Una sistematización teórica sobre la autorregulación y el aprendizaje responsivo

A theoretical systematization about self-regulation and responsive learning

Yeimer Prieto-López

Unidad Educativa Bilingüe Torremar, Universidad de Especialidades Espíritu Santo (UEES), Universidad Tecnológica ECOTEC - Ecuador

yprieto@torremar.edu.ec

Mario Fabricio Ayala-Pazmiño

Universidad Tecnológica Empresarial de Guayaquil (UTEG) - Ecuador

mayala@uteg.edu.ec

Francisca Ramona Marrero-Salazar

Universidad de Holguín – Cuba

franciscamatrerosalazar@gmail.com

RESUMEN

En el presente artículo científico se sistematizan los principales aspectos teóricos y metodológicos del modelo de evaluación denominado "responsiva-constructivista" o evaluación de la cuarta generación. Se trata de un modelo cualitativo que brinda una oportunidad para que los diferentes grupos, comunales o institucionales, puedan evaluar la ejecución de programas y proyectos sociales. El modelo de evaluación responsiva-constructivista, es una importante alternativa para que la evaluación de programas y proyectos en trabajo Social y en general en las ciencias sociales, se haga de una manera participativa, y asegure la evaluación de los procesos y no sólo de los resultados. La investigación se aplicó en la materia de Diseño de Proyectos de Investigación en la Facultad de Marketing y Comunicación de la Universidad Tecnológica Ecotec. Prevaleció una investigación de corte cualitativo con el empleo de métodos teóricos tales como: el histórico-lógico para determinar los principales fundamentos teóricos que sustentan el modelo de evaluación responsivo, la sistematización teórica, así como la modelación científica.

Palabras claves: metodología responsiva-constructivista, sistematización teórica, autorregulación, proceso de aprendizaje responsivo, evaluación responsiva

ABSTRACT

In this scientific article, the main theoretical and methodological aspects of the evaluation models called "responsive and constructivist," or evaluation of the fourth generation, are systematized. It is a qualitative model that allows different groups to evaluate the implementation of social programs and projects. The responsive and constructivist evaluation models are essential alternatives to ensure the evaluation of the processes and the results. The research was applied inside a prestigious university in Guayaquil. Qualitative research prevailed with the use of theoretical methods such as the historical-logical to determine the main theoretical foundations that support the responsive evaluation model, theoretical systematization, and scientific modeling.

Keywords: responsive and constructivist methodologies, theoretical systematization, self-regulation, responsive learning process, responsive evaluation

Introduction

Throughout history, researchers evaluate and are continually evaluated. Evaluation is a natural process present in many aspects of our lives. For example, we evaluate daily for different purposes such as judging the characteristics and possibilities that some products on the market offer us compared to others to buy them or not, attributing adjectives to people, situations, or things based on the impressions they give us and making judgments that put us on someone's side or against.

We constantly evaluate without any apparent effort. However, more systematic and conscious evaluation happens in professional fields such as medicine, justice, journalism, construction, security, and education. In this paper, we are dealing with evaluation in educational contexts.

According to Pichardo-Muñiz (2019), evaluation is a necessary and continuous process, which allows recognizing the irregularities that occur in the planning process and proposing the necessary corrective measures. This responsive-constructivist model contributes to determining:

a) The problems,

b) The solutions,

c) The achievements,

d) Their consolidation,

e) Their impact.

This model encourages the participation of all those involved in a program or project, which allows them to discuss and facilitate decision-making, taking as a basis the elements called claims, problems, and concerns that have arisen throughout the execution process. The dynamics, also called dialectical-hermeneutical circles of the fourth generation evaluation, propose that different participants sit down to discuss, negotiate, and seek consensus. The first part presents the model's background. Then, it explains what the responsive and constructivist

models consist of and the methodological approach.

This section explains what each theory argues about the force or motive that leads the learner to self-regulate. While all behavior is goal-oriented and maintained, and as long as we have expectations of achieving it, the question that emerges is: What does each theory give us about the goals that may induce the learner to self-regulate? What about the motives that self-regulation satisfies? What about the role of expectations in self-regulation?

For the operant conditioning theory, the motivation to self-regulate depends on the anticipation of rewards, proximity, and importance. Thus, on the benefit expected to be obtained as a result of the activity, it is a fact that the expected effect has a significant influence on one's behavior. Consequently, if one wants to stimulate students to self-regulate, it will be necessary to help them be aware of the incentives they can obtain.

