



Applied Innovation and Research in
Vocational Education and Training

REPORT ON THE AIRINVET INTERVENTIONS

Summary of five online “train the trainer” training sessions organised by the project partners, aimed at proposing role-model interventions to support the development of Applied Research in VET institutions and ecosystems

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Summary of five online “train the trainer” sessions: opened to the targeted organisations.

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PUBLISHABLE EXECUTIVE SUMMARY

This report provides a brief overview of the interventions which were held within the AIRinVET project, focusing on five principal activities that exemplify applied research approaches and the collaborative roles held by various project stakeholders. The interventions were strategically designed to highlight the active participation and unique contributions of consortium members—TKNIKA, EURASHE, BHH, NBCC, KATAPULT, and ISSO—while providing practical, ready-to-implement ideas for institutions and other stakeholders aiming to establish a systematic approach for such collaborations. These efforts are intended to support those keen on integrating Applied Research within Vocational Education and Training (VET) settings at the institutional (VET centre), national, or regional levels.

Each intervention represents a different aspect of applied research in VET, addressing diverse topics and levels of detail to cater to a wide audience. Some interventions provide broad ideas and specificities for fostering cooperation across sectors (such as between Applied Higher Education and VET). Others highlight the importance of collaborative networks and systemic approaches (Public-Private Partnerships and the Basque Country model). In contrast, others present targeted solutions and methodologies, such as models for curriculum design and strategies for embedding student involvement in research activities (as demonstrated by BHH and NBCC). These interventions are intended to address current gaps in VET research implementation and inspire innovation and engagement among institutions seeking to broaden their applied research capabilities.

This summative report concisely describes each intervention on a general level, aiming to orient readers to the scope and purpose of the AIRinVET project. A forthcoming AIRinVET publication, the last in the project's lifetime, will delve further into each activity, offering detailed analyses and a set of replicable 'Do-It-Yourself' templates designed to facilitate the independent adaptation and integration of these interventions across various VET contexts.

LIST OF ACRONYMS AND ABBREVIATIONS

In this report we use the following acronyms and definitions as described in our [glossary](#).

Some additional abbreviations explanations you can find below:

HEIs	Higher Education Institutions
PHE	Professional Higher Education
PPP	Public-Private Partnership
R&I	Research and Innovation
RTOS	Research and Technology Organisations
UAS	University of Applied Sciences
VET	Vocational Education and Training
WPA	Work Process Analysis

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1. INTRODUCTION AND TIMELINE

The AIRinVET project aims to enhance the integration of applied research within Europe's Vocational Education and Training (VET) sector. Applied research is crucial in bridging the gap between theoretical learning and real-world practice, especially within VET contexts where the goal is to equip learners with practical, industry-relevant skills. However, VET institutions often face challenges in implementing applied research, from limited resources and funding to a lack of established collaborative frameworks that engage industry, government, and education partners. One of the activities carried out within the AIRinVET project was to address these gaps by developing structured examples of training sessions, which can inspire the local change-makers both in the VET institutions and the decision-makers at the system level. The project partners proposed five interventions, stemming from TKNIKA, EURASHE, BHH, NBCC, and KATAPULT and ISSO together.

The interventions conducted in 2024, served as platforms for piloting innovative research frameworks and building connections between VET institutions and industry partners. They highlighted different approaches to applied research, showcasing various models and best practices that could be adapted across countries and regions. By bringing together representatives from VET institutions, higher education, industry, and government, each intervention allowed the AIRinVET consortium to test practical solutions for scaling applied research across diverse educational and socio-economic environments.

The five main activities – ranging from TKNIKA's TKGUNE experience to BHH's model for curriculum design – reflect the project's comprehensive approach to applied research in VET. Each intervention tackled a unique aspect of applied research and collaboration, such as curriculum alignment with industry needs, development of Public-Private Partnerships (PPP), and frameworks for student participation in research activities. This introduction provides a foundation for understanding the range of topics addressed by the interventions and the collaborative spirit underlying the project. It outlines the timeline of these interventions, underscoring the structured, phased approach taken by the AIRinVET consortium.

