



# Ministry of Education - Guyana



In collaboration with the **OAS** and **ProFuturo FOUNDATION**

2020. CARICOM. INNOVATION ROUTE: PROFESSIONAL LEVEL

## PEDAGOGICAL INNOVATION

### Training Manual for Teachers of Riverine and Hinterland Region



## Message form the Minister of Education



### Dear Teachers

Across the world, the COVID 19 pandemic (Corona Virus) continues to cause undesirable disruption to the global education systems. Guyana, as you know, was not spared. As such, we implore you to keep engaging our nation's learners and we applaud those of you who have tried and continue to try. We heard your concerns when you told us you were uncertain about how to teach using different means, that you lacked confidence, and that you felt you were not equipped. This is our first response in partnership with the **OAS and ProFuturo Foundation**. This training will give you the much-needed knowledge and expose you to the tools you need to deliver education differently by being innovative and by using easily available technology.

We are aware that the cost of data is of great concern to you and we have remedied that by partnering with GTT and Digicel to zero rate the ProFuturo platform domain. This means that when anyone accesses the training platform, data will not be consumed. If teachers have neither devices nor connectivity, we will arrange a suitable location and

if teachers, as those in the hinterland and riverine areas, cannot access either, even with our help, we have arranged for part of the program to be done through these printed modules because we know that it is only a matter of time before you are able to access connectivity and devices. We will never leave you behind.

I encourage you to take this training offer with vigour so that you can be better prepared to do what you love: influence by teaching the next generations.

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# Unit 1

## Pedagogical Innovation



# Starting point

We will start by performing an analysis of the **traditional school** and finish by putting into practice actions and strategies enabling us to break down this well-established paradigm: **innovating at school**.

To do so we will work with three innovative learning methodologies and already proven results:

- ✓ Problem-Based Learning.
- ✓ Project-Based Learning.
- ✓ Experiential Learning.



# Goals

- ✓ To analyse currently-used pedagogical methodologies.
- ✓ To compare methodologies and types of schools.
- ✓ To assimilate the methodologies in order to put them into practice.
- ✓ To design the model which works for each teacher.
- ✓ To learn about success stories.



# Outline of contents

## Pedagogical Innovation



- ✓ The school before
- ✓ Draw your path

## Problem-Based Learning



- ✓ What is it?
- ✓ Competences for the 21st century
- ✓ How is this done?
- ✓ Practical application

## Project-Based Learning



- ✓ What is it?
- ✓ How is this done?
- ✓ The teacher's role
- ✓ Practical application

## Experiential Learning

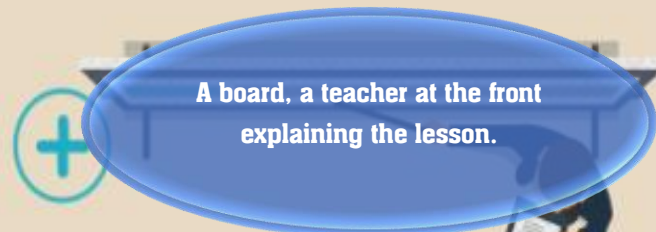


- ✓ What is it?
- ✓ How is this done?
- ✓ Practical application

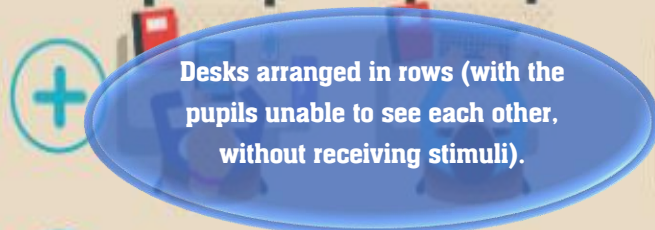
# The traditional school vs the 21st-century school

Click on the icons for more information.

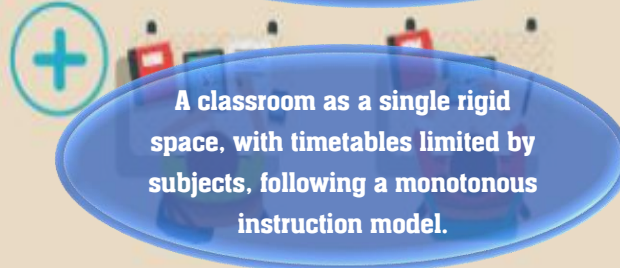
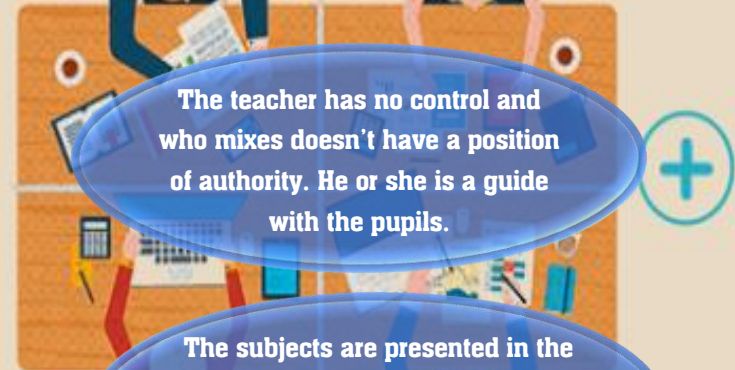
The school as we know it conventionally has a structure inherited over the centuries.



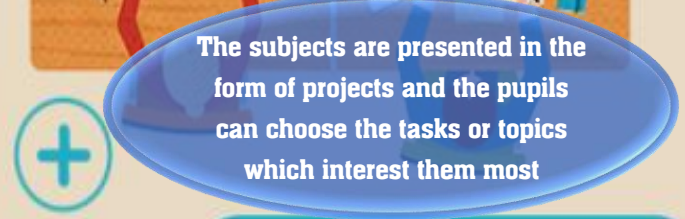
What are the desks like in your classroom?



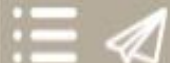
How are the pupils organized, by alphabetical order, for example?



