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The Relationship Between Self-Regulation, Motivation And Performance At Secondary School Students

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Abstract

Contemporary society, through its challenges, exerts a powerful pressure on its members. Thus, today, more than ever, the student is directly responsible and accountable for its performance, adjusting to the rapidly changing school environment. The competence of self-regulated learning is a key element in trying to be successful students. The present paper comes to find an answer to which aspects of motivation and self-regulation of learning are involved in obtaining the academic performance for the secondary school students in Romania. This study includes 270 secondary school students, aged between 12 and 14 years. Research methods used in this investigation are two surveys based on questionnaires and study of documents. The instruments used were the Academic Self-Regulation Questionnaire and Motivational Strategies for Learning Questionnaire. It was concluded that the competence of self-regulated learning has a strong impact on the level of attainment achieved by students, enhancing the relationship between motivation and performance.

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1. Introduction

From the perspective of Schmeichel, and Baumeister, “almost every major issue, personal and social, which affect a large number of modern citizenship implies, in a certain extent, a failure in self-regulation, situated in the context of broader social influences”. (Baumeister, 2002) Underachievement in school or employment arises from a lack of self-regulation of behavior in these areas. Self-regulation refers to certain conscious and unconscious processes by which the human psyche exercises control over the operation of the state and its internal processes. Self-regulation is the key aspect through which the Self acts on the organism. Some authors consider self-regulation

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as an individual energy resource. "Self-regulated power" represents the internal resources necessary to inhibit, overcome or alter possible responses that occur as a result of physiological processes, routines, learning or the novelty of a situation. Fonagy, P. and Target, M. designed self-regulation as a "key mediator between genetic predisposition, early life experiences and functioning of the adult". The authors describe self-regulation listed as the child's ability to "(1) control the response to stress, (2) the ability to maintain focused attention and (3) the ability to interpret mental states". We embrace the view over self-regulation as a competence, emphasizing in particular the acquired aspect of it, trying to diminish the "fatalist" role of heredity in the development of human personality. This conceptualization tries to overcome the limits of earlier models of self regulation. As well tries to place the origin of the phenomenon in the social modeling zone. Thereby, conscious self-regulation of behavior is achieved largely as a result of learning experiences. The act of learning, although it has a predominant individual component is, however, a social act, involving the socio-cultural mediated construction of meanings and signification production. We define self-regulated learning as being "the competence of learners to plan, execute and assess learning processes, involving continuous decisions on cognitive, motivational and behavioral aspects of learning cycle process" (Deci, Hodges, Pierson, & Tomassone, 1992) Self-regulation is not a measure of fluid intelligence, which is unchanged after a certain period in life and not a personal characteristic genetically determined or formed in the early period (Fonagy, Target, 2002). Students learn self-regulation through experience and self-reflection (Lee, Zhonghua, Yin, 2009), so it is a competence. Teachers can teach in ways that help students to become self-regulated students. Since self-regulation is not a personality trait, students can control their behavior and emotions to enhance learning and performance (Fonagy, Target, 2002) Self-regulated learning is often perceived as a mediator between personal and contextual characteristics on the one hand and the level of student performance on the other (Newman, 2009). A large number of studies show that self-regulation is a key ingredient in academic/ learning performance. Recent educational researches show that self-regulated learning help students to achieve the adaptiveness to the school environment, necessary for reaching the learning outcome. The self-regulated learner or the strategic help seeker reaches a mature level of cognitive and social development (Pintrich, 2000). This maturity gives to the self-regulated learner the flexibility and self-awareness necessary to persevere even in difficult conditions.

2. Research Methodology

2.1. Research Objectives

Objective no. 1: The identification of the motivational factors (self-efficacy, locus of control, interest in subject) that influence the level of school performance at middle school students.

Objective no. 2: The identification of the self-regulated learning's influence on the level of school performance at middle school students.

2.2. Research hypotheses

We assume that the relationships between motivational factors and academic achievement are influenced by effective learning strategies used, thus the level of using the self-regulated learning strategies is significantly associated with the increase of learning motivation.

