

## Self-regulation strategies as a learning assessment in students

**Albana Sadiku**

*University of Mitrovica "Isa Boletini" – Republic of Kosovo*

### Abstract

The research examines the strategies of self-regulation, which are applied by students during the learning process. As an instrument in order to collect the information for this paper, is used the so-called questionnaire "Strategies and self-regulation questionnaire", which was developed by psychologists, Printman, Smith, Garcia and McKeachie (1991), who worked at the University of Michigan. The purpose of this study is to measure the strategies of self-assessment, self-esteem and self-discovery that students show during the learning process, to understand if the students try to find different alternatives suitable for them, in order to allow them to learn more easily. This research is a type of descriptive, and the questionnaire is applied for collecting the required data. In order to accomplish an agreeable result/estimation, the research was conducted in three parallels of seventh grade of the primary school "Migeni", Mitrovica, Kosovo. The obtained results were analyzed by hi-square,  $\chi^2$ , coefficient variation, and standard deviation.

The hypotheses of this research are: "Difficult teaching lessons make students/pupils to collaborate with their classmates or with the teachers"; "The students are capable of self-judging while gaining knowledge, remembering and reproduction of them"; "The act of learning and doing homework in a specific place, without changing, impacts in higher and easier concentration.

Taken in consideration the obtained results, the first and second hypotheses are verified as accurate. The hi-square of the first hypotheses is 3.13, hi-square of the second hypotheses is 4, and hi-square of the third hypotheses is 152.788.

**Keywords:** *students, self-regulation strategies, learning.*

### Introduction

Self-regulation in learning is a very crucial process in motivating and reaching positive achievements in school. Self-regulation represents the individual's ability to self-control emotions, attention, emotions, energy, and individual actions. Self-regulation develops along with time, and includes various aspects of human: emotional, social, and cognitive, resulting in relevant behaviors (Zimmerman, 1996). The cognitive presents the degree to which the pupil is able to plan and think, such children keep their thoughts, behaviors, develop their abilities, and are able to adapt to certain environments, if necessary. While social and emotional aspects present the ability to prevent negative actions. This process requires from the pupils to independently plan, monitor and evaluate their learning outcomes. They can help students create better learning habits and strengthen their skills in studying (Wolter, 2011). There are many students performing such a thing, i.e. have 'sensitivity' to self-esteem that comes as a result of proper self-regulation. Self-regulation in essence is a process of learning (Jarvela&Jarenoja, 2011).

From a certain period, each of us can remember ourselves that we have experienced

emotional, social and cognitive disorders. Perhaps this is also one of the most important issues in this area that so many people are aware of or having skills in engaged activities, and at the same time they are aware that they do not know some facts and have no skills or skill to act in a certain way. In pupils, the self-rule is presented as a system and process of control, where they feel greater responsibility to their personal achievements (Zimmerman & Martinez-Pons, 2006).

The self-regulation perspective on pupils' achievements is not the only one, but there are many instructors that instruct teachers how they should work, and in what educational and educational profiles are more capable (Zimmerman, 1990). In recent years, there has been little empirical study of how pupils become masters in personal learning, an issue that became known as self-regulation in learning (Zimmerman & Schuck, 1989). There is a long time this kind of field has been done ex-researchers research eg. Pintch and De Groot (1990) measured self-regulation and cognitive strategies, in order to find the easiest way for initial knowledge in elementary school to achieve academic achievement. However, self-regulation should also be considered in students who are less able to independently learn and develop recurrent skills that are related to the purpose (Wang & Lindvall, 2014). There cannot be a sample for general application, because everything in the end goes to individual and personal adjustments. According to Zimmerman (1989), self-disadvantaged students are individuals who are "motivated metacognitively and actively involved participants in their learning processes."

Learning self-disorder is controlled by a number of internal factors that determine development and resilience (Bandura, 1993). Motivation is one of the factors involved in self-regulation and has a very important role (Ommundsen, Haugen & Lund, 2005). During the planning phase, when students know that a task needs to be accomplished, and know how long it takes to complete that task, their interests and assessments are key factors for decision making (Simons, Dewitte & Lens, 2000). It depends on what is primary for the student, is learning more primary or do they prefer to spend more time planning strategies and setting goals. Based on the definition given to us by Kuhl (2000), motivation depends on the self-regulation system that the individual creates, which means that whatever goal the student achieves, motivation may not be enough to satisfy his purpose, and in such cases involve the system of self-regulation within the framework of motivation theory.

Motivation is the force that initiates and directs behavior as well as factors that determine the intensity and stability of that behavior (Pettijohn, 1997). Learning based on self-regulation and motivation in most studies does not have a definite definition between them (Molnar, 2000).

In a narrower sense, self-regulation in learning involves control in cognition, motivation, and behavior, which is constructed and guided by goals and circumstances, e.g. when students are motivated to learn, they are more willing to spend their energy and time learning and applying the necessary skills that stem from self-regulation, and when students are able to apply self-regulation strategies, they are also more motivated to complete the given task (Zimmerman, 2000). Another definition includes self-regulation in intentional learning, strategies, behavior, and actions (Lemons, 1990).

