D. students have to pay for their education, may create circumstances where, on one hand, students receive scholarships in Poland and on the other, they pay for their tuition in partner countries. As of now, a potential alternative is to treat these students as external to the respective Polish university, yet this infringes upon the idea of a joint Ph.D. education. It would be highly beneficial if changes in Polish

law allow for the admission of joint Ph.D. students to doctoral schools and for their education without the requirement that they receive scholarships. Such a solution is expected by twelve of the surveyed universities (R1, R2, R3, R4, R5, R8, R9, R11, R12, R13, R14, R15).

No Possibility to Open and Run Common International Doctoral Schools

At the moment, the Act on Higher Education and Science allows for the joint education of doctoral students and the joint award of a doctoral degree (Art. 198 sec. 6 in connection with Art. 185 sec. 2 of the said Act). According to these regulations:

- → education of doctoral students may be conducted in cooperation with another entity, in particular with a foreign university,
- → the doctoral degree may be awarded jointly by entities granting doctoral degrees in a discipline in which each of them has a scientific category of A+, A or B+, or an authorisation granted in accordance with the procedure specified in Art. 226a sec. 1 of the Act on Higher Education and Science, including with the participation of foreign entities authorised to award the doctoral degree in the discipline in which the degree is awarded. The rules of cooperation are defined in a written agreement.

Additionally, Art. 179 sec. 3 of the said Act regulates the issue of a diploma to a person who has been awarded a doctoral degree.

Based on these regulations, Polish universities have already concluded bilateral cotutelle agreements under the EUI (and are still concluding them). These agreements are individual in nature and allow doctoral students to study simultaneously at a Polish doctoral school and at a foreign university, culminating in applying for a doctoral degree to be awarded jointly by these entities. As mentioned above, the agreements are individual in nature and specify, among others: issues related to the implementation of the training programme for a given doctoral student at two universities, the care of two supervisors, the preparation of a doctoral thesis, the course of the procedure for awarding a doctoral degree at both universities, etc.

However, the development of the EUI should lead to the introduction of systemic solutions related to the joint training of doctoral students which could be supported by a change in legislation, also enabling

the creation and running of joint doctoral schools in cooperation with foreign universities, i.e. common international doctoral schools. This solution was supported by 12 out of 16 universities that completed the survey (R1, R3, R4, R5, R8, R9, R11, R12, R13, R14, R15, R16), however, is currently impossible in the light of the wording of Art. 198 sec. 3 and sec. 5 the Act on Higher Education and Science. This provision does not mention a foreign university as an entity with which a Polish university could run a joint doctoral school.

Conclusions and Recommendations

The findings of our study are typically unique to the Polish context and therefore it may not be possible to generalise the results to other universities outside Poland. Moreover, due to the limited number of respondents, this study may serve as an overview and a set of recommendations in terms of management and legal regulations for Polish higher education institutions planning to join the EUI in the near future or already being members of this initiative. However, what needs to be taken into consideration is the fact that the total number of Polish EUI member universities is relatively low (21 universities in total).

Answering the first research question raised in the Introduction, our analysis revealed the positive experiences of Polish universities participating in the EUI. With regard to project management, Polish universities take different approaches to building the structures of their EUIs, depending on strategies agreed upon with their partners. Some are cooperating under consortium agreements, whilst some have chosen to establish more durable forms and already function as entities such as v.z.w., usually under Belgian or German law. However, more and more universities see the need to formalise cooperation within the framework of the creation of a permanent legal entity which will allow the idea of the EUI to survive and continue cooperation beyond the end of programmes being financed by the European Commission.

All universities see the need to create a legal framework for long--term financial support at the national level which would aid stability and enhance future cooperation. It should be noted that all universities participating in the EUI perceive their cooperation as an unprecedented opportunity for Polish science in general and for their universities in particular, and consider this to be a long-term form of cooperation.

It is therefore important to note that EUIs are not just another project that will end in a few years. This is also acknowledged when considering the relevant legal and financial aspects.

Polish universities have not identified barriers or legal restrictions regarding other teaching activities. However, they have highlighted the need to regulate micro-credential formulae in the Polish legal system.

Regarding joint studies main findings concerned quite substantial issues. For one, there are no clear rules as to whether a Polish university may conduct joint studies by incorporating study programmes already existing (within their university) into joint programmes; the Act on Higher Education and Science should clearly regulate this issue. There are also problems with different recruitment procedures for students from Poland and from abroad; the surveyed universities identify the need to unify these procedures so that the same recruitment rules apply to all students of joint studies. Also, there are no clear accreditation rules regarding the European Approach for Quality Assurance of Joint Programmes procedure; it would be desirable for the Polish Accreditation Agency to develop a set of guidelines for Polish universities, especially those willing to take on the role of leaders in a given programme/format implemented under the EUI. Additionally, ambiguities in existing regulations make it seem impossible to issue joint degrees (diplomas) although they are allowed under the Act on Higher Education and Science, thus there is a need for a number of clarifications and harmonisation in Polish law to enable the issuance of joint diplomas.

Regarding the joint education of doctoral students main problems concerned issues of scholarships and lack of full joint Ph.D. format in Polish regulations. Polish universities identify the need to introduce the possibility of admitting joint Ph.D. students to doctoral schools into the Polish legal system without the obligation to pay them scholarships. What is more important, as the works on joint Ph.D. formats are progressing in the EUI, Polish law should also be changed in such a way as to allow for the creation of the fully joint Ph.D. degree, and possibly joint doctoral schools established together with partner universities.

In relation to the second research question, the study demonstrated that there are several challenges and numerous opportunities for Polish universities engaged in the EUI. Among the main challenges faced by managers of the EUI, three main areas for improvement could be emphasised. First area refers to internal bureaucratic procedures

related to project administration which are sometimes more problematic than procedures of the EU or lead to the imposition of a heavier workload. The second area for improvement consist of insufficient human resources dedicated to the implementation of the EUI project, adding new responsibilities to employees. The third area emphasises the need of improving internal communication as well as informing faculties and employees about the initiative in large universities which may be challenging due to the large number of faculties and employees.

In conclusion, we propose a set of recommendations for Polish universities in the management and implementation of joint innovative formats.

First and foremost in the field of management it is worth to mention that the EUI is a large-scale undertaking which requires a structured, well-thought-out system of internal and external cooperation, preferably included in the strategy of development and/or internationalisation and, as such, requires the engagement of professional staff on a full-time basis, instead of an ad hoc basis as part of other duties. Moreover, the high level of initiatives requires continuous skills development of professional and academic staff, which may be assured by various short-term programmes for staff embedded in the EUIs. Due to the complex nature of the EUI, it is also recommended to use specialised tools for project management and bear in mind all the project lifecycles, as well as implement appropriate measures related to it. Since the EUI brings a new dimension of internationalisation, it is worth the efforts of the university managing team to harmonise internationalisation activities with this project to benefit from it as much as possible and find new synergies between many areas of cooperation such as, e.g., synergies with activities carried out within other university networks.

To assure the sustainability of the EUI, instead, it is recommended to supplement the project performance with other financial resources such as, for example, other international or national grants in various areas. There should be a dedicated group of people having the capacity and time to follow project calls and prepare applications.

It is also recommended to create a channel for efficient internal and external communication which would assure a good understanding of the project and its importance for the academic community as a whole. Furthermore, the academic community engaging in the EUI

should see its benefits and should be offered clear incentives to engage in it, not necessarily financial ones but primarily related to professional development opportunities.

As to the legal aspects of implementation of joint programmes we recommend a less rigid approach to legal regulations – we have observed a real problem with the proper interpretation of legal provisions (there is a fear of using a solution if that solution, although not prohibited, is not expressly allowed by the provisions). This approach may undermine all joint initiatives before they are launched. A flexible and solution-based approach instead of generating barriers would be recommended. In this regard submitting a joint request for support to the Minister of Education and Science through the Rector's University Committee for Internationalisation operating within the Conference of Rectors of Academic Schools in Poland would prove to be very useful. The statement should include all matters related to the problems with micro-credentials (lack of regulations in Poland), joint programmes and related admissions, joint diplomas, accreditation, joint Ph.D. schools and degrees.

Additionally, more frequent sharing of good practices and solutions elaborated among Polish operational EUI members is needed. The already existing task force for EUI within the IROs Forum network can be the proper place for this exchange. Also, engagement in the development of pilots for the European Commission within the European Degree Label may be helpful. First call and participation in the Ed-AFFICHE project by Polish EUI member universities has already been launched.

Because the study was exploratory in nature, the conclusions should be regarded with caution, and additional research is required to validate and expand on our findings. This publication can complement the available literature with new data and recommendations of particular significance to Polish universities and higher education institutions.

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Development of Innovation Culture. Teaching Experiences of European University Alliance Members. A Case Study from Poland

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Introduction

Closer international cooperation between HEIs has been postulated across Europe for decades. This postulate has been consistently pursued, among other things, thanks to Erasmus and Erasmus+. Every few years, further ground-breaking ideas are produced in this area. A decade ago, a list of "indispensable components of higher education in Europe and beyond" was proposed by a group of independent experts employed by the European Commission. On the list, researchers included greater student and staff mobility, an international dimension of curricula, international experience of the faculty and researchers (along with sufficient command of English), intercultural competencies, as well as a supranational offer of courses and degrees and international alliances (High Level Group on the Modernisation of Higher Education, 2013).

Based on these conclusions, at the end of the previous decade, the European Commission launched the European Universities Initiative. Offering joint degree programmes, continuing education programmes, and infrastructure sharing were defined as key areas of cooperation under such alliances. The purpose of the European Universities Initiative was to provide conditions for HEIs to seek international certification of the quality of the education provided by them (e.g. via accreditation), to exchange good practices, to develop international degree programmes and to transfer knowledge and technology at an institutional level. All the above elements are highly rated in international rankings. At the same time, the European Commission has worked on the development of joint European degrees that validate and attest to students' qualifications in higher education and promoted joint study programmes by cutting the red tape on international cooperation in the education sector. Last but not least, the European Commission

has allowed for HEIs' choice of organisational formulae for EUI alliances. European University partners can explore a variety of tools and decide on the ones that are best tuned to their objectives.

Since the first call for proposals by the EC, the operation of the alliances and their impact on national and European higher education systems has attracted the interest of researchers and experts. Recent research work in this area has focussed primarily on the development of the European Universities concept (Gunn, 2020). The impact of the EUI on stimulating internationalisation processes in higher education institutions has also been analysed (Jungblut, Maassen & Elken, 2020; Nijboer & Girotti, 2023). Models of the coordination of EUI members at the inter-university level and their cultural profiles have also been described (Maassen, Stensaker & Rosso, 2022; Lambrechts, Cavallaro & Lepori, 2023). Moreover, the EUI alliance-building process has been conceptualised and discussed in detail (Charret & Chankseliani, 2022; DePryck, Chapel, Kaptijn & Buunk, 2022). However, little is known about the actual impact of the EUI on education and teaching, which are priority areas for all alliance partner institutions. This chapter aims to fill this gap by presenting the results of empirical research on alliance members' experiences relating to the impact of the EUI on their education provision.

Methodology

The research objective was to learn the opinions of representatives of HEIs forming EUI alliances about the impact of the initiative on the introduction of teaching innovations and the development of innovation culture. The general objective was to analyse multiple operational layers of alliances related to education and teaching.

The authors adopted an exploratory strategy (Babbie, 2004), with desk research as its initial stage. The desk research, which focussed on legal and institutional requirements, provided an overview of formal frameworks for the operations of European Universities. The research included an analysis of national legislation concerning higher education and science, communications from the EC, conclusions and resolutions of the European Council and the Council of the European Union, as well as mission statements of EUI alliances concerning education and teaching at Polish HEIs.

The empirical study was conducted from November 2022 to February 2023 at all Polish universities (18) that became members of the EUI alliances selected in the first three competitions (2019, 2020 and 2022).

As part of the research objective, the following research questions were asked:

- → Under what circumstances was the education component included in the EUI?
- → How were the substantive functions of the education component defined?
- → How were the substantive functions of the education component implemented?
- → What role does the education component play in the EUI programme from the perspective of Polish members of the alliance?

Due to the need to obtain qualitative data, a semi-structured written questionnaire technique was used to collect information. For this purpose, a questionnaire with thematically structured open-ended questions was developed and later sent out to member HEIs of the EUI network. Deputy rectors for education, their plenipotentiaries and project managers, i.e. leaders responsible for programmes of study within the alliances, were asked to answer the questionnaire. Interview questionnaires were answered by 12 of the 18 EUI partner HEIs. This group included six universities (the University of Gdańsk, Jagiellonian University, Maria Curie-Skłodowska University in Lublin, Nicolaus Copernicus University in Toruń, the University of Opole and the University of Silesia in Katowice), five technical universities (AGH University of Kraków, Poznań University of Technology, Silesian University of Technology, Warsaw University of Technology, Wrocław University of Technology) and the Wrocław University of Environmental and Life Sciences (UPWRC).

In this group, only one HEI (the Poznań University of Technology) is an alliance coordinator. Five HEIs have been involved in the EUI programme for at least four years (the University of Gdańsk, Jagiellonian University, Nicolaus Copernicus University in Toruń, University of Opole, and University of Warsaw). The EUI alliance partners differ in terms of adopted objectives, HEI type and size, and strategic priorities

pursued by the alliances they build. It should be noted that two of the interviewed HEIs have little experience in EUI membership. The UPWRC and UMCS enjoy the status of associate member, therefore some of their statements about conducted activities were declarative, as the implementation of their tasks was still at an early stage. The collected data were compiled, categorised and then subjected to qualitative analysis.

Exploring the Culture of Innovation in EUI Partnership Models in Education

Developing international partnerships in higher education is a challenging endeavour. This perspective has already been presented in academic discourse (Vukasovic & Stensaker, 2018). EUI requires the development of solutions that can be implemented in different environments. It also requires the alignment of mutual expectations and needs of partners working in different academic traditions. Therefore, success in achieving the objectives of the EUI alliance lies primarily in openness to innovation.

Clayton Christensen has presented a comprehensive description of innovations in higher education. He has identified three models of innovation and defined them as follows:

- Sustaining innovation have to do with refining existing products and services making them bigger and better (Christensen & Eyring, 2011);
- Incremental innovation has a minor impact [...] and does not change conditions of use radically. It usually builds upon existing knowledge and resources: it is competence-/performance--enhancing (Pavie & Egal, 2010);
- Disruptive innovation it has by nature an impact that the market does not expect. It usually modifies conditions of use for customers and usually implies a radical change (Christensen, Baumann, Ruggles & Sadtler, 2006).

How a university organises itself and the quality of its cooperation with the environment are indicators of its culture of innovation. Culture is a kind of predisposition that can be attributed both to individuals and organisations or communities (Zdun, 2016). In terms of education processes, participation in the EUI poses challenges not only in terms of the programme and activities undertaken by alliance participants but

also in terms of the overall flexibility required to achieve the EUI's objectives. Meeting these challenges depends on the alliances' resources (micro level) and national or European conditions (macro level). At the same time, these challenges provide opportunities for the development of a culture of innovation in education driven by the implementation of new or previously unused educational solutions. As stated by a representative of one of the leading Polish technical universities taking part in the survey:

The EUI is an education programme (Erasmus+), so naturally all activities that are coordinated and conducted by various partners mainly concern the education (teaching) process.
[a representative of technical university]

The openness of national systems and individual universities to educational innovation can be seen in the countries and entities that struggle with challenges relating to attainment levels in the population due to its negative growth and high student dropout rates. The analysis of data coming from the POL-on system[1] indicates that from 2012 to 2020, more than 1.3 million students dropped out. This represented 40% of all students admitted to HEIs[2]. Data collected by the University Finance Committee operating within KRUP[3] confirms a significant decline in the number of students at Polish universities. The number of HEI students in 2021 accounted for only 71% of the total number of HEI students in 2011. The Jagiellonian University (87%) has been the least affected by the crisis[4].

The above data confirm that higher education providers in Poland are forced to seek innovative ways of responding to the aforementioned challenges. This may be one of the reasons why they are keen to join

1 POL-on – integrated system of information on science and higher education in Poland. From the perspective of the scope of data collected, it is the largest data repository operating in the public system. 2018 EUNIS Elite Award. (https://polon.nauka.gov.pl).

2 See: https://opi.org.pl/kto-i-dlaczego-porzuca-studia

3 The Conference of Rectors of Polish Universities (KRUP) was established by the Rectors of Universities at the congress in Kraków on 16 February 1989. It was the response of the academic community to the adoption of the Great Charter of Universities on 18 September 1988 in Bologna. KRUP brings together 20 Polish universities.

4 Data are taken from the University Finance Committee 2022 report and older reports held in the archives of the Committee's office at the University of Warmia and Mazury in Olsztyn.

EUI alliances. Attaining the objectives of alliances, combined with other changes taking place in higher education (e.g. implementation of the qualifications framework related to the Bologna Process, implementation of the European Credit Transfer and Accumulation System and Diploma Supplement) will accelerate the shift in focus in partner universities to a shared quality of education. A representative of one of the technical universities, leading in internationalisation process, noted:

EUI member universities are postulating the development of aggregated competencies as part of a degree programme, instead of dividing learning outcomes into knowledge, skills and social competencies.

[a representative of technical university]

It is also worth noting that graduates who have completed tailor--made study programmes and hold a variety of competencies are sought-after by socio-economic stakeholders of higher education institutions. However, it is extremely difficult to provide personalised programmes of study in Poland, mainly because legal regulations in force stipulate that all graduates of a given degree programme should achieve the same learning outcomes. What is more, the approach of Member States and individual universities to education policy varies across systems of higher education in the European Union.

The Importance and Impact of the Education Component in the EUI Programme

Building international partnerships in higher education often requires the development of universal solutions that can be implemented in a variety of settings, as well as the mutual adjustment of expectations and needs among partners operating in different educational realities. When asked about the most significant challenges faced by HEIs when developing a study programme within a EUI alliance, respondents identified such challenges in various areas that can be divided into three categories: challenges related to courses and programmes; those related to logistics and organisation; and those pertaining to standards and legal matters.

Course- and programme-related challenges usually concern the development of an interesting teaching offer that is attractive to students. This often involves the launch of a new study programme based on the courses that have not been provided before and using new teaching methods and approaches. The logistic and organisational challenges mainly resulted from disagreements when trying to establish uniform programme delivery methods at partner universities. In this area, other matters of contention pertained to how EUI courses should be integrated into degree programmes, differences in the structure of study programmes and how ECTS credits should be calculated, as well as difficulties with the comparability of assessment and credit awarding requirements. Problems related to the unification of HEI admission rules, tuition fees and the inclusion of EUI alliance coursework in the teaching load were also reported.

Organisational challenges also included the award of qualifications, including dilemmas regarding the introduction of dual degrees. The development of teaching programmes in the process of international cooperation is also hampered by the limited number of courses taught in English (at some universities) and difficulty with recruiting teachers willing to teach courses in foreign languages. Other organisational issues concerned the choice of a suitable platform for distance learning and documentation of the course of studies. Differences in academic calendars between partner HEIs, which complicated the organisation of the education process, were also considered a logistic difficulty. Additionally, one of the universities highlighted problems arising from establishing cooperation with partners who do not know one another. These problems resulted from the lack of knowledge about the research fields explored at individual HEIs and the lack of knowledge about the teaching offered by partner universities, which sometimes hindered international alliance building. It is clear that the need to bring partner interests and expectations into agreement forms an important component of EUI cooperation. Only on the basis of such an agreement, is it possible to develop innovative solutions in the area of academic teaching.

Discrepancies in standard requirements and legal regulations, both at the level of countries and individual HEIs, were also highlighted as challenges that hampered the introduction of innovative teaching solutions. Challenges reported in this category included differences

in accreditation systems in place and issues relating to the recognition of learning outcomes achieved as part of courses delivered remotely.

The challenges mentioned by the respondents are summed up in Table 3.1 and further divided into two groups: those attributable to an HEI (micro level) and those related to national or European requirements (macro level).

In addition to the categories of challenges discussed above, difficulties with attracting the required number of candidates to launch a joint degree programme were also pointed out. Concerns that even the best international study programme may not be attractive enough to attract applicants were recurring in the answers to the questionnaire.

