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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

on a renewed EU agenda for higher education

{SWD(2017) 164 final}

1. A NEW IMPETUS FOR HIGHER EDUCATION IN THE EU

A new EU agenda for higher education ...

The success of the European project depends on the EU's capacity to build a better future for European citizens. This is a key message of the Commission's White Paper on the Future of Europe.¹ It is also at the heart of the initiative 'Investing in Europe's Youth'² and the New Skills Agenda for Europe.³ These made clear that effective education and training systems are a foundation of fair, open and democratic societies and of sustained growth and employment. The EU's 'pillar of social rights'⁴ and recent reflection paper on harnessing globalisation⁵ identify education and skills as a priority for European cooperation.

Higher education plays a unique role. Demand for highly skilled, socially engaged people is both increasing and changing. In the period up to 2025, half of all jobs are projected to require high-level qualifications. High-level skills gaps already exist. Driven by digital technology, jobs are becoming more flexible and complex. People's capacities to be entrepreneurial, manage complex information, think autonomously and creatively, use resources, including digital ones, smartly, communicate effectively and be resilient are more crucial than ever. Europe also needs more high achievers who can develop the cutting edge technologies and solutions on which our future prosperity depends. In parallel, countering the growing polarisation of our societies and distrust of democratic institutions calls on everyone — including higher education staff and students — to engage more actively with the communities around them and promote social inclusion and mobility.

Without higher education institutions (HEIs) and systems that are effective in education, research and innovation and are connected to their societies, Europe cannot respond to these challenges. Reform of higher education is the responsibility of Member States and part of their efforts to develop world-class education and training. The EU can help Member States with their educational reform efforts. This renewed agenda for higher education⁶ aims to ensure the EU's initiatives to support higher education modernisation are focused on issues that matter, while also helping to prepare for the next EU funding period.

...that builds on work already done...

The EU has a successful record of supporting higher education through policy cooperation and funding programmes. The European Semester is a key driver of reform, namely through education-related country specific recommendations. As part of the Europe 2020 strategy and the strategic framework for European cooperation in education and training (ET 2020), the Council agreed that 40 % of young people should have a tertiary education qualification or

¹ [COM\(2017\) 2025 final](#)

² [COM\(2016\) 940 final](#)

³ [COM\(2016\) 381 final.](#)

⁴ [COM\(2017\) 250 final](#)

⁵ https://ec.europa.eu/commission/publications/reflection-paper-harnessing-globalisation_en

⁶ Announced in COM(2016) 941 final

equivalent by 2020. Supporting this target, since 2011, the Modernisation Agenda for Higher Education⁷ has provided strategic direction for EU and Member State activities to:

- **Build evidence about what works in higher education** (in education, research, innovation and the design of systems) through studies, expert groups and analysis and monitoring of benchmarks and indicators;
- **Support cooperation, mutual learning and targeted policy advice** between governments and authorities responsible for higher education;
- **Strengthen the capacity and outputs of higher education institutions** by funding innovative cooperation projects between institutions and their partners (Erasmus+, Horizon 2020) and, through European Structural and Investment Funds (ESIF), investment in infrastructure, facilities, skills and innovation projects. European Investment Bank projects have also supported investment in higher education infrastructure, including through the European Fund for Strategic Investments (EFSI);
- **Support international mobility of students, staff and researchers** as a way for them to develop their experience and skills (Erasmus+ and Marie Skłodowska-Curie Actions); and
- **Strengthen collaboration** between higher education, research and business.

...but refocuses efforts on current and evolving opportunities and challenges

The positive impact of EU activities, and the international dimension they bring, has been acknowledged by MS, social partners and the higher education sector. The EU is on track to meet the 40 % attainment target but, as highlighted by the public consultation on future EU support for higher education undertaken in 2016,⁸ Europe's higher education systems face challenges, including:⁹

- **A mismatch between the skills Europe needs and the skills it has:** many parts of the EU are experiencing shortages in certain high-skill professions¹⁰, both in terms of qualifications and the quality of the associated skills. At the same time, too many students graduate with poor basic skills (literacy, numeracy, digital) and without the range of transversal skills (problem-solving, communication, etc.) they need for resilience in a changing world.
- **Persistent and growing social divisions:** people from disadvantaged socio-economic and with a migrant background remain far less likely to enter and complete higher education; academics and graduates are too often perceived as detached from the rest of society; and gender segregation by field of study is still pervasive.

