



Case 'Learn to Know: Whole Body Search' – Educational Innovation Project in a Florianopolis/Brazil's School

Monica Wendhausen¹, Silvio Luiz Indrusiak Weiss², Sonia Maria Martins de Melo³, Rui Marques Vieira⁴, Rui Neves⁵

Abstract

This work aims to communicate an innovative educational experience in action, implemented since 2014 (4th year of execution) in a public school in the city of Florianopolis-SC (Brazil). Refers to the project "Learn to Know: Whole Body Search". With an innovative learning methodology for the country's educational standards, it is based on authors of Critical Thinking (Vieira & Tenreiro-Vieira, 2000, 2005), Emancipatory Education (Melo, 2011) and on the assumption that the child engages playfully in the research, in its biopsychosocial entirety. The theoretical foundation is also based on the methodological dynamics of scientific research, adapted to children from 6 to 10 years old (1st to 4th grade), with emphasis on a step-by-step approach developed by the researcher in scientific initiation. Initially, the teacher encourages the child to observe the reality, the facts and the activities of daily life, with brainstorming and other dynamics, subjecting them to a kind of serendipity. After a period of exploration of subjects, each group chooses the theme that will be searched during the year, passing to other phases of scientific research: - formulation of the hypotheses / questions to investigate; - literature review using books, internet searches, field trips, visits to scientific institutions; - planning of strategies for data collection; - response to questions / hypotheses and organization of results; - publication and exhibition at the Science Fair (data analysis and conclusions). The topics researched are the most diverse: Ancient Egypt, Japan, dolphins, theater, body movements, Astronomy, musical instruments, shells, children of the world, etc. Annually about 500 students, 230 families, 40 teachers participate in the project, as well as approximately 30 institutions and many volunteer researchers / consultants. Each year around 40 activities and research projects are developed. Since the implementation of the project, the school has achieved a great change in the quality and results of the teaching-learning process, in which students have become more protagonists and autonomous in the search for knowledge, finding democratic solutions in decision-making. Teachers became more motivated by this process, seeking creative pedagogical solutions to the contingencies and situations-problems of the classroom. At present, a pronounced participation of the families is verified in the pedagogical process and in the management of the school.

Keywords: *Critical Thinking. Learning Methodologies. Autonomy. Family Involvement. School Research.*

1. Introduction

Many innovative initiatives have been developed in schools and educational institutions around the world, aiming at improving the teaching-learning process, the autonomy and protagonism of the student. However, we observed that a large part of educational proposals stumble, failing to achieve the desired success due to several factors, among which is the poor relation with the expectations of teachers, students and school community (parents) and, consequently, an absence of accession. In addition, many are proposals outside the context of the school, imposed on teachers and without identity with the community.

¹ University of Aveiro, University of State Santa Catarina, Brazil

² University of Aveiro, Portugal. Brazil

³ University of State Santa Catarina, Brazil

⁴ University of Aveiro, Portugal

⁵ University of Aveiro, Portugal



International Conference The Future of Education

The successful initiatives are, for the most part, productions that occur in society and in the practical knowledge of teachers, but with a consequent acceptance of the whole school community, especially the engagement of families (parents), generating new contexts of educational innovation within educational institutions. [1]

At the *Adotiva Liberato Valentim* Primary School in Florianopolis, Brazil, since 2014, about 4 years ago, an educational project has been implemented with important results observed, both in the change of posture of teachers and students in the teaching-learning process, the Student autonomy and participation in the educational process, as well as in the engagement of families in order to implement / improve the proposal and in the democratization of the school.

The project's dynamic and innovative approach is based on the step-by-step application of the scientific research method, mainly in relation to research strategies, where the researcher identifies problems / researches, promotes a broad review of the theme, formulate as questions / hypotheses and responds / validates based on the information / data collected. At school, it is believed that the adaptation and application of procedures as a didactic activity can help to promote the critical and emancipatory education of the student, with a wide margin for 'serendipity', as long as he is the protagonist in a free choice of the research subject, finding the consensus of the class democratically. For Melo et al. (2011), an education guided by an emancipatory paradigm takes into account the needs, knowledge and experiences of the subjects involved in the educational processes, leading them to a deep and intentional reflection of their actions. The process of teaching and also of learning always occurs together 'with' the other and never 'over' or 'towards' the other. Important links are established that result in a social and solidarity co-responsibility between the individuals involved in this process. [2]

Tenreiro-Vieira and Vieira (2001) in an approach related to critical thinking, widely reviewing the bibliography in this area, emphasize that the teacher should be a problematizing actor and involve the student in the discussions, encouraging him to take responsibility for his own learning, taking Awareness of what to do and evaluating the tasks already accomplished, proposing his own alternative resolutions. [3]

2. Didactic sequence of method

In this project, the didactic sequence of the method consists approximately in the steps taught in the work of scientific initiation developed in the academic environment, so important in the formation of the researcher. The following is a brief description of each one.