Table 3.1 shows that the achievement of the objectives of the EUI alliance depends on the fulfilment of a number of programme-related, organisational and formal conditions. However, it is promising to note that only one of the surveyed universities reported a general knowledge deficit about the teaching offer among alliance partners. At the same time, statements made by the respondents emphasised that regulatory gaps at the European and national level result in the need for alliance member HEIs to develop innovative solutions and this is the main impulse for the self-study of universities participating in the EUI. This has also impacted the openness of the innovation culture in the field of education.

Table 3.1. Obstacles for the transformation of innovation culture thanks to EUI alliance partnership

CRITERION	LEVEL	OBSTACLES AFFECTING THE DEVELOPMENT OF A CULTURE OF INNOVATION
Substantive/ programme-related challenges	micro	The need to develop an interesting teaching offer that is attractive to students. This often involves the launch of a new degree programme based on courses that have not been provided before and using new teaching methods and approaches.
		Differences in assessment and credit-awarding requirements between partner HEIs.
Organisation- and logistics-related challenges	micro	Differences in calculating ECTS credits (micro).
		Lack of consistent admission rules.
		Lack of consistent rules for determining tuition fees.
		Lack of consistent rules for including EUI alliance courses in the teaching load.
		Insufficient number of candidates required to launch joint degree courses.
		Shortages of dedicated teaching staff.
		Limited offer of courses taught in English.
		Problems with selecting an appropriate distance learning platform.
	macro	Differences in academic calendars between partner HEIs.
		Inconsistent requirements for documenting the course of study.
		Lack of uniform requirements for the certification of joint degree programmes.
Standards and legal issues	micro	Lack of uniform requirements for the delivery of study programmes at partner HEIs. (i.a., lack of a standard procedure for automatic inclusion/recognition of EUI courses in degree programmes in partner countries).
		Regulatory and legal differences in terms of teaching solutions permitted by HEIs.
	macro	Lack of uniform qualification requirements, also those pertaining to double degrees.
		Differences in national accreditation systems.
		Lack of uniform requirements related to the recognition of learning outcomes achieved as part of courses delivered remotely.

Source: own elaboration.

The Role of the Education Component

When asked about the role of the education component in EU alliances, all respondents indicated that it played a crucial role, and was strongly emphasised in the proposals. When defining the role of the teaching component in their proposals, European Universities used such adjectives as: paramount; priority; essential; primary and the most important. Representatives of HEIs often emphasised the fact that this component affects the implementation of the alliance's auxiliary tasks. Such an opinion was formulated by a representative of a prestigious technical university from the south of Poland:

It is one of the most important components of the alliance's programme, and all others play a supportive role.
[a representative of technical university]

A person representing a university from another part of Poland is of the same opinion:

The education component is of paramount importance in the project. It is a unifying element for other project objectives and tasks.
[a representative of university]

The respondents agreed that, from the beginning, the education component was a top priority and formed the basis for cooperation between the universities. Furthermore, respondent from one of the oldest universities in Poland stated that:

From the outset, the education component has been a key driver for cooperation between the alliance partners.
[a representative of university]

Several years of the operation of alliances allow for the verification of assumptions presented in the proposals for European Universities. HEI representatives were asked whether and how the importance and perception of the teaching component had changed in the course of alliance implementation. The responses confirm that the leading role of the component has been preserved, but for some alliances

– due to some specific circumstances or challenges – the assumptions had to be modified. The changes were mainly introduced due to the circumstances described in Table 3.1, such as operating in different legal settings, which involved time-consuming finalisation of the arrangements. However, experiences of other HEIs show that the operation of the alliance leads to the improvement of teaching through developing a new study offer that was not provided for in the original proposal. The exchange of experiences and cross--fertilisation of ideas have tangible effects in the form of new study programmes. This was mentioned by a representative of the university that assumed the role of an informal leader during the project:

The initial plan was to develop one first-cycle and one second-cycle degree programme. Yet another one-second cycle programme has been launched, and more programmes are in the pipeline.

[a representative of university]

The experiences of European Universities show that cooperation within an alliance can also lead to new initiatives and the development of joint courses and course series offered as part of summer and winter schools, which is indicated by the statement of a representative of a technical university from the south of Poland:

We are observing a growing demand for dual degree programmes, courses leading to micro-credentials, teaching workshops, and summer and winter schools [...].

[a representative of technical university]

The internationalisation of education provision is one of the most important benefits of implementing the education component. Among the expected outcomes was the expanded offer of classes taught in foreign languages (mainly in English) and greater mobility of students and teaching staff. Making students' learning paths more personalised and flexible, coupled with adapting study programmes and teaching methods to the requirements of European labour markets was also considered important in this context. Finally, the implementation of the teaching component is seen as an opportunity to develop HEIs' infrastructure, which should translate into increased attractiveness of their education

offer. The above conclusions are well illustrated by a statement from a representative of one of the HEIs from the south of Poland, which has already implemented new study programs within the EUI:

The education component aims to facilitate day-to-day international cooperation of all students and staff at partner universities. It is intended to promote the further development of indispensable institutional infrastructure for a common, inclusive and sustainable European University. It focuses on boosting international (physical, online and hybrid) mobility of staff and students so that it reaches the level of 50% and more. It is intended to customise learning pathways and remove administrative obstacles to mobility. The European inter-university campus to be developed will aim to introduce a common European learning, teaching and research space to which all students and staff will have full access.

[a representative of the HEI]

All HEIs that answered the questionnaire declared that as part of their partnerships, they introduced new first-, second- and third-cycle degree programmes. Both dual and multi-degree programmes are launched. Experiences gained during joint activities have resulted in the modification of study programmes on offer, mainly with regard to making study paths more flexible and personalised. The range of courses taught in foreign languages has also been expanded. The existing courses have been adapted to the alliance's main themes and optional interdisciplinary courses have been introduced.

According to Polish HEIs, the processes and challenges resulting from endeavours relating to various forms of distance learning were an important strength of the alliances. In this respect, the COVID-19 pandemic has played an important role, as it "accelerated certain aspects of university modernisation, such as the development of virtual tools for inter-institutional collaboration and inevitable development of distance learning provision". The study confirms that modern digital information networks make access to data ubiquitous in many specialities. This is why academics no longer need to be in the same physical location to collaborate and teach students. This changes the paradigm of the attractiveness of education and poses a major

challenge at the same time. However, the European University model responds to it by introducing innovation in the higher education sector, and e-learning forms a fundamental part of the improvements.

The Provision of the Education Component

The answers to questions concerning innovative teaching methods adopted were highly interesting. In each of the alliances, measures in this respect were taken as part of the tasks included in the project proposal or jointly adopted solutions related to the launch of new study programmes. Often, this group of innovations was identified as fostered outside the alliance's activities and introduced through smaller education projects carried out under Erasmus+ and other programmes.

Table 3.2 presents a summary of teaching methods and methodologies that are adopted by the EU alliance partners. The innovativeness of the adopted methods was assessed subjectively by dividing them into those that (a) were already in place and were further disseminated, (b) were either not in use or used sporadically, and (c) were a result of joint creative work by academics from partner HEIs.

Table 3.2. Teaching methods adopted by Polish HEIs that are members of EUI alliances

METHOD	COVERAGE	LEVEL OF INNOVATIVENESS
Problem-based learning PBL	new study programmes modified study programmes	dissemination of a method that was sporadically used at HEIs
Research-based learning	new study programmes	introduction of a method that was not used (or was used sporadically)
Work-based learning (WBL)	new study programmes	introduction of a method that was not used (or was used sporadically)
Challenge-based learning (CBL)	new study programmes	introduction of a method that was not used (or was used sporadically)
Service learning	new study programmes	introduction of a method that was not used (or was used sporadically)
Challenge teams	new study programmes study programmes on offer	a new method developed within the EUI
Active Class	study programmes on offer	a new methodology developed within the EUI
Digital Learning Nuggets	new study programmes study programmes on offer	a new method developed within the EUI
"Flipped" distance learning	study programmes on offer	a new method developed within the EUI

Source: own elaboration.

Some of these methods deserve special attention. Active Class[5] involves the use of the flipped classroom method in distance learning. Challenge teams is a project-based method for solving complex problems by a group of students under academic supervision and in close cooperation with representatives of socio-economic stakeholders. Unusual innovations involve including digital learning nuggets (taking the form of interviews with people who achieved success in a given field) in a lecture[6], and introducing "flipped" remote learning (a lecturer teaches online, whereas students, supervised by a local assistant, attend the lecture in class).

The analysis has shown that the joint provision of education as part of European universities has been organised by individual HEIs in many different ways. This is a very important signal indicating a move away from the formula of delivering classes in fifteen-week cycles. This approach definitely boosts mobility opportunities and promotes the integration of multicultural and multidisciplinary communities. The most popular forms of teaching that can serve as a basis for cooperation between EUI alliance member HEIs include:

- institution-wide lectures,
- joint modules,
- groups of courses with common learning outcomes,
- thematic blocks,
- competency blocks,
- learning pathways,
- blended intensive programmes (BIPs),
- academic exchange weeks,
- mobility windows,
- summer schools,
- winter schools,
- teaching workshops,
- remote classes,
- virtual practical classes.

5 The Active Class methodology is described on the website for teachers and instructors: https://www.activeclass.com

6 https://ied.eu/project-updates/digital-learning-nuggets

Such solutions are conducive to lifelong learning, which is promoted by the European Commission and described in the European Skills Agenda for Sustainable Competitiveness, Social Fairness and Resilience (European Commission, 2020). The respondents postulate the need to implement this document and list several advantages of joint education provision, dual degrees, direct mutual recognition of learning outcomes, the introduction of a system of micro-credentials, and awarding of lifelong learning certificates.

Conclusions

The development by partner universities of joint innovative teaching solutions, pooling educational initiatives and giving them a special place in academic education provision is conducive to building a culture of innovation, which encompasses a number of elements that range from values (such as recognizing the importance of distance learning, international mobility of students and teaching staff, standards and good practices in the scope of teaching and joint education offer) to standards governing the provision of education (e.g. common regulations on education quality, streamlining class organisation and teaching, and certification and award of qualifications). The pooled teaching provided within the alliances contributes to the development of a European inter-university campus, which is a common learning environment, in which teaching innovations are introduced. The innovations take the form of new study programmes, teaching methods, methodologies and processes, and relate to the organisation of teaching, coordination of the work of academic teachers and students, and the management of cooperation with socio-economic stakeholders. Disparate academic traditions and contrasting models for the organisation and funding of education in individual countries call for protecting the interests of partners and matching their expectations. This is a crucial, but time--consuming process. Only based on such an agreement, is it possible to develop innovative solutions in the area of academic teaching.

The study on Polish HEIs has confirmed the universal principles enshrined in the *Magna Charta Universitatum* (2020), which states that teaching and research should be **inseparable**. Only by taking this approach can teaching satisfy the changing needs and demands of society and follow advances in science (*Magna Charta Universitatum*, 2020). Several respondents see the need for a research component

complementing the teaching component, which is a priority for EUI alliances and Erasmus+.

The results of the study on Polish HEIs that are members of EUI alliances show that the goals of the alliances pertaining to teaching are achieved primarily thanks to sustaining innovations (Christensen, Horn, Caldera & Soares, 2011). At the same time, transformations of the culture of teaching innovations in HEIs affect the attractiveness of higher education systems, their modernisation and quality. Openness to teaching innovations at the micro level helps higher education institutions seize opportunities resulting from participation in European University alliances. At the same time, sharing experiences by alliance partners is of help when addressing EUI-generated threats at the national level.

The culture of innovation developed by EUI alliances is a structure *in statu nascendi.* It is designed, shaped and transformed by alliance partners in the process of cooperation. It will probably never be complete, as systematic work aimed at improving academic teaching, the innovativeness of HEIs and cross-fertilisation of partners' ideas and mutual stimulation of pro-activeness will result in dynamic changes in the innovation culture. Nonetheless, the resolve to improve the quality of teaching at HEIs and giving it the same priority as that of research activities will foster the innovation culture.

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4

Digital Transformation of Universities Associated in the European Universities Initiative – Attempt at a Diagnosis

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Introduction and Context of the Study

The study is an attempt to diagnose the level of advancement of digital transformation of Polish universities participating in the European Universities Initiative. European Universities are transnational alliances that will lead the way towards the universities of the future, promoting European values and identity, and revolutionizing the quality and competitiveness of European higher education. It must be added that the study in this form fills in a research gap since this is the first overall research activity in Poland that tackles the issues of digital transformation within all Polish universities allied within European Universities consortia. This has been also proven by the analysis with the use of Scopus which shows research activity on digital transformation within universities, especially with the latest example of already cited here Lis (2023). However, no summative and comprehensive studies have been made so far in this respect in relation to all Polish universities participating in European Universities alliances.

The underlying assumption of the study is that the progressive digital transformation towards Education 4.0 (Morańska, Ciesielko & Jędrzejko, 2021) is based on four interrelated pillars:

- → Mature use of new digital technologies both in the teaching process and in the area of academic research and administrative service;
- → Personalisation of the knowledge and skills imparted and adaptation of educational services to the individual needs of the student;
- → Responsible data collection and analysis (including digital data);
- → The attitude of teaching, academic and administrative staff to be ready to work with smart technology solutions.

This assumption stems from general definitions of digital transformation which can be described as the use of digital technologies to achieve better efficiency, organisational potential and business results (Westerman, Calmejane, Bonnet, Ferraris & McAfee, 2011) as well as the digitalisation of analogue resources, cost reduction and accelerating processes (Collin, Hiekkanen & Korhonen, 2015; Kane, Palmer, Phillips, Kiron & Buckley, 2015). Digital transformation can also enable organisations including universities to expand their communication with stakeholders (Berman, 2012). All these benefits of digital transformation are discussed in detail by Mazurek (2020) and Lis (2023). However, it must be stressed at this point that the very process of digital transformation does not necessarily lead to change. The tangible sign of digital transformation is digital maturity which means the extent to which organisations develop their digital potential (Becker, Knackstedt & Poppelbus, 2009).

Accordingly, the study aims to examine the extent to which the surveyed universities in Poland are addressing the challenges connected with digital transformation and developing Education 4.0, as identified by the World Economic Forum, i.e.:

- → preparing content tailored to the adaptation needs and to the development of social competences (transformative competences, i.e. innovative thinking, ability to solve tensions and dilemmas and readiness to take responsibility for one's own actions);
- → Preparing students for gaining experience during their education (personalisation of learning, inclusive learning, problem--based learning, lifelong learning).

The study will also demonstrate how the digital transformation, which clearly accelerated during the COVID-19 pandemic, has changed the way universities operate in the areas of teaching, academic research and administration, thus bringing the educational model of Polish universities closer to the Education 4.0 paradigm. This paradigm results from the challenges imposed by the fourth industrial revolution which is defined by the full automation of production processes, alongside the rapid development of big data, artificial intelligence, the Internet of Things and increasing computing power. This new reality is shaping the labour market and it requires bridging the gap between the needs

of the current industry and the labour market's needs and what education should offer. To serve these needs, educational systems, especially higher education, must undergo digital transformation and equip students and academic staff with competences 4.0, or in other words: competences of the future. The latter is a prerequisite for creating universities of the future (Ehlers, 2019; 2020).

As a point of reference for analysing the digitalisation of universities, it is worth building on the assumptions of a parallel digital transformation in the industrial sector, as, to some extent, the management system of a university, its strategy and its overall development, can be approached in terms of a well-functioning enterprise.

Meanwhile, in the industry sector, accelerating development of companies towards Industry 4.0, i.e. intelligent production can be observed, based on the use of advanced digital technologies and the analysis of large datasets, which leads to increased productivity, flexibility and agility of the company. The study to be carried out at universities will demonstrate whether similar solutions are also implemented in the education sector and, if so, in which areas and to what extent. Similarly, the elements identified in the digital transformation model of companies can be successfully highlighted in the case of university operations – each of the mentioned fields of the technological evolution of companies has its counterpart in the educational ecosystem. Simply, both companies and universities are treated here as organisations.

Theoretical Model

Many authors identify three areas for research on the digital transformation of organisations: (1) external – new products for customers; (2) internal – new operations, new decision processes and new organisational structures; (3) holistic – new business models (Hess, Matt & Benlian, 2016; Kaufman & Horton, 2015; Schuchmann & Seufert, 2015). Others formulate it differently but practically refer to the same areas: (1) internal efficiency thanks to digital solutions; (2) new business opportunities; (3) digitalisation leading to the transformation of roles, functions and business models (Parvianen, Kaarianen & Tihinen, 2017).

The research model for the development of organisations towards Industry 4.0 has already been designed within a broader study on the digital maturity of leaders – both individual and institutional by

Poszytek (2023, forthcoming). It is based on five pillars as the main areas of change within the process of digital transformation. These are: 1) management model, 2) strategy, 3) human capital, 4) infrastructure, and 5) product.

By digital transformation of the university (pillar 1) the authors understand all planned and well-thought-out actions carried out to implement the overall digital transformation of the university, developed and adopted as a binding document. In practical terms, this can be achieved, for example, by a transition from a strategy based on the use of basic technological tools (e.g. MS Office) as support in the educational management process towards activities that incorporate new technologies in their design.

The management model (pillar 2) refers to basing the management process of the university and its staff on the use of digital tools and skilful implementation of innovative technologies in managing dispersed teams. This can be achieved through, for instance, a transition from a traditional organisational model to a flexible model more reliant on the functionalities of digital tools (use of platforms for real-time data collection and analysis), use of new technologies in the management process of teaching, research and administration, or through the application of innovative methods and solutions in team management and activity planning.

The area of infrastructure (pillar 3) is understood as the access to modern technological tools, cybersecurity concerns, advanced data analysis and secure processing of personal data of staff and students. It is manifested by the access to advanced technological tools and the ability to make mature use of the functionalities they provide, awareness of cybersecurity risks and procedures related to the protection of personal data, as well as by transition towards intelligent solutions, based on data collection and analysis (carried out in a fully or partially automated manner, in real time).

The human capital area (pillar 4) is defined by the authors as the level of competences 4.0 (digital, managerial, cognitive, transformative) of teaching, academic and administrative staff, while the product area (pillar 5) is defined as a real change in the paradigm of teaching, academic research and university management and educating students towards the competences of the future. It can be achieved, for instance, by a transition towards innovative forms of teaching (classes,

workshops), incorporation of innovative research methods, skilful use of tools in order to promote research results and involve (by means of dialogue) stakeholders from the socio-economic environment, and the inclusion of modern methods of project management and implementation of innovative solutions in the teaching process.

Other trends in university development towards the education of the future: skills of the future – moving beyond competency--based teaching and excessive focus on competences, transition from a mono-institutional to a multi-institutional, networked model and personalisation of the curriculum, involving students in designing the lifelong learning offer – lifelong learning trajectory, support for adult learning.

And finally, in this study, digital transformation is also represented as a three-step ladder, which leads to attaining digital maturity and allows unleashing the potential that new technologies can provide. This ladder starts from an organisation whose operations are based on a traditional model (step 1 – beginner), through an organisation that uses some of the digital solutions randomly and not in an integrated way depending on individual needs and contexts (step 2 – transitional), up to the stage at which the organisation uses digital solutions in all aspects of its operations in an integrated way (step 3 – advanced).

Methodology

Research Sample

The invitation to fill in the online questionnaire was sent out to entire population of Polish universities participating in the alliances (21 institutions[1]). The research was carried out among higher education institutions on a sample of 18 questionnaires. The authors have received seven surveys from universities, seven from technical colleges, three from natural sciences colleges and one from business school. Based on the results of the online survey, four higher education institutions were invited to take part in the qualitative part of the study – individual in-depth interviews. The main criterion for this selection was the level of digital advancement of the universities. The interviewees were

1 As of November 2022.

university representatives who were responsible for introducing and conducting digital transformation processes in their institutions or had insight into the process, among others, deans for digitalisation or heads of digitalisation centres.

Research Tools

The study was performed according to a mixed-methods approach methodology and it consisted of two major parts: a quantitative approach (online questionnaire) and a qualitative approach (individual in-depth interviews).

The CAWI questionnaire included 22 questions which covered all five areas (pillars) mentioned above – digital transformation strategy for universities, management model, infrastructure, human capital and product. The questions were mostly closed-ended, followed by a few questions requiring answers to be indicated on a scale to measure the intensity of a given phenomenon.

