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SCHOOL PROJECTS IN PRIORITY EDUCATIONAL TERRITORIES - GEOGRAPHICAL EXPERIENCES IN UNIVERSITY OF OPORTO (PORTUGAL)

PROYECTOS ESCOLARES EN TERRITORIOS EDUCATIVOS PRIORITARIOS - EXPERIENCIAS GEOGRÁFICAS EN LA UNIVERSIDAD DE OPORTO (PORTUGAL)

PROJETS SCOLAIRES DANS LES TERRITOIRES D'ÉDUCATION PRIORITAIRES - EXPÉRIENCES GÉOGRAPHIQUES À L'UNIVERSITÉ DE OPORTO (PORTUGAL)

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ABSTRACT:

Current education must prepare students for a global, uncertain and rapidly changing world, and this is not achieved with the excessive fragmentation of knowledge that occurs in school subjects. This is more evident when we talk about territories that, due

to their characteristics of socioeconomic or cultural exclusion, make the education of young people an even greater and priority challenge. In this sense, a group of higher education teachers implemented Project Based Learning with students from elementary and secondary schools enrolled in the Educational Territories Program for Priority Intervention (TEIP), trying to test more engaging work methodologies for these students. These experiences are presented in this article, discussing the importance of project work for the promotion of school activities, the context of the TEIP program and the projects developed, to finally conclude on the significance of the contents covered in learning and training of young students.

KEYWORDS:

Project-based learning; TEIP; inclusive education; Geography.

RESUMEN

La educación actual debe preparar a los estudiantes para un mundo global, incierto y en rápido cambio, y esto no se logra con la excesiva fragmentación del conocimiento que ocurre en las asignaturas escolares. Esto es aún más evidente cuando hablamos de territorios que, debido a sus características de exclusión socio-económico y / o cultural, hacen de la educación de los jóvenes un desafío aún mayor y prioritario. En este sentido, un grupo de maestros de educación superior implementó el Aprendizaje Basado en Proyectos con estudiantes de escuelas primarias y secundarias matriculados en el Programa de Territorios Educativos para la Intervención Prioritaria (TEIP), tratando de evaluar metodologías de trabajo más atractivas para estos estudiantes. Este programa y estas experiencias se presentan en este artículo, discutiendo la importancia del trabajo-proyecto para la promoción de actividades escolares, el contexto del programa TEIP y los proyectos desarrollados, para finalmente concluir sobre la importancia de los contenidos planteados en el aprendizaje y formación de jóvenes estudiantes.

PALABRAS CLAVE:

Aprendizaje basado en proyectos; TEIP; educación inclusiva; Geografía.

RESUMÉ

L'éducation actuelle doit préparer les *élèves* à un monde global, incertain et en *évolution* rapide, ce qui n'est pas possible avec la fragmentation excessive des connaissances qui se produit dans les matières scolaires. Cette constatation est d'autant plus *évidente* lorsque nous parlons de territoires qui, en raison de leurs caractéristiques d'exclusion socio-

économique et/ou culturel, font de l'éducation des jeunes un défi encore plus important et prioritaire. En ce sens, un groupe de professeurs de l'enseignement supérieur a mis en œuvre l'apprentissage par projet avec des élèves des écoles élémentaires et secondaires inscrits au programme d'intervention dans les territoires éducatifs (TEIP), essayant de tester des méthodologies de travail plus engageantes pour ces élèves. Ce programme et ces expériences sont présentés dans cet article, discutant de l'importance du travail de projet pour la promotion des activités scolaires, du contexte du programme TEIP et des projets développés, pour enfin conclure sur l'importance des contenus couverts dans l'apprentissage et formation de jeunes étudiants.

MOTS-CLÉS:

Apprentissage par projet; TEIP; éducation inclusive; Géographie.

1. INTRODUCTION

1.1. The importance of Project-Based Learning

The compartmentalization of knowledge in current teaching-learning process does not prepare students for a global, uncertain and rapidly changing world. Presently, new generations are required to adjust quickly and effectively to new functions, places and people, which requires the development of critical and reflective thinking, autonomy, responsibility, social-emotional competencies and creativity of students, as well as the use of academic knowledge and technology skills constantly updated (Johnson and Kress, 2003). In other words, students need to develop skills that allow them to question established knowledge, because we cannot continue to educate young people for our past (Schleicher, 2017). The school has to change its form of organization, transforming itself into a space that guarantees the effective right to learning and prepares young people for the 21st century, drawing the near future in a way that promotes multiple skills, aptitudes, and abilities in students that have different socioeconomic and cultural backgrounds, as we live in multicultural societies (Nieto, 2005; Banks, 2010; Osler, 2015).

