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G. Kiril Radev^{1[0009-0001-2228-461X]} and Ralitsa Velinova-Dencheva ^[0009-0000-4318-4493] New Bulgarian University, Dept. of Administration and Management, 1618 Sofia, Bulgaria 21 Montevideo Str., Bulgaria

Mg{y qtf u vocational education and training (VET), project-based learning (PBL), key performance indicators (KPI), digital technologies, learning innovation

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Modern vocational education and training (VET) techniques combine many elements that interact dynamically and are constantly changing. Innovative professional training in the age of technological progress has not only technical but also social and emotional-cognitive elements. Different approaches to measuring innovative learning in VET tend to focus on diverse indicators: professional characteristics of the trainer, learning dynamics, behavioral changes in the learner, decision-making approaches, quality of communication, technical resources, and others. At the same time, the increasing pressure from the impact of rapidly developing technological innovation is compounded by the effects of globalization. It demonstrates how remarkably the idea of "efficiency" can change over time. As a result, the importance of innovative VET approaches, which are challenged to optimize interactions between learners and technology and to enhance sustainable and human-centered social and economic activities within technological innovation, is increasingly paramount. Project-based learning (PBL) is a type of innovative, progressive learning method that has the potential to support and empower learners within the framework of digital transformation and the use of increasingly intelligent machines and technologies in the learning process. In the Republic of Bulgaria, innovative VET practices have been developed and implemented significantly recently. The policy objectives for the development and improvement of VET at the national level are:

- to ensure access to VET for citizens according to their personal interests and abilities;
- to meet the needs of a qualified labor force in a competitive labor market;
- to provide conditions for the functioning and development of a VET system based on the cooperation between institutions providing VET, state institutions, and social partners [1].

The study's object is 216 professionals who underwent innovative VET practice from May 2023 to May 2024. Respondents work in the IT and Consultancy Sectors and have at least three years of experience in their respective functional areas.

The study's subject is innovative VET practices, mainly PBL, and the assessment of its results to improve the overall quality and value of VET practices provided in the studied economic sectors.

The main objective of the present study is to map and analyze the dominant approaches and indicators for evaluating the results of the innovative techniques applied in VET and how they have developed over the last year in two economic sectors (IT sector and Consultancy Sector) in the Republic of Bulgaria.

The main tasks facing the construction of sustainable approaches and key indicators for evaluating the results of innovative VET practices in the Republic of Bulgaria are:

- 1. Inclusion of participants in innovative VET practices in approaches to its evaluation.
- 2. Maintaining up-to-date information on the key indicators used to evaluate the results of innovative VET practices.
- 3. Determining the changes in innovative VET practices to determine their impact on future opportunities and challenges.
- 4. Linking the changes of innovative VET practices to their effects to understand and manage them better.
- 5. Analyzing indicators for evaluating innovative VET practices in different economic sectors.

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A multifaceted research design was developed that drew on information from several sources and incorporated findings from earlier research studies:

- a) a review of the literature to analyze the development in the evaluation of the results of innovative VET practices and to identify the evaluation approaches in the studied economic sectors;
- b) comprehensive data provided by the study participants based on an online questionnaire specially prepared for the study;

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¹ kgradev@nbu.bg, +359885780480

c) a study of the national VET system and providers which aims to complement the analysis of specific VET practice changes in the Republic of Bulgaria.

The primary source of information, along with the literature review, is an online questionnaire distributed through online survey software and interviews with relevant key stakeholders to explore further specific aspects related to approaches and evaluation of outcomes of innovative VET practices in the Republic of Bulgaria. The study period is one year (May 2023 – May 2024). Each questionnaire consists of several parts focused on a specific topic. The first part focused on the first research question ("Which PBL evaluation indicators from the list are most important?"). Each subsequent part of the questionnaire consists of an in-depth analysis of the specific topic, analyzing individual approaches and evaluation indicators, their use, development, and comparison of their use in the studied economic sectors. Thus, separate parts of the questionnaire were used to illustrate and further explore change processes about specific evaluation approaches and indicators and their combination. The main changes in innovative learning in VET during the research period and the effects of the changes were studied. Also, the impact of digitization on assessment approaches and possible long-term changes (some changes may only be temporary, while others could be permanent) on innovative VET practice in the sectors considered were highlighted.

RESULTS AND CONCLUSIONS

The research results helped to gain a deeper understanding of the trends in innovative VET practices in the Republic of Bulgaria on a one-year basis and within the two economic sectors studied - the IT sector and the Consultancy Sector. Based on the obtained results, the following main trends were established:

- Differences are observed between the key indicators used to evaluate innovative VET practices in the two
 economic sectors studied: while the consulting services sector supports the use of more standardized
 indicators to assess the results of innovative VET practices, the IT sector focuses on implementation of
 indicators related to digital transformation and technological development;
- 2) The pressure for change and the effects it causes within innovative VET practice increases its impact on the participants in the learning process and their needs;
- 3) External transformations of the environment (digital evolution) have the potential to lead to changes in VET policies and programs;
- 4) The push for immediate change, for example, when learners have to work independently in virtual space, reinforces the need to develop new approaches to effectively delivering VET through digital learning.

The results of the study also show that some of the future challenges to building sustainable approaches and indicators for evaluating the results of innovative learning in VET are each likely to be related to the increasingly assertive use of digital technologies, AI, sensory technology, and big data. These processes can become transformative tools and require the construction of VET practices based not only on assumptions that individual participants possess a high set of skills universally developed in response to technological advances but also on documented data about their competencies and opportunities. The optimization of a wide range of learning techniques and technological innovation will continue to accelerate, requiring VET providers to sustainably manage both the development and use of digital tools for their educational purposes. The systematic development of innovative educational approaches and the sustainable evaluation of their effectiveness can strengthen the societal role of Industry 5.0 as an engine of prosperity and promote the digital transition for the benefit of both the economy and society.

REFERENCES

 Cedefop, The future of vocational education and training in Europe: synthesis report. Luxembourg: Publications Office. Cedefop reference series; No 125. (2023), http://data.europa.eu/doi/10.2801/08824 last accessed 2024/09/03

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