THE EFFECTIVENESS OF THE LEARNING MANAGEMENT CONCEPT DESCRIBED IN THE LITERATURE

A EFETIVIDADE DO CONCEITO DE GESTÃO DA APRENDIZAGEM DESCRITA NA LITERATURA
LA EFECTIVIDAD DEL CONCEPTO DE GESTIÓN DEL APRENDIZAJE DESCRIPTO EN LA LITERATURA

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ABSTRACT
The Learning management underpins a teaching proposal organized around learning, based on the protagonism of the learner. It is about considering the experiences brought by all the actors involved. This study aimed to identify the effectiveness of the Learning Management concept described in the scientific literature. For that, a systematic review of the published literature was carried out between 2010 and 2020. The PRISMA protocol was used, 50 articles were selected. The scientific literature points out that learning management is treated in an indirect and fragmented way in studies, and establishing little relation between its guiding principles. As well as the importance of a greater appropriation and division of responsibilities in the teaching-learning process.

KEYWORDS: Learning management; autonomy; metacognition; self-regulation.
"Teaching is not about transferring knowledge, but creating possibilities for your own production or construction" (Paulo Freire).

Introduction

Learning Management is an education proposal focused on the teaching action during the learning process. Its organization relies on the course of learning and not in the curricular momentum of the scholars. It sees the process as a group experience shared among the actors that are involved in the growth of knowledge. Furthermore, it is also fundamental to consider the uniqueness of each learner, which is influenced by its lifestyle, and thus affects the way the student behaves at school.

In traditional curricular models, the time intended for developing skills and competences is limited; students are assessed equally and have to carry out activities within a common pre-established period of time, not taking into account the students’ particular needs during their learning processes.

As a result, this article’s main objective is to answer the following question: How is Learning Management presented in the scientific literature? In order to acknowledge this query we did a systematic review (LINDE, 2003; SAMPAIO, 2007). As to identify whether the concept of Learning Management is considered in the scientific literature, only the articles published in renowned journals that followed a peer-reviewed process and written in English, Portuguese or Spanish between 2010-2020 were taken into account. In addition, this paper strongly builds upon the action guidelines established by the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA). (GALVÃO; PANSANI; HARRAD, 2015), which can be accessed in the annex section.

The study consisted of five stages: (I) identification of the phenomenon that needs to be studied, establishing a guiding question and formulating a subsequent search string focused on the research problem described; (II) search of scientific studies published in computerized databases and abstracts’ lecture; (III) selection of articles and data extraction; (IV) report the research findings and discuss the results; (V) knowledge synthesis.

From the research question, the following search string was formulated: (Learning management) AND (Learning OR autonomy OR learning to learn). The boolean research using the study main words allowed the selection of the articles that focuses on learning management, autonomy during the learning process and ‘learning to learn’. As a sin e
quanum condition, an article, in order to be considered for this study, had to have all of these terms either in its abstract or in its main body.

From teaching management to learning management

The way that school’s content is organized to be taught in the classrooms normally ignores the political and social relationship that students may establish; it does not favor the knowledge acquired to be critical nor it provides a social insertion by the learners. Morin (2002) properly denounces the supremacy of fragmented knowledge. According to him, it prevents the union between the parts and the whole from taking place.

The traditional model of organization of formal education underpins ‘teaching management’, where the main reference figure is the teacher and the attention is focused on the teaching (distribution) of content. Thus, in order to evaluate the quality of teaching, there is a need for results, which is translated in the analysis of the marks obtained from 0 to 10 in standardized tests. It is necessary to understand that school’s content, when dissociated from daily life results in a meaningless learning; it can prepare students to pass tests, but does not help them better enjoying social goods (VIEIRA; VIDAL; NOGUEIRA, 2015).

Learning Management consists of an educational thinking structure that encourages paradigmatic changes, as it places the student’s learning momentum above the bureaucratic momentum characteristic of traditional structures. It organizes the learning process according to the needs of the learners, regarding their already accumulated knowledge and is adapted to their social reality. In other words, it prepares for citizenship while supporting autonomy development along the way (MARTINS, 2017).

In learning management, learning plays a central role in discussions and the learner, who is the protagonist of the process. Therefore, the focus is on learning and on who is learning.

Nonetheless, for learning to exist, the subject needs to make a personal investment towards knowledge. This investment is directly linked to personal resources mixed with social, economic, emotional, material possibilities, etc. Thus, learning management is the capacity that the learner develops over his life to plan and organize in order to reach his learning goals, which are at the same time conditioned by the person’s skills and abilities presented in their social and individual contexts; these are factors that allow the teaching-learning process to take place.

Principles of learning management
Learning Management develops from the concept that learning is more effective whenever the subject takes the reins of his own learning process, transforming the teacher into a mentor who helps him direct his potential. For this to be possible, the actors involved in the teaching-learning process need to develop skills and competences that enable this self-management.

