

## Self-Regulated and E-Learning

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### ABSTRACT

The main aim of education is to develop students to be self-regulated learners by engaging their own learning experience and developing them cognitively. To do this, planning, monitoring, and evaluating are required by the students to perform them independently in which very few students do this normally.

The present paper presents a literature review of SRL including an overview of the concept; specific SRL strategies for students to use; and a discussion of some difficulties that teachers face during teaching their students to be lifelong Learners.

**Keywords:** SRL, E-Learning, Educators, Students

## التعلم المنظم ذاتياً والتعليم الإلكتروني

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### المستخلص

الهدف الرئيسي من التعليم هو تطوير الطلاب ليكونوا متعلمين ذاتياً من خلال إشراكهم في تجاربهم التعليمية وتطويرها معرفياً. يعد التعلم المنظم ذاتياً من ابرز النظريات التي يتطرق اليها العلماء و المختصون بعلم النفس حيث تكم اهمية هذه النظرية في نوع الطالب الذي يسعى المعلمون الى تكوينه, فالمتعلم ذاتياً يمتلك القدرة على التخطيط والتقييم وتحليل وتطبيق الاستراتيجيات المناسبة التي يجب ان يقوم بها الطالب بشكل مستقل ولكن نرى عدد قليل جداً من الطلاب يقوموا بذلك بشكل طبيعي.

تقدم الدراسة الحالية مراجعة عامة لنظرية التعلم المنظم ذاتياً بما في ذلك لمحة عامة المفهوم؛ استراتيجيات التي يستخدمها الطلبة؛ ومناقشة بعض الصعوبات التي يواجهها المعلمون أثناء تعليم طلابهم ليكونوا متعلمين ذاتياً مدى الحياة.

**الكلمات المفتاحية:** التعلم المنظم ذاتياً، التعليم الإلكتروني، المتعلمون، الطلاب.

## 1. Introduction

Self-regulated learning (SRL) means one's ability to comprehend the educational environment and control it. Self-regulation capabilities include setting targets, self-monitoring, self-investigation and reinforcement [2]. SRL should not be associated with mental capacity or academic ability, it is rather the process of self-direction and a series of behaviors in which students turn their minds into skills and habit using a development process which comes out of directed practice and feedback. In other words "masters of their own learning" [1].

The effectiveness of SRL actively defines objectives, decides on suitable strategies, plans their time, organizes and prioritizes information and materials, flexibly shifts approaches, monitor their learning through feedback, and make suitable adaptations for future learning activities.

Yet, most certainly the concept of SRL started in the 1980s by Gardner (1963) who said realizing the value of self-efficacy in learning [1] was the first researcher who proposed the concept of self-regulated learning in education. The main objective of the education system for Gardner was to "shift to the individual the burden of pursuing his own education" [3]. Later. the concept had been referred to as observational learning by Rosenthal and Zimmerman and also has been called the concept of thinking arrangement as well as reflectance on memory (ibid).

SRL was explored from various perspectives as a theoretical framework for example models for SRL development usually based on a social

cognitive perspective, where intellectual and social development are closely interconnected to each other and cannot be separated from their context. These models suggest that self-regulation skills gradually develop during childhood and adolescence [3].

Initially developing from social sources with self-regulatory skill and eventually shifting to self-sourced in a way that is similar to traditional education, for instance, propose a three-stage developmental sequence in which learners transition being from controlled by others (e.g. instructors' instruction and encouragement) to being able to complete the task with minimal guidance (e.g., hints) before achieving a degree of internalization or mastery [2].

Due to the Corona pandemic that swept the world and change education from traditional education into E-learning, it is become very important to teach our students how to be lifelong self-regulated. Accordingly, this paper seeks to demonstrate the value of self-regulated learning in academic settings especially for achievement, and examine SRL strategies that encourage university students to be self-regulated.

