

A COMPARATIVE ANALYSIS OF SOME RELEVANT CONCEPTUALIZATIONS OF SELF-REGULATED LEARNING

Daniela POPA¹, Marius BAZGAN²
^{1,2} Transilvania University of Braşov, Romania

ABSTRACT

Contemporaneous society, through its challenges, exercises a powerful pressure on the members. Today, more than ever, the individual is responsible for his evolution, for the adaptation to a rapidly changing environment. Underachievement in school or employment emerges from a lack of self-regulation of behavior in these areas. This article aims to be a comparative analysis of the main relevant models of self-regulated learning. We focus our research on Zimmerman's, Pintrich's and Boekaerts's models of self-regulated learning to highlight the main components of this concept. We used as criteria: the nature of self-regulated learning, the assumptions, the design, the relations between components, the innovative aspect of each model. The paper represents a qualitative research that try to find how we can foster the accountability for the development of self-regulated learning in our students.

KEYWORDS: self-regulation, learning, conceptual models.

1. INTRODUCTION

Contemporaneous society, through her challenges, execits a powerful pressure on the members. Today, more than ever, the individual is responsible for his evolution, for the adaptation to a rapidly changing environment. From the perspective of Schmeichel, J. B. and Baumeister, R. F., “almost every major issue, personal and social, that affect a large number of modern citizens, involves in a certain extent, a failure in self-regulation, situated in the context of broader social influences” [1]. Alcoholism, smoking, substance abuse, obesity and other addictions reflects an inability to control behavior. Emotional problems require, in general, failure to prevent or recover from some unwanted feelings. Underachievement in school or employment emerges from a lack of self-regulation of behavior in these areas.

Theorists, who study the phenomenon of self-regulation, grant it an essential role in the theory of self. Self's studies, from recent decades, reflect the need to understand and explain how it can maintain control over the person and make the necessary adjustments for the human beings to be in harmony with the physical and social environment. Specialists such as Pardel, T.K., consider that there are two types of regulations [2]:

1. Regulating unconscious behavior that occurs in biological programming of the individual, is the effect of maturation and learning (reflexes, deficits, customs);

2. Regulating conscious behavior, coordinated by learning experiences offered by the life contexts and the mechanisms formed / practiced through learning. Adjusting conscious human behavior aroused the interest of researchers and practitioners in the educational field and beyond it, seeking optimal ways of its formation, knowing that the social environment mediates the formation, development, reducing this type of adjustment.

In the recent years, psychologists attempt to place theoretically the phenomenon of self-regulation in the context of evolutionary biology and cultural influences. Baumeister believes that the development of self-regulation will prove to be one of the defining characteristics of human evolution, fitting it in the range of features that give specificity to human beings [3].

We cannot speak of a central component of human personality, the conscious - intentional aspect, without defining the terms with whom we move forward. Thus, the term "person" referring to "concrete human individual" and "personality" means "a theoretical psychological construction built with the intention to explain the psycho-physiological functioning of the organism, and so of the person" [4].

We consider personality as "a set of psychological characteristics with a high degree of stability and generality, organized hierarchically in a unique and unrepeatable configuration, traits that manifest in a particular mode of being and reacting of each person" [5]. This unique pattern of features makes each person to be considered an individual.

Dynamic personality is reflected in "the mental function designed to regulate the relationship between individual and environment, subject- object, namely, consciousness" [6]. The field of consciousness coincides with Ego when Ego conducts its experience to the maximum level. The Ego, appeared by his own power, codified by reason, develops according to the world in which it occurs" [7]. Regarding the sphere of the Ego, experts in the field have different perspectives. Jung believes that the Ego is the subject of consciousness and the Self is the subject to all psychic. If psychoanalysts (eg. Freud, S., Jung, G) define the areas of Ego, Id and Superego, presently the specialty literature does not clearly keep these delimitations.

In the Anglo-Saxon literature, it is usually used the term Self, in French literature we encounter the Concept of Self, and the Romanian literature uses the term Self, as equivalent to the psychoanalyst Id [8]. The term Self-concept is "a personal construct in which the subject faces cognitively with itself and with the dynamics (reasons) and his abilities as he perceives them" [9].

Phenomenological and humanistic personality theories differ from psychoanalytic theory and most majority of the theory of traits through the fact

that emphasizes individual subjective experience, including self-awareness. Self is investigated as an agent that builds energetically the mental life of a person, exploring the distinction between self as an object and self as the author of the action. Recent socio-cognitive models describe the Self concepts as "prototypes" the fundamental concepts are represented as network nodes of specific concepts. Often, in this view, the self is seen as an "organized scheme, as an organized cognitive structure that represents key elements of beliefs about the self" [10].