Timeline of Interventions: The interventions were organised sequentially between March and June 2024, each aligned with the expertise of the respective consortium members:

- **TKNIKA** - TKGUNE Experience: 19th of March 2024
TKNIKA's intervention centred on the TKGUNE network, a collaborative framework designed to engage VET institutions in applied research and innovation, specifically in collaboration with local SMEs.
- **BHH** - Curriculum Design and Student Involvement in Research: 24th and 30th of April 2024
BHH's two-part intervention explored models for curriculum integration and methods for fostering student engagement in applied research, offering valuable insights into embedding research-oriented activities within the VET curriculum.
- **EURASHE** - Systemic Approaches for VET-HE Collaboration: 7th and 8th May 2024
EURASHE focused on systemic collaboration between VET and higher education institutions, presenting strategies for fostering multi-stakeholder networks that promote research synergies across educational levels.
- **KATAPULT** - Public-Private Partnerships (PPP): 28th of May and 12th of June 2024
KATAPULT introduced the PPP model developed in the Netherlands, providing insights into building successful partnerships between public and private sectors and integrating applied research into these frameworks.
- **NBCC** - Practical Implementation and Student-Centred Models: 25th and 27th of June 2024
NBCC's intervention highlighted strategies for practical implementation of applied research projects within VET institutions, focusing on student-centred approaches and collaboration with industry.

Each intervention contributes to a wider understanding of how applied research can be effectively embedded within VET institutions, creating replicable models for other contexts. This report offers an overview of each intervention and presents key takeaways that can support stakeholders in expanding applied research efforts across VET networks. The timeline of the interventions does not determine the order of the interventions described in the further chapters in this publication. The structure of the following chapters moves from broad, universal approaches to national examples, eventually focusing on specific areas such as curriculum design and student involvement in applied research.

2. ADAPTING RTOS AND UNIVERSITIES APPROACHES AND BUILDING COLLABORATION WITHIN THE VET CONTEXT - EURASHE

The intervention organised by [EURASHE](#) took place on 7th and 8th May 2024 and was linked to the EURASHE Research Community of Practice and VIKO's Staff Development Week. The project consortium and the EURASHE Research Community of Practice members had a chance to meet and learn from each other. During the week-long meeting, parts of the session were dedicated to the intervention within the AIRinVET project focused on accelerating applied research, experimental development, and innovation to enhance regional impact effectively by adapting RTOs/universities approaches and building collaborations with VET contexts. This event gathered a predominantly academic audience from various Applied Sciences Universities and members of the AIRinVET consortium, fostering a profound understanding of the mutual benefits stemming from collaborations between universities and VET centres. As most EURASHE members are Universities of Applied Sciences, it was particularly relevant to discuss how such diverse European institutions could collaborate with the VET centres.

Objectives

The intervention aimed to encourage all higher education institutions, regardless of size and scope, to integrate VET centres and similar Professional Higher Education (PHE) institutions in the research and innovation environment and to encourage VET centres to participate in the research and innovation activities, as this integration is mutually beneficial. The benefits of this integration were outlined, and participants were introduced to alternative ways of looking at R&I environments beyond the traditional collaborations between Fundamental Research Universities, private businesses, and governments. The training also aimed at giving participants the necessary skills to integrate various stakeholders in the R&I environment.

Who Participated?

The training session included approximately 50 participants with varied job roles, representing 22 countries. About 35 attended in person, most of whom were research managers from European universities of applied sciences. A few were heads of internationalisation departments at their universities. While the majority of participants were from European universities of applied sciences, a small number joined from other regions, including Bhutan, Colombia, Egypt, and Nepal. Around 15 participants, including representatives of the project consortium, attended online. In sum, while a clear categorisation of participants is complex due to the differences in national education systems, the audience was predominantly academic, mostly research managers.