Individual in-depth interviews were each time based on the questionnaires. The aim of the interviews was to delve deeper into particularly interesting topics and to get more insight into and knowledge of the digital transformation processes taking place at the universities.

Data Analysis

Initially, the quantitative data were analysed in order to see the entire picture of the measured phenomenon and to see possible trends present in the data. Unfortunately, due to the character of the study and therefore the low number of universities involved, only analysis based on average and frequency measures could have been performed.

However, the analysis of qualitative data added much insight into the topic. After a qualitative analysis of the interviews was conducted, some particularly interesting statements were included in the study to underline key findings.

Research Results

The Management Model of the University

Two-thirds of the surveyed universities gradually streamline organisational processes towards intelligent management, based on education 4.0 solutions and new digital technologies. Nevertheless, such a model is regarded as largely traditional, as it is based on the direct supervision of employees by superiors.

Table 4.1. Answers to the question "How would you describe the management model adopted at your university?"

ANSWER	N
Our university is gradually streamlining organisational processes towards intelligent management based on the use of new digital technologies and Education 4.0 solutions. So far, management at our university is still largely traditional, through direct supervision of employees by superiors.	12
Our university follows a traditional organisational model based on personal team management and ongoing task delegation. At this point in time, we do not use any systems to monitor staff activity or optimise the use of resources.	3
In many areas, our university has already introduced automated and flexible organisational processes that minimise the need for direct supervision of employees by superiors (e.g. systems for monitoring work activity and systems for remote management of assigned tasks). We are currently conducting further process changes and improvements.	3

Source: own elaboration based on survey results (N = 18).

Such management style, in practice, is understood as very direct and top-down. It uses several digital tools to facilitate the processes. Some of them, introduced as a necessity during the pandemic, were received well enough to be used on a daily basis, even though the epidemiological threat is now over.

The electronic documentation system increased our effectiveness and made it easier to identify management-related problems. Moreover, during the pandemic, we had to find a solution that would make it possible to gather the key employees and vote. We implemented an online system for that and it has been used since then on a daily basis. No one wants to vote in person anymore, it is much more convenient to do it online.

[head of digitalisation centre, technical university]

The process of managing staff and delegating tasks is still largely executed directly, in person, with little support from digital tools. It is worth stressing, however, that all surveyed universities use them in these processes and none of the institutions manage their staff entirely **directly, in person**, without the use of digital tools dedicated to managing and planning the work of teams/employees/projects. At the same time, none of the universities admitted to using solely **digitised tools for managing staff work**.

Table 4.2. Answers to the question "How is the process of managing staff and delegating tasks / reviewing the performance of tasks assigned to staff carried out at your university?"

ANSWER	N
The work of university staff is largely managed directly, in person, with little support from a variety of digital tools (various software and applications for managing and planning the work of teams/employees/projects).	13
Work at our university is largely managed through the use of digital tools (dedicated software and applications for managing and planning the work of teams/employees/projects).	5
The management of the work of staff is carried out entirely directly, in person, without the use of digital tools dedicated to managing and planning the work of teams/employees/projects.	0
Only digitised tools for managing staff work are used at the university (including dedicated software and applications for managing and planning the work of teams/employees/projects), we avoid any form of micromanagement.	0

Source: own elaboration based on survey results (*N* = 18).

The surveyed higher education institutions, in most cases, are open to partnerships with both Polish and foreign universities. Only two institutions admitted that they enter into partnerships mostly with Polish universities rather than with foreign ones.

Table 4.3. Answers to the question "How would you define the level of networking of your university regionally and globally?"

ANSWER	N
We are open to partnerships with both Polish and foreign universities	13
Our university enters into partnerships primarily with foreign universities.	3
Our university enters into partnerships primarily with other Polish universities.	2
Our university operates to a large extent on its own, without close cooperation with other similar institutions.	0

Source: own elaboration based on survey results (*N* = 18).

Digital Transformation Strategy for Universities

All universities that took part in the study are in some way advanced in their digital transformation. More than half of them have already introduced modern digital solutions to some extent, however, in some areas they are still in the early stages of the transformation towards Education 4.0. Over one-third claim to have reached an advanced stage of digital transformation.

Table 4.4. Answers to the question "How would you describe the level of advancement of your university's digital transformation?"

ANSWER	N
Our university has already introduced modern digital solutions in some areas	10
Our university's digital transformation is already at an advanced stage	8
Our university has not yet embarked on a holistic digital transformation	0

Source: own elaboration based on survey results (*N* = 18).

The digital transformation of universities is manifested through the following activities: implementing electronic circulation of documents and information systems, digitalisation of university resources (e.g. libraries), using digital tools for didactics (MS Teams, Zoom), remote learning platforms (Moodle) and digital project management tools. Some universities are still in the process of digital transformation of their student-related systems. One of the surveyed universities claimed to have developed its own tools and systems and to rarely use external support in this respect. In general, technical universities that took part in the survey, compared with other types of universities, were more keen on developing their own, tailor-made IT solutions and systems.

We have fully implemented the electronic circulation of documents. All documents are accepted electronically. We also have an electronic students' record book – all grades are online.

[dean for foreign relations, university]

Some of our administrative tools are not yet fully digitalised – especially with regard to human resources. We still encounter difficulties with the GDPR in this respect.

[dean for digitalisation, university]

Our administrative and academic staff represent different levels of advancement in the use of digital tools. Administrative workers use our digital documentation system, while the academic staff is more familiar with tools for remote work – MS Teams, Zoom, virtual classrooms etc.

[head of digitalisation centre, technical university]

We have developed our own system for student relations. It is very convenient because it is perfectly adjusted to our needs and not the other way around. However, to be compliant with our external partners, we are thinking of buying another system. We were also among the first ones in Poland to give up paper course records.

[dean for education, technical university]

The direction of digital transformation is determined on a continuous basis by supreme organs of the university in half of the surveyed cases. One in three of them implements a pre-planned digital transformation strategy enacted and adopted centrally. It happens that the digital transformation process and its direction are inherent in the general development strategy of the university.

Table 4.5. Answers to the question "How would you describe the ongoing digital transformation process at your university?"

ANSWER	N
The direction of our university's digital transformation is decided on a top-down basis e.g. by the Rector's Committee.	9
Our university is consistently implementing a pre-planned digital transformation strategy, enacted and adopted centrally	6
The digital transformation of our university takes a continuous, bottom-up approach through the implementation of good practices at the unit and employee levels.	3

Source: own elaboration based on survey results (*N* = 18).

Individual interviews with university representatives shed more light on what this process looks like in practice. In fact, it is often a combination of a bottom-up approach (aiming at answering the needs of university staff and students) with a top-down strategy set up by the supreme authorities of a given higher education institution.

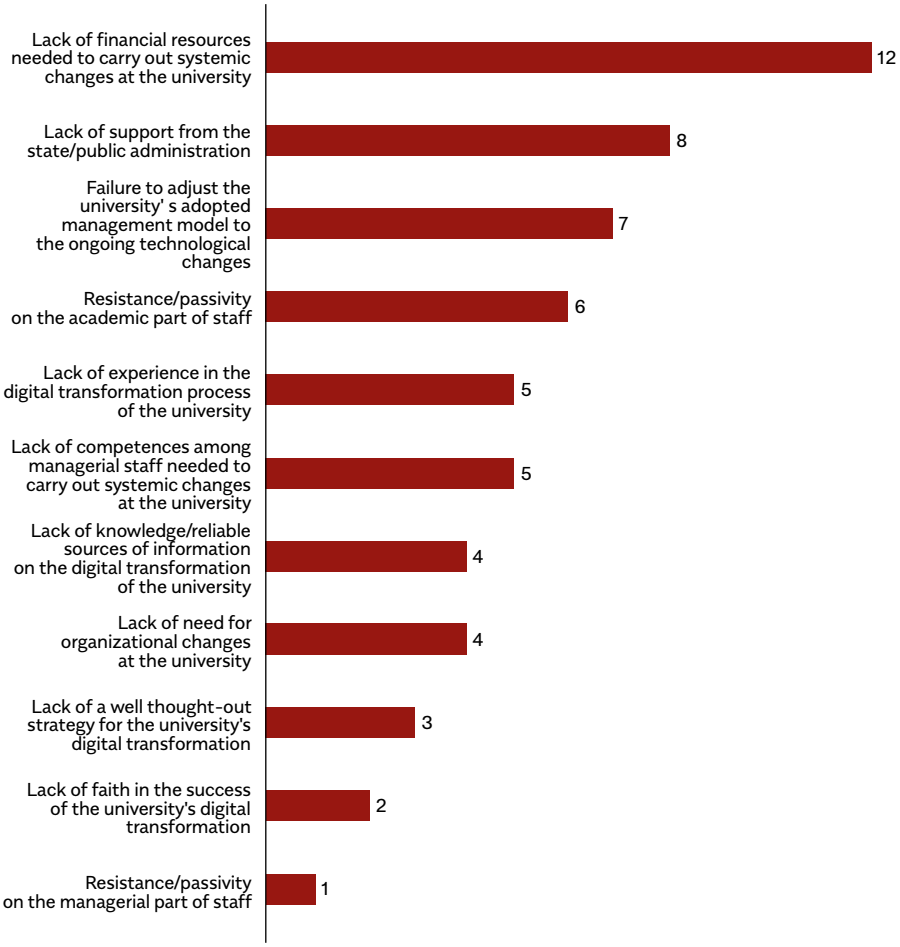
Digital transformation is a multi-track process: some of its aspects might be initiated and executed by the rector's council, however, some others, come from employees themselves. Some solutions are a result of international cooperation with other institutions. As you can see, it is a multi-layered and multi-track process.
[head of digitalisation centre, technical university]

Most of the processes are conceived to answer the needs of the middle management staff of the university. Our digitalisation council is in charge of preparing solutions to make their work easier.
[dean for digitalisation, university]

The key challenges in the digital transformation process include, among others:

- → lack of financial resources necessary to carry out systemic changes at the university,
- → lack of support from state public administration,
- → failure to adjust the university's adopted management model to the ongoing technological changes.

Figure 4.1. The greatest challenges in digital transformation process



Source: own work based on survey results (*N* = 18).

Lack of financial resources was identified as a systemic problem, not only in Poland but in Europe as well. The higher education sector was described as underfinanced and even the most prominent European universities often encounter financial constraints. Nevertheless, Polish universities were considered at risk of being left behind by their EUI partners from abroad unless they invest more resources in digital transformation processes. In Poland, "research universities"[2] are in a better financial condition, nevertheless, systemic changes were deemed necessary. This challenge is also related to the lack of support from the state. Polish universities cannot afford to hire digital transformation specialists as their budget is simply not competitive enough to hire top experts.

We simply cannot afford to hire the best IT and digitalisation specialists.

[dean for foreign relations, university]

Our IT specialists and developers often quit for financial reasons – they can make much better money working for a private company.

[dean for education, technical university]

The academic and administrative staff is not always willing to learn or to change something in their everyday working routine. It depends on the age, of course, and on a general openness.

[dean for digitalisation, university]

We need to jump on this high-speed train of digital transformation if we don't want to be left behind by our European partners.

[dean for education, technical university]

Other significant challenges include resistance from the university staff (academic rather than managerial) and a lack of competences

2 Since 2020, the title of "research university" is granted to the best universities in Poland. They receive additional funding for research activities.

of the managerial staff to implement and execute digital transformation successfully. This challenge can be addressed by training managerial staff, which is time-consuming and not always a priority.

We need to focus more on training our staff. We do not have a training unit that would be responsible for assessing training needs, designing and carrying out training courses. Such a unit, in my opinion, is very much needed at our university.
[head of digitalisation centre, technical university]

Human Capital

In more than half of cases, only basic training programmes for academic and administrative staff are provided. Only seven institutions declared that they offer comprehensive training programmes for their academic staff aimed at developing knowledge, competence and skills required in the changing conditions of the education system. For administrative staff, such diverse and complex training programmes were offered only in three cases.

Table 4.6. Answers to the question "How does your university prepare staff for the ongoing digital transformation and the technological changes that come with it?"

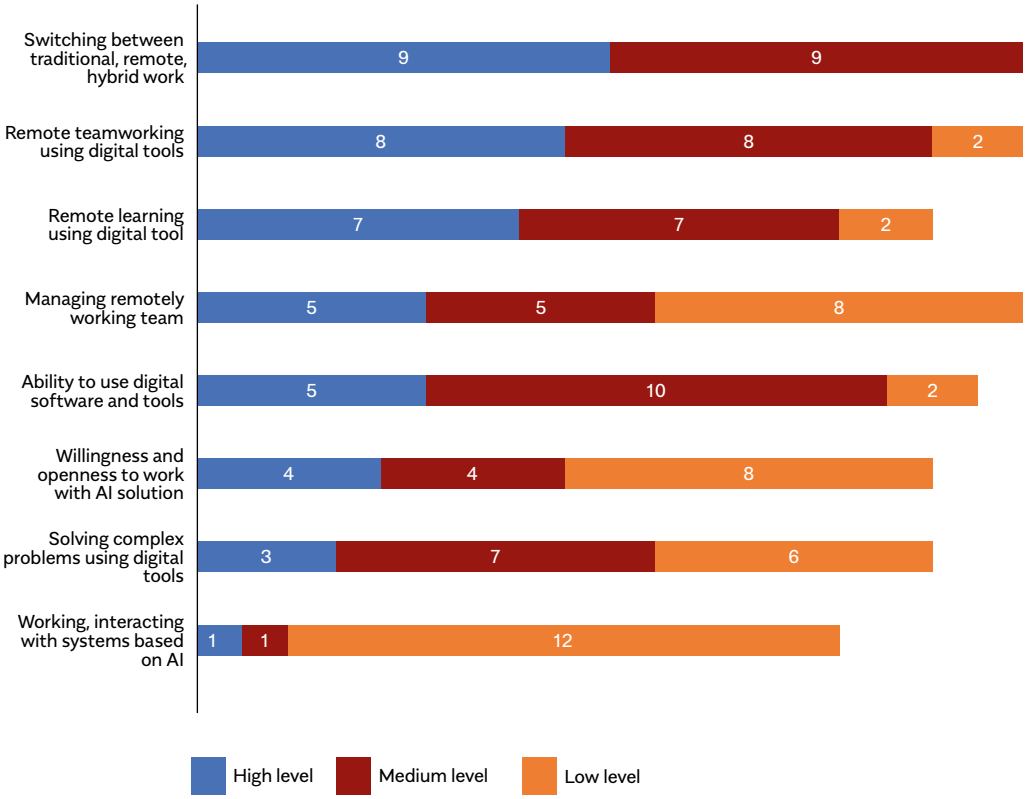
ANSWER	ACADEMIC STAFF	ADMINISTRATIVE STAFF
Basic training programmes for academic staff are provided at our university, primarily focused on preserving the standard and quality of conducted research projects.	11	14
Comprehensive programmes of various training courses for academic staff – both mandatory and optional – are conducted at our university, aimed at developing their knowledge, competences and skills in the changing conditions of the educational ecosystem.	7	3
We do not provide systematic training programmes for academic staff at our university; we leave the acquisition of new skills and competences (including digital ones) to their own discretion.	0	1

Source: own elaboration based on survey results (N = 18).

As far as the competence level of administrative staff is concerned, the highest rating was given to the ability to switch between traditional, remote and hybrid work environments. Administrative staff also

had strong skills related to remote work using digital tools as well as the ability to use digital software and tools. Working and interacting with systems based on AI was rated relatively low.

Figure 4.2. Answers to the question "How would you rate the level of competence of the staff at your university?"



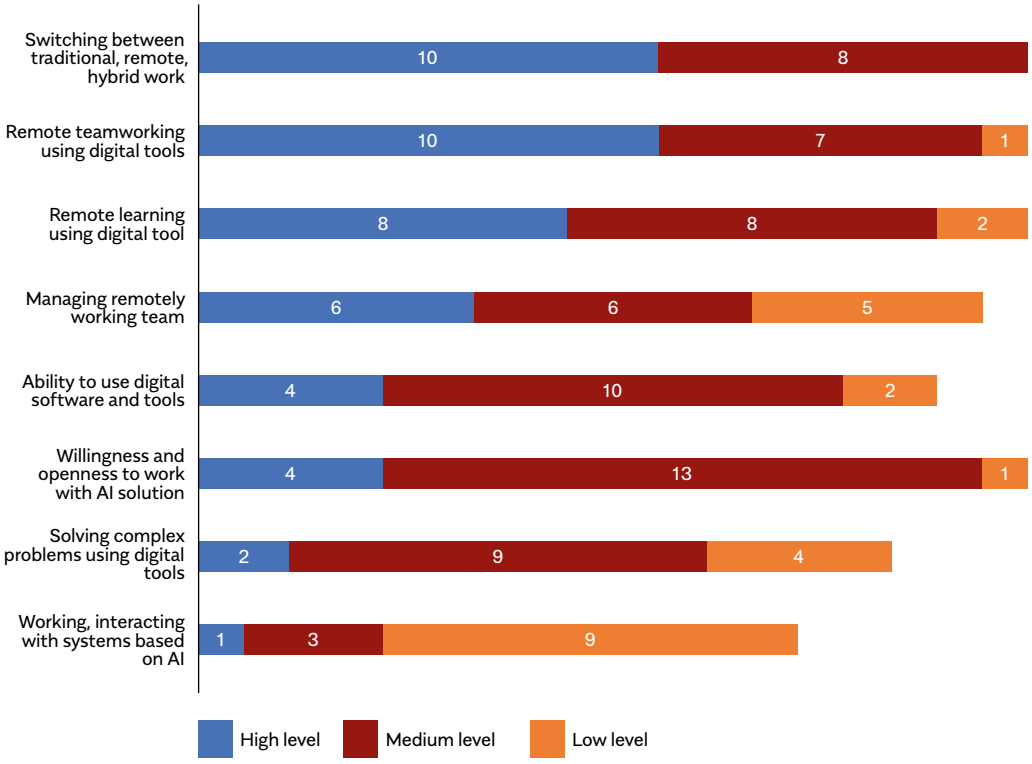
Source: own elaboration based on survey results (*N* = 18).

AI tools are far from being perfect and most of the staff are not familiar with them. On the other hand, people are afraid of what they don't know, and they really don't know much yet about artificial intelligence tools.

[dean for education, technical university]

Similarly, also the academic staff performed highest when it comes to remote teaching and teamworking using digital tools. The ability to use digital software and tools was also rated equally high.

Figure 4.3. Answers to the question "How would you rate the level of competence of academic staff?"

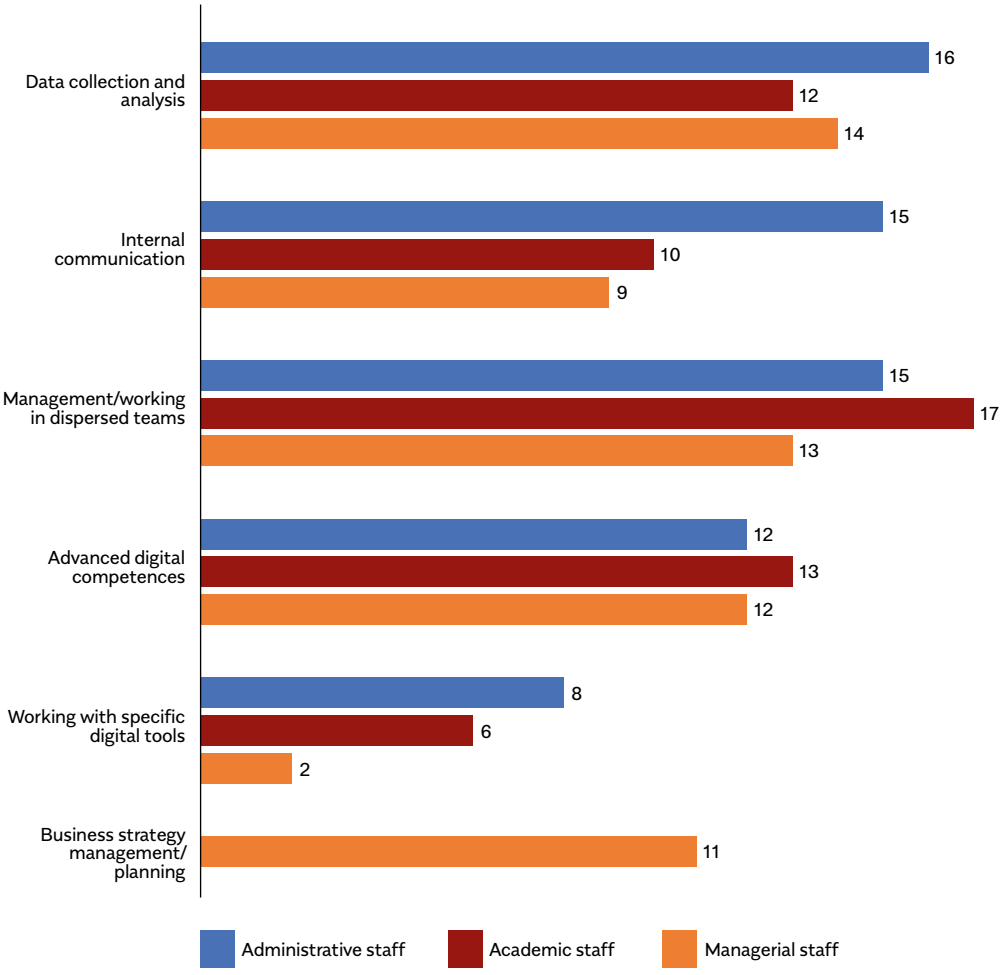


Source: own work based on survey results (*N* = 18).