Self-regulation is an important principle because it is the student's ability to manage his needs during the learning process. It is also a process of reflection and action in which the student plans, monitors and evaluates his own learning. “Theoretically, the concept of self-regulation incorporates a relationship between four basic dimensions of learning: cognitive / metacognitive, motivational, emotional / affective and social” (ZIMMERMAN; SCHUNK, 2001). The fundamental goal of education, as Bandura (1986, p.174) said: “is to equip students with the self-regulation skills that allow them to educate themselves”.

Metacognition is another fundamental principle that needs to be brought back to light. It is not an innate capacity, but a type of learning that helps the learner identify the limits of his knowledge. The historical roots of metacognition go back to the psychologist John Flavell (1979) and consist of the ability to get to know, control, regulate and evaluate oneself’s learning mechanisms. We call this the construction of autonomy during the continuous management of self-learning.

In addition to metacognition and self-regulation, building autonomy is one of the most important guiding principles when it comes to learning management. The concept of learners’ autonomy gained importance thanks to the work of teachers and researchers in the 1980s. Henry Holic (1981) defined autonomy in reference to the construction of knowledge as “the ability to take charge of one’s own learning”. Since then, many definitions have been added to the term, varying its meaning depending on the context in which it was discussed.

Another key element in the learning process for building learner’s autonomy is assessment. Assessment must have a regulatory learning value to the learner himself. To do so, it is necessary to raise awareness of the role that assessment has as a guiding tool in learning management. It has to be considered as an important part of the process, opposed to an interruption of the process to report results to an external agent (FERNANDES, 2019; PACHECO, 2018).

Based on the findings of literature, other important issues regarding learning management are: assessment, the role of the teacher, “learning to learn”, the role of the learner in the learning process. These are variables that if articulated and well developed,
could propel the learner towards self-management of learning.

**What research taught us**

In Figure 1 we show a flowchart that shows the steps taken in this study.

**Figure 1** Fluxogram showing the stages of the systematic review.

![Fluxogram showing the stages of the systematic review.](image)

Source: Original authorship.

Based on the inclusion criteria, 50 articles were accepted for being related to the guiding principles of learning management. In order to determine a better organization, following the theoretical foundations of the guiding principles of learning management, regarding the authors mentioned in this study and taking into account the findings of the research, the articles were classified into categories (Figure 2).
From the results obtained in this study, we present the evidence found according to the data analyses. Most of the articles analyzed (92%) involve at least one of the guiding principles of learning management exclusively, but do not address the subject in its scope. We observed the prevalence of the qualitative nature of the surveys (94%) reported in the chosen articles. The categories will be presented in three topics, concentrating the discussion around the three guiding principles of Learning Management, according to the theoretical foundation used in this study.

**Autonomy**

In the Emphasis on Autonomy category, there were 15 related articles, which represent the second largest group of articles in this study. In these articles it was possible to observe that the learner’s autonomy is treated as a central point of learning management and bring specific actions to promote the learner’s autonomy in the learning process. Mainly using active methodologies as a methodological approach to building autonomy.

According to Komissarouk, Harpaz and Nadler (2017), people differ from each other in their way of learning. Consequently, they also differ on how they experience this process of building autonomy. According to this author, the orientation / mediation of teachers to learners must be adequate for students to build autonomy.
The development of the learner's autonomy implies some variables in the teaching-learning process, such as: the importance of considering the learners' previous knowledge, which includes the autobiographical and self-referential character of knowledge; the exercise of theorization in the light of scientific production; the importance of reconnecting knowledge, showing how harmful the separation of contents by disciplines is; the dialogue between the actors (CAMPOS; RIBEIRO; DEPES, 2014).

Lüftenegger et al (2012), in his study on “lifelong learning” (LLL), refers to lifelong learning as a pedagogical strategy that inevitably results in autonomous and self-regulated learning. However, it is worth mentioning that between dependence and autonomy there is a long learning process so that students can learn to assume learning in the school environment. It is a process influenced by several unique factors, such as individual motivation, level of self-regulation and life experiences, etc. It is also influenced by external factors, like the culture of the community in which it operates, whether it is more collective or individualistic; the environment and the teacher-learner relationship, etc. According to Sultana (2018), if the learners' needs are fulfilled, the learning objectives and limitations can be expressed more easily and the learning process can become more motivating. Whereas, if students' needs are not taken into consideration in teaching management, it can lead to low motivation. Therefore, training the learner to achieve a better level of autonomy involves discovering what the learners perceive as a challenge and guide them so that each one of them can overcome obstacles autonomously.

The student’s dependence on teachers amplifies the damage in the construction of autonomy in the learning process. The more dependent students are, the less proactive they become, thus the orders of teachers become a necessary impulse for the studies; a very common attitude in the traditional teaching model, questioned when we propose to organize the management of teaching based on the principles of learning management.

