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APPROACHES TO INCREASE COOPERATION AND REDUCE BOUNDARIES TO EUROPEAN HIGHER EDUCATION

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APPROACHES TO INCREASE COOPERATION AND REDUCE BOUNDARIES TO EUROPEAN HIGHER EDUCATION

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Abstract:

The European Higher Education system is essentially at the forefront of transnational education collaboration. The standardization of degree cycles, credits, periods of study, and many other factors, has made transferring between institutions internationally much simpler than in other systems. Despite this, to achieve a truly European-wide education system, there is still more to be done. Designing a system with openness in mind would bring closer the unified Europe that has been discussed for decades.

This paper explores the approaches that can be taken in implementing a system with increased cooperation and reduced boundaries by reviewing previous collaborative efforts and approaches in European higher education, and insights from education experts from several European institutions. Ultimately, we present a framework by which such a system could succeed.

KEYWORDS: Higher education, European education, Education reform, EHEA, Collaborative learning

1 INTRODUCTION

Higher education in Europe is an impressive ecosystem. With comparatively low tuition fees, shorter undergraduate and graduate cycles, and a standardised credit system that allows students to complete periods of study at other European universities with relative ease, it is an extremely attractive proposition to prospective students. Despite this, there is still scope for improvement, and it is the mobility within the European institutions that this research will focus on. This paper will explore the possibilities of increasing students' freedom in their studies by allowing increased access to the higher education institutions within the region. The goal of this research is to ultimately present a theoretical framework outlining how such changes could be made, in the context of previous unification directives, and the current state of higher education.

In our paper we try to determine the feasibility and potential implementation of a system of institution-free higher education within Europe. Given the recent standardization of online education, the longstanding goals of strengthening the social, cultural, and scientific bond within Europe, the important role this plays to the promotion of peace and understanding within Europe, and most importantly, the promotion of free movement for students, researchers, professors, and academic staff has led to a higher standard of education across the whole region.

We aim to propose a framework that will increase the duration and accessibility to periods of study at institutions other than the home institution, which will lead to a more connected Europe, as well as a higher standard of education.

2 TOWARDS A FRAMEWORK FOR FUTURE HIGHER EDUCATION

We first must understand the context and history of higher education to examine various approaches to increased collaboration.

2.1 European Legislation

In 1979, the United Nations Educational, Scientific and Cultural Organization (UNESCO) (UNESCO, 2022) held the Convention on the Recognition of Studies, Diplomas and Degrees concerning higher Education in the States belonging to the Europe Region (Scientific United Nations Educational and Cultural Organization (UNESCO), 1979). The convention began by acknowledging that most nations had bilateral or sub-regional agreements among themselves concerning equivalence or recognition of diplomas but stated their desire to extend their cooperation in this field to the whole Europe region. Building upon the principles laid out in the conventions that came before it, it called for recognition of certificates, diplomas or degrees to enable the holders to be considered for entry into the higher education institutions of any signatory member. In a similar vein, it compelled signatory members to agree to make their higher educational institutions as widely accessible as possible to students or researchers from any of the other members, as well as explore the possibility of adopting similar terminology and evaluation criteria which would facilitate the application of a system that would ensure the comparability of credits, subjects of study, and certificates.

The nineties saw the Council of Europe resume the march toward unified higher education with the 1990 European Convention on the General Equivalence of Periods of University Study (Council of Europe, 1990). This convention, while simplistic in its goal, was also very significant in its importance to a more unified education system. While Paris 1956 (Council of Europe, 1956) allowed students of modern languages to spend a period of study at a university abroad and have that period and the relevant courses & exams taken recognised by the home university, this directive extended the legislation to apply to students of all disciplines. The Council of Europe described the convention as the first legislation that made it easier for students to move between universities on a European-wide level.

1997 saw the Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Council of Europe, 1997). A joint convention by both the Council of Europe and UNESCO, it sought to consolidate all the conventions into one legal framework. Importantly, the convention also established bodies that would oversee its implementation. The significance of this was that while previous conventions had largely left the implementation to be sorted by the nations among themselves, this convention set forth that implementation would be done in unison.

The following two years saw the vision towards unifying European higher education expressed eloquently, starting with the Sorbonne Joint Declaration in 1998. The joint declaration by the ministers in charge of (higher) education for France, Germany, Italy, and the United Kingdom catches the eye with the header: "Joint declaration on harmonisation of the architecture of the European higher education system" (European Higher Education Area, 1998). The three-page proclamation expresses the key rationale behind striving for a unified European education system, namely that an open European higher education system would bring Europe even closer through increased mobility and cooperation. Beyond this, there are some practical recommendations as to how the education systems could be unified. The declaration de-scribes a standardized credit system such as ECTS (European Credit Transfer and Accumulation System) as imperative to the system's success. There is also the call for international recognition of a 'first cycle degree', or undergraduate, and a graduate cycle containing a shorter master's degree and a longer doctor's degree. These are all elements we can recognise in our current education system. Finally, there was a large emphasis placed on both the students and faculty at universities to work in other countries.