The long process of evolution of educational systems has increasingly consolidated the idea that the curricular fragmentation of knowledge, instead of its articulation - even in the context of a given discipline (Gerhard and Filho, 2012) - must be associated with collaborative educational practices that work in the interstices of knowledge, a complex space where unexpected situations are built today. And if recent events on a global scale (such as the coronavirus pandemic) reveal that technology is capable to quickly respond to crisis and challenges in several domains of our life, in the field of education this question arises more strongly and not always in a positive way. The essential escapes,

namely the ability to work and act together - because the means provided by technological resources can't replace the importance of 'presence' - and, therefore, implies the loss of opportunity to cultivate in students the sense of community in the definition of values and common purposes as a collective basis for individual learning, beyond the tendency to aggravate inequalities between students (Bowers, 2011; Burbules and Callister, 2018).

Although sometimes work in schools tends to develop in scientific and technically multidisciplinary teams, often functioning with large groups that participate in a project context - in such a way that it is common to talk about an educational, curricular, or training project, among others - these practices are not yet common as an active methodology for teachers, that will also have to adjust to a new way of perceiving the school education, necessarily different from the one they face during their training support. However, due to the availability of scientifically multifaceted professionals, the school is, of course, the privileged space for the development of works that aim to transform ongoing realities that want to improve and promote quality.

The principle of education and social development can only be based on the interaction and freedom of human learning, otherwise we would have performances similar to 'robots' that cannot be "unfaithful" to their genetics, that is, they work confined to the space of their programming and, therefore, do not produce transformation. Thus, it is understood that Project-Based Learning (PjBL), due to their problematizing and work grouping aspects, constitute one of the privileged ways of approaching content involving students in problem solving, while exercising ways of thinking and drawing objectives of personal development (Cachinho *et al.*, 1991; Almeida 1999). In other words, it is all about mobilizing knowledge, initiative and creativity to structure actions that aim to promote change in a given situation, group and / or person (Agostinho, 2017).

From the identification of a problem situation, to the definition of purposes, guidelines, objectives, action plans, evaluation of resources (human and material) until its accomplishment, PjBL involves a lot of work. For a more 'resigned' teacher, it is easier to follow the traditional methods, without having to go through the tasks of developing an idea, operationalizing it and evaluating its impacts. However, the recent changes in the Portuguese education system, has been promoting and stimulating important modifications. The *Profile of Students Leaving Mandatory Schooling* ('Despacho' No. 6478/2017) reinforces the idea that the school, and the entire education system, must adapt to the defined profile of students' skills at the end of compulsory education, placing the emphasis on principles that privilege "... freedom, responsibility, appreciation of work, self-awareness, family and community insertion and participation in the society" (DGE/MEC, 2017, p. 31).

In fact, it is necessary to think and reflect on the challenges facing education and teachers, through the promulgation of two legislative documents ('Decreto-Lei'

no.54/2018 - amended by 'Lei' no.116/2019 - and 'Decreto-Lei' no.55/2018), so that each School, within the legal framework of *Inclusive Education* and *Curricular Autonomy and Flexibility*, is able to build appropriate and effective responses, defining the educational action to be implemented according to the needs of the students, the particularities of their socio-economic, cultural and environmental context and the available resources that can be mobilized.

The *Inclusive Education*, "...where each and every student, regardless of their personal and social situation, finds answers that enable them to acquire a level of education and training that facilitates their full social inclusion", is legislated and assumed by all ('Decreto-Lei' no. 54/2018, p. 2918). However, reality does not reflect this ideal: the number of retentions is still quite high, many young people reach 18 years of age without completing secondary education and the schooling of our population is still far below the European average. In fact, grade retention and premature school leaving rate between 2003/2018 reaches 14.1% of the students of basic education and an average of 36% on secondary (DGE/EEC), while 50.2% of the population has not accomplish secondary or higher education, for a European average of 21.9% (PORDATA, 2019).