2. THE CONCEPT OF LEARNING

From a large perspective, learning is defined as "a modifying ability of an individual to perform an activity under the effect of interactions with the environment" [11]. But the concept on which we leaned upon in this section has various meanings, being approached over time, from different perspectives and paradigms. Legendre, R. believes that "learning is constituted by acquisition or by changing processes, dynamic and internal of a person who stimulated the desire and will to develop, builds new representations, coherent and sustainable explanations of the world based on material perception, based on the environment stimuli, from the interaction between internal and external data and the connection of personal conscience" [12].

Nowadays, learning is considered to be "an active and constructive process that always occurs in a context, so it is situational, multidimensional and systemic" [13]. From the pedagogical perspective, learning represents an activity designed by the teacher aimed to determine behavioral changes in the personality of learners by capitalizing on their ability to acquire knowledge, skills, strategies and attitudes [14]. In the school context, this takes the form of a process conducted in a variable extent, systematic, led by the teacher - the person with epistemic authority.

The learning process analysis depending on the level of complexity that takes place reveals a continuum whose extremes are the elementary level, represented by the response to external factors, conditioning, and complex, by interposing a filter between the stimulus and the individual response, which includes declarative acquirements and procedural knowledge. The acquired knowledge are dynamic, they transform throughout a long and complex process. But the process is not limited to obtaining these products, knowledge, which represent the cognitive aspect. Equally, this process also covers developmental milestones by building skills and abilities as well as the socio-affective, forming social skills, attitudes, norms and values through learning. Them properly assimilated and well structured, fully operational and facilitate skills training.

The approach of the neoconstructivist model on the cognitive development brings into question the child's executive control structures that

contribute "to the development of general conceptual models that transcend particular tasks, becoming an indicator to the level of organization of conceptual networks at different stages of its development" [15]. This model combines with the cognitive and the constructivist concepts as well as the latest results of neuro –behavioral sciences to emphasize high activism of a child thinking, it, being under the coordination of his own personality.

I. Neacșu believes that the neoconstructivist model has certain advantages for the educational plan. The most important of them raise a new perspective on understanding "the conceptualization of a child, the essentialization of education, being more likely for the original structures to be used by the teacher on a scientific basis, dominated by constructivism, the emergence of knowledge" [16].

The education specialists speak today of enhancing educability, not only as a result of expansion of education, but as an instrumental objective expressly pursued by it. If, psychologically speaking, educability would result in the structure and function of four major skills (learning to learn, learning to share knowledge with others, learning to assess and evaluate oneself and learning to change and improve) increasing their educability means their development and efficiency. In the educational act we operated with two goals: one external - the purpose (forming the student in relation to a specified value, given by the purpose of education) and one internal - transforming the object of education in to the subject of education. The student is the subject of their own training, according to its coefficient of engagement and activism.

T. Husen "reinforces the idea of society necessity based on learning, citing informational explosion which, at that time, did not know the dimensions of today, if we look from a retrospective perspective. Analyzing Husen's contribution, S. Ranson emphasizes the idea of a lifelong education as required processuality, emphasizing the need for formal education but also the necessity for reconsider it, in conjunction with non-formal and informal education, which should form a unit and be in complementary relations" [17]. Husen's predictions have become mostly reality, so in the last 30 years there have been profound changes in educational practice as a result of these goals. Therefore, self-regulated learning has become one of the principal axes of educational practice [18].

According to Zimmerman, B.J., the student is not only actively involved in his own development, but through his level of involvement, becomes leader of the self-training process [19]. The term self-regulated learning became known in the educational field in 1980, because it highlights the students' autonomy and responsibility in learning. Today we witness to an explosion of specialized studies on self-regulated learning, which proves the growing interest of researchers and practitioners of this phenomenon, representing a real direction for research and educational practice.

It is appreciated as a valuable term, because it highlights how "self" is an agent in setting goals and learning strategies and how each one's perception of self and task influence the quality of learning [20]. In the last twenty years, much of the research on self-regulated learning focused on a cognitive perspective [21], on the social origins of self-regulated learning [22],[23], on the learning strategies that promote self-regulated learning [24]. As a general term, self-regulated learning fits research on cognitive strategies, metacognition and motivation in a coherent construct that highlights the interactions between them.

3. SELF-REGULATED LEARNING

The field of self-regulated learning research consists of many camps and perspectives that sometimes focus on different constructs [25],[26]. In recent decades, researchers have developed numerous models that attempt to identify the processes involved in self-regulated learning, to establish relationships between them and school success.

