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The Romanian undergraduate students' perspective on the project-based learning

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Abstract. Carrying out projects in school can benefit all students, regardless of age, gender, education or sex. Moreover, PBL can enhance the benefits of a project by making students be responsible for their own learning and solving relatable problems of their everyday life. We conducted a survey to find out students' perspective on carrying out projects and in addition implementing PBL in our university, to see if they would find the method appealing and if they would be motivated to try PBL in their future classes. The finds are, in fact, similar to the theory on PBL, but, also, through the students' answers, the difficulties involving the application of PBL in Romanian higher education were identified.

Keywords. project-based learning (PBL), projects, students' point of view.

Introduction

Project-based learning (PBL) has been found to be an effective teaching strategy that enhances student engagement and learning outcomes. In fact, recent studies have explored the use of a flipped learning approach to online PBL, where students return to their textbooks and other course materials to improve their learning outcomes (Dewi, 2023). The construct of PBL and its effectiveness in improving students' skills and knowledge is a central theme in literature reviews. Two key areas are emphasized: the construct of PBL and the impact of PBL on student engagement and learning outcomes. The use of PBL in education has been linked to the development of higher-order thinking skills such as problem-solving, critical thinking, and creativity. Moreover, students who participate in PBL have been found to have improved academic performance, higher retention rates, and better motivation levels. These findings highlight the significance of PBL as a teaching methodology that promotes active learning and fosters student engagement. In addition, the use of technology has made it easier for teachers to create and manage PBL activities, thus expanding the scope of this approach in a variety of educational settings.

The lead and philosopher John Dewey the first-time the method of learning through projects at the University of Chicago (Dewey, 1958). An active inquiry-type learning process, through



which students develop personal investments in the material if they engage in real, meaningful tasks and problems that shape real-life situations. William Kilpatrick, a student of Dewey's, writes, in 1918, an article about the method of the project as an educational process. (Kilpatrick, 1918). Subsequently, the method becomes popular in the U.S.A. thanks to their American researchers and their high school and middle school teachers who collaborated by developing a set of instructions for designing projects in science.

1. Difference between projects assessment and PBL

According to (Larmer et. al., 2015, p. 70) PBL is different from the simple project that can be an alternative method of assessment. The main differences that the authors refer to are explain in the Table 1. Main differences between project and project-based learning

Table 1. Main differences between project and project-based learning

The point of view	Project	Project Based Learning
Unit and standards	Supplement to a unit (additional work)	The project is the unit or the major vehicle for teaching content standards within a unit
Task	Based on directions form the teacher	Open-ended and involves the voice and choice of students
Repetition	Is repeated every year	Differs from year to year
Collaboration	None – projects is done individually	Team effort
Focus	On the product/results	The inquiry, the process, and the creation of the product
Authenticity	Not authentic to the real word of to the students' lives	Authentic both in the real world and the students' lives

The project applied very often in our schools and universities are in fact simply projects and not project-based learning. Referring to the projects (Larmer et. al., 2015, p. 68) make a clear classification depending on the moment of application and the method of creating the project (Table 2: Projects classification.

Table 2: Projects classification

Title	Main characteristic	Goal	Time	Product
Desert project	- Is view as a reward for students that slogged thought the material. - They are seen as fun.	To provide students with some practical experience.	At or near the end of a unit of instruction.	Something tangible (a model, a video, a poster, robot).
Side dish project	- Is a type of homework involving research that will be presented in class. - Provides an extension on the content being taught in class.	To deepen the topic of study, with some degree of choice.	During a traditionally taught unit or outside the unit entirely.	Usually is a PowerPoint presentation or another type of displaying data and graphics, depending on the topic at hand
Buffet project	- Constitute in a series of tasks and activities that are both fun and educational, that fallow the same theme.	To engage students and enrich the basic content of the unit	During the traditional taught unit	Projects may reach a high complexity, involving



	Some of these activities could be called projects and students can choose which one they do or what topic to pursue.	by adding and researching different aspect.		illustrated posters, witting and performing skits, learn additional information about a subject of study.
End-of-unit performance assessment/ learning task	<ul style="list-style-type: none"> - It could be individual or a group task. - Students must solve a problem or to answer in writing allowing to experience a hands-on and enjoyable activity. 	To assess and to grade students that can demonstrate that they have learned as the culmination of a unit.	End of a unit to evaluate the improvement of competences	Projects consist in a presentation design and create, that shows performance or scientific investigation.