Literature review

Responsive methodology

In order to know the theoretical foundations that support it, one must first know what the responsive methodology, also known as responsive evaluation, is. This is based on a naturalistic observation to understand the program's natural context, merits, and weaknesses.

According to Zimmerman and Moylan (2020), responsive evaluation is strategy-oriented more towards the program's activities than its intentions since it responds to the information needs of the intended audience and considers different value perspectives of program stakeholders when judging its appropriateness.

To evaluate is to make a judgment about the value of an object. As Zimmerman (2017) puts it, to evaluate is a search for the goodness and problems of an object, its merit, and limitations, in other words, its quality. Furthermore, although most recognized theorists

and evaluators adopt this concept, many people confuse evaluation with its purposes, uses, and/or elements. Moreover, they associate it with their particular approaches or models (Avilés, 2018).

The study of self-regulation processes emerged from perspectives that considered that differences in student performance could not be entirely explained by intelligence. Consequently, it became necessary to include more variables other than cognitive ones in the explanation. For example, those of a motivational nature that would help explain the level of involvement and differential performance of students when performing school tasks (Rosário, P., Lourenço, A., Paiva, O., Núñez, J. C., González Pienda, J. & Valle, A., 2018; Zimmerman, 2017). In particular, it seemed necessary to delve deeper into the energetic dimension of behavior to study the motivational and self-regulatory processes related to student learning and school success (Schunk & Zimmerman, 2007; as cited by Avilés, 2018).

Research on self-regulation developed due to numerous attempts to explain how students actively control their learning by directing and monitoring their cognitive and motivational processes towards personal goals (Rosário, Núñez, Ferrando, et al., 2018; Zimmerman, 2017).

Learning is increasingly understood as an activity that students proactively perform on their own and not as something that happens to them reactively and in response to learning situations. Moreover, learners who self-regulate their learning are proactive in learning, as they are aware of their abilities and limitations. Therefore, their study behavior is guided by goals and strategies that help them achieve them.

Typically, students who self-regulate their learning monitor their behavior concerning their goals and reflect on their progress. As a result, this activity promotes their satisfaction and motivation to continue and improve their learning method, which ends up having an impact on good academic results and optimistic

expectations for the future (Núñez, Martín-Albo, et al., 2019; Pérez, Valenzuela, Díaz, González-Pienda & Núñez, 2018).

For many authors, evaluation is a particular type of applied research. However, for others, they are two different concepts. The former group believes that both share aspects in common, such as the production of knowledge and the different methodologies or approaches in their design and development. However, the latter suggests that traditional research and evaluation differ in:

1.   Conceptualization

Evaluation necessarily involves assessment, while research focuses on understanding and explaining phenomena and, in some cases, on their prediction and control. But, as can be seen, the value judgment essential in an evaluation study is not necessarily present in formal research studies.

2.   The role of generalization

While traditional research is oriented to the nomothetic (creation of laws or principles), evaluation relates to the ideographic (description of the particular).

3.   The role of explanation

Traditional or quantitative research focuses more on causes, while evaluation studies focus more on how good the program, personnel, or product is or how it produces its effects.

4.   The motivation of the person conducting the study

In research, the researcher's curiosity or interest in advancing knowledge motivates him or her, while in the case of evaluation, the evaluator is interested in issuing a value judgment for decision-making, usually by external actors.

5. The objective of the study

Research seeks conclusions, while evaluation is decision-oriented.

6. The autonomy of the researcher

Science is an independent and autonomous activity. Evaluators have a lesser degree of autonomy because there are usually stakeholders interested in the evaluation in evaluations, and the evaluator cannot ignore their interests or information needs.

Theoretical models of program evaluation.

The different evaluation models can be divided into three main groups: positivist, critical, and interpretive. They all determine the merit or value but use different perspectives that go beyond data collection methods or techniques.

Theorists have developed critical evaluation models known as democratic approaches (Greene, 2000, 2007, as cited by Zimmerman & Schunk, 2017). Among these thinkers, Jennifer Greene (2007) stands out for her evaluation model has contributed to using qualitative, participatory, and mixed methods to implement and develop the evaluation of social programs. Besides, she believes that evaluation should be carried out through a process in which deliberative and democratic dialogue on critical social and educational issues takes place (as cited by Zimmerman & Schunk, 2017).