The Bologna Declaration of the following year put into an agreement the lofty ambitions of the Sorbonne Declaration. The declaration states the growing need to establish a more connected Europe, expressing the importance of educational co-operation in the development of a strong and stable European community (European Higher Education Area, 1999). The declaration set out a list of objectives to be achieved in the 'short term' - within the first decade of the third millennium - in order to establish the European area of higher education. These goals were:

- Adoption of a system of easily readable and comparable degrees
- Adoption of a system based on two main cycles, undergraduate and graduate
- Establishment of a system of credits, such as ECTS
- Promotion of mobility for students and staff
- Promotion of European co-operation in quality assurance with a view to developing comparable criteria and method-ologies
- Promotion of the necessary European dimensions in higher education, particularly with regards to curricular development, inter-institutional co-operation, mobility schemes and integrated programmes of study, training and research

The declaration concluded with a message to the universities, stating that there is an expectation that they will actively assist in achieving these goals. The distinction has to be made that while the Sorbonne Declaration was the proclamation of a European vision somewhere in the future, the Bologna Declaration was a commitment to action (CRE, 2000).

2.2 University partnership initiatives

EPICUR. The European Partnership for an Innovative Campus Unifying Regions, or EPICUR, is a European University Alliance "to pilot a new way of intensifying collaboration among Higher Education institutions through the creation of a European University" (EPICUR, 2022b). A fairly new organization, having only gotten its start in late 2019, at the time of writing the alliance is made up of 9 universities, including the University of Amsterdam, in 7 European countries. EPICUR's mission statement reads quite in line with the research objectives of this paper, stating "Our European University for the future is a place where all our boundlessly mobile students, doctoral candidates and staff irrespective of their nationality, mother tongue, cultural or socio-economic background, acquire a broad, interdisciplinary, academic perspective strongly rooted in our European traditions" (EPICUR, n.d.). To achieve this, the alliance has set out some goals, both in the short and long term. The short-term goals include the creation of a four year 'European Bachelor of Liberal Arts and Sciences', a strong push toward establishing a policy of multilingual universities, using on-line learning to create a virtual inter-university campus experience, and finally to use the universities to strengthen Europe "by sharing resources, experiences and infrastructure" (EPICUR, 2022a). The long-term goals, while naturally sharing some similarities with the short term, tend to be more ambitious. These goals have the target date of 2025, and are in line with the goals of our research (EPICUR, n.d.):

- Nurturing multilingualism, language acquisition, and inter-cultural awareness
- Facilitating boundless connectivity and free movement of students and staff on a European 'inter-university' campus
- Developing models for innovative, student-centred teaching & learning
- Providing thriving frameworks for the next generation of young European researchers
- Establishing a European inter-regional academic network
- Developing sustainable governance structures

A crucial method to reach these objectives is to build an information system where all course offered by the participating universities will be described. Because the number of courses is overwhelming, such an information system is a crucial factor for success.

2.3 Revolutionary Approaches to higher education

Aside of the information system with an overview of the available courses, many of these courses will have to be offered as Massive open online courses (MOOCs) to improve the availability of the courses Europe wide, MOOCs, are an online learning platform that have the advantage of scalability in that they are unrestricted by physical limitations such as classroom size. MOOCs are built on the idea of providing free education to as many people as possible, essentially removing the barriers that exist to higher education. Opinions on their effectiveness vary greatly. One study conducted on the impact of MOOCs on higher education (Alhazzani, 2020) at the King Saud University found that MOOCs not only had a direct impact on improving education outcomes, they also had a noticeable effect in improving learning skills as well as effective communication. On a wider scale, the author also cited some added benefits to MOOCs over traditional learning environments, namely the accessibility, as well as a more interactive experience. Others are much more critical (Kim, 2016). Both raise valid points, but ultimately their existence can only be a good thing for those wanting to learn as it gives them more opportunities which are extremely accessible. One of the most cited papers on the topic, which analyses MOOCs from a business perspective, contains a pair of frameworks created with the idea of designing successful MOOCs are the 5C frameworks. The pair are denoted as the framework to drive intrinsic student motivation - with the 5 C's representing commitment, challenge, control, competition, and contemporaneous - and the framework to choose a successful online teacher - with the 5 C's representing charisma, competence, constancy, compensation, and contribution (Kaplan & Haenlein, 2016).

While the various approaches have all had success in their own right, initiative taken from the legislative level has had consistent results. The combination of common goals, strict deadlines, and governing bodies to oversee implementation on a wider scale has meant that these initiatives have seen continued success.

3 KEY POINTS FOR THE FRAMEWORK

We have conducted interviews with experienced university staff from several European universities to gain a broader perspective on the key discussion points to the framework.

3.1 Evolution or Revolution

The first reoccurring point of discussion in proposing a new education system if the system should be taking the existing system and making incremental changes until we arrive at the goal (evolution), or should we create a completely new system and scrap the old one (revolution).

Interviewing experts, some questioned whether it was better off to revolutionize the approach by registering for higher education centrally on a European level, like EPICUR, exclaiming that building upon the current system would incur numerous limitations from the existing structures. Other experts cautious to overhaul the current system, remain hesitant as to whether a redesign was strictly necessary. The sentiment was that existing national and institutional exam boards have many options to cope with a system of open higher education, meaning that there would be no need to overhaul the system and change the law of accreditation. Institutional and national exam board level have more flexibility to approve courses, whereas on the centralized level it is more difficult. Having to approve courses on an individual level would likely overwhelm the exam boards, but the current system could be built upon a robust information sharing structure between the various exam boards, allowing the current system to remain in place without the need to change the legal structure. Another insight into the advantages of revolutionizing the system upon the success of the Bologna Process' call for a shift to a new degree cycle (undergraduate and graduate), which despite its difficulties, was accomplished. A governing body demanding the institutions to meet certain criteria was ideal and feared that an evolutionary approach would stall at the point of a few nations working together and would likely not progress much further. A new centralized system could also solve some existing problems plaguing large universities by allowing some admissions limitations to prevent universities from being flooded with the influx of new applications they would likely receive.