The sessions explored various critical aspects:

- The significance of engaging applied Higher Education Institutions (HEIs) in research activities to boost educational and regional development.
- Essential competencies for researchers, emphasising practical skills for navigating complex research environments.
- Future perspectives and evolving demands in the research sector, particularly regarding local and regional impacts of research.

Content

The introductory session focused on traditional Research and Innovation (R&I) environments, also known as the "knowledge triangle." Participants learned about the R&I landscape and the roles of each stakeholder (research and technology, businesses, education) within it. John Edwards, Secretary General of EURASHE, emphasised the importance of cooperation between different types of institutions to foster innovation. He positioned VET centres within the R&I landscape and illustrated the regional and local dimensions of R&I.

In the following sessions, the focus was on introducing the participants to RECAPHE. RECAPHE is a collaborative process that creates tools to improve PHE research and innovation capacity. Participants were taught how this tool is developed to understand its significance, while also being informed about the RECAPHE Competence Framework for PHE, highlighting the differences from the Competence Framework developed by the European Commission. It was essential to offer participants an alternative perspective on their institutions' research skills: unlike the European Commission framework, the RECAPHE Competence Framework has been specifically designed for PHE Institutions. Familiarising participants with this Framework was crucial to help them easily identify VET centres and PHE institutions in the R&I environment. The discussion then focused on the skills that project participants need to acquire to successfully integrate with other R&I environment stakeholders. It introduced the various roles of project team members, highlighting the different responsibilities of each member. Furthermore, it showed how effective communication can enhance collaboration between stakeholders. The session also introduced participants to methods for improving project sustainability, aiming to maximise their impact.

The last session focused on the regional impact of research. During this session, UASiMAP was introduced to the participants. UASiMAP is a self-reflection tool measuring local engagement of Universities of Applied Sciences (UAS). Participants were invited to conduct a self-reflection of their UAS's regional engagement. During the event, John Edwards introduced the concept of Smart Specialisation to the participants. Drawing from his experience at the European Commission's Joint Research Center, he provided valuable insights into the benefits of smart specialisation for individual institutions, regions, and the entire European Union. The session also highlighted the role of VET centres in identifying trends and strengths within the region.

3. APPLIED RESEARCH IN VET IN THE BASQUE COUNTRY – TKGUNE PROGRAMME

This section of the report highlights the Basque TKGUNE programme as a model of applied research in VET. It is designed to showcase effective practices and provide a roadmap for other regions interested in enhancing their applied research activities. This intervention aimed to promote the Basque VET system's approach to applied research to an international audience, encompassing insights on policy, collaboration between companies and VET centres, and the roles of policymakers. The session utilised a combination of lecture-based learning and multimedia case studies to engage participants.

Objectives

The intervention's objective was to help participants gain an understanding of the Basque VET system's applied research framework, including concrete examples of collaboration and stakeholder roles. Learning objectives encompassed comprehending the applied research process, exploring case studies, reflecting on the educator's role, and considering system applications in different contexts.

The session objectives for attendees included, among others:

- Identify and describe the applied research process within Basque VET centres, gaining insight into how these centres engage in collaborative research initiatives.
- Recognise examples of applied research within the Basque context, including the methods employed and the outcomes achieved, allowing for a better understanding of effective practices.
- Reflect on the diverse roles of educators in VET organisations, considering how teachers support applied research and contribute to bridging the gap between education and industry.
- Evaluate the application of applied research in small and medium-sized enterprise (SME) contexts, understanding how research collaborations address SMEs' specific needs and innovation goals.
- Consider the role of policymakers in shaping a supportive environment for applied research, identifying the policy frameworks that facilitate successful partnerships between VET institutions and industry.
- Infer potential adaptations of the Basque applied research model within their ecosystems, exploring how similar practices could address local challenges and enhance VET systems in their regions.

Who participated?

The training was open to educators, researchers, industry representatives, and other stakeholders in applied research for VET. Participants included AIRinVET project partners and representatives from multiple countries, fostering an international exchange of ideas.

