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THE VALUE OF EUROPEAN UNIVERSITY EDUCATION IN THE CONTEXT OF COVID-19

DO EDUCATION AND SCIENCE HAVE TO PAY OFF THE GENERAL BILL OF SOCIETY?

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INTRODUCTION OR DOES EDUCATION (NOWADAYS) MAKE SENSE IN ITS MODERN FORM

The time of economic turmoil has forced Europe and the world to rethink their attitude and mindset towards education. With the financial crisis gaining momentum, the interest towards investments in education is also increasing, most probably due to the fact that this is the most serious investment, which, at a later stage pays back people's capital. Not only because it encourages the creation and implementation of established and of emerging scientific knowledge, but also because it contributes to the solution of specific, socially significant issues.

Higher education plays an essential role in the development of society, since it fosters innovation, helps the economic growth and improves the material and non-material well-being of citizens.

Globally, education today is exposed to changes,

dynamic in form and size, which necessitates the rethinking of syllabi and leads to the reconstruction of contemporary university environment. The world today makes the debate about the "meaning and content" of higher education not only extremely interesting, but rather complex, too. Very often, among the cultivated part of society you can come across the well-founded claim that due to the dynamics of the processes in the world, knowledge is getting obsolete very quickly. Therefore, some observers come to the conclusion that education in its classic, academic form loses its due significance and it is more and more impending for education to orientate towards preparing the young people of today how to acquire practical, rather than theoretical abilities and skills. Resulting from this controversial position is the thesis that without an adequate and radical change, the current European system of higher education does not cope with the new global challenges and will not be able to do so with future ones.

Indeed, generally speaking, knowledge gets obsolete quickly. However, we should not forget that there are fabulous universities, as well as fabulous university lecturers. Thanks to their efforts the level

6

of knowledge corresponds to the necessity and the needs of its practical implementation.

In the context of these considerations we should ask ourselves an important question – whether higher education is mandatory and absolutely necessary for every European citizen. Apparently, the answer is – no! In Western Europe, for example, less than half of the young people study in classic universities or specialized universities of applied sciences. Most young people there complete a vocational education, which includes both basic theoretical and predominantly practical educational components. In Eastern European countries, which lack traditions in the system of vocational education, or, have rejected such long-standing traditions voluntarily, this role is taken over by the current system of higher education, its final stage being the bachelor educational degree. The above-mentioned different trends for a specific type of education provide opportunities for critical analyses and discussions, regarding the in-depth contemplation of the prerequisites and the logical steps, related to education and the professional development of young Europeans. Thus, in the framework of this natural, public debate, everybody

7

can build critical thinking, so they can assess and sift the various explanations of reality.

With reference to the above considerations, we can ask ourselves the question – Does European higher education make sense in its modern form? The reasonable assumption to this question is a resounding – no! The European system of higher education should be changing continuously, taking into account the requirement that it needs in-depth reforms, not revolutions! These reforms can be summarized in the following four directions:

- Remembering facts is outdated and it causes harm: their compulsory "learning" generates antipathy and fierce resistance with students and their attitude towards education as a whole;
- The modularisation of higher education presents a danger to studying, since it can turn into a "credit hunt" when students choose individual courses;
- The competition between thousands of European universities should not be allowed to lead to inflation of grades;

• A guiding principle in the comprehensive evaluation of each European university should be its ranking on the national, regional, European and global education market.

Speaking of universities, we should always do that on the basis of the paradigmatic postulate that the University's aim is to train not only good professionals but good European citizens as well.

If we mentally transfer to the Middle Ages, we will find that since its establishment, the institution called UNIVERSITY of has had the status ล CORPORATION – a corporation of lecturers. а corporation of trainees, a joint corporation of lecturers and students or a Bologna-type corporation, where students were able to assign and reassign lecturers. And corporations were allowed to live and thrive in accordance with their own laws - secundum legume suam vivere. The corporate status of universities meant that they did not fall under the jurisdiction of local secular or local ecclesiastical either the authorities, i.e. they depended neither on the duke nor on the bishop but were in direct subordination to the respective Royalty or to the Pope. In other words, this expressed the juridical freedom of universities and it was one of the main features of university life. The other feature – the reverse of the medal – is represented by the so-called academic freedom of expression – "libertas docendi et libertas disputandi" – the freedom of learning and discussion. That freedom found its expression in the fact that university professors had the right to discuss all kinds of issues and arbitrary topics, provided that they did not form or defend any final views and doctrines in front of their students.

If we try to summarize what has been said so far, we can definitely conclude that universities since their inception and to this day have been and still are places where social criticism is concentrated – criticism of conventional concepts, conceptual scientific criticism, criticism of knowledge, of societies and of all social institutions, past and present. In the past and nowadays, too, society as a whole is ready to tolerate this situation and even consciously supports universities financially because, at the end of the day, these are the only places that educate specialists who serve society.