While it seems feasible to keep the current system of institutional and national examination boards in place and at the same time move towards open higher education, administration would far outweigh the challenges of centralizing these systems. Institutional examination boards having to assess, in parallel, thousands of courses from other institutions and determine which ones would fit into their programs would likely need years before the system could be operational, versus centralized catalogues and examination boards who could do so much more efficiently.

3.2 Top-Down or Bottom-Up

In discussions with the experts, the discussion over whether to take a 'top down' or 'bottom up' approach surfaced repeatedly. A top-down approach refers to a scenario in which the legislative bodies and regulators impose a framework by which the institutions must adhere to, while a bottom-up approach speaks to the idea that the initiative should come from the institutional level, with regulation a result of a grassroots movement from the universities.

One expert expressed that the greatest approach would be to execute a new system on a European level, adding that it would require political backing. This political will already exists to some extent, which can be seen by examining EPICUR. While definitively a bottom-up approach, its success has seen it gain recognition and backing from the EU in the form of subsidies. On scaling such a system to a European-wide level, shows the strength of EPICUR that is supported from top-down with European and institutional fundings.

The other expert supporting a bottom-up approach, where initiatives come from the students, who are looking for a new way of learning, and a new perspective. As society progresses, it will be up to the students to bring a new perspective on doing things that will spark the change. Addressing the opposing point of view, a top-down approach runs into political difficulties that can bring the process to a standstill.

A third expert expressed the sentiment that change must come from the regulatory level, stating if there is a real motivation for change, then it must come from the top, as with previous directives, giving nations the choice to join the new system.

We admit the importance to initiate the change from both sides, but without legislative backing, we would lack success. While the first two experts both mentioned EPICUR as a great bottom-up initiative, they also accepted that for such an approach to have European-wide success there would need to be a

'meeting in the middle'. A top-down approach would have the advantage of addressing issues in legislation that currently leave institutions apprehensive to joining such initiatives.

3.3 Quality education

Our previous research on reforms to the higher education system hypothesized that increased accessibility to study programs for students would in turn increase the quality of their education. The rationale is that with more availability, students will be able to tailor their studies to their individual needs, and in the process create a program (within limits) that is of the most relevance to their academic ambitions, rather than a standard program containing some courses of little to no interest. On the other hand, too many options without a clear structure and understanding of the information presented could lead to the opposite.

An expert introduced an interesting angle as to whether equivalent programs at different universities are equivalent, giving an example of two different schools of thought and methodology towards the same programme. This is very relevant to the proposed system, as for a student taking courses in both, there are essentially two outcomes: their understanding is either enriched from being able to see both sides of the same coin, or they are left confused having not understood either. Therefore, it is not that straightforward to combine various programmes.

As to whether gaining these different insights from various institutions was in the students' best interest, he felt that this was up to interpretation. Being able to see different perspectives and approaches would allow the student to gain a broader understanding and in a way be more multidisciplinary, at the expense of specializing. Whether that increases the quality of education depends on the student and their ambitions, as he noted that the labour market has a need for both skill sets.

The idea that gaining knowledge from multiple institutions of higher learning might increase the quality of education was discussed. A hypothesized scenario where a social sciences program in a humanities focused institution wants their students to take a computer science course, while conversely a computer science program in a technical university wants their students to take a social science course and having the sets of students take the courses at institutions which excel in those subjects. As a valid point, this development can already be seen with the increased accessibility to higher education online through platforms such as MOOCs.

Students potentially having the freedom to essentially tailor their courses for a given program, an expert explained that in some parts of Europe, similar systems are already in place that allow students entering a bachelor program to create a plan for their studies that they must adhere to. On whether such freedom would lead to a higher quality of education for the students, she expressed that it would be advantageous to give students the choice. For those who really want to specialize, they would have the option to find and take specific courses that would help them on their path, and conversely those who want to have a multidisciplinary education would also have the freedom to do so.

We see this topic can have two opposite and still correct answers. Students may take advantage of the new opportunities and create themselves the 'path of least resistance', choosing the courses that will most easily get them a degree. This student may also use the system to travel and gain experiences. For others, however, such a system will give access to courses and programs that will challenge them, or give them an alternative point of view, and ultimately lead to a higher level of education than they could have got at their home university alone.

3.4 Specialization of Institutions

Something that we speculated in our initial research in this topic was the effect of open education system would have on the universities. We theorized that students choosing to go to different institutions for certain fields would allow the universities to become specialists in them, not too dissimilar to the existing technical universities, art schools, and other specialized institutions that already exist. In this section, we share the insights of the experts whether this is a natural and desirable development.