What is your place in the classroom? How or when do you move around the classroom?



Know more...



Know more

## Find the differences

Traditional School	21st-century School
Chiefly authoritarian methods with a guiding purpose, the teacher is the main source of knowledge.	Methods which encourage participation, the teacher has the role of guiding the learning.
The encyclopaedia is used with the main purpose of memorizing.	It is based on meaningful learning, what really matters is learning to learn.
Focused on the teacher, he or she explains and the pupils take notes.	Focused on the pupils. The lessons are dynamic. The teacher attempts to arouse the pupils' curiosity and allow them to learn by reasoning.
The pupil's learning process is not controlled in the acquisition of knowledge. The learning is linear and rote.	Active and practical learning by means of discovery is regarded as very important.
The evaluation method is always a written test.	The teachers evaluate continuously and are aware of each pupil's entire process and development.
The learning focuses on the acquisition of knowledge.	The learning focuses on the development of competences.
Exclusionary, a pupil who doesn't manage to follow the pace of the class is left out.	Inclusive, it adapts to the paces and learning styles of each student.

# Three reasons to innovate

Before innovating by putting into practice different forms of teaching, it is important to study the one which best suits you and only then put it into practice.

1 You will be more successful in your daily work because some subjects require a particular style of teaching.

2 The use of different methodologies will surprise your pupils and that will motivate you.

3 The change in the classroom will improve your communication with the pupils.



# The children's machine

Click on the vertical arrows to view the content.

In this text, from the book by Seymour Papert: "The Children's Machine: Rethinking School in the Age of the Computer", the author introduces a parable and a query.

Why, in a period in which we have experienced a revolution in many areas of our activity, have we not witnessed a comparable change in the way we help our children to learn?

We encourage you to reflect on this parable and the question posed. What would your answer be?

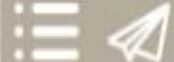


# The children's machine

"Imagine a group of travellers from the past; among them there is a group of surgeons and a group of schoolteachers who are all anxious to learn how much their professions have changed over one hundred or more years.



Click on the vertical arrows to view the content.



# The children's machine

Imagine the puzzlement of the surgeons when they find themselves in the operating room of a modern hospital. While they would be able to recognize that an operation was being carried out, and they could even guess what the diseased organ was, in most cases they would have no idea what the surgeon's aim was, nor would they understand the purpose of the strange instruments he or she and his team were using. The rituals of asepsis and anaesthesia, the piercing sounds of the electronic devices and the bright lights, familiar to regular television viewers, would seem extremely strange to them.

Click on the vertical arrows to view the content.



# The children's machine

Click on the vertical arrows to view the content.

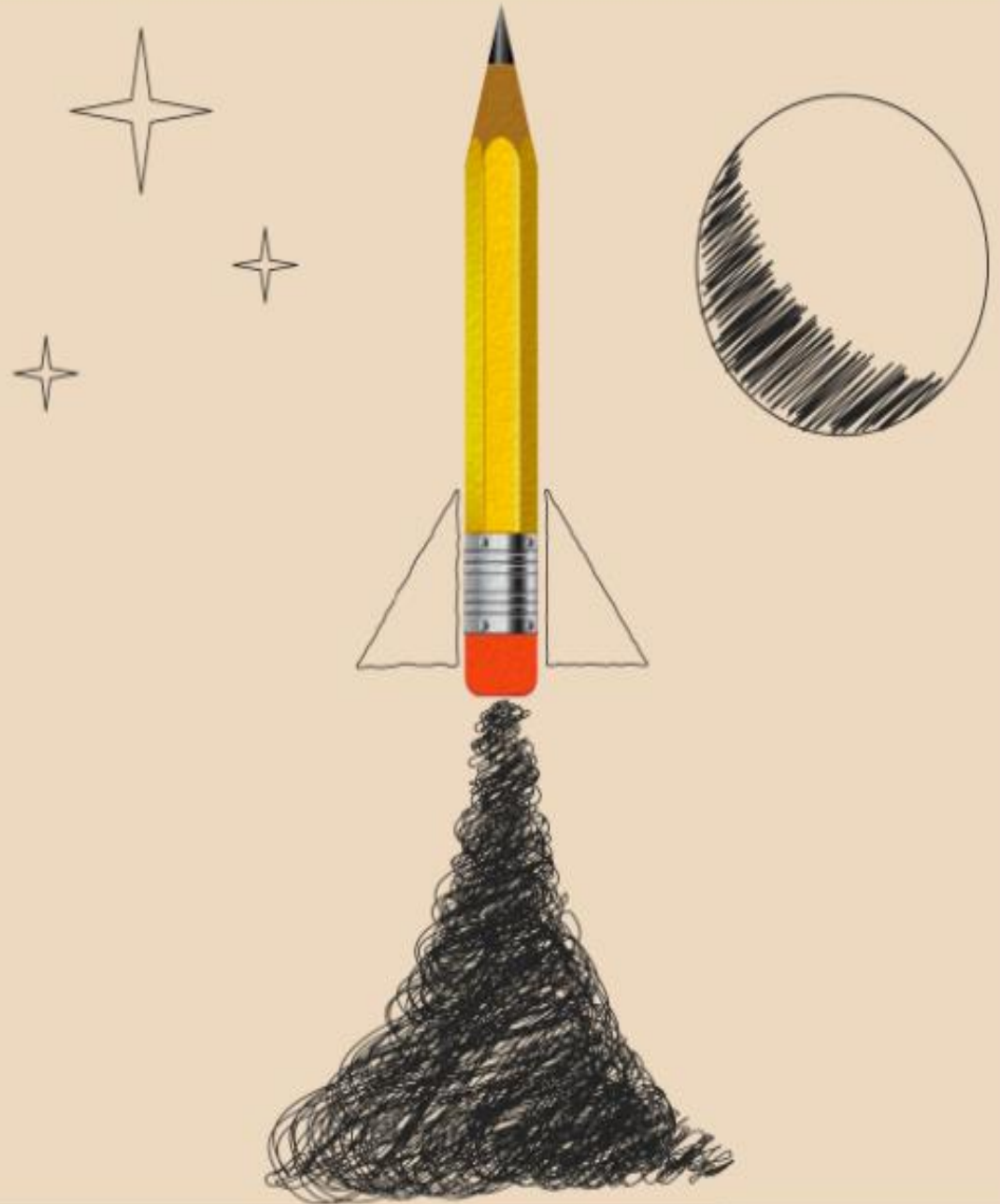
The teachers from the past, in contrast, would react in a very different way to a lesson in a modern primary school. They might be confused by the presence of some objects; maybe they would perceive changes in the application of certain techniques - and there would definitely be no agreement among them about whether the changes have been positive or negative - but it is certain that they would all perfectly understand the purpose of what was being performed and they would be perfectly capable of taking over the lesson."