However, higher education is not associated only with building awareness and criticism of theories and empiricism for the specialist. The term "university" includes also the high ideal of a comprehensive education that expands the general culture of students through the humanities; that enriches and further develops their knowledge of foreign languages communication with different and enters into cultures. Alexander von Humboldt said that "The most dangerous worldview is the worldview of those who have not viewed the world". This idea of his is especially relevant for the Old Continent at present. In this context, higher education should provide indepth knowledge in the chosen science, provide with various theoretical models students and methods, build skills for critical thinking and empirical analyses, and thus enable their thinking to acquire what is necessary today – complexity, flexibility and speed. Every student, and even every university lecturer nowadays should be more educated in their general view of the world. In periods of stagnation or relatively long-time intervals saturated with irrational thought patterns and ignorance of foreign cultures, university education stands among the main counterbalances to the serious threats to a free modern and future society.

The current scientific study examines the educational and scientific area within the European Union, with a main focus on the trends in education and the vision for the future of universities in Europe against the background of the unprecedented global pandemic related to COVID-19.



Author: Marina Todorova, 5 years

EUROPE TO THIS DAY?!

Currently, there are around 5538 universities in Europe, 3514 of them are in the European Union (EU) member states, including the United Kingdom, which is still for illustrative reasons included in the graphs related to the common European educational and scientific area.

Based on a study, and resulting from the collected, summarized and analyzed statistical data as of the end of October 2019, it is clear that at the beginning of 2018 there were 19.8 million students in the EU, 7.4% of them attended courses with a short cycle of education, which are usually professionally orientated towards preparing specialists ready for quick employment on the labour market, 61.0% attended undergraduate courses, 27.7% - graduate courses, and 3.8% attended doctoral programs. In recent years, approximately 4.8 million been students have completing their higher education within the EU. Nearly three-fifths, or 57.6% of them are women.

Despite the fact that the quality of education is an

indisputable responsibility of the Member States, the EU is providing its strong financial and methodological support for improving the education systems, innovations and research.

The education and scientific area does not exist and does not function outside the public development environment. Due to this reason, it is not separated from the problems of society. We are witnessing the near-permanent financial crisis exacerbate the need for reforms in European economies, which were aimed at achieving sustainable growth and enhancing competitiveness in the EU. At the end of the day, the European leaders realized the well-known fact that economics, education and science are inextricably linked.

While observing the trends in world development, we cannot but mention the role of the European Council in all these educational, scientific, cultural and economic processes and pay tribute to 'Europe 2020' program, which, as early as 2010 proposed a multilateral strategy for sustainable growth and jobs for the next decade, in order to help Europe cope with the dire economic crisis. In order to achieve the 'Europe 2020' vision, the European Union set itself some ambitious key objectives: increasing the employment rate of the population between 20 and 64 years old; investments from GDP in research and development activities; increasing the share of higher education graduates and reducing the rate of early school leavers; reducing the number of people at risk of poverty or social exclusion; improving energy efficiency, increasing the share of renewable energies and reducing greenhouse gas emissions.

Thus formulated, the goals and initiatives of the strategy identified the main dimensions that allowed the assessment of progress towards achieving the set goals. Each Member State set its national targets, which is an important step in the strategy, ensuring that they had been subjected to internal political debate and accepted as their own in every country.

The European Union's **'Europe 2020'** Strategy for Growth and Jobs was aimed at guaranteeing the European Union's recovery after the financial crisis, laying solid foundations for growth and ensuring the sustainability of the economy, as well as reporting Member States' progress in the field of education.

15



Author: Adrian Manolov, 5 years

VISION FOR EUROPEAN HIGHER EDUCATION 'EUROPE 2030'

In 2018 the European Commission published a document *"Towards a Sustainable Europe by 2030"* on the future of Europe, which aims to support the transition to sustainability in the fields of education, science, research, technology, digitization, innovation, finance, pricing and many more, as well as governance and coherence at all levels.

In this context, the European Commission set up a Centre for Strategy and Evaluation Services (SCAS) with the purpose to carry out studies. Based on the latter, the fundamental set of needs, objectives and standards, needed to carry out reforms in the field of research and innovation at universities, can be specified.

The results were not delayed and in February 2020, based on the existing knowledge and experience of previous studies, a report was presented, defining a working transformation Platform entitled "Towards a 2030 Vision on the Future of Universities in Europe"

concerning some of the most important topics in the field of research, innovation and development in the sector of education.