The first point of discussion was whether an institution focusing all its efforts in an area in which they excel would raise its quality. The first expert considered such focus as a loss in quality, expressing that having a diverse environment with many people from a broad set of educational backgrounds who can challenge each other and provide different perspectives is a key contributor to success in a specific field. Being too tunnel-visioned on a specific field, especially in science, can be a risk. The impact this would have in a broader sense, highlights that students attending various universities rather than all congregating at the few recognized top institutions in a field is a benefit for society in general. Diversity

is a strength and cutting out diversity could be a risk. The second expert did not believe that such a system would lead to universities specializing in areas of study in which they excel within the next decade. Broadening of the scope of education is only increasing, with institutions developing new programs that have this goal in mind. While institutions being regarded as experts in particular fields may be great for attracting more students, this may also bring more problems for their teachers. With the likelihood of online education being incorporated in such a system, teachers with popular courses may be overwhelmed by the number of students, which does not add an unmanageable extra effort in terms of giving lectures but does do so with regard to grading assignments and exams.

The consensus among the experts is that highly specialized universities are not a target that should be aimed at. At best, universities that are specialized in a broad field, humanities for example, would be acceptable - the idea being that a broad area of focus would in turn give students a broader perspective. While this is true, specialized universities in an open education system would not necessarily leave students with a narrow point of view, as students would have the option to get various points of view from various specialized institutions. Ultimately, we believe that the 'market will make the decision' so to speak, as the students' demand for certain areas of study at certain universities will shape the way they adapt moving forward.

3.5 Challenges identified by the expert interviews

In this section we will outline the various aspects the experts pointed out as potential challenges to a centralized European education system.

While the abundant choice of thousands of courses would give students more options, without proper planning, it could cause students to be incredibly overwhelmed and lacking the correct tools to make an informed decision. The issue comes down to how students will be able to find the right courses that add to their education quality, and how they can be supported in doing so. This would require a centralized course catalogue, but more than that, the catalogue would have to include numerous features and descriptions for students to be able to distinguish between hundreds of identical courses and choose the one that is right for them. On the issue of a centralized higher education system, each country has their own structure and requirements in order to enrol for higher education. The differences between these structures and requirements presents a challenge in attempting to centralize an admissions process.

One glaring issue that may arise without amendments to the current system is universities lacking capacity to keep up with the number of students. Moving forward while the current rules are in place, the school would be beyond capacity. This would lead to a decrease in the quality of education, as practical working groups, and even one on one thesis assistance would be impossible. It is an issue that is already plaguing some large institutions and opening a European university system without the correct measures in place would exacerbate this problem even further.

3.6 Challenges regarding the role of IS

Following the five general issues for the framework to be developed, the impact on the IS requirements is huge. Related to these issues, we can summarise IS-related issues along the following lines.

- We have to distinguish between IS/IT related to the management of this new way of cooperation between Higher education institutions (HEIs). IS/IT does not have a leading role in the development in an evolutionary or revolutionary way, nor regarding the top-down versus bottom-up issue. But in general, choices regarding these issues can only be facilitated when a flexible IS infrastructure is made available.
- Also, regarding the quality and specialisation aspects within the framework, management issues will arise. Quality assurance is way more complex in a multi-partner setting of HEIs that on a single institution level. And choices where to specialise, might easily lead to conflicting choices of the institutions.
- Aside from the management issues, IS/IT also plays a crucial role in facilitating education itself. When all students can choose their courses anywhere, temporary moving to the location will lead to a.o. housing issues, so we will have to invest in offering the courses using modern IS/IT, for example, by providing the courses in the form of MOOCs.

In general, the role of IS/IT is crucial, but practical solutions to how to deal with it still need to be developed.

4 PROPOSED FRAMEWORK

Considering both the expert opinions and the findings in the literature, the solution could be achieved most optimally via the introduction of a centralized higher education system. It would need to be introduced from the European legislative level, with a provided framework by which the various national entities must comply. As this new approach to cooperation between cooperating HEIs, we only propose a first draft of a proposal. In further research we will have to work out our proposal in more detail including a graphical representation, for which our ideas need to be further elaborated.

If we analyse the three education-focused conventions of the Council of Europe that took place in Paris in the 1950's (Council of Europe, 1953, 1956, 1959, 1964), we can see that they handed the national authorities' tasks to promote interconnectedness between their educational systems but no framework on how to achieve this, leading to a number of bilateral and sub-regional agreements. While this definitely was a step in the right direction, these numerous agreements were not equivalent, highlighted by the fact that UNESCO set out to replace them with a standard European framework in 1979 (Scientific United Nations Educational and Cultural Organization (UNESCO). 1979), and later in a joint convention with the Council of Europe replaced all previous conventions with another standard framework in 1997 (Council of Europe, 1997). This added effort of replacing incompatible arrangements with a standardized framework could be avoided by agreeing upon a framework in the first place.

Another big argument in favour of centralization is the administrative burden that would be created by not doing so. A central system could consolidate existing resources to make much more efficient decisions than could be done at the institutional level. If we look at the courses offered at various universities as an example, university exam boards would be flooded by the workload of trying to determine what courses from other institutions fit in with the programmes they offer. On the other hand, a central system could pool all the course information from the various institutions and make decisions much more efficiently compared to the universities doing so in parallel to each other. And centralizing can happen regardless of whether the initiative comes from the legislative level or a grassroots movement. If we look at EPICUR, it is a great ex-ample of a university initiative that implements a central system of registration and programmes to unify several European universities.