When it comes to the training needs of the staff, the respondents indicated that managerial staff would benefit most from data collection and analysis as well as the management of dispersed teams. Academic staff, on the other hand, is in need to be trained in working

in dispersed teams and in digital competences. It was recognised that administrative staff need data collection and analysis training and internal communication workshops.

Figure 4.4. Answers to the question "Which training courses for university staff would you find attractive [to support your university's digital transformation process]?"



Source: own elaboration based on survey results (N = 18).

All interviewees underlined the paramount importance of staff training in the process of digital transformation at their institutions. The training process is twofold: on the one hand, employees are trained in external digital tools, such as MS Teams, Zoom and Moodle. On the other, the training concerns internal digital solutions prepared within the university: the digital documentation system, electronic student record books, digital invoice systems etc. The interviewees also stressed the role of the COVID-19 pandemic in accelerating both digital transformation and training processes.

Since 2019 we have made a huge step forward. Our staff had no other choice during the pandemic but to train themselves in using digital tools. Transformation is always a process, but as it turned out, it was not so hard. It is not cheap either. Let's be honest – digital transformation is a costly process, but it is worth it. It is an investment in our staff and in our university.

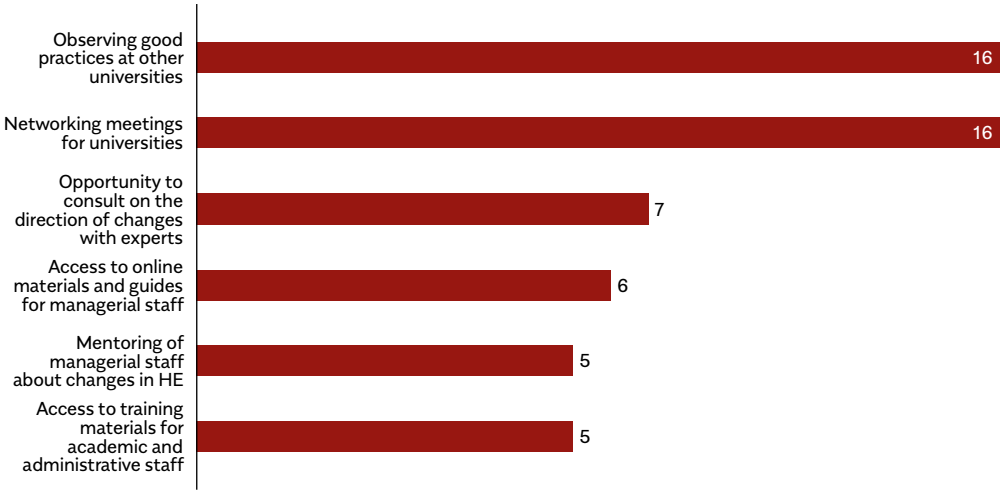
[dean for digitalisation, university]

It is important to communicate the new tool to the employees. We offer training videos, in-person training and training handbooks available online. But the best training is through practice. You must not be afraid of the new tool, you have to start using it, make mistakes and learn from them.

[head of digitalisation centre, technical university]

Among other activities that could support their university's digital transformation process, the respondents listed activities related to networking and inter-institutional cooperation. Special stress was put on international relations and joint project implementation between similar research institutions.

Figure 4.5. Answers to the question "What other activities would you find attractive to support your university's digital transformation process?"



Source: own elaboration based on survey results (*N* = 18).

Cooperation with foreign universities enhances our digital transformation greatly. We can observe what solutions work abroad and try to implement them here, in Poland. Besides, universities with strong international exchange and relations have always been more open to new solutions.

[head of digitalisation centre, technical university]

We have two PO WER projects with foreign universities. They both concern IT solutions. In this respect, we can say that international cooperation truly contributes to the digital transformation of our university – both in terms of financing and know-how.

[dean for foreign relations, university]

Infrastructure

One-third of universities that took part in the survey declared to use advanced technological solutions to optimise teaching, research and administrative tasks. Most of the institutions still use **basic software and tools**, although **more complex, intelligent systems are increasingly being introduced**, allowing to adapt the way teaching and academic research are conducted to the requirements of the evolving educational reality. None of the institutions considered their solutions to be basic.

Table 4.7. Answers to the question "How would you rate the overall level of technological advancement of your university?"

ANSWER	N
Our university is still using basic software and tools, although advanced intelligent systems are increasingly being introduced, allowing us to adapt the way we teach and conduct academic research to the requirements of the evolving educational reality.	12
Our university uses advanced technological solutions to optimise and streamline the way teaching, academic research and administrative services are carried out in times of digital revolution.	6
Our university uses basic technological solutions and underlying software to maintain the continuity of teaching, research and administrative processes in the era of ongoing technological change.	0

Source: own elaboration based on survey results (*N* = 18).

In most of the surveyed cases, **intelligent systems for data processing and analysis have already been partially implemented** in order to improve the teaching, research and administrative processes. Nonetheless, these are still piecemeal solutions that do not cover the entirety of the processes carried out. Only in one case, different areas of operations are **integrated into systems of comprehensive analysis** (conducted in real time), which allows for faster reactions and efficient strategic decision-making even in unforeseen circumstances.

Table 4.8. Answers to the question "Which of the following statements best describes the data collection and analysis policy adopted at your university?"

ANSWER	N
Intelligent systems for data processing and analysis have already been partially implemented at our university in order to improve the teaching, research and administrative processes, but these are still piecemeal solutions that do not cover the entirety of the processes carried out.	12
Data collected at our university in the different areas of its operation (teaching, research and administration) are processed and analysed selectively for the needs of individual offices and administrative divisions. We do not use an integrated data analysis system.	5
Data collected in different areas of our university's operations are integrated into systems of comprehensive analysis (conducted in real time), which allows for faster reactions and efficient strategic decision-making even in unforeseen circumstances.	1

Source: own elaboration based on survey results (*N* = 18).

Product

The universities surveyed declared to have introduced a wide array of innovative teaching solutions, such as, for example, 3D printers, digital production and manufacture equipment or mixed reality equipment.

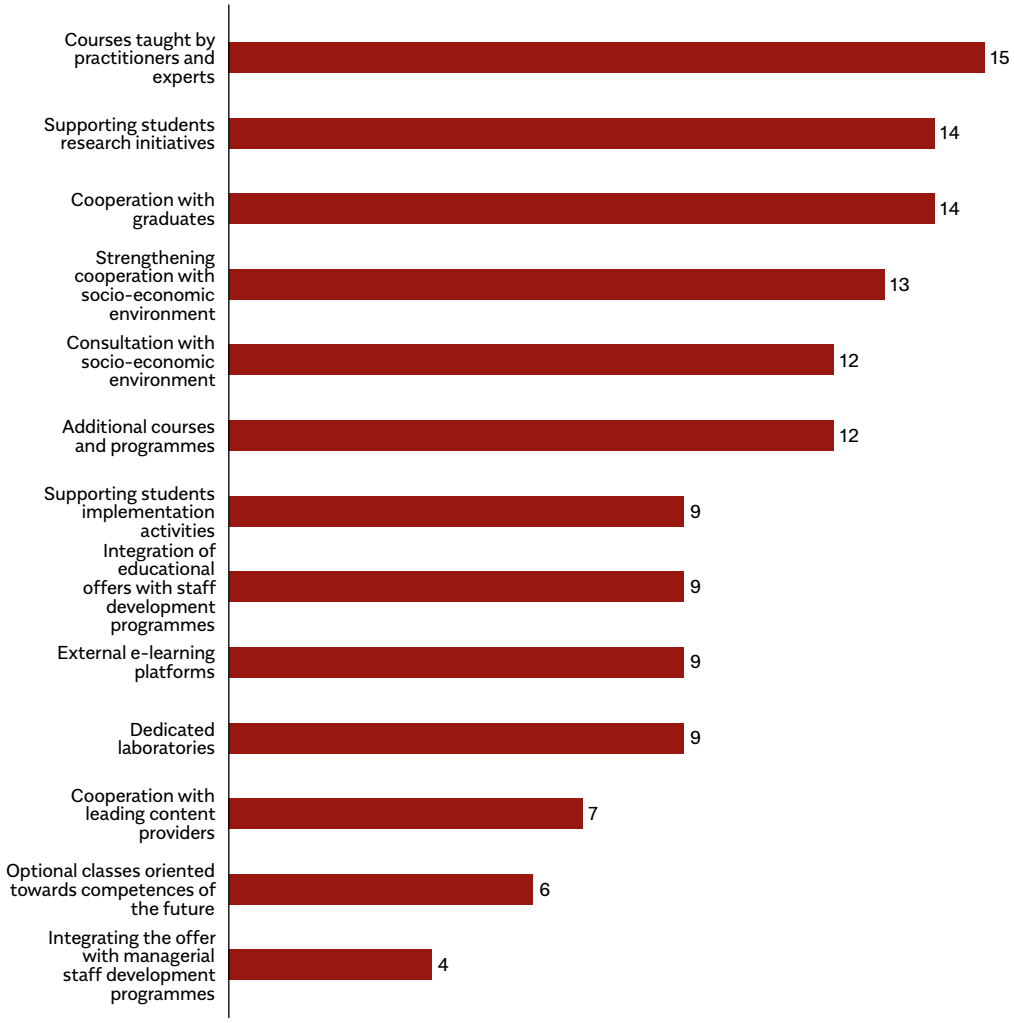
Table 4.9. Answers to the question "What innovative teaching solutions has your university introduced?"

ANSWER	N
Media laboratories (allowing people with different skills to work and learn together on projects using new media and technologies, e.g. recording studios, sound laboratories)	13
Business Incubator / Start-up Incubator	12
Fabrication laboratories (providing the opportunity to implement own projects and ideas using digital production and manufacturing equipment, including 3D printers, 3D scanners, CNC machines, laser cutters, laser plotters, CNC embroidery machines, sewing machines and others)	10
Simulation spaces (with VR, AR and Mixed Reality equipment)	8
Makerspaces (creative *garages*)	7
Science and Technology Park	5
Innovation studies (space for testing and developing cross-industry cooperation)	3

Source: own elaboration based on survey results (*N* = 18).

As far as students' digital competences are concerned, the respondents underlined the importance of courses taught by practitioners and experts from outside of academia, supporting students' research initiatives and alumni relations. Strengthening cooperation with the socio-economic environment and its role in consulting the curriculum was considered valuable.

Figure 4.6. Answers to the question "Which of the activities towards supporting the development of students' competences of the future does your university undertake?"



Source: own elaboration based on survey results (*N* = 18).

In most of the surveyed cases, the curricula offer a moderate level of adjustment and are modified on an ongoing basis in consultation with student representatives and guarantee a **free choice of subject path/module and optional courses** selected by students according to their preferences. Only in less than one-third of the universities surveyed, curricula are not updated more than once every few years.

Table 4.10. Answers to the question "To what extent do students at your university have a say in the individual design of the curriculum and the selection of individual subjects/courses?"

ANSWER	N
Curricula at our university are modified on an ongoing basis in consultation with student representatives and guarantee a free choice of subject path/module and optional courses selected by students according to their preferences.	12
Due to complex procedures and formal requirements, curricula at our university are not updated more than once every few years. They include small blocks of optional classes to be selected by students individually.	4
The framework curricula at our university are modified on an ongoing basis in consultation with student representatives and guarantee a high degree of freedom to construct the course of study and the modules/subjects pursued.	2

Source: own elaboration based on survey results (*N* = 18).

Conclusion

A detailed analysis of the obtained results shows that more than half of the universities that took part in the study confirm that they have already introduced modern digital solutions in some areas (pillar 1 of the model for the development of organisations towards Industry 4.0). In general, technical universities that took part in the survey, compared with other types of universities, are more keen on developing their own, tailor-made IT solutions and systems. Furthermore, the direction of digital transformation is determined on a continuous basis by supreme organs of the university in half of the surveyed cases. One in three of them implements a pre-planned digital transformation strategy enacted and adopted centrally. Accordingly, two-thirds of the surveyed universities gradually streamline organisational processes towards intelligent management, based on education 4.0 solutions and new digital technologies. This means that the management at universities

is still largely traditional and is carried out mostly through direct supervision of employees by superiors, however, the first steps towards introducing automated and flexible organisational processes that minimise the need for direct supervision (e.g. systems for monitoring work activity, systems for remote management of assigned tasks) are being undertaken (pillar 2). Still, the process of managing staff and delegating tasks is still largely executed directly, in person, with little support from digital tools. Nevertheless one-third of universities that took part in the survey declared to use advanced technological solutions to optimise teaching, research and administrative tasks.

The study revealed numerous challenges in the digital transformation process. These include: lack of financial resources necessary to carry out systemic changes at the university, lack of support from state public administration, and failure to adjust the university's adopted management model to the ongoing technological changes. It needs to be underlined that Polish universities were considered at risk of being left behind by their EUI partners from abroad unless they invest more resources in digital transformation processes. To address these challenges almost all surveyed institutions declared that to support their digital transformation it would be advised to observe good practices at other, similar universities, both in Poland and abroad, and to exchange experiences and ideas during networking meetings with representatives of other universities.

The underlying factor of a successful digital transformation is a continuous staff training. In more than half of cases, only basic training programmes for research, teaching and administrative staff are provided. However, only seven institutions declared to offer comprehensive training programmes for their research and teaching staff aimed at developing knowledge, competence and skills required in the changing conditions of the education system. For administrative staff, such diverse and complex training programmes were offered only in three cases. In needs to be noted that both academic and administrative staff are open to developing their data collection and analysis skills. As far as dispersed teams are concerned, the managerial staff is willing to improve their ability to organise teamwork whereas academic staff is eager to learn how to work in such teams.

The universities surveyed declared to have introduced a wide array of innovative teaching solutions, such as, for example, 3D printers, digital production and manufacture equipment or mixed reality equipment (pillars 3 and 4). Over ¾ of institutions declared that they undertake the following activities aimed at enhancing the development of the competences of the future among their students: courses delivered by practitioners and experts from outside of academia, alumni relations and support for student research initiatives. The study also showed that in most surveyed cases, students are free to choose optional courses which allows them to tailor their curriculum to their needs (pillar 5).

To conclude, this study aimed to examine the extent to which the surveyed universities in Poland are addressing the challenges connected with digital transformation and developing Education 4.0 and to demonstrate how the digital transformation has changed the way universities operate in the areas of teaching, academic research and administration. Answering these questions, the study results show that, according to the three-step ladder model proposed above, Polish universities taking part in EUI alliances might be positioned most often at the second, transitional level. This means that they gradually streamline organisational processes towards intelligent management based on the use of new digital technologies and Education 4.0 solutions. Polish universities also show signs of the increasing use of a variety of digital tools, even though their personnel is largely managed directly. And finally, they adapt teaching and academic research to the requirements of the evolving educational reality through the ongoing introduction of advanced intelligent systems.

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5

Assessment of Readiness of Polish Universities to Implement Flexible Learning Pathways, with Particular Reference to the Implementation of Micro-Credentials

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Introduction

The post-pandemic landscape of European universities is characterised by a number of new trends that have defined an entirely new university model, ready to respond proactively to the diverse social, cultural, professional and competence needs of society. They include, among others, flexibility, inclusiveness, upskilling and reskilling and in consequence, according to European recommendations,

education and training systems to become more flexible and to find solutions to deliver more learner-centred, accessible and inclusive learning to a wider range of profiles.

[*Council recommendation of 16 June 2022 on individual learning accounts, 2022*]

Responding to these challenges involves, to a large extent, the need to revise the educational strategies adopted by universities and design a new offer allowing not only participation in formal education offered by the university but also the documentation of personal achievements for lifelong learning. The impressive growth in the number of users of Massive Open Online Courses (MOOCs) portals in 2020 has proven that societies want to learn, however, this learning must meet certain conditions to fit the needs of the learners. One of the clearest trends that received a lot of attention from different groups of learners was the shorter time of the learning experience. Statistics strongly indicate that societies want to learn through short forms, not necessarily leading to full qualifications. Additionally, they want to learn at a time/moment in life that is convenient for them.

Building flexible learning pathways should become a major impulse to shape the regular offer for undergraduate, engineering

and graduate students, as well as for the so-called lifelong learners, who use the educational services of universities on an incidental and significantly shorter basis than regular students.

Although these trends seem very new, they actually go back to the roots and basic assumptions of the Bologna Process, whose strategic framework was defined in the early 1990s. The underpinning idea of lifelong learning is the effective implementation of a system of accumulation of achievements – not only to obtain a full qualification according to the requirements of a university but, above all, to document personal achievements in lifelong learning (European Commission, 2015).

In terms of offering good quality lifelong learning to learners, it is vital

to ensure the mutual permeability and flexibility of different learning pathways, in different forms and at different levels of education and training, as well as the validation of non-formal and informal learning outcomes

[Council resolution on a strategic framework for European cooperation..., 2021]

In recent years, the European Commission has worked intensively to support universities to actively engage in lifelong learning and implement a coordinated employability strategy.

One of the basic tools to better integrate the activities of HEIs with the needs of a learning society and the dynamically changing competence needs of the labour market is the idea of micro-credentials. According to the Recommendation on a European approach to micro-credentials for lifelong learning and employability of 16 June 2022,

Micro-credential means the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes will have been assessed against transparent and clearly defined criteria. Learning experiences leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be stand-alone or combined into larger

credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity.
[Council for the European Union, 2022, p. 13]

Their effective implementation is meant to incentivise universities to more intensively implement flexible learning paths offered to both regular students and non-student members of the academic community.

The main purpose of this paper was to understand the current conceptions and discourses of flexible learning pathways and micro-credentials in Polish higher education institutions that have become members of EUI Alliances, and to identify the opportunities and challenges of introducing flexible learning pathways and micro-credentials in Polish higher education. In order to recognise the degree of readiness of Polish HEIs to implement flexible learning models aimed at inclusivity and openness to the diverse needs of different groups of learners, the basic indicators and components of HEI systems that determine the effectiveness of the implementation of this innovative policy were analysed. A particularly important group are the European Universities, specifically designed to act as "lighthouses", showing the way forward for Europe in different contexts. It was therefore decided to include this particular group of universities in the study, as they are the most dedicated to piloting any changes.

Flexible Learning Pathways as a Pillar of the New University in Europe

Creating flexible learning pathways in universities is a natural step for a new university model based on accessibility, inclusivity and offering personalised learning experiences. One of the fundamental tasks facing 21st-century universities is to break down the various personal and systemic barriers blocking access to the educational offerings of the academic world.