The new educational paradigm requires, therefore, a more critical and dynamic attitude able to generate challenging pedagogical practices based on coherent and consistent skills with the demands of our era. The values, principles and areas of competence of the *Student Profile on Leaving Mandatory Schooling* (DGE, 2017b), *National Citizenship Education Strategy* (DGE, 2017a), *Essential Learning* (DGE, 2017c), *Curricular Autonomy and Flexibility* (DGE/MEC, 2018a) and the new *Inclusive Education* legal regime (DGE/MEC, 2018b), emphasize the need to provide a better teaching-learning process, contributing to increase educational success and equity among all students. In this sense, school paradigm must understand that the "...realization of meaningful learning and the development of more complex skills presuppose time for the consolidation and integrated management of knowledge, valuing disciplinary contents, but also interdisciplinary work, the diversification of procedures and instruments of assessment, the promotion of research skills, relationship, analysis, the mastery of communication and argumentation techniques, the ability to work cooperatively and with autonomy." ('Decreto-Lei' No. 55/2018, p. 2928/9).

Autonomy and flexibility of curriculum calls for innovation in its management, taking into account the context and characteristics of the students and school, as well as the 'essential learnings' – by means of collaborative work of teachers (Palmeirão e Alves, 2017) - aiming to improve the success of all students, since "... it is in the way of teaching that will be found the potential that enables, induces and facilitates the learning of others" (Roldão, 2010, p. 5). However, this change only materializes with the involvement of the 'leading actors', because it implies their assumption of the need and urgency to innovate, and agreement that the new ways of working with students make it possible to

enhance their school results. These changes are achieved by encouraging the sharing of experiences, namely through the development of projects and continuous training.

For schools and students, it can be said that this governmental ‘imposition’ creates the necessary context to move forward with more creative activities – namely the PjBL – specially in school groups with socially and/or territorial disadvantaged environments, that in Portugal are framed by the TEIP Program - Educational Territories for Priority Intervention.

Project-based learning has great advantages over individual work, as it embodies an active and innovative methodology, focusing not only on the quality of academic learning, but also on the valuation of social and collaborative skills. PjBL can be developed in a variety of ways, however, its most relevant characteristic is that students must seek for answers or solutions to problems which they face in the ‘real world’, thus establishing the relationship between the theory and practice of learning. Being a dynamic, cooperative, integrated and interdisciplinary process, which encourages students to (de)construct, reflect and critically debate, in a cooperative way, experienced problems, this methodology allows them greater freedom of management and regulation of their learning, that becomes meaningful (Masson *et al.*, 2012; Bender, 2014; Cipolla, 2016). Teachers are the guides and facilitators of the development of students’ autonomy, monitoring the process, helping in research and instigating reflection. The PjBL methodology, often originating from research-action work from higher education institutions, benefits from the availability of schedules dedicated to interdisciplinary practices in schools, creating the space and time to imagine forms of collaborative work anchored in the syllabus of different disciplines.

Another important question is the new ICT tools - allow easy and rapid access to knowledge and foster the research and information processing tasks that the project work requires (Boss and Krauss, 2014) - but they must be mediated by educators. However, it is exactly among socially and economically disadvantaged students that problems persist and even worsen in a scenario of strong use of technological resources, as demonstrated by the experience of distance learning following the social confinement imposed by the pandemic Covid19. The students who do not have internet or computer, feel closely the aggravation of social exclusion that affects, in particular, the priority intervention territories (TEIP). The pandemic is obliging to solve a problem that has always existed: if all students have equal access to education, this is confined to the school; because outside its walls the living environments are different, and some of them create profound inequalities in the education of individuals whose academic development requires the completion of the same stages (exams, for instance) for everyone!

This is the logic that moved us in the implementation of PjBL, mainly with schools located in less favoured territories from a social and economic point of view. So, the

question that was raised five years ago and which remains very present in our work, is to evaluate the extent to which the contents/essential learnings of basic and secondary education and the methods of Geography can be sufficiently strong challenges to mobilize young students to think and feel, critically, the territories where they live.

Some of the experiences, carried out in schools included in TEIP program, resulted in a set of projects whose implementation allows the synthesis we present, reflecting on its importance for students and teachers. We will start by making a brief characterization of the TEIP Program in the national territory, followed by the presentation of projects developed in schools in the Metropolitan Area of Porto, ending with a critical assessment of the results.

1.2. The program of Educational Territories for Priority Intervention (TEIP)

Inspired by the *Zones d'Éducation Prioritaires* previously defined in France (1981), the Portuguese Ministry of Education, through 'Despacho' No. 147-B/ME/96, determined that the TEIP should proceed, establishing the proceedings to be adopted by schools belonging to these territories, as well as the pedagogical priorities of the educational project. This initiative arose from the need to implement positive discrimination measures in educational territories socially and economically disadvantaged, implying the adoption of exceptional measures to mobilize equity *vis-à-vis* other territories. So, the program was created with the objective of improving and creating conditions for the universalization of a quality basic education and promoting the academic success of all students, especially children and young people who were at risk of social and school exclusion (Ferreira e Teixeira, 2010).

