LEVERAGING PROJECT-BASED LEARNING FOR STUDENT AUTONOMY IN DIGITAL AND DISTANCE EDUCATION

Shvetsova I.V., Doctor of Pedagogical Sciences, Professor,
Kherson State Maritime Academy, Ukraine
ORCID: https://orcid.org/0000-0002-6801-5204
E-mail: phd.shvetsova@gmail.com

Modern students live in a world where digital technologies are an integral part of the learning process. Online courses, mobile applications and learning management systems (LMS) have opened up new avenues for education. At the same time, the digital format presents students with new challenges, including the need to manage their own time, set goals and achieve them without constant supervision from teachers. This requires the development of autonomy, which includes the ability to plan studies independently, use resources effectively and critically evaluate progress. Without these skills, students risk losing motivation and experiencing a decline in learning effectiveness.

The growing need for autonomy and self-discipline means that distance learning requires students to take greater responsibility for their educational outcomes. In order to successfully master course material, students need to develop autonomy skills: to plan their studies independently, to use resources effectively and to evaluate their progress critically. Students risk losing motivation and learning effectiveness without these skills. A key element in preparing future professionals is to create conditions that foster the ability to respond effectively to the challenges that arise in professional environments. This approach ensures the development not only of theoretical knowledge but also of practical skills, facilitating the successful integration of professionals into the dynamic landscape of the modern labour market. One of the most effective tools for achieving these goals is project-based learning, which promotes the development of key skills such as teamwork, critical thinking, problem solving and time management. These skills form the basis of professional success, especially in a rapidly changing labour market where initiative and the ability to work independently are often required. Focusing the

educational process on developing the ability of future professionals to adapt to the real challenges of working life is therefore an essential aspect of their preparation.

The *aim* of this study is to examine the impact of the Project-Based Learning on the development of student autonomy in digital and distance education, and to develop recommendations for the effective implementation of PBL to foster key competences necessary for successful integration into the professional environment. The research explores tools and strategies that enhance students' motivation, develop their self-regulation skills and enable effective organisation of the learning process, regardless of the educational format.

Project-based learning provides a significant role in fostering student autonomy, particularly in the context of digital and distance education. According to Egenrieder (2010), educators can support student autonomy by encouraging learners to select, design and explore their own ideas within PBL, whether this method is integrated throughout the curriculum or used periodically [1].

Furthermore, the study by Meng, Dong and Roehrs (2023) showed that the use of e-learning platforms to implement PBL enables students to acquire interdisciplinary knowledge, develop collaborative skills and solve real-world problems in a digital environment [2]. Otto and co-authors (2024), in their systematic review of the literature, highlighted that contemporary digital practices promote the creation of student-centred learning environments. These approaches emphasise online, hybrid and blended learning formats, which have gained popularity since the onset of the pandemic [3].

Knoblauch (2022) investigated how students interact with digital PBL environments and found that such approaches can be effectively implemented to enhance future learning scenarios in higher education [4]. In addition, Mutanga's (2024) qualitative study shed light on students' perspectives on PBL, noting that this approach promotes active learning, critical thinking and practical application of knowledge - particularly important in digital and distance education contexts [5].

Thus, Project-Based Learning represents a powerful tool for developing student autonomy in digital and distance education. Its

implementation promotes active student engagement in the learning process, cultivates essential skills such as collaboration, critical thinking and problem solving, and supports the integration of digital platforms and contemporary practices. This not only enhances the effectiveness of the educational process, but also creates opportunities for the development of innovative thinking, which is critical in the modern educational landscape.

The shift to digital and distance education has underscored the need for innovative teaching approaches capable of addressing the unique challenges faced by both students and educators. One of the critical challenges is fostering student autonomy, which has become essential for their success. Research indicates that distance education often places greater responsibility for managing learning on the students themselves, accompanied by several barriers:

– Lack of immediate feedback and personal interaction: This can lead to feelings of isolation and decreased engagement among students.

– Difficulties in organizing independent work: Students often struggle with time management, goal setting, and maintaining focus without external supervision.

Addressing these challenges requires a pedagogical approach that not only engages students but also equips them with the skills to manage their learning process effectively. Project-Based Learning, with its emphasis on active participation, collaboration, and problem-solving, has the potential to mitigate these barriers and foster the development of autonomy in digital and distance education contexts.

These challenges highlight the importance of implementing methods that empower students to take responsibility for their own learning processes. In this context, Project-Based Learning plays a crucial role due to its capabilities:

– *Facilitating autonomy*: By engaging students in projects that require planning, research, and execution with minimal instructor oversight, Project-Based Learning encourages independence and self-direction.

– *Fostering self-reflection and self-regulation skills*: Through continuous evaluation of their progress, students develop self-assessment and critical thinking skills, essential for lifelong learning.

Furthermore, an effective way to integrate global experiences into the educational process is by employing approaches that enable students to collaborate in international teams. Using digital platforms to implement joint projects, such as Collaborative Online International Learning (COIL), students develop intercultural communication skills and collaborative abilities crucial in a globalized world.

Participation in such projects promotes the development of several critical competencies, including:

1.   *Intercultural communication*: Collaborating with peers from different countries helps students gain deeper insights into diverse cultures and learn how to effectively interact in culturally diverse environments.

2.   *Digital literacy*: Utilizing online tools for project organization, idea sharing, and problem-solving equips students with essential digital skills required in modern professional settings.

3.   *Collaboration*: Practicing teamwork in global settings enhances students' ability to work effectively in diverse teams, a key attribute for successful careers across various fields.

By incorporating PBL and international collaboration into the educational process, students are better prepared to navigate the complexities of modern professional environments and contribute meaningfully to a globalized society.

