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NEARVET

NETWORK OF EXCELLENCE FOR APPLIED RESEARCH IN VET

Network of excellence for applied research in VET

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BLUEPRINT



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1. Introduction

“Blueprints”, intended as conceptual and practical frameworks evidencing the key competences and connections to life and work events. A blueprint, in a general sense, refers to a detailed plan or guide outlining the key components, structure, and specifications of a particular project, product, or process. It serves as a comprehensive document that provides clear instructions and visual representations to help individuals understand and execute tasks effectively. In the context of skill development in Vocational Education and Training (VET), the purpose of the development of the Blueprint in general and specific competencies outlines the following:

- The identification of competency standards. Blueprint defines the specific skills, knowledge, and abilities required for Applied Research in VET. These competency standards are based on industry needs and are developed through consultation with employers, industry experts, and relevant stakeholders, done within the NEARVET Project.
- The Blueprint not only outlines a typology and taxonomy of applied research in VET projects and assignments but also establishes domains and skills critical for effective participation in such activities. By doing so, it aims to bridge gaps between varying national practices and promote a standardized yet flexible approach to professional development in applied research within the VET sector.
- The NEARVET Project’s approach through this Blueprint emphasizes the importance of research literacy while also acknowledging that not all VET professionals need to become research experts. Instead, it suggests a model where foundational research skills are enhanced and specialized expertise is incorporated as needed, depending on the specific requirements of the project or assignment.

For NEARVET, this Blueprint provides a connecting framework between the methodological concept of WP2, developed from and based upon the systematic consultation and research programme - and the further elaboration of the NEARVET concept. Specifically, taking into account the NEARVET focus on the development of a newly-defined and emerging 'community of applied researchers in VET', it outlines certain essential components to contextualise the evolution of these 'change agents' who have the potential to be an innovative force in the 'step up' of vocational education and training (VET) within a European context. Critically, by incorporating within the Blueprint a foundational set of factors, described in the form of self assessment questions, it contributes on two levels; (a) as strategic questions for self-reflection by practitioners who are at the forefront of the NEARVET transnational community of practice concerned with the development of applied researchers in VET; and also (b) lend themselves to further elaboration - for instance as a practical 'training needs analysis tool' that can be used by prospective participants taking part as 'learners' in NEARVET related professional education. Either way, they provide the basis to accompany the NEARVET competency framework to create a common, yet nuanced, language of competencies across different VET systems, without imposing a homogenized model. This is critical for addressing the role that applied researchers in VET can play, within the diverse educational and training landscapes found across Europe.

2. NEARVET - Network of Excellence for Applied Research in VET

The NEARVET Project produces an innovative mechanism of systematic inquiry and development of Applied Research in VET, by drawing upon state-of-the-art methods in the co-creation and validation of applied research local innovation eco-systems. It addresses a question that is often left unaddressed - 'if Applied Research in VET is critical - who are the Applied Researchers?', therefore defining its target group within the European community of VET practitioners and companies.

The project will realise its ambitions through an interdependent, highly participative work programme, that will:

1. Elaborate a methodology concept, within which it will draw upon state-of-the-art methods in the co-creation and validation of Applied Research methods in VET through andragogical philosophies, user-led and user-validated methods and techniques.
2. Identify, define, and specify the competences required to act effectively in the performance of Applied Research in VET, including the elaboration of standards and the performance criteria and attainment levels in relation to knowledge and skills to conduct effective Applied Research in VET.
3. Provide and nurture a community of practice rooted in a wide and relevant network, fostering exchange of knowledge and innovation through Applied Research and collaboration between VET practitioners, stakeholders, employers, enhancing VET's role in innovation, research, and development across the EU.
4. Co-create and validate a set of practical learning resources and methods, through the establishment and facilitation of a digitally enabled transnational platform and Hub.¹
5. A comprehensive legacy framework supporting transferability and sustainability in a long-term perspective, including the exploitation of its results in 5 countries in addition to the 6 involved in the proposal.