⁷ COM(2011) 567 final.

⁸ See Annex II of the SWD accompanying the New Skills Agenda for Europe.

⁹ See accompanying SWD

¹⁰ See 'Skill shortage and surplus occupations in Europe' (CEDEFOP, 2016): 'Across the EU...[t]he top five are ICT professionals; medical doctors; science, technology, engineering and mathematics (STEM) professionals; nurses and midwives; and teachers.' The situation varies from region to region.

- **An innovation gap:** higher education institutions are often not contributing as much as they should to innovation in the wider economy, particularly in their regions. The performance of higher education in innovation varies strongly between EU regions.
- **The different components of higher education systems do not always work together seamlessly:** funding, incentive and reward mechanisms in higher education are not always configured to reward good teaching and research, innovation, social inclusion and engagement. Cooperation with schools, vocational providers and adult learning is often limited.

2. PRIORITIES FOR ACTION

It is time to give new direction to EU support for higher education. This will address the four challenges above by focusing on four corresponding priorities for action, supported by EU-level activities:

1. Tackling future skills mismatches and promoting excellence in skills development;
2. Building inclusive and connected higher education systems;
3. Ensuring higher education institutions contribute to innovation;
4. Supporting effective and efficient higher education systems.

2.1 Tackling skills mismatches and promoting excellence in skills development

Addressing Europe's **high-level skills needs** requires action. First, more people need to be attracted to the fields of study that prepare students for jobs where shortages exist or are emerging. In many EU Member States there is unmet demand for graduates in science, technology, engineering, (arts) and maths (STE(A)M) fields, medical professions and teaching¹¹. Second, all students in advanced learning, irrespective of discipline, need to acquire advanced transversal skills and key competences that will allow them to thrive. High-level digital competences¹², numeracy, autonomy, critical thinking and a capacity for problem-solving are increasingly crucial attributes.

What people choose to study in higher education depends on personal motivation, good guidance and the availability of attractive learning and career options. Career opportunities ultimately depend on employers and the wider economy, but education and training have a key role to play. Schools can motivate pupils to take an interest in all subjects, including maths and sciences, and in guiding their choices. They are also key to tackling the under-representation of women, minorities and other under-represented groups in scientific and technical subjects in higher education and subsequently in related professions. Good information on what graduates do, contacts with alumni and forecasts of future skills needs are all valuable to guidance counsellors. Higher education has a duty to ensure that content is up to date, provide relevant study programmes in fields where skills shortages exist and

¹¹ See COM(2017) 228

¹² (DigComp): <https://ec.europa.eu/jrc/en/digcomp>

develop methods of learning and teaching that allow students to acquire the breadth and depth of skills they need.

Well-designed higher education programmes and curricula, centred on students' learning needs, are crucial for effective skills development. A wider range of course choices, including two-year¹³ degrees and options for continuous professional development, help higher education respond better to people's needs. Technology offers new ways to structure the way learning and teaching are organised¹⁴, including through open, online and blended learning¹⁵ to increase flexibility and teacher-student interaction. Open educational resources (OER) and learning analytics¹⁶ have potential to improve learning, but remain under-exploited. While much teaching in higher education takes place in research-performing institutions, research is not exploited enough as input for teaching, while undergraduates are often not involved in research. This limits students' opportunities to explore contemporary issues and develop their research skills. Digitally-enabled open science¹⁷ opens up new possibilities to address this.

Higher education should also allow students to acquire skills and experiences through **activities based around real-world problems**, include work-based learning and, where possible, offer international mobility. **Cooperation with employers** can allow HEIs to increase the relevance of their curricula and deliver them effectively, and increase opportunities for students to access high quality work-based learning.

