WP5

Teacher **C**ontinuous **P**rofessional **D**evelopment

The Weizmann team

International PROFILES Conference in
Berlin, Sept. 24th to 26th 2012

Main goal

To implement a three stage professional development program for lead teachers using suitably translated materials and teaching modules.

- Conduct a professional development programme using evidence-based best practice strategies regarding the inquiry approach to science teaching and learning.

- Each teacher should undergo this programme - face to face meetings and online learning, providing teachers with needed background and classroom interventions putting the IBSE into practice and partner guidance.

The content and performance of the CPD program

- **Promote IBSE through enhancing the self-efficacy of science teachers, to take ownership, and to acquire more effective ways of teaching students:**

- **Learning the spirit of PROFILES by learning the modules (see WP4 report) - the teacher as a learner.**

- **Designing a new module which is relevant to the teachers' classes and their teaching environment - the teacher as a teacher.**

- **Implementing the modules in class.**

- **Reflecting on the classroom practice - the teacher as a reflective practitioner.**

Emphasis on

- The development of intrinsic motivation,
- Inquiry learning
- Extrinsic motivation attributes
- Classroom atmosphere
- Assessment
- Feedback strategies
- The need to enhance scientific literacy for responsible citizenry.

Data analysis collected from the partners regarding the CPD

- **The data was received from 16 partners from 15 countries.**

- **The partners provided information regarding the CPD program by:**

    *Describing the plan of the workshop and answering open questions.

    *Answering an online questionnaire:

https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dG1h
bURHZV9McUV5Q2E3RFY3YVVpN2c6MQ#gid=0

Data collected from the on-line questionnaire

- **The average length of the CPD program was 62 hours**

- **In most countries the workshop consisted of face-to-face and online sessions.**

- **In four countries there were only face-to-face sessions.**

- **In Finland, most of the sessions were on-line,**

The CPD models selected by the partners

- **The most meaningful CPD models that were selected:**

  *Action research

  *Teacher as a curriculum developer

  *Focus group

  *Evidence-based.

- **The most popular CPD model: Action research.**

The CPD program in all groups relied on various models and was not based on one sole model

Results

All groups dealt in the CPD program with:

- Many types of reflection - 50% of the time was devoted to self-reflection and the other 50% to group reflection.

- The development and presentations of the modules.

Analysis of the open questions

The open questions gave us an insight to different scenarios:

- **Meaningful activities**
- **Difficulties**
- **Interesting ways to follow-up the implementation of the modules by the teachers in their classes.**

The programs were diverse, but some of the activities and problems were similar.

Examples of open questions and answers

Question: *"Point out three or four meaningful activities while conducting (participating) in this CPD"*

- *"Action research is helpful to open teachers' minds for real reflection…. Some of teachers are willing to see colleagues in their lessons for professional learning from each other." (La)*

- *"We got an input on inquiry based learning and on PROFILES. By introducing some PARSEL-Modules and working on them, we found appropriate topics for our own modules". (Au)*

Examples of open questions

- **Question:** *"Point out two or three key problems that arose while conducting this CPD (pedagogical, logistics, context, etc.)"*

- *"Continuity of continuous teachers' participation; Looking for suitable dates for everyone" (Ge)*

- *"Supporting every individual teacher on a continuous basis as they designed and enacted their design, especially since teachers come from different cities; Finding the balance between guidance/scaffolding and supporting the development of teacher ownership". (Cy)*

Problems

1. **Long distances – in big countries long distances caused a huge difficulty.**
2. **Long workshops – it is difficult to sustain motivation over time.**
3. **Financial – There were difficulties in funding teachers' expenses related to the CPD face to face sessions**
4. **Difficulties in the design of new modules.**
5. **On-line interaction.**
6. **Questionnaires – the project demands filling up many questionnaires and reports.**
7. **School and education system – some partners reported difficulties because the system did not support such activities.**

Problems

8. Curriculum – PROFILES' modules do not coincide necessarily with the national curriculum.

9. Implementation – based on the difficulties mentioned above the implementation itself was difficult.

10. Lack of time – the implementation requires at least 4 hours.

11. Scaffolding/guidance balance – It was difficult to know how to balance between scaffolding and guiding the teachers while designing the modules.

12. Cognitive/knowledge – the modules require knowledge on topics (CK) which are not familiar to the teachers.

Recommendations

1. The workshop should focus on ensuring that the participants understand the purpose of the PROFILES CPD provision, especially promoting Inquiry-based learning through student-centred teaching and learning, stressing relevance to students' everyday life and identifying approaches to effective student learning through problem solving and decision-making activities.

Recommendations

2. The CPD providers should choose a CPD model, aiming at developing teachers' knowledge and pedagogy, so that they will be able to scaffold their students in acquiring the specific skills.

3. The teacher should undergo a few stages: as a learner, as a teacher, as a leader, and as a reflective practitioner.

Recommendations

4. The teachers should have the opportunities to reflect and discuss about selected PROFILES modules on site and to re-develop modules for the situation in their specific school science system.

5. The CPD providers should look for strategies of motivating teachers to be involved in a long-lasting workshop, despite the fact that such a long commitment isn't easy and requires frequent interaction between the PIs and the teachers.

Recommendations

6. An on-line communication during the workshop may help in encouraging teachers to join the project.

7. The creation of a module from scratch might be too difficult for most of the teachers. It is not easy to find the right balance between scaffolding/guidance in order to promote teacher's ownership. Nevertheless, stressing the fact that it is a "bottom-up" process instead of "top-down" may help the teachers as well as the CPD providers, undergo the process.

Recommendations

8. The CPD providers should discuss with the teachers the fact that teaching the modules might be time consuming on one hand, but very beneficial in promoting the students' interest in science.

Acknowledgement

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Thank you!

Today's Program

Time	Program
9:30-10:30	1. Selection of the module 2. Design or adaptation of the modules x2 3. Following up the design/adaptation of the modules x2
10:30 -11:00	coffee break
10:50-11:45	1. Activities during the CPD workshop 2. Problem that arose while conducting the CPD workshopx2 3. Development of a reflective teacher x2
11:45 -12:45	Presentation of conclusions from group discussion
	Lunch & SPA
17:00-18:00	Creating a basis for the evaluation of success of the CPD workshop
18:00-19:00	Guided discussion