However, these perspectives share common assumptions that provide the foundations for all self-regulated learning models [27]. First, an underlying construct of most self-regulated learning models is that students are proactive in a constructive process of learning. Students are assumed to actively construct their own strategies, goals, and meaning from information available in their own minds as well as from the external world. Second, most self-regulated learning models assume that students can potentially regulate and monitor certain aspects of their cognition, behavior, and motivation. Due to individual differences and developmental constraints, individuals do not constantly monitor and control their cognition, behavior, and adoption of goals in all contexts.

Third, most models assume that all human cognitive behavior is goal-directed and that self-regulated students modify their behavior to achieve a desired goal. Individuals set goals for their learning, monitor their progress towards these goals, and then adapt and regulate their behavior, cognition, and motivation to reach those goals. Fourth, most models assume that self-regulatory behavior is a mediator between (a) an individual's performance, (b) contextual factors, and (c) personal characteristics.

Students acquire many skills by imitating those of others, such as parents, teachers, and peers. From a social cognitive theoretical perspective, self-forms of regulation are derived in part from social forms. Contexts also play a role in the adaptation, such as whether a self-regulatory process is applied before, during, or after a task is performed. Imitative forms of social learning can occur formally, such as when a teacher purposely describes subtle aspects or his/her strategic performance, or forms can occur informally, such as when a student imitates the clothing choices of a popular classmate.

3.1. Zimmerman's model

One of the most popular models, which generated an impressive number of studies, is the one built by Zimmerman, B. J., pioneer in researching the phenomenon of self-regulation. According to Zimmerman, self-regulation refers to "thoughts, feelings and self-generated actions, which are systematically oriented toward goals" [28]. Author exemplifies through investigated studies the existence of a connection between self-regulated learning and academic success. It identifies as indicators of self-regulation, students' personal characteristics, such as: time management dedicated to learning, practice, mastery of learning methods, monitoring the progress and attaining a sense of self-efficacy.

This model was designed to describe the nature of self-regulated learning in terms of three sequential phases and three levels: self-regulated learning phases (e.g. forethought), groups of processes and beliefs (e.g., task analysis and self-motivational beliefs) and specific processes and beliefs (e.g., goal setting and self-efficacy) (Figure 1. Zimmerman's perspective of the self-regulation model, 1998).

To reinforce the value of learning self-regulation, Zimmerman brings for argument the studies that certify that one of the causes of academic underachievement is the inability of students to effectively control behavior. The author makes use of the research findings of Borkowski and Thorpe on a large number of studies on the subject, indicating that a substantial number of studies show that the unachieved students are more impulsive, have unclear or poorly defined goals, fail to properly self-evaluate, are too self-critical and less efficient in their activity and have a tendency to give up more easily than the comparison group, those in academic achievement situations. Self-regulating effects of these limitations are considerable, generating a high degree of anxiety for individuals in question, a low self-esteem, and an accentuated need for approval and rather become influenced by extrinsic factors.

Zimmerman creates a model that conceptualizes self-regulation in educational contexts as being carried out on four dimensions or areas in which students self-regulate their own activities, namely:

- Reasons for learning and achieving performance;
- The methods used;
- Results of performance or target behavior that is aimed to be achieved;
- Use of external resources, from the environment.

Zimmerman states that, to be self-regulated, it is not necessary for the student to exercise control over all dimensions, considering that a complete control over all dimensions is rather rare in the educational context. The author develops a model (Figure no. 1, Zimmerman's model of self-regulation from the perspective of 1998) expressing his view on the phenomenon of self-regulation, assimilating it continuous series of cycles of feed - back consisting of three

phases: planning, control and reflection. Zimmerman states that, for being self-regulated, it is not necessary for the student to exercise control over all dimensions, considering that a complete control over all dimensions is rather rare in the educational context. The author develops a model (Figure no. 1, Zimmerman's perspective for the of self-regulation model, 1998) expressing his view on the phenomenon of self-regulation, assimilating it to a continuous series of cycles of feed - back consisting of three phases: planning, control and reflection.

The most important element of any approach to self-awareness learning is the existence and existence of a well-defined purpose. Thereby, the first part of the planning stage on which stops Zimmerman, is establishing the goal. The author believes that a moment of setting expectations on learning outcomes, aims towards answering the question "Why do I want to do this?"