Taking into account the well-known fact that Europe has a very strong educational and scientific community, we can add that this community consists of highly competent university professors and scholars, which are a key component of the unified network structure of United Europe. This community has the potential to make a worthy contribution to the planned and anticipated global European changes in the economic and social area, as well as in the field of environmental protection. Notwithstanding the above statement, European universities need strong institutional support in various aspects of their social, educational, research and innovation activities. This support should target the following areas:

- Effective management of research and innovation;
- Shared interoperability of infrastructure and resources;
- Development of human capital;
- Open science and open access;
- Cooperation between academia and business and

formation of entrepreneurial thinking;

- Strengthening the commitment of individuals and society to research and innovation;
- Mobility of scientists;
- Financial aspects.

The report clearly shows that the goals, set by the European Commission, concerning its activities for the future of universities in Europe by 2030, are aimed at transformations that include fostering knowledge, the integration of scientific skills and practices, stimulating the citizens and society's commitment, strengthening the cooperation between academia and business. The development of this particular "Vision 2030" is being implemented in the context of European research areas, European educational spheres and European higher education.

The main goals of the new strategy, entitled "Vision 2030", are in organic unity with its sub-goals, namely:

- Improving the governance of European universities;
- Development of human capital through university education;

- Supporting and presenting the cooperation between academia and business;
- Improving the skills for working in an open science environment;
- Fostering the commitment of universities to citizens and society.

The goals, thus set, are implemented in values that reflect in the best of the traditions and practices of European academic thought:

- Academic autonomy;
- Freedom of expression;
- Traditional European academic ethics;
- Sense of belonging to a community;
- Transparency on resource allocation;
- Opportunities for personal development and career development;
- Knowledge sharing with the public.

In general, these "specific values" are part of United Europe's values.

We must not forget that the European research area is an area enabling the free movement of researchers, scientific knowledge and technologies. The main priorities are aimed at achieving: more effective national research (and innovation) systems; optimal transnational cooperation and infrastructure for competition and research; open labour market for researchers; gender mainstreaming and gender integration in scientific research; access to and transfer of scientific knowledge; international cooperation, etc.



Author: Teodor Trenchev, 4 years

EDUCATION, RESEARCH AND INNOVATION IN TIMES OF CRISIS

At the beginning of 2020, the fear-ridden world was forced to face a new crisis – the coronavirus pandemic – and Europe was defined as the epicentre of this pandemic by the World Health Organization, despite the fact that the crisis emerged in China.

We witnessed how quickly and adequately a large number of EU Member States exercised their constitutional law and introduced a state of emergency throughout their territory. Borders, shopping centres, cultural centres, kindergartens, schools and universities were closed and a ban on holding mass events of all kinds was introduced.

All these actions have raised many questions, including: will the world be able to cope with this crisis, protect people's values and interests; will it be able to protect and guarantee the irrevocable human right to education and access to vocational and continuing training; how and under what conditions all this could happen.

23

In pursuit of two main goals – to preserve the health of students, teachers, university students, lecturers, researchers and innovators and to keep the educational and scientific processes going, EU countries have undertaken different actions. In order to overcome the effects of the spread of the disease caused by the COVID-19 virus, various restrictive measures have been introduced in the academic systems, with almost all countries suspending work and physically closing their educational and scientific institutions. Due to/In connection with these measures, most countries have switched to online education – through eLearning systems as well as broadcast television educational programs.

At this point we would like to provide a little more information about eLearning systems (and platforms) for online education.

ELearning systems (LMS) are known by different names depending on their purpose:

- Course Management Systems;
- Learning Management Systems LMSs;
- Course Supportive Sysems;
- Learning Content Manager.

The following LMS annotations could be articulated more generally: LMSs are platform independent and create virtual environment for consumers. LMSs provide an opportunity to implement different pedagogical and didactic approaches to training. The use of LMS provides a unified environment for the trainees. LMSs serve the entire training process and store history for each user.

The architectures of these systems are different, but they have some common modules, such as: administrative modules, user module – trainee and trainer profile, knowledge area, activities, communication tools, assessment and user interface. The LMS architecture shows an interconnection between almost all modules:

- **Trainee module** bilaterally with the trainer, the knowledge area, the interface, assessment and one-way – the feedback;
- **Trainer module** connects bidirectionally with the knowledge area, the assessment and provides data to the feedback;
- **Feedback module** completed by the trainer;
- Knowledge area module responsible for the

educational content (will be discussed in more detail in the next *Resources* section);

- **Module interface** dvisualises information;
- Administrator module ensures the work of LMS.

What are the main functionalities of LMS?

