

Chapter 18

Scaffolding Pedagogical Planning and the Design of Learning Activities: An On-Line System

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ABSTRACT

This paper examines pedagogical planning as a means to foster the introduction of ICT (Information and Communication Technologies) tools into classroom practice. The authors illustrate IAMEL, an ICT-enhanced system aimed at supporting teachers in the process of designing, structuring and planning educational activities. Pedagogical planning, which is a traditional school practice, is meant as the description of a learning situation aimed at the acquisition of a precise body of knowledge through the specification of roles, activities, educational theories and methods. ICT-enhanced pedagogical planning offers significant added value to the intended scope: (1) helps teachers fully express their didactical ideas and finalize the educational approaches and methods to be adopted (2) supports the sharing of practice among teachers and communities of teachers (3) fosters “a posteriori” reflections on the planned educational experience, once implemented in real school settings.

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INTRODUCTION

The integration of ICT into ordinary classroom activities is nowadays considered a necessity in the education policies of most of countries, and its positive effects have been showed by a number of research projects carried out in a variety of contexts and age levels. The first effort made by many governments in this direction was the considerable budget invested for equipping schools with hardware and software tools. However, this effort proved to be insufficient and the high expectations put on ICT as vehicles to promote change in education remained unfulfilled (Venezky & Davis, 2002; European Commission, 2004).

The limited impact of the wide ICT use in schools can be ascribed to a variety of different reasons: from those related to the traditional resistance of the school systems to “change”, to reasons more deeply related to the fact that technology has often been introduced as an addition to an existing, unchanged classroom setting (De Corte, 1996; Grasha & Yangarber-Hicks, 2000).

For the purpose of this paper, we focus on the teachers and on the difficulties they encounter in reconsidering and revising their pedagogical practice in order to accommodate a proper and not sporadic use of ICTs (Guzman & Nussbaum, 2009). Often, teachers are induced to look at software tools for education on the basis of very general, ill-defined expectations, and this approach can result in a lack of understanding of the theoretical frameworks, pedagogical practice and conditions under which the educational use of such tools could be genuinely meaningful and productive.

This means that the work towards technological innovation should be developed together with pedagogical innovation. As a matter of fact, from one hand, the use of new tools results in a little pedagogical gain if novel educational strategies and the activities in which teachers and students are involved in are not carefully re-considered and

planned. On the other hand, pedagogical innovation should be based on the opportunities offered by technological advances and on the critical examination of how such advances change substantially, in a direct or indirect way, the needs, the modalities and the content themselves of teaching and learning activities.

A relevant role is played by pedagogical planning seen as the description, at different level of granularity, of the playing out of a learning situation (or a unit of learning) aimed at the acquisition of a precise body of knowledge through the specification of roles and activities.

When considering the integration of ICT in school practice, pedagogical planning assumes a particularly important role since it not only helps the single teacher express his/her didactical objectives and approaches but it also serves as a means contributing to the sharing of practice among teachers and communities of teachers; ultimately, it also provides a suitable ground to foster reasoning on encountered difficulties and problems faced. The integration of new technologies in classroom practice, requires that teachers increasingly take into account a variety of different elements (e.g. multiple literacy, changing of roles, timing, contents, etc.) (Robertson & Hughes, 2010), in an effort to ensure that these form part of a coherent, manageable whole able to effectively respond to learners’ needs (Jonassen, 1997) and that consents the full attainment of the intended educational objectives. Teachers should, then, be supported in the setting-up of pedagogical plans which both serve the purpose of describing educational itineraries and also help them reflect and make explicit their pedagogical aims, choices and approaches.

Current research in the field of pedagogical planning mainly focuses on defining which instruments and methods better serve the scope since a wide number of different tools and different approaches are available to assist teachers “in the thought processes involved in selecting appropriate

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