Designing, building and delivering good study programmes is not easy. **Good teachers** are crucial. Too many higher education teachers have received little or no pedagogical training and systematic investment in teachers' continuous professional development remains the exception. National and institutional strategies to improve career opportunities and rewards for good teachers are becoming more common but are far from standard.

The Commission will:

1. Start a **European initiative to track graduates** to improve knowledge at national and EU level on how they progress in their careers or further education. This will support improvements in career guidance, programme design, institutional strategy and policy-making. The Council Recommendation¹⁸ proposed as part of this package will be supported by an EU-level graduate survey and cooperation to improve national graduate tracking mechanisms.
2. Launch an up-scaled **EU STE(A)M coalition**¹⁹ bringing together different education sectors, business and public sector employers to promote the uptake of relevant STE(A)M

¹³ Short-cycle courses (EQF 5)

¹⁴ <https://ec.europa.eu/jrc/en/open-education>

¹⁵ Typically combining online and classroom-based learning.

¹⁶ Data about learners and their contexts used to identify students' learning needs

¹⁷ Open science is the movement to make scientific research and data accessible to all

¹⁸ This will include graduates of higher education and vocational education and training (VET) as well as those who leave education without a qualification.

¹⁹ Building on EU projects to date, including the EU STEM coalition. The evolution from STEM to STEAM reflects recognition within higher education of the increased importance of inter-disciplinary

subjects and modernise STE(A)M and other curricula, including through more multi-disciplinary programmes and cooperation between relevant faculties and HEIs.

3. Encourage the integration of work placements, recognised through ECTS points, into higher education programmes, further strengthen **Erasmus+ business consortia** to increase the availability and quality of work placements and support Erasmus+ **student work placements with a particular focus on digital skills**²⁰.
4. Develop and roll out a **digital readiness model** to help HEIs, their staff and students implement digital learning strategies and exploit the potential of state-of-the-art technology, including learning analytics. This will be accompanied by **guidance on open education initiatives**.
5. Step up **strategic support for higher education teachers, doctoral candidates and postdoctoral graduates through Erasmus+** to help them develop pedagogical and curriculum design skills through targeted opportunities for staff mobility for pedagogical training and strengthened cooperation between teacher training centres across the EU.

2.2. Building inclusive and connected higher education systems

Higher education must play its part in facing up to Europe's **social and democratic challenges**. This means ensuring that higher education is inclusive, open to talent from all backgrounds²¹, and that higher education institutions are not ivory towers, but civic-minded learning communities connected to their communities. Academics and students have a crucial role to play in defending empirical facts and evidence and in communicating research results effectively and widely.

The profile of the population of students entering and completing higher education should reflect wider society. This requires intervention from government, schools and higher education. The social groups least represented in higher education are more likely to lack basic skills (literacy, numeracy and digital competence), experience of learning independently and a clear idea of what higher education entails. Systematic **cooperation between HEIs, schools and VET providers** is needed to prepare and guide students based on their talents, not their background, and provide flexible pathways between the different types of education and training. Adequate career guidance and mentoring are crucial.

Making higher education systems inclusive also requires the **right conditions for students of different backgrounds to succeed**. This goes beyond the question of financial support for disadvantaged groups, although this is vital for those from low-income backgrounds. To promote successful completion of studies, higher education providers should take a holistic look at how teaching and assessment are organised, put measures in place to mentor students and provide academic and non-academic support²². HEI campuses should be safe places for

approaches. The interaction between STEM and art and design is driving substantive innovation and creativity.

²⁰ See COM (2017) 228. An example is the Horizon 2020-funded 'Digital Opportunity pilot project.

²¹ In accordance with UN Sustainable Development Goal 4 on ensuring inclusive and quality education for all.

²² Including teacher training on dealing with classroom diversity.

all students, free from gender-based violence and discrimination. Early detection of problems is crucial for identifying the support that students need. Flexible study options (part-time or online) and more widespread recognition of prior learning are also required to make higher education more accessible, particularly for adult learners. Strategies to help disadvantaged students to access and go on to complete higher education are a promising way to achieve these objectives.