- Consumer management and role assignment: in addition to the trainer, the trainee and the administration, a supervisor (parent), etc., are also available;
- Creation, management and maintenance of courses according to the schedule of courses by weeks or topics;
- Establishing communication between users by various means – synchronous (audio, video, chat at one and the same time) or asynchronous (forums and tasks at a convenient time for the participants in the process);
- Presentation of assessment and testing tools. Using these tools makes it possible to monitor the trainee's progress;
- Providing a post-assessment logbook;

- Tracking the actions of users in the system in daily and comprehensive reports for each user, regardless of their role in the system;
- Gamification;
- Compatible with IMS, SCORM eLearning standards that ensure compatibility of the training platform with other platforms;
- Providing mobile versions;
- An opportunity for customization and branding of LMS.

Personalization makes LMS more attractive to trainees.

Cloud based LMS or open source LMS?

Features of Cloud Based LMS:

- No installation is required, i.e. faster implementation;
- Hosted on the vendor's server, providing security and data support from the vendor 24/7;
- Budget costs are based on each client's needs.

Features of open source LMS:

- Requires installation and setup;
- The user has to take care of the maintenance and the data, the updates are made manually;
- Budget a cheap solution.

List of better known eLearning systems

The list is based on the recommendations of $UNESCO^1$ and eLearning Industry² – the network of media and publishing houses.

Moodle

Moodle is widely known among open source LMS solutions. It contains detailed guides on how to set up your own learning management system, tips on how to create online training courses and teach with Moodle, as well as a large community of Moodle users who interact on various topics. Most importantly, the system is completely free and comes with a mobile

¹ Distance learning solutions, https://en.unesco.org/themes/educationemergencies/coronavirus-school-closures/solutions

² The Top 10 Extended Enterprise Learning Management Systems (2020 Update), https://elearningindustry.com/top-extended-enterpriselearning-management-systems-lms

application. It integrates webinar applications such as BigBlueButton.

Canvas

It is an open source LMS that is free of charge for instructors. This makes teaching and learning easier in terms of implementation, learning, customer support and success. The system is reliable and adaptable. Its interface and functions are designed to save time and effort, which results in faster and more profound acquiring of knowledge than many other learning management systems.

Google Classroom

This system makes it easy for trainees and lecturers to maintain communication within and outside the university. The service saves time and material resources such as paper, pens, etc., and allows for easy course creation, allocation of assignments, organizing and communication.

Docebo

A highly regarded learning management system approved by reputable companies such as Thomson Reuters, Bloomberg and Sharp. The Docebo system's philosophy of learning, training and sharing is fully reflected in its practical features. Docebo applies gamification to the learners' engagement. Mechanisms such as badges, awards and charts are used to increase participation and the success of the course.

LearnUpon LMS

LearnUpon is an LMS for corporate training, management, tracking, and achievement of learning objectives through a single solution. The system has been declared reliable by over 1000 businesses worldwide, including Zendesk, TripAdvisor, Booking.com, Intuit Quickbooks, Logitech and Twilio. LearnUpon is one of the fastest growing LMSs in the world.

Adobe Captivate Prime - paid

Adobe Captivate Prime can manage end-to-end training effectively across employees, customers, and partners. With Adobe Captivate Prime, skills can be upgraded and the effectiveness of partner organizations can be improved, by extending learning programmes to an external ecosystem. This LMS has the following characteristics:

- Easy setup of learning structure reuses modules in courses to create structured learning paths; combining virtual or live classrooms and eLearning courses into learning programmes and certifications;
- User group reporting creating customized user groups to get different views of learning data; tracking the effectiveness of user group performance
- Team view all managers get access to consolidated summarized information on the progress and training of their teams.

TalentLMS

TalentLMS is the ideal training platform for partners, employees or clients. This learning management system comes with all the tools for delivering courses. Currently, TalentLMS is one of the most versatile, easyto-use LMSs with distinguishing features, such as:

- Available on the cloud;
- One training platform with unlimited power;
- Removes language barriers there is a choice of 38 different languages.

SAP Litmos LMS

SAP Litmos powers trainings for the intelligent enterprise. The solution combines a powerful learning management system, SAP Litmos Training and a robust content library, SAP Litmos Training Content. This system:

- Is ideal for training partners and customers;
- Facilitates the training of contractors.

Looop

Looop is an extended corporate LMS for all internal and external trainings. Whether in a small business or in a multinational enterprise, Looop delivers a guaranteed performance at the speed, scale and quality that the consumer needs, by providing:

- Easy integrations through built-in or custom APIs;
- Training through automated campaigns and communications.

Blackboard

Provides resources and tools for delivering quality teaching and learning online. Paid system, works with McGraw-Hill Publishing House.

CenturyTech

Provides the creation of personalized learning paths with micro-lessons to deal with knowledge gaps, is a challenge to students and fosters long-term memory retention.

ClassDojo

Connects teachers with students and parents to build communities in the classroom.

Simbaloo

Free cloud platform for sharing heterogeneous resources.



