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INTEGRATION OF PROFESSIONAL TASKS IN SCHOOL PROJECTS: DEVELIPING KEY COMPETENCES

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This article explores the effectiveness of interdisciplinary project-based learning in fostering and assessing key competencies essential for students' professional success. By engaging students in a series of industry-relevant tasks - such as market research, stakeholder communication, design development, and project presentation - this approach facilitates the practical application of theoretical knowledge in real-world contexts. The study emphasizes the significance of developing critical skills, including analytical thinking, communication, research skills, collaboration, and adaptability. Additionally, the integration of industry feedback provides educators with a framework to evaluate students' competencies against professional standards, thereby enhancing the rigor of competency assessment. This alignment with the evolving demands of today's labor market underscores the importance of cultivating transferable skills that prepare students for the challenges they will encounter in their future careers.

Keywords: *competence, project, research, interdisciplinary approach, solving relevant problems, lifelong learning.*

INTEGRAREA SARCINILOR PROFESIONALE ÎN PROIECTE ŞCOLARE: DEZVOLTAREA COMPETENȚELOR CHEIE

Acest articol explorează eficacitatea învățării bazate pe proiecte interdisciplinare în promovarea și evaluarea competențelor cheie esențiale pentru succesul profesional al elevilor. Prin implicarea elevilor într-o serie de sarcini relevante pentru industrie - cum ar fi cercetarea de piață, comunicarea cu părțile interesate, dezvoltarea designului și prezentarea proiectului - această abordare facilitează aplicarea practică a cunoștințelor teoretice în contexte reale. Studiul subliniază importanța dezvoltării abilităților critice, inclusiv gândirea analitică, comunicarea, abilitățile de cercetare, colaborarea și adaptabilitatea. În plus, integrarea feedback-ului din industrie oferă educatorilor un cadru pentru a evalua competențele elevilor în raport cu standardele profesionale, sporind astfel rigurozitatea evaluării competențelor. Această aliniere la cerințele în continuă schimbare ale pieței muncii de astăzi subliniază importanța cultivării abilităților transferabile care îi pregătesc pe elevi pentru provocările pe care le vor întâlni în carierele lor viitoare.

Cuvinte cheie: *competență, proiect, cercetare, abordare interdisciplinară, rezolvare de probleme relevante, învățare pe tot parcursul vieții.*

Introduction

The role of schools in the lives of students primarily involves preparing them to tackle the challenges they will face as adults. It is crucial to educate students' key competencies that will empower them to become active, engaged members of society, function effectively in the workplace, collaborate in teams, and proficiently acquire, analyze, and apply information. The educator's role is to create conditions that support the development of these skills and attributes, which is challenging to achieve within a purely disciplinary framework. This necessity is further emphasized by the contemporary demand from employers for team members who are developed, proactive, creative, and capable of multitasking.

Integration of professional tasks in school projects

The need to reform the educational system and implement a competency-based approach gained prominence in the 20th century. N. Chomsky [3], D. Hymes [7], R. White [12], and J. Raven [11], among others, have explored the principles of competency-based education. For decades, educators have focused on imparting knowledge to students; however, this approach has not always ensured the practical application of

that knowledge, leading to demotivation among today's youth. In the digital age, where children's attention spans are diminishing and processing information has become increasingly complex, it is essential to effectively convey the relevance of the subject matter, engage students' interests, and demonstrate the practical benefits of the topics discussed.

It is often assumed that all the necessary skills can develop independently in students through knowledge acquired via a disciplinary method. However, reality presents a different perspective, revealing the limitations of this approach. J. Raven says: „People are motivated by a desire to develop and contribute, to have their talents recognized and rewarded" [11]. Also, in „Teaching for Meaningful Learning: A Review of Research on Inquiry-Based and Cooperative Learning" we meet the idea: „Students learn more deeply when they can apply classroom-gathered knowledge to real-world problems, and when they to take part in projects that require sustained engagement and collaboration" [1]. University students encounter new expectations from educators who seek autonomy, the ability to locate, process, and analyze information, and the capacity to work on projects-skills they often lack. Subsequently, university graduates enter the workforce and face new demands and regulations, where employers expect swift adaptation to novel conditions and a thorough understanding of how to navigate situations that differ from those familiar to them. „Not only have the tasks we face changed; the requirements for the types of competencies needed to solve these tasks, as well as the roles we must all play in this process, have also evolved" J. Raven claims [11]. Newman says: „Studies have shown a positive impact on learning when students participate in lessons that require them to construct and organize knowledge, consider alternatives, engage in detailed research, inquiry, writing, and analysis, and to communicate effectively to audiences" [1].