The effort made by the 35 educational communities (then selected) to motivate students for learning – mobilizing resources and partners according to the characteristics of the student groups - was certainly the opportunity to work in a different way by creating disruptions with more traditional forms of teaching. In addition to financial support provided, other measures, such as the reduction of the number of students per class, have contributed to the promotion of a teacher-student approach. In other words, the conditions were created to implement teaching-learning methodologies that were more adjusted to students, based on the definition of objectives aiming to increasing school success, objectives that were accomplished through work-projects.

A decade after these initiatives, the Metropolitan Areas of Lisbon and Porto denounced relevant situations of school exclusion that demanded urgent measures. The 'Despacho Normativo' n° 55/2008 fulfills this quest by regulating TEIP2, that would have to present solutions to the problems identified in their educational community. So, they were required to present multi-annual educational projects that would lead the way to achieve

improvement of results (of the teaching-learning process, educational success, reduction of premature school leaving, increased involvement of families, among others), and the school should position itself as a fundamental pillar of young people's transition to active life. It also calls on the educational community to assume co-responsibility and build multidisciplinary teams in communion with all educational agents, allowing students to improve their school results. These teams and initiatives are thought to be the engine of the desired transformations, since they are allowed, together with the direction of schools, to design new ways of acting, directed to the needs and difficulties of students inserted in social vulnerable contexts.

The 2009/10 TEIP Program report, indicates its implementation in 105 school groups involving around 10% of students from portuguese public education, concentrated mainly in the north of Portugal and in the Lisbon and Vale do Tejo region, respectively 40.9% and 41.5% of the TEIP. Regarding investment, this report indicates that 83% of funds was spent on human resources, with the remaining 17% for 'goods and services' (DGE, 2010).

The reflection about TEIP2 program, published in 2012 and reporting to the year 2010/11, points out some recommendations that indicate the difficulties felt in internal operating practices of the institutions, in the teaching-learning methodologies, and also in the interactions with external school agents, highlighting the need to:

- *consolidate the intervention in the classroom with a special focus on the 1st cycle;*
- *deepen the action of the pedagogical teams, collaborative work, articulation between teachers and between teachers and technicians;*
- *maintain pressure on the most fragile learning areas and the most vulnerable audiences, investing in innovative student support systems;*
- *make monitoring and evaluation instruments more effective, committing intermediate structures with the management of improvement plans;*
- *take advantage of the full potential of external consultants;*
- *strengthen cooperation networks with the community by mobilizing wills and expanding the resources that may be mobilised" (DGE / MEC, 2012, p.8).*

The distribution of the budget within the framework of TEIP2 maintained the structure of priority investment in teaching and non-teaching staff, but the regional distribution of funds had suffered some changes, namely through the increased number of students from Algarve in this inclusion program, instead of North and Lisbon and Vale do Tejo or, to a lesser extent, the Center region, which recorded a loss of TEIP students. Although over a very short period - because just one year has passed since the last report - these figures denounce not only the evolution trend of Portuguese population,

revealing a decrease in younger age groups, but also the attention that progressively was provided to educational needs of more peripheral areas, that is, more distant from the urban centers of greater density (DGE / MEC, 2012).

Facing the rapid evolution of schools eager for priority intervention in the national framework, the following year, through ‘Despacho Normativo’ No. 20/2012, October 3th “...the second generation of educational intervention territories are constituted, as well as the rules for the elaboration of program contracts to be awarded between educational establishments and the Ministry of Education in order to promote and support the development of educational projects that, in this context, aim to improve educational quality, school success, transition to active life, as well as community integration” (Op.cit.:33345). The conditions were created for schools to independently define an improvement plan grounded on structured knowledge and based on clear and unequivocal evidence of students and school reality, in order to give a concrete and effective response to the improvement of the more fragile success indicators, considering that these schools “... must have increased possibilities for the implementation of their own projects, strongly based on evidence and on the knowledge they have about local realities.” (Op.cit.: 33344)

Today the TEIP Program is implemented in 137 schools of territories “... economically and socially disadvantaged, marked by poverty and social exclusion, where violence, indiscipline, early school-leaving and academic failure are most manifest, [having as] central objectives (...) the prevention and reduction of early school leaving and absenteeism, the reduction of indiscipline and the promotion of the educational success of all students” (DGE / MEC, 2013).