Content

The TKGUNE intervention in the AIRinVET project was a comprehensive training that explored the integration of applied research within the Basque Vocational Education and Training ecosystem, specifically through collaborative initiatives with SMEs. Structured into five thematic blocks, the intervention provided participants with insights into the Basque VET model, showcasing how applied research can support local industry needs while enhancing the scientific and technological competencies of VET educators. By addressing policy, regional business dynamics, SME perspectives, VET centre roles, and local implementation gaps, the TKGUNE intervention equipped participants with actionable knowledge for fostering similar applied research approaches in their own regions.

Block 1: Policy Framework

The first block introduced participants to the regulatory framework and guidelines that govern applied research projects in the Basque Country. The aim was to clarify the policies and regulations that support the collaboration between VET centres and industry, ensuring projects align with local and regional goals. This overview underscored the importance of understanding compliance, accountability, and operational policies, which are essential for successfully establishing and sustaining research initiatives. This foundation helped participants see how a supportive policy environment enables collaborative innovation in the Basque VET system.

Block 2: Basque Business Environment

The second block provided an overview of the Basque business landscape, highlighting its unique strengths, opportunities, and challenges. Participants were introduced to key stakeholders, industry leaders, and innovators in the Basque ecosystem, gaining a deeper understanding of the region's identity, values, and commitment to technological and industrial development. This section highlighted the innovative practices and success stories that have propelled the Basque Country to prominence in applied research and business development, offering participants a model for fostering strong ties between industry and education. Through this lens, participants began to see how a well-connected business ecosystem can play a significant role in promoting applied research within VET institutions.

Block 3: Perspectives from SMEs

This block shifted focus to the perspectives and needs of SMEs, particularly those seeking to improve their manufacturing processes, adopt new technologies, or develop innovative products. Many SMEs may lack the in-house expertise or resources to advance these goals independently. By collaborating with the TKGUNE network, SMEs receive targeted support to address their technical and developmental needs. This model of collaboration highlighted how applied research can be mutually beneficial—helping SMEs stay competitive while offering VET centres real-world contexts in which to engage their educators and students. Participants were encouraged to consider the crucial role of industry partnerships in enriching VET curricula and research agendas.

Block 4: Role of VET Centres in Applied Research

The fourth block focused on the role of VET centres within the applied research ecosystem. VET institutions play an active part in identifying and assessing the specific needs of SMEs, acting as both facilitators and knowledge hubs. Through needs assessments and close collaboration with industry stakeholders, VET centres help tailor applied research projects that directly address identified skill gaps or innovation needs within the SME sector. This engagement not only benefits SMEs but also serves as a practical, hands-on learning environment for VET educators and students, further enriching the applied learning experience. Participants reflected on how their own VET institutions could adopt similar models to support local industry and drive regional development.

Block 5: Analysis of Development Gaps and Implementation Planning

In the final block, participants were tasked with identifying the gaps and challenges that might arise when adapting the TKGUNE programme in their own contexts. Using a guided questionnaire, they explored how the Basque model's components could be modified or implemented in their respective regions or countries. This exercise was informed by the AIRinVET project's findings and included comparisons of the Basque approach with other European and Canadian applied research models. By analysing gaps and discussing solutions, participants were able to outline preliminary strategies for establishing similar collaborative frameworks, drawing on both the strengths of the Basque model and the specific needs of their local environment.

Concluding Exercise

The intervention concluded with participants developing preliminary implementation plans inspired by the TKGUNE model, tailored to their own regional and institutional contexts. This hands-on exercise allowed them to consider how applied research might address the particular needs of local SMEs and to envision steps for building partnerships that integrate applied research within their VET systems.

In sum, the TKGUNE intervention served as a valuable case study in applied research, demonstrating how VET institutions can engage in meaningful, results-oriented partnerships with SMEs. It provided participants with both the theoretical knowledge and practical tools needed to foster similar innovations in their own region, supporting the broader objectives of the AIRinVET project.