Greene (2007) explains that the evaluation must highlight the values and their interrelations, including the different actors' multiple perceptions, points of view, interests, and values. Therefore, the evaluator is an advocate (as cited by Zimmerman & Schunk, 2017). Ernest House and Kenneth Howe (2000, 2003) developed the deliberative democratic evaluation model, which emphasizes promoting democracy within the context and development of evaluation. This model is divided into three stages: (a) inclusion, (b) dialogue, and (c) deliberation (as cited by Avilés, 2018).

In this era of constant distractions, it is not strange to note that many students have not learned to organize their academic studies. Therefore, the concept "procrastination," so widely used in social networks, alludes to the tendency to postpone tasks and responsibilities for irrelevant activities that are more satisfying. Unfortunately, this is a reality for many students, young and not so young, who cannot set their learning goals, manage time, choose appropriate strategies, self-evaluate, and seek help or information (Zimmerman, 2017). Therefore, it is required to equip students with the competencies to master current and future learning, so it is crucial to teach and strengthen the skills required for effective self-regulated learning. According to Zimmerman (2017), self-regulated learning is neither a mental capacity nor an academic performance skill. Instead, it is the self-directive process by which students transform their mental skills into academic skills. Thus, learning does not occur only as a reaction to the teaching received but as an activity that students proactively perform independently.

Self-regulation refers to the thoughts, feelings, and behaviors oriented to achieving a particular goal generated by the learner (Zimmerman, 2017). There are three key ideas about the process of self-regulation of learning that research has been unveiling:

1. Self-regulation of learning involves more than detailed knowledge of a skill, which also involves self-awareness, self-motivation, and the behavioral ability to put that knowledge into appropriate practice (Cooperrider, 2020).

2. Self-regulation of learning is not a unique personality trait that learners do or do not possess. Instead, it involves selecting specific processes that must be personally adapted to each learning task.

It has been found that the level of student learning depends on the presence or absence of the following self-regulation processes (Schunk, et al., 1994, 1998; as cited by Avilés, 2018):

- To set specific and short-term goals for oneself.

- To adopt powerful strategies to achieve the goals.

- To plan to monitor the progress of one's performance.

- To restructure some conditions of the physical and social context to make it compatible

with the goals.

-To manage time effectively.

- To self-evaluate the methods used in the process.

- To attribute causality to the results, interpreting that the cause of errors or successes is in factors controllable by the learner, such as selecting a better strategy.

- To adapt the methods to be used in the future to be more effective the next time.

3. The quality of self-motivation of self-regulated learners depends on several underlying conceptions, such as perceived efficacy and intrinsic interest. Historically, educators have focused on social encouragement and extrinsic "bells and whistles" to raise the motivation level of learners. For instance, grades, end-of-course performance awards, rankings are external and social achievement indicators. In parallel, self-directed practice and study have been socially portrayed as boring and repetitive. However, interviews with expert learners reveal a very different picture of these experiences (Guba & Lincoln, 2019).

Expert learners spend approximately four hours in self-directed study and practice activities. Moreover, they find these activities highly motivating, varying their study and practice methods to discover new strategies for improvement. For example, in activities as diverse as chess, sports, and music, the amount of study and practice an individual engages in is a strong predictor of their level of expertise and the development of the skills needed to master them. There is also evidence that the quality of practice and study is highly predictive of the learner's skill level (Zimmerman, 2017, 2019).

Self-regulation in responsive learning:

There are two main kinds of self-reflection phase processes: self-judgment and self-reaction.

Self-judgment or self-assessment refers to comparing self-observed performances with some standard such as one's past performance, another person's performance, or an absolute standard of performance. Another form of self-judgment is causal attribution, which refers to interpreting the cause of one's own mistakes or successes, such as the grade earned on an exam in a given subject. Thus, attributing a poor grade to limitations of one's ability can be detrimental to motivation because it implies that the efforts to improve on a future exam will not be practical. Conversely, attributing a poor grade in related subjects to controllable processes, such as selecting an incorrect solution strategy, will maintain motivation because it recognizes that a different strategy may lead to success.

On the other hand, self-reaction involves feelings of self-satisfaction and positive affection about one's performance. Increased self-satisfaction improves motivation, while decreased self-satisfaction undermines learning efforts (Schunk, 2008, as cited by Aviles, 2018). Besides, self-reactions also take the form of adaptive or defensive responses, which refer to efforts to protect one's self-image by withdrawing from or avoiding opportunities to learn and perform, for example, dropping out of a course or missing an exam. In contrast, adaptive reactions refer to adjustments designed to increase the effectiveness of the learning method, such as discarding or modifying an ineffective learning strategy.