In summary, TEIP3 gives autonomy to the school to incorporate other elements that can bring added value to its action plan. This new framework focuses on the actions that schools identified as susceptible to promote the quality of learning and students’ results; prone to reduce early school-leaving, absenteeism and indiscipline; a better transition from school to active life; and school intervention as a central educational and cultural agent in the life of the communities in which it operates.

2. THE CHALLENGE OF WORK-PROJECTS – THE START, THE MATERIALS AND METHODS

Five years ago, when started the first edition of the Master in Geography Teaching in the 3rd cycle of Basic Education and Secondary Education at the University of Porto (MEG-FLUP), has begun also a more effective process of building bridges between the University and the Schools involved in the training of Geography teachers, and these links were implemented through work-projects. In other words, we wanted to expand the ‘teaching’ of pedagogical practices through spaces that were not confined to an ordinary

pedagogical training, offering to master students the opportunity to face and work - in their first (or second) year - with the reality of a school. In the same way, faculty doors were opened to students and teachers of Basic and Secondary Education, to facilitate the development of projects research that went beyond the curriculum themes, what was not the tradition as the A3ES Board of Directors pointed out in the report produced for the MEG accreditation in 2015.

From this moment of accreditation and reflection, we started a journey centered on the will to change the way the University relates to Schools, a relationship that, without any doubt, could not be confined to the supervised teaching practice. It was also necessary to work with young people from those levels of education, in the context of curricular extension through themes linked to their syllabus, but in spaces and times that exceeded the teaching periods, without any imposition and considering their own free will.

Initially, in 2015/16, we moved forward with the idea of captivate young people of different levels of education for the need to promote their 'land' (the lived territory), giving birth to PROM @ TT project. The success of the implemented activities led Porto City Hall (CMP) to invite the team to integrate the *SEI Project* (Society, Teaching and Research), that culminates, in just one year, with a replication segment of previous success cases, trough *SEI Pedagogical Practices* (PP-SEI). In the following academic year, however, despite the contacts received by countless schools in order to move forward with the development of the projects, this was not possible due to changes in the dynamics of Department of Education of CMP and, therefore, there were no conditions to ensure the natural follow-up of the work-projects.

At the beginning of the 2018/19 academic year, MEG proposed to FLUP, as a UP Organic Unit with autonomy to lead projects with other institutions, that, through the signing of protocols, it could formalize the connection between university and schools. Then emerged the project *FLUP @ 2E - Teaching and Education*, the legal device we have today. In point 2 of the first clause of this protocol, it can be read that "The FLUP @ 2E project is based on the establishment of a partnership between FLUP and the School, aiming the development of one or more projects during the school year by the students of the school above mentioned, with the supervision and scientific monitoring of FLUP second teaching cycles, but may involve other study cycles". This document also states that FLUP must monitor the projects, guarantee the fulfillment of objectives through scientific supervision and organize a final event to display the results. The Schools are responsible for ensuring the fulfillment of the project's objectives and join FLUP in supervising the collection, processing and analysis of information. Therefore, was established the basis for the development of work-projects and multiple activities with MEG and the Basic and Secondary Schools.

This evolution is shown in Table 1, which reveals a complex consolidation process, that arises from a higher education study cycle related to the professionalization of Geography teachers. We know that everything would be easier if a group of teachers decided to move forward with a tight thematic project exclusively developed in schools, however, that was never our purpose. As we have already said, the motto of these work-projects is the thematic flexibility, functioning on a collaborative basis between schools and university and promoting the development of young students of basic and secondary education and young teachers in formation of MEG-FLUP

School	2015/16 PROM@TT	2016/17 SEI	2017/18 PP_SEI	2018/19 FLUP@2E
Alexandre Herculano	1 class	1 class		
António Nobre		1 class	1 class	1 class
Eugénio de Andrade			1 class	
Fontes Pereira de Melo		1 class	2 classes	3 classes
Gonçalves Zarco		1 class	1 class	1 class
Leonardo Coimbra			3 classes	
Nossa Senhora de Lourdes			1 class	
Paredes	1 class			
Senhora da Hora	1 class			

PROM@TT Promote your Land, SEI Society, Teaching and Research, PP_SEI SEI Pedagogical Practices, FLUP@2E FLUP Teaching and Education

TABLE 1. TEIP schools involved in MEG-FLUP projects

With some nuances in the project focus - because we always strive to give students some freedom of choice - the idea was to always involve students in work-projects that themselves considered appealing, starting with challenges set by teachers (from schools and the faculty) based on the syllabus.