We will see that, in the Romanian education, project-based learning is often confused with the project method entirely. Most students would like to do projects, but not project-based learning because they are not prepared to be self-taught, they never had to do this type of task and they don't want to be responsible for their own education. Many of the issues addressed here are underline by (Fleming, 2000, p. 18): "I'm not sure I can control it", "It will take too much time," "It will be hard for students to make up work if they miss a class," "It's not easy to grade," "My students can't handle that much responsibility," "My community expects me to impart my knowledge," "My students don't like it". We will see that students appreciate both the traditional form and the one based on the realization of projects. Many of the problems posed by Fleming are found in the educational environment, but to overcome them, a change is needed.

There have been some attempts to implement PBL in our high education. We mention an implementation of PBL in Romania (Bârsan & Kifor, 2020) conducted with the teacher and students at University of Sibiu. They implemented a hybrid program consisting of lectures for the first half of the semester and PBL for the other half. They recognised the advantages of the method, but also the challenges of implementing and rolling-out a new method effectively inside a change-resistant organisation. Also, we mention the example of good practices on PBL in science lessons (Drăghicescu et al, 2014) and the PBL implementation conducted with the students Applied Engineering program, during the academic year 2014-2015 (Lazăr & Faciu, 2019).

2. Method of research and batch

We distributed a questionnaire to determine if the Romanian students form Ovidius University of Constanța are familiar with the PBL or the project method. From the seventy responses received, we formed our sample of research, involving students from all years of education from different majors. The distributions obtained are shown in **Error! Reference source not found.** and Figure 2.

Year of study
70 responses

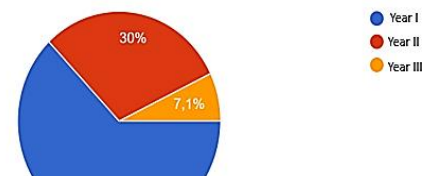


Figure 1. Distribution of the responses on the year of study

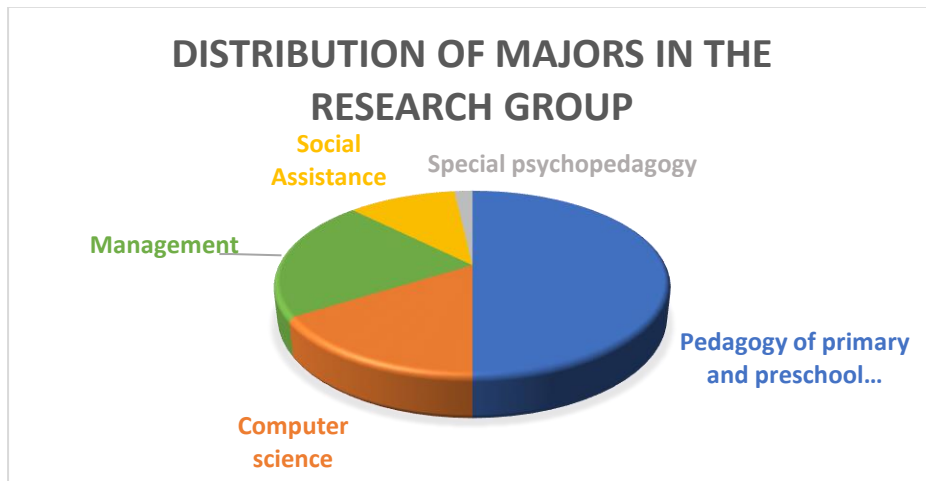
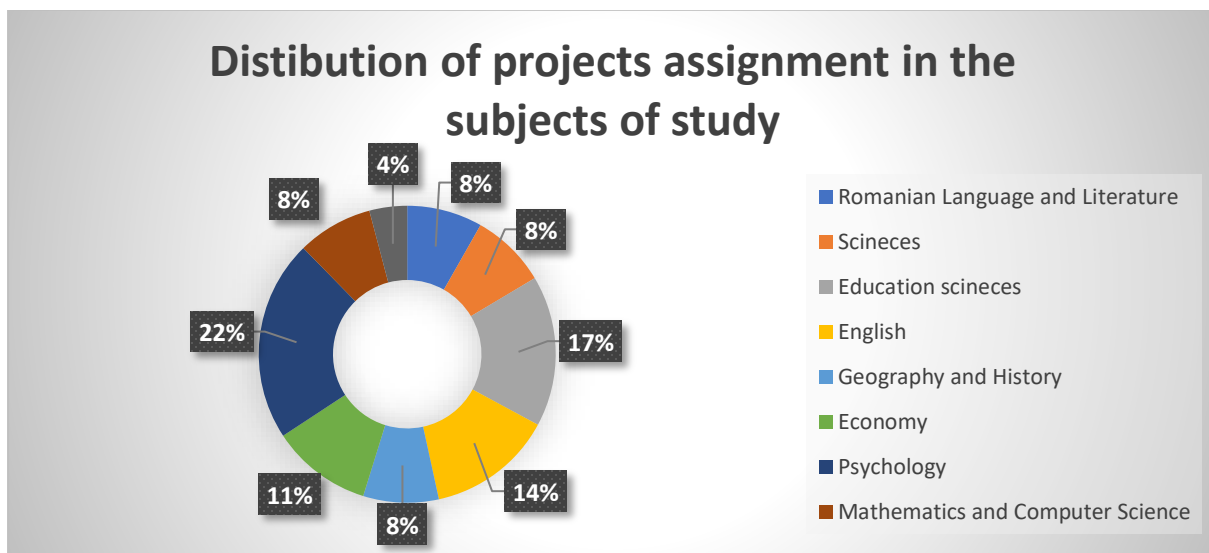


