


# Chapter 3

## Algorithm for Organizing and Evaluating Project– Based Learning as a Tool to Increase the Objectivity and Informativeness of Evaluation

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## ABSTRACT

*This chapter presents a unified algorithmic approach to the organization of project-based learning and objective quantitative assessment of students' data-driven project work. The algorithm is implemented using the basic provisions of qualityology and multistage assessment. The application of the algorithm allows formatting assessment, providing students with feedback at each stage of project work, thus increasing the effectiveness of learning. Methodological bases of the evaluation algorithm: from the position of the general methodology and tactics of project work construction - process approach and “plan-do-check-act” cycle (PDCA, Deming-Schuchart cycle); from the position of criteria for selecting and determining the complexity of tasks - modern interpretation of the Zone of Proximal Development hypothesis by L.S. Vygotsky; from the position of the tactics of psychological and pedagogical supervision of the student - Phenomenological approach of existential pedagogy.*

## INTRODUCTION

The project approach in learning in general and in higher education in particular is not something new. Project-based learning allows to simulate real situations of the student's future professional activity, provides the necessary depth of student's “immersion” in the simulated situation or the problem set by the teacher, allows to apply such an approach to learning, which is focused on the development of key competencies of the student. In addition, the project approach to learning opens up great opportunities for individualization of the learning process and allows the student to develop universal competencies related to the project type of professional activity.

The relevance and demand for the application and further development of the project-based learning format is confirmed by a large number of publications devoted to project-based learning over the past several decades. Researchers test and adapt the basic provisions of the project-based learning theory in a wide variety of areas and contexts of educational activities. The project approach is one of the most flexible alternative teaching methods. This activity is easily adapted and implemented in almost any curriculum, organically combining with traditional teaching methods. Often, studies emphasize the multidisciplinary nature of the project-based approach to learning, the ability to provide students with the adaptability, resilience and entrepreneurial spirit necessary for success in a dynamic and ever-changing labor market through the implementation of authentic, real projects (Shenbagavalli, 2025). The study by X. Ma and X. Wu establishes a seamless integrated structure of project-based learning, mediated by an evidence-based project-based learning system. The model uses conceptual clusters, problem chains, and evidence-based task design to

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