Breaking down **barriers between higher education and the rest of society** can help students develop their **social and civic competences**.²³ Some institutions are developing their profile as ‘**civic universities**’ by integrating local, regional and societal issues into curricula, involving the local community in teaching and research projects, providing adult learning and communicating and building links with local communities. Well-organised voluntary and community work can be a particularly effective way to help students develop their wider practical experience and skills. HEIs should be engaged in the development of their cities and regions, whether through contributing to development strategies, cooperation with businesses, the public and voluntary sectors or supporting public dialogue about societal issues. Outreach beyond the academic community in local languages should be incentivised and rewarded, including as part of career development.

The Commission will:

6. Direct Erasmus+ support to help HEIs in developing and implementing **integrated institutional strategies for inclusion, gender equality and study success** from admission to graduation, including through cooperation with schools and VET providers.
7. Promote **development and testing of flexible and modular course design** to support access to higher learning through specific priorities for Erasmus+ strategic partnerships.
8. Support HEIs wishing to **award ECTS points to students for voluntary and community activities**, based on existing positive examples.
9. Support **recognition of qualifications held by refugees** to facilitate their access to higher education. Activities will build on an ongoing Erasmus+ project that provides practical guidelines and includes peer-counselling activities between NARICs²⁴ and stakeholders and e-learning modules, and will complement the skills profile tool for third country nationals.

2.3 Ensuring higher education institutions contribute to innovation

Many higher education institutions are developing **new solutions to economic, social and environmental problems**. Ensuring these efforts are well-targeted and help solve immediate as well as long-term challenges is not simple. Innovation is the most important driver of economic growth. Research institutes, research-intensive universities and universities of applied science contribute to innovation in different, inter-related ways; and within and across multiple geographical boundaries. Strengthening the contribution of higher education to

²³ As defined in the European Framework for Key Competences.

²⁴ National Academic Recognition Information Centres.

innovation requires action across all higher education institutions' activities — education, research and engagement with the wider world. Institutions need to build an outward-looking culture of innovation and entrepreneurship.

New ideas and discoveries stem from human curiosity, creativity and initiative. All forms of higher learning should aim to equip students with the ability to understand new concepts, think critically and creatively and act entrepreneurially to develop and apply new ideas. High **quality post-graduate studies and doctoral training** are critical. It produces researchers, developers and 'innovation managers' who drive scientific discovery and the promotion and adoption of new ideas. In comparison to the US and Japan, too few PhD holders in the EU go on to work outside academia. HEIs need to promote this through greater focus in doctoral programmes on the application of knowledge and interaction with future employers.

HEIs should also play a wider role in local and regional development. The EU's investment in regional development through innovation is guided by the principle of **Smart Specialisation** — focusing regional investment and effort on innovation in sectors with high growth potential. HEIs can do more to facilitate connections between academics, entrepreneurs and public authorities, to align their educational offer to needs identified in smart specialisation strategies, seize opportunities for innovation in priority sectors, and help local businesses and other organisations understand and adopt new ways of thinking. Making all this happen should be part of a wider cultural change, whereby HEIs become '**entrepreneurial actors**'. The EU-supported HEInnovate tool²⁵ helps in making innovation and entrepreneurship a core part of overall institutional strategy. The Seal of Excellence provides an additional opportunity for investment in research and innovation²⁶.

The innovations of tomorrow depend on research undertaken today and on creative talent to exploit the results. Governments and higher education systems must invest intelligently to develop areas of existing strength in ground-breaking research. Achieving research excellence is linked with international cooperation and mobility: a key mission of the Horizon 2020 programme. But the EU can do more to **strengthen centres of research excellence** in more parts of Europe and to encourage the translation of scientific advances into marketable innovations.

The Commission will:

10. Expand the European Institute of Innovation and Technology (EIT) **regional innovation scheme (EIT-RIS)** model and the EIT label²⁷ to more universities and regions, to strengthen development of **entrepreneurship and innovation skills** and better prepare doctoral candidates and graduates for working in innovative businesses.

