

## Fostering Higher Education Students' Self Regulated Test Preparation Strategies

Benkhedir Nadia Habiba<sup>1,\*</sup>, Chaib Mohamed Saci<sup>2</sup>

<sup>1,2</sup> Psychology and quality of life laboratory Ouagla (Algeria)

<sup>1</sup>. Université Larbi tebessi (Algeria)

<sup>2</sup>. Université Kasdi Merbah. Ouagla (Algeria)

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### Abstract:

This article reports the findings of a study that sought to investigate the effect of a training in self regulated learning strategies following Zimmerman's (2000) cyclical model on post graduate university students' reported use of these strategies during test preparation. The sample consisted of 37 post graduate students in an Algerian university. The findings show that a training of four 90 mn sessions was able to foster the participants' use of two forethought phase strategies, one performance control phase strategy and two self reflection phase strategies

**Keywords:** Self- regulated learning ; self-regulated test preparation strategies ; self regulation as an aptitude.

### المخلص:

يهدف البحث الحالي إلى دراسة أثر برنامج تدريبي مبني على نموذج زيمرمان (2000) للتعلم المنظم ذاتيا على استخدام طلبة الجامعة لهذه الاستراتيجيات خلال التحضير لامتحانات. لتحقيق أهداف الدراسة تم اعتماد المنهج التجريبي بتصميم تجريبي حقيقي؛ مجموعة تجريبية ومجموعة ضابطة وقياسين قبلي وبعدي، أجريت الدراسة على عينة عشوائية مكونة من 37 طالبة وطالب في السنة الأولى ماستر تم توزيعهم عشوائيا على مجموعتين واحدة تجريبية والأخرى ضابطة. بينت النتائج أن التدريب الذي يتكون من أربع حصص ذات التسعين دقيقة كان فعالا حيث أدى إلى زيادة استخدام الطلبة لخمس استراتيجيات في القياس البعدي مقارنة بالقياس القبلي.

**الكلمات المفتاحية:** التعلم المنظم ذاتيا - استراتيجيات التحضير لامتحان المنظمة ذاتيا-التنظيم الذاتي كسمة

### I- Introduction :

The demands of the environment in the information and the knowledge society are rapidly changing (Schmitz, Klug & Schmidt, 2011) which makes learning take place beyond the scope of the formal instruction in classes at a specific limited age range. Now it takes place everywhere at any time and any age. This means we are living in a competitive society where not only students acquire knowledge to get a specific degree in hope of getting a permanent job, but also struggle to survive in the job market and to achieve "occupational success [which] requires individuals to constantly update their knowledge, retool, and acquire new information and skills." (Zeidner and Stoeger, 2019, p.2). They are also continuously assessed for that knowledge. They are, for instance, required to take different kinds of contests as a requirement to have access to post graduate studies or further specialize in a field or to get promoted in one's career path or even to have access to a specific job like the teaching profession application contests.

Therefore, there is a need to cultivate the belief that one's learning and one's success is under one's own control. Such a belief will empower learners and equip them with the necessary tools to deal with any task in any learning situation. This belief and this empowerment are not likely to be achieved if learners are not aware of their agency which is a common characteristic of all self skills such as autonomy, self reliance, self determination, self control and self regulation of learning.

This makes the need for acquiring these lifelong learning self skills namely self regulation of learning more than necessary (Wirth & Leutner, 2008; Wagner, Dörrenbächer & Perels, 2014; Winne et al,2006) . To prepare individuals for the challenges of the occupational life, they have to be introduced to these skills in the formal learning settings as early as possible (Wagner & Perels, 2012).