Author: Victor Yosifov, 4 years

MASSIVE OPEN ONLINE COURSE PLATFORMS – MOOC

The platforms provide courses in various fields. Completion of training is most often certified by a Course Completion Certificate. Such platforms are:

Alison – https://alison.com/ – online expert courses;

Coursera – https://www.coursera.org/ – Online courses taught by instructors from world-renowned universities and companies;

EdX – https://www.edx.org/ – online courses from leading educational institutions;

University of the People – https://www.uopeople. edu/ – online university with open access to higher education, Non profit;

Future Learn – https://www.futurelearn.com/ – online courses to help students learn, build professional skills and connect with experts;

Canvas – https://www.canvas.net/ – lifelong learning and professional development for lecturers.

Learning content that we can manage ourselves

Byju's – https://byjus.com/ – a training application with large repositories of educational content, tailored to different degrees and levels of training.

Discovery Education – free educational resources and lessons on viruses and epidemics for different grade levels.

Khan Academy – https://www.khanacademy.org/ – Free online courses, tutorials and practice.

LabXchange – https://about.labxchange.org/ – curated, digital educational content, customeroriented, that provides opportunities for educational and research experience.

OneCourse – https://onebillion.org/onecourse/app/ – a children's app aimed at teaching reading, writing and numeracy.

YouTube – https://www.youtube.com/ – A huge repository of educational videos and training channels.

Video platforms – webinar

Hangouts Meet (external link) – Video calls integrated with other Google G-Suite tools.

Skype (external link) – video and audio calls with options for calls, chat and collaboration.

Zoom (external link) – Cloud platform for video and audio conferencing, collaboration, chat and webinars.

Teams – Chat, meetings, calls and collaboration options, integrated with Microsoft Office software.

Dingtalk (external link) – A communication platform that supports video conferencing, task management and calendar, attendance tracking and instant messaging.

Lark – a collaboration suite of interconnected tools including chat, calendar, cloud storage.

In the context of the overall picture of the crisis, let us analyse its impact in the previously defined key areas for the development of European university education, research and innovation "Vision 2030".



Author: Marina Todorova, 5 years

EFFECTIVE MANAGEMENT OF RESEARCH AND INNOVATIONS

Universities governance can be considered both as a fundamental traditional activity and as an activity related to their current and future transformation in the context of "Vision 2030" for modern education, research and innovation. Discussions related to this issue must be based on the premise that European academic area is very fragmented and diverse and is characterized with internal differences that are difficult to overcome. Notwithstanding the latter finding, the European academic sector has been managed decently so far. The fact that the new "Vision 2030" platform anticipates its rapid transformation is also very pleasing.

Unfortunately, from the perspective of COVID-19 pandemic, we can hardly talk about an effective university governance currently. No university within United Europe was prepared to face this challenge. The unexpected suspending of universities has totally disrupted their activity. At this point, it would be hard to agree that there are any forms (even crisis ones) of university governance. Modern telecommunications toolkit for making contacts between different entities is not generally applicable in the traditional (no matter how modern) university environment. At the heart of this environment is the fact that the foundation of university management is its collegial form of decision-making. In our view, the management of European universities at the moment should be based on the principle that *"while patients are treated and healed, the healthy ones must continue working."*

Shared interoperability of infrastructure and resources of universities

According to "Vision 2030" platform, an extremely important task in the efforts for supporting the integration processes in modern education and research is to create interoperability, exchange of physical and virtual resources and relevant infrastructure.

The current crisis situation on the Old Continent not only "puts a spoke in the wheel" in the accomplishment of this important task at present, but it also has an impact throughout the entire subsequent period related to the restoration of universities' normal activities. It is expected for any university or scientific community to first of all rebuild the available infrastructure and review the existing resources and only then begin to share them.

Human capital development

Human capital issues are very important, wideranging and with some negligible exceptions cover all aspects of global university activity. At this point, with regard to "Vision 2030" platform and as far as the future development of human capital in the academic field is concerned, we could recommend improvements in several directions. In our opinion, the most important of them are:

- Career assessment system;
- Cross-disciplinary and cross-sector mobility;
- Management of university communities;
- Geographic mobility;
- Cooperation between academia and business;
- Fostering civic engagement in education and science issues and enhancing its social impact;
- Introducing the most facilitated procedures for "brain circulation" in the European educational

and scientific area as well as in the field of innovations;

• Providing guaranteed employment opportunities for young European university graduates (holders of doctoral degrees).

Let us now turn our attention to another problem of significant importance for the future development of university structures. It concerns the nature, mission and tasks of all universities on the territory of the Old Continent.

According to the generally accepted and generally acknowledged definition, the university (Lat. *universitas* – a whole) is a specific structure for higher education and research that provides educational and scientific degrees in various fields of science.