4. BRINGING THE PUBLIC-PRIVATE PARTNERSHIPS APPROACH FURTHER – KATAPULT’S EXPERIENCE AND THE DUTCH MODEL

Intervention 5 focused on enhancing the Public-Private Partnerships (PPP) approach within VET institutions, leveraging the extensive experience of Katapult from the Netherlands. This intervention was part of the AIRinVET project’s efforts to share and enrich existing methodologies to facilitate the introduction and uptake of applied and innovative research in VET. The Dutch contribution comprised an interactive training session on the PPP approach, enriched by prior experiences from the AIRinVET project. Presented collaboratively by Katapult and ISSO, the training was assessed by other AIRinVET partners to evaluate its usefulness and feasibility in different national contexts. The intervention aimed to provide participants with comprehensive insights into establishing and managing PPPs, fostering collaboration between government, education, and industry to address real-life challenges through applied research.

Objectives

The main objective of the intervention was to share the PPP approach, emphasising its potential as a platform for applied research in VET institutions. Developed by Katapult over the past decade, this framework fosters collaboration between government, education, and industry stakeholders to address regional challenges. The intervention aimed to familiarise participants with the foundational principles of PPPs, covering the establishment of networks, the roles of partners, funding structures, and effective internal communication strategies. By exploring these elements, the intervention encouraged participants to consider how PPPs could be instrumental in solving real-world problems, particularly through research in areas such as renewable energy, digital security, and mental health. The session also aimed to introduce frameworks for long-term sustainability, including guidelines on securing funding, effective governance, and creating alignment between public and private goals in a PPP.

Who Participated?

The intervention attracted a diverse group of stakeholders from various regions participating in the AIRinVET project. Participants included VET leaders, project partners, educators, and representatives from industry sectors such as chambers of commerce, trade associations, and development agencies. Specifically, organisations from the Basque Country (Spain), Germany, and broader European contexts were involved in assessing the applicability of the PPP approach within their respective environments. The training was designed to engage individuals who are directly involved in VET and those who have a vested interest in fostering collaboration between educational institutions and industry partners. This inclusive participation ensured that the insights and feedback gathered were comprehensive and reflected the needs and challenges faced by different regions in establishing effective PPPs.

Content

Key to the PPP approach of Katapult is the collaboration between government, education, and industry, each with its own role. PPPs are mostly set up in a specific region and always related to a specific topic, such as H2-transition, advanced manufacturing, IT security, mental health for refugees, or sustainable energy for buildings. The aim of the Public-Private Partnerships (PPP) is to address real-world problems by combining efforts to advance the field through applied research.



The Katapult Public-Private Partnership approach. Credits: Katapult

The intervention comprised an interactive training programme delivered over two days, each focusing on different aspects of the PPP approach. On the first day, Yorrick van Bree of Katapult introduced the fundamentals of the PPP approach in the Netherlands, highlighting the importance of collaboration between government, education, and industry. He presented models and tools essential for developing successful PPPs, emphasising the need for strong networks, effective communication, practical activities, and leadership within consortia. Heidi Kamerling from Yuverta then illustrated the practical application of applied research within PPPs from a VET perspective, stressing the importance of connecting research with daily practices to spark curiosity and innovation among students. Martijn Pepers of Katapult concluded the day by discussing funding strategies for PPPs in the Netherlands, underscoring the necessity of stable, long-term funding from government or external sources to support sustainable collaborations.

On the second day, AIRinVET partners from other regions presented their assessments of implementing PPPs in their contexts. The Basque Country identified bureaucratic hurdles and technical capacity as primary challenges, proposing solutions such as regulatory flexibility and enhanced collaboration infrastructure. Germany recognised the value of PPPs for innovation but noted difficulties in establishing diverse networks and navigating strict funding regulations. They recommended a mindset shift towards viewing collaboration as a foundation for innovation and improving stakeholder engagement through effective marketing. The European perspective highlighted the overall value of PPPs for staff development, knowledge exchange, and fostering innovation, while also pointing out challenges like intellectual property concerns and administrative burdens. The intervention concluded with a discussion on the next steps for refining the PPP approach based on the collective insights, emphasising the importance of a clear and broad-based rationale for PPPs, supportive legislation, and ongoing education for VET centre staff on managing PPPs. Five key insights were identified to guide the EU-wide uptake of the PPP approach, ensuring its effectiveness in promoting applied and innovation research within VET institutions.