2.3. The subjects' lot structure

This observational study had two essential points:

- The development of a pilot study aiming to investigate the chosen instruments on a population of 100 middle school students;
- Applying the tested instruments on a group of 270 middle school students.

The results of the pilot study allowed further research on a larger scale. The lot of 270 subjects consists of 129 boys (47.8%) and 141 girls (52.2%), representing a relatively homogeneous group based on gender criteria, with a slight predominance of female gender. The students who participated in this research were aged between 12 and 16, 35 students had, at the time of the research, 12 years of age (13%), 118 students were 13 years old (43.7%), 117 students with 14 years (43.3%).

3. The research instruments

- Academic Self-Regulation Questionnaire (SRQ-A):

The version used for the purposes of this research was developed by Deci, Hodges, Pierson, & Tomassone, (1992). The questionnaire has four subscales: external regulation, internal regulation (regulation of behavior, but not accepting it as their own), identified regulation (acceptance of the activities value as being personal important) and integrated motivation (integration as identification with other aspects of someone's self), from the behavior least to the most internalized. The version for middle school students is composed of 17 items with a response scale from 1 (never true) to 5 (totally true), expressing subjects possibilities to disagree with that item, not representing his behavior, to strongly agree.

For the entire questionnaire we obtained the internal consistency coefficient alpha Cronbach $\alpha = 0.84$, signifying a very good fidelity, and for subscales, as follows: for external regulation (ER) $\alpha = 0.65$, internal regulation (RJ) $\alpha = 0.72$, identified regulation (RI) $\alpha = 0.64$, integrated motivation (IM) $\alpha = 0.71$, thereby two of the dimensions shows moderate size fidelity, and the other two good fidelity.

- Motivated Strategies for Learning Questionnaire, the Chinese version (MSLQ-CV):

This questionnaire (MSLQ-CV), adapted and validated in 2010 by Lee, Zhang Zhonghua, Yin Hongbiao for the Chinese population, measures students' motivational orientations and the learning strategies used for different disciplines. The authors adapted the questionnaire constructed by Pintrich, using the version for middle school students. The construction of the questionnaire is based on a cognitive perspective concerning motivation and learning strategies. The section that investigates motivation is composed of 22 items that measure self-efficacy, goals orientation, personal beliefs and anxiety in terms of student assessment. The section regarding to learning strategies include also 22 items that measure cognitive and self-regulatory strategies that students use in learning. The version of the questionnaire proposed by the authors has five dimensions, namely, self-efficacy, intrinsic value, test anxiety, cognitive strategies used, self-regulation, in agreement with the factorial model proposed by Pintrich, & De Groot, (1990). All items are scored on a seven-point Likert scale. Categories from 1 to 7 represent the degree of agreement with the statement in question from "strongly disagree" to "totally agree".

Regarding the fidelity level of this questionnaire (MSLQ-CV), the results obtained show an Cronbach alpha coefficient of internal consistency, for the entire instrument of $\alpha = 0.92$. Analyzing each dimension separately in terms of fidelity, we obtained for the subscale of self-efficacy a value for internal consistency coefficient of $\alpha = 0.89$, the intrinsic value of $\alpha = 0.82$ for test anxiety $\alpha = 0.79$, for cognitive strategies used $\alpha = 0.85$, for self-regulation $\alpha = 0.80$, demonstrating that we have achieved a very good fidelity on each scale separately.

We assured the correspondence from English into Romanian of both instruments using the translation - re-translation method. The translations were made by the same Romanian person, specialist in English linguistics, who has teaching experience in secondary education in Canada for 10 years, teaching English to native English speaking students.

4. Results

Regarding our main concern, which is to find the declared use of self-regulated learning strategies, we obtained satisfactory evidence proving that the study population is relatively homogeneous. The independent mediated variable "self-regulated learning strategies" was investigated through four dimensions described above. Analysing this variable, we can assert that the group contains both students that succeed in regulates their learning behavior and an impressive number of students who can not do this or that manage self regulated learning at an average level. The obtained data shows a very slight positive asymmetry (the average beening 47.67, and the median 48 and the lowest value recorded was 18 and the maximum 89). Because the investigation on the normality of the data's distribution through the graphic method, the histogram form, is full of bias, we used for this reason both Kolmogorov-Smirnov and Shapiro-Wilk test, considered to be more discriminative than the first.

