THE ROLE OF UNIVERSITIES IN COMPETENCE-BUILDING ON GREEN SKILLS. THREE QUESTIONS TO SIMON ROY

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Simon Roy leads the Higher Education Policy Team in the OECD's Directorate for Education and Skills. The OECD work programme on HE currently focuses on the issues of resourcing HE, the impact of digitalisation on HE and adapting HE provision in the face of evolving demand for upskilling and reskilling, including the development of non-degree credentials. Projects in the team often include a combination of international evidence reviews, comparative analysis of policies, practice and international data, international peer learning and the development of system-specific recommendations. Micro-credential implementation, financing, widening access and study success in HE, and quality assurance are also key areas of work of his team.

Katrin Männik: What is the role of universities with regard to the green transition?

Simon Roy: Universities have a pivotal role to play in our collective efforts to reduce greenhouse gas emissions and other forms of pollution, improve the resource-use efficiency and manage and mitigate the negative effects of technological, economic and environmental change.

University-based research not only feeds into the development of environmentally sustainable technologies, but also – in fields such as behavioural science - provides insights into how we can accompany and support populations through periods of change. Universities train many of the engineers and technical specialists who design and implement green technologies but also educate a much wider population of highly skilled individuals who will work in occupations with a strong "green" component. OECD research shows that a high-proportion of jobs involving tasks related to environmental sustainability ("green-task" jobs) are in high-skill occupations, held by people with higher education qualifications[1].

Beyond these very direct contributions to the green transition through the supply of new knowledge and specific technical skills, universities, alongside schools and other public institutions, clearly play a broader societal role in supporting the green transition. One channel for this contribution is broader education and awareness raising on sustainability

[1] OECD (2023) *Job Creation and Local Economic Development 2023: Bridging the Great Green Divide.* Paris: OECD Publishing. https://doi.org/10.1787/21db61c1-en

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issues across the whole student population. Many individual universities in OECD countries have mainstreamed sustainability education or promote trans-disciplinary courses related to sustainability, while in France, for example, universities now have an obligation to embed training on the green transition in all undergraduate programmes[2].

Another way universities contribute to the green transition is by acting as hubs for place-based sustainable development. As large institutions, universities can implement resource-efficient technologies and practices on their own campuses, often acting as local or regional pioneers in this respect. Equally, through partnerships with regional businesses and public-sector organisations, universities can support regional economic change, including decarbonisation in specific energy-intensive industry sectors such as steel, cement, chemicals and shipbuilding. Such engagement can support innovation in affected economic sectors, while well-targeted upskilling and reskilling offerings can help workers affected by economic change to develop their careers or pivot to new occupations. In a targeted example of such efforts, a recent Erasmus+ project (REMAKER) coordinated by Tallinn University of Technology developed and tested university-level retraining courses in mechatronics specifically for workers displaced – or likely to be displaced – by the phase-out of coal mining in Estonia, Czechia, Germany and Poland[3].

Katrin Männik: From a lifelong learning perspective, what are the challenges of universities in a changing educational ecosystem, responding to acute labour market problems and especially supporting the reskilling and upskilling of professionals working in sectors undergoing a green transition?

Simon Roy: Universities in all OECD countries have historically focused on educating young people transitioning from school education. While some systems have also catered to relatively large numbers of mature students in the mainstream programmes and may have offered various forms of “open” education for adults, the offering of programmes specifically designed for upskilling and reskilling has generally been limited. As technological and economic change mean that more and more adults need to update their skills throughout life, universities are understandably being called upon to play their part.

Responding to the increased need for upskilling and reskilling is not straightforward for most higher education institutions as it typically requires changes to institutional strategy, organisation and structures, the teaching staff that are mobilised and the educational offerings that are provided. Higher education institutions are generally best placed to support advanced upskilling and reskilling among populations with strong existing skills sets. While some adult learners in these groups are highly autonomous, others need more support than younger students with more recent experience in formal education and training – calling for tailored approaches to curriculum design, teaching approaches and academic support. Time constraints also mean that many adult learners are looking for small and flexible learning opportunities – a space in which micro-credentials are increasingly seen as a promising solution, including in higher education[4].

When it comes to supporting regions and localities undergoing major structural change as a result of the green transition – here the examples of the coal and steel industries are

[2] Ministry of Higher Education and Research (2023) *Note de cadrage formation des étudiants de 1er cycle.* Available at: https://www.enseignementsup-recherche.gouv.fr/sites/default/files/2023-10/note-de-cadrage-formation-des-tudiants-de-1er-cycle-pdf-29688.pdf (Accessed: 30 June 2025).
[3] https://taltech.ee/en/remaker
[4] OECD (2023), ‘Public policies for effective micro-credential learning’, *OECD Education Policy Perspectives,* No. 85. Paris: OECD Publishing. https://doi.org/10.1787/a41f148b-en.

particularly relevant – higher education institutions may wish to play their part but may not always be the best suited institutions to support the workers affected, who typically have lower levels of educational attainment. Nevertheless, through partnerships with other education and training providers, universities can develop upskilling and reskilling pathways, which can ultimately allow adults to gain advanced skills. In the tertiary education system in Ireland, for example, partnerships between Further Education and Training (FET) colleges and universities of technology involve cooperation of micro-credentials and new options for credit accumulation and transfer between the two types of providers[5].

Katrin Männik: What are the key public policy interventions towards universities in supporting competence-building on green skills and, conversely, how can lifelong learning assist policymakers in making informed decisions about the green transition?

Simon Roy: An important step for public policy is to recognise and acknowledge the role of universities in adult learning – in upskilling and reskilling - potentially including in the underlying legal frameworks that govern the higher education sector. In publicly funded systems, public resources will usually be required to support the development of new forms of upskilling and reskilling offerings in higher education, even if universities can subsequently earn money through such provision from student fees or targeted public subsidies. The pilot projects to develop micro-credentials in a number of OECD countries, whether in Australia, the Netherlands, Czechia or Spain, are an example of such public support. In parallel, we are witnessing an increasing number of experiments with different forms of incentives for employers and learners to engage in upskilling and reskilling, including the development of individual learning accounts. To date, among OECD countries, France remains the only country to have implemented a genuine individual learning account system nationwide.

Naturally, public servants are among the target audiences for university-based upskilling and reskilling. Indeed, they often fall into one of the easier-to-reach target groups for upskilling and reskilling initiatives: highly educated individuals in high-skill jobs. The OECD is currently working with a number of countries on the development of university-based upskilling and reskilling and, in one case, will be exploring exactly the question of how universities can support upskilling and reskilling for central government civil servants.

Katrin Männik: Thank you very much.

[5] https://nto.hea.ie/