It is very important to mention the fact that the word "university" is derived from the Latin term "*universitas magistrorum et scholarium*" which means "a whole (a community) of lecturers and students".

At its core, the social mission of universities is to create and pass on human knowledge, as well as to develop the human capacity in order to create, transfer and put into practice that same knowledge.

It is not a coincidence that in this study we have focused our attention on the subject (generally speaking) of online education. A particular focus of this (not financially, but definitely commercialized) process is the implementation of eLearning systems and the various systems and platforms for course management, training management, course support and content management.

Objectively activated by the state of emergency in all countries of United Europe, universities on the Old Continent have gone massively to online teaching. Honestly, this measure is necessary to partially overcome the situation. However we should not forget that it is a TEMPORARY MEASURE. The apologists for the so-called SMART universities are "rubbing their hands" and are working hard to promote their 'SMART' educational environment. It is true that eLearning systems and the educational platforms, based on them, have their place in modern educational process. However, they cannot and should not, under no circumstances, replace the natural community learning process in today's universities. Still, a UNIVERSITY IS A COMMUNITY OF LECTURERS AND STUDENTS. And this community is undoubtedly socially engaged.

The massive penetration of eLearning systems (aided, quite objectively, by the COVID-19 pandemic at present) and their conjuncture establishing as a future major component of university education are totally wrong. This type of training is more suitable for training robots than humans. If we extrapolate the total dominance of remote learning, we will soon have to delete the word 'university' from the dictionaries and replace it with the term "a store (depending on the size, could be a supermarket as well) for selling diplomas".

Open science

At this point almost all authors agree that, in general, the term "open science" refers to the possibilities of creating transparent and accessible knowledge, aided by science, which is shared and developed through integrated community networks. This term is at the heart of a positive global movement of a large number of members of the scientific community who believe that science should be "shifted" to a more open, collaborative and

44

networking pathway to research and exchange of scientific results. Ultimately, the goal of open science is to make public (to open) research processes, to increase the degree of reproducibility of research, and to address more successfully the impact of science on significant social changes.

Nowadays in academia, the adjective "open" is associated not only with the term "science" but also with terms such as "knowledge", "software", "content" and "access". For example, in a university context, "open knowledge" has a much broader scope than "open access", whereas "open science" is associated with the creation, restoration and free transfer of knowledge.

In the University, Research and Innovation Development Platform "Horizon 2030", presented by the European Commission, particular attention is paid to promoting and implementing the ideas of open science in current social practice. The crisis situation in Europe, linked to the pandemic of coronavirus, is a kind of litmus test for the potential for highlighting and enhancing the benefits of open science.



Author: Marina Todorova, 5 years

COOPERATING BETWEEN ACADEMIA AND BUSINESS AND FORMING AN ENTREPRENEURIAL MINDSET

Cooperation between academia and business affects the direct strategic links between business and the academic sphere, leading directly to significant and visible advantages and benefits not only for these two sectors but also for society as a whole.

This cooperation is one of the main areas for the development of European university education, research and innovation, set out in the "Vision 2030" platform. The dominant cooperation between academia/ and business envisaged in the platform will help to realize one of the modern educational paradigms, namely the radical transition from "accredited qualification to certified skills".

Strengthening the commitment of individuals and society to research and innovation

The future of social commitment to the problems of modern education, research and innovation in United

Europe emphasizes the "co-production" of knowledge and reflects towards the dynamic non-linear nature of efforts The conscious of research. academic communities to engage citizens and the entire society with the problems of universities are in the same direction. In principle, they actively encourage their individual scientists, researchers, and innovators to do the same in the direction of coping with global change, because each of them has realized the truth that scientific advances remain "in the shadow" if society is closed (not committed) to their transparent visualization and effective implementation.

The strategy for the prosperous future of universities in Europe involves a multitude of critical transformations in all public structures aimed at enhancing the commitment of individual European citizens and of society as a whole to modern education, research and innovation.

The current crisis situation in United Europe associated with the COVID-19 pandemic shows a greater involvement of society in the problems of educational and scientific structures.

48

Financial aspects

One of the essential problems of our time concerns the topic of university funding. And while there is talk of a single European education area, in the context of a financial crisis, complemented by the COVID-19 pandemic, the positives and negatives in the work of the Member States and their universities, respectively, are clearly evident.

We are witnessing how, as a result of the crisis, universities began to experience increasing financial pressure, which led to a change in the mechanisms for their funding. In almost all Member States, the sources of research funding, competing against the state, are an important factor. Some universities are well funded, while others are poorly funded, some are highly developed, while others are centralized. Taking into account the advantages and disadvantages of the different ways of financing, we pay attention to the information provided on the different financing methods, including appropriations measures, based on the results obtained. Despite the variety of tools and the availability of feedback, training and adaptation mechanisms, at this stage neither the pros nor the cons of funding universities can be identified and summarized.

