

## **John Dewey and the project-based learning: landmarks for nowadays Romanian education**

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### **Abstract**

The paper advocates for project-based learning (PjBL) as one of the most inspiring and sustainable educational approach nowadays. With a long history, project approach represents an important legacy of John Dewey's work. The paper aims at 1) providing a brief historical perspective on project-based learning and highlighting Dewey's contribution to the overall concept of the project approach, and 2) supporting project based learning' use at a larger scale in Romanian schools. There is a special focus on social education, as part of the revised curriculum for 4 year secondary school.

*Keywords:* project-based learning (PjBL); social education; John Dewey; 21<sup>st</sup> century skills, laboratory school

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### **1. Introduction**

Recent European policy climate shows that the society is not as harmonious as it should be, and that citizens are not as healthy and happy as they deserve to be. Raise of hate discourse and terrorist attacks, a decline in indicators of social cohesion such as voting, volunteering and interpersonal trust reflect changes which may have major consequences for the quality of democratic societies. Such concerns are interlinked – with others - to the issue of education for citizenship and education for diversity. During the last years, respect for diversity became an important topic on the educational agenda at the European level, as part of broader international arena. From an early age, children and teenagers in school encounter cultural and racial diversity, developmental diversity (including 'special needs'), gender diversity and socio-economic diversity (Mac Naughton 2006, Derman-Sparks 1989). Regardless of policy initiatives, the educational practice in the schools remains mainly mono-cultural, with little respect to the different facets of diversity, while students experience a serious gap between real life and school.

In *Experience and Education* (1938), John Dewey demonstrated that deeply personal and inherently social, learning connects individuals to each other. School experience is framed by both interactional contexts and systems of representations regarding school tasks, the self, significant others (teachers, classmates, parents) and groups. Students' experience outside school is rarely used in school. Biographical experiences of students and teachers are frequently neglected in Romanian schools. Ontological learning is less emphasized than epistemological learning, which increases the educational gap for minority (especially the Roma) and disadvantaged students. In addition to poor preparation of Romanian students for diversity, the international assessment projects (TIMMS, PIRLS or PISA) reflect also poor preparation for present realities. "Education at a Glance 2010: OECD Indicators" draws attention to human capital in the context of financial crisis, impact of education on adults' chances of employment and quality of life. Calls for change are coming from many places.

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## 2. Project approach: a bridge between past, present and future

Understanding John Dewey as a key author for changing both the concept and practice of education, this paper highlights the project-based learning (Pjbl) as a catalyst for emerging efforts into nowadays Romanian educational system, A short historical overview reveals the importance of American educators' experience.

### 2.1. The project approach in American education

Michael Knoll (1997) in his study *The Project Method: Its Vocational Education Origin and International Development* identified the following key stages in project's use in education:

- 1590-1765: The beginnings of project work at architectural schools in Europe;
- 1765-1880: The project as a regular teaching method and its transplantation to America;
- 1880-1915: Work on projects in manual training and in general public schools;
- 1915-1965: Redefinition of the project method and its transplantation from America back to Europe;
- 1965-today: Rediscovery of the project idea and the third wave of its international dissemination.

As proved by historians, the "project" work appeared in the late Renaissance in Italian architecture schools. Later, it incorporated scientific knowledge and became prominent as part of the syllabus of engineering schools in the United States (1765–1880) (Pannabecker 1995). According to the longitudinal analysis of Fallik et al., from 1880 to 1915 projects were integrated into public schools in America as part of the vocational education movement. John Dewey and his group advocated projects as a means of "learning by doing" based on student self-interest and a constructivist approach. In 1918, Dewey's student William Kilpatrick formalized "The Project Method" and became popular in the Progressive Education movement. In parallel, the use of projects in education blossomed in Europe and Russia. During the 60's and 70's, the project approach lost popularity in the United States (Blumenfeld et al. 1991; Marx et al. 1997; Thomas 2000); but, since 1980, the approach has gained popularity in districts not constrained by mandated standardized testing. Within the last two decades, a great deal of experience and knowledge about Pjbl has been reported (e.g., Knoll 1997; Thomas 2000; Krajcik and Blumenfeld 2006).