The second step of this phase is called by the author "strategic planning", representing the sequence in which the person builds and selects strategies and learning methods, of which application makes possible the achievement of the intended purpose. These two sequences from the self-regulating process of behavior in learning depend strongly on "personal beliefs" regarding personal interpretation of reality and the power of self-image (the value given to the learning process, the orientation of the goals, self-efficacy). We wish to emphasize that this influences the quality and level of engagement in an activity, with significant effects on the final outcome of learning.

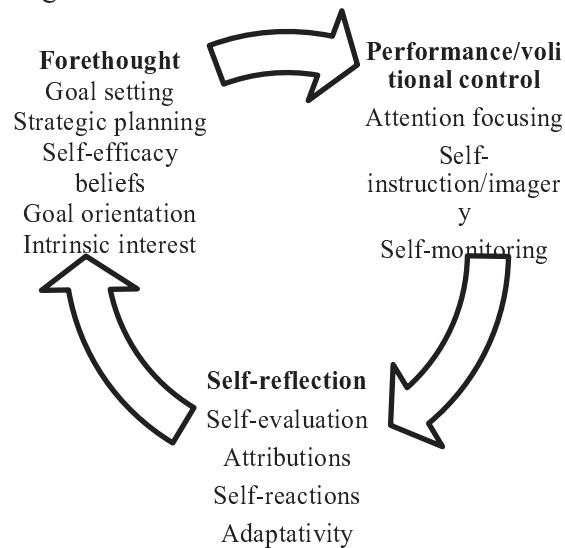


Figure 1. Zimmerman's perspective of the self-regulation model, 1998

In the second stage of self-regulation model proposed by Zimmerman, "Performance/ volitional control", are found those will and motivational

processes, which focuses the efforts of the trainee on the task ahead and it "optimizes performance". By focusing attention, student stands out from the distractors and also prioritizes competing goals, eliminating or minimizing unimportant tasks, focusing on the important and/or urgent objectives needed to reach his goals.

An important role in this stage has metacognition, operationalized by Zimmerman through "self-instruction", including training techniques of forming conceptual maps, mental images, verbalizing for himself the steps necessary to solve the problems, all aiming to consciously realize the process of learning. Metacognition, at this stage, is present in the self-monitoring process, the student self-evaluating their progress, assigning internal or external causes to the obtained result.

The manner in which are made the attributions, their direction towards inside or outside the person himself strongly influence responses of self, in a positive or negative manner. Zimmerman highlights studies which certifies that "the attribution of success or failure to strategies used are directly related to positive self-reactions, and putting result on behalf of skills relate to a negative reaction to itself" [29]. The attributive strategies used may be more or less adaptive. An optimum adjustment is achieved when a person discovers those strategies of attribution that work best for themselves. A more realistic evaluation enables the student for an effective adjustment. Launching into an understanding effort of the matters and the major psychological dimensions of learning, such as motivation and learning methods, the author creates a conceptual framework for the analysis of these aspects that can be seen in the Table 1. Conceptual analysis of self-regulation academic dimensions [30]. A second purpose covered by the author in constructing this framework of analysis is represented by the interest in defining the necessary conditions to achieve the tasks, to observe how each component self-regulates. Also, the researcher is interested in discovering interrelationships between components and the integration of the findings obtained from the analysis of different theoretical perspectives.

Table 1. Conceptual analysis of self-regulation academic dimensions (Schunk, D.H., Zimmerman, B.J., 2009, p. 25)

Scientific questions	Psychological dimensions	Task requirements	Self-regulating characteristics	Self-regulating processes
Why?	Reasons	Choosing participation	Intrinsically motivated or self-motivated	Self-setted goals, self-efficacy, values, attributions. and so on
How?	Methods	Choice of method	Scheduled or automated	Strategies used, relaxation.
What?	Performance outcomes	Choosing performance results	Awareness performance results	Performance monitoring, self-judgment, control actions, will.
Where?	Environment (social)	Social control and physical arrangement	Social sensitivity / environmental and resource fullness	Environmental structuring, searching assistance.

Zimmerman and Schunk consider that “self-regulation may be acquired in stages. Self –regulatory processes are not acquired overnight but rather become refined through repeated instruction and practice” [31]. The student should be initiated in becoming a self-regulated learner. The teacher has an important role in stimulating the students in this direction.

3.2. Pintrich's model

Another reference model is that of Pintrich, P.R., considered by some authors to be one of the most complete models [32]. He registers his model in a socio-cognitive perspective, classifying and analyzing important processes as self-regulated learning. In Pintrich's model, the processes of regulation are organized in four stages / phases: planning, self-monitoring, control, evaluation. In these four stages, activities are divided into four areas: cognitive, motivational / affective, behavioral and contextual.

