



**EXPEDUCOM**

# **A HANDBOOK ON EXPERIENTIAL EDUCATION.**

## **PEDAGOGICAL GUIDELINES FOR TEACHERS AND PARENTS**

Erasmus+ Project:

Experiential Education Competence  
(teaching children aged 3-12) – EXPEDUCOM

The grant reference number:  
2014-1-LT01-KA200-000368

### **Editors:**

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## **FOREWORD**

**Violeta KAMANTAUSKIENE**

Experience-based education is the method or way of teaching through doing, namely it is the process during which young learners obtain knowledge and skills via personal experience. Individuals are involved in a particular activity which they reflect, analyze and that brings higher level of awareness and/or changes in behavior

World tendencies require to educate young learners so that they were creative, flexible, able to analyze, think critically.

It is common sense that the most predominant tendency in education is to educate young learners so that they become creative, flexible, able to analyze, critical thinkers, independent and democratic citizens.

EXPEDUCOM is a project risen from the needs to meet the requirements of the modern world via developing and implementing innovative educational practices related to experience-based pedagogical approach addressed to children aged 3-12.

The project outcomes target at strengthening the professional profile of in-service educators as well as students - future teachers by developing pedagogical guidelines on experiential education, open educational tools-real life cases, offering training for improvement of professional and communicative skills, improving curricula of pre-school, primary and teacher training institutions.

This handbook rose from the needs to meet the requirements of the modern world via developing and implementing innovative educational practices related to experience-based pedagogical approach educating children aged 3-12.

This handbook constitutes an approach for investigating the theoretical and practical training strategies from the perspective of experiential education. The purpose of this paper aims to provide theoretical and practical tools useful in early education specialists and primary education by developing practical strategies component, to support the development of educational activities and research to adapt permanently instructive approach to the specific demands of contemporary society. Due to changes at multiple curricular authors develop paradigms for training future teachers and introduce the need for activity planning, implementation and evaluation of training through experiential learning activities, thereby contributing directly to improving interactive teaching strategies.

Given the above, this handbook is organized as follows:

*Part A.* General framework on experiential learning

What is experiential learning? (Concept; Characteristics of experiential based learning; The principals of experiential orientation; Experiential based learning stages; Teacher roles; Children roles; Integration of experiential learning in teaching); Overview of conceptual foundations on the experiential based learning (Instructional models for the experiential learning theory; Dewey's foundations for the experiential based learning; Implications of Vygotsky's ideas on learning process; Bruner's conceptual contribution to the experiential based learning; The Jean Piaget's perspective; Kolb's experiential learning theory); Citizenship and 21<sup>st</sup> century education (An overview of 21<sup>st</sup> century skills education; What kind of citizens are needed in the Netherlands in the 21st century?); Different approaches of experiential education (Reggio Emilia Approach; High Scope Approach; Pedagogy in Participation or MEM)

*Part B.* International research report on experiential learning approaches

*Part C.* Examples of experiential based learning developed in different countries structured as case studies on experiential education in kindergarden and case studies on experiential education in primary school.

This handbook aims to provide the necessary and adequate information regarding experiential learning and teaching and is directed to parents, students and educators of preschool and primary school children. More specifically, the outcomes of the project directly address teachers working in kindergartens and primary schools; students of pre-school and primary education; teacher trainers, researchers at universities providing pre-school and/or primary education; parents or anybody interested in education of children aged 3-12.