The motto of our work-projects emerged in 2015 when it was announced that 2016 would be proclaimed the *International Year of Global Understanding (IYGU)*, under the slogan “building bridges between global thinking and local action”. This idea was in line with the strategic priorities defined by Portugal within the *Sustainable Development Agenda 2030* (UN, 2015), of which we highlight quality education, gender equality, reduction of inequalities and environmental protection. So, we had here an ample justification for the development of local projects (related to nature, culture, economy,

etc.) with global impact, with objectives focused on understanding, equilibrium and sustainability in peoples' live.

One of the first steps in the construction of these projects was the identification of a PROBLEM to be solved, which should involve the discovery of significant and interesting elements (meaning and interest assessed by students) in the school's territory. In other words, it was necessary to select sites, monuments, buildings, infrastructures, events, that, due to their beauty, culture or history, can be attractive / appealing to visitors, thus contributing to the promotion of students' LIFE TERRITORIES. Identified the problem and the analysis scale, the next step was to define the MEANING OF INTERVENTION, that is, the formulation of objectives and the workflow planning, assessing the availability of necessary RESOURCES, keeping in mind the responsibility of the school, families and the partnership of Local Authorities, the students' mobility for training and field surveys, the availability of tools to georeferencing, collect and analyse data inside and outside school/faculty.

That is how the MEG-FLUP started the activity of implementing a technical and scientific challenge with a geographic base, anchored in the promotion of local territory of schools. So, if one of the challenges of the IYGU was related to "Geographies that change - the global reach of local actions", then the development of knowledge and valorization/promotion of local identity through field and online research, statistical and cartographic processing using *Map Creator* from Here, *ArcGIS* and *Story Maps*, was the 'bridge' between students, schools and the world.

Thus, the idea for the work-projects allowed to define five specific objectives: (1) value local culture and identity as a support for global awareness; (2) collect, register and analyse relevant sites/events to local promotion; (3) contribute to the formation of solidary citizens; (4) formulate global geographical explanations from local observation; (5) catalyze geographic knowledge for "global understanding".

To achieve these objectives, six work phases were designed. In the first phase, FLUP teachers went to schools to display motivational materials on the importance of valuing identity and culture in building balance and understanding at several scales, asking students to collect texts, images and / or sounds from geographic elements that call their attention in school parish, always identifying the source and / or location of data. In the second phase, students from basic and secondary education went to FLUP to learn and practice some applications and software's for georeferencing and basic mapping, session oriented by FLUP teachers and young trainee teachers. In the third phase, takes place the cabinet and field work, with groups composed by the young students and FLUP trainee teachers. In the next step – and leaving to students the choice of the meeting point(s) – takes place a session to assess and discuss the

elements collected and recorded by the students, beginning the design of the final materials (videos, posters, flyers ...), which can be developed after. These tasks take a little longer than the previous ones because they require successive advances and setbacks in the fine-tuning of the works until reaching the final version. In the fifth phase, students are encouraged to cross ideas with chairman of the (school) parish council and other agents of local community, to assess the obtained information. At last, the final exhibition of the work-project begins with the oral presentation of the results (in which promotional materials are displayed), made by all groups of students of basic and secondary education supported by young teachers in training, that ends up with an opening space for debate.

Following this basic structure students were mobilized over these four years, and the themes selected by them were diversified. Among them, we highlight: the definition and georeferencing of their “family migrations” (Pacheco *et al.*, 2017); the “hazards hunt”, implying the identification and location of elements/events (natural, mixed, technological, anthropic) that can affect people, property or environment (Soares *et al.*, 2017); “places of memory”, a time-travel through images of the same places of the study area in different time periods; “spaces to be rehabilitated”; “rurality in urban places” (Soares and Pacheco, 2019); “impacts of tourism in Porto”, “space and time from generation to generation”, or the discovery of territories preferred by “street artists”. Regarding these last projects, although it may seem that they have nothing to do with the others, its certain that they are all linked through the reading and interpretation of geographic information. Each class in each school had to choose a theme within the disciplinary areas and programs they were working, with the condition of having a local territorial base, thus implying fieldwork and methodologies for surveying and recording Geography. So, talking with the teachers of the disciplines, and then with the FLUP group (teachers and students), the work-project was organized defining a methodological structure for gathering information and monitoring the production of the final materials.