¹ Nearvet Digital Hub: <https://nearvethub.projectlibrary.eu>

3. Conceptual approach to Applied Research in VET

3.1 Knowledge transfer and Applied Research in VET

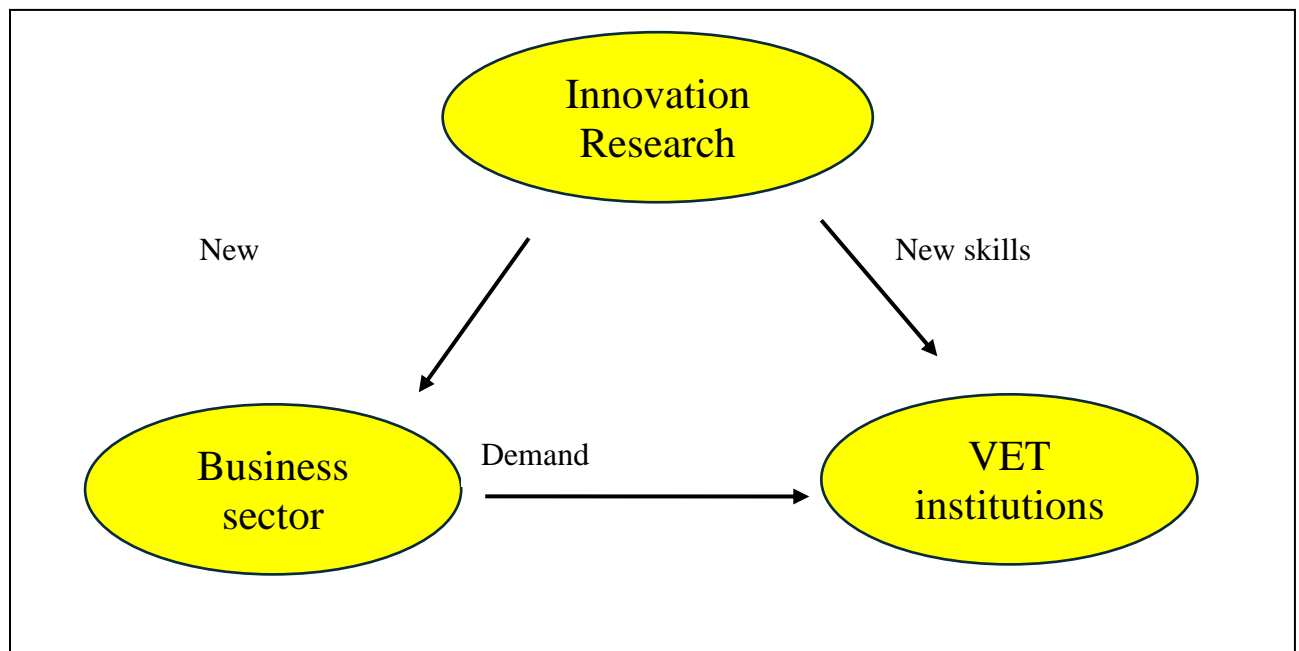
The concept of knowledge transfer has been widely discussed and refined at the European level. It provides a way of understanding and promoting the role that the effective interaction between education, research and innovation play a role for society and business, as well as VET education. Although a strong concept, the practical implementation of the knowledge transfer in the everyday practices of VET institutions and their partners is not well documented outside of European projects, especially not from the perspective of education and how the activities feed into research and innovation in relation to VET development

The higher VET in Germany, Netherlands and Sweden offers a roadmap for a more effective integration of the knowledge transfer to VET institutions.

Embedding the entrepreneurial culture throughout the VET institution. The entrepreneurial culture should be embedded throughout institutions, among staff, students and with partners/other stakeholders.