# Draw your path

According to the opinion of many teachers, **the greatest task they face is the collective construction** of a school project which addresses the challenges facing the school community, which reflects on the pending issues for the pupils of the century and which questions the teaching methods which have historically produced functional illiterates.

**What project could you promote in your school to begin collective construction?**



# Route

Analyse the route you can pass through to reach a school of the future and be an innovation pro.

For more information, click on the images.

## 1. You are the protagonist

We are not the owners of a magical recipe. You are the one who will determine how and when to apply the support materials, activities and interactions we provide in this topic. You are the only person who knows your pupils and your resources. Having said that, don't let time go by! You must forecast how long may be required to develop a new activity and think of the companions who will accompany you on this adventure. Before beginning, also set the time periods for the results.

## 3. Start moving forward

The purpose of this course is to put new theories into practice at your school. This is why you will have to accept the challenge and get your hands dirty. Look for support and inspiration in the complementary materials.

## 2. Diversity of paths

You must seek the support of your companions to apply the new strategies, one by one. Test, analyse and move forward step by step. In this course we propose three new methodologies: study them thoroughly before applying them. They are independent theories; you can use them all together, use just one of them or use them one by one throughout the year. Before attempting to apply a methodology to the entire curricular programme, you should try it out; associate it with a short activity.

## 4. Company for the journey

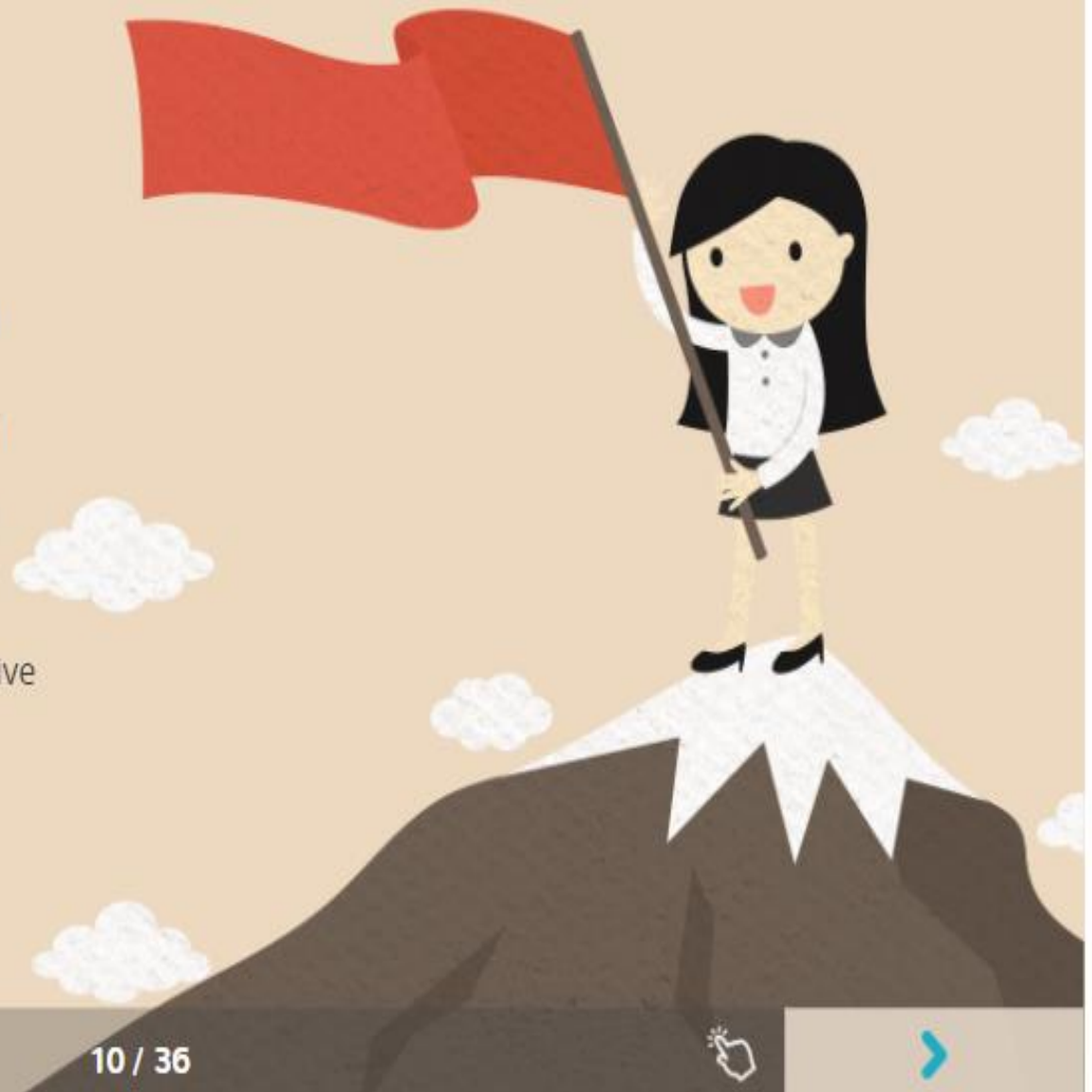
You have to choose who will accompany you on this journey. They are the people who give life to the networks. The school is a space rich in connections, in inter-connected stories and, of course, in experiences. This is precisely the wealth which will complement this course, expanding spaces, periods of time and opportunities for exchange.