Analyzing the key skills that underpin the competency-based approach, it becomes evident that all of them can effectively assist students during their school years in understanding how to solve various problems when adapted to real-life conditions. Project-based activities could facilitate this process, as they often serve as a foundational principle for the operations of many companies. Lavitt and Boothe say: „To be truly transformational, the learning must extend and endure beyond completion of the learning project" [9]. This may help students develop their key competences and apply them in their future job. The Education Code of the Republic of Moldova [4] identifies the following key competencies:

- Communication skills in Romanian;
- Communication skills in the native language;
- Communication skills in foreign languages;
- Skills in mathematics, science, and technology;
- Skills in digital technologies;
- The ability to learn throughout life;
- Social and civic skills;
- Initiative and entrepreneurial skills;
- Skills for cultural expression and awareness of cultural value.

This list of key competencies leads us to several ideas that educators can utilize to effectively organize the educational process and justify their choice of teaching methods and formats. For example, we can discuss the positive aspects of implementing interdisciplinary projects as a teaching approach that allows students to develop critical and analytical thinking, recognize connections between non-obvious situations and phenomena, and seek unconventional solutions to questions and problems that may seem unsolvable. Interdisciplinary project tasks can also involve the development of communication skills (both linguistic and social) [2, 6]. Teamwork, initiative, and entrepreneurship are essential qualities sought by modern employers. Adaptability and lifelong learning are crucial for future graduates, enabling them to find solutions to unconventional problems in the workplace and acquire new skills as industries modernize and undergo changes, especially when ready-made solutions do not yet exist.

Such projects serve as a practical field for developing students' key competencies, embodying the principles of activity-based and contextual learning approaches, making them valuable within the school curriculum and in professional preparation. Research, such as the work of Lave and Wenger on situated learning and participation in „communities of practice", confirms that skills are acquired through engagement

in environments closely resembling real-world activities [8]. This is learning „in action”, where students tackle tasks similar to those professionals face, fostering critical thinking and practical adaptability.

Project-based learning, as noted by Barron and Darling-Hammond, develops problem-solving, collaboration, and adaptability skills [1]. Such tasks help students transition from abstract knowledge to practical application, leading to a deeper understanding of professional processes and building „flexible skills” that are highly sought after in today’s fast-changing world.

Implementation

Let us present one example of an interdisciplinary project that encompasses many of the key competencies mentioned above and helps students immerse themselves in a simulation of a genuine corporate team work process they may encounter in the future. Notably, this project is based on a relatively specific elective subject - graphic design - whose National Curriculum was developed and released only four years ago, yet has already captivated many students [5]. Newstetter says: „design-based lessons have several features that make them ideal for developing technical and subject matter knowledge”. „Design projects require students to set constraints, generate ideas, create prototypes, and develop plans through storyboarding or other representational practices. These are all critical twenty-first century skills” [1].

The annual interdisciplinary projects „Corporate Identity” have been conducted at the IPL „Da Vinci” school from October to June during the years 2020-2024 for grades VI-IX.

The goal of this project is to develop a set of corporate identity elements for small businesses in the Republic of Moldova, considering local characteristics and the company’s needs.

The objectives of this project implementation include:

- Researching and analyzing the market to select a suitable candidate company for the project;
- Analyzing competing companies to identify positive and negative examples of corporate identity development within the chosen industry;
- Investigating and analyzing the identities of companies in the selected industry on the international market to identify the best solutions for the chosen candidate;
- Communicating with the company’s administration to ascertain needs and create a project work plan;
- Studying digital tools and their application throughout the project;
- Researching and analyzing examples of presentation results in the graphic design industry to select the best strategy;
- Engaging with industry specialists for feedback and experience acquisition;
- Developing teamwork skills, including the distribution of roles and responsibilities during the project;
- Enhancing skills in working with printed materials and industrial design products;
- Cultivating public speaking skills.

Let us examine the stages involved in the interdisciplinary project „Corporate Identity”:

1. **Analysis of the Current Market Situation and Candidate Selection**: In the initial phase, students conduct a thorough analysis of the small business market to evaluate current economic and market conditions. They identify candidate companies most suitable for developing corporate identity based on market trends and the specific needs of the segment. During this stage, students gather information online, explore social media, attend various events and fairs, analyze the market in collaboration with a mentor, and communicate with representatives of the companies that interest them.
2. **Communication with Company Administration**: This stage involves interaction with representatives from the selected companies. Students develop social and communication competencies, honing negotiation skills and establishing partnerships, thereby fostering a professional culture of communication. This can be regarded as one of the most significant skills students can cultivate through the project, which may not be easily achievable within standard educational activities.
3. **Identifying Company Needs and Formulating Project Tasks**: Students conduct a detailed analysis of the company’s needs, identifying key aspects for developing corporate identity. They create a list of goals and tasks based on the company’s requests, structuring the project activity and laying the groundwork for further implementation.