As shown in Table 2. Pintrich's self-regulated learning model (2004), self-regulating processes trigger in the *planning phase*, where the main tasks are: to establish desired goals or objectives that are next to be achieved in the realization of the task, activating prior knowledge about the matter and metacognitive knowledge (acknowledgment of the difficulties involved in different tasks, identifying prior knowledge and skills necessary to solve them,

knowledge about resources and strategies that can be helpful); activation of motivational beliefs (self-efficiency, purposes, value of task, personal interests) and emotions, time and effort in planning that will be used for that task (the behavioral area) and the activation of perceptions regarding school context (class) and task.

In the *monitoring phase*, there are included activities that mediate the increased state of awareness (level) of cognition, motivation, emotion, use of time and effort, such as the conditions and context of task. There are included self-observational understanding activities that occur when students are aware that they did not understand a perceived aspect, when they are aware that they are reading too fast for the type of text involved or for the purpose that was set (e.g. understanding the main ideas).

At this phase there are found processes which students activate to be aware of the motivational pattern (or that is that they deemed competent, or that they value themselves positively). They become aware of their own behavior (eg, "I must try harder", "I should seek help") as well as of the contextual characteristics of the task and classroom (the rules that exist in the classroom, how performance will be measured, the system of rewards and punishments, teacher behavior).

Control activities perform a selection and use of thought control strategies (use of cognitive and metacognitive strategies), motivational strategies and those to control emotions, as well as those related to regulation of time and effort and control of the various school tasks and not finally, control of environment and class structure.

Table 2. Pintrich's self-regulated learning model (2004)

Stage / phase	The regulation areas			
	Cognitive	Motivational	Behavioral	Contextual
Planning / Enabling	<ul style="list-style-type: none"> * Setting goals * Activating prior knowledge * Enabling metacognition 	<ul style="list-style-type: none"> * The adoption of orientation purposes * Judgment on the effectiveness * Perception of task difficulty * Enable task value * Enable interests 	<ul style="list-style-type: none"> * Planning effort and time * Planning self-observation behavior 	<ul style="list-style-type: none"> * Task perception * Context perception
Monitoring	<ul style="list-style-type: none"> * Metacognitive awareness * Monitoring 	<ul style="list-style-type: none"> * Awareness and monitoring of motivation and emotion / affective 	<ul style="list-style-type: none"> * Awareness and monitoring effort, time 	<ul style="list-style-type: none"> * Monitoring, changing task and

	cognitions		use, need of help *Self-observation behavior	contextual conditions
Control	*Selecting and adapting cognitive strategies for learning, thinking	* Selection and adaptation strategies for managing motivation and emotions / affects	* Increasing/decreasing the effort * Perseverance/ Renouncement * Searching aid behavior	* Changing or renegotiation of task * Changing or maintaining context
Reaction and reflection	* Cognitive judgment * Attribution	* Emotional Reaction * Attributions	* Choice of behavior	* Task evaluation * Context evaluation

Evaluation phase (reflection) includes judgments and assessments that the student makes on their own task execution, compared with predetermined criteria (of his teacher or his own), makes causal attributions of success/failure related, experiences emotional reactions due to result, chooses the behavior that he will use in the future, as well as the overall assessment regarding of task context.

In this model, self-regulated learning is seen as a mediator between personal and contextual characteristics, on one hand and the level of student performance, on the other hand [33]. We consider Pintrich's model as a comprehensive one, providing a theoretical-methodological reference for analysis and explanation of cognitive, motivational / affective, behavioral and contextual process which mediate self-regulated learning.

The innovative aspect of this model is represented by the inclusion of contextual factors as an area of self-regulation. Noticed that, in this model, students can intervene to change/modify context, these proactive aspects are points of interest in the self-regulation of learning, encouraging student autonomy and responsibility towards their training.

Pintrich's model draws attention on some key aspects, less discussed by other authors, in regulation of learning process as learning task value (willingness and desire to learn some specific content) learning context and emotion control. Regulating the learning context refers to environmental structuring to be suitable for learning (reducing the noise, adjusting the light,

the temperature, etc.). The emotion control through relaxation exercises, self-encouragement and seeking social support has the role to maintain an optimal level, limiting the influence of negative emotion.