A plethora of research was conducted on self regulated learning in different learning situations such as homework (Bembenuddy, 2009; Schmidt, 2009; Perels, Gurtler & Shmitz, 2005; Zimmerman & Kitsantas, 2005; Kitsantas & Zimmerman, 2009; Stoeger & Ziegler, 2005, 2006, 2008; Zimmerman et al, 1996; Ramdass & Zimmerman, 2011) and in a variety of context ranging from traditional face to face teaching to hypermedia/computer based learning environments to online teaching (see Azevedo and Cromley, 2004; Green and Azevedo, 2009, 2010; Green, Moise & Azevedo, 2011 ; Järvelä, Näykki, Laru, & Luokkanen, 2007), and across different disciplines ranging from mathematics( see Perels; Gurtler and Schmitz, 2005) , to language (cf Seker, 2016; Wagner and Perels, 2012; Wagner, Dörrenbächer & Perels, 2014 ), to biology (Green and Azevedo, 2009; Azevedo and Cromley, 2004) and motoric skills (Cleary, Zimmerman and Keating, 2006 ) and civil engineering ( Shmitz and Wiese, 2006; Schmidt, 2009).

Extensive research was conducted on different populations mainly elementary and secondary school pupils (Cf Stoeger & Ziegler, 2005, 2006, 2008; Perels & Schmidt, 2009; Greene & Azevedo, 2009; Perels, Otto, Landmann, Hertel, and Schmitz, 2007; Perels; Gurtler and Schmitz, 2005 respectively) but very few research was conducted on higher education graduate and post graduate students (see Shmitz and Wiese, 2006; Schmidt, 2009 respectively) and kindergarten and kindergarten teachers (Cf Perels, Merget Kullmann, Wende, Schmitz, and Buchbinder, 2009) .

Little is known (to our knowledge) about the self regulation in the context of exams which is known to be challenging and anxiety provoking for most of people since it is a complex and cognitively demanding task. The few studies that investigated self regulation in this context were descriptive. Boekaerts (2003) investigated students' use of some SRL strategies namely causal attributions as a self reflection phase strategy in exam performance. Anthony and colleagues (2013) also investigated 160 high school girls' use of test preparation strategies. Kitsantas (2002) also investigated the different strategies 62 college students used before, during and after test taking. We believe that self regulation is an important prerequisite of exam preparation as the latter is an important learning situation that takes place at home wherein the learner is left alone to take decisions individually, go through cognitive chores and undergo emotional and affective, thus motivational challenges without any support from the teacher. Therefore, a training in self regulated learning processes proves to be necessary.

But all these studies were descriptive; none of them consisted of an intervention. Therefore, the aim of this study is to fill this gap by addressing the effect of an intervention consisting of a training in self regulated learning strategies, in the context of exam preparation, on higher education students' mastery of these strategies.

We hypothesise that a three phases training in self regulated learning will foster students' use of self regulated learning skills in exam preparation.

### **I.1. Self regulated learning**

Self regulated learning has been advocated during the four last decades by many scholars as a necessary skill for learning and academic achievement (Winne et al, 2006, Boekaerts, 1997; Zimmerman, 1986; Zimmerman & Schunk, 1989; Zimmerman, Schunk, & DiBenedetto, 2015). It has been recognized as a complex, active and interactive process whereby the learner regulates his cognition, behavior and environment in the service of attaining academic goals.

In contrast to the traditional instructional theories where the teacher played the major role of adapting the instruction and the learning environment to the reactive learners' individual differences in abilities and resources and assume the whole responsibility for their achievement, Self-regulation theories focus on learners' covert as well overt agency in the learning situation (Zimmerman, 1989, p.22).

"This definition, in terms of actions and covert processes whose presence and quality depend on one's beliefs and motives' (Zimmerman, 2005, p.14) is based on the view of self regulation 'as an interaction of personal, behavioral, and environmental triadic processes' (Bandura, 1986 as cited in Zimmerman, 2005, p.13).

