

Chapter 21

Technologies to “Bridge the Gap” among Learning Contexts in Vocational Training

Elisa Motta

Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland

Elena Boldrini

Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland

Alberto Cattaneo

Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland

ABSTRACT

The dual-track system characterising Swiss Vocational Education and Training (VET) is based on the alternation of three learning locations: the school, the training company, and intercompany courses organised by occupational organisations. In this way, apprentices gain experiences in different contexts, which then have to be connected in a unique knowledge corpus in order to develop real professional competences. However, the different decision-making bodies involved in VET perceive a gap in the learning among the different contexts, for example consistency of work procedures. The two studies presented here focus on mobile technologies and Web 2.0-supported collaborative writing as examples of the use of technology in professional education to bridge this gap. The results emerged in terms of ease of use, perceived usefulness of the artefacts, and in terms of pedagogical added value of the instructional design. The findings confirm that the underlying pedagogical model is valuable and further research is warranted.

INTRODUCTION

The focus of the studies presented here is to underline the valuable role of technological artefacts in supporting the process of bridging the gap among the different learning locations characterising

Swiss Vocational Education and Training (VET) curricula. Each of the two experiments presented sheds light on the use of a specific technology (respectively mobile devices and web-based tools for collaborative writing) in a specific professional domain to capture the experiences lived by the

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apprentices at the workplace and to exploit them at school in a structured learning and pedagogical scenario. The overall framework of these experiments is consistent with some recent models of vocational learning (e.g. Tynjälä, 2008; Eraut, 2004) which underline the necessity to develop an integrative pedagogics able to incorporate workplace-based learning in school education and vice versa.

Context

The Swiss education system is structured so that students completing the compulsory lower-secondary school cycle can select between the two types of upper-secondary schools: selective schools, which prepare students for the Academic Baccalaureate; and vocational schools, which prepare students for the Federal VET Certificate or for the Federal Vocational Baccalaureate.

The VET system plays a fundamental role in Switzerland: actually, from a mere quantitative point of view, it involves about 45% (OFS, 2009) of the population between 25 and 64 years old confirming itself as a tradition which characterises the Swiss educational culture. Approximately two-thirds (65%) of all young people leaving the lower-secondary school cycle enter an upper-secondary level VET programme, although a recent tendency shows a decrease in enrolments for the combined school/work-based VET programmes (the so-called “dual” system) to the benefit of increasing numbers in general education.

The aim of vocational schools is, as made explicit in the 2002 Vocational and Professional Education and Training Act (VPETA), to create:

a professional training system that allows individuals to develop personally and professionally and to integrate into society, in particular in the employment sector, by making them capable and available to be professionally flexible and to remain in the employment sector (VPETA, Art. 3).

Fulfilling these objectives, both professional and sociocultural, requires that the training curricula are structured on the existence of different training agencies and on their interrelationship. That is why in Switzerland – similar to what happens in Germany and Austria – such paths are based on the so-called “dual” system: primarily organised on the alternation between the work-based segment and the school-based segment. Generally, depending on the profession, apprentices spend between three and four days in a company where they sign a regular contract and get paid, and they spend the rest of the week at school where they are exposed to general subject matters (such as language and civics) and to more theoretical aspects tied to the professional knowledge. In addition, since VPETA came into force, an additional learning location has been foreseen: the training segment known as “intercompany courses” or “industry courses” (the courses last approximately 15 days per semester and are organised by the specific occupational organisations). These courses are conceived as ‘complement to the work-based and school-based segments’ (VPETA, Art. 16, Para. c) and aim to let apprentices exercise the fundamental competences of the profession and to better articulate the relationship between theory and practice.

Such an articulation requires the engagement of different actors such as, for example, people active in the schools, in the occupational organisation and in the training companies. That is why to reach the objective of a coherent and joint training curriculum it is important that ‘host companies, vocational schools and industry training centres shall coordinate their activities’ (VPETA, Art. 16, cpv. 5).

Each of the three learning locations has a different and complementary training role concerning the delivery and the development of different forms of knowledge. If apprentices face concrete situations in the training company in which knowledge is somehow implicit (“*impliziertes*

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