3.3. Self-regulated learning model proposed by Boekaerts

Boekaerts (1999) proposes a concentric model of self-regulated learning, based on the following assumptions:

A. Self-regulated learning is a complex construct, born at the intersection of several research areas, each with its own history and conceptual devices;

B. Researches that contributed to the conceptualization of self-regulated learning were those that investigated learning styles, metacognition and regulation styles, along with theories and research on self-concept;

C. Self-regulated learning refers to a set of cognitive and affective-motivational processes, interrelated that operate simultaneously on different components of the information processing system.

The concentric model of the author, presented below in Figure 2. The Self-regulated learning model of Boekaerts, 1999, proposes a three-stage vision of the concept discussed [34]. The model is interpreted taking into account the concepts used from the center of the image to its extremity.

A first phase is represented, in the center of model, by the awareness of choosing between alternative processing models. The author argues that the perception of choice is an important aspect in self-regulated learning. It illustrates how individual learning style adapts to suit a specific task or a solving problem. Boekaerts emphasizes the crucial role of student awareness in the existence of alternative routes of action to achieve the objective. These involve the use of different cognitive strategies and the use of various information processing models to program the behavior for effective learning. Among the cognitive strategies used in this context we mention a few, without claiming to be exhaustive: selective attention, understanding informations, updating knowledge, elaboration, structuring, generating questions, implementing rules, reorganization, automation of abilities. Also, adjusting processing models imply mental representation of purpose and mental development of the goals pursued.

The second key aspect of Boekaerts explanation for the functioning of self-regulated learning is the student's ability to direct their own learning. The author argues the existence of this level by entering into service of metacognitive strategies while learning. The researcher defines metacognition as referring to two directions. The first regards the level of awareness of the learner, the knowledge base in which information is stored, awareness of procedural knowledge about how, where, when various cognitive strategies can be used. Monitoring progress allows changing behavior patterns during the activity.

The second relates to access to direct learning. The author insists on the different vision that she has on metacognition, its role in ontogenesis and the internal and external regulation of child behavior. She argues that treating learning and regulation styles as traits or provisions we move away from the essence of self-regulated learning, namely: perception of choice, accessibility and adaptability. Boekaerts believes that the choice of the learning and regulation styles is strongly influenced by personal or cultural characteristics valued, more than the specific adaptability that it expresses. Beliefs about strategies, personal skills, and evaluation and ranking tasks based on the value system come into operation during the course of learning.

The third level, at the extremity of the image, highlights three key aspects: emotional involvement of the student, the allocation of effort and resources and commitment to goals chosen on their own will. Motivational strategies that influence the activity are: creating intention to learn, activation of mechanisms that act on stressors that can block learning, managing efforts made and identifying social factors that can support the efficient running of the learning activity.

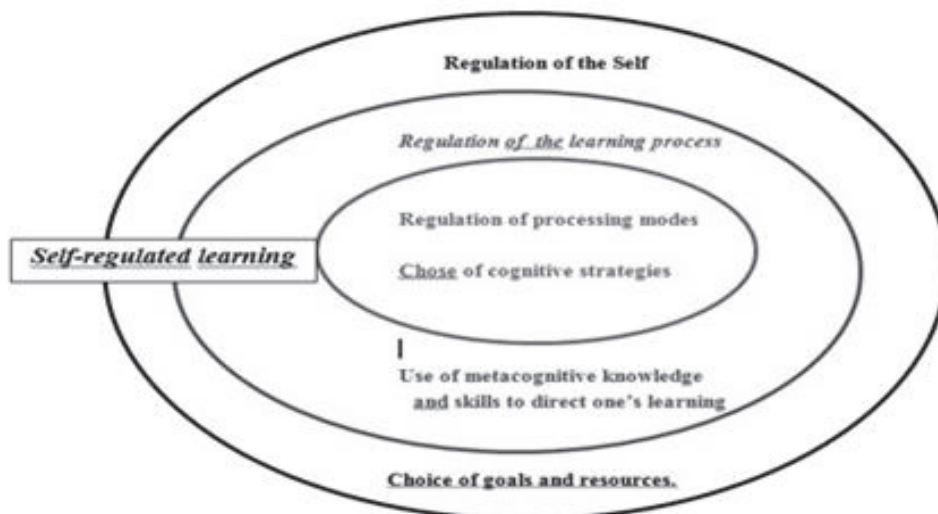


Figure 2. The Self-regulated learning model of Boekaerts, 1999

All these aspects reflect the student's ability to define activities consistent with his needs, expectations and desires. Boekaerts believes that the goals that students perceive as important are strongly energizing for behavior that can be seen as indicators of how the individual adjusts its Self. The author

draws attention to the fact that students pursue multiple goals simultaneously. The ability to decide weighs more in the efficiency of elections.

