



Self-Regulated Learning in Higher Education

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ABSTRACT

Self-regulated learning (SRL) is highly meaningful in the context of higher education. According to the educational standards of higher professional education in Russia up to 70% of all educational time is to be spent on student's self-study. In this prospective the role of self-regulated learning becomes significant and its promoting tends to be important in the process of teaching and learning. Self-regulated learning involves metacognitive, motivational, and behavioral processes that are personally initiated to acquire knowledge and skill, such as goal setting, planning, learning strategies, self-reinforcement, self-recording, and self-instruction. Moreover, strategy use is the crucial element for defining self-regulated learners. Whereas teachers should allow students to gain awareness of this process, learn how to control it, how to apply SRL strategies and learn more effectively. This article will define self-regulated learning, including SRL stages, SRL strategies and the role of teachers in promoting SRL in the context of higher education.

Key words: Higher education, self-regulated learning, Federal State Educational Standard of Higher Professional Education, learning strategies, learning processes.



1. INTRODUCTION

In the beginning of the 21st century Russia adopted European competence oriented concept of education. This caused massive changes in the methods of teaching and learning throughout the national educational system.

Traditionally, the system was stressed on acquisition of literacy and numeracy knowledge and skills.

In the context of competence orientation the stress was made on key competences that are to be trained to students on different levels of schooling. The competences are considered to be dispositions and abilities that should be identified, and activated by and promoted for each individual learner. It attempts to define and discuss the learner's ability to perform an action or activity. Since competences are acquirable, this means that developing them in one particular field can have a synergistic value in another (Ortiz-Ordoñez et al, 2015).

New educational standards were developed and gradually implemented in all levels of schooling including higher and post-graduate education. Federal State Educational Standard of Higher Professional Education of the third generation FSES HPE (FSES-3 + Higher Education) is the state mandatory instruction that regulates the process and the content of higher education in Russia (Fakhrutdinov et al, 2016).

The role of a teacher and a student also changed. Traditionally, the teacher was a guru and a guide, controlling the entire process of teaching and learning. The students were passive recipients of information provided by the teacher. The students would ask questions and seek clarifications but seldom challenged his authority or leadership. However, there has been a paradigm shift in the process for teaching and learning with the introduction of applied disciplines, and more so with the advent of technology, allowing greater access to information and sources of knowledge. "The instructor is no longer the king of the classroom but rather a middleman between information and student." On the other hand, "the student has now become an active informational architect, procuring, rearranging and displaying information, instead of a passive sponge soaking up knowledge." (Evanouski,2011). FSES HPE implies that every student should be capable of becoming autonomous in not only basic competences, but also in coping with one's life and new present challenges.



According to FSES HPE up to 70% of all educational time is to be spent on student's self-study.

In this prospective the role of self-regulated learning becomes significant and its promoting tends to be important in the process of teaching and learning.

2. METHODS

This paper brings together literature on professional learning, self-regulated learning and teachers' role in promoting SRL. The study aims to show theories and approaches in self-regulation.

3. RESULTS

3.1 Self-Regulated Learning

Self-regulated learners have been defined as individuals who actively and consciously control their own learning from the cognitive, affective, motivational and behavioral points of view (Zeidner, Boekaerts, & Pintrich, 2000)

According to Zimmerman (1986) self-regulation focuses on how students personally activate, change, and maintain their learning practices in specific context .

A self-regulated learning perspective shifts the focus of educational analyses from students' learning abilities and instructional environments as fixed entities to students' self-initiated processes for improving their methods and environments for learning. This approach views learning as an activity that students do for themselves in a proactive way, rather than as a covert event that happens to them reactively as a result of teaching experiences (Zimmerman, 2015) .

A person who is self-regulated is characterized to be an active problem solver and aims to improve his/her performance and abilities (Graham & Harris, 1994; Zimmerman & Risemberg, 1997) . Individuals who self-regulate achieve tasks successfully because they make attempts to close the gap between their present status and goals (Leventhal & Cameron, 1987) .

Self-regulated learning involves metacognitive, motivational, and behavioral processes that are personally initiated to acquire knowledge and skill, such as goal setting, planning, learning strategies, self-reinforcement, self-recording, and self-instruction (Zimmerman, 2015) .

There are several studies where self-regulation was applied in a specific context or made domain specific such as in language acquisition. Previous studies have identified self-



regulation as a useful strategy to acquire and become proficient in learning a language (Graham & Harris, 1994; Zimmerman & Risemberg, 1997; Magno, 2009) .

3.2 Self-regulated learning stages

Zimmerman (1998c, 2000) suggested a social cognitive model of self-regulated learning with respect to the processes which are considered at each stage. According to this model, self-regulation is achieved in cycles consisting of (1) forethought, (2) performance or volitional control, and (3) self-reflection (see Table 1) .

Table 1. Self-regulated learning stages.

Stage of SRL	Processes
Forethought	In the forethought phase, task analysis and self-motivation beliefs are important. Task analysis refers to planning processes like goal setting and strategic planning. Self-motivational beliefs comprise a student's self-efficacy beliefs, his outcome expectations, intrinsic interest and goal orientation. In the forethought phase, learners can ask when and where they will write, how they will start, and what will help them to write.
Performance or volitional control	In this phase, the chosen strategy is implemented and monitored by the student. Zimmerman distinguishes between self-control and self-observation. Self-control refers to regulatory processes like self-instruction, imagery, attention focusing and task strategies. Self-observation includes monitoring strategies like self-recording and self-experimentation. In the performance phase, learners can try to find answer to the questions whether they accomplished the aim of the assignment, whether it is taking more time than the planned time, whether they can be encouraged to keep going, and what will help them.
Self-reflection	In the self-reflection phase, the student tries to evaluate the outcome of his efforts. In the self-reflection phase, the questions “whether the students did a good job, how they kept on task, what helped them, whether they gave enough time to complete the assignment, whether they chose the right study strategies, whether they set rewards and



	consequences for themselves, and whether the students followed their plans” are asked.
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3.3 Self-regulated learning strategies

Zimmerman defines self-regulation strategies as self-initiated methods designed to enhance learning, such as multistep plan to solve story problems in mathematics (Zimmerman, 2015) (6).