**PART C.**

**EXAMPLES OF EXPERIENTIAL  
BASED LEARNING DEVELOPED IN DIFFERENT  
COUNTRIES**

## Chapter 7.

### CASE STUDIES ON EXPERIENTIAL EDUCATION IN PRIMARY SCHOOL

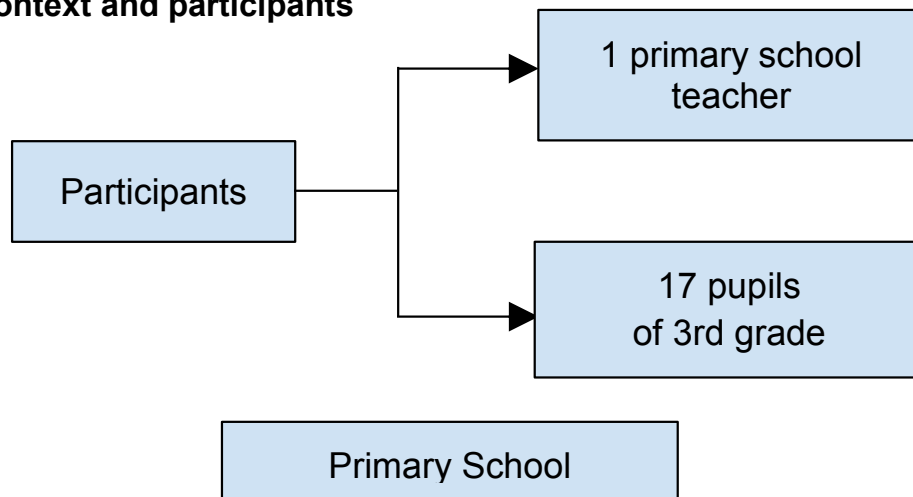
#### Alphabetical Country Order:

No.	Country	Title of the case-study
Case Study no. 1	Greece	<i>How the “refugee issue” helps children become citizens of the world</i>
Case Study no. 2	Latvia	<i>Three little piglets and how they built their houses</i>
Case Study no. 3	Lithuania	<i>A beautiful world. Noun plurals</i>
Case Study no. 4	Lithuania	<i>Happy geometrical shapes</i>
Case Study no. 5	The Netherlands	<i>From people planet prosperity towards involved citizenship</i>
Case Study no. 6	Portugal	<i>Researching about space, astronauts, planets and stars</i>
Case Study no. 7	Romania	<i>Experiential Learning Project In Primary School: Let’s Count Outdoor!</i>
Case Study no. 8	Romania	<i>Architectural and Environmental Issues As Experiential Learning Activity</i>
Case Study no. 9	Romania	<i>Experiential Learning Project In Primary School: Bean's Diary</i>
Case Study no. 10	Romania	<i>Experiential Learning Project In Primary School: Build A Parachute!</i>
Case Study no. 11	Turkey	<i>Wind power</i>

## 7.6. RESEARCHING ABOUT SPACE, ASTRONAUTS, PLANETS AND STARS

Inês SILVA<sup>40</sup>;  
Cristina MESQUITA<sup>41</sup>  
Polytechnic Institute of Bragança, Portugal

### Context and participants



### Pedagogical approaches

The teaching-learning experience described in this case study follows an approach based on inquiries as a base for a problem-solving strategy, involving the use of several procedures. As referred in the perspectives of Dewey (2007) and Bruner (2008, 2015), the inquiry based learning approach emphasizes the participation and responsibility of the child to discover knowledge new to him. This highlights the involvement and the action of children, and also the need to organize it in a clear and sequentially investigational process.

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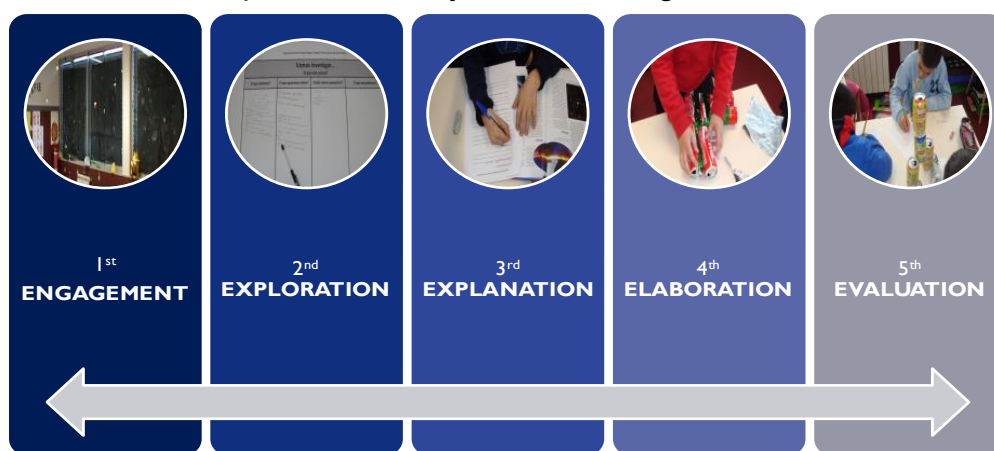
This approach aspires to the involvement of children in the knowledge discovery, in an authentic learning process.

