

In an era marked by rapid technological advancements and growing environmental concerns, the VET sector must adapt to the evolving landscape. This adaptation involves incorporating applied research as a crucial tool to enhance program quality, relevance, and innovation, especially in the context of the green and digital transition. This article examines the support provided for applied research in VET in various European and extra—European countries, studying their policy contexts and funding streams.

The European Union (EU) has been at the forefront of shaping VET policies across its member states, actively endorsing the VET sector through a combination of policy frameworks. The European Skills Agenda and the European Pillar of Social Rights serve as the foundation for these policies, emphasizing equal access to education and the significance of VET.

In addition, four key policies further define the EU's vision. The 2020 Council Recommendation on Vocational Education and Training champions public-private partnerships, accessibility, and the integration of sustainability skills, all aimed at elevating the quality of VET programs and ensuring their alignment with the ever-evolving labor market requirements. Similarly, the Osnabrück Declaration underlines the need to transition towards green and digital economies. The Centers of Vocational

Excellence (CoVE) Initiative complements this framework by promoting innovation, skills development, and applied research within the VET sector, while the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET) is designed to enhance the quality and transparency of VET across Europe by providing a shared framework that incorporates common principles and indicators.

To gain deeper insights into the support for applied research in VET, we now turn to case studies from various European and extra-European nations. The information provided is based on desk research and interviews conducted as part of the AIRinVET project.

Spain and the Basque Country: Spain's policies on applied research in VET emphasize collaboration between VET institutions and the business sector. The Organic Law on the Organization and Integration of Vocational Training and the 2020 Plan for the Modernization of Vocational Training underscore the importance of this partnership. The Basque Country stands out with a unique approach that fosters strong collaborations between VET institutions and local industries, promoting public-private partnerships and encouraging close relationships with businesses. Financial support is derived from a variety of sources, including the Spanish Ministry of Education, Caixa Dualiza, and local government bodies.

In **The Netherlands**, the policy framework mainly rests upon the Agreement on the National Steering Body for Practice-oriented Research (SIA) 2023-2028. Public-private partnerships (e.g., CoVEs) play a pivotal role, encouraging close collaboration between the education and employment sectors. While there is no specific policy mandate for innovation in VET, emerging initiatives like practorates aim to integrate new knowledge and innovations into educational practices, enhancing the quality of VET programs. Despite this progressive policy framework, the unique position of VET centers in the Dutch education system, situated between secondary schools and universities of applied sciences, limits their access to specific innovation structures and grant schemes.

The **German** VET system operates on a shared governance model involving the Federation, Länder (states), and social partners. While Germany lacks a comprehensive framework specifically tailored to applied research in VET, its strong emphasis on dual VET and lifelong learning demonstrates a commitment to developing a skilled and adaptable workforce. Financial support for applied research in VET often begins with securing grants and co-funding by companies is a crucial resource for sustaining and advancing applied research initiatives.

The **Danish** VET system stands out due to its tri-partite governance structure, involving the state, employers, and employees. This collaborative approach is supported by a comprehensive legal framework, national qualifications standards, quality assurance procedures, and financial arrangements.

In **Canada**, the context for applied research in VET primarily centers on teaching and coursework. Faculty members in Canadian colleges typically do not have research as a part of their job description, which drives institutions to offer "buyout" agreements, allowing faculty members to engage in research activities. Funding remains a challenge since the structures vary and universities are often allocated the majority (97%) of federal research funding over colleges (3%). Core funding primarily comes from the colleges themselves, supplemented by

operating grants and private funding, including fee-for-service arrangements.

The **Australian** policy context presents unique challenges, including the absence of a structured research framework for VET and insufficient time allocation for VET teachers engaged in research. The financial landscape for applied research in VET is shaped by limited financial support, administrative challenges, and the pivotal role of partnerships in achieving successful research outcomes. Similar to Canada, VET typically receives a lower share of research grants compared to the higher education sector, making it reliant on industry and corporate funding. This reliance underscores the ongoing need for strong partnerships between VET institutions and industry. Collaborative projects are negotiated case by case, lacking standardized agreements, payment structures, and operational frameworks.

Applied research is an indispensable component in the evolution of VET to meet the demands of the rapidly advancing green and digital economy. The European Union has played a pioneering role in this endeavor through ambitious policies that emphasize inclusivity, sustainability, and public-private partnerships. Nonetheless, challenges persist, particularly concerning financial sustainability and streamlined funding frameworks, which is why collaboration between VET institutions and the industrial sector remains in many cases vital to ensure sustainable funding. Policymakers, educational institutions, and industry leaders are key players in driving this transformation, ensuring that VET remains at the forefront of developing a skilled, adaptable, and future-ready workforce. As industries continue to evolve, VET, with applied research at its core, will continue to be a cornerstone of societal progress, responding to the everchanging needs of industries, societies, and learners.