### 2.2. Dewey's laboratory schools

A century ago Dewey made clear three important functions of the schooling. His recurrent and intertwining themes of education, democracy and communication are summed up in the following excerpt from the first chapter, "Education as a Necessity of Life", of his 1916 book, *Democracy and Education: an introduction to the philosophy of education*: "What nutrition and reproduction are to physiological life, education is to social life. This education consists primarily in transmission through communication. Communication is a process of sharing experience till it becomes a common possession." (1916, p. 6) Dewey pointed out that the pre-ordained and authoritarian knowledge approach of modern traditional education was too concerned with delivering knowledge, and not enough with understanding students' actual experiences.

Dewey's vision on school reflects many concepts and ideals behind it initially and as it evolved. Over one hundred years later, Dewey's influence can be felt in curriculum and instructional settings. One way Dewey's school connected society and academic subject matter, was to bring 'human occupations' such as cooking, weaving, and carpentry, into the classroom to help students understand fields of organized knowledge such as chemistry, geology and mathematics. "Children learned by re-

enacting the drama of human development” (Tanner, 1997, p. 2). Dewey and his teachers included curriculum that focused on human similarities. All humans must eat, cook, build houses of some type and have to clothe themselves somehow. Dewey’s idea was that by working on solutions for similar problems, there would be more peace between various ethnic and cultural groups of people. Observing the changes in society, from a mostly agrarian society to an industrial society, Dewey also recognized that, because of the changes where both parents might be outside the home working in factories and therefore, children might lack the character training they might have had in the past when parents had more presence in the home, some form of character education should also be included in a school’s curriculum. Dewey wrote in 1899 in *School and Society* about a school needing to become: “an embryonic community life, active with the types of occupations that reflect the life of the larger society, and permeated throughout with the spirit of art, history and science. When the school introduces and trains each child of society into membership within such a community, saturating him with the spirit of service, and providing him with the instruments of effective self-direction, we shall have the deepest and best guaranty of a larger society which is worthy, lovely, and harmonious”. (Dewey 1899, pp. 43-44).

In 1896, Dewey established a laboratory school at the University of Chicago; it became a landmark for progressive education and a major inspiration source for many teachers.

Laurel Tanner created a list of features found in a Dewey school (1997, pp. 176-177):

1. It is organized as a social community; children are learning in the active setting of a miniature community.
2. There is a developmental curriculum that begins in kindergarten with children’s natural interests and abilities.
3. The curriculum has two dimensions, the child’s side (activities) and the teacher’s side (facts and generalizations in the major fields of knowledge).
4. The teachers are specialists in their subject fields.
5. The social significance of subject matter is brought out in instruction.
6. Children have hands-on experiences in the manual arts.
7. Children are engaged in solving real problems, past and present. The subjects in the curriculum are integrated in the way that they work and are synthesized in the real world.
8. There is a powerful organizing vertical theme.
9. Curriculum thought is vertical; teachers have a longitudinal view of the curriculum.
10. Teachers work together in planning theme-related activities.
11. Teachers confer frequently, informally and formally.
12. The school is imbued with a test-and-see (experimental) attitude.
13. The curriculum is continually being developed and plans are modified as new difficulties and potentialities are found.
14. There is a close relationship with a university.
15. Classes are small enough to give individual attention to each child.
16. The child’s attention is self-impelled.
17. Regarding discipline, appropriate behavior is determined by the nature of the work to be done.
18. In the case of individual discipline problems, the child is redirected into a different activity with the same objective.
19. Younger groups begin the day by reviewing what was accomplished the day before and planning the day’s work cooperatively; older children start right in on their independent projects.
20. Children are free to move around in the room and seek help from others.

21. The teacher is viewed by the children as a fellow worker in the activities in progress, instead of an all-powerful ruler.
22. Children are developing habits of cooperation and service to the community.
23. Teachers support the child's aspirations.
24. The school takes advantage of cultural and educational institutions in the community to enrich the curriculum and children's lives; Dewey's idea that there is no lower or higher education, just education, is in operation.
25. The children are happy.

Many of these features are desirable in school all over the world. What of experimental schools' legacy could be realistically found in nowadays schools?