This view of self-regulation is cyclical because self-reflections of prior learning efforts affect subsequent anticipatory processes. For instance, dissatisfaction with oneself will lead to lower levels of self-efficacy and less effort during subsequent learning. A positive relationship is found between students' anticipatory performance and self-reflection phase processes (Zimmerman & Schunk, 2020). Thus, students who set specific short-term goals are more likely to self-monitor their performance in these areas, achieve the goal, and show higher levels of self-efficacy than students who do not set goals (Bandura et al., 2008, as cited by Campbell, 2020). In addition, other studies have found that expert learners show significantly higher self-regulatory processes during practice than novices (Cooperrider., 2020).

The self-regulation profile of novice trainees is very different from that of expert trainees. Novices do not engage in high-quality forecasting and instead attempt to self-regulate their learning reactively. Therefore, they do not set specific goals or systematically self-monitor. Instead, they tend to rely on comparisons with the performance of others to judge the effectiveness of their learning. Since other students usually make progress, their performance represents an ever-increasing criterion of success that is sometimes very difficult to surpass. Thus, students who make comparative self-assessments are driven to attribute causality to lack of ability, which will produce lower personal satisfaction and provoke defensive reactions.

In contrast, the self-regulation profile of expert learners reveals that they exhibit high levels of self-motivation and set hierarchical goals, with process goals leading to outcome goals in succession, similar to dividing a formal essay into an introduction, a body, and a conclusion. Consequently, expert learners plan to use effective strategies and self-monitor their effects, such as a visual organizer to fill in crucial information (Zimmerman, 2019). Besides, they self-assess their performance against their personal goals rather than against the performance of other learners and make strategy (or method) attributions rather than ability attributions, which

leads to greater personal satisfaction with their learning progress and more significant efforts to improve their performance. Therefore, these self-reactions reinforce expert learners' conceptions of self-efficacy, outcome expectations, learning orientation, and intrinsic interest. Thus, knowing the differences in the structure and function of self-regulatory processes between expert and novice learners has allowed researchers to formulate intervention programs in schools for students who show lower levels of self-regulatory development (Schunk et al., 1994,1998; as cited by Aviles, 2018).

A study shows that simply asking students to record some aspect of their learning, such as task completion, often leads to "spontaneous" improvements in functioning (Pichardo-Muniz, 2019). These effects imply that students' metacognitive awareness (i.e., self-awareness) of particular aspects of their functioning might improve their self-monitoring. Of course, self-awareness is often insufficient when a learner lacks fundamental skills, but it can produce a disposition that is essential for personal change (Zimmerman, 2017).

On the other hand, it has been widespread for several years now that self-regulatory processes are teachable and can increase student motivation and achievement (Zimmerman, 2019). Moreover, although research findings strongly support the importance of students' self-regulatory processes, few teachers effectively prepare students to learn independently (Zimmerman,2019). Hardly ever do students choose the academic tasks to perform, the methods to carry out complex tasks, or the study partners to work with.

Additionally, few teachers encourage students to set specific goals for their academic work or explicitly teach study strategies. Consequently, self-assessment of personal or group work is not sufficiently utilized, and teachers rarely assess students' conceptions of learning or their perceptions of self-efficacy or causal attributions to identify cognitive or motivational difficulties before they become a problem.

While the capacity for self-regulated learning is not naturally acquired, nor is it asocial in origin, every process or belief necessary for self-regulation, such as goal setting, strategy use, and self-assessment, can be learned with instruction and modeling from parents, teachers, coaches, and peers. In addition, self-regulated students seek help from others to improve their learning.

What defines them as "self-regulated" is not their reliance on socially isolated learning methods but their initiative, perseverance, and adaptability. Thus, self-regulated learners focus on activating, modifying, and maintaining learning practices in both social and solitary contexts. When these essential qualities for lifelong learning are sorely lacking in many students, the teaching of self-regulated learning processes is especially relevant. As a result, one of the main goals of schooling is to equip students with self-regulation, which is particularly relevant for students with learning difficulties. Self-regulated learners are those who engage in an active and constructive process, in which they set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and by the contextual features of the environment (Pichardo-Muniz, 2019).