## Self-regulation characteristics in learning

Metacognition is one of the most important characteristics, which refers to awareness, knowledge and cognitive control. Metacognition includes three other processes that activate metacognition, and they are: planning, monitoring and regulation activities (Pntrich et al., 2001). Planning involves presenting the educational purpose and detailed analysis of other aspects (S. Chen, 2002).

Social and physical environmental management represents the physical and social regulation of the work environment including the environment and the demand for help (Zimmerman &Risenberg, 2007). The management of the student's work space, the location being glabrous and having enough brightness. This is also a method that leads to independence, and then retraining strategies are required from the teacher or parent, and later lead to independence and achievement of the goal with personal planning and without assistance.

Time Management is another aspect of self-regulation in learning is time. Time management includes: curriculum, scheduling and performing a given assignment as long as the student is planned. Britton and Tessor (2013) defined a link between time management and average grades in school students, and concluded that students who had time management had greater success.

Attempting presents another way for student to practice self-regulation training is the ability for a student to cope with failure and to continue. Attempt or will is the tendency to concentrate and continue to reach the goal (Corno, 2004).

The cognitive social theory on self-regulation by Albert Bandurerepresents learning as a dynamic interaction between the individual, the environment, and the behavior that the individual shows. According to Bandure (1991), in human social cognitive theory human behavior is extremely motivated and regulated by the experiences that the individual passes and the consequences that pertain to the individual. The most successful mechanisms of self-regulation operate through three sub-functional principles: self-monitoring of one's behavior, determination and impact of that behavior; judging the behavior of another related to personal standards and environmental circumstances; and the self-response effect.

Julian Rotter's Social Learning Theory explain personality and behavior like an inner product of the individual in interaction with the environment that surrounds the individual. In the theory of social learning, the environment is presented as an external stimulus, and the individual is the one who recognizes it, self-organizing and responds to it, it is seen as a component of learning with experience. Rotter's social learning theory represents the integration of the theory of learning and personality (Phares, 2006).

Learning without anybody help from Martin Seligman - According to Seligman (1997), learning without help/assisance is a state of mind that is created when a human being or an animal learns to act without help, including when individuals try to avoid unpleasant situations. The theory of learning without help describes human behavior as a model to explain depression as a condition that affects a lack of feelings.

Personality theory of Walter Mischael (1974) had the aim of researching the structure

of an individual's personality, process and development, as well as self-regulation. According to the Walter Mischel's theory of personality stands on two things: specific attributes that have a certain situation, and the way that the individual perceives that situation. Mischel is in complete opposition to the traditional social-cognitive theory, which according to him a person behaves in a certain way, even if his actions represent a high probability of achieving the same results, he emphasizes that each individual is different and this is based on the experience and experiences of the individual.

According to Walter Mischel (1974), there are five variables that affect the individual's preferred behavior, they include:

1. Competence - in which the capacity of the individual and his / her ability to react in accordance with the social environment is enshrined,
2. Cognitive strategies - cognitive strategies include the distinctiveness of different persons in a specific situation, the same situation some may regard as wrongdoers and some may consider it challenging,
3. Excellence - presents the expected results from the various behaviors that the individual already has in his mind,
4. Subjective values - include the respective values of each result of different behaviors,
5. The system of regulation - presents a set of rules and standards that people adopt in order to regulate their behavior.

The Bandura Theories, Rotterdam and Mischel, explain how we can specifically approach our personality. The theories of social and cognitive learning emphasize that we can not understand or appreciate the personality of an individual without ever having what he has in mind exactly. The other difference between these theories is that with the exception of the Bandura who presents such behavior that can be taught by the daily behavior of people, others present behavior as the inner attribute of the individual (Pettijohn, 1997). The rotor and Mischael (1974) share the view that one thing that man anticipates happens in the future becomes factors to shape a certain behavior. Meanwhile, what distinguishes Mischel from Bandura and Rotter is the particular emphasis he gives to cognition, where delaying the expected pleasures affects consistency or personality.

Also there are several entertained, healthy and education ways that lead to a successful self-regulation in learning. Doing aerobics, gymnastic and other physical activities may have a positive effect on the student's psyche and physique. Sports and martial arts if performed on time and regularly can help improve students' learning skills. Continuation of programs and courses which have as study profile the success of self-regulation in learning having everything regulated within the standards, monitoring by professionals and motivation (Randi, Judi &Corno, 2000). In general, student participation in educational activities outside of school is a great help in achieving the success of self-regulation in learning.

### **Methodology**

The method that is used to conduct this study is questionnaire, a useful tool on research situ and belongs to the subjective or judgment instruments that may assist in direct observation activity; it is used for the evaluation of pupils in our study case.

The applicable instrument is the specific questionnaire known as “The Motivated Strategies for Learning Questionnaire –MSLQ, profoundly utilized by the psychologist at the University of Michigan.

Taking in consideration that in this study case is included only one questionnaire, initially it was analyzed specifically and the given answers were computed in SPSS program (Statistical Package for Social Sciences), we have got fast and precise results regarding to the required variables. Based on the given data the risen hypotheses might be verified or disapproved. The questionnaire that will be used is licensed by the University of Michigan and contains 32 questions, multiple choices or replenishing the squares (x).