2.1 Initial exploratory phase (1st stage)

Initially, each class of the school and each individual student is encouraged to 'observe' their environment, paying attention to objects, animals, people, facts, events, not just nearby, but media news, current and historical, as well as all kind of peculiarity. The teacher asks the main question of the project: What do you want to learn this year at school? This phase extends over a period of 2 months (beginning of the school year). The children make exploratory field trips, watch videos, search the internet and the library, and discuss their experiences intensely in the classroom. This is a phase of the project extremely fertile in ideas and suggestions, where curiosity and restlessness is stimulated. Teachers guide students to record everything that is interesting.

2.2 Definition of the theme and problematization (2nd stage)

It is important to understand that in the context of the school it is not possible for each child to choose its theme, because there would not be enough structure and time to make the material and human resources operational to approach everyone. Then, each class will choose their theme, to develop the research throughout the school year. At this stage, the teacher often uses brainstorming to collect students' themes and preferences, promoting discussions to better clarify the class on preferred subjects. In the end, the theme is chosen by the class by voting. One of the interesting actions observed in this phase is the initiative of groups of students already decided by a theme, to carry out campaigns of mobilization trying to convince the undecided ones, having a process of negotiation and argumentation. After choosing the topic, there is a period for formulating the questions (questions to be investigated) that will become the goals that will guide the whole investigation. It is important to



International Conference The Future of Education

highlight that during the data collection new issues can be incorporated. This phase extends for up to 2 months.

2.3 Definition of 'instruments' and data collection strategies (3rd stage)

At this stage, there is a need for advice to teachers, since not all of them dominate the area of scientific research. Adapting to the school environment, the protocols (for documentary / bibliographic and field research) and the data collection schedule are elaborated. In all cases, they should be made with the students. They are summarized as 'observational records' for the visits, 'interview scripts' for the approach of the speakers, 'record sheets' for searches in books, magazines and on the internet, among others. Exceptionally, the elaboration of protocols can extend to the phase of data collection, due to contingent demands. This period does not exceed 1 month.

2.4 Data collection (4th stage)

At this stage, naturally, the students have already mobilized their families by themselves and are engaged in researching the subject together. The parents are oriented to act as facilitators, providing the means for the students to have access to information outside of school in their free time. This phase is very rich in technical visits, support by professionals and specialized institutions in the chosen subjects, intense circulation of lecturers and consultants in the school and visits to universities and research institutes, besides the assiduous attendance of the classes in the library and the computers room. Teachers guide the recording of all research in journals, drawings, photographs, filming. There are often initiatives for creating blog's, videos on You Tube, etc. Here, much of the teaching activity is focused on stimulating, problematizing, creating together with the student an environment conducive to the research and investigation of the subject. This is the longest stage of the project and can be extended for 4 or 5 months.

2.5 Final report and 'publication' (5th stage)

It is idealized and organized annually the Science Fair, with much engagement of the school community. This is the main 'publication' where the results of all the work developed throughout the year are presented. The results are also presented in social networks, developed jointly by students and teachers.

3. Experience report

Here we briefly report some relevant aspects of the project that have occurred throughout its execution.

At a School Board evaluation meeting in 2013, a mother questioned the low use of the computers room and library by the teachers and students. This questioning later resulted in the conception of the project, supported by an external consultant and a student's parent. In the last 4 years, the project has reached approximately 500 students, 250 families, more than 40 teachers and educators, as well as 80 professionals and research partners. This initiative resulted in nine regional awards and two national awards; four scientific publications; one doctoral thesis and two others in progress. In addition, currently this methodology is being implemented in two other Brazilian schools.

Initially, in the implementation of the project, there was some resistance from some teachers, questioning the lack of time to comply with the annual curriculum. As soon as the activities started, it was possible to adapt the official contents of the curriculum to the subjects researched.

It is noticed that students throughout the stages of the project become protagonists and acquire autonomy for decisions of all kinds, appropriating the project as 'their' and spontaneously organizing / participating in: - open polls, dissemination of the topics through posters and interviews, seminars and simulated juries; - small events, workshops and scripted works; - study outings and guided tours; - visits in laboratories and research centers; - portfolios, models, videos and further media.

One of the great 'products' of this project is the adherence and participation of families in the studies and researches carried out by the children. One of the strategies was the creation of the 'scientific bag', which takes into the students' homes the knowledge that is being elaborated in the classroom.

Within this context, in a long-term perspective, the implementation of the project is promoting the complete revision of the political-pedagogical project and the strategic management lines of the school.



International Conference The Future of Education

References

- [1] Gvirtz, S., Larrondo, M. (2007) Notas sobre la escolarización de la cultura material. Celulares y computadoras en la escuela de hoy. *Teías*: Rio de Janeiro, 8 (15-16).
- [2] Melo, S. et al. (2011). *Educação e sexualidade*. 2ed. Florianópolis: UDESC/CEAD/UAB.
- [3] Tenreiro-Vieira, C. & Vieira, R. (2001). *Promover o pensamento crítico dos alunos: propostas concretas para a sala de aula*. Porto: Porto Editora.