5. ENHANCE LEARNERS' CURRICULUM - APPLICATION OF WORK PROCESS ANALYSIS FOR SMES IN-HOUSE TRAININGS - BHH

Intervention four, carried out by the [BHH](#), introduced innovative applied research methods from the German VET system through a short, blended learning program, aimed at equipping participants with tools and knowledge to strengthen applied research capacity in VET. The intervention took place over two online sessions, each lasting two hours, with a five-day period in between for participants to engage in self-research and independent learning. This format provided a structured yet flexible environment for participants to explore applied research frameworks that emphasise practical problem-solving, enhancing both curriculum design and student outcomes.

Objectives

The primary objectives of this intervention were to present an overview of applied research methods within collaborative projects involving SMEs, to deepen participants' understanding of Germany's distinctive vocational training frameworks, and to introduce tools for independently creating solutions in VET curriculum design. By exploring concepts such as work processes, spheres of action, and competence profiles, the intervention sought to empower participants with research instruments — such as Work Process Analysis (WPA) tools and competence profile matrices — to improve curriculum content directly. These frameworks align VET curricula more closely with industry needs, creating valuable outcomes for learners and strengthening the connection between educational programs and local socio-economic demands. Below you can find the example of the competence profile matrix used by BHH:

		DIMENSION			
		Functions	Innovation/ Research	Governance/ Organisational Management	Impact
		<ul style="list-style-type: none"> Activities carried out by the VET centre Type of organisation and Academic profile 	<ul style="list-style-type: none"> Research capacity, research areas/ fields Research Methods Research outputs Agents involved/ Ecosystem 	<ul style="list-style-type: none"> Strategies for AR Barriers, enablers 	<ul style="list-style-type: none"> Target groups, impact, assessment methods Motivation, mind-sets, incentives
LEARNING CATEGORY	Knowledge	+	++	-	++
	Comprehension	+	++	-	+
	Application	+	++	+	++
	Analysis	-	+	+	+
	Synthesis	-	+	+	+
	Evaluation	-	-	+	+

Competence file matrix used by BHH during the intervention. Credits: BHH

Who participated?

The intervention was designed for various stakeholders engaged in vocational education and training. Participants included VET teachers, trainers, and curriculum developers interested in integrating applied research into their instructional methods. It was also attended by emerging applied researchers working in the VET field, offering them insight into collaborative research methods tailored for vocational training. Industry representatives, including those from chambers of commerce, trade associations, and development agencies, also participated, facilitating a multi-perspective approach to aligning VET curricula with the practical needs of the industry. Additionally, as in all interventions, the project consortium partners attended the session.

Content

The content was divided into two interactive online sessions. In the first session, participants were introduced to essential concepts, including the structure of German vocational training, applied research methods, and the significance of competence profiles and work process analysis in curriculum design. Case studies from collaborations with SMEs illustrated practical applications of these tools. During the intersession period, participants engaged in independent tasks to deepen their understanding, guided by specific goals for the second session. The second session began with a recap and presentation of participant findings, followed by an expert validation workshop that highlighted methods for refining curricula with applied research tools. Participants were provided with a handbook and guidelines for future implementation, giving them concrete resources to carry forward the intervention's principles into their own VET programmes.

6. APPLIED RESEARCH AS A FORM OF EXPERIENTIAL LEARNING – NBCC

The intervention provided by New Brunswick Community College consisted of two workshops that aimed to guide stakeholders on enhancing students' learning experiences while contributing to the socio-economic growth of their regions. This was achieved through exploration of a framework directly integrating experiential learning and core employability competencies into the programme curriculum.