### *2.3. Project-based learning in the present*

Throughout its history, learning through project work has been based on different educational models. Today, there are different variations of Pjbl. Despite the differences, Pjbl is a teaching-learning approach that guides students to learn the concepts of selected disciplines while using inquiry skills to develop research or design products (Blumenfeld et al. 1991; Thomas 2000). It has been recognized for many years throughout the world, from elementary schools to universities.

Reconsidering Dewey's educational philosophy, projects stimulate young children and students to learning from life, as long as they are encouraged to find answers and learn about a subject in the context of complex, multifaceted, and realistic problems. Project approach involves the use academic skills in the service of intellectual pursuits (Katz, Chard & Kogan 2014) within different period of time, up to some weeks. Depending on student's age and project complexity, critical thinking, culturally situated learning, cooperation skills, co-responsibility, public visibility etc. are encouraged and assessed as outcomes of the project based learning, beside academic achievements. The old paradigm of academic teaching and learning within the school is breaking down, and schools can use such powerful, engaging, inquiry based methods that prepare young people to live in *their* world rather than ours. The entire school, the community or the city could become the learning environment. *Briefly, based on the constructivist background, the project approach represents a student-centered pedagogy, a comprehensive instructional endeavour which consists in individually, small or larger groups in-depth extended investigation of a topic or problem, worthy of the student's interests, energy and time.*

Literature review and research projects in the US and elsewhere (Harmer 2014; Holm 2011) have shown that students who engage in Pjbl develop skills of independent learning (including problem-solving), learn to be more open minded, remember what they learn longer, and perform better on standard achievement tests than non- Pjbl students.

### *2.4. Relevance of Dewey's perspective for nowadays Romanian education*

In East European countries (such as Romania and Bulgaria) systemic educational change efforts were mainly supported by EU funds and inspired by EU policy, trends and norms. For example, inclusive education means efforts for mainstreaming children with special educational needs and improving educational opportunities for minorities and disadvantaged groups. At the supra level, there is a common European framework on social justice and intercultural education. Therefore, at the macro level, political rhetoric and interest in funding have attracted researchers' attention. At the meso level, stakeholder interest has drawn attention to regional and local strategies. Whereas internationally, the issue of respect for diversity in education is reflected by several important schools of thought, the practitioners who implement education for diversity projects and programs have little ownership of curricula, spaces and time, and are not clear about the models underlying their activities (e.g. laissez-faire, special provisions, cultural understandings school, equal opportunities and

antidiscrimination school). Lack of ownership and a low level of reflexivity have strong influence on teacher energy, enthusiasm and effectiveness. Despite the written principles of the national curriculum, Romanian schools still have a strong emphasis on content and academic skills and weak support for the emotional and social skill development of their students. The hidden curriculum counts. Perceptions of school as a learning environment affects student results, well-being (Awartani, Whitman, and Gordon 2008) and their civic skills (Steiner-Khamsi et al., 2002). Parents have almost the same academic perception about what is worthwhile to learn at school. Therefore students (especially as they get to middle school and high school) are often like drivers in a long traffic jam, as Senge commented in 2003.

Students and teachers in Romania confront a highly de-motivating atmosphere, with strong focus on academic content and skills, but low engagement (in practical educational activities) of emotional and social skills, poor connection to individual and community life and biographical experience. More than ever, school staff members and students face strong criticism: the mass media show a proliferation of cases of aggressive behaviors in schools (both of students and teachers), increasing drop-out rate, disconnection between skills and qualifications provided by schools and labor market, scarcity of early childhood provision, low quality of pre-service and in-service teacher education. Many teachers are familiar with the curricular principles and innovative ideas (like integrated learning, cross curricular themes), but very few are willing and able to put such ideas into daily practice. Another issue is connected to social aspects of individual and group development, which are crucial for academic learning, social skills and emotional wellbeing of students. There are many explicit or implicit questions that can be found both in Dewey's work and contemporary debates in Romania:

- How to keep students as eager and natural learners?
- How to keep teachers genuinely motivated for teaching and education in a complex environment?
- How to continuously re-shape school energy to be a learning organisation?
- What types of approaches and strategies to have in place in order to make inclusion, equality of opportunities, sustainable development more than slogans within the educational policy level?
- How to bring back human energies and the sense of togetherness within the school or classroom community?
- How to inspire and keep solid/ vivid/ consistent the learning orientation of a school?

