



Educational Practices which Develop Self-Regulated and Metacognitive Learning of Pupils in Experimental Activities

Liliana Cascai, Lavinia Haiduc

lili.ciascai@phys.ubbcluj.ro, lavinia_haiduc@yahoo.com

Babes-Bolyai University (Romania)

Abstract

Self-regulated learning refers to the pupils' ability to exercise an active, metacognitive, motivational and behavioral control of learning, and is of high importance in helping pupils to better understand the content of text and in transferring learning from one context to another. Self regulated learning could be promoted through experiments and scientific investigations during Science lessons. Experimental activities, as usually performed in the school practice in Romania, involve making the experiment by pupils, under the direct guidance (verbally or through worksheets) of the teacher, or observing experiments performed by the teacher. The present study aims to identify the extent in which experiments and scientific investigations promote/enhance/develop the self-regulated learning skills of 15 years old Romanian pupils. In this study we present the results of a written survey based on instruments developed by the researchers and on three focus-groups. We used both qualitative and quantitative methods and thus a number of 142 pupils aged 15 years old have completed the survey and 15 teachers have participated in three focus-groups. The participants' answers revealed the reduced concern for developing students' abilities for establish independently learning goals, for preparing independently the action (planification, the selection of strategies), for self-assessment of performance and for enhancing valid answers. However, even if the educational practices in the educational system in Romanian give a reduced importance to the active role of pupils, the participants' responses show that they value the usefulness of the experiment in natural sciences.