The individual variable "motivation for learning" in our research model was operationalized through four dimensions. These are: (1) self-efficacy, (2) intrinsic value, which measures self-efficacy, goals orientation, personal beliefs, (3) external regulation which is corresponding to extrinsic motivation as well as (4) intrinsic motivation. The purpose of measurement of the motivational orientations and the used learning strategies for school tasks was to highlight the extent in which the self-regulated versus controlled functioning, making distinction between several

types of behavioral adjustment. The results achieved using the Kolmogorov-Smirnov and Shapiro - Wilk tests are statistically significant, there for the variables distributions are asymmetric, indicating low scores.

Consequently, we can characterize the group as having the following trends:

- The group of students reported a low level of confidence in their success, considering to have a low efficiency in learning;
- The students' group tends not to realize the intrinsic value of learning and their usefulness, being forced to learn by teachers, parents or by fear of failure. We believe that the age of the participants is an important contribution to the crystallization of this trend;
- The descriptive analysis also shows a low level of intrinsic motivation for learning in the lot.

Between the variables Learning outcomes/performance (overall annual average grades) and the used of cognitive strategies we obtained a mean score of the correlation ($\rho(270) = 0,226, p = 0.00$). Between the learning outcomes and self-regulation we obtained an average coefficient ($\rho(270) = 0,343, p = 0.00$) between the learning outcomes and internal control we obtained an average coefficient ($\rho(270) = 0,241, p = 0.00$) and between the learning performance and the identified regulation we achieved the highest coefficient in this series of correlations ($\rho(270) = 0,514, p = .00$).

In this case, we can affirm that school performance increase if the person is curious, has control, regulates and directs impulses, preferring rigorous planning and perseverance to achieve success in what they aim.

5. Conclusions

Variables that influence school performance are internal control level ($\rho(270) = 0,514, p = 0.00$), intrinsic motivation ($\rho(270) = 0,402, p = 0.00$) and the perceived level of self-efficacy ($\rho(270) = 0,515, p = 0.00$). Self-regulation variable correlates strongly with motivation variable ($\rho(270) = 0,823, p = 0.00$), which confirms that a high level of self-regulation involves a high degree of motivation as well as the assumption that self-regulation moderates the relationship between performance and motivation. The scores obtained at variable learning outcomes/performance strongly correlates with all scales self-regulation and motivation concepts except the external regulation scale. Thereby the group of students declares they do not learn by compulsion or to please significant adults in their lives, like parents, teachers, etc. Analyzing the correlation coefficients obtained, we observe that there are directly proportional correlations between the level of learning outcomes/performance and the relative autonomy index, internal regulation, identified regulation, internal motivation and inversely proportional between this dimension and external regulation. These results confirm our assumption that students are aware of the level of responsibility for their development. Being more confident in their own forces contribute to internal motivation, adjusting their internal activities, validating the results obtained after a proper referential and exceed their academic performance level. The resulting conclusion on performed analysis is that academic performance increases if the person aware of his purpose, controls, regulates and directs his impulses, follows the rules, prefers careful planning and demonstrates perseverance in achieving success. In this case, the learning outcomes students can achieve are high. Therefore, the reference to the internal values, the own rules of satisfaction, considering learning as a necessity determines a high level of academic achievement. Positive personal beliefs related to achieve a good organization and execution of activities, the pursuit of a goal is associated with a high level of academic achievement. In addition, confidence in their own possibilities to mobilize cognitive resources and motivation necessary to successfully perform a task correlates with a high level of academic achievement.

Competence of self-regulated learning has a strong impact on the level of school performance achieved by pupils therefore we believe to be one of the most important transferable skills that Romanian schools should focus in their curriculum. Firstly, because it enhances the motivational level and allows the student to be accountable for their own learning. Secondly, because it determines indirectly changing patterns of poor behavior and positively influence the level of achieved performance.

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