3.2 The definition of the Knowledge Triangle

The definition of the knowledge triangle stands for the *“The concept of the knowledge triangle relates to the need for improving the impact of investments in the three forms of activity – education, research and innovation – by systemic and continuous interaction”*.²



² Conclusions of the Council and of the Representatives of the Governments of the Member States, meeting within the Council, of 26 November 2009 on developing the role of education in a fully- functioning knowledge triangle (2009/C 302/03)

The Methodological Concept³ developed within the framework of the NEARVET project examines and emphasizes that triangular relationship operates in different directions, forming a dynamic and interconnected system that enhances each component's effectiveness. Some countries, for example Sweden and Netherlands, have a different perspective to the following definition because of the various factors. In accordance with a case study from Netherlands, *"The central idea here is that creating new knowledge from research and high quality education in themselves are not enough to gain prosperity and economic growth. New knowledge and talented people need to be linked to innovation."* But knowledge triangles don't just appear in a vacuum, they develop within a larger ecosystem. According to the NEARVET concept, Applied Research in VET incorporates a variety of stakeholders functioning as organizers and intermediates, such as researchers, instructors, managers, employers, trade associations, and students enrolled in higher education. This demonstrates that there isn't a one type of applied research typology for VET assignments. As there are scenarios, issues, challenges, and opportunities that can be identified in dialogue and actions between business and industry on the one hand, VET institutions, practitioners (including students), and other VET stakeholders, these means the three sides of the Knowledge Triangle are closer together. The Applied Research in VET is a process that may be instigated, or initiated by the interests, priorities and needs of any or all of the actors specified above, and performed by any combination of them.

The following three key areas highlight the importance and impact of the knowledge triangle in the VET sector:

1. Involving students as co-creators of knowledge and as part of the innovation system: There is a fundamental shift in the position of students in many VET institutions from a product or consumer to an integral part of the development of knowledge and opportunities. Students already look for all kinds of additional opportunities to enhance their academic achievements, and they increasingly value internships and project-based activities, creating their own relationships with stakeholders, and exposure to new learning environments. This change not only improves their educational experience but also fortifies their connections to the workforce, cultivating professional networks and transferable abilities that will be crucial to their future employment. Students actively participate in and gain from real-world business practices through these engagements, which helps them become more flexible and ready for the profession.
2. Creating rich learning environments for talent development: Many of the cases of higher VET from the above countries take innovative approaches to teaching and learning and embed them across curricula. The new learning environments also need diverse teachers from industry and research.
3. Quality assurance and recognition of new skills development: It is increasingly important to find new ways of recognising the broader variety of skills that are being accumulated in these rich knowledge triangle environment

³ Methodological Concept: <https://nearvet.projectlibrary.eu/intellectual-outputs/methodological-concept.html>

4. Need for development of competencies in VET for Applied Research

Initially the National Centre for Vocational Education Research (NCVER) framework⁴ was created with the Australian VET system in mind. Thus, it is inevitable that certain of its features are quite context-specific because it was established expressly to have real-world applications in that specific country setting. The framework was mapped against Australian training structures, such as the competencies listed in the Training and Assessment Package and other training and assessment frameworks in Australia. Therefore, the initial framework was designed as a tool for a non-European country, VET practitioners and policy makers specifically in Australia, but doesn't align with a European Union Context.

Secondly, the NCVER framework targets VET instructors and students specifically. As a result, it was able to define specific terms related to how Applied Research in VET ought to "function" in Australia and what competencies those two main target groups ought to acquire to do Applied Research in VET. Third, regarding the 'Theorise and Learn' area within the NCVER development framework, the authors argue that comprehensive academic research skills are not essential for applied research projects; nevertheless, VET educators and other professionals should possess what is referred to as 'research literacy.' They further mention that some of these educators and professionals may advance their skills in research methodologies. The NCVER framework explicitly lists 'Research Method' and emphasizes the importance of methods like ethnographic, narrative, phenomenological, and grounded theory as valuable competencies. Importantly, the framework does not highlight the necessity for skills in statistical analysis or the application of specific quantitative methods and tests.