Autonomous learners who are sensitive to their thinking, the learning environment, and their behavior in relation to the goals set are highly effective. The concept of metacognition (Flavell, 2009, as cited by Parres & Flores, 2020) was formulated after recognizing that, although all students may have particular self-management learning abilities, their use may be inconsistent inefficient. Flavell's concept of metacognition consists of two interrelated factors: self-awareness and self-regulation, both of which support an individual's practical learning.

Graham et al. (2000) proposed an adapted version of Pintrich's self-regulated learning model, in which both affection and motivation influence learners as they demonstrate strategic behavior and functioning within a given learning context (As cited by Perez et al., 2018). Teachers can use this framework to make explicit the behaviors involved in approaching proposed tasks with a classroom and guide their students with learning difficulties in the phases of planning, monitoring, encouraging student independence, and reflecting on evidence of self-regulation.

Commitment to sustainable learning involves taking into account three dimensions: That all students learn, that the teaching provided is meaningful and that the learning achieved endures and is helpful in the learner's life (Graham et al., 2000, as cited by Nunez et al., 2019). To move towards the first dimension - learning for all, it is necessary to maintain high expectations with each student and set challenging goals for them. Thus, incorporating students in each of the phases of the self-regulated learning process, such as setting their own goals and monitoring progress, is a concrete and collaborative way to move in this direction.

Typically, however, students with learning needs have little awareness of their cognitive processes as learners. For these students, metacognition may develop slowly, become less sophisticated, and need to be fostered through explicit instruction (Wong et al., 2017; as cited by Petroni & Souza, 2020).

Many students may have difficulty assessing whether learning has been achieved because "conditions that enhance performance during learning may not support long-term retention and transfer, whereas other conditions that appear to create difficulties and slow the acquisition process may enhance long-term retention and transfer" (Worthen & sander, 2017, p. 438). This is especially true for students with learning needs and leads to an analysis of the importance of the second dimension.

The second dimension, meaningful teaching, requires teachers to strengthen self-regulation in their students. As a result, they should explicitly teach different ways to set goals, segment them into small tasks, sequence them logically, collect the necessary materials, persevere in developing each stage, monitor progress continuously, evaluate the outcome, and reset the next goal for further progress. Therefore, students are often expected to learn to perform these processes independently, for example, without formal mediation by a teacher. Moving towards meaningful teaching implies incorporating direct actions in this sense since all learners require "learning to learn" autonomously, and not all of them will be effective at it independently.

Finally, the third dimension, related to lifelong learning, emphasizes that self-regulation of learning must be a developed capacity in the learner of the contemporary world. Thus, deepening self-knowledge that allows recognizing one's motivations, interests, personal needs, and those of the community in which each learner develops are necessary conditions to persevere in the development of new learning from the student's perspective acting as an active learner.

In general, it is essential to acknowledge the research-based conclusion that students with learning needs have significant difficulties with strategic processing and metacognition (Worthen & Sander, 2017). This perspective highlights the utility of instruction that focuses on teaching cognitive and metacognitive strategies. Like cognition, metacognition is a developmental process. Therefore, both thinking and thinking improve with maturity and experience and can be facilitated by teaching appropriate strategies.

Parres and Flores (2020) analyzed the effects of a program to promote self-regulated learning in an art subject, Visual Art Workshop (VAW), based on Pintrich's self-regulation model of learning. With a pretest-posttest design without a control group, they evaluated the program's impact on the self-regulation and autonomy of 15 students from a Mexican university. For this

purpose, the research version of the Motivational Strategies for Learning Questionnaire (MSLQ) was used (García & McKeachie, 2005 and cited by Avilés, 2018).

The results revealed statistically significant differences in the means of the motivation scales, although this was not the case for the learning strategies scales. Regarding students' learning strategies after they participated in the program, increased awareness of their autonomy and ability to decide which strategies to use and when to use them was reported. This increase in metacognitive processing improved the quality of learning outcomes in the subject. As a result, the authors stressed the importance of transferring this methodology to other subjects and disciplines in the university.

Methodology

The research is ascribed to the qualitative, interpretative paradigm, which according to Cisterna (2010), constitutes a way of approaching, studying, understanding, analyzing, and constructing knowledge from processes of interpretation, where the validity and reliability of knowledge rest ultimately on the rigor of the researcher (as cited by Cooperrider, 2020). Thus, the pretended positivist objectivity based on the separation between researcher and object of research disappears, and the question of knowledge construction is assumed as a subjective and intersubjective process. The individual builds the research design, collects the information, organizes it, and gives it meaning from both his or her previous conceptual structures and the findings that arise from the research itself, which is later collectivized and discussed in the academic community.