The learner in SRL theories is proactive in the sense that he is able to achieve academically in spite of his limited individual characteristics and resources by personally choosing appropriate meta cognitive as well as motivational strategies, structuring and creating appropriate environments and deciding upon “the form and amount of instruction they need”(Zimmerman, 1989,p.4). He also decides upon the appropriateness of the strategies he uses, adapts himself or his environment to meet the needs of the learning activity (Winne, 1995)

Self regulated learning “refers to self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (Zimmerman, 2005, p.14). It also refers to “the ability to control one’s affective responses and/or behavior in line with one’s goals » (van Dillen and Papies, 2015, p.141) .This means that SRL revolves around setting goals, designing plans and providing the necessary resources, ranging from cognitive to affective to environmental resources, to achieving them and monitoring and evaluating their performance based on their goals as a reference point . This explains why self regulated learning was given different definitions that share the idea that it is an intentional, organized, proactive, self directed, judgemental, strategic, adaptive and metacognitively guided process whereby the individual is cognitively, meta-cognitively, motivationally and environmentally engaged during his quest for learning ( Boekaerts, 1997, Winne, 1995, Winne & Perry, 2005; Winne et al, 2006; Zimmerman,1990; Schunk & Zimmerman 2008; Zimmerman, 2002; Zimmerman & Schunk, 1989; Zimmerman, 1989).

## **I. 2. Zimmerman’s Self Regulated Learning model:**

Inspired by the social cognitive theory, Zimmerman (2000) developed a model that views self regulated learning as cyclical in nature. The model consists of three phases. The first one is the fourthought phase that precedes the engagement in the learning task. It consists of some task analysis strategies such as setting learning goals and designing an action plan that is meant to direct the learning performance process in the following phase, to achieve them. In this phase the learner displays certain motivational beliefs regarding the task at hand like intrinsic or extrinsic motivation for the task, outcome expectations about the task and self efficacy beliefs about their ability to perform it.

The second phase is the performance control phase which consists of self control and self observation that are the two main processes that take place during the learning task. Self control refers to all the strategies the learner uses to direct and maintain the learning performance. These are self instruction, attention focusing, task strategies, environmental restructuring and help seeking. Self observation refers to the strategies the learner uses to monitor his learning and his goal attainment which in turn likely to enhance self control processes . These are monitoring and self recording that are respectively the informal and formal set of strategies one uses to track his learning processes.

The last phase in the cyclical model is self reflection which follows the learning process and consists of self judgements of the learning outcomes and self reactions to them. While the former refers to self evaluation of one’s attainments and the causal attributions of his success or failure, the latter refers to self satisfaction/dissatisfaction with one’s outcomes and the inferences they make about them. These can be adaptive inferences or defensive inferences. In the former, the learner decides to adapt his behavior, his environment as well as the strategies used in order to improve his outcomes in future learning situation. In the latter, the learner tries to avoid feelings of dissatisfaction, which are mainly due to his non controllable causal attribution and outcome self evaluation as well as social comparisons, by procrastinating or even avoiding subsequent learning tasks .

## **II– Methods and Materials:**

### **Participants**

The sample consisted of 37 master one students (44 females and 6 males) enrolled in Master of Language sciences programme during the academic year 2018/2019 in one of the Algerian universities. They were divided into two groups randomly assigned to either the experimental condition (n=16) (receiving an intervention in a form of a training in self regulated learning strategies) or the control condition (n=21) (receiving no training).

## **Instrument**

### **A Self Regulated Test Preparation Scale**

The scale measures self regulation as an aptitude which, according to Winne (2005), describes a relatively enduring attribute of a person that predicts future behavior.

The scale is designed after Zimmerman's (2000) cyclical model of academic self regulation which comprises three phases.

Accordingly, this scale which measures self regulation as a trait is divided into 3 parts representing the three phases of the learning cycle and consists of 50 items that have to be answered on a 5 point likert type scale ranging from 1(not at all true for me) to 5 (highly true for me).Each part contains sub scales reflecting each of the self regulation strategies. A pilot study was conducted on 68 participants to test the psychometric characteristics of the instrument.

