How to prepare for a greener future?

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Abstract. The global buildings industry has an enormous responsibility to transform towards a regenerative and decarbonized future. The new project SECOVE 101056201 aims to establish a network of cooperation among Centre of Vocational Excellence (CoVEs) in the sector of clean and sustainable energy. The CoVEs will be established in 5 European countries (Greece, Spain, Italy, Slovakia, and Portugal) and will all cooperate transnationally with each other through common structured forms of dialogue and communication. The paper deals with the main activities and goals.

1 Introduction

Sustainable energy centers of vocational excellence (SECOVE) aims to establish a cooperation platform for Centres of Vocational Excellence (CoVEs) across Europe in the sector of renewable and sustainable energy. It will be locally based, with a CoVE in each partner country. The platforms’ main goal is to promote the uptake of innovative and qualitative lifelong learning opportunities, oriented towards the development of skills, competencies and the achievement of qualifications, including the promotion of mobility opportunities. The project will adopt and support a holistic approach to promote creativity, inclusion and entrepreneurial mindset together Figure 1[1].

SECOVE is a project designed over 4 years of implementation. Its ambition to achieve a positive impact in VET and the sustainable energy sector can be reasonably understood thanks to its long duration, involvement of a large number of partners from five different countries, representing different types of stakeholders and substantial financing. SECOVE team is indeed committed to monitoring, measuring and most importantly acting to ensure that the activities of the SECOVE network bring about a positive long-term change. It is co-funded by the Erasmus + Programme of the European Union [1].

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1.1 Challenges and objectives of SECOVE project

The project will organise local and national workshops, capacity building events, mobility, summer academies for female students, exchange programmes for students and teachers, innovation competitions and national conferences. In Slovakia, the project will translate into better links between vocational education and science, research institutions and the private sector, strengthening dual and inclusive education and supporting students beyond their vocational studies. The project started in July 2022 (Fig. 2).

SECOVE addresses the following challenges:

- sustainable energy and its different applications such as energy efficiency in buildings, renewable energy and smart energy systems are integrated in national and regional policies of the involved countries
- development of new and relevant learning programs that tackle major challenges of sustainable development
- promotion of work-based learning and engagement of the labor market in VET
- attraction of more women in technical qualifications is apparent in all countries
- promotion of innovation and entrepreneurship at all levels of education and training, in line with regional smart specialization strategies and using the existing capacities of partners and local networks.

The objective of SECOVE network is to mainstream a culture of **excellency** in **Vocational Education** and Training in the realm of **Sustainable Energy**. This will be done by approaching different dimensions of Excellency.

The SECOVE partnership, 22 organisations such as Universities, VET schools, research centres, networks, chambers of commerce and companies, will work for 48 months (2022 – 2026) to establish the European and national SECOVE networks.

SECOVE will be the establishment of 5 national networks in Greece, Spain, Italy, Slovakia and Portugal, working to mainstream a culture of **Excellency**. The 5 networks will be open to new partners and cooperate formally at the transnational level through the European SECOVE Network.

**KEY AREAS OF INTERVENTION**

Fig. 1. SECOVE project in general.

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Project objectives are as follows:

• establishment of a quality culture in vocational training that goes beyond conformity, with standards and regulations that address common and shared values for excellence, inclusiveness and sustainability [2]

Fig. 2. SECOVE project flow diagram [1].

2 Green building industry

Construction is one of the most heavily regulated industries and is increasingly subject to more stringent rules about the environmental impact of constructing buildings. The World Green Building Council estimates that construction and the energy required to operate buildings account for around 40% of global carbon emissions [4].

Driven by the combined energy and climate crises, the EU is becoming more and more aware of the need to switch to a green economy. But even as Europe looks to ramp up the deployment of solar panels, heat pumps, and electric vehicles, it must face the fact that it simply does not have the people to get the job done.
“The best technology is only as good as the skilled workers who can install and operate it,” said European Commission President Ursula von der Leyen and she added: “And with a huge growth in new technologies, we will need a huge growth in skills and skilled workers in this sector.”

2023 is the European Year of Skills and the EU’s new Green Deal Industrial Plan listed skills as its third pillar.

The green building industry encompasses various practices aimed at reducing environmental impact while promoting sustainability (Fig.3). Green Industry means economies striving for a more sustainable pathway of growth, by undertaking green public investments and implementing public policy initiatives. The energy sector has responded to the shift towards green buildings by recognizing the critical role that buildings can play in meeting climate change ambitions. The implementation of energy efficiency improvements in the building sector requires developing innovative, reliable and high-quality technologies and infrastructure [3].

Fig. 3. Most important approaches to improve Sustainability in construction industry [4].

The EU is implementing various policies and targets, legislative measures and initiatives on green buildings, such as the Green Deal and the Circular Economy Action Plan. Targets are being set, the feasibility of which can be debated. European countries are nowadays embarking on a transition towards climate neutrality, digital leadership and net zero technologies. Driven by the combined energy and climate crises, the European Union (EU) is becoming more and more aware of the need to switch to a green economy.

The ILO emphasizes the importance of developing skills for green jobs to ensure a just transition to a low-carbon economy [5]. There will be a need for people whose jobs are not considered green to receive training in skills to enable changes that will improve sustainability. For example, a change to building regulations designed to improve energy efficiency creates a one-off change in skills requirements across a range of occupations in the construction sector, and a consequential requirement for training to meet these skills need. Researching these occupations, skills and training and education needs means looking beyond the core green industries [5].

Learning green building construction skills is a smart career investment because it plays an important role in the construction industry, energy sector, and economy. It is expected to grow further, leading to more jobs and better jobs for green building construction workers all over the world. Therefore, investing in training programs that teach these skills can help individuals prepare for a career in this growing field.

Several drivers of skills change in green buildings have been identified:

- emphasis on soft skills, such as communication and collaboration
- shortage of skilled workers in the green building sector
- investing in leadership development for career progression in the green skills sector
- creating new roles and supporting them with the right team, infrastructure, salary, and timescales
people with the right skills can be a driver of change.

The focus group for skills and competencies discussed this issue on February 24th, 2023 and stands that skills and qualifications will be most important in creation a new job profiles in green building industry. Personal characteristics such as desire to work, motivation, flexibility, professional knowledge, manual skill, evaluation of green building project proposals, critical thinking. There is a need of combining knowledge in the field of construction with IT and architecture - also for lower qualification jobs (e.g. maintenance worker) a very important is combining knowledge of design and botany to design vegetated roofs and green structures. Digitization of the territory - how green the territory will look after construction can help developers or building managers to see the design in 3D. Specific knowledge in various phases of the cycle of design and implementation of green buildings as well as during the entire life cycle of GBs helps mangers to see their impact on people and outwardly on the climate and how vegetation technologies /systems contribute to sustainability in energy sector.

The OECD's policy review of VET, Learning for Jobs, recommends recruiting sufficient teachers and trainers for VET institutions who are well-acquainted with industry experience. Changes to the education system will be important to ensure students are adequately trained for labor and employment opportunities in the future [6].

3 Conclusion

The project will considerably reduce the gap between job market needs and vocational education offer through enhanced level of innovation and quality in terms of cooperation, course design and delivery of educational content. At the same time, the CoVEs will mainstream an equality-oriented approach to VET - such as the sustainable energy one- which sees a very low level of participation from women of all ages and education levels. The new paradigm promoted by SECOVE will comprehensively remodulate the work and cooperation protocols put in place so far in favor of a quality-based, innovative, and overall meaningful VET offer in the sector of renewable energies.

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