# The finishing line

## What do we pursue with educational innovation?

- ✓ Facilitating the adaptation to the change.
- ✓ Promoting positive attitudes.
- ✓ Applying and popularizing new experiences which contribute to the solution of educational problems.
- ✓ Promoting creative and participatory curricular transformations.
- ✓ Stimulating a change in the teachers, based on their own educational practice.
- ✓ Sharing innovative educational experiences.
- ✓ Creating permanent conditions for the innovative experiences to become an institutionalized practice.



# Technology + Pedagogy = Innovation

In 2013, the Zeferino Lopes de Castro school in Brazil began a **reinvention process by means of the technological and pedagogical conditions** provided by Fundación Telefónica on the occasion of the *Programa Escuelas Rurais Conectadas*. The school plans to **provide all the teachers and pupils with tablets and laptops**, as well as having robotic kits, a fibre optic internet connection and a pedagogical advisory and training team.

In addition, this teaching institution has had the opportunity to dream, based on the motto "The school people want".

For more information, click on the vertical arrows.



# Technology + Pedagogy = Innovation

For more information, click on the vertical arrows.

Dissatisfied with observing the pupils' disinterest in the lessons and aware that innovation should not be exclusively limited to the use of technological equipment, the teachers and advisory team sought a more radical transformation: rescuing the pleasure of learning.

For this purpose they created the **EDITI project** (Escuela Digital de Turno Integral), **by means of which the pupils and teachers stay longer at the school** as another way of extending the learning times.



# Technology + Pedagogy = Innovation

For more information, click on the vertical arrows.

After experimenting with some proposals, the teaching staff adopted a school curriculum organized around learning projects. Within this model, the **aim of the pedagogical activities** became the topic of research chosen by the pupils, enhanced by experimentation with the technology.

The **pupils' interest determines which classmates they will work with**. A breakdown in the traditional serialization occurs. The teachers assume the role of guides.



# Technology + Pedagogy = Innovation

For more information, click on the vertical arrows.

These are some of the principles of this school:

- ✓ **build concepts** by means of research situations,
- ✓ achieve a **pleasant and stimulating school** for learning,
- ✓ **use technology** to create and design prototypes,
- ✓ develop **moral and intellectual autonomy** and shape a **sustainable conscience**.



# Technology + Pedagogy = Innovation



For more information, click on the vertical arrows.

The experience of intensively using digital technologies, the connectivity at the school and a curriculum based on scientific research are shaping a **pioneering initiative within the context of rural education** in this country.

The aim is to create models for the enhancement of the learning of children and young people in rural regions.



# Without bars or walls

We construct our reality upon the basis of our experiences and the environment in which we undergo the experiences. Analyse this case, in which a school head changed the pupils' experience by creating a personal and motivating environment.

For more information, click on the images.



## How did it come about?

*"Head, the pupils are not criminals, nor are they mad."* The beginning of the management work of Ana Elisa Siqueira was deeply influenced by this phrase, said to her by a primary education pupil at the Amorim Lima school in Brazil in 1996. So much so that she decided to take over the running of the Centre. The yard and windows were closed off by bars. The walls were grey. The children's uniforms also lacked colour. According to one of the people responsible for the cleaning at the time, it was to hide the dirt. But the setting looked more like a prison.

## The initial reaction

Ana did not hesitate for a second. One of her first measures (of the many which would end up literally transforming the school's structures) was to have the bars pulled down and to integrate the outer spaces so that the children could move around freely. With a staff of 60 teachers and approximately 780 pupils, the school knocked down the walls and organized the pedagogical activities in two large halls, where pupils from the different years study together with the guidance of the teachers as tutors.

## Result

Gathered together in groups of five, the pupils develop their personalized study paths. They research, study, carry out activities, talk with their classmates and resolve queries with the teachers. In other words, they create their own paths with autonomy.

# Hands-on activity

We invite you to design an initiative designed to **change the timetables or spaces at your school**, starting with your class. To do so:

## Step 1

- ✓ Write a summary of the problems which should be changed in your class (from one to three paragraphs).
- ✓ Highlight the potential innovations and their potential impacts.
- ✓ Indicate the basis of your initial recommendation for the possible solutions.

## Step 2

Prepare a **“propaganda campaign”** for the innovative action, geared towards your colleagues. Invite them and encourage them to take part and offer their opinions about the problems and their possible solutions.

## Step 3

After sharing the adjustments made when summarizing the detected problems and the proposed solutions, save the document and, when the end of the year arrives, check it with your colleagues.



# Summary

- ✓ How often do we stop to ask ourselves how our school's learning model was established?
- ✓ Who does this model serve? Is it true that it is beneficial for the pupils' development?
- ✓ Does it encourage intellectual development?
- ✓ How can we transform the school reality by starting in our own classrooms?

We will analyse the model of the traditional school in order to put into practice measures and strategies aimed at breaking down this well-established paradigm.



# Unit 2

# Problem-Based Learning



# What is Problem-Based Learning?

It is considered that the ability to organize data and resolve problems will be an essential competence in this century. We resolve problems every day. However, we can enhance the ways of resolving them - isn't that the same thing?

For more information, click on the images.

The aim of the implementation of Problem-Based Learning is to develop the following competences:

## Autonomy

- Oblige the pupil to think productively.
- Develop the pupil's reasoning.



## Creativity

- Teach the pupil to face up to new situations.



## Motivation

- Give the pupil the opportunity to get involved in the subjects.



## Analysis and argumentation

- Convert the classrooms into more interesting spaces, with more challenges and stimuli.
- Provide the pupil with strategies for resolving problems.



I was saying...



“Education, for most people, means trying to make the child resemble a typical adult in his or her society... but, for me, education means creating creators... you have to make inventors, innovators, non-conformists.”

Jean Piaget

# 21st-century competences

Problem-solving is a transversal competence present in several fields of knowledge. It is related to other important competences, essential for the 21st century.