After calculating the reliability and validity of the instrument some items were deleted and the final version of the questionnaire consisted of 46 items ( $\alpha = .89$ ) distributed as follows

Scale 1.goal setting 4 Items; Scale2.strategic planning 3 Items ; Scale3. self motivation beliefs .8 items ; scale 4. self observation. 5 items ; Scale5. Self control.12 Items ; Scale6.self evaluation. 3 Items ; Scale 7. Causal attributions. 7 items; scale 8. Self reactions. 2 Items.

Only the scales with  $\alpha > .60$  were used for the analysis ( Perels et al, 2005).

## **Design**

A pre-test post-test control group experimental design was used. The participants were randomly assigned to either the experimental condition (receiving a four- week training in self regulated learning strategies) or the control condition (receiving no training).

## **Procedure**

As a pretest, all participants completed a self regulated test preparation scale SRTPS that measures self regulation as a trait

This SRTPS that measures self regulation as a trait, contains strategies pertaining to the forethought, performance and self reflection phases. As this scale is a trait measure, which "aggregates... over some quality of self regulated learning based on multiple learning events" (Winne, 2005, p. 534) and that prompts learners to report from their memories the self regulated learning behaviours that they usually display in a certain learning situation (Winne, 2005), The participants were given the whole test preparation scale a month following the first semester examination. They were required to report the strategies pertaining to the three phases of the self regulated learning cycle based mainly on the way they usually prepare for tests and exams and the way they prepared for their first semester exams.

Two months following the pre-test, the participants in the experimental group received a training in self regulated learning strategies on a weekly basis during one month. The training consisted of four 90 mn sessions. The first session was devoted to a general introduction about the importance of having control over one's learning and the importance of the use of self regulated learning strategies to achieve this end. Moreover, Zimmerman's (2000) model of the self regulated learning cycle was explained and discussed. There was a focus on the cyclical nature of the model and the importance of feedback and self evaluation in that process. In the end of the session, participants were introduced to the content of the following training session.

During the second session, two forethought phase strategies were introduced namely, goal setting and strategic planning. In the third one, the participants were trained in self observation and self control and in the last session they were introduced to self reflection strategies.

As a post -test, the same SRTPS as a trait measure was administered to the participants after the examination period and after receiving feedback from all teachers in all the second semester modules.

## **III- Results and discussion :**

To answer the question of whether a training in self regulated test preparation strategies leads to an increase in participants' reported use of these strategies, We first compared the pre-training data from the control and the experimental group on the corresponding variables. Then, we compared their post training data. A t test for independent samples was conducted for the variables whose data were normally

distributed and a Mann Whitney U test was conducted for the variables whose data did not meet the aforementioned assumption but had the same variance, the same shape or equal distribution over the two levels of the independent variable (The pre-training strategic planning scale as well as the post intervention self observation scale.)

The results of the t test (see Table 1) and the Mann Whitney test show no statistically significant differences between participants in the two conditions on the different self regulated learning strategies subscales: goal setting ( $t(35) = 1.66, p = .10 > .05$ ), strategic planning ( $z = -1.11, p = .26 > .05$ ), self motivation beliefs ( $t(35) = 1.95, p = .059 > .05$ ), self observation ( $t(35) = .60, p = .55 > .05$ ), self control ( $t(35) = 1.81, p = .07 > .05$ ), and the self evaluation scales ( $t(35) = 1.86, p = .07 > .05$ ). But it shows significant differences in the causal attributions scale.

But post training comparisons using the same tests show that there is still a difference in the causal attributions scale. There are also significant differences in the goal setting scale ( $t(35) = 2.93, p = .00 < .05$ ), the self motivation beliefs scale ( $t(35) = 2.93, p = .00 < .05$ ) and the self control ( $t(35) = 2.62, p = .01 < .05$ ) as well as the self evaluation ( $t(35) = 2.26, p = .03 < .05$ ) scales. But no significant differences are observed in the strategic planning and the self observation ( $z = -.84, p = .39 > .05$ ) scales.