On the contrary, the NEARVET Project seeks and operates in a various contexts. Taking place in a distinctly European context, with an involvement of a 27 member states, as well as nations in the single market area and potentially others linked to its transnational educational programs (such as accession states). This context is both demonstrated and illustrated by desk research findings and further supported by interview data, which reveals a widespread eagerness for increased focus on stakeholder development to foster innovation and experimental progress in Vocational Education and Training (VET). In the NEARVET conception, Applied Research in VET therefore involves, amongst others, researchers, VET teachers, VET managers, employer representatives, trade associations and others acting as organisers and intermediaries; VET (including higher VET) students). The graded structure of the Competency Framework (basic, advanced, and professional dimensions at appropriate EQF aligned levels, will cover the different needs of potential to promote equal access to research and knowledge opportunities.

Overall, while the NCVER framework serves its purpose within the Australian context, adapting such a framework for a European setting involves broadening its scope to include diverse research methodologies and stakeholder collaborations, reflective of the more varied educational and political landscape of the EU.

⁴ NCVER framework: <https://www.ncver.edu.au/about-ncver/about-our-data>

5. Stakeholders' role and responsibilities in the development of the competencies needed for Applied Research in VET

For effective applied research in Vocational Education and Training (VET), a comprehensive set of competencies is necessary to meet the needs and expectations of various stakeholders including employers, research centers, VET providers, and government bodies. Each of these stakeholders plays a unique role in shaping the VET landscape, and their specific needs must be addressed through the development of targeted competencies. Here's a breakdown of essential competencies for each group. To some extent, this reflects the diversity in VET systems in the way that, for instance, employers and company representatives are integrated into national VET systems, that is why they play a crucial role in the development of competencies needed for applied research in Vocational Education and Training (VET). Their involvement is vital not only in defining the necessary skills and knowledge that should be imparted through VET programs but also in ensuring that these programs remain aligned with industry needs and technological advancements. The other roles and responsibilities of the employers are stated as:

- The identification of the current labor market trends and needs, as well as the obligation to foresee the future trends. By predicting those, employers can help VET providers anticipate shifts in skills requirements, thus tailor the VET programs with an alignment to innovations and actual requirements.
- The collaboration in the co-designing of the curriculum, not only addressing the current status of the sector, but to assist in incorporating into the programs the real-life needs.
- The facilitation of work based learning (WBL) opportunities, by offering the internships for students to gain the experience and knowledge needed, as well as offering mentorship programs, through which employers and company representatives can directly contribute to the professional progress of VET students, thus contributing to the development of the competencies needed for the Applied Research in VET.

Considering the impact of the research centres and government on the government in the process of competence acquisition and improvement, the main objective is to provide the technological and economic development. Considering the side of the governmental influence on the competencies development, the possible roles and responsibilities are:

- Policies Development and Funding. The governmental bodies are in charge of creating and maintaining supportive and research-friendly policies aimed at supporting and facilitating applied research in VET.
- Establishment of the framework and standards needed for the successful implementation of the applied research, by setting a relevant to the labor market and innovation needs VET programs.

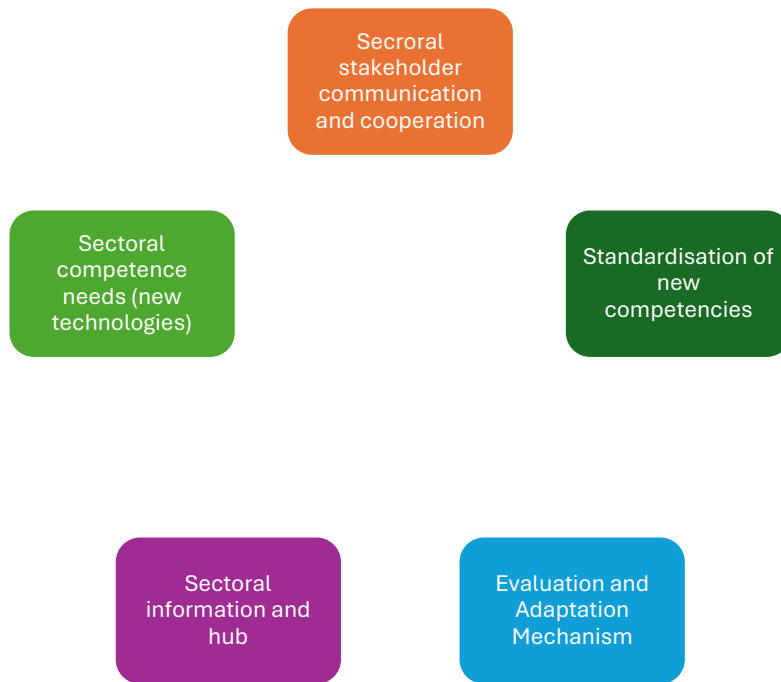
The research centers should lead the research practices in order to ensuring that VET research is at the forefront of educational development. Consequently, they obtain the obligation to inform the government as well as VET providers about the further research findings, concerning the applied research needs.