The category Emphasis on method added 36% of the articles analyzed. Problem Based Learning (PBL) is one of the most widespread active methodologies among the articles included in this category (n = 18), corresponding to six articles. Other methodologies cited were: learning by project, learning by building portfolios, by prizes and contests, flipped classroom, learning by research / authorship, by problematizing teams and by extension and research work. Studies have shown us that there is a significant use of methodological strategies that can contribute to the construction of autonomy. However, we know that schools with very crowded rooms and a lack of resources make it difficult for teachers to use the different methodologies that go beyond the expository class.

Despite the recognition of the need to innovate in teaching management, we saw
reference to the construction of a curricular organization to improve the flow of these methodologies. What generally happens is a ‘fit’ of the methodologies active in the traditional teaching model.

The use of methodologies that are established as the principle for the construction of autonomy emphasize the need for the preparation of competent teachers in the technical, scientific, ethical and political dimensions for social subjects with the capacity to act in contexts of uncertainty and different degrees of complexity. This is only possible with autonomous individuals in their thinking and acting.

**Self-regulation**

The concept of self-regulation is closely related to the concept of autonomy and metacognition. It involves the development of monitoring, controlling, evaluating, organizing, goal setting, time management and information research skills. Summing up, it is about the regulation of the learner’s learning by itself.

Regardless of the theoretical model used to understand self-regulation, whether by Albert Bandura (1986), Barry Zimmerman (2001), or Dale Schunk (2001), among others, they all start from the assumption that the learner must be an active agent of his learning and that it needs to develop self-regulatory skills through the use of facilitating strategies.

The study by Lima Filho, Lima e Bruni (2015), composed of a sample of 250 students at two public universities in Bahia, Brazil, shows that the level of self-regulation of the learner may be related to gender and age. According to this author, women and younger students tend to have higher levels of self-regulated learning and the most used strategy is to seek outside help. This helps to realize that older and male students should receive even more special attention regarding their self-regulated, independent and proactive development. It also leads to questioning how a learning model that teaches and evaluates everyone in the same way can be efficient, since people are different.

However, Lüftenegger (2012), in a study carried out with a sample of 3,362 students in 28 Austrian schools, mentions that boys express higher levels of self-efficacy (effectiveness in reaching goals) than girls. It also states that expressions of interest, learning objectives and self-efficacy decrease among students as they reach the highest grades and, therefore, the grade has a greater power of interest. This study indicates that students show less interest in classes as they reach school goals, mainly grades, and stop attributing meaning to classes themselves and focus on the results. This fact reinforces the idea that meaningless learning does not promote the learner on looking for ways to develop strategies, abilities, life skills in school, but it only prepares them to pass tests.
As for these self-regulatory strategies, there are both favorable and unfavorable strategies for learning. Postponing studies, attributing failure to lack of time, not carrying out necessary readings/studies, among others, are considered unfavorable strategies that go against the development of self-regulation. The different guidelines to which strategies adopted for building self-regulation can be related are: motivation, the affective/emotional dimension, personal belief and social dimension. However, it is a topic that has been little explored in the literature.

The category Emphasis on evaluation represents 10% of the studies analyzed (n = 5). In these studies, it was possible to perceive that evaluation is often treated as an end to itself and as a classificatory intention, little addressed as a training tool throughout the teaching-learning process. The evaluation, according to Clark (2011), can be classified in diagnostic, summative and formative. The sum is the most used in the formal and traditional school context. The grades and approval of the student for the following year, as well as the fulfillment of the bureaucratic teaching time, is a limiting way for the teacher to dedicate himself to formative assessments that demand time to reconstruct the learner’s knowledge based on the teacher’s feedback and exchange between peers.

There is a weakened perception of teachers about the role of evaluation. Formative assessment is, therefore, a strategy that makes up the arsenal of self-regulatory strategies and the development of metacognition. This way of organizing the evaluation helps to monitor the learners' potentials and weaknesses, in order to show the areas that need to be worked on. It also helps to clarify the starting and ending point of each one, which helps build awareness of their knowledge, respectively.

It is understood that the assessment is closely related to the management of learning, since it is a guiding instrument that helps to identify the learner’s need, contributing to the development of better guidance according to the limitations presented. The practice of evaluating in traditional teaching contexts to which one is accustomed to, is lost in measuring and quantifying knowledge, failing to identify limitations to instigate individual and collective potentials.