The research techniques developed are documentary analysis of various sources, such as official institutional documents of university education, educational models, teaching guides, ministerial regulations, and sources of specialized literature. This documentary analysis is a form of technical research. García (2019) explains, "a set of intellectual operations that seek to describe and represent documents in a systematic,

unified way to facilitate their retrieval." It comprises the analytical-synthetic processing, which in turn includes the bibliographic and general description of the source, classification, indexing, annotation, extraction, translation, and preparation of reviews.

Conclusions

This review synthesized the results of the studies focused on self-regulation of learning, which was published in the different databases. Gradual growth in publications on this topic has been observed since 2006, although research in journals in this database is still at an early stage of development. Nevertheless, the results found are promising, suggesting an increase in research on self-regulation processes in the educational field and the university context.

As discussed in the research, the nature of self-regulation of learning poses significant challenges for assessment. It is therefore understood that one of the main challenges for researchers is centered on the construction of instruments to assess self-regulation processes, which must be adapted to different populations and present robust psychometric characteristics, not only in the format of self-report questionnaires but also as event measures that capture the behaviors of the subjects during the process (Zimmerman, 2017).

It is hoped that this work of theoretical systematization will contribute to the promotion of the increase of scientific papers and articles on self-regulation of learning in the next decade.

References

Avilés, G. (2018). *Conceptos, tipos y usos de la evaluación para los directivos de la Uady.* Tesis, Uady, Facultad de Educación.

Campbell, D. (2020). *'Reforms as Experiments'*: C Weiss (ed.), Evaluating Action Programs: Readings in Social Action and Education. Allyn and Bacon, Boston, USA, pp. 187-223.

Cooperrider, D. (2020). *Positive Image, Positive Action: A basis for organizing.* stipes, Retrieved from: http://www.stipes.com/aichap2.htm

García, Antonio. (2019). Tratamiento y análisis de la documentación. La Habana: Universidad de la Habana.

Guba, E. and Lincoln, Y. (2019). Fourth generation evaluation. California: Newbury Park.

Núñez, J. C., Rosário, P., Vallejo, G. & González-Pienda, J. (2018). A longitudinal assessment of the effectiveness of a school-based mentoring program in middle school. Contemporary Educational Psychology, 38(1), 11-21.

Núñez, J. L., Martín-Albo, J., Paredes, A., Rodríguez, O. & Chipana, N. (2019). The mediating role of perceived competence: Testing a motivational sequence in university students. Universitas Psychologica, 10(3), 669-680.

Parres, R. & Flores, R. (2020). Experiencia educativa en arte visual diseñada bajo un modelo de autorregulación del aprendizaje con estudiantes universitarios. Revista Mexicana de Investigación Educativa, 16(49), 597-624.

Pérez, V., Valenzuela, C., Díaz, M., González-Pienda, J. A. & Núñez, J. C. (2018). Disposición y enfoques de aprendizaje en estudiantes universitarios de primer año. Universitas Psychologica, 10(2), 441-449.

Petroni, A. & Souza, V. (2020). As relações na escola e a construção da autonomía: un estudio da perspectiva da Psicología. Psicología y Sociedad, 22(2), 355-364.

Pichardo-Muñiz, A. (2019). Evaluación del impacto social. San José, Costa Rica: Editorial de la Universidad de Costa Rica.

Rosário, P., Lourenço, A., Paiva, O., Núñez, J. C., González Pienda, J. & Valle, A. (2018). Autoeficacia y utilidad percibida

como condiciones necesarias para un aprendizaje académico autorregulado. Anales de Psicología, 28(1), 37-44.

Whorthen, B & Sander, J. (2017). Educational evaluation. Alternative approaches and practica guidelines. Longman, New York & London.

Zimmerman, B. & Schunk, D. H. (2017). Self-regulated learning and academic achievement: Theory, research, and practice. New York: Springer.

Zimmerman, B. (2017). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64-70.

Zimmerman, B. (2019). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. American Educational Research Journal, 45(1), 166-183.

Zimmerman, B. J. & Moylan, A. R. (2020). Self-regulation: Where metacognition and motivation intersect. In D. J. Hacker, J. Dunlosky & A. C. Graesser (Eds.), Handbook of metacognition in education (pp. 299-315). New York: Routledge.