Objectives

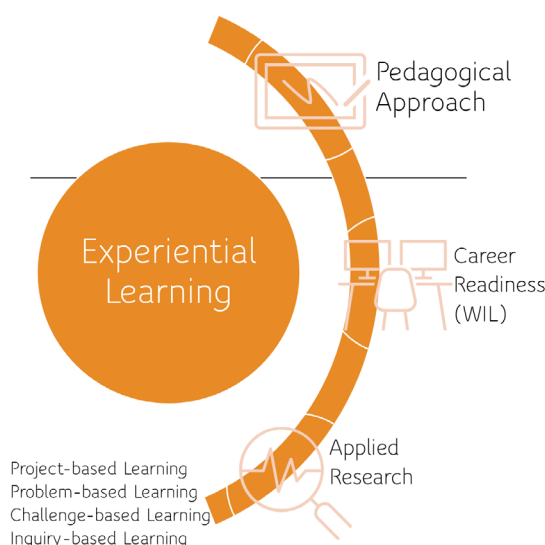
The training was intended to demonstrate to partners and other target groups how to enhance students' learning experience while contributing to the socio-economic growth of their regions through a framework for experiential learning and core employability competencies integrated into programme curriculum. The intervention achieved its aim as the first session explored how core employability competencies and experiential learning can prepare learners for the future of work and how VET institutions can ensure the effective integration of applied research in their educational programmes. It should be noted that the intent of the second session was for VET practitioners to apply the frameworks to their existing curriculum; this goal was partially met due to the collaborative efforts of participants to make up for the limited attendance of VET educators. Participants were able to access examples of their existing applied research projects, and they discussed how the projects could connect to specific VET programme outcomes.

Who participated?

14 people from nine different countries attended session 1. The target groups for session one included:

- Teachers and trainers
- Curriculum developers and instructional designers
- Academic leaders and managers
- Researchers
- Research administrators and managers
- Project officers
- Policy advisors

The second session was designed specifically for VET instructors and curriculum developers. Nine people attended.



Experiential learning framework used by New Brunswick Community College during the intervention. Credits: D. Burt, 2024

Content

The intervention involved two online workshops: Workshop 1: “Applied Research and Experiential Learning”; and Workshop 2: “Integrating Applied Research in Programme Curriculum”. The workshop facilitator demonstrated to partners and others how to enhance the learning experience for students while also contributing to the socio-economic growth of their regions through frameworks for experiential learning and core employability competencies integrated into the programme curriculum. The workshops explored how core employability competencies and experiential learning can prepare learners for the future of work and how VET institutions can ensure the effective integration of applied research in their educational programmes.

Applied research attempts to find solutions to existing problems, such as creating new or improving processes, products or services. For most colleges in Canada, applied research requires a partner with a problem to be solved. There are four key components of an applied research project, starting with an industry or community partner’s practical problem based on their specific needs and parameters and ending with a deliverable.

Applied Research and Innovation benefits industry and community partners and positively impacts social and economic development. However, for VET institutions, the most important reason to engage in applied research is to enrich the learning experience for students. Applied Research and Innovation in VET provides students with opportunities to engage directly with real-world problems. Applied research facilitated as a form of experiential education can increase student interest and motivation; real problems are more engaging than textbook cases. Students develop both technical and professional competencies, and they are better prepared for the workforce and further education. Employers seek graduates with professional and employability skills, such as communication, collaboration, adaptability and problem-solving. Engaging in applied research can help students develop these skills.

Workshop 1: “Applied Research and Experiential Learning” began with an overview of how one Canadian college successfully integrated applied research into experiential learning in the programme curriculum while drawing from other Canadian colleges’ experiences. It highlighted how student engagement in applied research develops professional employability skills and provides opportunities to practice technical skills. The frameworks were explained with a focus on teaching and learning implications. Success factors for implementation were also discussed. The session was delivered through MS Teams, and participants were engaged using the polls, chat tools, and discussion questions. This workshop was intended for VET leaders, project partners and others interested in enhancing students’ learning experiences while also serving the socio-economic needs of local companies and communities.