One of the most important aspects of creating a new flexible education policy is to adapt the offer to the individual needs and preferences of learners. This is not only a question of the diversity of learning provision. There are many other dimensions of flexibility, relating both to modes of access and delivery and also to the learner's influence on the design of the pathway and the choice of individual modules. The implementation of flexible learning pathways is also fundamental

to building a culture of lifelong learning oriented not only towards traditional students but also towards those working or seeking educational inspiration for personal purposes. An important issue related to implementing flexible learning pathways is their scalability, which enables universities to open up to a wider population of learners. In turn, supporting this process with technological tools (for instance, learning and validation support solutions or asynchronous learning applications and software) reduces infrastructural and administrative constraints significantly. All these issues are three essential pillars of flexibility related to its inclusiveness, openness and diversity.

Looking at the last decade or so of higher education institutions in Europe or Poland, it is clear that initiatives related to flexibility and openness to the individual needs of students have developed quite intensively. Many documents, recommendations and guidelines at the European and national levels include suggestions related to the need to implement the so-called student-centred systems. (Commission Communication on a European strategy for universities, 2022; Dakovic & Zhang, 2020; Marinko et al., 2016). New flexible learning opportunities such as micro--credentials are also very high on the agenda of the European Commission, national governments, and institutions (Ubachs & Henderikx, 2022). Many universities have pursued this challenge by implementing new flexible solutions accessible to wider groups of students. Some universities paid special attention to tailoring their educational infrastructure to either individual needs or student groups. However, most of these measures were directed at the full-time students who used the university's academic offerings to obtain full qualifications.

More recently, flexibility and openness as a response to the needs of those who are not everyday members of the university community have become particularly important. This has also been reflected in legislative solutions. The new 2018 Act on Higher Education and Science also brought a qualitative change in the perception of flexibility from the point of view of the legislator, who deliberately changed the translation of "learning outcomes" from "efekty kształcenia" to "efekty uczenia się". This is a very significant linguistic change, which opens Polish higher education to an entirely new understanding of its educational mission, aimed not only at regular students but also at any other person who may wish to develop their competences and confirm them not only through formal education offered at universities but

also through various types of competence recognition processes with the authority of higher education institutions.

The analysis of currently operating flexibility models presented below is largely based on current systemic and operational solutions at Polish HEIs. A number of basic attributes of flexibility have been identified for comparative analysis, and their utility for non-regular student groups (lifelong learners) that do not constitute a regular student group at a given university has been examined.

Research Methods

The study analysed 18 universities that are members of the European University Alliances. A systematic and structured analysis was made of internal legislation and various types of information material available at the university level on various aspects of the implementation and operation of flexible learning pathways.

The primary research method used in this study is the scoring technique in the context of scoring (point-based method; Stabryła, 2000), which involves assigning points or numerical values to different variables, characteristics or elements of the flexibility phenomenon under study for the purpose of evaluation, comparison or analysis.

The scoring method is a method that allows the evaluation of any object according to a set of accepted criteria (Szyran-Resiak, A. (2016), for example in terms of product quality (Lisiecka, 1997), companies (Kral, 1993; 1997), strategy (Kral, 1996), sector or process attractiveness (Gierszewska, 2002).

The research process involved four stages:

- → Categories or criteria related to the flexible learning pathways against which points will be awarded have been identified and defined.
- → Points or numerical values were awarded for individual elements based on the criteria.
- → After scoring all the analysed elements, the scores were added for each category, creating indicators or measures that allow comparison of the different elements of flexibility under study in universities.
- → Based on the results obtained, analysis and interpretation were carried out, drawing conclusions about the current level

of flexibility and identifying patterns, trends, relationships or other relevant information.

Three main groups of information sources were examined:

- → Internal legal acts of universities available on their websites: Study Regulations, Statutes, strategies, specific regulations for mobility, individual learning paths, etc.
- → Information, documents, announcements and other promotional material on educational flexibility on the university's website.
- → Information on the website of the European Alliance, of which the university is a member.

A group of experts consisting of a learning policy specialist in charge of the Teaching & Learning unit in a large university, a quality process specialist in the university, an Erasmus+ mobility recognition specialist, a learning outcomes validation specialist and a European University specialist discussed each criterion on the basis of a prior individual analysis of each document.

On the basis of the jointly agreed scores awarded to individual institutions, an average was then calculated for all Polish institutions that are members of the European Alliances. This analysis provided an overall picture of the degree of progress in Poland on a given criterion.

Dimensions of Flexible Learning in the Perspective of HEIs Providing Educational Services in Poland

Four main dimensions related to the construction of a flexible education/learning model within the university were identified:

- → Flexible learning paths within the regular study process;
- → Lifelong learning (LLL) culture at the university;
- → Recognition of competences acquired through informal and non-formal pathways;
- → Flexible learning paths at the European University Alliance (EUI Alliance) level.

Each dimension was defined by performance indicators describing the different levels of performance indicated by a combination of numerical scales and descriptive terms.

Dimension 1: Flexible Learning Paths within the Regular Study Process

Specifically, the following perspectives were analysed:

- → Access to individual learning paths for regular students.
  This indicator assesses the level of access to individual learning paths for regular students based on the available regulations for individual study programmes. The analysis covered the extent to which access to individualised pathways is constrained at the university level. The assessment concerned the extent to which students can create their own learning paths.
- → Access to a variety of options for the accumulation of achievements.
  The assessment covered the possibility of recognising differentiated learning experiences in the study programme, either as an optional subject, as a subject replacing a subject from the implemented study programme or as an additional achievement indicated in the diploma supplement.
- → Access to advice on individual learning pathways.
  The extent to which the university organises and promotes the involvement of students in the design of their own learning pathways was examined. The extent to which the university offers students expert and content-related support in educational counselling was investigated.
- → Availability of organisational and administrative solutions to implement flexible learning.
  The extent to which the student has the opportunity to follow a study programme that is flexible and tailored to their needs and abilities was analysed. The degree of student involvement in the design of the learning process was examined.
- → Availability of infrastructure to deliver flexible learning.
  The level of student access to hybrid forms of learning was investigated. The availability of technological solutions to support flexible learning was analysed.

Dimension 2: LLL Culture

The description of the benchmarking criteria included:

- → Diversity of the educational offering for diverse groups of learners.

The educational offerings of universities were analysed in terms of different groups of learners and also in terms of making these offerings more accessible and flexible and how they are delivered.

- → Availability of counselling for creating learning pathways for different groups of learners.
  The existence of different forms of counselling aimed at non-regular students and other groups of learners was examined. The extent to which universities have anticipated the need for specialised units providing such services was analysed.
- → The degree of organisational preparedness in dealing with diverse groups of learners.
  Administrative and organisational arrangements to support the service of people who are not regular students of the institution were analysed.
- → Level of communicative openness in promoting differentiated learning pathways.
  The extent to which universities promote different types of activities related to flexible learning pathways was investigated.
- → The level of involvement of the socio-economic environment in the co-creation of flexible learning paths.
  The level of involvement of companies and other organisations in the creation and delivery of learning targeted at different learner needs was examined.

Dimension 3: Recognition of Competences Acquired through Informal and Non-Formal Pathways

The description of the criteria in this dimension included:

- → The level of sophistication of the legal provisions on informal and non-formal pathways within the university's internal regulations.
  The extent to which universities have incorporated the needs of informal and non-formal learning into their regulations was examined.
- → Recognition of informal and non-formal competences for regular students.
  The level of openness of HEIs to recognise competences other than those acquired in the formal learning process provided by the study programme was examined.

- → Recognition of competences acquired through informal and non-formal pathways for non-regular groups of learners.
  The extent to which the university is actively involved in the validation of various learning outcomes and competences for non-regular students was analysed.

Dimension 4: Flexible Learning Paths at the European University Alliance Level

The evaluation criteria analysed particularly:

- → The Alliance's degree of commitment to promoting flexible learning pathways for diverse groups of learners.
- → The Alliance's degree of progress in implementing micro--credentials.
- → The Alliance's degree of sophistication in co-creating organisational and legal solutions to support learning through informal and non-formal pathways.
- → Level of collaboration with the socio-economic environment in co-creating flexible learning pathways.

Table 5.1. Results for Dimension 1

FLEXIBILITY DIMENSION	FLEXIBLE LEARNING PATHS WITHIN THE REGULAR STUDY PROCESS			
Indicator description	Criteria for indicator assessment			
	Failure to meet the criterion (1)	Basic level (2)	Intermediate level (3)	Advanced level (4)
Individual learning paths	The university does not provide individualised learning paths; the student has almost no influence on the shape of the learning path.	The university allows individual learning paths for a limited group of students; there is flexibility in the organisation of studies; students have a limited influence on the shape of the path.	The university allows individual learning paths for a relatively wide range of learners; students can partly influence the choice of subjects and the shape of the path.	The university allows the creation of flexible learning paths for a wide range of students, and they can design their paths autonomously.
Accumulation of achievements	The university does not provide for extra-curricular learning outcomes to be credited for the accumulation of achievements.	The university enables extra--curricular learning outcomes to be recognised as an achievement indicated in the diploma supplement.	The university allows for the recognition of extra--curricular learning outcomes as an elective subject or as an additional achievement indicated in the diploma supplement.	The university allows for the recognition of extra-curricular learning outcomes in the study programme as an elective subject, as a subject from the study programme with the omission of compulsory subjects and as an additional achievement indicated in the diploma supplement.
Consulting	The university is not developing any form of academic support for regular students.	The university offers its students basic support through occasional counselling and similar services through dedicated organisational units such as a careers office.	The university offers its students basic counselling services in the form of dedicated units and organises occasional assistance to students in designing their learning paths.	The university has advanced academic counselling programmes based on coaching, mentoring and tutoring. In addition, the university has a support model integrated into the university's existing education policy.

Organisational and administrative arrangements	The university does not support organisationally flexible learning pathways in any way.	The university has basic mechanisms and procedures for applying for flexible learning pathways, but these apply to a relatively small group of students.	The university has a structured approach to implementing flexible student learning pathways, and the system allows students to schedule courses to suit their needs and time capabilities flexibly.	The student can design the learning paths flexibly and also plan the individual activities associated with them. The university has procedures and documents as well as an IT infrastructure to support designing flexible learning paths.
Educational strategies tailored to flexible learning pathways	The university does not promote any innovative learning strategies.	The university has the infrastructural and content facilities to adapt the educational methods used in flexible models.	The university has the facilities to adapt the space and organisation of the process to the individualised paths of single students or student groups. The university promotes the use of active teaching/learning methods.	The university strongly promotes active forms of education and student learning and allows the combination of different educational strategies within the same student group. The university has the IT and technical infrastructure to create and deliver individualised learning paths flexibly.

Source: own elaboration based on survey results (*N* = 18).

Table 5.2. Results for Dimension 2

FLEXIBILITY DIMENSION	LLL CULTURE			
Indicator description	Criteria for indicator assessment			
	Failure to meet the criterion (1)	Basic level (2)	Intermediate level (3)	Advanced level (4)
Diversity of the educational offer	The university is oriented towards providing educational services aimed at regular students only.	The university organises a selection of educational forms aimed at different age groups of learners.	The university provides the opportunity to participate in a wide range of learning experiences of varying sizes. The learner can influence the selection of individual elements of this offer to a relatively large extent.	The university has a wide range of learning experiences of different sizes aimed at different groups of learners. The learner has the flexibility to select individual educational components from the offer. For the needs of selected groups of learners, the university can create a personalised offer, outside the regular LLL offer.
LLL consultancy	The university does not offer any form of support for groups of non-regular students.	At the level of individual university units, some individuals or departments can occasionally provide consultancy services in LLL provision.	There is one dedicated central unit in the university dedicated to informing different groups of learners at the university level, as well as people outside the academic community, about the LLL offer available at the university.	The university has a dedicated unit or position responsible for providing consultancy services in LLL, particularly for people outside the academic community. Most often, the university provides the opportunity to work with an individual coach or tutor. This service is available to the learner throughout the learning cycle.

Administrative and organisational preparations	The LLL process is not included in the university's procedures and documentation.	The processes involved in organising and operating LLL are accompanied by procedures, with an indication of the responsibility for implementing the procedure and the necessary documentation to accompany it.	The university has a dedicated unit that handles the administrative processes involved in handling the offer; however, this is not fully integrated into the university's regular education service process.	The handling of the process is fully integrated into the day-to-day operations of the university and is a natural part of it. The implementation of the procedures and the generation of the necessary documentation are carried out with the support of IT tools. The learner can plan the learning path individually and select the individual educational components.
Communication openness in LLL	The university does not promote its LLL offer through any communication channel.	The university has basic information related to LLL offerings posted on its website.	In addition to providing information on LLL offerings, the university communicates on a regular basis about events related to the implementation of its LLL mission.	The University has a strategy in place to promote lifelong learning and encourage diverse groups of learners to become involved in the process. The University promotes its LLL programmes through various online channels and social media and reaches out to diverse groups of potential learners on a regular basis.
Involvement in the socio-economic environment	The university does not expect to involve the socio--economic environment in the implementation of the LLL offer.	The socio-economic environment of the university is occasionally invited to various events related to the promotion and implementation of the LLL offer.	The socio-economic environment benefits from the LLL offer of the university; the university occasionally invites representatives of the environment to co-lead individual educational components.	The university has implemented well-established solutions related to the co-creation of the LLL offer with representatives of the socio-economic environment; representatives of the environment actively participate in the running of individual educational components; the university has implemented a number of agreements on the mutual provision of educational services for its employees.

Source: own elaboration based on survey results (N = 18).

Table 5.3. Results for Dimension 3

FLEXIBILITY DIMENSION	RECOGNITION OF COMPETENCES ACQUIRED THROUGH INFORMAL AND NON-FORMAL PATHWAYS			
Indicator description	Criteria for indicator assessment			
	Failure to meet the criterion (1)	Basic level (2)	Intermediate level (3)	Advanced level (4)
University regulations	The university does not have any specific provisions that entitle it to recognise competences acquired through informal or non-formal pathways.	The university has provisions for the recognition of competences acquired through informal or non--formal pathways in at least one internal normative act.	The university has provisions for informal and non-formal pathways in more than one internal normative act; however, it only occasionally uses these provisions in practice.	The university has provisions for informal and non-formal pathways in most of its internal regulations and, above all, these pathways are an integral part of the internal quality assurance system.
Recognition for regular students	The university does not implement any activities related to the recognition of competences acquired through informal and non-formal pathways.	The university provides the opportunity to recognise outcomes acquired through informal and non-formal pathways only at the recruitment stage.	The university offers the possibility of recognising non-formal and informal learning outcomes at the recruitment stage; in addition, the university makes it possible to recognise such outcomes, outside the study programme, as an additional achievement indicated in the diploma supplement.	The HEI not only provides the possibility to recognise outcomes acquired through informal and non-formal pathways at the recruitment stage but also has a system of validation of learning outcomes in place, which it uses regularly. Validation mechanisms are included in at least one internal normative act (e.g. study regulations) and are an integral part of the internal quality assurance system.

Recognition of the achievements of lifelong learners	The university does not have a policy for recognising outcomes acquired through informal and non-formal pathways.	The university occasionally recognises competences of selected learners, and this process is not usually part of a formal procedure; it is based on the expertise of the individual academic staff.	The university has procedures related to confirming competences to different groups of learners; however, it uses these powers occasionally. Typically, the offer and competence range of such credentials is limited.	The university has mechanisms to confirm competences of different groups of learners and further flexibly adapts the process to the needs of such learners. The confirmation process is formal, accompanied by a procedure and appropriate documentation and is an integral part of the internal quality assurance system. The range and scope of credentials are unlimited.

Source: own elaboration based on survey results (*N* = 18).

Table 5.4. Results for Dimension 4

FLEXIBILITY DIMENSION	FLEXIBLE LEARNING PATHWAYS AT THE EUROPEAN UNIVERSITY ALLIANCE LEVEL			
Indicator description	Criteria for indicator assessment			
	Failure to meet the criterion (1)	Basic level (2)	Intermediate level (3)	Advanced level (4)
Promoting LLL and flexible pathways	The Alliance does not communicate any LLL-related content.	The Alliance promotes various lifelong learning initiatives; however, flexible learning pathways do not feature prominently in this communication.	The Alliance promotes lifelong learning and access to flexible informal and non-formal learning pathways on its website and selected social media channels.	The Alliance is fully committed to various initiatives promoting lifelong learning and access to non-formal and informal learning pathways. The Alliance cites examples of good practice in this regard implemented at the network level.
Implementation of micro--credentials	Micro-credentials do not feature prominently in the Alliance's current activities.	The Alliance clearly declares its willingness to grant micro--credentials; there is no developed policy yet. The Alliance is at the stage of testing possible pathways for issuing micro-credentials.	The Alliance has a clearly stated policy for the granting of micro-credentials posted on websites or social media. The Alliance has some experience in micro--credentials/micro--certification, is developing formal procedures and fitting the designed process into an IT system operating at the network level.	The Alliance has a fully implemented micro--credentials awarding system based on European quality standards. The micro--credentials are available to a diverse group of learners drawn from different partner universities – members of the Alliance. The system of micro--credentials is fully supported by an Alliance-wide IT system.

Organisational and legal arrangements	The Alliance does not have any specific solutions related to the handling of the LLL process and flexible learning pathways.	The Alliance includes aspects related to lifelong learners in its action plan and declares its willingness to expand access to education for this group. However, there is a lack of specific legal solutions providing guidelines and quality standards for such processes.	The Alliance's website provides guidance on the units responsible for handling the LLL process and flexible learning pathways. The Alliance has a legal procedure related to the handling of the process covering all network members.	The Alliance has a clear organisational structure and division of responsibilities related to the operation of the LLL process and flexible learning pathways. The Alliance has an elaborate LLL policy integrating the interests of all its members, which is an integral part of its internal quality assurance system.
Cooperation with the socio--economic environment on flexible pathways	The Alliance is not taking any specific action regarding the socio-economic environment.	The Alliance declares its willingness to engage in the implementation of joint activities with the socio-economic environment.	The Alliance actively involves various entities from the environment in the co--creation and co-delivery of the LLL offer, examples of which can be found on the Alliance's website.	The Alliance's LLL offer is developed in close cooperation with the socio-economic environment. The Alliance can demonstrate multi-level relationships with different representatives of the socio--economic environment. The beneficiaries of the process offered at the Alliance level can be multilateral and come from both Alliance partner universities and the socio--economic environment.

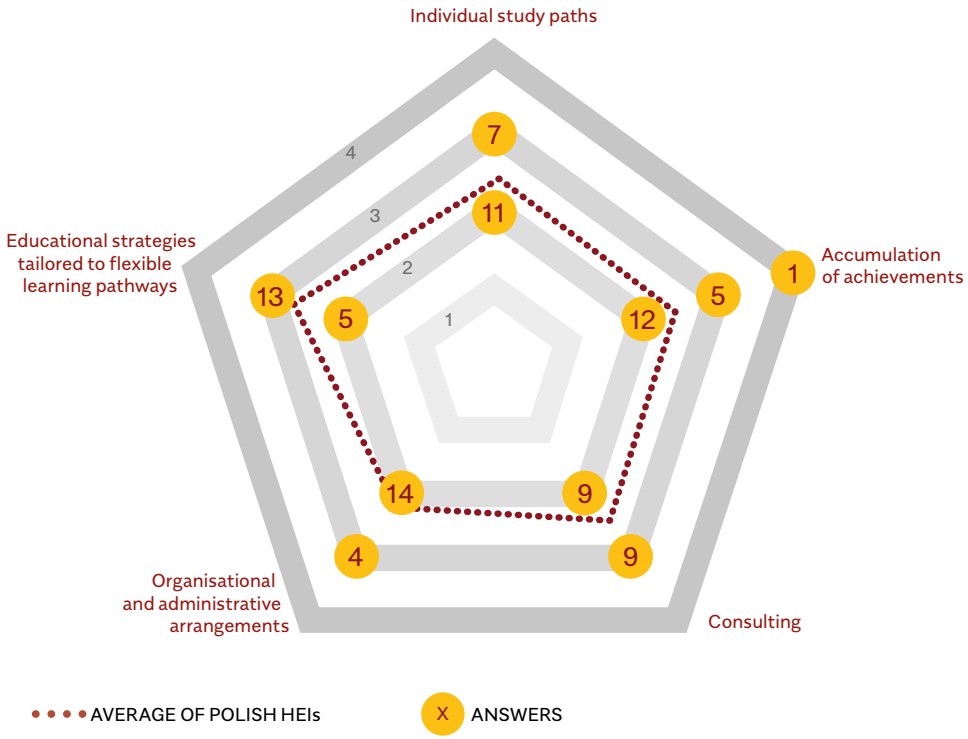
Source: own elaboration based on survey results (N = 18).

