

Increasing Science Teachers' Ownership through the Adaptation of the PARSEL Modules: A "Bottom-up" Approach

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ABSTRACT: The study describes the process of adopting new curriculum materials, which had been developed in the PARSEL project in several European countries, into the local educational science classroom of another country. The goal of the PARSEL project was to raise the popularity and relevance of science teaching by enhancing students' scientific and technological literacy and by identifying suitable teaching/learning materials, based on relevant context-based educational approaches. All PARSEL materials are organized in a website and are freely accessible by science teachers around the world. In order to increase the teacher's ownership towards the new materials, a "bottom-up" approach that included a teacher workshop for modifying the PARSEL modules for the needs of teachers was implemented. The teachers used the modified modules in their classes and reflect upon the whole process, after it was completed. Data have been collected using various research tools, such as, teachers' questionnaires, teachers' interviews and teachers' focus group interviews. The results indicate that the "bottom-up" process increased teacher ownership towards the PARSEL modules and helped the teachers to align their teaching with the philosophy and the teaching style of the PARSEL project. It was also indicated that the students found the modules to be popular and interesting.

KEYWORDS: Adopting new curriculum, bottom-up strategies, popularity, relevance, teacher's ownership.

Introduction

A growing body of evidence suggests that imposing a curriculum by central professional bodies in what is called "top-down" fashion, whereby teachers are expected to just implement the developers' philosophy, ideas, and intentions, has proved to be ineffective in introducing educational and curricular innovations into schools (Hofstein, Mamlok, & Carmeli, 1997; Mamlok-Naaman, Hofstein, & Penick, 2007).