- ✓ Autonomy.
- ✓ Creativity.
- ✓ Motivation.
- ✓ Cooperation.

For more information, click on the vertical arrows.



# 21st-century competences

## Autonomy

According to Kamii, *“an intellectually autonomous person needs to be truly convinced of his or her mistake in order to accept the solutions of other people, while heteronomous people believe everything they are told, without asking”* (1991). **And if, to maintain the pupils’ intellectual autonomy, their mistakes were not corrected?** That is, ultimately, a common situation in pedagogy guided by questions, problems and challenges.

When a pupil replies that an object floats because it is very light and another sinks due to the fact that it is heavy, the teacher must destabilize that momentary balance the pupil has obtained by pointing out the following fact: a ship floats and a pin sinks. At the same time, the ship’s weight greatly multiplies the pin’s. Given this new data, the pupil will have to look for a better and greater balance than the previous one (improved balancing).

For more information, click on the vertical arrows.



# 21st-century competences

## Creativity

According to Chrysikou (2014), we can define creativity as a **mental process** by means of which **we first become sensitive to a particular problem**. Once the difficulty has been identified, we test **hypotheses with regard to the question** (albeit mentally) and, finally, we obtain the **solution**.

This “response” is regarded as **creative** when, in addition to being **new**, it is **actually useful and suitable for the situation**.

Change the pupil's role for that of the teacher. Ask your pupils to create a video lasting less than three minutes in which they explain, in their own words, the content you are teaching them and upload it onto a platform so that they can view it.

For more information, click on the vertical arrows.



# 21st-century competences

## Motivation I

According to Fagundes, from the beginning of their development, the subject displays a **motivation to CREATE**:

- ✓ In the **constant** (spontaneous or provoked) **search** for new meanings.
- ✓ In the need to proceed to a **realignment in order to better understand** what they signify and constantly resignify, when what is no longer present in his perceptual field once again presents itself in his thoughts.
- ✓ In the **evaluation he attempts to carry out**, always putting the forms of its alignment to the test.
- ✓ In the **communication**, by means of these forms.

For more information, click on the vertical arrows.



# 21st-century competences

## Motivation II

If the pupils do something well, **congratulate them**; it will instill confidence (in the subject and the teacher). If we give the students their dignity, they will reward us with their effort.

If we detect a **weakness in a pupil**, we must make it clear that our comments refer to a specific piece of work, not to the student as a person. Support the pupils instead of judging them.

For more information, click on the vertical arrows.



# 21st-century competences

## Cooperation I

According to Piaget, **cooperating in the action** involves **cooperating in common**. In other words, by means of new (qualitative or metric) operations of **correspondence, reciprocity or complementarity**, adjust the operations executed by each of the participating colleagues.

**Cooperation exceeds the sum total of the individual activities** when it establishes groupings which mutually modify the participants in the interaction. In it there exists a **confrontation and transformations** of the systems of signification.

For more information, click on the vertical arrows.



# 21st-century competences

## Cooperation II

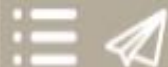
Kamii (1991) relates **the resolution of problems to cooperation and autonomy** in a rather timely talk with regard to this discussion:

When a child says that  $4 + 2 = 5$ , the best way of reacting, instead of correcting the statement, is to ask:

How did you get the result of 5?

**Children often correct themselves autonomously**, as they try to explain their logic to another person. This is due to the fact that a child who attempts to explain a logical flow must lose focus in order to present an argument which makes sense to the interlocutor. Therefore, **when attempting to coordinate a point of view with someone else's, he or she often realizes the mistake.**

For more information, click on the vertical arrows.



## Language (reading)

### Goals

- Reading of texts of the genres planned for the corresponding school cycle, combining decryption strategies with selection, anticipation, inference and verification strategies.
- Use of indicators to make anticipations and inferences in relation to the content.
- Use of the data obtained by means of the reading to confirm or rectify previously made assumptions about the meaning.
- Textual production practices - Analysis and reflection - Goals.
- The pupils are expected to autonomously use reading strategies (decrypting, anticipating, inferring and verifying) and coordinate, even if help is needed, the different roles they need to assume when producing a text: planning, writing drafts, reviewing and attending to the presentation.

## How can we put Problem-Based Learning into practice?

The resolution of problems in the classroom helps the students, in an autonomous manner, to find the solution to a problem, by **seeking, understanding, integrating and applying** the basic concepts of the content of the problem.

Here are some examples of curricular parameters which incentivize and pursue the objective of Problem-Based Learning (PBL).



Language  
(reading)



Natural sciences



Mathematics



Geography  
and history



Art



For more information, click on the images.

## Art

### Goals

To use the different languages (verbal, mathematical, graphic, visual and body) as means of producing, expressing and communicating our ideas, interpreting and using cultural productions, in public and private contexts, and addressing the different intentions and situations of communication.

## Natural sciences

### Goals

- To question the reality by formulating problems and attempting to solve them, using logical thinking, creativity, intuition and capacity for critical analysis, selecting procedures and verifying their appropriateness.
- Oral and written communication of assumptions, data and conclusions, respecting different opinions.
- Interpretation of the information by means of the establishment of relationships of dependence, cause and effect, form and function.

## Mathematics

### Goals

- To resolve problems, knowing how to validate strategies and results, developing ways of reasoning and processes such as deduction, induction, intuition, analogy and estimation and using mathematical concepts and procedures, in addition to using the technological instruments available.

## Geography and history

### Goals

- To organize historical-cultural repertoires which allow us to locate events in a multiplicity of times, so that we can formulate explanations (by means of the establishment of relationships) with questions about the present and the past.
- Comparison of different items of information and perspectives regarding the same event, fact or historical topic.
- Formulation of hypotheses and questions regarding the topics studied and registering in different forms: texts, books, photos, videos, exhibitions, maps, etc.



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# Hands-on activity: the candle problem

We present an exercise which you can easily transfer to the classroom to explain different ways of thinking to the pupils. It is a challenge for the application of **Problem-Based Learning** which fosters creativity and cooperation.

