Hybrid Learning Environments in VET

Vocational education and training (VET) plays a central role in preparing young people for work, developing adequate skills and responding to the labour-market needs of the economy.

The transition learners are required to make from education to the workplace is a complex, and often problematic, process (Tynjälä, Valimaa, & Sarja, 2003). Studies show a gap between what is learned and what is required of competent professionals in an ever more complex world (Baartman & De Bruijn, 2011). The integration of students’ learning experiences across academic and practice settings is currently of considerable interest within the educational sectors in a number of countries (Billett, 2011), among which the Netherlands. The last decade Dutch VET institutes have been experimenting to design learning environments that cross the traditional school boundaries into working life. Zitter (2010) introduced the term hybrid learning environments. "A learning environment can be considered as a hybrid learning environment? when? different formal and informal elements are woven together into coherent programmes of learning and into single learning environments, rather than a programme that combines different components with the aim of offering a more enticing menu of learning for the students" (Zitter & Hoeve, 2012 in OECD, 2013, pp. 138).

These experiments ran parallel to the trend that school-based learning has become more informal with forms introduced such as authentic assignments, project-based learning, and in-school mini-enterprises. At the same time, informal learning was formalised by means of recognition of prior learning and the use of portfolios (Tynjälä, 2008). This has led to a process of cross-fertilization leading to new forms of learning that interweave aspects of both formal and informal learning. In a hybrid learning environment learning and working processes are interwoven to benefit from the strengths of both formal, school-based learning and real-life experience. Such an environment facilitates the integration of knowledge and skills into personal
professional theory or PPT (Schaap, De Bruijn, Van der Schaaf and Kirschner, 2009). A PPT serves as a reference frame through which shared knowledge and collective norms, values and beliefs of a particular domain can be internalised. By developing a PPT students grow into a professional/vocational domain.

Designing a hybrid learning environment is not an easy endeavour (Zitter and Hoeve, 2012). It requires long term commitment of both parties, i.e. VET-institutes and business partners, to develop new forms of integrating learning and working processes. An exploratory field study (Huisman, De Bruijn, Baartman, Zitter & Aalsma, 2010) uncovered a variety of forms of hybrid learning environments already present in Dutch vocational education. On the basis of this exploratory study, the collaborative partners of a multi-stakeholder, multiannual educational innovation and research project were found. The project ran from May 2009 until the December 2013. It can be characterized as a design-oriented, applied research project from the Centre for Expertise in Vocational Education (ecbo-project) and an educational innovation/practitioner-research project (hpbo-project). A PhD-research project is closely related. These different partners of the joined projects participated because they embrace the dual goals of the projects: educational innovation combined with practice-based research. The research part is aimed at revealing the underlying design principles of a hybrid learning environment. The focus in design-oriented research is to show how the concept of hybrid learning environments is translated into practice in a certain context, whether the outcomes in that context are realised and, if possible, due to which mechanisms that are presupposed by the designers (Van Aken en Andriessen, 2011).

The main research question is; What are the design principles of a hybrid learning environment in VET?

**Method**

Developments in the project sites were monitored by document analysis of project plans, progress reports, design documents, educational materials and evaluation documents. Besides, data was gathered through semi-structured, reflective group-interviews, based on the so-called ?Critical Moments Reflection Methodology ? (Ferreira, n.d.) combined with site visits. Based on the monitoring of ongoing developments of the project sites we selected one best practice case. On this site we observed one week in the hybrid learning environment in action. The observation was carried out by researchers making field notes independently. Further, a film camera recorded the interaction between teacher and students. For the initial analysis, the field notes were rewritten in a thick description of the observed week. This thick description was further analysed with the Hybrid framework developed by Zitter (2010). The Hybrid framework consists of two dimensions. The first dimension has on one side the knowledge acquisition metaphor, in which knowledge is considered as a commodity that can be acquired, transferred and shared with others. On the other side is the participation metaphor, characterising learning as becoming a member of a professional community. The second dimension is constructed-realistic. This dimension characterises how realistic learning tasks are. Constructed settings are characterised as low-fidelity: the rich reality of society, and specifically of professional practice, is reconstructed. Moving towards the realistic-side of this dimension, constructed settings can become of higher fidelity, for example, by involving simulation technology, internal employees or outside actors to enact roles like client or patient. Moving to the right-hand side of the dimension are realistic settings that closely mirror the real professional context; learners may be situated in an actual, real-world workplace setting. These two dimensions form four quadrants, each with specific types of situations. For example classic lectures to present explicit theoretical knowledge fit in the constructed-acquisition quadrant. Discussing or presenting work experiences to enable tacit knowledge to be made explicit fit in the realistic-acquisition quadrant. Group assignments or simulations go in the constructed-participation quadrant. In the realistic-participation quadrant are the most realistic situations, such as working for actual, external clients from within a school-based setting, as well as working side-by-side with professionals in real-life workplaces. In a hybrid learning environment all quadrants should be represented and need to be aligned with each other. The results of this
initial analysis was presented at the educators at the project site in a workshop for validation.

**Expected Outcomes**

Based on initial analysis of the data we established that this best practice case has build a solid design and that in the enactment was in accordance with the design. Further, evaluation with the students indicated that they perceived the hybrid learning environment facilitates the integration of knowledge and skills into a personal professional theory. Feedback from the business partners involved indicates that smooth transition from school to workplace is to be expected. In this paper we will focus on the design principles that can be drawn from this best practice case. These principles show how the concept of hybrid learning environments is translated into practice in a certain context. Such principles help other contexts to translate the concept to their own context with its particularities. Further, we will present the mechanisms provoked by a hybrid leaning environment that contribute to the realization of the intended outcomes.

**References**


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