From the perspective of the VET provider, VET teachers', trainers and other VET staff, they have multiple roles and have a set of the specific roles and responsibilities to perform the successful VET program with the applied research orientation. Therefore, VET providers can contribute to:

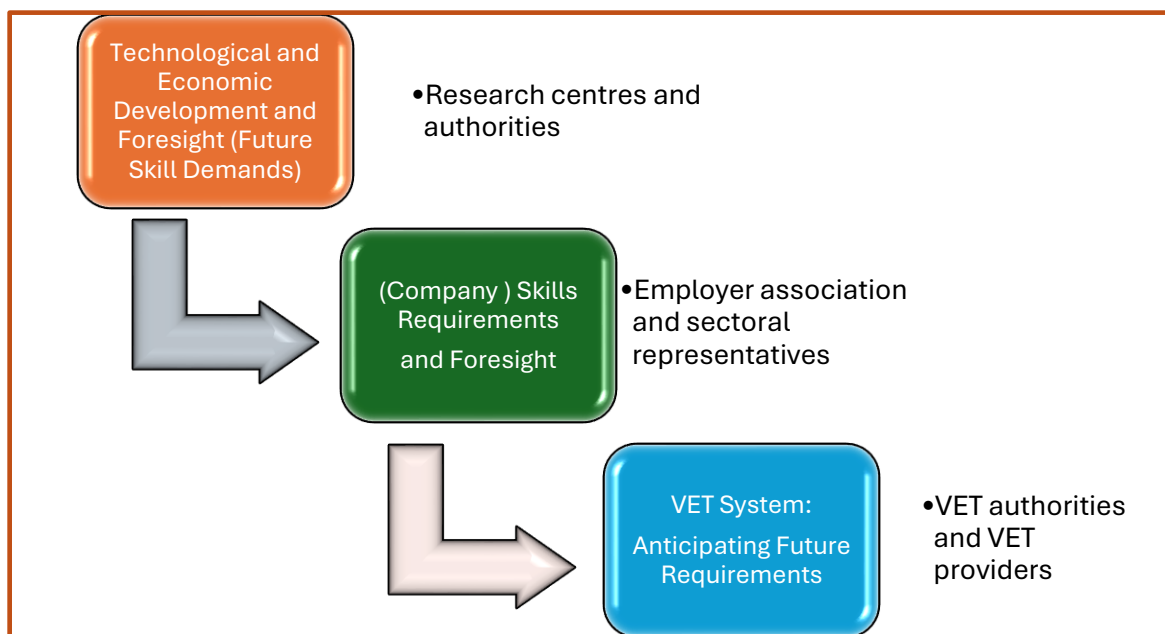
- Development of the Curriculum, including and a constant updating of the training programs to the innovations,
- Offer a practical solution to real-world professional problems based on its theoretical and methodological study and aimed at the innovative development of enterprises.
- Quality Assurance factor, meaning the evaluation and the successful adaptation mechanism of the elaborated training curriculum with the sectoral competency needs, incorporating feedback from employers and research entities.