Assessment of the Readiness of Polish Universities to Implement Flexible Learning Pathways with a Special Focus on Micro-Credentials

Having defined the dimensions of flexibility and their detailed categories, which are the basis for awarding points, the degree of readiness of Polish higher education institutions that are members of EUI Alliances to implement flexible models. Quantitative scoring was used for the individual elements, assigning numbers of points for different degrees of intensity. The results of the analysis carried out for the previously defined four dimensions are presented below.

Dimension 1: Flexible Learning Paths within the Regular Study Process

Figure 5.1. Analysis of flexibility within the regular study process in Polish HEIs that are members of EUI Alliances



Source: own elaboration based on survey results (*N* = 18).

In accordance with the chart above regarding the creation of individual learning paths, the vast majority of the surveyed universities allow individual learning paths for a certain group of students. These are mostly provided for students with the best academic results and the highest averages for academic performance. In a large number of universities, the creation of individual learning paths for a wide group of learners is allowed. In the vast majority, a student has the right to participate and at least partly influence the choice of subjects and the shape of their future path. In principle, the option to fully design their learning paths autonomously was not found in any surveyed university.

In the vast majority of the surveyed HEIs, all kinds of learning activities and experiences that are not part of the formal learning process can be recognised as additional achievements indicated in the diploma supplement. In some of the surveyed HEIs, it is possible to recognise curricular learning outcomes through the completion of an elective subject. In very few HEIs, it is possible to flexibly recognise learning outcomes for credit of subjects from the regular study programme. The latter option is often used for a limited group of students participating in mobility programmes.

A very important aspect related to the effective implementation of flexible learning pathways for regular students is professional counselling.

In most cases, universities offer basic counselling support in the form of the services of a university career offices. However, there are also arrangements whereby students are supported with additional assistance to design individual learning pathways and to take advantage of additional learning experiences available within or outside the university. In some universities, it was noted that there are relatively advanced academic counselling programmes based on coaching or tutoring.

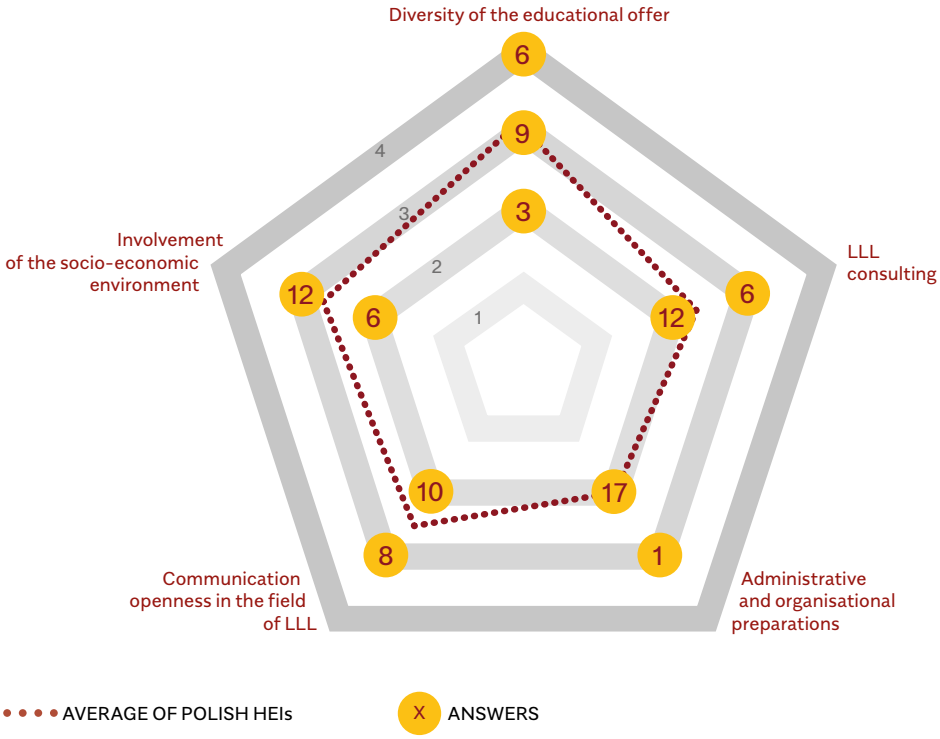
The use of active teaching/learning methods is promoted in most universities. The universities have adequate facilities to flexibly adapt the organisation of the learning process to the individualised needs of groups and individual students.

Dimension 2: LLL Culture in the University

Polish universities that are members of EUI Alliances have a wide variety of educational offerings aimed at students, staff and learners who are not regular academic community members. The vast majority of universities offer various educational experiences of varying sizes aimed at different age groups of learners. In selected HEIs that are members of EUI Alliances, there is a unit dedicated to collecting and promoting LLL offerings. None of the surveyed HEIs provided consultancy services in LLL, particularly those outside the academic community. The lifelong learning offer is widely promoted on websites. In most HEIs, in addition to the promotion of the LLL offer itself, many online articles or other reports document the course of individual events related to the implementation of the LLL educational offer.

The participation of the socio-economic environment at this level can be described as a medium-level engagement. Some universities cooperate with companies by organising occasional training for company employees. In some universities, professionals from the socio-economic environment are invited to the teaching process. However, most of these activities are incidental and do not form an integral part of the educational policy of the surveyed universities.

Figure 5.2. Analysis of the degree of involvement in building an LLL culture at Polish HEIs that are members of EUI Alliances

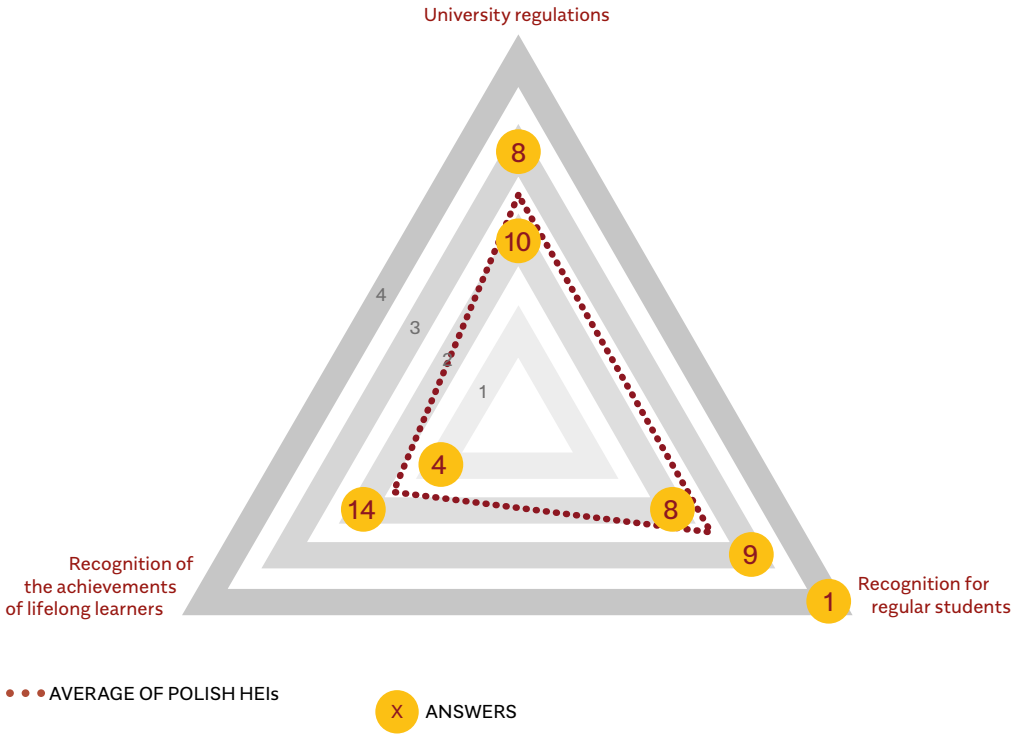


Source: own elaboration based on survey results (*N* = 18).

Dimension 3: Recognition of Competences Acquired through Informal and Non-Formal Pathways

Recognition of competences acquired through informal and non-formal pathways is one of the most sensitive points related to the flexibility models operating at Polish HEIs that are members of EUI Alliances. The existing legislative and information documentation in place at the HEIs regarding the possibility of recognising learning outcomes acquired through non-formal and informal pathways was analysed.

Figure 5.3. Analysis of the degree of recognition of competences acquired through informal and non-formal pathways



Source: own elaboration based on survey results (*N* = 18).

Recognition of learning outcomes acquired through informal and non-formal pathways is one of the biggest challenges for Polish HEIs. In most documents analysed, HEIs have provisions for the recognition of competences acquired through non-formal and informal pathways in at least one internal normative act. However, there is no clear information concerning the statistics of the use of recognition mechanisms both for regular students and the non-academic community using the LLL offer. Only a small number of HEIs provide opportunities to recognise outcomes acquired through non-formal and informal pathways, not only at the recruitment stage. In principle, no HEI found full integration and recognition of learning in non-formal

and informal pathways with the quality policy described in the internal quality assurance systems.

As far as the group of so-called lifelong learners is concerned, HEIs occasionally use competences related to the possibility to recognise selected learners' competences acquired outside the formal education process. In principle, there is no culture of tailoring recognition processes to the needs of individual learners at Polish HEIs. No documents have been found that describe the formal process of recognition of non-formal and informal learning outcomes for the needs of non-regular members of the academic community.

Dimension 4: Flexible Learning Paths at the EUI Alliance Level

The promotion of flexible learning pathways and lifelong learning provision at the level of the European University Alliances is relatively high. The Alliances are very much involved in promoting lifelong learning, presenting many articles and other materials both on their websites and in official documents stating the mission and vision of the respective network. Relatively little information was found on flexible learning pathways and the recognition of learning acquired through informal and non-formal routes. The attention of the Alliances is now very much directed towards promoting education targeting different groups of learners. Micro-credentials have a special place in the communication and promotion strategies of University Alliances. Most Alliances strongly encourage the idea of issuing micro-credentials. A relatively large proportion of the Alliances declare the creation of special IT systems to support the effective implementation of the lifelong learning offer. Some of the Alliances are taking the floor in the discussion concerning making the approach to the learning process more flexible, promoting the modular design of learning offers and enabling individual learners to select modules to suit their learning needs flexibly.

Figure 5.4. Analysis of the flexible learning paths and their promotion at the EUI alliance level

Source: own elaboration based on survey results (*N* = 18).

The idea of micro-credentials currently seems to be the most important trend in terms of shaping the future educational policy of the various Alliances. The vast majority of universities declare their intention to implement micro-credentials. Internet sources linked to the individual Alliances contain a great deal of information on planned activities in this area. Some HEIs are also promoting IT tools to support the implementation of micro-credentials at all stages – from design, through the learning process and verification of learning outcomes, to final confirmation of the acquisition of the aggregated set of competences. There is a strong trend towards defining modularisation for individual educational components, making relatively autonomous selection and design of individual learning paths possible. It has to be said, however, that universities are rather in the early stages of the road to comprehensive

implementation of micro-credentials. Currently, there is a great deal of activity around defining micro-modules leading to micro-credentials. Mostly these are micro-modules offered by individual members of the Alliance. There is relatively little implementation of micro--modules co-implemented by different members of the Network. Only some members of the Alliances are vocal about the need to implement micro-modules for people who are not regular academic community members. There is also a lack of formal mechanisms for the recognition of competences acquired through short learning experiences. The current dominant trend is to issue micro-credentials/micro-certificates closely linked to the formal system of awarding full university qualifications. Micro-credentials are, to a large extent, treated as tools for differentiating the competence profile of graduates from a particular field of study. The predominance of micro-credentials issued at the Alliance level is primarily due to the cultural diversity of the institution delivering the micro-credentials and the mobility experiences that are often an integral part of the new educational strategies of individual network members and the Alliances as a whole.

When analysing the status of the involvement of Polish HEIs, which are members of the Alliances, in implementing micro-credentials, one should appreciate their open-minded attitude and readiness to test various tools developed at the Alliance-wide level. European university networks are a definite driving force behind this new policy and a source of operational, legislative and formal solutions that are largely transferable to individual universities. This is by far the most important added value resulting from the functioning of Polish universities in the Alliances.

Discussion: Building a LLL Culture at Polish Universities as the Most Important Operational Challenge of the Coming Years

Lifelong learning has become the overarching concept and vision for education, as reflected in the United Nations' 2030 Agenda for Sustainable Development and its Sustainable Development Goals. One of which, goal 4, explicitly petitions countries to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UNESCO Institute for Lifelong Learning, 2022).

This study allowed us to outline the current view of Polish HEIs that are members of EUI Alliances on the involvement in the implementation

of the latest European trends related to delivering micro-credentials and flexible lifelong learning paths. The analysis of the content of documents and various online sources related to HEIs and European Alliances revealed a relatively high level of activity of Polish HEIs in this area.

The state of readiness of Polish HEIs that are members of EUI Alliances for implementing new university models oriented to the individualised needs of diverse learners can be considered satisfactory. However, it is worth pointing out a few important aspects of day-to-day operations that universities can revise, the improvement of which does not require much investment, time or legislative changes but could contribute to accelerating the work on flexible models and more in-depth testing of possible solutions in this area in Poland.

The most visible manifestations of self-limitation of HEIs can be observed in the adopted patterns of action, legislative beliefs and interpretations of certain provisions of the Act and Regulations. The conducted research shows that it is not uncommon for HEIs to treat the provisions of the Act too literally. For example, Article 71.1 of the Act on Higher Education and Science states:

A higher education institution may confirm learning outcomes acquired in the process of learning outside the system of studies to persons applying for admission to a degree programme in a particular field, level and profile [...].
(2) Learning outcomes shall be validated to the extent that they correspond to the learning outcomes set out in the programme of study.

This article deals with the recognition of learning outcomes acquired through informal and non-formal pathways for the purpose of their recognition for the future award of a full qualification. There is, therefore, no provision prohibiting HEIs from recognising learning outcomes acquired through informal and non-formal pathways to accumulate achievements in lifelong learning. However, the current discourse in this respect leads us to believe that some HEIs consider that the provision covers the only possible range of competences in recognising informal and non-formal outcomes. Unlocking the activities of HEIs in the area of validation and recognition of learning outcomes, not necessarily for a particular study programme, could

be a significant driving force for making the educational activities of HEIs more flexible. This would be a great space for the effective implementation of micro-credentials or other forms of certification for short educational experiences, such as digital badges, for example. This would make it possible to diversify the competency profiles of graduates, often representing huge cohorts of people graduating from the same course in a given academic year.

The survey also identified sources of untapped potential at the universities that are members of EUI Alliances. When it comes to regular students, individual learning paths are often only available to outstanding students. Meanwhile, at the root of the idea of flexibility is its inclusiveness – the accessibility of this to the different needs of learners, who also often show diverse learning skills and abilities. There is no provision limiting the university's autonomy in this regard.

The phenomenon of unnecessary self-limitation also applies to validation mechanisms, which were obligatorily adopted by resolutions of senates by all HEIs in Poland a few years ago. Unfortunately, most HEIs do not use the solutions and internal mechanisms developed in these resolutions. Meanwhile, the analysis of available documents in this area showed many valuable ideas for structuring validation processes in the conditions of Polish HEIs. This mechanism could also be one of the levers for creating lifelong learning culture at HEIs.

The flexibilisation of the educational offer should encompass students of regular study programmes and non-members of the academic community who do not participate in the formal educational offer of a given university.

Polish HEIs are very cautious in promoting services related to the recognition of learning outcomes for non-regular groups of learners. Based on the discussions at higher education institutions, it can be concluded that the likely reason for this situation is the lack of human resources available at a given HEI, but also due to the lack of legislative and operational solutions to support such processes. IT solutions that would automate these processes would help organise them more efficiently. Unfortunately, in the Polish market, there are not many forms and tools to support this.

The lifelong learning concept offers the perspective of a radical new approach especially for the higher educational process focused

on opening up traditional universities for those who want to learn as adults (Varadarajan, Koh & Daniel, 2023).

The forthcoming development of the university should aim at creating universities as places of useful learning for various social groups, i.e. creating the so-called "place of useful learning not only teaching". The university should be a natural choice for people with diverse learning needs resulting from labour market dynamics or the personal ambitions of learners. These educational needs may not only arise from a desire to take part in some educational process or other form offered by the university, but also learners may wish to benefit from the authority and competence of the university in recognising competences acquired outside the formal education process. It should be emphasised that universities currently have no legislative barriers to carrying out this type of action.

Universities, according to the adopted European strategy for higher education (Communication on a European strategy for universities, 2022), should proudly play the role of the so-called "lighthouses", pointing the way forward, not only scientific or technological but also professional/competency-based development, for their environment. Finally, universities should be the place that would generate a wide range of support for society, anticipating all kinds of risks and concerns arising from technological progress and changing geopolitical conditions in the world. Through increasing differentiation of skills and globalisation, it has become necessary to continually update knowledge and competences to ensure an individual's life development and self-fulfilment. It is necessary to further enhance the citizens' high level of qualification and to draw less educated people into the modern society (Valueva, 2022).

Polish universities undoubtedly show openness to innovation and willingness to implement new solutions. Perhaps additional interpretative support from the legislature would help Polish universities gain more courage in testing non-obvious solutions, not necessarily literally contained in normative acts. In this way, the next few years would allow for the creation of a new model and face of Polish higher education institutions as a significant link in the implementation of the new vision of a resilient and innovative Europe.

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6

Transition into Becoming European Universities – Conclusions and Recommendations

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The discussion presented so far in subsequent chapters of this book has captured the idea of the European Universities Initiative in its many facets which overall contribute to defining EUI through the following set of activities: (1) implementation of joint study programmes; (2) promoting the mobility of students and staff; (3) enhancing the quality of teaching and research, and (4) fostering innovation and entrepreneurship. The EUI aims to create a seamless European Higher Education Area where students, researchers, and staff can easily move between institutions and countries, and where cooperation and exchange are prioritised. The EUI promotes collaboration across various disciplines and sectors, breaking down traditional boundaries and fostering interdisciplinary approaches to address academic and societal challenges. European Universities are also expected to actively involve students in the design and governance of the alliance, ensuring their voice is heard in shaping the future of the European Higher Education Area. In light of the above definition and taking into account all the research findings from the subsequent research activities presented in this book, the answer to the question posed in the Introduction, namely: how Polish universities position themselves in the process of becoming European Universities, is as follows:

Polish universities have shown great enthusiasm for European Universities alliances and used substantial effort to participate in this initiative and develop their potential within it. Higher education institutions from Poland discovered these alliances as one common ground where all their international activities could be placed for better quality, coordination, realisation and management. This has also given Polish universities a better sense and feel of what the European Higher Education Area is. Activities within European Universities alliances

such as designing and developing common didactic offers, creating common research areas for innovations and implementing new tools and solutions for better governance, communication, cooperation and administration have become a tangible sign of European dimension and cooperation. Indeed, cooperation like this existed before but it is the European Universities Initiative that has boosted this cooperation and has given it a meaningful direction. Participating in EUI's alliances has also unleashed the already existing potential among Polish universities. The positive impact of participating in a European University alliance was reported both at institutional and individual levels including students, administration, and didactic and research staff. Surprisingly enough, all these positive effects have not been affected much by the COVID-19 pandemic. However, the resilience of international university networks to the pandemic has been also proved in a separate research carried out by Poszytek (2021).