These results show that the experimental group outperformed the control group as far as their responses to all self regulation subscales after the intervention are concerned except strategic planning and self observation. They indicate that the training in self regulated learning strategies led students in the experimental group to self regulate their exam preparation strategies by fostering four of the self regulated learning strategies taught namely goal setting, self control, self evaluation and causal attributions and one non training related self regulated learning skill i.e self motivation beliefs.

**Table 1**  
**The results of the control experimental group Comparisons**

	Experimental group				Control group				Sig level for difference					
	Pre-test		Post-test		Pre-test		Post-test		Pre-test		Post-test			
	M	SD	M	SD	M	SD	M	SD	P	df	t	p	df	T
Goal setting	12.0625	3.31	13.75	2.76	10.2857	3.13	10.52	3.66	.10	35	1.66	.006	35	2.93
Strategic planning	11.75	2.48	11.12	2.70	10.80	2.61	9.38	2.59	/	/	/	.055	35	1.98
Self motivation beliefs	26.62	4.52	27.18	5.62	23.90	3.93	21.52	5.94	.059	35	1.95	.006	35	2.93
Self observation	13.43	3.57	13.31	4.09	12.66	4.07	12.23	4.28	.55	35	.60	/	/	/
Self control	56.31	6.75	56.37	7.51	51.52	8.73	49.61	7.94	.07	35	1.81	.01	35	2.62
Self evaluation	11.93	2.04	11.87	2.47	10.52	2.44	9.90	2.71	.07	35	1.86	.030	35	2.26
Causal attributions	27.06	2.99	26.56	3.46	24.09	4.64	22.47	4.20	.03	35	2.22	.003	35	3.15

## Discussion

The present study sought to investigate the effect of an intervention consisting of a training in SRL strategies on EFL students reported use of these strategies.

The results of the post training comparison between the control condition and the training condition revealed that the participants in the experimental group outperformed their counterparts in the control one in their reported use of five macro self regulated learning strategies. These are goal setting, self motivation beliefs, self control, self evaluation and causal attributions. No differences were observed in their responses to the strategic planning scale and the self observation scale.

Therefore, we can safely claim that our training improved the present study participants' reported use of five self regulated learning skills. These are two forethought phase self regulated learning skills namely self motivation beliefs and goal setting, a performance control phase self regulatory skill namely

self control and two self- reflection phase self judgement process i.e self evaluation and causal attributions.

The increase in the experimental group Participants' self reported self motivation beliefs after the training in self evaluation and causal attributions was expected. This is in line with the literature that reports that a focus on process and self evaluation criteria leads to an improvement in motivational beliefs and performance (Ames,1992; Pintrich, 2000 cited in Cleary and Zimmerman, 2006). Kitsantas & Zimmerman (1998) also assert that such a focus improves self efficacy beliefs, and intrinsic motivation. It is also in line with Weiner's attribution theory assertion that causal attributions affect learners' "emotional reaction to success and failure, and their expectations regarding future outcomes [which] in turn, influence appraisals of future task situations; academic self-concepts, and to a certain extent academic success in examinations" (Boekaerts', 2003, p.332). Self efficacy is also expected to continuously increase as a result of the whole training in self regulation although it is not a training related variable (Shmitz and Wiese, 2006).

According to the cyclical nature of Zimmerman's (2000) model of self-regulated learning, it was expected that participants' reported use of self observation, self evaluation and causal attributions would increase as a result of the training in self recording. That was in fact the case for self evaluation and causal attributions which were expected to increase not only as a result of a training in self recording but also as a result of the three phase training (Cleary, Zimmerman and Keating, 2006). But contrary to our expectations that was not the case for self observation. This might be due to the measurement of self regulated learning as a trait which aggregates over multiple learning events as well as to the nature of the learning task i.e test preparation that takes place in different settings and conditions due to the nature of the different modules. This might be confusing for the students and cognitively demanding in terms of formally recording their strategy use and monitoring their goal progress. Therefore, longer training periods and more opportunities to practise would allow participants internalise and automatize these self observation strategies (Boekaerts, 1997; Boekaerts, 2002; Winne and Perry, 2000) .