Figure 2

As we can observe the biggest percentage (47%) is occupied by the social sciences and language which are better suited for the project assignments and project-based learning. These subjects involve a comprehension of some material without the constant help of the teacher and can cover a wide range of topics. At the opposite pole, sciences and mathematics are less represented in the graph (20%) because, although they are applicable, they involve the constant need of the teacher and a solid understanding of the topic and of the mathematical apparatus necessary to solve real problems.



3. **Error! Reference source not found.** shows the distributions of project made by the students during their education so far.



4. Results of the survey

Analyzing the answers given by the students, we note that 97% of the respondents said they conducted at least one project for at least one subject. Regarding the project-based learning experience, only 31% of the students declare that they have worked in a project during high school or undergraduate studies. The students were asked to specify at least one project they have done in the past. From the answers, we conclude that nearly 50% of the projects conducted were simple project-based assessments, 40% of the projects students where involve in where educational projects being conducted in their school and only (10%) where in fact PBL as described by Larmer and explained in the introduction. (Larmer et. al., 2015).

According to the students, PBL can have a positive impact on the academic trajectory. They all justified their responses. Summing up the answers, 28% of the students believe that projects are a better way of understanding the subject taught in classes and deepens the knowledge by researching and filtering the information found, 22% of the students like working in their own pace, 13% of the students said that projects are a great way to develop creativity and imagination, 12% of the answers enjoy working in collaboration and recognize this as a benefit of the method, 10% of students think is a pleasant and practical way to learn, 8% enjoy the individual studies and 7% recognize the responsibility of their own learning in the method.

Answering the question about how project-based learning can help with their graduate thesis 94% of the responses where positive. The students observed that many of the techniques involved in PBL can be further applied in their research and development of their thesis. Some of the techniques identify by the students are carrying out an individual study, sorting and filtering information needed for the projects, organizing information, and presenting it in a scientific way, using citations and references, develops the analytical part of the research, forming conclusions and formulating a personal point of view.

According to the answers, students believe that the main obstacles to the realization of a project may include lack of clarity and clear definition of the objectives and purpose of the project (11%), lack of necessary resources (34%), difficulties in collaboration and communication with project colleagues (23%), problems with time management and meeting deadlines (19%), difficulties in problem solving and decision-making during the project, as well as lack of experience and knowledge (10%). Nearly 6% of the answers focused on the lack of reliability of the projects that they have encountered and 5% notes that projects can not be made successfully without internet and technologies (knowledge on how to use a computer, software needed in simulations or writing and presenting the finds). Also, students point out that they were not taught how to do projects, not being a necessary requirement in preuniversity education and they usually don't know how to present the projects, how to write about the theme, how to organize the findings. Furthermore, the biggest obstacle is the lack of information. Even if the information is available on internet, most website show just the abstract of the papers, some of the information is unreliable or of poor quality. As we know not all students have access to research database which can be expensive.

For those 95% of the students who have identified obstacles in carrying out projects, the methods to overcome them are diverse: 23% believe that the teacher is the one who can help them in case of a stalemate, through regular discussions and consultations. In addition, the same percentage of students are of the opinion that the educational institution should facilitate access to quality scientific information and make available to students without possibilities the technology



necessary to carry out a project. On the other hand, 15% of students say that a clarification of the objectives and the form of the project is needed. The same percentage of students believe that the difficulties that arise should be overcome by their own effort. In terms of teamwork, 14% of respondents would like the whole team to work better and be able to choose their team based on common interests, which is one of the requirements of PBL, but according to the students sometimes is not met. Other answers refer to the choice of a topic that would cause interest for the student, to the lack of the method in the pre-university environment, and 3% would like the method not to be applied because it is very time and resource consuming and, from their point of view, it does not help with anything their professional path.

