RELATION BETWEEN MOTIVATION, METACOGNITION AND COGNITIVE PERFORMANCE

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Abstract

Several researches emphasise the importance of motivation in learning as well as its relation to metacognitive development and cognitive performance. The objectives of this research are exploring the variables of goal motivation theory that influence the performance of cognitive tasks and the effect of goal motivation to metacognition. The sample of this study is consisting of 354 primary school students aged 8-11 years, in a public school in the Community of Madrid. Parents and teachers have been asked for permission and were informed of the proceeded. The sample gathering was done during a month between October and November at the beginning of the academic course 2018-2019. The instruments of measurement selected for the variables of the study are The Questionnaire of Motivation towards Learning (MAPE-I) that evaluates the types of goals towards academic tasks, as well as student’s willingness to make an effort: The Junior Metacognitive Awareness Inventory (Jr. MAI), which assesses knowledge and metacognitive regulation. Both questionnaires were done in class groups at school time. For the variables of academic performance, that is measured according the development of cognitive level, is considered the battery of Neuropsychological Assessment test of the Executive Functions in Children (ENFEN). This battery needs to be done individually and outside the class. The number of participants in this task were 168 students.

According to the literature review, we expected to find what motivational implications of the student, influence cognitive and metacognitive strategies. The Pearson correlation statistics analysis exposes moderate significances between learning goal orientation with cognitive tasks that involves working memory, inhibition, flexibility of mental changes like “Stroop task” and “Trails 2 task”. Also, we find small correlation between effort aptitude and knowledge regulation. After Pearson correlation we do a dichotomization of motivational variables, to contrast variances between groups and the independent variables (metacognition and cognitive performance). That confirms the relation observed at the correlation analysis. The research reveals significance results at the comparison between groups regarding orientation to learning. The performance obtains in the “Stroop task” and in the “Trails 2 task” at ENFEN battery, are related high scores when students are oriented to learning goals. This is linked to the fact that students are learning oriented, enjoy and seek to increase their competences. Moreover, students learning oriented have more attention and effort response through academic task in order to regulate their strategies. In contrast to the group of students oriented to performance goals to obtain high grades or recognition, at school. We detect a significance result between the effort disposition and metacognitive regulation. Students that have aptitude to effort in academic task have more abilities to regulate their metacognition. However, no significance is observed between motivation variables and knowledge in metacognition, nor with the rest of the ENFEN’s battery task performed.

Keywords: Self-regulation, metacognition, cognition, goal orientation, children.