The training in goal setting using a goal setting sheet had a significant impact on participants' reported use of this forethought phase strategy. Moreover, using a self control sheet and a time management sheet as a part of the training in self control strategies fostered participants' use of these strategies.

#### **IV- Conclusion:**

This study sought to investigate the effect of a training in self regulated learning strategies following Zimmerman's (2000) cyclical model on post graduate university students' reported use of these strategies during test preparation.

The findings of this study show that our three phase training in self regulated learning was able to foster the participants' use of two forethought phase strategies, one performance control phase strategy and two self reflection phase strategies.

The findings of the present study are limited to only four training sessions which is a relatively short period. The length of the training period was imposed by unexpected circumstances (a nationwide students' strike as a result of the 'Hirak'). Therefore, further studies that implement the same training for longer periods and in the context of multiple test preparation opportunities could enhance more self regulated learning strategy use. Moreover, more post tests will allow us to see the cyclic effects of the different self regulated learning strategies

#### **Referrals and references:**

- Anthony, J. S., Clayton, K. E., & Zusho, A. (2013). An investigation of students' self-regulated learning strategies: Students' qualitative and quantitative accounts of their learning strategies. *Journal of Cognitive Education and Psychology*, 12(3), 359-373.
- Bembenutty, H. (2009). Self-regulation of homework completion. *Psychology Journal*, 6(4), 138-153.
- Boekaerts, M. (1997). Self-regulated learning: A new concept embraced by researchers, policy makers, educators, teachers, and students. *Learning and Instruction*, 7, 161-186.
- Boekaerts, M. (2002). Bringing about change in the classroom: Strengths and weaknesses of the self-regulated learning approach. *Learning and Instruction*, 12, 589-604.
- Boekaerts, M., & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology*, 54(2), 199-231.