**Participants and procedure** - The questionnaire will be given to three parallels of the seven grades at the elementary school Migeni, Mitrovice, Kosovo.

The first parallel, respectively VII/1 has 35 pupils, 19 females and 16 males.

The second parallel, respectively VII/2 has 34 pupils, 17 females and 17 males.

The third and last parallel, respectively VII/3 has 35 pupils, 17 females and 18 males.

Total number of pupils indicates that: 96 pupils are age of 13 and 8 are ages of 14.

Three females and 5 males are age of 14.

Taking in consideration that in this study case is included only one questionnaire, initially it was analyzed specifically and the given answers were computed in SPSS program (Statistical Package for Social Sciences), we have got fast and precise results regarding to the required variables. The goal of this study was the measurement of self-regulation strategies that pupils manifest during the learning process or to understand if the pupils tend to find different alternatives that can be more useful and easier for better study.

## Discussion of results

Based on the fact that for the same questions we have received different answers, then as a measure for determining the distribution of answers from their arithmetic mean is used variance, standard deviation.

Therefore, in the obtained result, the calculated numerical value of the variance in the positive answers is  $\sigma^2 = 21.58$ , while the standard deviation,  $\sigma = 4.64$ . For negative answers  $\sigma^2 = 15.46$ , and the standard deviation,  $\sigma = 3.93$ . As for the neutral answers, the values obtained are:  $\sigma^2 = 11.38$ , while the standard deviation,  $\sigma = 3.37$ . From the obtained results it can be detected that we have cases of distribution from their arithmetic mean as well as the standard deviation. The high numerical values obtained for the variance, ie the standard deviation, indicate a large ambiguity in the answers obtained.

As for the hypotheses presented as a non-parametric method for their reliability, the hi-square test was used. Regarding the hypothesis: “Students are capable of self-judging while gaining knowledge, remembering and reproduction of them”, the obtained results have confirmed the hypothesis. This hypothesis the average value of  $\chi^2 = 3.13$ , the release rate is 2. The limits of the value of the hi-square below the 5% probability level, as taken from the corresponding table the significance scale is 5.991. Since our hi-square 3.13 is smaller than the limits of the 5,991 degree scale we can

conclude that the hypothesis is accepted as correct.

The other hypothesis, which is: "Difficult teaching lessons make students/pupils to collaborate with their classmates or with the teachers ", has also been proven based on the value of the hi-square which is  $\chi^2 = 4$ , the degree of release is 2. The limits of the value of the hi-square below the 5% probability level, as taken from the corresponding table the significance scale is 5.991. Since our hi-square 4 is smaller than the limits of the 5,991 degree scale we can conclude that the hypothesis is accepted as correct.

And the last hypothesis is: "The act of learning and doing homework in a specific place, without changing, impacts in higher and easier concentration ", based on the value of the hi-square which is  $\chi^2 = 152.788$ , the release rate is 2. A boundary of the value of the hi-square below the 5% probability level, which is taken from the corresponding table, the degree of importance is 5.991. Since the numerical value of the hi-square is 152,788, which is much larger than the scale level of 5,991, we conclude that the hypothesis is rejected because there are very large differences between theoretical and empirical frequencies.

### Conclusions

The obtained results give us an empirical basis on the use of self-regulation strategies. Based on the values of the hi-square, which is calculated specifically for the 32 questions of the questionnaire, it turns out that self-regulation strategies are applied by students only 18.75%, or based on the questions of the questionnaire, respectively the value of hi-square in the rest of the answers the value of the hi-square is large for the release rate at 1% and 5%. Whereas, the numerical values of the hi-square obtained based on the students' answers, confirm the first and second hypothesis stated that: "The pupils are capable of self-judging while gaining knowledge, remembering and reproduction of them", and the other hypothesis is: "Difficult teaching lessons make students/pupils to collaborate with their classmates or with the teachers".

Hi-square numerical values do not support the third hypothesis: "The act of learning and doing homework in a specific place, without changing, impacts in higher and easier concentration". The obtained results from the unit of variance and standard deviation have distributions, respectively standard deviation has distributed from the arithmetic mean.

The first hypothesis: "The pupils are capable of self-judging while gaining knowledge, remembering and reproduction of them", based on our results has been proven.

Teachers should be aware of the aspect of self-regulation, to give some more advice and alternatives to pupils regarding self-regulation in learning. Teacher should respect student's self-regulation strategies in learning, even in classroom.

Based on all collected/obtained data, we may conclude that the students during the learning process have the ability of attention self-control, emotions and individual actions, which affects in the improvement of self-regulation strategies during learning. the calculated numerical value of variance is made on the basis of alternative responses, in positive responses it is  $\sigma^2 = 21.58$ , while the standard deviation is  $\sigma = 4.64$ . For negative answers  $\sigma^2 = 15.46$ , and the standard deviation,  $\sigma = 3.93$ . As for the neutral answers, the values obtained are:  $\sigma^2 = 11.38$ , while the standard deviation,  $\sigma$

= 3.37.

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