²⁵ <https://heinnovate.eu>

²⁶ The Seal of Excellence is a European Commission quality label awarded to excellent research and innovation project proposals that were submitted and positively evaluated under Horizon 2020, but not funded due to limited resources (https://ec.europa.eu/research/soe/index.cfm?pg=opportunities_msca)

²⁷ <https://eit.europa.eu/activities/education/eit-label>

11. Support further development and testing of **teaching methods for creativity and innovation** in higher education, building on joint work between the OECD and the European Commission²⁸ in the school sector.
12. Further roll out **Higher Education for Smart Specialisation**²⁹, to provide advice to public authorities to involve HEIs and, where possible, EIT Knowledge and Innovation Communities (KICs), closely in the design and implementation of Smart Specialisation Strategies.
13. Develop opportunities within the **Marie Skłodowska-Curie actions** that help close the research and innovation divide between Member States and regions and help address brain drain from less developed regions.
14. Step up EU support for **university-business cooperation**, making the biannual University Business Forum a focal point for exchange on HEIs and regional development at European level and promoting the establishment of **regional and national university-business fora** across the EU.

2.4. Supporting effective and efficient higher education systems

The ability of higher education institutions and systems to deliver what Europe needs relies on adequate human and financial resources, incentives and rewards efficiently deployed. Governments remain the primary funders of higher education in most EU Member States and, in all cases, play a crucial role in **setting incentives, objectives and quality standards** for the higher education system as a whole.

As higher education is called on to do more, it becomes more challenging for governments and HEIs to determine the best ways to **target and balance investment**. One question is whether more private money can and should be used to fund higher education. A second is how to design funding systems that encourage higher education to deliver what society needs and reconcile the objectives of effectiveness, equity and efficiency. Many Member States are testing performance-based funding and institutional agreements that set out agreed goals individual HEIs will achieve in return for public funds. Although initial results of these activities are promising, defining appropriately broad indicators to measure progress is a challenge.

In addition to structural measures in the overall funding system, some countries are introducing targeted incentives to improve particular aspects of higher education. To increase the **prestige and rewards associated with good teaching**, some have introduced new forms of teaching fellowship and frameworks for teaching excellence. Other initiatives aim to strengthen the relationship between teaching and research by better integrating quality frameworks and funding systems.³⁰ Funding initiatives have also been used to build links

²⁸ The CREASSESS project

²⁹ <http://s3platform.jrc.ec.europa.eu/hess> .

³⁰ Some research funding systems include use of research in teaching as a selection criterion

between HEIs and outside partners, promote research-based teaching, support interdisciplinary education and research and bring practical innovation into the classroom.

While HEIs operate in a framework created by public authorities (funding, accreditation, quality assurance), the allocation of resources and creation of incentives *within* institutions has a major impact. Good institutional leadership and effective **internal cooperation and resource management** become even more important when the institutions' range of tasks increases and more emphasis is placed on measuring and demonstrating performance.

The Commission will:

15. Launch a **review of funding, incentive and reward structures for higher education systems**, in cooperation with the OECD and build on the programme of **peer counselling for EU Member States** on good design of incentives and funding in higher education.
16. Ensure researchers are encouraged to perform teaching tasks, and/or be trained to do so, as an integral part of the **Marie Skłodowska-Curie actions**.

3. STREAMLINING EU SUPPORT FOR HIGHER EDUCATION

To achieve progress, EU activities and funding must be better coordinated ...

The priorities outlined here illustrate the extent to which the roles of higher education in education, research, society and innovation — the four elements of the knowledge helix — are linked³¹. For higher education systems to work effectively these links must be recognised and strengthened in the strategies of individual HEIs, in national and regional higher education policy and across the activities the EU undertakes.

...to support evidence for policy-making and practice

By measuring the performance of higher education policies, systems and individual institutions in a comparable way, the EU helps to provide insights into what works. This can be used to spark discussions within national systems and institutions, and to provide a basis for finding better solutions to problems.

