

A (very) Brief Historical Note



70s - A growing Educational System

- The education boom
- A shortage of Teachers

80s - The System reacts

- New Teacher Education Institutions (Pre, Primary and Preparatory)
- More and More Integrated Teacher Education Courses

90s - CPD - Teacher Education School Centres

- Courses/worshops/isolated initiaves...

2000- Less pupils / Birth rates

- Bolongna Process (Teachers a master degree)
- Falling number of Teacher Education Courses
- A Surplus of Teachers



Challenges and Opportunities CIE CONSELHO NACIONAL® EDUCAÇÃO

Initial Teacher Education

- Recruitment of students (A call for the best)
- Professionalization (stage, supervision, coaching, exam, probation ...)

Selection and recruitment of teachers

Preparation of Teachers for Vocational/Professional Education

Over 42% of teachers in some levels are over 50 years of age

Focus on In-Service CPD

- The school association centres
- Higher education institutions
- The Ministry
- Partnerships (teachers, researchers, teacher educators, schools, higher education institutions...)





A NATIONAL PROGRAM IN SCIENCE EDUCATION



THREE LINES OF ACTION

1. In-Service Teacher Education, during one or two academic years.

2. Production of teaching materials: eight didactic guides were produced. Published in print and available in pdf on the website of DGIDC.

3. **Financial allocation** of participants schools for the purchase of laboratory equipment.





Program Goals



- 1. To understand the relevance of an adequate science education for all, capable of motivating teachers for innovating approaches in science teaching;
- 2. To develop pedagogic content knowledge concerning science education in the first years of schooling;
- 3. To conceive, implement and assess practical, laboratorial and experimental activities for science teaching in elementary school.

Serra, P. (2011)





IN-SERVICE TEACHER EDUCATION IN CONTEXTS A MODEL



Construction of a common theoretical framework: PLENARY SESSIONS

The school teachers deepen their knowledge about relevant curricular scientific topics and about instructional strategies centred around experimental work/investigations. With support of the teacher trainer they read, discuss e integrate professional practical knowledge with theoretical knowledge.



Modeling: GROUP SESSIONS

The teachers, assisted by the teacher trainer, implement the practical work that they will develop later on with their pupils in the classroom. They go through and discuss the difficulties that pupils will probably experience. They plan tasks and produce teaching materials to help solve those difficulties. They reflect upon various aspects of the task, the role of the teacher and the pupils' receptivity.



Coaching: INDIVIDUAL SESSIONS

The teacher trainer observes and cooperates with the elementary school teacher in the implementation of an experimental activity in the classroom.



Reflection: SCHOOL TEAMS

Small groups of teachers of the same primary school discuss with the teacher trainer about the more and less accomplished aspects and ways of improving practices.





Assessment: PORTFOLIO

Throughout the process each teacher builds a portfolio and discusses it regularly the teacher trainer.



Serra, P. (2011)







		PROJECTS	
		EART	AIEB
	Theoretical Foundations	Weak. Limited to the basic theoretical assumptions of the project.	Strong, formal, scholarized, researcher- centred. An overview of the state of the art about the topic and the project standpoint within the topic were given. A model for teaching investigations was also presented. Teachers experienced and trained competencies to deal with investigative work.
	Identification and Definition of Problems	Problems identified and defined by the teachers based on their previous ideas and professional experiences.	Problems were identified and defined by the researchers.
Phase I	Partnerships	The partnerships were organised according to the problems and interests that the teachers put forward, independently from the grades or subject areas they taught. Three sub-projects were organised.	Partnerships were formed according to the problems selected by the teachers that were teaching the same grades.









		PROJECTS	
		EART	AIEB
	Planning activities and constructing materials	Carried out by the teachers according to their own ideas and previous experiences and supported by the teacher trainers/researchers. It generated a great diversity of activities and pedagogic materials.	The plans of the activities were devised in a collaborative way by teachers and researchers and were based on the given teaching model.
	Classroom Activities	Activities were delivered by the individual teachers or in partnership with other teachers. Teachers identified problems and difficulties during implementation	Teachers implemented the activities by themselves sometimes with a researcher as an observer.
Phase II	Reflection in and on practice	of activities in the classroom. They question the activities and pupils' learning - reflection in action - discuss and analyse the work done with other partners (teachers and/or researchers) - reflection on action.	Teachers identified problems and difficulties during implementation. They questioned the particularities of each activity as well as their students' learning - reflection in action -, and discussed and analysed them with other partners (teachers or/and researchers) - reflection on action.









	PROJECTS	
	EART	AIEB
Phase III Evaluation	A meeting with all the participants was held to reflect upon the obtained results (impact in pupils on teachers and their practices, and on the school community). The main difficulties and limitations to develop the project were identified. Teaching materials were evaluated and reformulated. Firstly all these were individual and written answers in a questionnaire. Subsequently the subprojects were presented in detail and analysed by the whole group.	A meeting with all the participants was held, to reflect on the obtained results in terms of teaching and learning investigative work as well as on the impact of the project on teachers and their practices, on students and on the school.





Concluding....



Innovation, reflection and partnership seem to be key concepts in CPD.

However, if we want to achieve real teacher development, critical and informed reflection and genuine collaborative partnerships, the way ahead should be reappraised.

We can neither fall in the temptations of applying the same model of teacher education in all the programs nor to assume some models as clear cut and pedagogically correct while others are regarded as just wrong...





Concluding....



In a concrete teacher education project we need to analyze the specificity of each particular moment and to avoid the extreme points of several continua. We need to make unbiased and flexible decisions in order to use more or less scholarized, more or less formal, more or less collaborative, more or less researcher centred, more or less theoretical approaches, according to the specific context of each moment of the project.

Like the river margins, teacher education models and approaches have ill-defined boundaries... You Know!?







Manuel Miguéns Secretary General National Council of Education

manuel.miguens@cnedu.pt