Sometimes, the students proposed a theme that, at first, seemed to be difficult to integrate it in the context of disciplinary contents. This situation happened in ‘street artists’ and even in ‘spaces from generation to generation’. But right from the start, we found that, in addition to being important to ‘grab’ the students’ proposals, due to their motivation’, it is always possible to find Geography in them (anchored by other disciplines) ... because everything have a place and takes place in space: “The immanence of space does not delimit social space, and refuses any certainty and security of orientation because “everything takes-part and in taking-part, takes-place; everything happens, everything acts” (Anderson and Harrison, 2010, apud Webb, Kalervo and Gulson, 2015, p. 74).

3. RESULTS – THE WORK-PROJECTS

In line with the guiding principles of the work-projects that the university develops with basic and secondary schools, particularly with those that fall within priority educational territories, we pursue the motivation of young people, not only for local sites/ events that are distinctive and unique - such as each student - but also for the usefulness of methodologies used to read and represent geographic features, allowing to understand different scales of analysis, starting from the development of critical and participatory local spirit for the construction of global awareness.

Thus, from the project-works developed in TEIP schools we present here some examples, with the essential of reflections, surveys and readings produced, that is, the more specific objectives and a summary of students results in terms of spatial representation.

3.1. Exploring the urban environment from local communities

LEVEL: Secondary education

OBJECTIVES: To identify hazard features/events; understand the evolution of urban spaces through analyses of old and recent cartography; recognize and reconstruct surface and underground drainage of Ribeira da Granja.



FIGURE 1. Ribeira da Granja hazards.

3.2. Art and street artists

LEVEL: secondary education

OBJECTIVES: To know Porto street art and artists; locate artists and street art; understand artists' life contexts; assess the importance of this activity for socioeconomic and cultural characteristics of Porto



FIGURE 2. Flores Street. Formerly famous for its jewellery shops.

3.3. Places of Memory

LEVEL: 3rd cycle of basic education

OBJECTIVES: to identify geographic elements with historical significance; to apprehend the transformation of urban spaces; to discover interventions for the valorization of heritage.

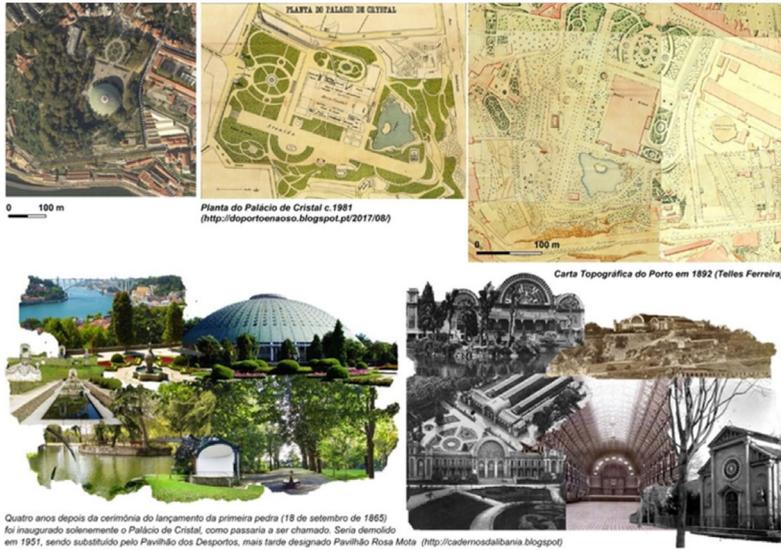


FIGURE 3. Super Bock Arena –Rosa Mota Pavillion, ancient Cristal Palace.

3.4. Risk hunting

LEVEL: 3rd cycle of basic education

OBJECTIVES: identify natural, technological, mixed and anthropic hazards in the territory close to the school; raise awareness of situations that may affect people, properties and environment; manipulate georeferencing and cartographic tools;



FIGURE 4. Risk hunting – trails and population interviews.

3.5. Circulation, consumption and tourism spaces

LEVEL: 3rd cycle of basic education

OBJECTIVES: Distinguish city functions/spaces; develop critical reading on the territorial occupation; infer dynamics of urban areas transformation.



FIGURE 5. Santa Catarina street, one of the most important shopping streets in Porto.

3.6. Tourism in historic neighbourhoods

LEVEL: secondary education

OBJECTIVES: explain the distribution and diversity of urban functions; to infer the impact of tourism on local socioeconomic and cultural characteristics; to apply functional survey methodologies.