Yet, certain areas still need further development so that the whole initiative could be carried on successfully further. There are two fundamental elements embedded in EUI's DNA which constitute a sort of testing ground for the continuation of this initiative. These are: establishing one legal entity out of each consortium and issuing a European diploma as a result of studying within a consortium. As regards the first of these elements, most European Universities in which Polish higher education institutions participate function on the basis of a traditional model which is a project consortium. Only a few of them make an effort to base their cooperation on certain forms of associations, which is a demanding endeavour since in most cases they represent different organisational structures, cultures and approaches. The second element, namely: offering one common European degree, is even more challenging, especially for Polish universities. Although joint degree programmes have been supported by the European Commission for decades within the Erasmus+ programme's central action called Jean Monnet, the participation of Polish higher education institutions in it has been rather weak so far. This will be the greatest challenge for Polish universities within European Universities alliances in the near future. Polish universities themselves admit that this challenge is mainly of organisational and legal character. However, it must be stressed that Polish universities are already on the way to establishing common regulations and rules for

the organisation, execution and certification of lectures and the entire didactic process together with their consortia partners. This does not yet constitute virtual campuses, which are one of the most tangible goals of European Universities alliances but at least it can be treated as a preparatory ground for a common didactic ecosystem. As a result of the impact of the COVID-19 pandemic on educational institutions across Europe, European Commission (2021) states that fully--functional digital EU inter-university campuses with a blended learning model including micro-credential system are a must for the creation and the development of universities of the future.

However, from the overall point of view, digital transformation is quite a promising area of cooperation for consortia of European Universities. Although the research presented shows that they are on the medium level of development in this respect, many of them claim that it is their European University alliance that made them transform. And although most of them state that the main obstacle for them to further develop in this area is a lack of financial resources since IT solutions are expensive, it must be stressed here that it is highly recommended that they use Erasmus+ funds for partnerships. From this EU's financial perspective, digitalisation is one of the most important priorities and Erasmus+ funds for partnerships are still relatively easy to obtain. This recommendation also refers to developments within didactic, research, governance and administration areas since the Erasmus+ partnerships scheme is also dedicated to financing such activities.

The overall recommendation is that Polish universities which are already part of European Universities alliances should strengthen their cooperation with their partners and that still further Polish universities should join such alliances. The benefits are numerous: (1) a unique chance to position itself in a well-functioning international network able to compete effectively on a global educational market; (2) greater visibility and acknowledgement worldwide; (3) better quality in didactics and research – both fostering innovations and forming a solid ground for a culture of innovation; (4) more effective management and administration; (5) faster path to become a university of the future to better respond to requirements of the current fourth industrial revolution. On top of this, both the greater visibility and higher quality mentioned above may foster the efforts of Polish universities to rise in worldwide university rankings. Finally, it must be noted that only

one Polish higher education institution is a leader of its alliance, while the other ones are only partners within their consortia. This should also change if we, as Poland, want to have a say in the further formation of a common European Higher Education Area.

Considering the desired profile of a European University described above and the presented advancements of Polish universities in becoming European Universities, the main conclusion is obvious. None of the aspiring and already participating Polish higher education institutions can miss such an opportunity, especially since they are already on the right track, though with still much to do and improve ahead of them. This is crucial not only for the development of Polish universities themselves but it is also a fundamental issue in the development and competitiveness of the country as a whole. The results of the European Innovation Scoreboard (European Commission, 2022) are not favourable for Poland. Actually, our country scores rather low in most of the parameters of innovation. It must be noted that many of these parameters refer to higher education: investments in education, expenditure for research, academia-business cooperation, number of foreign students, etc. There is no doubt that participation in the European Universities Initiative can help us improve our score in the next European Innovation Scoreboard. Also, the analysis of Scopus inventory shows that from the point of view of scientometric data, Polish universities are not very competitive in comparison to their partners within European Universities alliances. Again, participation in these alliances may help Polish universities improve their results in this respect. To sum up, it should not be an exaggeration to say that the already mentioned opportunities for Polish universities are not only of educational, research and organisational character but the opportunities resulting from participation in EUI must also be treated here in a broader context of civilisation development.

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Appendices

Appendix 1. Polish Higher Education Institutions in the European Universities Initiative

1CORE

The 6 universities of the 4EU+ Alliance jointly conduct research and teach students, create initiatives related to innovation, technology transfer and university social responsibility. Together, the universities implement more than 100 projects for research, education and enhancing staff competences. The challenges for the alliance partners are to increase mobility rates, which will be crucial for all universities, to deepen integration and increase balance at the European level, to establish a common framework for education. The main mission of the alliance is to develop a borderless cooperation in education, research and innovation within the network.

Leader: 4EU+ European University Alliance E.V. – legal entity of the alliance

Partners: Copenhagen University, Heidelberg University, Milano University, Sorbonne University, University of Warsaw

ARQUS II

The ARQUS network brings together nine comprehensive research universities that have a wealth of experience in collaborative projects and share a common profile as internationalised institutions with a deep regional commitment in mid-sized cities.

The main aspiration of ARQUS is to act together as a laboratory for institutional learning in order to advance the design, testing and implementation of an innovative model for deep inter-university collaboration.

Leader: University of Granada

Partners: Graz University, Leipzig University, University Lyon 1 Claude Bernard, University of Minho, University of Padova, University of Vilnius, University of Wrocław

CIVICA

CIVICA's vision for 2030 is to deepen and expand its activities in key areas such as education, research, civic engagement, innovation and lifelong learning; to develop a diverse and inclusive CIVICA community and continue its global reach; to establish CIVICA's leading role in the social sciences; and to create a framework for sustainable institutional collaboration.

In line with its mission, CIVICA will continue to serve local and global communities, defend fundamental European values, support environmental sustainability and conduct research in areas relevant to social science policy. At the same time, CIVICA will also continue to focus on the internal communities of the alliance. From autumn 2022 to autumn 2026, thousands of students and young researchers are expected to gain new opportunities to pursue international mobility, benefit from new educational offers and Europe-wide civic engagement opportunities.

Leader: Institute of Political Sciences Paris,

Partners: Bocconi University, CEU Central European University, European University Institute, Hertie School of Governance, IE University, National University of Political Studies and Public Administration, SGH Warsaw School of Economics, Stockholm School of Economics

COLOURS

The COLlaborative innOvative sUstainable Regional univerSities alliance aims to strengthen the European network, increase global exposure and encourage mobility in Europe. Alliance partners are committed to addressing current societal challenges through multidisciplinary approaches. They also seek to foster cooperation between their regions and actors in the socio-economic environment. To capitalise on the potential of the cooperation within the alliance, partners intend to adopt a "challenge-based approach" in teaching, research and transfer of knowledge and technology. Among other things, they plan to develop new virtual and physical mobility programmes and to start joint research and teaching activities. Students from the partner universities will be involved in these processes.

Leader: Paderborn University

Partners: Jan Dlugosz University in Częstochowa, Josip Juraja Strossmayer University of Osijek, Kristianstad University, Le Mans University, St. Clement of Ohrid University of Bitola, University of Castilla-La Mancha, University of Ferrara, Ventspils University of Applied Sciences

ECIUn+

The mission of the ECIU network is efficient, open learning at European level that addresses multidisciplinary societal challenges and supports research and lifelong learning. The network partners are creating an inspiring model of a true European university for the benefit of European society. The 14 consortium members share a strong commitment to entrepreneurship, innovative forms of teaching and learning and high-quality research. Working together and learning from each other, ECIU universities strive to achieve scientific and educational excellence that will have a real impact on business and society.

Leader: University of Twente

Partners: Autonomous University of Barcelona, Dublin City University, European Consortium of Innovative Universities – legal entity of the alliance, Hamburg University of Technology, Kaunas University of Technology, Linköping University, Łódź University of Technology, National Institute of Applied Sciences in Toulouse, Tampere University, University of Aveiro, University of Stavanger, University of Trento

ENHANCE

ENHANCE is a consortium of research universities in the technical and life sciences. It brings together Europe's leading technical universities with the objective of creating systemic, structured and sustainable cooperation between the consortium's universities that will lead to new solutions beyond existing models of cooperation. The aim of the alliance is to use science and technology for the benefit of society in order to turn global challenges into development opportunities.

The ENHANCE consortium universities work together with 30 associated partners: enterprises, municipalities, student

organisations, research networks, non-profit foundations and organisations.

Leader: Technical University of Berlin

Partners: Chalmers University of Technology, Delft University of Technology, Gdańsk University of Technology, Norwegian University of Science and Technology, Polytechnic University of Milan, Polytechnic University of Valencia, RWTH Aachen University, Warsaw University of Technology

EPICUR-SHAPE-IT

The vision of EPICUR European University is to create a place where all students, postgraduates and staff, without mobility restrictions, can obtain a broad, interdisciplinary academic perspective, strongly rooted in the European tradition, regardless of their nationality, mother tongue, cultural or socio-economic background.

Teams from the 9 alliance universities are collaborating to make this vision a reality, through such means as: multilingualism and the preservation and enhancement of European linguistic diversity, internships based on research closely linked to the regional ecosystems of the universities, and the facilitation and creation of new forms of mobility (physical, virtual, mixed) available within the network.

Leader: University of Strasbourg

Partners: Aristotle University of Thessaloniki, Karlsruhe Institute of Technology, University Adam Mickiewicz of Poznań, University of Amsterdam, University of Freiburg, University of Haute-Alsace, University of Natural Resources and Life Sciences Vienna, University of Southern Denmark

ERUA

The European Reform University Alliance represents a shared vision of universities as creative spaces, an awareness of the power of an experimental approaches and an understanding of diversity. They bring together academics from across Europe and students from diverse backgrounds to address the challenges and problems of today. The ERUA alliance aims to create an inter-university campus that offers personalised educational pathways in a multilingual and

multicultural environment. The project activities include: establishing a governance structure for administrative and financial procedures, developing a educational offer and mobility opportunities, building multilingual community based on shared values and interests, as well as promoting the activities and outcomes of the cooperation within the alliance through communication and tools tailored to target groups.

Leader: University of Paris 8 Vincennes Saint-Denis

Partners: European University Viadrina, Mykolas Romeris University, New Bulgarian University, Roskilde University, SWPS University, University of Konstanz, University of Las Palmas de Gran Canaria, University of Macerata, University of the Aegean

EU4DUAL

EU4Dual is a network of 9 leading centres for dual education in Europe with the goal of becoming a global reference for dual education. The network aims to create an integrated dual education institution worldwide – a multi-campus, multidisciplinary institution committed to close integration between the academic community, industry and its regions.

Leader: University of Mondragon

Partners: Baden-Wuerttemberg Cooperative State University Stuttgart, ESTIA School of Advanced Industrial Technologies, FH JOANNEUM University of Applied Sciences, John von Neumann University, Malta College of Arts Science and Technology, PAR Visoka Poslovna University College, Koszalin University of Technology, Savonia University of Applied Sciences

EU GREEN

EU Green is a transnational alliance of European universities created by 9 partner institutions that have the potential to be engaged in all regions of Europe. At the same time, they focus on the communities of their regions while adopting a global perspective.

EU Green focuses on a new model of growth by: shaping a new generation of European citizens; enhancing the employability of young

people; strengthening sustainable development at regional level; linking growth and competitiveness; implementing genuine social inclusion; adapting scientific development to address emerging global challenges; strengthening innovation in digital competences; supporting the rebuilding of economic and social quality and resilience in a post-pandemic world and in the face of potential security threats.

Leader: University of Extremadura

Partners: Institute of Technology Carlow, Otto von Guericke University of Magdeburg, University of Angers, University of Évora, University of Gävle, University of Oradea, University of Parma, Wrocław University of Environment and Life Sciences

EUNICE

The EUNICE network was established to design and put into practice a model of a European university with great potential to create flexible activities in order to tackle the challenges and problems faced by a changing Europe and world.

EUNICE aims to replace the traditional form of education with a personalised one, which includes the promotion of inter-university "blended" mobility. It provides a competitive and personalised educational offer that meets the needs of individuals, society, the labour market and the industrial and business sectors.

Leader: Poznań University of Technology

Partners: Brandenburg University of Technology Cottbus-Senftenberg, EUNICE AISBL – legal entity of the alliance, Karlstad University, Polytechnic Institute of Viseu, Polytechnic University of Hauts-De-France, University of Mons, University of Cantabria, University of Catania, University of Peloponnese, University of Vaasa

EURECA-PRO

EURECA-PRO is a global education centre and interdisciplinary research and innovation leader in environmental and social development for sustainable consumption and production of goods. It covers technological, environmental, economic, social and political aspects. The international cooperation will strengthen the higher

education system in Europe, contributing to mobility, civic engagement, shared values and approaches to responsible system design. By merging universities into a consortium, students and staff will have the possibility to learn and conduct research in the field of responsible consumption and production.

Leader: University of Leoben

Partners: Hasselt University, Mittweida University of Applied Sciences, Silesian University of Technology, Technical University Freiberg, Technical University of Crete, University of Leon, University of Lorraine, University of Petrosani

FORTHEM

Within FORTHEM, seven universities with pre-existing extensive global and European partnerships and shared experience in academic projects are joining forces and sharing networks to create a permanent multilateral and European collaborative environment. FORTHEM is composed of multidisciplinary public research universities that are located (all but one) outside the capital regions and are not among the largest or highest-ranked universities in their respective countries.

It is a new network of institutions with dynamic and flexible capacity to experiment with new and innovative forms of collaboration. FORTHEM thus presents a reproducible model for European and non-European universities that want to develop similar new alliances.

Leader: Johannes Gutenberg University of Mainz

Partners: Lucian Blaga University of Sibiu, University Dijon Bourgogne, University of Agder, University of Jyvaskyla, University of Latvia, University of Opole, University of Palermo, University of Valencia

SEA-EU 2.0

SEA-EU is an alliance of 6 coastal European universities whose vision is to create an international, multi-ethnic, multilingual and interdisciplinary European University. It will enhance scientific and teaching cooperation, as well as foster innovation and knowledge transfer. The universities forming the alliance are united by a cultural and economic tradition linked to the sea. They cover almost all the seas

and oceans that form the northern, western and southern facets of the European continent: Baltic Sea, Atlantic Ocean, North Sea, Mediterranean Sea and Adriatic Sea. Most importantly, the maritime sector is of great strategic importance to the economies of these six regions.

Leader: University of Cádiz

Partners: Christian-Albrechts University of Kiel, Nord University, University of Algarve, University of Gdańsk, University of Malta, University of Naples Parthenope, University of Split, University of Western Brittany

STARS EU

The Strategic Alliance for Regional Transition embraces European values and incorporates them into all its activities and initiatives. Partners respect human dignity, freedom, democracy, equality, the rule of law and human rights, including minority rights. The STARS EU features and excels in academic freedom, quality, integrity and honesty. The Alliance aims to: create a new generation of future-oriented students, develop innovative, flexible, diverse and challenge-based education and research systems and capitalise on the synergies of inter-regional cooperation.

Leader: Hanze University of Applied Sciences

Partners: Aleksandër Moisiu University of Durrës, Bremen University of Applied Sciences, Cracow University of Technology, Polytechnic Institute of Bragança, Silesian University in Opava, University of Franche-Comté, University of La Laguna, University West

T4EU

The mission of the Transform4Europe network is to transform Europe by educating and training knowledge entrepreneurs. The University of Silesia in Katowice, together with six foreign universities, are uniting to jointly conduct research at the highest level and educate young people in international fields of study. They are also establishing a shared, multilingual campus in order to safeguard the future of their regions and, by extension, the countries of Europe.

Leader: Saarland University
Partners: Estonian Academy of Arts, Catholic University of Portugal, Jean Monnet University, Sofia University St. Kliment Ohridski, University of Alicante, University of Primorska, University of Silesia in Katowice, University of Trieste, Vytautas Magnus University

Una Europa

Una Europa is a union of 11 leading European research universities striving to create the university of the future – a truly European inter-university environment, built on the potential and strengths of its partners. The network's member universities have been educating across Europe for more than 1,000 years. Together, they integrate over 500,000 students and almost 100,000 university staff in a network along with millions of online learners.

Leader: Catholic University of Leuven
Partners: Complutense University Madrid, Free University of Berlin, Jagiellonian University in Kraków, Leiden University, Paris 1 Panthéon-Sorbonne University, Una Europa vzw – legal entity of the alliance, University of Bologna, University of Helsinki

UNIC

The European University of Post-Industrial Cities focuses on the challenges faced by post-industrial cities, the role of universities in their transformation and building the capacity of cities in key areas such as social inclusion, diversity, sustainability. The vision of the partner universities is to contribute to reinforcing revitalisation trends in Europe's post-industrial centres, bringing science into urban spaces through initiatives such as CityLabs (urban laboratories, the interface between the city and universities).

Leader: Erasmus University Rotterdam,
Partners: Koç University, Malmö University, Ruhr University Bochum, University College Cork, University of Deusto, University of Liège, University of Łódź, University of Oulu, University of Zagreb

UNIgreen

UNIgreen aims to create an alliance constituting a model European university for higher education and research in the areas of agricultural, bio and life science. The project aims to enable the free movement of knowledge, facilitate the acquisition of dual or joint European degrees and attract talent from outside Europe by promoting multilingual learning, interculturalism and increased inclusivity.

The project is also expected to contribute to achieving economic transformation at the local and regional level, while at the national level it aims to launch trans-regional networks for development, innovation and entrepreneurship, and strengthen the personal and professional competences of citizens, thus increasing their employability.

Leader: Almeria University

Partners: Agricultural University – Plovdiv, Higher Institute of Biotechnologies of Paris, Higher Education Institution of the Province of Liège, University of Modena and Reggio Emilia, Agricultural University of Iceland, Polytechnic Institute of Coimbra, Warsaw University of Life Sciences

UNITE

Unite! is a network of seven universities stretching from Finland to Portugal, connecting European regions of economic perspective, entrepreneurship and innovation. Unite! combines engineering, science and technology with grand societal challenges, creating solutions for a new generation of European and global citizens.

Leader: Technical University of Darmstadt

Partners: Aalto University, Graz Technical University, Grenoble Institute of Technology, KTH Royal Institute of Technology, Polytechnic University of Catalonia, Polytechnic University of Turin, University of Lisbon, Wrocław University of Science and Technology

UNIVERSEH

UNIVERSEH – the European Space University for Earth and Humanity – is a network of space universities. Developing fields of study that go beyond the Earth's globe is the path towards the future discipline

of space and its better understanding. The alliance's activities will provide the basis for building innovative, employment-oriented curricula and will support mobility, integration and multilingualism.

Leader: University of Toulouse

Partners: AGH University of Science and Technology, Heinrich Heine University Düsseldorf, Luleå University of Technology, University of Luxembourg, University of Rome Tor Vergata, University of Namur

YUFE 2030

YUFE, or Young Universities for the Future of Europe, is made up of ten dynamic, young, student-centred research universities and four non-academic partners working on higher education, the labour market and entrepreneurship. The network aims to radically change and transform European higher education by becoming a leading model of a student-centred, open and inclusive European university.