- Boekaerts, M., Otten, R., & Voeten, R. (2003). Examination performance: Are student's causal attributions school-subject specific?. *Anxiety, Stress & Coping*, 16(3), 331-342.
- Greene, J. A., & Azevedo, R. (2009). A macro-level analysis of SRL processes and their relations to the acquisition of a sophisticated mental model of a complex system. *Contemporary Educational Psychology*, 34(1), 18-29.
- Greene, J. A., & Azevedo, R. (2010). The measurement of learners' self-regulated cognitive and metacognitive processes while using computer-based learning environments. *Educational psychologist*, 45(4), 203-209.
- Greene, J., Moos, D., & Azevedo, R. (2011). Self-regulation of learning with computer-based learning environments. *New directions for teaching and learning*. Publicado en línea en Wiley Online Library. <https://doi.org/10.1002/tl.449>.
- In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents*, 2, 1-27.
- Järvelä, S., Näykki, P., Laru, J., & Luokkanen, T. (2007). Structuring and regulating collaborative learning in higher education with wireless networks and mobile tools. *Journal of educational technology & society*, 10(4), 71-79.
- Kanfer, R., & Ackerman, P. L. (1989). Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of applied psychology*, 74(4), 657.
- Kitsantas, A., & Zimmerman, B. J. (2009). College students' homework and academic achievement: The mediating role of self-regulatory beliefs. *Metacognition and Learning*, 4(2), 97-110.
- learning: Time-series analyses of diary data. *Contemporary Educational Psychology*, 31, 64–96.
- Mahwah, NJ: Lawrence Erlbaum.
- Nenniger, P. (2005). Commentary on self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology*, 54(2), 239-244.
- Perels, F., Gürtler, T., & Schmitz, B. (2005). Training of self-regulatory and problem-solving competence. *Learning and instruction*, 15(2), 123-139.
- Perels, F., Merget-Kullmann, M., Wende, M., Schmitz, B., & Buchbinder, C. (2009). Improving self-regulated learning of preschool children: Evaluation of training for kindergarten teachers. *British Journal of Educational Psychology*, 79(2), 311-327.
- Ramdass, D., & Zimmerman, B. J. (2011). Developing self-regulation skills: The important role of homework. *Journal of advanced academics*, 22(2), 194-218.
- Rottweiler, A. L., Taxer, J. L., & Nett, U. E. (2018). Context matters in the effectiveness of emotion regulation strategies. *AERA Open*, 4(2), 2332858418778849.
- Schmitz, B., & Wiese, B. (2006). New perspectives for the evaluation of training sessions in self-regulated
- Schmitz, B., Klug, J., & Schmidt, M. (2011). Assessing self-regulated learning using diary measures with university students. *Handbook of self-regulation of learning and performance*, 251-266.
- Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In *Handbook of self-regulation* (pp. 631-649). Academic Press.
- Seker, M. (2016). Scenario-based instruction design as a tool to promote self-regulated language learning strategies. *SAGE Open*, 6(4), 2158244016684175.
- Stoeger, H., & Ziegler, A. (2011). Self-regulatory training through elementary-school students' homework completion. *Handbook of self-regulation of learning and performance*, 87-101.
- Van Dillen, L. F., & Papies, E. K. (2015). From distraction to mindfulness: Psychological and neural mechanisms of attention strategies in self-regulation. In *Handbook of biobehavioral approaches to self-regulation* (pp. 141-154). Springer, New York, NY.
- Wagner, D., & Perels, F. (2012). Evaluation of an intervention program to foster self-regulated learning and academic achievement in Latin instruction. *International Scholarly Research Notices*, 2012.
- Wagner, D., Dörrenbächer, S., & Perels, F. (2014). A framework for designing training programs to foster self-regulated learning and text analysis skills. *Education Research International*, 2014.
- Winne, 1995
- Winne, P. H., & Perry, N. E. (2000). Measuring self-regulated learning. In P. Pintrich, M. Boekaerts, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 531-566). Orlando, FL:
- Winne.P & Perry.N(2005) MEASURING SELF-REGULATED LEARNING in Boakaerts.M and Pintrinch. Handbook of self regulation
- Wirth, J., & Leutner, D. (2008). Self-regulated learning as a competence: Implications of theoretical models for assessment methods. *Zeitschrift für Psychologie/Journal of Psychology*, 216(2), 102.

- Zeidner, M., & Stoeberl, H. (2019). Self-Regulated Learning (SRL): A guide for the perplexed. *High Ability Studies*, 30(1-2), 9-51.
- Zimmerman, B. J. (1998). Developing self-fulfilling cycles of academic regulation: an analysis of exemplary instructional models. In D. H. Schunk, & B. J. Zimmerman (Eds.), *Self-regulated learning: from reaching to self-reflective practice* (pp. 1–19). New York: Guilford Press.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). New York, NY: Academic Press.
- Zimmerman, B. J. (2002a). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 179-183.
- Zimmerman, B. J. (2002b). Achieving self-regulation: The trial and triumph of adolescence. *Journal of Educational Psychology*, 94(1), 1-10.
- Zimmerman, B. J., & Paulsen, A. S. (1995). Self-monitoring during collegiate studying: An invaluable tool for academic self-regulation. *New directions for teaching and learning*, 1995(63), 13-27.
- Zimmerman, B. J., & Schunk, D. H. (2008). Motivation. In D.H. Schunk & B. J. Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research and application* (pp. 130). New York: Guilford Press.
- Zimmerman, B. J., Bonner, S., & Kovach, R. (1996). *Developing self-regulated learners: beyond achievement to self-efficacy*. Washington, DC: American Psychological Association.
- Zimmerman, B. J., Schunk, D. H., & DiBenedetto, M. K. (2015). A personal agency view of self-regulated learning. *Self-concept, motivation and identity: Underpinning success with research and practice*, 83-114.
- Zimmerman, Barry J. (2013) From Cognitive Modeling to Self-Regulation: A Social Cognitive Career Path, *Educational Psychologist*, 48:3, 135-147, DOI: 10.1080/00461520.2013.794676

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