Workshop 2: “Integrating Applied Research in Programme Curriculum” was an interactive online session facilitated through MS Teams. It was intended for VET instructors and curriculum developers. In this session, specific examples and tactics were shared on improving teaching practices and enhancing student learning by integrating applied research and programme curriculum. The purpose of the second session was to equip participants with ideas and actions that could be implemented in their VET programmes. In break-out groups, participants connected applied research projects with programme learning outcomes.

By the end of the NBCC intervention sessions, participants were able to:

- Discuss the benefits of experiential learning for Technical and VET students, focusing on how these approaches enhance employability competencies.
- Explain applied research as a form of experiential and work-integrated learning, recognising its role in bridging theoretical knowledge with real-world application.
- Recognise how engagement in applied research cultivates employability competencies and professional skills, preparing students for the workforce demands.
- Describe the essential components for integrating applied research successfully into programme curricula, understanding key factors that support effective implementation.
- Translate the framework and components of applied research integration to their own institutional settings, adapting concepts to meet specific educational needs.
- Identify a potential applied research project that aligns with course objectives and expected learning outcomes, showcasing practical application within their teaching contexts.
- Demonstrate how to integrate applied research as an experiential learning method within a course or programme, aligning projects with curriculum goals.
- Design an applied research project in collaboration with an industry or community partner, ensuring it aligns with course content and outcomes (optional).

All learning objectives, aside from the final optional one, were achieved and demonstrated through active discussion and engagement during the sessions. Participants are expected to incorporate elements of the framework and the intervention's recommendations in their own regions.

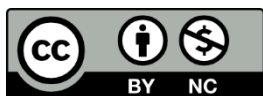
SUMMARY

This publication captures the outcomes of five targeted interventions within the AIRinVET project, showcasing a comprehensive approach from five different angles on how to implement applied research in vocational education and training across diverse European but also local contexts. Through these interventions, the project significantly contributes to three pivotal areas defined earlier in the project: Mapping Applied Research, Building Bridges, and Establishing Structures for Applied Research. The interventions provide a contextualisation of applied research by illustrating how it can be implemented within VET frameworks to bridge the gap between theoretical learning and practical application. Programs like NBCC's experiential learning model and BHH's curriculum design tools empower VET centres to integrate applied research as an essential component of student learning, fostering real-world skills and aligning educational outcomes with industry needs.

The publication also emphasises the importance of Building Bridges with SMEs and promoting a research-oriented mindset among VET institutions. Interventions like TKGUNE and the Katapult approach exemplify successful public-private partnership models, facilitating direct engagement with SMEs to co-develop applied research initiatives that address industry challenges. These examples demonstrate how strategic collaboration enriches students' learning experience and drives local innovation by aligning VET research with the practical demands of regional economies. Such partnerships cultivate a shared research culture, encouraging VET institutions and industry partners to collaborate on innovative solutions that advance both educational and economic goals.

Finally, the AIRinVET project addresses Structures for Applied Research, offering replicable frameworks and strategic models that strengthen institutional support for applied research within VET. The EURASHE intervention provides insights into system-level collaboration between VET and higher education institutions, while BHH's work process analysis approach offers adaptable tools for integrating research practices within VET curricula. These interventions underscore the importance of structured support—through policies, funding mechanisms, and organisational models—that enable VET centres to introduce and conduct applied research sustainably. By providing these frameworks, the publication offers a roadmap for other institutions and policymakers to adapt and integrate similar practices, reinforcing VET's capacity to contribute to Europe's socio-economic development through innovation-driven, applied learning. In order to dive deeper into the intervention scenarios and module description to organise 'Do-It-Yourself' sessions, please read the final AIRinVET report and see other outcomes from our project.

COLOPHON



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