Students were asked about the transferable abilities developed in PBL. They identified some expected abilities such as personal growth (33%) involving creativity, originality, stepping out of the comfort zone, social abilities, professional evolution, working with new technologies to make an attractive presentation, respecting the timelines by a good management of time. On the other hand, 31% of the answers referred to the ability of reaching, analyzing, and filtering information and 20% of the students think that by carrying out projects they gain better teamwork skills. Only 8% of the answers identify the ability of self-taught and the ability of public speaking, which can be transferable in all aspects of life. The same percentage think that there are no skills to be gained by carrying out projects, or they don't know how to answer.

Finally, students were asked to give some suggestions about the PBL. They referred to the lack of training in the area of project making from both the teachers and students, the countless hours involved in the process, the hard work, and the fact that in various occasions, students come to be taught not to teach themselves. To this end, they suggested a better training in carrying out projects even from early studies, teachers that make themselves available for discussion, and access to a database provided by the University through virtual or physical libraries. In the students' point of view, some abstract subjects cannot be taught by PBL, some require lectures. The time used for creating and documenting for a project can be used in some other way. For the most part of the students the themes on which they carried out projects didn't seem interesting. Many teachers who tried to implement PBL didn't find an interesting subject that attract the students; therefore, the latter didn't have the motivation need for creating the project. In addition, they usually had to redo all the work, being frustrating and not productive. Moreover, the Romanian students have the tendencies of leaving little time for independent work at the end of the semester, usually before the exams not having the time management skills required by PBL, so a strict schedule have to be enforced, with small steps that have to be carried out.

Conclusions

Although there are challenges to implementing PBL in the Romanian educational system, there is still hope for its successful application. While some students have found the method unsatisfying, over 95% of them recognize its benefits and believe that it can improve their academic trajectory.

Considering that from the survey, approximately 50% of the students did already carry out projects in school, we emphasize the need for more projects early-on in school. Students also said that they weren't taught how carry out projects, because wasn't a mandatory requirement in pre university education. Also, as has been pointed out in a recent study (Munteanu (Merlușcă), 2022), projects can contribute to the transferability of study subjects and to the self-evaluation process,



both being a very important skills for the work environment and for life after the completion of studies.

Although the PBL method is new and unfamiliar to many students, they can still benefit from it. While some may not be convinced of its effectiveness, many others recognize its benefits and can learn to apply it successfully. Despite challenges in implementing this method in the Romanian education system, there is still hope for successful application. Additionally, simple projects that implement learned content are a useful alternative, especially in high schools where conditions for project writing may be more limited. By combining modern and traditional teaching methods, students can benefit from a wide range of educational options that allow them to learn and develop fully.

Here, difficulties are encountered, however, not all subjects can be translated into interesting projects; sometimes they fail to capture the students' interest, who view them as just another homework assignment. Additionally, in disadvantaged environments, projects may lack relevance to students' daily lives, which can lead to a lack of necessary knowledge: disinterest in the subject, lack of experience in project implementation, difficulty in time management, and lack of technological resources.

To successfully apply the PBL method in the Romanian educational system, a change in mentality and more efficient endowment of educational institutions is necessary. Students cannot be left to fend for themselves, relying solely on their own resources and personal time, but need concrete support. This can consist of teachers who offer careful observation and correction, diverse material resources provided by the institution, and rest time, an aspect that is often overlooked. The combination of modern and traditional methods should occur naturally, at the right time and in suitable environments. Traditional teaching activities should not be completely replaced, but PBL can have a greater impact if applied with consideration for the facilities, mentality, and attitudes of the students involved. By combining modern and traditional teaching methods in the right environments, PBL can have a greater impact on students' learning and development.

References

- Bârsan, R., & Kifor, Ș. (2020). Continuous Improvement Challenges: Implementing PBL in One University in Romania. *Studies in Business and Economics*, 18-27.
- Dewey, J. (1958). *Dewey on education*. New York: Teacher College Press.
- Dewi, A. K. (2023). Developing Project-Based-Learning (PBL) Speaking Syllabus for Flight Attendant School in Flipped Learning Network (FLN) Activities. *International Journal of Education and Literature*, , 22-30.
- Drăghicescu et al, L. M. (2014). Application of Problem-Based Learning Strategy in Science lessons - Example of Good Practice. *Procedia-Social and Behavioral Sciences* 149 (pp. 297-301). Elsevier.
- Fleming, D. (2000). *A Teacher's Guide to Project-Based Learning*. ERIC.
- Kilpatrick, W. H. (1918). *The Project Method*. Columbia University's Teachers College Record.
- Larmer et. al., J. (2015). *Setting the standard for project based learning*. ASCD.



Lazăr, I., & Faciu, E. (2019). Project Based Learning as Teaching Approach for Master Students. *The Romanian Journal for Multidimensional Education*, 11(4), 113-135. doi:10.18662/rrem/161

Munteanu (Merlușcă), D. (2022). Project based learning for the undergrads students. *Black Sea Journal of Psychology*, 33-51.