However, apart from this, a question arises at this point "Is there really a single European educational and scientific area, if one of the main points in its functioning, such as funding, is not clearly defined?!".

Mobility of researchers

Recent research by the European Commission shows that university lecturers, researchers and innovators from Europe who have international experience could have a major scientific impact on social development. Researchers' mobility is also about addressing an important issue, namely "brain drain" from countries with weak sectors in higher education and research towards countries with stronger ones.

We could say that scientists, as a vanguard in knowledge society, are becoming more mobile – both physically and virtually. Physical and virtual mobility of people is a civilizational characteristics of the time we live in today. In view of the high academic and market value of researchers' work, they are quite naturally in greatest demand on the scientific labour market and are, accordingly, more mobile than others in the field of research. Distinguished researchers, on their part, seek – and can afford – a scientific environment to provide them with optimal conditions for research and for moving science forward. Most often, they choose to work for solidly funded research centres, ambitious scientific and real-world programs and projects, good management, modern technical equipment and technology, etc. [3] The mobility of these researchers is therefore saltatory – they can be relocated when starting a new project, funding a new program, opening a new scientific unit, etc., and remain there until the end of the activity and, if possible, for further research, in the most appropriate place for conducting it. However, for most scientists, the periods of time, spent in a given scientific environment, are relatively longer due to the larger scale of the projects, the availability of more funding and positive work environment.

However, alongside the positive, there are also negative results from the market formation of research centres, due to the over-centralization of science. A small number of elite universities "generate" elite personnel who are then hired by prestigious scientific units and become significant scholars. The limited number of market positions for elite scientists condemns a lot of young researchers who have graduated from the vast array of "non-elite" universities to a lack of funding and of favourable scientific environment. [5] The popularity of various formal university rankings also shows this trend of marketisation and strong competition for presence in the scientific elite.

As a result of the trends in education and science outlined above, it can be assumed that universities are a highly competitive community that has the potential to influence global and European economic and social challenges, breaking the frontiers of research, helping different initiatives and engaging the population with them. Due to this and some other reasons, universities and other research centres need to be continuously supported to work with various technologies, to promote interdisciplinary research and to cooperate with government institutions and businesses.

In the conditions of COVID-19 pandemic, too, the European Union should play a leading role in creating a framework for policies that provide regulatory mechanisms and tools, fostering cooperation and the dissemination of knowledge, experience and good practices in order to provide both real (physical) mobility, as well as (predominantly) a virtual one.

THE VISION FOR EUROPE AND THE VALUE OF EDUCATION AND KNOWLEDGE

Taking into consideration the human factor as a strategic tool for ensuring social progress, as well as the economic dynamism of Europe, the knowledgebased, intellectual labour and innovation-based sectors are becoming increasingly sought-after and valued indicators that guarantee Europe's prosperity. By building a knowledge society, the EU aims to achieve high results in the educational process by creating a social and economic environment where research and innovation develop in parallel with the basic and superstructural skills of the population.

The pursuit of excellence does not neglect the efforts for promoting broad access to university education, too, which can be achieved through:

- Providing a unified environment for universities, students and research;
- Reporting the discrepancy between demand and

supply of knowledge, which should be placed among the main priorities of the education system;

- The successful new educational paradigm "Learning by doing"³, which will be a fundamental principle in the system of education;
- Creating a flexible and lifelong learning orientated culture that provides people with the opportunity to return to the education system at any time of their development, regardless of age and social status;
- Stimulating the development of centres of excellence.

Without ignoring the European educational and research perspective, we should say that university education can not only sharpen the sensitivity of society to specific problems, it can also foster the scientific knowledge and innovative capacities that should be used to cope with ailing public challenges.

 $^{^3}$ Introduced in the beginning of the $20^{\rm th}$ century by the renowned scholar and scientist John Dewey

Day-to-day problems, such as the COVID-19 pandemic, which, from a historical perspective of society, have minimal effect on its development, in fact distract our attention and we lose sight of the important part of what enhances and gives meaning to our lives, namely knowledge.

As a synthesis of the discussed topics, we can offer brief final reflections on the subject of education, research and innovation in a united Europe in time of crisis. Because as a result of the processes for overcoming this total crisis, modern education and science in Europe will become stronger. Their natural synergy will not only support their efforts not to pay the general bill of society. Supported by citizens, they will successfully pay off that bill.