Students use strategies to regulate their learning. Studies show that students who plan strategies before engaging in an academic task perform better than those who do not (Pressley, 1986) . The subprocess of strategic planning is pivotal in the self-regulatory cycle because students use it to guide their next course of action, such as a study schedule, courses to be taken next term, or the path to take in pursuit of a career.

Zimmerman and Martinez-Pons (1986) relied on interviews with high school students about self-reported strategies used in a variety of common learning contexts and they found evidence of students' use of 14 types of self-regulated learning strategies .See table 2.

Table 2. Self-regulated learning strategies.

	Categories/Strategies	Definitions
1	Self-evaluating	Statements indicating student-initiated evaluations of the quality or progress of their work; e.g., “I check over my work to make sure I did it right”
2	Organizing and transforming	Statements indicating student-initiated overt or covert rearrangement of instructional materials to improve learning; "I make an outline before I write my paper."
3	Goal-setting and planning	Statements indicating students’ setting of educational goals or subgoals and planning for sequencing, timing, and completing activities related to those goals; e g.. “First, I start studying two weeks before exams, and I pace myself."



4	Seeking information	Statements indicating student-initiated efforts to secure further task information from nonsocial sources when undertaking an assignment; e.g., "Before beginning to write the paper, I go to the library to get as much information as possible concerning the topic."
5	Keeping records and monitoring	Statements indicating student-initiated efforts to record events or results: e.g., "I look notes of the class discussions"; "I kept a list of the words I got wrong."
6	Environmental structuring	Statements indicating student-initiated efforts to select or arrange the physical setting to make learning easier; e.g., "I isolate myself from anything that distracts me"; "I turned off the radio so I can concentrate on what I am doing."
7	Self-consequating	Statements indicating student arrangement or imagination of rewards or punishment for success or failure; e.g., "If I do well on a test, I treat myself to a movie."
8	Rehearsing and memorizing	Statements indicating student-initiated efforts to memorize material by overt or covert practice; e.g., "In preparing for a math test, I keep writing the formula down until I remember it."
9-11	Seeking social assistance	Statements indicating student-initiated efforts to solicit help from <i>peers</i> (9), <i>teachers</i> (10), and <i>adults</i> (11); e.g., "If I have problems with math assignments. I ask a friend to help."
12-14	Reviewing records	Statements indicating student-initiated efforts to reread notes (12), <i>tests</i> (13), or <i>textbooks</i> (14) to prepare for class or further testing.



According to Zimmerman self-regulated students select and use self-regulated learning strategies to achieve desired academic outcomes on the basis of feedback about learning effectiveness and skills (6).

3.4 Teachers promoting SRL

It is essential for teachers to allow students to gain awareness of this process, learn how to control it, how to apply SRL strategies and learn more effectively.

Teachers, who fail to set specific instructional goals, are ambiguous or inconsistent about their criteria for judging classroom performance, give ambiguous feedback about schoolwork, make it difficult for students to take charge of their learning. Few teachers ask students to make systematic self-judgments about their schoolwork, and as a result, students are not prompted or encouraged to use self-regulatory subprocesses such as self-observation, self-judgment, and self-reactions.

Teachers should turn to extra-classroom sources of information, deduce subtle unspecified criteria for success, and rely on self-efficacious beliefs derived from earlier successful learning experiences (Zimmerman,2015).

Students often show a deficiency in the knowledge and use of SRL strategies and see no need to self-regulate learning processes because they tend to overestimate their knowledge. Because this constellation is likely to result in underachievement, they have a special need for support. Trainings that impart knowledge on SRL strategies and support students in practicing these strategies can improve SRL skills and academic achievement and can show long-lasting effects (Dörrenbächer et al, 2016).

Moreover, the computer has been widely embraced as an ideal instrument to study and enhance students' self-regulation of learning. Computers can provide invaluable feedback to the experimenter or the learner because performance outcomes can be stored, analyzed, and graphed in countless ways to uncover underlying deficiencies (Zimmerman,2015).

4. DISCUSSION

The present study was based on literature review regarding self-regulation. The focus was made on Zimmermann's and others theories and approaches. Theories are useful to the degree that they raise specific issues that can be resolved through research. Each of the formulations of academic self-regulation in this study raises many provocative questions. The authors offer, on the whole, complementary view of the key subprocesses in student



self-regulated learning. Ultimately, of course, the importance of each subprocess, even its very definition, will be established by further research.

5. CONCLUSION

Present day teacher is required to prepare students for a highly competitive globalised world, equipped with far better professional, soft and life skills than ever before. Consequently, one of the most important directions of high school teachers is development of their ability to choose appropriate educational technologies for developing certain competences of their students and readiness to apply methodical methods of creating corresponding learning and teaching recommendations, including promoting SRL and SRL strategies use. In this view, awareness of these mechanisms is highly desirable because, not only would it improve SRL, but it would improve students' performance and success in education.

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