### **Teaching and learning experience (description)**

The teaching and learning experience was developed in a primary school, in a third grade class. It was designed from a problem that emerged from the curiosity of children, sparked after reading a story. It assumed a holistic and interdisciplinary approach, and the action was planned from the ideas and interests that children revealed about the subject.

### **Contextualization**

We started reading the story "One, two, three, planet n.º 20" (Gomes, 1983). We created, in advance, a suitable environment to narrate the story. We dimmed the lights, closed the shutters, projected stars on the ceiling to create the idea of a night sky. We made an expressive reading of the story, projecting the images on the interactive whiteboard. The students were engaged by the reading. The conversation about the story was a great moment of reflection. Many questions were made by the children, and many doubts emerged. This dialogue created the conditions for the development of the research. The procedure is synthetized in figure 1.



*Fig 1. Summary of the teaching-learning experience*

#### **1<sup>st</sup> Step: Research question**

The main research questions that arouse were: what are the planets? who can travel in space?

#### **2<sup>nd</sup> Step: Exploration**

Children wanted to find out the answer to the questions they had about the stars. They were motivated and interested in the investigation.

With the intention of knowing the preconceptions of children, to establish the main research questions, we asked each student to answer a questionnaire with questions such as, among others: what is a planet? what are the stars?

The questionnaire was answered individually and without any kind of help, to establishing a reference for the evaluation process and use it to compare the children knowledge on the subject in the final moment.

### **3<sup>rd</sup> Step: Explanation**

When they completed the questionnaire, we provoked a large group discussion about their ideas about the space, planets and stars. Then, they suggested what they wanted to know.

Each child set his ideas and questions in his diary and on the placard, previously prepared for the registration of the research questions.

Together we agreed that we would find answers to the questions in books on the topic, in textbooks and on the Internet.

On the next day, starting again from the story, the following question emerged: "Who can travel to other planets?". All the children seemed to realize that only the astronauts could do such activity. Because of that, children also wanted to know how a person can become an astronaut.

We gave each child a guideline, with all the questions they have asked. They should research for answers on books, encyclopedias, on the Internet, following a list of given website links.

### **4<sup>th</sup> Step: Elaboration**

After completing the researched, children began to build a more clear idea about the issues under study. The next challenge was how could they communicate the knowledge they built to their colleagues.

It was decided that each group would prepare a narrative to show to the others what they had learned.

The teacher made the suggestion to create a narrative in a different way. Some children would create astronauts, others would build spacecrafts and others would create space, galaxies or other environments where the story could happen.

We provide waste materials so that they could build the characters (astronauts, aliens, spacecraft and environments).

Once they finished, we formed sub-groups, each consisting of three children: one that built an astronaut, other with the spacecraft and another with the environment. Based on their objects, each of these sub-groups wrote a storytelling, applying the previously knowledge. When they finished, each group presented it to the class.

### **5<sup>th</sup> Step: Evaluation**

At the end of the week, after the completion of the research, we asked the children to answer a new questionnaire about the subject, in order to check if the conceptions had changed after. The majority of the children had more meaningful ideas about the subject.

### **Using in other contexts and age groups**

Although developing the process described in this paper with a class of the third grade, transferability is possible to other levels of education. The procedures developed in the learning experience that include involvement, problem solving, exploration, inquiry, communication and evaluation, should be encouraged in all levels of education.

The teacher's mediating role and the children's action are aspects that must be considered in the pedagogical interaction in schools.

In this regard, we believe that, with the appropriate adjustment of languages and considering the complexity of the issues and themes, this activity can be developed in different educational environments and age groups.

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