While a legislative approach is necessary for the success of such a system, we believe that - as the experts put it - they must "meet in the middle". The initiative from the institution level is likely necessary to prompt lawmakers even consider making such drastic changes. However, as we see with EPICUR, at some point the initiative can only go so far before it is inhibited by the current regulations. But it is for this reason that without the proper legislation, it is a very difficult task.

A final argument in favour of a centralized system is the much more transparent access to information it would give (prospective) students. A centralized course catalogue, no matter how much information overload may exist, will be simpler and more accessible than visiting individual university websites to find their course offerings. A little bit of thought into the data structures and information organisation would make the system far superior. Grouping courses by programme, simple statistics on what universities excel at what programmes (e.g. application rate, graduation rate, employability of graduates), and an indication of the level of the courses would instantly make such a catalogue very usable. The Vrije Universiteit (VU) Amsterdam is a great example of a simple yet extremely informative metric that could be applied to such massive amounts of information. Their course catalogue gives all their courses a level between 100 and 600, "Undergraduate courses at VU Amsterdam range from level 100 to 300 with 100 being first-year/introductory-level courses, 200 being second-year, and 300 being third-year/advanced-level courses. Master courses range from 400 to 600" (Vrije Universiteit Amsterdam. 2022). Information on the level of courses, while perhaps not explicit, can be assumed to exist at most universities, and centralizing means that this, and other important metrics, would be available to all.

If we assess the challenges put forth by the experts, we can see the strength of a centralized system is in the ability to tackle the issues facing restructuring the education landscape within Europe.

The first issue that was raised was that of access to the right information. As was discussed in the previous section, a central catalogue designed with the principles of good information management in mind would - for the most part - solve this issue. Naturally, the central system would likely be more difficult to navigate than a single university's offerings, but we argue that it will be significantly more usable than trying to navigate and compare several universities' offerings. A similar challenge that can be addressed simultaneously is that of a student attempting to get a diploma with minimal effort, or the 'path of least resistance'. This student already exists, and a course rating system such as the VU's

course levels where each student is required to take a certain number of courses from each level would all but mitigate this issue.

Another challenge that surfaced was that of a lengthy legal process associated with a top-down approach. While this would be the case, there are no expectations that such a system could be implemented in a short period of time, the same could be said for a grassroots initiative, which for as much support as it may get from the institutional level, will ultimately need some legislative assistance to achieve its goals.

The issue of admissions is twofold: first in admitting the right type of student, and second in admitting the right number. To address the first issue, the European Qualifications Framework (Europass, 2022) for the most part addresses this issue. On top of that, institutions admitting students from other European nations is not a new concept, so the precedent already exists within many nations as to how many qualifications can be compared. Regarding admitting the right number of students, a legislative approach appears to be the desired approach. With the current framework, universities are not (easily) allowed to place limits on the number of students they admit. A new system without restrictions may cause some institutions to be full beyond capacity. This is not a certainty, but the risk is there. With a top-down approach, limits could be written into the framework to avoid such scenarios.

5 CONCLUSIONS

The European higher education system is essentially at the forefront of transnational education collaboration. The standardization of degree cycles, credits, periods of study, and many other factors, has made transferring between institutions internationally much simpler than in other systems. Despite this, there is still more to be done in the hopes for a truly European-wide education system to be achieved. Designing a system with openness in mind would bring closer the unified Europe that has been discussed for decades.

A centralized system of education is a potential solution to this problem. Allowing students to register for programs in a central location that gives them access to courses at any European university, within certain limits, would see a more connected education system, as well as give students a broader perspective on their subject matter beyond the approach of their specific institution.

While the findings presented in this paper are fairly conclusive and thoroughly constructed, this is by far not the only path to a collaborative European education system, and by no means the irrefutably optimal one. The important thing, however, is that the discussion on collaborative learning continues.

As society adapts to new ways of working and living, the education system should not be left behind. This paper shows that the will does exist and keep the narrative alive for long enough to affect real change in higher education.

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Appendix EXPLORATION INTERVIEW QUOTES

C.1 Expert 1 *Central Information Manager at a University*

C.1.1 *Evolution or Revolution.*

After the presentation of the goals and motivations of changing the current higher education system, the first expert was presented with a description of an evolutionary system, where bi-annual goals would be set across the Union in hopes to slowly change it over time. He responded with the following:

"So you're approaching it from, let's say evolutionary perspective. So you're saying we have this current system, let's take a small step towards [the goal], and now my question would be: is that going to work? Or should you more revolutionize this approach, and say, what we need is you register for a study on European level, which somehow can consist of courses on different institutions. Otherwise you will always come to the basic elements and the basic structures and the basic regulations and the systems that check these - because these programs they are checked by NVAO [Accreditation Organisation of the Netherlands and Flanders] (NVAO, 2022) for instance, whether they're still accredited, and they have to be able to show what they do. Now if you are one year away [from your institution], they can't show, or you have to do a lot of things so that they can show, but they will not vouch for what you do there - they can't, because they are not responsible for it. Which means that you always have to fight to overcome the boundaries of the existing system, while perhaps looking at - well, we're making a new way - and then by all means think of a way where, indeed, these periods of study are maybe [gone], and not say 'I am a European student.' No, I'm a European and I can study throughout my life".