To consolidate and improve evidence-building on higher education, the Commission will:

17. Optimise synergies between EU evidence tools by creating a **Knowledge Hub on higher education**. Incorporating the European Tertiary Education Register (ETER)³² U-Multirank³³ and the proposed pilot phase of the graduate tracking study, this will enhance data quality, comparability, data collection and indicators and draw lessons from implementation of EU higher education data tools to date.
18. Strengthen the work of the **Eurydice network** and the Commission's **cooperation with the OECD** and its Member countries in higher education, research and innovation to avoid duplication of efforts and benefit from joint work.

³¹ See description of quadruple helix in accompanying Staff Working Document

³² https://ec.europa.eu/education/resources/european-tertiary-education-register_en .

³³ <http://www.umultirank.org/#!/home?trackType=home> .

...ensure available resources are used to invest strategically in higher education

In addition to **Erasmus+ funding**, significant **European Structural and Investment Funds** have been allocated to support higher education in many parts of the EU, in particular in less developed regions³⁴. The HESS project³⁵ is an important component in the Commission's ongoing strategy to help HEIs optimise these resources by improving their impact on regional economies and innovation capacity. The **European Fund for Strategic Investment (EFSI)** is also starting to be used to attract private investment to specific higher education activities that offer good prospects of financial returns but deter traditional private sector lenders.

...and promote international cooperation, exchange and mobility to boost quality

Through its actions, the Commission seeks to ensure good practices and the latest developments in education, research and innovation are shared and applied as widely as possible in Europe and worldwide. This **international circulation of ideas** is driven by **cooperation** between students, researchers, staff, institutions and governments; physical **mobility** of individuals; and support for 'internationalisation at home' within European HEIs. This in turn helps institutions to become more open to the world and helps stem brain drain.

EU higher education and research programmes are increasing their focus on international cooperation, reflecting the range of expertise needed to solve complex global challenges. The Commission will continue to facilitate student and staff mobility by ensuring that Member States implement the recast directive on students and researchers³⁶ and promoting electronic exchange of data between European HEIs and mobile students and staff. In view of the Bologna Process Ministerial Conference in 2018, the Commission will also convene EU Member States to discuss the direction of future cooperation in the European Higher Education Area.

As the Commission prepares for the **next multiannual EU budget**, it will explore with Member States the future of shared EU targets in the fields of education, research and innovation and seek to strengthen cooperation in these fields as a basis for achieving the objectives set out in this Communication.

The Commission will:

19. Simplify student mobility by building on existing Erasmus+ projects³⁷ for the **electronic exchange of student data** and explore the feasibility of establishing **electronic student identification systems** to allow cross-border access to student services and data.
20. Initiate a discussion with Member States and stakeholders, as part of the **mid-term review of Erasmus+**, on efficient support to students, staff, institutions and higher education systems.

³⁴ Up to 2020, almost EUR 13 billion of Structural and Investment Funds have been allocated to higher education and public research infrastructures

³⁵ Higher Education for Smart Specialisation.

³⁶ Directive (EU) 2016/801

³⁷ <https://www.erasmuswithoutpaper.eu/>, <http://europeanstudentcard.eu/>, <http://www.emrex.eu>

4. CONCLUSIONS AND NEXT STEPS

Implementation of this renewed agenda will require cooperation among stakeholders within and outside higher education. The Commission will initiate a dialogue on the implementation of these actions and will continue to engage with stakeholders, along with Member States, the European Parliament, the Committee of the Regions, the Economic and Social Committee and the European Investment Bank Group, to take forward the agenda and ensure alignment with priorities in current and future EU funding programmes.

This renewed agenda for higher education forms part of the Commission's broader strategy to support young people and strengthen the European pillar of social rights. Complementing the Communication on school development and excellent teaching and the European Solidarity Corps, it recognises the vital role of higher education in laying the foundations of prosperous, inclusive, democratic societies. In taking forward this agenda, this is the ultimate goal that the Commission, Member States and stakeholders must keep in mind.