The diagram represents and outlines the interrelated stakeholders engagements in the development of the competencies needed for Applied Research in VET. Sectoral competence needs (new technologies) to identify the new skills and requirements within a specific industry sector with a particular focus on the technological and innovations inventions. The sectoral stakeholder communication and cooperation emphasises the significance of a mutual collaboration with those last (employers, research centers, VET Providers and government) to create a cohesive approach to the skills mapping for VET programs and their achievement. While, the standardization of new competencies goes in hand and points the formalization of the competencies and identifying a common standardized framework. The component named "Evaluation and Adaptation Mechanism" serves as a QA tool, as well as stresses the necessity of the systematic approach to evaluate the VET program towards the criteria, that promote the research-oriented learning and, if it is needed, to adapt the program to the needs. Last but not least relevant component is the sectoral information and hub, which suggests the creation of the network of the stakeholders to access the state-of-art data, research findings and a basis for the curricula development and adaptation.

It is important to note that all the factors shown in the diagram do not function separately but are interconnected. Through these interconnections, stakeholders can collectively ensure that VET programs are dynamic and responsive to the needs of both the labor market and the broader societal context.



4.1 Process of skill development and stakeholders



Step 1 - Establishing a Skills Collaborative Platform: The stakeholders need to create a competent Collaborative Platform consisting of diverse stakeholders, including the tourism industry. This will support broad participation and raise awareness of the importance of competence assessment.

Step 2 - Creating a Destination Skills Profile: The second step is creating a competence profile for the sector concerned. The primary aim of this competence profile is to review the current local/regional/national situations by identifying and summarising existing knowledge (secondary data collection) on tourism and hospitality competence assessment as well as trends and developments (applied research competencies) that might have implications for future needs regarding the competence under investigation.

Step 3 - Conducting a Competence Assessment Survey on Digital and Communication Competence: A Competence Assessment Survey can be conducted. The survey aims to map the importance of the competence sets under investigation and detect if a gap exists between current competence levels and the skills and levels that will be needed in the future in the targeted subsectors.

Step 4 - Conducting interviews on the Future of Digital and Communication competencies: After the desk research and survey, more in-depth insights and understandings of the future of digital and communication competencies should be collected from the perspective of (people working in) the tourism industry through interviews. Possible participants include senior managers, human resource managers, company owners, entrepreneurs, heads of departments, et cetera.

Step 5 - Organising Competence Collaboration Platform Stakeholder Meetings: The Competence Assessment coordinator should organise regular meetings where the partners come together to discuss the progress. The results so far can be shared and reviewed, and upcoming plans can be explained and discussed with all the key partners.

Step 6 - Formulating Skills Assessment Response Strategies: All the information collected during the desk research, the survey, and the interviews should come together and analysed and evaluated to generate a combined Industry Skills Needs Report and a Skills Strategies Report to support the implementation of the Blueprint Strate.