C.1.2 *Top Down or Bottom Up.*

After a discussion of implementation on the specific university level, expert 1 added *"the greatest approach would be to do this on the European level, because I think there's a value, and it should be possible because there should be political will on a European level to do this."*

When the conversation shifted to how this could be implemented on a European level, he brought up the example of EPICUR. *"What they are trying to do is more the revolutionary approach where you register somewhere central, and you can follow courses at any institution that is part of this initiative... As soon as that is running, you get a separate flow of students who are coming to follow courses at these institutions, then other institutions can join, and it can grow to be European initiative... But so that approach actually, there is support for it, and there are EU subsidies for it."*

On scaling such a system to a European-wide level, the question was put forth as to whether this could most realistically be done through a bottom up initiative from the universities or a top down approach from the EU legislators. He once again mentioned EPICUR as an example, stating that *"the strength of that particular solution... is that there is both top down support within Europe and therefore the nation States, and funding, and support from a number of institutions which can grow. I think that's the combination you need. Top level somebody thinking of how to do this, telling the universities 'this is how it works' is never going to fly. Because that*

will never be compatible with whatever we [the universities] do, it just has to be set up new then." On the other hand, "only an institution trying to start up, doing it one by one I think is also very hard. Because let's say you're Delft and you're working with Eindhoven now, how are you going to scale up to include the Brussels or Antwerp? Because you need all kinds of legal things for which you need the EU."

C.1.3 Quality of Education.

On this topic, expert 1 introduced an interesting angle as to whether equivalent programs at different universities are really equivalent. *"I mean high level yes, but in certain approaches and certain things that they emphasize, there are differences, and any institution will have their own way of doing certain things. I remember when I did the bachelors economics sometime ago, and I remember then you had different programs of economics, and one of the ways that you could distinguish them is - you had a bunch of people at that time, at UvA actually, who were very much into microeconomics, and that's the way to look at the world. And then you had other institutions who were actually on a more macro level. Yes, they were both doing economics, but basically you had different schools of thought. So now, if you would imagine in such a case that you do part of your program here and part there, it could either be extremely valuable because you have two sides, or it could be that you didn't understand either... So I don't think that you can so easily combine and mix these different programs."*

As to whether gaining these different insights from various institutions was in the students' best interest: *"I think multidisciplinary is extremely important in the world, and you see it everywhere. However, on the same moment you see that we have a need, because of higher complexity, of more and more specialized people. Which partially again drives this force for multidisciplinary teams, because you have all these highly specialized people and together they cover everything. So then is the real question: is one person going to be able to be specialized in two fields?"*

You often think of this as the T shape, where the top of the T is how wide are you and the length is how deep. So probably if you mix like this you might get a wider T but less deep. Which again could be something which is great for certain places and could be a need for, but it will be difficult... And again, I can see both sides. I can see the added value of being wider, and having different schools of thought in your education which could actually be, I think pretty good. But it could also limit you in your specialization."

C.1.4 Specialization of Institutions.

The first point of discussion was as to whether specializing in a certain topic was beneficial to the institutions. The discussion centered around the example of the UvA, who at the time of writing have been the #1 ranked university globally for Communication and Media Studies for the past five years (QS Quacquarelli Symonds Ltd. 2022), and whether focusing all their efforts on this area of excellence would raise the quality of the university. *"I would consider that a loss, to be honest, and I'll tell you why. Yes the communication, as you mentioned, is one of the top, well known [programs], but how do you get there? And having a diverse environment, diverse background will help. And also if you are the top, how do you get challenged enough and have other inputs? So the fact that we are a really broad university, I think really helps to achieve the current outcomes, in which there are some on the top and maybe some are a bit less, and also helps the other ones grow and maybe become later top ones. If you would focus only on this view where you are now the high scoring institution, maybe you can continue at this high level, but it could also mean that you become like a tunnel, too focused, and I think especially in science, that's a risk. So my feeling is that it's really important to keep this width that we [UvA] are having, and if you compare with a [TU] Delft, or maybe a Wageningen [University] where they focus, but still on a wide field, not just on one topic, and there they can keep this going."*

He then went on to another point, that universities thrive on the diversity - both focus and points of view - they foster. He highlighted this with an example where *"you have one teacher that is really great and all the students are coming there [to that university]. Isn't the fact that we have multiple places with different teachers helping because later on when these students are actually going to work... they have one shared background versus a much more diverse [one], so don't you risk to get more [of a] monoculture in certain directions, whereas the fact that we have it spread out now means it's more diversified. And that feels to me as important to be able later on to reach different solutions, because you need people who can counter each other, you need to organize people who do not agree to move ahead, and not just everybody who followed the same way. Not that everybody in the course will think the same, that's not in academic programs. But still, the diversity is a strength, and cutting out diversity, even to go to one top could be a risk."*

C.1.5 Challenges.

While the abundant choice of thousands of courses would give students more options, without proper planning, it could cause students to be incredibly overwhelmed and lacking the correct tools to make an informed decision. *"How are students going to find the right courses that do add to quality? How can they be supported in doing this?"*

Take, for example, a first year computer science student looking for an 'Intro to Python' course. They will likely be greeted with hundreds of options. *"So which is the one that will add to your quality? How will you get there and do you need help? Is there a student advisor that has an overview? How do they get that?"*

This would of course require a centralized course catalogue, but more than that, the catalogue would have to include numerous features and descriptions for students to be able to distinguish between hundreds of 'Intro to Python' courses and choose the one that is right for them.

