Analysis of Preservice Elementary Teachers’ Lesson Plans

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ABSTRACT

The purpose of this study is to analyze lesson plans from third to sixth grades of science and to find out teaching strategies in respects of learning functions provided by preservice elementary teachers in education university. On the whole, to control students’ learning process preservice teachers used more shared-regulation strategy than strong teacher-regulation one. Teaching activities for regulative learning function were most used in strategy of strong teacher-regulation, and in strategy of shared-regulation those for cognitive learning functions were most used. But teaching activities for affective learning functions were used a little considered in both teaching strategies. In introduction step of instruction, affective and regulative learning functions were more instructed by strong teacher-regulation strategy and cognitive learning functions were more instructed by shared-regulation strategy. The affective, cognitive, and regulative learning functions were largely planned by shared-regulation teaching strategy in development. The regulative learning functions were planned by strong teacher-regulation strategy than by shared-regulation strategy and affective learning functions were considered a little bit in consolidation. There was a tendency that strong teacher-regulation strategy was increased in lessons for fifth and sixth grade.

Key words: lesson plans, preservice elementary teachers, learning functions, strong teacher-regulation, shared-regulation

I. Introduction

In recent views of constructivism, the learning is considered as an active process. New knowledge is constructed by individuals as sensory data are given meaning in terms of prior knowledge. Learning is also an interactive process, involving constructions of individuals and social collaboration (Marin et al., 2000). Knowledge is created through social interaction as individuals test the fitness or usefulness of their conceptual understandings in interactions with others and in the context in which the knowledge is applied (Hodson & Hodson, 1998).

Therefore, constructivist views on learning are different from traditional learning views which focused on transferring information from the teacher to the learner who is seen as an empty vessel to be filled with knowledge. According to appearing new views on learning, the role of teaching has been changed from transmission of knowledge to supporting and guiding construction of knowledge (Vermunt & Verloop, 1999). Considering in this respect, teachers’ efforts and teaching strategies focused on provoking students’ knowledge construction have to
be designed. The idea that practices and theories of teaching should be based on knowledge and theories of how students learn can already be found in Gagne's work (Gagne, 1970). Glaser (1991) also emphasized this view in teaching science, and Shuell (1993) also highlighted integration of both teaching and learning theories. As considering the above mentioned, teaching effects will be maximized when teachers' teaching activities are matched with students' learning activities. It also means that teachers should make lesson plans giving special attention to the joint effects of teaching and learning. The lesson plans are very important in appropriate teaching and effective learning (Reigeluth, 1999). In lesson plans, generally teachers plan to teach content by using what kind of procedure and method (Lee, 2002).

Even though teaching is not entirely worked out according to a lesson plan in classroom, teachers base considerable parts of teaching on their lesson plans. In case of preservice teachers in educational university, they will make lesson plans according to good teaching practices they have learned in university.

Analysis of the science lesson plans made teachers or preservice teachers can give information of their teaching style. For example, if it is analyzed the learning tasks, questions, assignments, and exam questions that teachers offer to students in respects of the learning functions, it can be found out that these tasks are whether one-sided or not, and also the reflection degree of students' need. Consequently this analysis on lesson plans can be very helpful for transition their teaching styles from strong teacher-regulation to shared-regulation. It is also very useful for evaluate preservice teachers' teaching practices, because it reflects how they understand about science teaching and learning. In prior research (Pate, 1991) analyzing lesson plans was very helpful in determining improvement of teaching strategies. Therefore, the analysis of what strategies are used by preservice teachers in lesson plans can give insights of present and future teacher education.

The purpose of this study is to find out what teaching activities and strategies were used to design lesson plans of science by preservice elementary teachers and to see what tendencies in their plan shown at the grade level of science lesson. In this article, the frame for analyzing the types of teaching strategies is based on view of constructive teaching activities and learning functions. In addition, the implications for elementary teacher education are discussed.

II. Theoretical Background

When learning is conceived more as self-regulated knowledge construction than as taking in already existing external knowledge, the object of teachers' efforts have to focus on the processes of students' knowledge construction. This calls for theories of teaching that are firmly based on an analysis of student learning processes (Duffy et al., 1993; Brown, 1994; De Corte, 1995). The literature on student learning is extensive, and different researchers use different concepts for similar or partly overlapping learning activities. As a whole, many researchers classified common elements of learning components into three types of learning activities: cognitive, metacognitive and affective/motivational (Short & Weisberg-Benich, 1989; Pintrich, 1994; Wagner & McCombs, 1995; Shuell, 1996). Therefore, a first organizing principle in the categorization of learning activities concerns three types of learning activities. Vernunt and Verloop (1999) also tried to develop the categorical system explicitly from the viewpoint of three main learning components: cognitive, affective and regulative. They analyzed the cognitive,