## 2. Processes of Self-Regulated Learning

Zimmerman [1] describes self-regulated learners as "metacognitive, motivational, and behaviorally active individuals". SRL is, thus, categorized into three main elements: (a) metacognitive, (b) motivational, and (c) behavioral processes. Zimmerman [5] claims that student self-regulation is so important that they participate in their own

learning process in a metacognitive way, with motivation and compliance.

Concerning metacognition, Corno [4] argues that SRL students plan their learning process, identify goals, arrange their learning tasks, follow each other closely during their learning processes and analyze their own study processes ongoing. Metacognition is the key behind the determination, awareness, and intelligence of the learner[1]. This process used at various levels as Zimmerman indicated [5] In the learning process, three distinctive phases during the metacognitive process: forethought, results, and self-reflection. In forethought, students approach and evaluate the task to develop priorities and strategies that play a major role in the task's successful completion. During the performance stage, the actual task performance is repeated, so that the student checks over and over whether the material is understood such as self-questioning. The learner evaluates the learning process in the last phase, and eventually, learners examine their performance mentally and determine if behavioral or strategy needs to be changed (ibid).

In addition to metacognition, a high degree of motivation requires self-regulating learning, Borkowski et al. [6] say that the motivational mechanism involves self-efficacy, self-attribution, and the desires of an inherent task. A motivated learner is truly a self-starter in the process of learning. The exceptional effort, persistence during the learning process are exhibited by motivated learners [1]. Zimmerman and Dale Schunk [7] state that "motivational approaches include self-efficacy, the orientation of attribution, methods of

action management, and feedback." The goals of tasks should be set by students, for example, the goal should be improved: the reasons for performing a task and evaluation of the task: the degree in which the task is perceived to be significant, important, and beneficial and the self-efficacy of students: to increase the student's confidence in their ability to achieve the task successfully.

Zimmerman [1] called "behavioral process" as the third component of self-regulated learning. The behavioral process was defined by Wang and Peverly (1986) and Henderson as the process by which self-regulated learners choose, structure, and build environments that are valuable and aiding for optimized learning [1]. Students looking for guidance, searching for knowledge, and finding places for better learning. They learn by themselves and reinforce what they have learned during their performance activities. Furthermore, self-regulated learners are different from non-self-regulating partners by (a) being aware of the link between self-regular strategies and learning results, (b) being aware of the usefulness of self-regulation for learning, and (c) using self-regulatory methods that are used to achieve their learning objectives and results [1].

### 3. SRL Theories

The classification of SRL theories was introduced by Zimmerman [1] as follow:

1. Social Cognitive theories: they focus on positive feedback elements. Those theories suggest that the real key for self-

regulation are elements such as self-efficacy, success, cognitive balance, and similar.

2. Phenomenological Theories: which means own-oriented feedback loop is characterized by these theories as covert sensory processes. These theories note that a common sense of SRL is informed by a universal sense of self-actualization and self-esteem.
3. Operant theories: represent open descriptions such as self-instruction, self-recording, self-reinforcement, etc. Theories of operators maintain that external rewards or punishment (i.e., social recognition, improved reputation, material benefit, promotion, etc.) determine SRL responses.

#### **4. Encouraging SRL**

Scholars such as (Hollingsworth Silvia Ybarra, 2009, Montalvo & Torres, 2008, Labuhn et al., 2010, Gibson et al., 2011) applied certain strategies to encourage students to be a self-regulated learner. Therefore, teachers must teach their students SRL processes that facilitate learning to promote SRL in classrooms.

##### **4.1 Goals**

Researchers also indicate that it can be an efficient path for helping students reach their progress by motivating students to set short-term goals for their learning. Goals in the school environment, can be easy just like getting a good mark in an exam. Achievable short-term goals can be fulfill long-term targets. For instance, if a student sets a

long-term target of doing well on the test, she/he may also set attainable targets, such as preparing for a certain amount of time and using various research methods to help ensure the performance of the test. [8].