Leader: University of Maastricht

Partners: Nicolaus Copernicus University in Toruń, University Carlos III of Madrid, University of Antwerp, University of Bremen, University of Cyprus, University of Eastern Finland, University of Rijeka

Source: bit.ly/3YkaQDY; https://erasmusplus.org.pl/uniwersytety-europejskie

Appendix 2. List of Actual European Universities

NO.	ACRONYM	NAME OF ALLIANCE	ORGANISATIONS INVOLVED AS FULL PARTNERS	COUNTRY
1	1CORE	4EU+ European University Alliance	4EU+ European University Alliance E.V. – legal entity of the alliance	DE
			Charles University	CZ
			Copenhagen University	DK
			Heidelberg University	DE
			Milano University	IT
			Sorbonne University	FR
			University of Warsaw	PL
2	ARQUS II	Arqus European University	Graz University	AT
			Leipzig University	DE
			University Lyon 1 Claude Bernard	FR
			University of Granada	ES
			University of Minho	PT
			University of Padova	IT
			University of Vilnius	LT
			University of Wrocław	PL
3	ATHENA	Advanced Technology Higher Education Network Alliance	Hellenic Mediterranean University	EL
			Niccolò Cusano University	IT
			Polytechnic Institute of Porto	PT
			University of Maribor	SI
			University of Orléans	FR
			University of Siegen	DE
			Vilnius Gediminas Technical University	LT

4	Aurora	Aurora Alliance	Copenhagen Business School	DK
			Palacky University Olomouc	CZ
			Paris 12 Val de Marne University	FR
			University Duisburg Essen	DE
			University of East Anglia	UK
			University of Iceland	IS
			University of Innsbruck	AT
			University of Federico II of Naples	IT
			University Rovira and Virgili	ES
			Free University of Amsterdam	NL
5	CHARM--EIGHT ∞	Challenge-Driven, Accessible, Research-based and Mobile European University	Abo Academy	FI
			Eotvos Lorand University	HU
			Hochschule Ruhr West	DE
			Julius-Maximilians-University Wurzburg	DE
			Trinity College Dublin	IE
			University of Barcelona	ES
			University of Montpellier	FR
			Utrecht University	NL
6	Circle U.	Circle U. European University	Aarhus University	DK
			Catholic University of Louvain	BE
			Circle.U AISBL – legal entity of the alliance	BE
			King's College London	UK
			Paris Cite University	FR
			University of Belgrade	RS
			University of Humboldt Berlin	DE
			University of Pisa	IT
			University of Vienna	AT
			University of Oslo	NO

7	CIVICA	European University of Social Sciences	Bocconi University	IT
			CEU Central European University	AT
			European University Institute	IT
			Hertie School of Governance	DE
			IE University	ES
			Institute of Political Sciences Paris	FR
			National University of Political Studies and Public Administration	RO
			SGH Warsaw School of Economics	PL
			Stockholm School of Economics	SE
8	CIVIS 2	European Civic University	Autonomous University of Madrid	ES
			Free University of Brussels	BE
			National and Kapodistrian University of Athens	EL
			Paris Lodron University Salzburg	AT
			Sapienza University of Rome	IT
			University Eberhard Karls of Tübingen	DE
			University of Aix-Marseille	FR
			University of Bucarest	RO
			University of Stockholm	SE
9	COLOURS*	COLlaborative innOvative sUstainable Regional UniverSities	Jan Dlugosz University in Częstochowa	PL
			Josip Juraja Strossmayer University of Osijek	HR
			Kristianstad University	SE
			Le Mans University	FR
			Paderborn University	DE
			St. Clement of Ohrid University of Bitola	MK
			University of Castilla-La Mancha	ES
			University of Ferrara	IT
			Ventspils University of Applied Sciences	LV

10	E^3UDRES^2	Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions	Fulda University of Applied Sciences	DE
			Jyväskylä University of Applied Sciences	FI
			Politehnica University Timisoara	RO
			Polytechnic Institute of Setúbal	PT
			Saxion University of Applied Sciences	NL
			St. Pölten University of Applied Sciences	AT
			Szent Istvan University	HU
			University College Leuven- Limburg	BE
			Vidzeme University of Applied Sciences	LV
11	EC_2U	European Campus of City Universities	Alexandru Ioan Cuza University of Iasi	RO
			Friedrich Schiller University of Jena	DE
			University of Coimbra	PT
			Johannes Kepler University Linz	AT
			University of Pavia	IT
			University of Poitiers	FR
			University of Salamanca	ES
			University of Turku	FI
12	ECIUn+	ECIUn+ University	Autonomous University of Barcelona	ES
			Dublin City University	IE
			European Consortium of Innovative Universities – legal entity of the alliance	NL
			Hamburg University of Technology	DE
			Kaunas University of Technology	LT
			Linköping University	SE
			Łódź University of Technology	PL
			National Institute of Applied Sciences in Toulouse	FR
			Tampere University	FI
			University of Aveiro	PT
			University of Stavanger	NO
			University of Trento	IT
			University of Twente	NL

13	EDUC	European Digital UniverCity	Jaume I University	ES
			Masaryk University	CZ
			Paris Nanterre University	FR
			University of Cagliari	IT
			University of Pecs	HU
			University of Postdam	DE
			University of Rennes I	FR
			University of South-Eastern Norway	NO
14	EELISA	European Engineering Learning Innovation and Science Alliance	Budapest University of Technology and Economics	HU
			Friedrich-Alexander University Erlangen Nürnberg	DE
			Higher Normal School	IT
			Istanbul Technical University	TR
			National School of Civil Engineering	FR
			Polytechnic University of Bucharest	RO
			Paris Sciences et Lettres University	FR
			Sant'Anna School of Advanced Studies	IT
			Technical University of Madrid	ES
15	ENGAGE. EU	European University Engaged in Societal Change	Hanken School of Economics	FI
			Luiss University	IT
			Norwegian School of Economics	NO
			Ramon Llull University	ES
			Tilburg University	NL
			Toulouse 1 Capitole University	FR
			University of Mannheim	DE
			University of National and World Economy	BG
			Vienna University of Economics and Business	AT

16	ENHANCE	European Universities of Technology Alliance	Chalmers University of Technology	SE
			Delft University of Technology	NL
			Gdańsk University of Technology	PL
			Norwegian University of Science and Technology	NO
			Polytechnic University of Milan	IT
			Polytechnic University of Valencia	ES
			RWTH Aachen University	DE
			Technical University of Berlin	DE
			Warsaw University of Technology	PL
17	ENLIGHT	European University Network to promote Equitable Quality of Life, Sustainability, and Global Engagement through Higher Education Transformation	Comenius University Bratislava	SK
			Ghent University	BE
			National University of Ireland, Galway	IE
			University of Bordeaux	FR
			University of Göttingen	DE
			University of Groningen	NL
			University of Tartu	EE
			University of The Basque Country	ES
			Uppsala University	SE
18	EPICUR-SHAPE-IT	European Partnership for an Innovative Campus Unifying Regions	Aristotle University of Thessaloniki	EL
			Karlsruhe Institute of Technology	DE
			University Adam Mickiewicz of Poznań	PL
			University of Amsterdam	NL
			University of Freiburg	DE
			University of Haute-Alsace	FR
			University of Natural Resources and Life Sciences Vienna	AT
			University of Strasbourg	FR
			University of Southern Denmark	DK

19	ERUA	European Reform University Alliance	European University Viadrina	DE
			Mykolas Romeris University	LT
			New Bulgarian University	BG
			Roskilde University	DK
			SWPS University	PL
			University of Konstanz	DE
			University of Las Palmas de Gran Canaria	ES
			University of Macerata	IT
			University of Paris 8 Vincennes Saint-Denis	FR
			University of the Aegean	EL
20	EU4DUAL	European Dual Studies University	Baden-Wuerttemberg Cooperative State University Stuttgart	DE
			ESTIA School of Advanced Industrial Technologies	FR
			FH JOANNEUM University of Applied Sciences	AT
			John von Neumann University	HU
			Malta College of Arts, Science and Technology	MT
			PAR Visoka Poslovna University College	HR
			Koszalin University of Technology	PL
			Savonia University of Applied Sciences	FI
			University of Mondragon	ES
21	EU-CONEXUS Plus	European University for Smart Urban Coastal Sustainability	Agricultural University of Athens	EL
			Catholic University of Valencia	ES
			EU-CONEXA – legal entity of the alliance	BE
			Frederick University	CY
			Klaipeda University	LT
			La Rochelle University	FR
			Rostock University	DE
			Technical University of Civil Engineering Bucharest	RO
			University of Zadar	HR
			Waterford Institute of Technology	IE

22	EUGLOH 2.0	European University Alliance for Global Health	Ludwig Maximilians University of Munich	DE
			Lund University	SE
			Paris-Saclay University	FR
			The Arctic University of Norway	NO
			University of Alcalá	ES
			University of Hamburg	DE
			University of Novi Sad	RS
			University of Porto	PT
			University of Szeged	HU
23	EU GREEN	European University Alliance for Sustainability: Responsible Growth, Inclusive Education and Environment	Institute of Technology Carlow	IE
			Otto von Guericke University of Magdeburg	DE
			University of Angers	FR
			University of Évora	PT
			University of Extremadura	ES
			University of Gävle	SE
			University of Oradea	RO
			University of Parma	IT
			Wrocław University of Environment and Life Sciences	PL
24	EULiST*	European Universities Linking Society and Technology	Brno University of Technology	CZ
			Leibniz University Hannover	DE
			Institut Mines-Télécom	FR
			Jönköping University	SE
			Lappeenranta-Lahti University of Technology	FI
			National Technical University of Athens	EL
			Slovak University of Technology in Bratislava	SK
			Vienna University of Technology	AT
			King Juan Carlos University	ES
			University of L'Aquila	IT

25	EUNICE	European University for Customised Education	Brandenburg University of Technology Cottbus-Senftenberg	DE
			EUNICE AISBL – legal entity of the alliance	BE
			Karlstad University	SE
			Polytechnic Institute of Viseu	PT
			Polytechnic University of Hauts-De-France	FR
			Poznań University of Technology	PL
			University of Mons	BE
			University of Cantabria	ES
			University of Catania	IT
			University of Peloponnese	EL
			University of Vaasa	FI
26	EUniWell	European University for Well-Being	National Institute for Oriental Languages and Civilizations	FR
			Linnaeus University	SE
			Semmelweis University	HU
			University of Cologne	DE
			University of Florence	IT
			University of Konstanz	DE
			University of Nantes	FR
			University of Murcia	ES
			University of Santiago de Compostela	ES
27	EUPeace*	European University for Peace, Justice, and Inclusive Societies	University of Giessen	DE
			University of Marburg	DE
			Comillas Pontifical University	ES
			University of Calabria	IT
			University of Limoges	FR
			Çukurova University	TR
			University of Mostar	BA
			University of West Bohemia	CZ

28	EURECA--PRO	European University Alliance on Responsible Consumption and Production	Hasselt University	BE
			Mittweida University of Applied Sciences	DE
			Silesian University of Technology	PL
			Technical University Freiberg	DE
			Technical University of Crete	EL
			University of Leoben	AT
			University of Leon	ES
			University of Lorraine	FR
			University of Petrosani	RO
29	EuroTeQ	EuroTeQ Engineering University	Czech Technical University in Prague	CZ
			École Polytechnique	FR
			Eindhoven University of Technology	NL
			HEC Paris	FR
			Tallinn University of Technology	EE
			Technical University of Denmark	DK
			Technical University of Munich	DE
			University of Navarra	ES
30	EUt+	European University of Technology	Cyprus University of Technology	CY
			Darmstadt University of Applied Sciences	DE
			Riga Technical University	LV
			Technical University of Cartagena	ES
			Technical University of Cluj-Napoca	RO
			Technical University of Sofia	BG
			Technological University Dublin	IE
			University of Technology of Troyes	FR

31	EUTOPIA	European Universities Transforming to an Open Inclusive Academy	Babes Bolyai University of Cluj	RO
			Ca' Foscari University of Venice	IT
			Cergy Paris University	FR
			Free University of Brussels	BE
			Nova University Lisbon	PT
			Pompeu Fabra University Barcelona	ES
			Technical University of Dresden	DE
			University of Göteborg	SE
			University of Ljubljana	SI
32	FilmEU	European Universities Alliance for Film and Media Arts	Academy of Performing Arts in Bratislava	SK
			Dún Laoghaire Institute of Art Design and Technology	IE
			FilmEU Association – legal entity of the alliance	BE
			Luca School of Arts	BE
			Lusófona University	PT
			Lithuanian Academy of Music and Theatre	LT
			National Academy for Theatre and Film Arts	BG
			Tallinn University	EE
			VIA University College	DK
33	FORTHEM	Fostering Outreach within European Regions, Transnational Higher Education and Mobility	Johannes Gutenberg University of Mainz	DE
			Lucian Blaga University of Sibiu	RO
			University Dijon Bourgogne	FR
			University of Agder	NO
			University of Jyvaskyla	FI
			University of Latvia	LV
			University of Opole	PL
			University of Palermo	IT
			University of Valencia	ES

34	INGENIUM	INGENIUM European University	Karlsruhe University of Applied Sciences	DE
			Medical University Sofia	BG
			Munster Technological University	IE
			Oviedo University	ES
			Rouen Normandy University	FR
			Southeast Finland University of Applied Sciences	FI
			Technical University Gheorghe Asachi of Iasi	RO
			University G. d'Annunzio Chieti-Pescara	IT
			University of Crete	EL
			University of Skövde	SE
35	IN.TUNE*	IN.TUNE - Innovative Universities in Music & Arts in Europe	Catalonia College of Music	ES
			National University of Music Bucharest	RO
			Norwegian Academy of Music	NO
			Paris Conservatory	FR
			University of Arts in Belgrade	RS
			University of the Arts the Hague	NL
			University of the Arts Helsinki	FI
			University of Music and Performing Arts Vienna	AT
36	INVEST	Innovations of Regional Sustainability: European University Alliance	Karelia University of Applied Sciences	FI
			Slovak University of Agriculture in Nitra	SK
			University of Agribusiness and Rural Development Plovdiv	BG
			University of Córdoba	ES
			University of Milano-Bicocca	IT
			University of Reims Champagne-Ardenne	FR
			University of Thessaly	EL
			Van Hall Larenstein University of Applied Sciences	NL

37	NEOLAiA*	Transforming Regions for an Inclusive Europe	Bielefeld University	DE
			Örebro University	SE
			Šiauliai State University of Applied Sciences	LT
			Ștefan cel Mare University of Suceava	RO
			University of Jaén	ES
			University of Nicosia	CY
			University of Ostrava	CZ
			University of Salerno	IT
			University of Tours	FR
38	Neurotech EU	European University of Brain and Technology	Bogazici University	TR
			Iuliu Hațieganu University of Medicine and Pharmacy	RO
			Karolinska Institutet	SE
			Miguel Hernandez University of Elche	ES
			Radboud University	NL
			Reykjavík University	IS
			University of Bonn	DE
			University of Debrecen	HU
			University of Lille	FR
39	RUN-EU	Regional University Network – European University	Häme University of Applied Sciences	FI
			Howest University of Applied Sciences	BE
			NHL Stenden University of Applied Sciences	NL
			Polytechnic Institute of Leiria	PT
			Polytechnic of Cávado and Ave	PT
			Széchenyi István University	HU
			Technological University of the Shannon: Midlands Midwest	IE
			University of Burgos	ES
			Vorarlberg University of Applied Sciences	AT

40	SEA-EU 2.0	European University of the Seas Alliance	Christian-Albrechts University of Kiel	DE
			Nord University	NO
			University of Algarve	PT
			University of Cádiz	ES
			University of Gdańsk	PL
			University of Malta	MT
			University of Naples Parthenope	IT
			University of Split	HR
			University of Western Brittany	FR
41	STARS EU*	STrategic Alliance for Regional TranSition – STARS European University	Aleksandër Moisiu University of Durrës	AL
			Bremen University of Applied Sciences	DE
			Cracow University of Technology	PL
			Hanze University of Applied Sciences	NL
			Polytechnic Institute of Bragança	PT
			Silesian University in Opava	CZ
			University of Franche-Comté	FR
			University of La Laguna	ES
			University West	SE
42	T4EU	Transform4Europe – European University for Knowledge Entrepreneurs	Estonian Academy of Arts	EE
			Catholic University of Portugal	PT
			Jean Monnet University	FR
			Saarland University	DE
			Sofia University St. Kliment Ohridski	BG
			University of Alicante	ES
			University of Primorska	SI
			University of Silesia in Katowice	PL
			University of Trieste	IT
			Vytautas Magnus University	LT

43	ULYSSEUS	Open to the World, Persons-Centred and Entrepreneurial European University for the Citizenship of the Future	Cote d'Azur University	FR
			Haaga-Helia University of Applied Sciences	FI
			Management Center Innsbruck	AT
			Technical University of Kosice	SK
			University of Genoa	IT
			University of Montenegro	ME
			University of Münster	DE
			University of Seville	ES
44	UNA. Universitas	Una Europa	Catholic University of Leuven	BE
			Complutense University Madrid	ES
			Free University of Berlin	DE
			Jagiellonian University in Kraków	PL
			Leiden University	NL
			Paris 1 Panthéon-Sorbonne University	FR
			Una Europa vzw – legal entity of the alliance	BE
			University of Bologna	IT
			University of Helsinki	FI
45	UNIC	European University of Post-Industrial Cities	Erasmus University Rotterdam	NL
			Koç University	TR
			Malmö University	SE
			Ruhr University Bochum	DE
			University College Cork	IE
			University of Deusto	ES
			University of Liège	BE
			University of Łódź	PL
			University of Oulu	FI
			University of Zagreb	HR

46	UNIgreen	Green European University	Agricultural University – Plovdiv	BG
			Almeria University	ES
			Higher Institute of Biotechnologies of Paris	FR
			Higher Education Institution of the Province of Liège	BE
			University of Modena and Reggio Emilia	IT
			Agricultural University of Iceland	IS
			Polytechnic Institute of Coimbra	PT
			Warsaw University of Life Sciences	PL
47	UNITA	UNITA – Universitas Montium	Politécnico da Guarda	PT
			Public University of Navarre	ES
			Transilvania University of Brasov	RO
			University Beira Interior	PT
			Universitas Montium (Unita) – legal entity of the alliance	IT
			University of Brescia	IT
			University of Pau and Pays De L'Adour	FR
			University of Savoie Mont Blanc	FR
			University of Turin	IT
			University of Zaragoza	ES
			West University of Timisoara	RO
48	UNITE	University Network for Innovation, Technology and Engineering	Aalto University	FI
			Graz Technical University	AT
			Grenoble Institute of Technology	FR
			KTH Royal Institute of Technology	SE
			Polytechnic University of Catalonia	ES
			Polytechnic University of Turin	IT
			Technical University of Darmstadt	DE
			University of Lisbon	PT
			Wrocław University of Science and Technology	PL

49	UNI-VERSEH	European Space University of Earth and Humanity	AGH University of Science and Technology	PL
			Heinrich Heine University Düsseldorf	DE
			Luleå University of Technology	SE
			University of Luxembourg	LU
			University of Rome Tor Vergata	IT
			University of Namur	BE
			University of Toulouse	FR
	U!REKA*	Urban Research and Education Knowledge Alliance	Amsterdam University of Applied Sciences	NL
			Frankfurt University of Applied Sciences	DE
			HOGENT University of Applied Sciences and Arts	BE
			Polytechnical Institute of Lisbon	PT
			Metropolia University of Applied Sciences	FI
			VSB Technical University of Ostrava	CZ
50	YUFE 2030	Young Universities for the Future of Europe Alliance	Nicolaus Copernicus University in Toruń	PL
			University Carlos III of Madrid	ES
			University of Antwerp	BE
			University of Bremen	DE
			University of Cyprus	CY
			University of Eastern Finland	FI
			University of Maastricht	NL
			University of Rijeka	HR

As of 3 July 2023. Alliances marked with * were selected in 2023.

Source: https://education.ec.europa.eu/news/european-universities-2023-call-results

List of Abbreviations

BA/MA	bachelor's/master's degree programmes
BIP	blended intensive programme
EC	European Commission
ECTS	European Credit Transfer and Accumulation System
EGM	Emerging Global Model
EHEA	European Higher Education Area
EMJM	programme Erasmus Mundus Joint Master
ERC	European Research Council
EU	European Union
EUA	European Universities Alliances
EUI	European Universities Initiative
FRSE	Foundation for the Development of the Education System (in Polish: Fundacja Rozwoju Systemu Edukacji)
H2020	programme Horizon 2020
HEI	higher education institution
IDUB	The national programme "Excellence Initiative – Research University" (in Polish: „Inicjatywa doskonałości – uczelnia badawcza")
KRUP	Conference of Rectors of Polish Universities (in Polish: Konferencja Rektorów Uniwersytetów Polskich)
LLL	lifelong learning
MOOC	Massive Open Online Course
PKA	Polish Accreditation Committee (in Polish: Polska Komisja Akredytacyjna)
POL-on	integrated system of information on science and higher education in Poland
PO WER	Operational Programme Knowledge Education Development (in Polish: Program Operacyjny Wiedza Edukacja Rozwój)
SPOC	Small Private Online Course

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Foundation for the Development of the Education System (FRSE) has been operating since 1993. It is the Erasmus+ and the European Solidarity Corps National Agency in Poland for 2021–2027. Since 2014, it has also been participating in the implementation of the Operational Program Knowledge Education Development (PO WER), and since 2023 – in the implementation of the European Funds for Social Development (FERS). At the same time, it implements European information and education initiatives: eTwinning, Eurodesk, Eurydice, Europass, EVET and EPALE. It also supports cooperation with the countries of the East through the Polish-Lithuanian Youth Exchange Fund, the Polish-Ukrainian Youth Exchange Council and the SALTO Eastern Europe & Caucasus Resource Centre. The Foundation also organises the Congress of Education, the most important educational event in Poland.

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