4. Development of Team Skills and Role Distribution: A critical component is the formation of teamwork skills and the distribution of roles among project participants. Students learn to collaborate in groups, efficiently allocating responsibilities, which enhances their organizational and managerial competencies. At this stage, it is crucial for students to recognize their strengths and weaknesses, allowing team members to take on parts of the project that align with their expertise, fostering mutual learning, deeper inquiry, and seeking optimal solutions with guidance from the mentor. The tasks and roles students encounter and resolve during the project may include:

- Communication with company representatives;
- Defining a work plan;
- Developing the concept of basic elements for the corporate identity, such as a logo, business cards, posters, social media materials, product packaging (if needed), etc.;
- Technical aspects, including working with materials in graphic editors and preparing them for printing and presentation;
- Consulting with specialists in the field and addressing mistakes;
- Presenting the results to the client company;
- Creating a portfolio of materials and presenting the final project to the school community.

5. Competitor Analysis: In this stage, students conduct a competitive analysis of companies across various market segments (small, medium, large businesses) to identify successful and unsuccessful examples of corporate identity development. This research helps students gain a deeper understanding of client market preferences and tailor their solutions to meet the demands of a specific industry within the national market context.

6. Researching Global Practices: Students analyze global trends in corporate identity. They study successful international examples to comprehend the global context and adapt best practices to local conditions, thereby enhancing their research and analytical skills.

7. Digital Tools: At this stage, students acquire specialized digital technologies necessary for developing corporate identity (graphic editors, design, and visualization software). This promotes the formation of digital competencies and deepens professional skills in design.

8. Project Presentation Method Analysis: Students investigate contemporary strategies and methods for presenting work results in graphic design. The goal is to select the most effective tools for showcasing the project to the client, which fosters the development of visual and verbal communication skills and the creation of compelling presentations.

9. Interaction with Industry Specialists: At this stage, students engage with professionals from design and marketing fields, allowing them to obtain expert feedback. This integration of theoretical knowledge with real professional practice may occur through competitions or personal consultations with invited specialists.

10. Working with Printed Materials and Implementation Preparation: Practical preparation of printed products and industrial design materials takes place. Students develop skills in working with printed media and preparing materials for implementation, facilitating the acquisition of practical aspects related to material design objects.

11. Project Results Presentation to the Client: The final stage involves presenting the developed corporate identity to representatives of the client company. Students showcase their work and justify their proposed solutions, enhancing public speaking skills, professional communication, and project presentation. This stage parallels activities in real companies, where adult professionals present their ideas to clients in meetings. In this case, we refer to adapting school assignments to future employer expectations.

12. Project Analysis and Reflection: Upon project completion, a critical analysis of the work performed is conducted. Students evaluate the strengths and weaknesses of completed tasks, analyze mistakes, and develop strategies for their rectification, which contributes to enhancing research and organizational competencies. This stage typically involves discussion among team members and the mentor, where all share impressions of the work done, point out strengths and weaknesses, and debate potential future improvements.

The final results of the project are presented to the school community through publications on social media, presentations to classmates, or community gatherings. This promotes the dissemination of acquired knowledge and experience among students, encourages their engagement in project activities, and elevates the overall competence level of the school collective.

As a result of implementing the interdisciplinary project „Corporate Identity”, it has been found that this work format ignites significant interest in research and project activities among students. Introducing tasks similar to those faced by professionals in real life allows students to understand how the contemporary professional environment operates, what is expected of workers, and what challenges they may encounter in the future. The project format facilitates the integration of knowledge from various disciplines - native language (communication), foreign languages (researching and analyzing information and experiences from other companies in the international market), graphic design (creativity, connections to art and technology), and analysis (research skills) - helping students recognize the interrelations between theoretical knowledge and its practical application. Through analyzing examples, competitors, and company needs, students engage with real business processes, develop critical thinking, learn to make informed decisions, and understand how their actions impact the final outcome, enabling them to transcend traditional school curricula and comprehend where knowledge acquired during education can be applied in real life. The mentor's role in this process is pivotal as they guide and support students, helping them tackle challenges, structure tasks, and find appropriate solutions. Communication with industry professionals and receiving real feedback immerse students in the professional community, providing valuable insights and enabling them to tailor their solutions to actual business needs. This form of interaction serves as a vital element of professional orientation, helping students perceive the real context in which their knowledge can be applied. Over the past four years, this project has demonstrated that students are indeed eager to show interest, initiative, work beyond the school program, attend various events and meetings, learn to communicate with adults and professionals, grow, and solve unconventional problems.

Conclusion

The interdisciplinary „Corporate Identity” project demonstrates an effective model for advancing and evaluating key competencies in students by simulating authentic professional scenarios. This project-based learning approach facilitates the development of critical skills such as analytical thinking, communication, collaboration, and digital proficiency, and it also provides teachers with a framework to assess these competencies in action. Through stages that include market analysis, stakeholder communication, design development, and final project presentation, educators can observe students' progress, analyzing how well they apply learned skills to complex, real-world tasks. Engagement with industry professionals enhances this evaluation process by introducing standards from actual practice, allowing educators to refine their strategies and maximize learning outcomes. This reflective and iterative project design strengthens students' abilities to adapt and problem-solve in professional contexts, preparing them effectively for the demands of the modern workforce.

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