This candle problem is a famous experiment, conceived in 1945 by the psychologist Karl Dunker.

## Challenge

It consists of fixing a lighted candle to the wall and ensuring that the wax does not drip onto the table. We have a table, a candle, a box of drawing pins, a box of matches and the wall.



## Solution

## SOLUTION

The solution is very simple and serves to illustrate, among other things, that there are small details which are significant and decisive for guiding the user towards an error or success by "manipulating" his or her visual perception.

The difficulty in resolving the problem lies in the fact that an element (the box) already has a fixed function, which is to store the drawing pins. Therefore, if we presented the same problem with the same objects but with the safety pins outside the box, anyone would solve it quickly and without any difficulty.

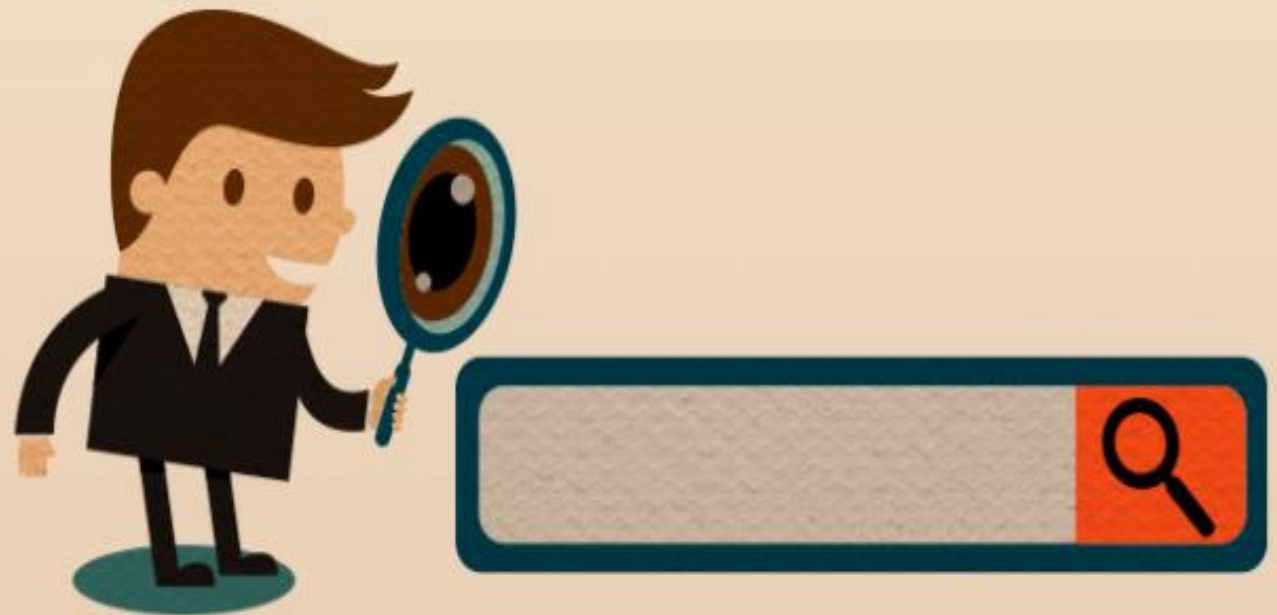
# Webquest

You can also use **Problem-Based Learning (PBL)** in online exercises or activities. To do so there is the [+ Zunal creator](#) tool.

A WebQuest is a structured activity which poses an attractive task using resources available online, selected in advance by the teacher, with the purpose of contributing to the **administration of the time** the pupils devote to the development of the latter.

A webquest must involve the following steps:

- ✓ Introduction.
- ✓ Task.
- ✓ Process.
- ✓ Resource.
- ✓ Evaluation.
- ✓ Conclusion.
- ✓ Credits.
- ✓ Didactic guide.



# Summary

The Problem-Based Learning (PBL) method is a teaching-learning strategy in which a **small group of pupils work in a group with a facilitator**, usually the teacher, **to analyse and resolve a problem** specially selected or designed for the achievement of certain **learning objectives**.

With this strategy, pupils understand the importance of **working collaboratively** and **developing analytical skills** (developing critical thought) and **synthesis of information**, as well as **engaging in their learning process**.



# Unit 3

## Project-Based Learning



# What is Project-Based Learning?

Project-Based Learning conceives the **pupil as an author-researcher**, based on the experience of a process very similar to that of scientific research.

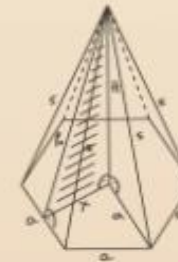
It involves the pupils in **research activities to resolve problems**, allowing them to work autonomously to **build up their own knowledge**, and culminates in specific products. The characteristics which define PBL include **contents, conditions, activities and results**.

I was saying...

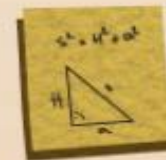
For more information, click on the button.



$$D = 2a$$
$$d = 2 \frac{a\sqrt{2}}{2} = a\sqrt{2}$$



$$P = B + H$$
$$D = \frac{6a\sqrt{2}}{2} = 3a\sqrt{2}$$
$$H = \frac{a\sqrt{2}}{2} = \frac{a\sqrt{2}}{2}$$
$$V = B \cdot H$$
$$V = 3 \frac{a\sqrt{2}}{2} \cdot \frac{a\sqrt{2}}{2}$$



$$y_{\max} = 1$$
$$x - \frac{\pi}{4} = 2k\pi$$
$$x = \frac{\pi}{4} + 2k\pi$$

$$y_{\min} = -1$$
$$x - \frac{\pi}{4} = -\pi + 2k\pi$$
$$x = \frac{3\pi}{4} - \pi + 2k\pi$$
$$x = -\frac{2\pi}{4} + 2k\pi$$



I was saying...

*“Teaching is not transferring knowledge but creating possibilities for its production or creation.”*

**Paulo Freire**

# How can we put Project-Based Learning into practice?

Source: <http://www.bie.org/pbl/overview>.