Boekaerts introduces in the concept of self-regulated learning extension a high caliber component namely volitional strategies well (re)defined. They manifest as efficient work habits. The author brings new explanations, arguing that those who have studied the phenomenon of self-regulation discussed how to form and maintain learning, not about how it works when people are not fully engaged in learning, not on the effort necessary for adjustment. Thus the dual process model of self-regulated learning describes how the learning goals interact with those related to the wellbeing [35]. In this model, the components discussed are co-dependent and interact with each other to achieve the learning goals.

4. DISCUSSION ON MODELS OF SELF-REGULATED LEARNING

The phenomenon of self-regulation was and still is studied in various branches of psychology (developmental, personality, clinical, social, consumer psychology), as well as in other fields such as biology, medicine, anthropology, in recent decades, the research focusing on an interdisciplinary perspective. In an attempt to discover the origin of self-control, some specialists provide as possible explanation the need to survive through mutual exchanges, altruism, cooperation, economic benefits. Therefore, the ultimate goal of self-control and executive functioning is a social one, position to which we subscribe.

This study expresses the concern for the quality and effectiveness of learning and re-highlights the concept of learning in the context of current features of Romanian school population. In the background, the discovery of the actual characteristics of the "new" learning framework can become support for teachers in assisting and advising students in the art of "learning to learn".

Self-regulation is not a measure of fluid intelligence, which is unchangeable after a certain period in life and neither personal characteristic genetically determined or formed in early period. Students learn self-regulation through experience and self-reflection [36], therefore it is ability. Professors can teach in ways that help students to become self-regulated learners. Whereby self-regulation is not a personality trait, students can control their behavior and emotions to improve learning and performance [37].

Besides goal setting, in self-regulated learning some key processes are highly important as self-efficacy, achievement values and self-schemas. This is why the authors consider that self-regulated learners “set goals and control their thoughts and behaviors to accomplish them” [38]. Accordingly, Sitzmann, T., & Ely, K. (2011) showed in their self-regulation meta-analysis that moderated to strong predictors of successful self-regulated learners are goal setting and self-efficacy and those weak to moderate predictors are attributions, effort,

motivation, environmental structuring, time management, metacognitive strategies [39].

All analyzed models (Zimmerman's, Pintrich's and Boekaerts's models of self-regulated learning) have adopted Bandura's social cognitive theory as the basis for their formulations. Zimmerman (1998) proposed three sequential phases (i.e., before, during, and after performance) whereas Pintrich (2004) divided the "during" phase into two sequential phases, monitoring followed by control, rather than treating them as two interacting processes as one performs. There is evidence in the goal setting literature that self-monitoring of controlling processes is more effective in enhancing learning than self-monitoring task outcomes. Since monitoring and control processes can co-occur during performance, do they warrant a separate phase designation?

Questions that we can ask ourselves as teachers are: How can we foster the accountability for their own development? What is the optimal level of stimulation, what self-regulated learning strategies stimulus are/can be used for children with learning difficulties?

REFERENCES

- [1] Baumeister, R. F. & Vohs, D. K. (2004). *Handbook of Self-Regulation. Research, Theory, and Applications*, ed. The Guilford Press, New York, p. 3;
- [2] Neacșu, I. (2010). *Introducere în psihologia educației și a dezvoltării*, Polirom, Iași, p. 66;
- [3] Idem 1
- [4] Luca, M. R., (2004). *Personalitate și succes*, Ed. Psihimedia, Sibiu, p. 30;
- [5] Idem 4, p. 25;
- [6] Pavelcu, V. (1981). *Cunoașterea de sine și cunoașterea personalității*, EDP, București, p. 347;
- [7] Lupu, D. A., (2011). *Implicațiile activităților de consiliere psihopedagogică asupra diadei stimă de sine-reușită școlară*, Ed. Universității Transilvania, Brașov, p. 65;
- [8] Iluț, P., (2001). *Sinele și cunoașterea lui - Teme actuale de psihosociologie*, Polirom, Iași;
- [9] Golu, M., (2005). *Dinamica personalității*, Ed. Paideia, București, p. 105;
- [10] Matthews, G., Deary, I. J., Whiteman, M. C. (2005). *Psihologia personalității*, Polirom, Iași, p. 147;
- [11] Larousse, (2006). *Marele dicționar al psihologiei*, Ed. Trei, București, p. 638;
- [12] Cocoradă, E., (2009). *Psihologia învățării*, Ed. Univ. Transilvania din Brașov, Brașov, p. 87;
- [13] Siebert, H., (2001). *Pedagogie constructivistă*, Institutul European, Iași, p. 31;

