Chapter 20

Didactical Design for Online Process– Based Assessment in Teacher Education:
Making the Informal Formal

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EXECUTIVE SUMMARY

This chapter reports on a research project in which a group of students in pre-school teacher education participated in an educational intervention based on the development of process-based assessment. A didactical design was developed and structured into three phases for supporting students in building formal knowledge from their prior informal knowledge. Moreover, the design was implemented in an online context that facilitated documentation and reflection. A qualitative approach was taken that aimed to understand the learning environment emerging from the didactical design through the use of technology by addressing questions about the teacher's role, the learning process, and the assessment process. Data was collected through in-depth interviews and a questionnaire, which were analyzed through inductive thematic analysis. The concept of variation was used in the analysis of the student perspective on the didactical design. The results indicate how the concept of variation was helpful in highlighting the underpinning affordances and constraints of this environment and the associated social relationships.

INTRODUCTION

Adult learners most often bring several years of work experience back into formal educational contexts. However, their informal knowledge is seldom used as a springboard for developing new knowledge or as a reference point for further analysing learning. This chapter focuses on the experiences of a group of student teachers in a pre-school teacher education program, participating in an educational development project with the aim of increasing the level of professional competence in pre-schools. This development was based on the "Satellite" approach by offering adults a blended-learning program at a study center that was at a considerable distance (130 km) from the main university campus. One of the aims in the associated research study was to gain a better understanding of students' learning processes in the online learning context. The educational development was based on a didactical design for process-based assessment, which is discussed fully in the following section.

Researchers have paid attention to the notion of didactical design in teacher education (Hudson, 2011; Rostvall & Selander, 2008; Selander & Kress, 2010). The concept of didactical design is close to Simon's (1996) definition of design: "Everyone designs who devises courses of action aimed at changing existing situations into preferred ones" (Simon, 1996, p. 111). In educational settings, the didactical design concerns the meeting between *teacher, student* and *content*, addressing the classical didactical questions of *how, what* and *why*. These issues concern students' development in a particular learning environment with the social relationships it raises. Further, the design of process-based assessment has similarities with what Torrance and Pryor (1998) address as convergent and divergent formative assessment. With the convergent approach, students receive feedback according to the criteria, which the student acts or does not act upon. With divergent formative assessment, teachers comment on other issues as well, for example on students' social development. Despite this similarity, process-based assessment is considered different from formative assessment from at least five design perspectives. First, formative assessment focuses on students learning at a particular moment; however, process-based assessment focuses on students learning during a period of time (Hudson, et al., 2009). Second, formative assessment has a fixed focus for a particular assignment or group of assignments; however, process-based assessment involves reflections for further analysis developed from students' previous knowledge and experience. Third, formative assessment is based on traditional expectations with regard to power relations, but process-based assessment emphasizes a less hierarchical power relationship (Bergström, 2010). Fourth, formative assessment involves strong guidance from teachers, while process-based assessment emphasizes design for student-centered learning. Fifth, formative assessment could

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