For more information, click on the images.

## Contents

- The problems are presented in all their complexity in the form of a question.
- The pupils seek inter-disciplinary relationships between the ideas.
- The pupils are face with ambiguity, complexity and unpredictability.
- Real-world issues which concern the pupils.



## Activities

- The pupils perform multi-faceted research work.
- They come up against obstacles, search for resources and resolve problems as a response to a challenge.
- They establish their own relationships between ideas and acquire new competences.
- They use authentic materials (for example, real-life resources and technologies).



## Conditions

- The pupils form part of a research group and carry out their work within a social context.
- They develop task and time management skills, both individually and in groups.
- They conduct their own work and supervise their own learning.



## Results

- The pupils generate complex intellectual products to demonstrate their learning (e.g. models or reports).
- They participate in their own evaluation.
- The pupils display development in areas which were often omitted but which are important for the real world: social, life and self-management competences and a willingness to learn on their own.



### 1. Selection of the topic and broaching of the guide question

Choose a topic linked to the reality of the pupils which motivates them to learn and allows you to develop the cognitive and competential goals of the topic you want to work on. Then broach an open guide question which will help you to detect their prior knowledge of the topic and invite them to think about what they should research and what strategies to implement to resolve the issue.

For example: How would you make the inhabitants of your town aware of healthy habits? Which campaign would you conduct to inform tourists of the history of your region? Is life on Mars possible?

### 10. Evaluation and self-evaluation

Finally, evaluate the work of your pupils in the section you have previously provided them with, and ask them to evaluate themselves. It will help them to develop their spirit of self-criticism and reflect on their failures or mistakes.

### 9. Collective response to the initial question

Once the presentations of all the groups have ended, reflect on the experience with their pupils and invite them to look for a collective response to the initial question together.

### 6. Analysis and synthesis

The time has come for your pupils to pool the information compiled, share their ideas, debate, draw up hypotheses, structure the information and look for the best answer to the initial question together.

### 5. Research

You must give autonomy to your pupils to allow them to search for, confirm and analyse the information they need to perform the work. Your role is to lead them and to act as a guide.

### 7. Preparation of the product

In this phase the students will have to apply what they have learnt to the realization of a product which provides a response to the question posed at the outset. Encourage them to give free reign to their creativity.

### 4. Planning

Ask them to present a work plan specifying the planned tasks, the pupils in charge of each of them and the schedule for performing them.

### 3. Definition of the final product

Establish the product the pupils must develop, depending on the competences you wish to work on. You can have different formats: a brochure, a campaign, a presentation, scientific research or a model. We recommend that you provide a section with the cognitive and competential goals which must be met and the criteria for evaluating them.

### 2. Team training

Organize groups of three or four pupils, in such a way that the profiles are diverse and each one plays a role.

### 8. Presentation of the product

The pupils must explain to their classmates what they have learnt and show them how they have responded to the initial problem. It is important for them to have a structured script of the presentation, explaining it clearly and supporting the information with a wide range of resources.

## Practical application in 10 steps

We show you how to apply Project-Based Learning in ten steps.



For more information, click on the numbers.

# The teacher's role

In many school cultures, “teaching” basically involves introducing some contents, proposing some activities and performing an evaluation, usually written, to check whether the contents have been assimilated.

Many teachers are aware that the textbook is what defines the learning context, defining the times, establishing what is read and even providing the activities or the evaluation to be performed.

In **Project-Based Learning the teachers are designers and also researchers.** They create learning situations which they aspire to make memorable and they also ask themselves what is the impact of each situation and what consequences it has on the learning and on the pupils' lives.



# Summary

Project-Based Learning perceives that learning involves not only understanding and memorizing but also searching, choosing, discussing, applying, failing, correcting and testing.

It is a way of teaching which shows that “learning” is a form of “doing”.



# Unit 4

## Experiential Learning



# What is Experiential Learning?

**Experiential learning** attempts to develop the ability to **learn from one's own experience** and from the social and physical environment experienced.

Learning from experience involves **systematic work**, structuring the different experiences upon the basis of the educational objectives we aim to achieve and the profile of the group of pupils.

To achieve the above, a set of techniques based on specific tools and devices must be selected. This theory was developed by several authors: John Dewey, Kurt Hahn, Carl Rogers, David Kolb.



For more information, click on the button.

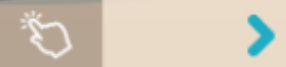
I was saying...



**I was saying...**

*"Teaching must be through action. Education is life; school is society."*

**John Dewey**



# How can we put Experiential Learning into practice?

For more information, click on the images.

To incorporate experiential learning into your classroom we propose **dividing the contents into cycles**. Kolb proposes **4 cycles based** on capacities which should guide the learning.

## Specific Experience

In this case, the challenge for the teacher will be to choose the activities and sequences in such a way that they allow the experiences to be sufficient to bring about certain learning.

## Reflective Observation

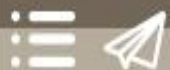
Being able to reflect on these experiences and observe them from multiple perspectives. The acquisition of the knowledge based on the above observation and the judgement of value enables us to understand the meaning of the experience.

## Abstract Conceptualization

Being able to create new concepts and integrate observations into logically solid theories.