- [14] Cristea, S., (2000). *Dicționar de pedagogie*, Ed. Litera – Litera Internațional, Chișinău- București;
- [15] Idem 2, p. 105-106;
- [16] Idem, p. 107;
- [17] Niculescu, M. R., (2010). *Curriculum A continuing challenge*, ed. Junior, Italia, p. 26;
- [18] Torrano Montalvo F. & Gonzalez Torres M.C., (2004). Self-Regulated Learning: Current and Future Direction, *Electronic Journal of Research in Educational Psychology*, 2 (1). pp. 1-34;
- [19] Zimmerman, B. J., (2002). Becoming a self- regulated learner: An overview. *Theory into practice*, 41, p. 64-72;
- [20] Paris, S. G., (2001). *The Role of Self-Regulated Learning in Contextual Teaching: Principles and Practices for Teacher Preparation*, <http://www.ciera.org/library/archive/200104/0104parwin.htm>
- [21] Paris, S. G. & Byrnes, J.P. (1989). *The constructivist approach to self-regulation and learning in the classroom*. In B. Zimmerman & D. Schunk (Eds.). *Self-regulated learning and academic achievement: Theory, research, and practice* (pp. 169–200). New York: Springer –Verlag;
- [22] Pressley, M., (1995). More about the development of self-regulation: Complex, long-term, and thoroughly social. *Educational Psychologist*, 30, p. 207–212
- [23] Zimmerman, B. J., (1989). A social-cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, pp. 329–339;
- [24] Butler, D. L., & Winne, P. H., (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65, pp. 245–281;
- [25] Boekaerts, M. (1999). Self-regulated learning: where we are today. *International Journal of Educational Research*, 31, 445-457. Disponibil pe: http://home.arcor.de/silkehertel/E_Learning/Termin_1/boekaerts_1999.pdf. 01.05.2013, 18.38.
- [26] Zimmerman, B. J. (2002). *Becoming a self- regulated learner: An overview*. *Theory into practice*, 41, 64-72.
- [27] Pintrich, P. R., (2000). Educational Psychology at the millennium: A look back and a look forward. *Educational Psychologist*, 35, p. 221-226;
- [28] Schunk, D.H., Zimmerman, B.J., (2009). *Self- Regulation of Learning and Performance. Issues and Educational Applications*, ed. Routledge, New York;
- [29] Schunk, D.H., Zimmerman, B.J., (1998). *Self- Regulated Learning. From Teaching to Self- Reflective Practice*, ed. The Guilford Press, New York;
- [30] Schunk, D.H., Zimmerman, B.J., (2009). *Self- Regulation of Learning and Performance. Issues and Educational Applications*, ed. Routledge, New York, p. 25

- [31] Schunk, D.H., Zimmerman, B.J., (2009). Self- Regulation of Learning and Performance. Issues and Educational Applications, ed. Routledge, New York, p. 308
- [32] Puustien & Pulkkinen (2001). Models of self-regulated learning: A review. *Scandinavian Journal of Educational Research*, 45(3). p. 269–286;
- [33] Pintrich, P. R., (2004). A conceptual framework for assessing motivation and self-regulated learning in college students, in *Educational Psychology Review*, Vol.16, No. 4;
- [34] Boekaerts, M. (1999). Self-regulated learning: where we are today. *International Journal of Educational Research*, 31, 445-457. Available on: http://home.arcor.de/silkehertel/E_Learning/Termin_1/boekaerts_1999.pdf. 01.12.2013, 18.38;
- [35] Boekaerts, M., Cascallar, E. (2006). How Far Have We Moved Toward the Integration of Theory and Practice in Self-Regulation? *Educational Psychology Review*, 18, 199–210. doi: 10.1007/s10648-006-9013-4. Available on: http://www.unco.edu/cebs/psychology/kevinpugh/motivation_project/resources/boekaerts06.pdf 01.11.2013, 14.12;
- [36] Idem 27;
- [37] Chen, C. S., (2002). Self – regulated Learning Strategies and Achievement in an Introduction to Information Systems Course in Information Technology, *Learning, and Performance Journal*, Vol. 20, No.1, Spring;
- [38] Schunk, D.H., Zimmerman, B.J., (2009). Self- Regulation of Learning and Performance. Issues and Educational Applications, ed. Routledge, New York, p. 308
- [39] Sitzmann, T., & Ely, K. (2011). A meta-analysis of self-regulated learning in work-related training and educational attainment: What we know and where we need to go. *Psychological Bulletin*, 137, 421-442;