

#EUCircularTalks

on Education, Learning and Skills for a circular economy



EIT Community is supported by the EIT, a body of the European Union

European
Circular Economy
Stakeholder Platform



Collaboration between the EIT Circular Economy Initiative and the ECESP Defining discussion group

Experts workshop summary

October 2020

Introduction

The present notes intend to summarise the main outcomes from the workshop on Education, Learning and Skills for a Circular Economy, which was held online on 9 October 2020, by pointing out barriers and opportunities as they emerged from discussion among the speakers and participants. The detailed minutes of the workshop are included as Annex.

Part 1: Education, Learning and Skills for a Circular Economy, main challenges

The incorporation of Circular Economy (CE) topics in higher education and research has increased over the past years and a big rise of CE in a broader range of disciplines has been observed in higher education. However, several barriers prevent the adoption of new curricula or incorporation of CE topics at university or faculty level. With a view to 2030 goals, it takes too long for CE-trained undergraduates to reach senior or management levels, so there is a need to educate and train current senior staff.

Barriers:

- Discipline silos – scope and scale of what is needed is too large to teach in traditional silos. CE requires interdisciplinarity but cross-collaboration between disciplines is difficult. There is a general need to make space for CE topics in the various disciplines and de-silo those disciplines. In some cases, softer disciplines (e.g., architecture) are more prone to interactions than hard sciences (i.e., basic research, low technology readiness level). Indeed, many universities are research-based and the first challenge is to develop interdisciplinary research on CE in universities. The incentives for this are limited, hard to find and generally not available for basic research. The siloing problem is not limited to universities and is also observed in EIT initiatives at the KIC level.
- University leadership – it is essential for senior and management teams of universities to focus strategy intent on CE. When the top management changes, there is a risk of slowing or stopping the process but senior professors also play a key role and are able to ensure continuity. Senior researchers are essential in networking and link building.
- Competent staff – there are not enough teachers with sufficient knowledge and experience. Universities are in general under pressure for funding. The large amount of EU funds on CE and the broad calls have pushed universities to focus on CE topics even when the university staff have no adequate knowledge or experience to trigger the change. Training instruments for staff would help.
- EU instruments and National funding – currently, EU calls for funding in CE are broad, unbalanced across fields and hence are not so effective. On the other side, national CE funding is limited but very strategic to drive changes in higher education and research. More investment at national level would generate positive feedback, with successful cases to bring to the table and redirect the EU initiatives.
- Universities tend to be bad at delivering training for professionals and are generally not interested in non-students' education.

Opportunities:

- Exploit the network of specialists across Europe which could form a core group to “train the trainers” to help scale up, close the gaps and accelerate fast.
- Integrate a compulsory CE module into 1st year university courses to ensure that at least the basic principles are taught at the start of a student's journey, and persuade those leading curricula to make space for CE topics.
- Increase the dialogue with national and local authorities.
- Increase prior learning (at schools) and informal learning of teenagers and adults.

- The KICs should adopt common strategies (e.g., joint calls on CE topics).

Part 2: Education and training of students (I-VET and Higher Education) for a Circular Economy

Universities need to mobilise many disciplines if they want to attract and train students on CE (e.g., governance, earth sciences, business, engineering, science and innovation, environmental sciences, industrial ecology, etc.). Most regions are close to universities and play a key role in the CE transition. Regional authorities are able to stimulate universities and facilitate the transition of education and research to CE by providing funding instruments and leadership.

Barriers (attitudinal, financial, operational and structural):

- Need for interdisciplinarity;
- Huge inertia in academic world because professors tend to be conservative in their courses. Senior management can influence the process but it is not easy. In particular, changing the curricula is very hard, professors are reluctant to come up with new ideas, so students tend to follow existing curricula;
- The CE transition requires funding for new infrastructure;
- It is difficult to make changes during a programming cycle and long programming cycles are necessary;
- Universities have limited funding for new staff and the slow turnover limits the intake of fresh researchers with CE mindset;
- There is a need to tackle the technical questions, with a parallel need of support and financial incentives.
- The public administrations of universities and national authorities need to be trained in CE.

Opportunities:

- Key actors can be change agents;
- Interdisciplinarity can provide a different entry point;
- Willingness from universities to lead the transition;
- Participatory approaches can help make the transition fast;
- The problem of expert trainers in CE could be overcome if external experts with high levels of competence are hired by university to bring new skills into programmes. This depends on the regulations of Member States and may have regulatory limitations;
- External funding (EU but also regional) can help drive the change. Funding helps drive strategic management and supports the necessary infrastructure;
- It is important to start CE education early at schools. If more is done at school, then students will go to higher education. MOOCs are a good way of informal outreach, but present challenges for universities. Universities are concerned about the high costs of a MOOC if it cannot be monetised.