## Active Experimentation

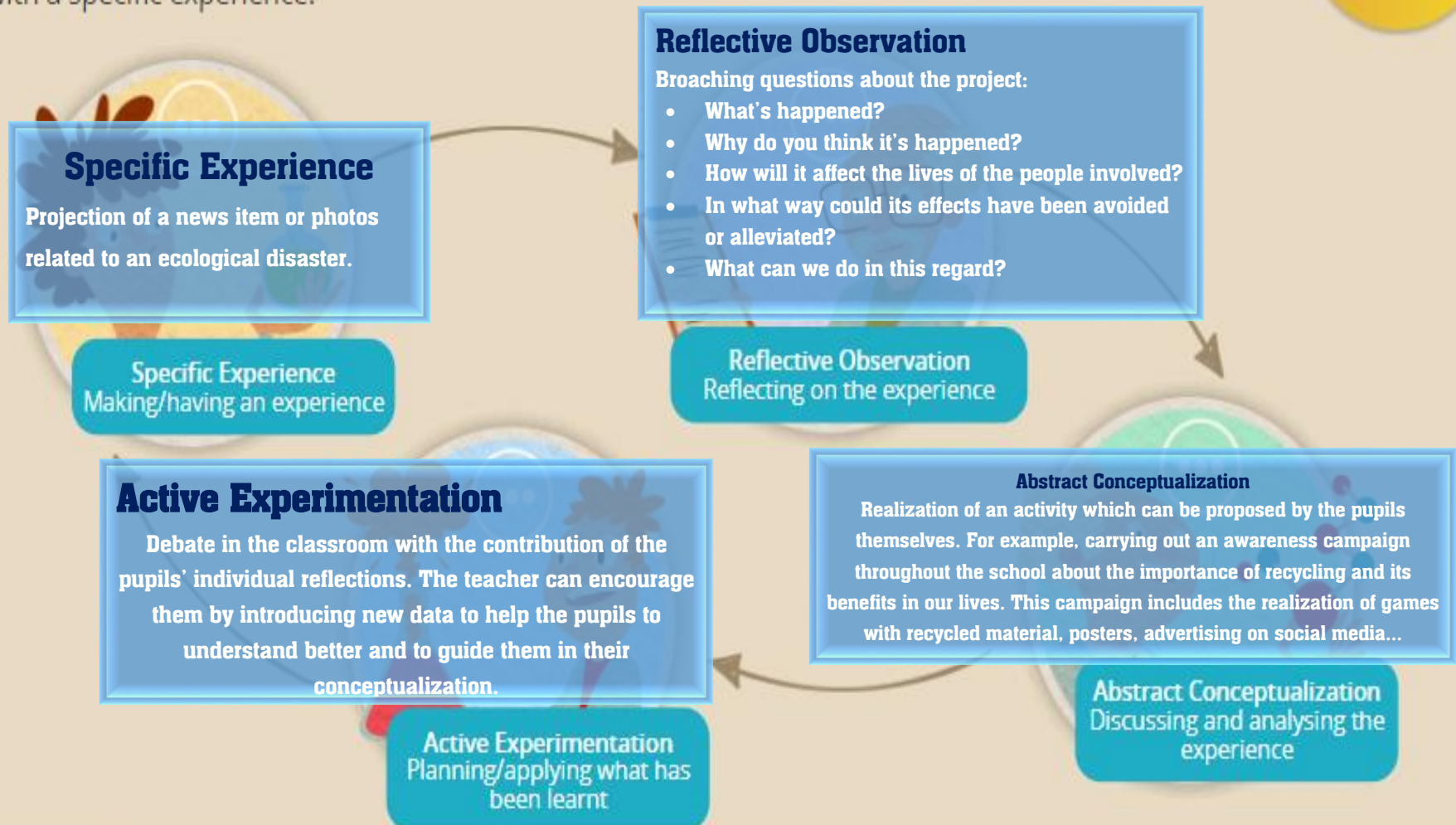
By means of reflection, the pupils are able to use these theories to make decisions and solve problems. Defining an application of what has been learnt for a future experience.



# The Kolb cycle

According to the author, the learning can begin at any of the four points, although it is more common for it to start with a specific experience.

For more information, click on the images.



# Unit 5

## Farewell



# Summary

## Learning Based on...

For more information, click on the images.



### Learning Based on Problems

- Begin with the presentation of a problem the pupils must resolve or learn from.
- They cannot be related to real life.
- Use the question method.
- The pupils present solutions but not necessarily a final product.

### Learning Based on Projects

- Begin with the presentation of a problem, bearing in mind a final product.
- Use a model which reflects real-life problems.
- The pupils use or present a final product.
- The final product is the basic element.

### Learning Based on Experience

- Start with a real experience/event which can act as a case study.
- Focus on the analysis of a real experience to obtain learning with a view to the future.
- Use a cycle method which, according to Kobe, may vary from 4 to 5 cycles.
- The cycle closes with a new experiential activity in which the participants execute the action plan they designed in the previous stage.

# Practical Activity

## Acknowledge the authors

At a professional level, what we intend to do is to continue inquiring about the most innovative pedagogical methodologies. To do so, begin by acknowledging the authors we have introduced and then continue discovering new ones on your own.

Problem-Based Learning

Jean Piaget ▼

Project-Based Learning

Paulo Freire ▼

Experiential Learning

David Kolb ▼

Your answer

Correct answer

Select the correct option.



# Downloadable data sheet

The three learning methods analysed form part of the “**active learning**” area. These teaching and learning strategies establish a difference with regard to “direct teaching” because, among other things:

- ✓ Knowledge is not a possession of the teacher.
- ✓ The student’s role is not limited to active listening.

For a new learning method to be successful, bear in mind that a **gradual, feasible and pilotable innovation within the personal context of each teacher is more easily assumable.**

## Active learning characteristics:

- ✓ It is an adventure.
- ✓ It is fun and/or captivating.
- ✓ It involves everyone.
- ✓ It is based on the pupil, not the teacher
- ✓ It is an oriented process.
- ✓ It is focused by means of participation.
- ✓ It is relational.

For more information, click on the button.

[+ Download the summary data sheet](#)



## Final word

- ✓ How often do we stop to ask ourselves how the our school's learning model has been established?
- ✓ Who does this model serve?
- ✓ Is it true that it is beneficial for the pupils' development?
- ✓ Does it encourage intellectual development?
- ✓ How can we transform school reality by starting in our own classroom?

The **analysis of the model of the traditional school** helps to put into practice measures and strategies aimed at breaking down this well-established paradigm.

We have seen **learning methodologies** which seek to arouse interest in educational change and generate curiosity with regard to other innovative methodologies which could be attempted in the classroom.

Success stories and proposals for the application of these methodologies seek to **identify the points for improvement, requirements and problems** in the classroom.