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HOPE DURING AN EPIDEMIC

Antoine de Saint-Exupéry says that the greatest luxury in human life is interaction between people. With today's imposed physical restrictions, the through books becomes interaction even more significant. This reading material is for all people around the world. It expresses sympathy towards the human drama, which a few months ago was unknown. This was written in a peculiar time with a particular concern and by special authors. They are discerning explorers, favorite teachers, academic authorities and respected social activists not only in their countries of origin. Ever since the University of Bologna, this institution has been an indicator of civilization, prestige and intelligence. And they are the bearers of this tradition. Such people refute B. Shaw's humorous aphorism: "Those who can, do; those who can't, teach". Because they can do both.

When the Higher School, established in 1888 under St. Stambolov's government became the most revered university in Southeast Europe, isn't this a legitimation for public and scientific value? Didn't the same happen with the University of Library Studies Information Technologies (ULSIT), and which overcame ironic skepticism in the beginning and today is an educational aspiration for very smart European young people? The topic is unexpected and unusual because that's how it came about. Epidemics are a global phenomenon perceived differently, but they are a tragedy for all people. Historically, they have been reflected in chronicles, literature, paintings, and even in predictive legends. But globalization makes them ubiquitous. If there is anything in common on this scale, it is the equally panicking and fanatical perception of this contagious wave. There are few differences worldwide, and the danger seems universal

Who would have thought that the generally negative word 'mask' as a behavior would acquire a life-saving daily and mass purpose? Without being the most frightening, prolonged and large-scale, our epidemic fever shakes everyone because of the endangered sense of security prevailing over the established sense of community of humanity. And it should provoke even more. The book evokes thoughts that run parallel to the aesthetic satisfaction of reading it. "Skepticism is the beginning of faith", says the god of aphorisms, Oscar Wilde. We can modestly add that even precautionary concern does not terminate adversity, but overcomes it. Part of this concern is the importance of universities in dealing with such similar incidents, regardless of their duration. Here meticulously emotionless analysis is accompanied by the nobility of a vocation. The vocation of carrying light, thought and saving optimism that comes from knowledge. Here the authors' definition that "universities are the ideal of a comprehensive education" carries the Renaissance ideal of a comprehensive intellect. Thus, that stirring poem about student youth by the famous Bulgarian poet Valeri Petrov "Tarsi se" (Wanted) reminds both of a longing for the youth and an ennobling meeting with the world in spirit. Just in the spirit of Alexander Humboldt quoted by the authors. Thus knowledge becomes self-knowledge and mostly vice-versa!

This time of unexpected health panic trials will have its heroes and thugs. It seems that the latter will be more. As with all trials. Probably some want to reduce the human race a little. Especially the elderly. We cannot only watch dramas on TV and always about others. Somerset Maugham had once ridiculed the British position of brilliant isolation that it was neither brilliant nor isolated. It turns out today that there is a need for isolation. Rescue. Who would have accepted this as a virtue? Offered by fate, but inexplicable fate. Today it is not a British or even a European addiction. It is global. This means that globalization is not just a virtue. Man in trouble is the real man. This is delicately suggested by both authors of the book. This is especially true of friendship. People forget about money when surrounded by homeless children, ruins and death that has taken its toll or is imminent.

"La situazione non è buona" (The situation is not good) – these are words from the popular song by Adriano Celentano 5 years ago. And what of today? Until recently, each social anomaly could have been defined as a crisis. And now it is catastrophic, no natural factors involved. If God had wanted to punish Sodom and Gomorrah with no fire and brimstone. He would have done the same. But where have we sinned? Who could have predicted this? It turns out that a test tube is more dangerous than any fighter jet. Until recently, we laughed and got angry at all sorts of sweet action how some hairy monstermachines attack Mother Earth from other galaxies. And now they are here and there is no threat from the outside. Talking about it means panic, not talking about it is dangerous and reprehensible. It is clear that some will gain from all this, but much more will lose. And isn't this shared panic a product and a failure of globalization? How did all countries close down to save themselves from others? Of course, this is not a novelty in human history. Especially in modern times. Plague, tuberculosis, and small-scale AIDS have "cleansed" humanity in a timely manner. It has been claimed that mass diseases have renewed society at least democratically – for better or worse, the hereditary aristocracy has died out, especially in England. Panic is human, explainable, shared, even when exaggerated. And yet, do we not forget countries, nations that have expected bombings day and night with less panic? As with all trials, this case is a test of humanity and friendship. Personally as well as globally.

Inappropriate as it may sound, in these tragic circumstances, this drama also has social dimensions.

Third class passengers on the Titanic lost their lives the most. All celebrities saved from the disease sounds great, but what about others? The world, along with the schools, has been forced to take months off. And yet, it stays the same. That is why, again, it is knowledge and science that will help keep self-control and save the world. This is the discreet message of this small but wise book!

Sofia

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THE VALUE OF EUROPEAN UNIVERSITY EDUCATION IN THE CONTEXT OF COVID-19

Do Education and Science Have to Pay Off the General Bill of Society?

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