##### **4.2 Planning**

It is an important thing to teach students to reach the tasks with a plan. Planning is one method for encouraging learning and self-regulation. It can aid the learning process of the students to be self-regulated, similar to goal setting. Researchers show that planning and setting goals are supplementary processes, as planning can assist students to develop good goals and strategies to succeed. Planning involves three stages: setting a goal for a learning task, establishing strategies for reaching the goal, and evaluating how much time and resources will be necessary to accomplish the goal [1].

##### **4.3 Motivation**

Self-motivation happens when a learner employs one or more methods individually to keep themselves on track towards a learning goal. The self-regulation mechanism is critical because it allows students to assume control over their learning [4]. Besides, in the absence of external rewards or benefits, self-motivation happens and can be a good indication that a learner become more independent [8]. Students are more likely to continue through different learning challenges by defining their learning objectives and seeking encouragement to make progress towards the goals and also find the learning process more satisfying.

#### 4.4 Mentoring

Students must take control of their learning and accomplishment outcomes to be strategic learners [9]. By monitoring their progress towards learning objectives, self-regulated learners start taking on this responsibility. The self-monitoring method incorporates all of the techniques listed above. One must set his/her own learning goals, plan for it, personally inspire to achieve certain objectives, focus his/her attention on the test, and use learning strategies to inspire the learner's understanding of the content in order to track his/her progress [8]. Through allowing students to keep track of the number of times they have worked on particular learning tasks, the strategies they have used, and the period of time they have spent working, teachers can encourage self-monitoring. This practice encourages students to visualize their success and, if necessary, to make changes.

#### 4.5 Help

SRL do not try to achieve each task by themselves, contrary to common opinion, but rather instead they seek assistance from others when needed [11]. What separates SRLs from others, that they seek guidance from others, but they do so intending to make themselves more independent [10]. Teachers can foster positive behavioral reinforcement through giving learners with continuous progress reviews that they can simply explain and empower learners to re-submit assignments after making necessary changes.

#### 4.6 Evaluation

When students have the ability to evaluate their learning independently from teachers' assessments, students are more likely to become SRL [12]. This process helps students to determine their learning methods and to do changes in future tasks. Teachers can encourage self-evaluation in the classroom by having students track their learning goals and strategies usage, and then making improvements and changes to the goals and strategies depending on the outcomes [8].

### 5. Challenges For Educators

Most teachers and educators believe that it would be beneficial to teach students to be SRL in the classroom, however, this does not come without obstacles. It is not a simple task to develop lectures that can make students able to engage in SR practices and give them real support and implementation chances. Most would find that the time needed to teach students how to use particular techniques is the main obstacle in helping students to be SRL. Devoting the time and resources required for training students to be SRL, significant improvements at the school level will need to happen. Most crucially, it is necessary to organize curriculum besides evaluation systems in a ways that promote and value inquiry and strategic problem-solving [13].

Knowing that influences beyond the control of the teacher may have a significant impact. It may also prove to be a challenge to build the capacity of a student to be self-regulated. For instance, how a student choose to approach and track their learning is generally consistent with their choice or desired

social identity, which may have little to do with the guidance of a teacher [14]. Although, students who think it is unacceptable for their social group to get good grades may ignore successful SRL strategies such as efficiently doing homework [15] students with identities associated with academic curiosity may be more likely to participate in SRL (ibid). Therefore, the social identities of students will affect their academic activities and educational objectives.

### Conclusion

E-learning is a new phenomenon that enters education, especially education in Iraq. The overview of SRL presented in this paper demonstrate that students need to be involved and goal-directed to be self-regulated. Also, they need to control their motivation, cognition, and actions in the learning process. SRL is the best strategy for a student to achieve his or her educational goals besides E-learning. Teachers can experience high success in academic achievement and life-long learning by teaching and encouraging their learners to be more self-regulative. Adding materials and exercises within their lectures that promote students to be SRLs, can enhance the learning environment and can go a long way to help students prepare for challenging tasks. Substantially, if we aim to build a successful lifelong learner, then we must first ensure that we teach them the appropriate strategies for that journey.

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