As part of our practical work, one of the most effective applications of Project-Based Learning was the implementation of the Collaborative Online International Learning (COIL) project. In this course, students from Ukraine and the United States collaborated in international teams, working on joint tasks that required strategic planning, intercultural communication, and the use of digital tools to present their outcomes.

For instance, during a six-week COIL course, students developed interactive presentations and conducted research, managing their work independently. They coordinated meeting schedules, distributed responsibilities, and organized their tasks autonomously. This process not only fostered their autonomy but also provided them with hands-on experience in intercultural collaboration.

The integration of global experiences through innovative educational practices like COIL ensures students acquire not only

practical skills but also adaptability and readiness to collaborate in multicultural and technology-rich environments. These attributes are critical for success in contemporary professional contexts. Project-Based Learning proves to be an effective tool that helps students adapt to digital education while cultivating the skills necessary for learning, work, and life in the 21st century.

In the framework of our COIL project, students from diverse cultural and academic backgrounds collaborated on tasks requiring strategic planning, intercultural communication, and digital literacy. This approach not only strengthened their autonomy but also enhanced their global competence and teamwork skills.

For example, in our six-week COIL course, students undertook projects that demanded goal setting, task delegation, and result presentation, overcoming challenges independently in an online environment. Such experiences underscore the transformative potential of Project-Based Learning in preparing students for the demands of a globalized and technology-driven world.

To maximize the impact of Project-Based Learning in fostering student autonomy, it is essential to integrate modern tools and strategies that facilitate effective planning, progress monitoring, and motivation. Below are the key approaches for implementing PBL in a digital learning environment:

1.   Learning Management Systems (LMS): Platforms such as Moodle, Canvas, or Thinkific provide a structured framework for course delivery with step-by-step tasks, clearly defined deadlines, and supporting resources. LMS platforms also offer tools for tracking student progress, evaluating completed tasks, and supporting asynchronous communication. These features enhance the organization and accessibility of project-based learning, enabling students to work independently while staying on track.

2.   Clearly Defined Project Milestones:

Dividing project work into stages with specific deadlines helps students maintain a structured timeline while preserving their autonomy in planning their work. This approach supports the development of self-regulation and accountability by encouraging students to manage their responsibilities effectively and meet interim goals.

3.   Recognition of Individual and Group Achievements: Recognizing and celebrating both individual and team accomplishments fosters a sense of achievement and motivates students to engage actively in their projects. This can include digital badges, certificates, or public acknowledgment within the LMS or course community.

The integration of LMS platforms, such as Thinkific, combined with clear milestone planning and achievement recognition systems, provides effective tools for implementing PBL in digital education. These approaches enhance student autonomy, boost motivation, and ensure successful project completion. By adopting these strategies, educators can create an engaging and supportive learning environment that empowers students to take ownership of their education while equipping them with critical skills for the modern professional landscape.

The outcomes of the implemented work revealed several anticipated effects that contribute to enhancing the learning process's efficiency and fostering student autonomy. The integration of Project-Based Learning (PBL) combined with modern digital tools has been shown to significantly increase student motivation. By working on real-world tasks aligned with their professional interests, students exhibit heightened engagement and a stronger commitment to achieving their goals.

Moreover, the use of PBL fosters the ability to perform tasks effectively across various learning formats. Students develop essential skills in self-regulation, independent planning, and organization of their work. These competencies enable them to maintain high productivity and quality in traditional in-person, remote, or hybrid learning environments.

Simultaneously, project-based activities enhance learning flexibility, reflected in students' ability to adapt to changing conditions, make independent decisions, and work efficiently in diverse educational settings. Participation in projects requiring collaboration, critical thinking, and real-world problem-solving promotes the development of key competencies necessary for future professional endeavors, particularly in the context of a digitalized labor market. Continuous engagement in projects that allow for autonomous decision-making strengthens students' ability to take

ownership of their learning process, a vital element of modern education and a hallmark of successful students.

The results of Project-Based Learning implementation demonstrate its substantial potential to improve learning efficiency, especially in digital and distance formats. Project-Based Learning equips students with the essential skills to tackle contemporary challenges in education and professional life, making it a powerful tool for fostering autonomy, adaptability, and readiness for the demands of the 21st-century workforce.

Bibliographic List:

1. Egenrieder, J. A. (Jim). Facilitating student autonomy in project-based learning to foster interest and resilience in STEM education and STEM careers. Journal of the Washington Academy of Sciences, 2010, vol. 96, no. 4, pp. 35–45. Available at: http://www.jstor.org/stable/24536352.

2. Meng, N., Dong, Y., Roehrs, D. et al. Tackle implementation challenges in project-based learning: A survey study of PBL e-learning platforms. Education Tech Research Dev, 2023, vol. 71, pp. 1179–1207. DOI: https://doi.org/10.1007/s11423-023-10202-7.

3. Otto, S., Bertel, L. B., Lyngdorf, N. E. R. et al. Emerging digital practices supporting student-centered learning environments in higher education: A review of literature and lessons learned from the Covid-19 pandemic. Educ Inf Technol, 2024, vol. 29, pp. 1673–1696. DOI: https://doi.org/10.1007/s10639-023-11789-3.

4. Knoblauch, C. Digital project-based learning in the higher education sector. In: Guralnick, D., Auer, M. E., Poce, A. (eds). Innovations in Learning and Technology for the Workplace and Higher Education. TLIC 2021. Lecture Notes in Networks and Systems. Cham: Springer, 2022, vol. 349. DOI: https://doi.org/10.1007/978-3-030-90677-1_17.

5. Mutanga, M. B. Students' perspectives and experiences in project-based learning: A qualitative study. Trends in Higher Education, 2024, vol. 3, no. 4, pp. 903–911. DOI: https://doi.org/10.3390/higheredu3040052.