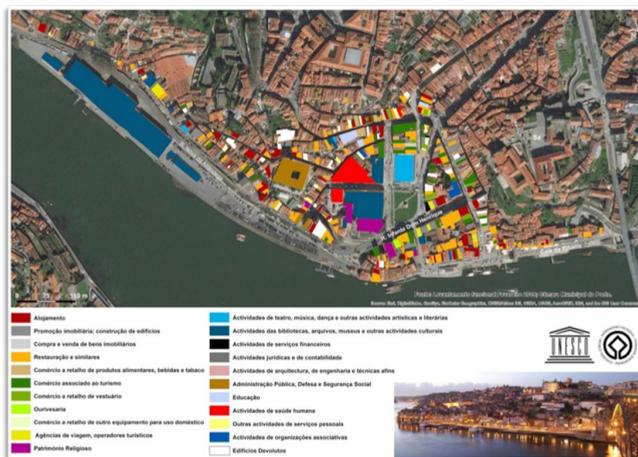


FIGURE 6. Functional survey of Massarelos parish.

4. DISCUSSION OF RESULTS AND CONCLUSIONS

The consolidation of a structure able to sustain the performance of work-projects through a protocol hosted at FLUP, ended up in some pedagogic experiences, although without a 'true' evaluation of each of the developed projects. However, we have recorded the real enthusiasm among young people from all participating schools, especially when it was time to get together in order to present and discuss the results of their work at the university. Similarly, even in a non-systematic way and confined to the online links with students through social networks - namely by Facebook private groups created for communication while the project was ongoing -, after a year we applied a questionnaire to students about what they liked most. All of the 187 respondents remembered with enthusiasm the work-project, with 62.5% referring that the activities carried out at the university, the discussions and sharing of ideas, the used methodologies and being able to work in FLUP (a space that, for many of these young people, seems far from reach), was clearly the most striking. A smaller fringe, with 25.8% of responses, pointed to data collection work outside the school, with respective georeferencing tools, as well as the manipulation of maps. About 12% considered that the search for documents and images, old and recent, in online archives was a surprise, admitting that later they returned to search for information not only on the websites already used, but managed to find other links of interest for their schoolwork. These records, either because we felt that young students were more motivated with Geography, or because we felt that they were more interested to proceed their studies for higher education, gave us the strength to insist on building bridges between university and school with legal support through the formalization of collaboration protocols.

The exchange of results between students from different schools resulted in the enrichment of knowledge and the interest about research, but especially the increase in students' self-esteem and confidence in themselves and in the group, a fundamental aspect in these TEIP schools where young people rarely receive praise for their academic performance.

The geography teachers' feedback also manifests the strong interest of the Schools to maintain the work-projects, especially because they are in line with the dynamics imposed by the new legal framework, as mentioned above. In fact, from the development of scientific knowledge through the deepening of the essential learnings inscribed in the curriculum, to the reinforcement of teacher-student interpersonal relationship, collaborative work mediated by geographic methodologies (observation, survey and data analysis, graphical and cartographic representation using multiple analogic and digital tools, among others), promote multiple literacies anchored in widely participated experiences. Furthermore, the teachers saw their work valued, understanding the importance of the collaboration with colleagues from other scientific

areas, and the need to adjust educational practices to future citizens that are going to face an unpredictable and complex world.

Although we do not have data to assess the influence of the work-project in promoting learning progress/success, we know, through the challenges that students and schools already proposed for the next school year, that these experiences were positive and fit on Basic and Secondary Education requirements for the levels in question. In fact, the PjBL helps the students understand the connection between the programmatic contents of the several disciplines involved, noting also the applicability of knowledge to the real world they live in.

The school, in this time of great economic, social and political disturbance, is the lever for a more integrated and humanized societal evolution. In a globalized world, the place of the school must not be limited to a lonely abandonment, always addressing the same problems and the same answers. New approaches are needed to allow different responses to solve emerging and unexpected problems.

Now, if the entire educational community is important, there is no doubt that a substantial part of the changes must start by and with teachers, who have to be receptive to modifications and try new strategies. Multidisciplinary teams, allowing teachers from different scientific areas to work on a common project, may be the great driving force behind the necessary changes in today's school. They allow bridges between the subjects, (re)build new dynamics, bring together and motivate new actors and lead them to understand the need to act differently about the same problem. PjBL inside and outside the school, crossed with other strands of knowledge, weave networks that complement and help each other by joining people with another 'look' at the same reality, urging the school to develop new ways of working with the entire educational community. Oriented by this purpose, new protagonists, new educational practices and new strategic actions - that promote measures and changes inside and outside the classroom - are gaining space. All the educative agents must be engines of organizational transformation, participating and encouraging work-projects that allow to change the crystallized routines, motivating and giving a new meaning to teaching-learning process.

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