Part 3: Adult learning and education for a Circular Economy

There is a need for general upskilling to ensure that the CE transition will happen, and to accelerate it. CE education and learning needs to start in the early stages of the professional lifetime of workers, and to be continuous throughout.

Even if there is a lot of uncertainty about the skills that are needed, and will be needed in future, CE training has to be multidisciplinary. Due to the Covid-19 crisis, there has been a potential shortage in vocational education and training (VET), while academia has been better at adapting new solutions for VET. It is important to optimise the digital skills of workers.

Barriers:

- There are tremendous skills in the community that are being wasted and cannot be transferred to the job market;
- More interlinkages between CE organisations and the social economy are needed;
- Overall, CE requires higher skills than the traditional linear economy, and its scope includes many “indirect” roles, from marketing to education;
- Adult learning is mostly available to already highly skilled people (not to all workers across the spectrum)
- Not only is there a need to upskill (all) people, but also organisations and companies to change mindset about CE and their contribution to the UN sustainable development goals (SDGs).

Opportunities:

- Promote the CE as a mid- and late-career destination – this can help create changes towards the CE now;
- Maximise innovative forms of learning such as “hands on” training facilities where people can learn in real time and in a practical way about the technology that is coming to market;
- Educators can learn and get exposure to new processes and technologies;
- Drive demand for CE through procurement;
- The emerging labour market is more adaptive – VET can be key for this as it can be more adaptable;
- Build on the recent uptake of online learning due to the Covid-19 pandemic to push the courses that are already available to a wider group of customers;
- 10% people in cities experience barriers to joining the workforce (unemployment, mental health etc.), helping to reskill them is essential;
- We need to start focusing on the wider social impact of CE, the economy is just a vessel. CE is not only a way to be less wasteful and to recycle more but is also about rethinking what is valuable to society.
- Societal initiatives such as repair cafes can attract volunteers with useful CE skills. There is potential in linking them with more formal education and training structures.

Part 4: Childhood and school education for the circular economy

Childhood and school education play a key role in incorporating CE in our society and economy. Through their families and local communities, students are able to have significant impact on people’s habits. Indeed, CE education at schools breaks the borders between different disciplines and motivates youngsters to move into higher education.

Barriers:

- Need to co-create learning pathways for students through open dialogue with schools;
- The participation of schools and professors is based on singular commitment and interests;

- Changes at high level (e.g., ministry) for incorporation of CE topics in national programmes is a hard and slow process. Bottom-up or top-down changes to curricula are both valid approaches but depend on the country;
- Need to set up “train the trainer” programmes with schoolteachers.

Opportunities:

- Engaging young students also means engaging families – pupils and students will act as ambassadors in their families, schools and local communities, this will speed the development of a CE mindset;
- International sharing of good practices;
- Teachers are key actors in the process – they can link the CE concept with the official curriculum at schools;
- Obtaining an accreditation for courses to train professors would be a great incentive;
- Create a sense of community;
- Success cases will help to get political endorsement.
- Potential in moving from “learning by doing” to more innovative approaches to teaching new skills and perspectives, such as gamification.
- Again, Covid-19 drove growth in “off-curriculum” web-based learning. The question is how to maintain this momentum.

Organisers

ECESP: The [European Circular Economy Stakeholder Platform](#) is a joint initiative by the European Commission and the European Economic and Social Committee to implement the circular economy. The platform brings together stakeholders active in the broad field of the circular economy in Europe.

Through its website, the platform offers a virtual open space that aims at promoting Europe’s transition to a circular economy. As a “network of networks”, it facilitates dialogue among stakeholders and help disseminate activities, information, and good practices on the circular economy.

Stakeholders can contribute to the Platform by participating in the annual conference and by interacting and/or contributing to the website with good practices, knowledge, strategies and events.

The members of the Coordination Group contribute to the annual Stakeholder Conference, accelerating or facilitating the transition by cooperating in setting up specific activities with their networks, and overall enrichment of the website content with strategies, events, publications or good practices.

EIT Circular Economy Initiative is an initiative by EIT RawMaterials (Coordinator) , EIT Digital, EIT Climate-KIC KIC, EIT Food, EIT Manufacturing and EIT UrbanMobility to strengthen the collaboration and coordination of internal and external activities related to the circular economy. In this particular context, one of its objective is to establish a collaboration with the ECESP to create both online and face to face discussion groups related to specific areas agreed with the coordination group.