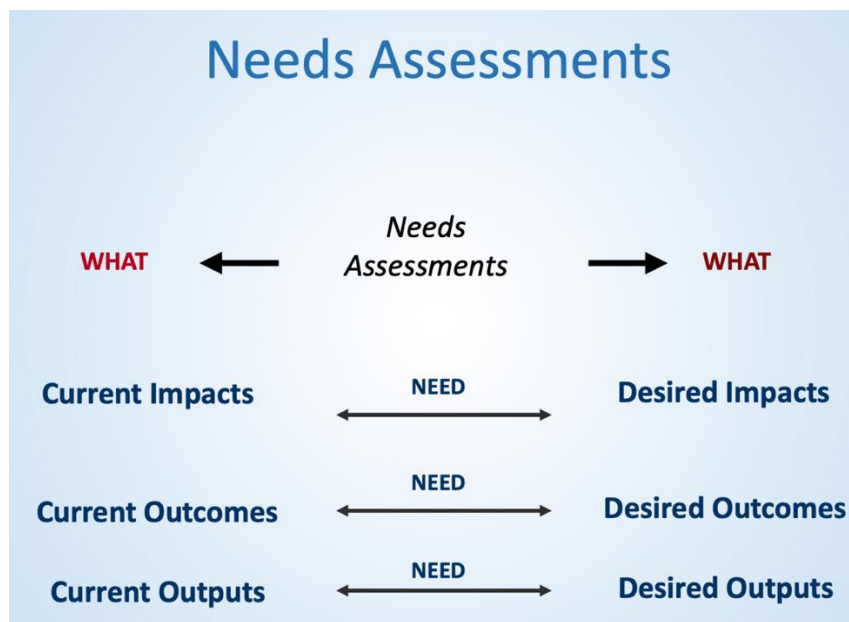
5. Needs Assessment Methodology

5.1 The objectives of the needs assessment methodology

The needs assessment methodology for the NEARVET project will be operationalized through a structured questionnaire, designed specifically to evaluate the various skills and knowledge strengths, weaknesses, and needs within defined areas of attention. This approach is chosen to accurately capture the essential competences required for Applied Research in Vocational Education and Training (VET). The needs assessment methodology, along with its accompanying tools, plays a crucial role in the execution of the NEARVET project. The primary objectives of these components are multi-faceted and pivotal for the project's success.

- Firstly, the methodology is designed to thoroughly evaluate the competences, skills, and knowledge of individuals within targeted attention areas. This evaluation not only identifies strengths but also pinpoints weaknesses and gaps that require attention, thereby providing a comprehensive insight into the current status of skills and competencies among the participants.
- Secondly, the results from this needs assessment are significant in laying the groundwork for further competence development initiatives. This is particularly relevant for the activities planned under Work Package 4 (WP4), which includes the establishment of a Digital Hub. The Digital Hub aims to function as a Community of Practice that offers a variety of learning resources tailored to the needs identified through the assessment process.

5.2 The description of the needs assessment tool



Resource: https://ieg.worldbankgroup.org/sites/default/files/Data/eval_week_needs_assessment2.pdf

The needs assessment tool serves as a questionnaire, which is a ground for the identification of the needs that are to be taken into account for the further development. The needs assessment tool embraces the core principle of the needs assessment depicted in

the scheme. The questionnaire is structured into three sections, each corresponding to specific competencies identified in the NEARVET Competence Framework:

The competencies include areas like ethics in research, collaboration with VET stakeholders, use of technology, and innovation in educational practices, among others. Most of the questionnaire consists of Likert scale questions ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale helps in quantifying the degree of competency and identifying gaps in knowledge, skills, and attitudes. Respondents complete the questionnaire, providing their assessments of their own skills and knowledge in relation to the competencies outlined. Responses to Likert scale questions are quantitatively analyzed to measure central tendencies and weaknesses. This analysis helps in identifying the average level of competency across all respondents and spotting areas with significant deviations, indicating widespread needs for improvement.

6. Conclusions

As a crucial component of the NEARVET initiative, the NEARVET Blueprint offers a comprehensive framework for raising the standards and effectiveness of Vocational Education and Training (VET) via the integration of the Applied Research.

The Blueprint provides a precise structure for helping VET practitioners acquire the required skills. This covers both fundamental research abilities and specialized knowledge catered to particular project needs. The Competency Framework's graded structure guarantees equitable access to opportunities for research and knowledge acquisition, fostering professional development for individuals with diverse degrees of skill.

The Blueprint offers a framework for integrating Work Package 2's (WP2) methodological idea to the NEARVET concept's ongoing development. In order to reflect on their progress as creative change agents within the European VET framework, it outlines crucial components that promote the establishment of a community of applied researchers in VET.

The needs assessment tool, which assesses an individual's competences and skills in certain areas, is an essential part of the Blueprint. By incorporating a set of strategic self-assessment questions, the Blueprint contributes on two levels: (a) it serves as a tool for practitioners in the NEARVET transnational community of practice to reflect on themselves, and (b) it serves as a useful tool for prospective participants in professional education related to NEARVET to analyze their training needs.

In summary, the NEARVET Blueprint is designed to impose a homogenized with the NEARVET competence framework to provide a shared understanding of competencies across various VET systems. Addressing the function that applied researchers in VET may play within the various training and educational environments prevalent throughout Europe requires doing this.

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