### **3. Project-based learning as a resource for the future**

As already stated, advocating for Pjbl grounds on past, present and future. Back to Dewey's focal question, despite the fact that in real life, the boundary between life, work, school is less and less, in many Romanian schools remain a kind of separate universe. Why living and learning are artificially separated, instead of being inseparable in an organic and fruitful way? How to put into practice values, principles and pedagogies we need in contemporary world? Project approach can facilitate such necessary change. Nourished by a long and diverse tradition, nowadays Pjbl represents:

- a pedagogy which engages and challenges students and provides them with learning experiences relevant to the 21st Century (collaboration, problem solving, critical thinking and technology integration) while prioritizing choices of project content to maintain high respect for core knowledge;
- an effective way to enhance student experiences of civic participation, solidarity, cultural diversity and, further on, as a platform for personal, professional and social experiences in adult life.

Many teachers, policymakers and researchers all over the world ask questions about how to prepare students for nowadays world, rapidly evolving global and technological changes, influenced by migration, economic discrepancies and terrorist attacks. 21st Century knowledge and skills, as now perceived, while building upon core content knowledge, include information and communication skills, thinking and problem-solving skills, interpersonal and self-directional skills, and the use of information and communication technologies.

A 2010 work, *21st Century Skills: Rethinking How Students Learn*, edited by James Bellanca and Ron Brandt highlights five types of minds that are needed for this new era (Gardner), education policy changes required to bring these skills to the forefront (Darling-Hammond), teachers as models of critical thinking (DuFour), technology and its future impact in increasingly global and self-driven education (Richardson), emotions of teaching and leading and the sustainability of change in education (Hargreaves), cooperative learning, conflict resolution and positive negotiations (Johnson & Johnson), collaborative culture of a professional learning community, emerging technologies, policy, and leadership (Dede), use of Blogs, Wikis and Web tools in classrooms (Richardson).

Although its significant educational potential as constructivist teaching-learning strategy is recognized, Pjbl has not been used on a large scale in Romania. Although “better reflects the goals we want each student to achieve, demonstrate, and document” (Pearlman, 2006), you cannot easily find evidence about Pjbl use in Romanian schools and classrooms. Pjbl is more frequently found in higher education, for several reasons (Ulrich & Ciolan, 2016): higher level of maturity of students, smaller size of students groups, better facilities, greater autonomy of professors for their own planning, teaching and assessment and, last but not least, the European Bologna process (which encourages collaborative learning and requires quality assurance procedures audited and evaluated).

#### **4. Discussions**

Why to highlight Dewey’s major contribution as a landmark for contemporary education in Romania? At one hand, the argument relies on the inner philosophy of the project approach: learning by doing principle, connection of school to life, social goals of education, finding solution to real problem. Pjbl involves student-centeredness, authentic learning, civic participation and many life skills Romanian education intends to focus on in the future.

At another hand, educational context is strongly influenced by recently revised curriculum framework for secondary schools. According to updated structure approved in May 2016, secondary students will study one hour per week “social education”. Social education became a compulsory subject for the 4 year secondary studies. More specifically, under the generic label of social education, students will have one hour per week for Critical thinking and children’s rights (5th grade), Intercultural education (6th grade), Education for democratic citizenship (7th grade) and Financial and economic education (8th grade). The underlying Law of Education (2011 updated in 2016) focuses on a paradigm shift: from a strong academic learning toward skills oriented learning.

As it happened before in case of other policy initiatives, the “implementation”, as key stage, is the most difficult part. Project-based learning represents a crossroad for such a paradigm shift. It can bring the “oxygen” needed by teachers and students. The American inspired program Citizen Project, inquiry based teaching experimental classes and other innovative efforts prove that Pjbl can become the solution for daily teaching practice.

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John Dewey [1859-1952] an influential philosopher, psychologist and educational thinker, published his book on Democracy and Education: An Introduction to the Philosophy of Education in 1916. One hundred years later what is the relevance of Dewey's work in general, and this book in particular? John Dewey [along with Lev Vigotsky and Jean Piaget] is often considered as the father of constructivism. He believed that learning is a social, communal process requiring students to construct their own understanding based on personal experience.