C.2 Expert 2 *PhD in History of Science*

C.2.1 *Evolution or Revolution.*

The second expert was cautious to overhaul the current system, remaining hesitant as to whether a redesign was strictly necessary. When asked whether the existing national and institutional exam boards would be able to cope with a system of open higher education, or whether a new centralized system would have to be put in place, he responded that *"the exam boards have quite a lot of legal options to approve such a road, so exam boards can approve that a specific course which is from another university can be allowed within your curriculum. So we don't have to change the law of accreditation, but we can leave it. And that's the nice thing about it, that on a small level there are a lot of possibilities. If you want you can [implement it where] 'we have to look at it from a top down, we have to change the whole curriculum before we allow it' and it is much more difficult to approach it. But if you took it from 'OK, I have this student and they have this great online course,' it's much easier to deal with and have a completely new set of curricula."*

When questioned whether having to approve courses on an individual level would not overwhelm the exam boards, he agreed, stating *"If you look at the way of work, I mean if you have large volumes of people doing it, then it is very hard if you have to do it case by case. Then it will take a lot of effort from the people from the exam committees involved. So that's completely true."* But he subsequently came up with a counterpoint in favor of the existing system, explaining that *"Then you should have a workflow that is easy to handle, and that's maybe something that information science can help on - how can we improve that? If you look at it, do we need a completely strict top down legal structure or can we have an information structure in which we can pass information quite easily with all the technologies that we have now, so that local exam boards can make an informed decision based on all the information that we can gather around. I think that there's a lot of information already into all kinds of systems that we don't really use. And if we can make good sense of all those information structures, then we don't even have to change the legal structure on top of it. And to make it meaningful, but also to let technology work for us. That's where information science comes in, so they can help us to have a more process oriented approach to how we deal with information."*

C.2.2 *Top Down or Bottom Up.*

The second expert, while supporting a bottom up approach, saw it from a different perspective. *"I think that bottom up would be the best approach, because I think the change should come from the students. If you look at the history of universities, it's the students in the middle ages who started the universities, not the teachers, because they were looking for teachers. I think that the change should come that students want to have a new way of learning and a new perspective."*

Addressing the opposing point of view, he stated *"If you do top down, you run into all kinds of politically difficult issues which will lead to very long discussions and inaction",* but adding that *"of course, somewhere they have to meet in the middle."* In the end, he solidified his point that, while he was of the opinion of a bottom up approach, in this context it meant from below the university level - the students. *"But I think that the students have to give us the perspective that you can do it different, that things can be organized differently, and that society - maybe 21st century society - also demands a new way of looking at higher ed, because we now just keep growing and growing and growing, but we're not changing the way we teach and are doing research. Bottom up, I think, would be more fruitful in the end."*

An educational alliance between a number of European universities, EPICUR is a great example of a bottom up initiative. *"You also talk about the one centralized infrastructure, and that's what EPICUR is now looking into. They are applying for a new grant... to broaden their network, but also to build a more centralized system where you have a centralized admissions process and centralized course catalog. So that's slowly moving in the direction you are proposing."* On whether the efforts could scale to a European-wide level, he added *"It's very difficult because it has to do, of course, with local laws. Each country has their own laws concerning higher education. There's of course the Bologna agreement and there's more or less agreement to move together, but it's just a slow process. Higher ed is still localized within each country, within their own culture and practice."*

C.2.3 *Quality of Education.*

The idea that gaining knowledge from multiple institutions of higher learning might increase the quality of education was discussed. A scenario was hypothesized in which a social sciences program in a humanities focused institution wants their students to take a computer science course, while conversely a computer science program in a technical university wants their students to take a social science course, and having the sets of students take the courses at institutions which excel in those subjects. *"I think that's a valid point. I think there we see that happening, and that would be maybe happening more in the future. We see that especially in computer science, we [University of Amsterdam] have the programming lab from the Science department that's looking at this great course, CS50 (Harvard College, 2022). An online computer science course that has tons of knowledge. YouTube videos which you can just dive into and use it as the core material in which you can build your own subject. That will happen more and more often, that you take a very good course, materials or teach things, examples or knowledge videos from specific teachers, from abroad or from another university, and build that into your own curriculum. I think that is something that's an interesting development and slowly we see examples of that."*

C.2.4 Specialization of Institutions.

The same question was put forth to the second expert as to whether such a system would lead to universities specializing in areas of study in which they excel. *"I think that for sure that won't really happen within the next decade. So I think at least for the Dutch universities we have of course specialized universities, where the larger ones are broad universities in which a lot of disciplines are being taught and researched... there are of course always disciplines in which you're better than others... But they still want to be broader because they also want to give students a broader look at the world where it would be."*

This broadening of scope for students is not a new concept, and has been a point of discussion at the University of Amsterdam in the past. *"We did discuss that and it never came to life, but one of the programs which we tried to set up around ten years ago was to give students the opportunity to have a minor in a completely other discipline. So when you're more into science that you do at least a minor in humanities, or do minor in social sciences, so that you have a broader perspective of life."*

And according to him, this broadening of the scope of education is only increasing. *"You see the new programs being developed, like a program like what is now starting next year, computational social sciences, that we are getting new areas, but they'll have a more broader perspective. They combine different disciplines into one new discipline. I think that is more happening, that we're getting, we're moving away from the very specialized disciplines in the past that we get the new developments are broader disciplines in which you, at least in your bachelor get a more broader perspective on a discipline in which you combine computational skills with social skills with humanities skills."*

C.2.5 Challenges.

On the issue of a centralized higher education system, expert 2 remarked *"each country has their different ways in which you can enrol in a higher institution. The Dutch higher ed system is completely different than the German or the French, so that makes it difficult. And also because you don't know what kind of students you get in. So a lot of universities found it difficult to enrol students in which they don't know what their starting levels are, what their math levels are, the language levels are. So that makes it difficult, but it is an interesting concept and it is maybe slowly moving in the right direction."*

C.3 Expert 3 Program Coordinator of Computer Science

C.3.1 Evolution or Revolution.

On the topic of an evolutionary or revolutionary system, expert 3 gave another insight into the advantages of revolutionizing the system. When asked which of the two systems she could see having more success, she drew from previous examples, stating, *"...Going to the Bachelor-Master system, we did that in [around] 2002, and we all went there. And some with more difficulties than others, but it works. It works if somebody says, 'No, no, it's done, we're going to do this now'".* She also addressed the other perspective, saying *"[if] it is going to be evolutionary then there will be just a few countries working together, like Belgium and the Netherlands and Luxembourg are, but that's it."*

She reasoned that a new centralized system could also solve some existing problems plaguing large universities like the University of Amsterdam. With the current system, universities are not able to place limits on their admissions. *"We're not allowed to do that... everybody who applies and is admissible is in."* There does exist a possibility to apply for limits on a per program basis: *"You can apply for a fixed quota program, but you really have to prove to the government that you really need to be a fixed quota program."* For large institutions like the University of Amsterdam who receive thousands of applicants each year, the current system is proving to be an increasing problem. *"[We] just have to accept everybody. That's why we're kind of flooding at the moment."*

C.3.2 Top Down or Bottom Up.

The third expert was of again another opinion, expressing the sentiment that change must come from the regulatory level. On this discussion, she stated frankly *"Centralizing works, I think, better than bottom up because we've been having bottom up for years now - we have the layout network and we started with European universities, and everybody really wants to, but nothing really happens much because we all have different systems."* She went on to elaborate on the point that *"We all have different things. There are those that have bachelors of four year or three year, bachelors who are specialized already like in the Netherlands, or bachelors like in in the UK system which start really broad and then you can specialize a little bit."* She then concluded the sentiment by stating *"if you really want to change something, you have to [do] it from above,"* as with previous directives, giving nations the choice to join the new system, and having those that do meet set requirements within specified time periods.

This point of view comes after experience with bottom up initiatives, and while she is behind the idea, the general sentiment is that this approach has too many barriers that a top down approach may not have. *"... EPICUR [is a] really good example of how you can do it bottom up. But then still, you will probably get to a certain standard a lot of problems with systems which don't match."* She gave an example of a University contemplating joining such an initiative, but finally deciding *"we can't join, we have a completely different system."* Because of these experiences, she is *"...really behind internationalization for a long time now. When the EU really states that something should happen like the bachelor master system or automatic recognition [of diplomas], it happens in the end."*

On the issue of admissions and the lack of limitations, a top down approach could be seen to have some clear advantages over a bottom up one. *"That's exactly why it should be top down. Somebody should think about that and adjust the rules... Suppose the EU says 'We're going to do a centralized system, and students can choose, but it's only open for so many students'. That would work better because if we do it bottom up, we have to accept everybody."* She concluded that *"There's a lot of legal things involved always. So these would have to be arranged too."*

C.3.3 Quality of Education.

On the topic of students potentially having the freedom to essentially tailor their courses for a given program, expert 3 explained that in some parts of Europe, similar systems are already in place. *"You [the student] could arrange it, but then you would have to make a good plan for yourself. In Eastern Europe, some of the bachelor programs [have] you make a plan in the first year, and you have to stick to that plan. And the plan is completely your choice, it's up to you what you do, but you have to do it right."*

On whether such freedom would lead to a higher quality of education for the students, she expressed *"That would be handy. I like the idea that you think 'I really want to become a specialist in this, and I need that from the University of Bielefeld and I need that from the University of Hannover'".* She later added *"I do see the advantage of that. But you could just make your own interdisciplinary curriculum. Like you say, I really want to specialize in [something], but I also need courses from that and that field. And I know that a good university offers that."*

C.3.4 Specialization of Institutions.

While institutions being regarded as experts in particular fields may be great for attracting more students, this may also bring more problems for their teachers. *"I'm just thinking, suppose you work at [the] communication science [department at the University of Amsterdam]. You're a teacher there, and you get thousands of students in, online of course, because you're so highly ranked. Would they like that? Because they also have exams and everything to check. I mean, it would be a lot of work."*

C.3.5 Challenges.

One glaring issue that may arise without amendments to the current system is universities lacking capacity to keep up with the number of students, especially for well-known institutions such as the University of Amsterdam. With the current rules in place, *"It would be flooded... And I worry about the academic [quality]. If you're totally flooded with students, you can't do a one on one thesis assistance, or even in classes - I mean all these working groups we have. You can't really if there's too [many students]. I've seen it at the university already. There's too many. I mean, we do the diploma evaluation for most of the bachelor programs. And that's really thousands and thousands and thousands of students applying. And we have to check if they really have a high school comparable to the Dutch system. But we hear from the classes or from the professors like 'we don't want so many.'"*