Little was identified in the articles (n = 1) self-assessment as a valid assessment in the training process. Assessment is always treated in a hierarchical manner, where the teacher assesses and validates the student's learning condition, evidencing the power relationship between them. It also makes it impossible for the learner to exercise the ability to self-regulate. Self-assessment makes up an arsenal of self-regulation strategies that encourage the individual to appropriate his learning process (PUNHAGUI; SOUZA, 2012).
Metacognition

Last, but not least, the metacognition category represents only 4% (n = 2) of the articles collected for this study. The studies about metacognition of this research are based, without exception, on investigations that take place during presentational classes. According to Deffendi and Schelini, (2016) learners who have a better developed metacognitive system are more aware of their level of knowledge and can easily point out what they have learned in a subject throughout the semester. When we are faced with a situation in which someone tells us to do something in a certain way and we answer “I do it better this way” or “no, I learn better this way”, or when we memorize the personal document number, the analysis, the planning and choosing the best way to accomplish the task is what is called metacognition.

Metacognition has a multifactorial influence on its individual construction, since it can be developed over time and influenced by the individual’s personal and social experiences. In this category there is a predominance of longitudinal research. This data can be explained by its multifaceted nature, requiring an analysis over time to better identify the level of metacognition and the self-regulatory strategies of the learner in the school context.

It is understood that metacognition is directly intertwined with the concept of self-regulation supported by two components: cognition awareness and cognition regulation, the latter of which concerns self-monitoring of the construction of knowledge. Hence metacognition is closely linked to the concept of evaluation, as it requires deliberate reflection with the purpose of self-correctness in order to know what one has learned and what one should learn. It is about the self-reflection of individuals about the way they do it and how they could do it ‘better’, that is, their metacognitive assessment of the learning process.

For Corrêa, Passos and Arruda (2018, p.520), “Every relationship with knowledge is a relationship with yourself through learning”. It is understood, therefore, that to instigate the development of metacognition in learners, it is necessary to reinforce the idea of training aimed at strengthening self-knowledge. However, the education system itself discredits it when the curricular paradigm distances itself from critical social analysis, ignoring the identity relationship that exists between the individual and his/hers learning process.

The fact that the actors in the school environment lack self-awareness is evident when only two articles make up the category that addresses the role of the teacher in the learning process as a central theme, contrasting with a single article contemplating the student’s perspective as a central theme. Nonetheless, there is a constant reference,
in other categories, to this question. Changing the roles of the actors in the educational scenario to promote learning management is therefore obvious.

In the teaching model based on learning management, the teacher moves from being a “transmitter of knowledge” to the role of advisor / mediator of teaching-learning. This change of roles in the educational scenario is also seen, by some educators, as a decline in the teacher's role due to loss of power and authority in the classroom, but, at the same time, the great contribution to the student’s autonomous learning is recognized (PEREIRA; ALVES; CABRAL, 2013).

There is the need to redefine the role of three important agents in the context of teaching, then: knowledge, considered as a valuable asset; the subject, as the main responsible for the construction of his knowledge; and the teacher, as a mediator between the first two. If the teacher is a central figure in learning and knowledge is the teacher’s power, it is far from a guided and multidirectional sharing. Martins (2017), when dealing with learning networks, considers that all actors must be visible and can actively act in the learning itself, as well as cooperate in the learning of colleagues. As long as teaching is teacher-centered, its effective purpose is to teach and learning for life will be further from being achieved.

In learning management, the teacher is a tutor who guides the way dynamically, without the need to establish fixed routes, since the path towards learning can be influenced by the characteristics of each learner. Personal and social motivations may differ in learning outcomes. In this way, it is considered that the management of learning is intrinsically linked to a dialogical education that allows democratic exchanges in respect to the particularities of those involved in the process.

A single article brought the learner’s perspective as a central theme, showing the invisibility of the learner’s perspective in the process of his own learning, contradicting one of the principles of learning management: the learner at the center of the learning process. Everything that deals with learning, but where the student is not mentioned as the central actor of this process, refers to teaching management. When the student's perspective or its centrality in learning is disregarded, results in bad consequences on their productivity.

**Conclusion**

The aim of this study was to identify the concept of learning management described/used in the scientific literature. The study focused on establishing the principles inherent to learning management according to the literature found on the topic. It was found that its discussion in the scientific literature does not include the
scope of the concept, but deals with its components individually. Since the teaching-learning process is complex, there is no unanimity on the aspects considered most important. Hence the importance of not reducing the discussion on the learning management to a single variable.

The importance of greater appropriation and division of responsibilities in the teaching-learning process is evident for the development of skills for self-learning, such as the learner’s autonomy, self-regulation and metacognition. The compartmentalized way and exploring the concept of Learning Management does not include the proposal of a disruptive teaching approach, but reaffirms, with active methodological insertions, the traditional teaching processes of teaching.

The learner’s perspective seems to remain invisible to the educational scenario. Nevertheless, as long as the learner is not at the center of the learning itself, any proposal for innovation, whether regarding the method or the curriculum organization, will be trivialized. Traditional curriculum must be overhauled so teaching - which is notably in crisis - can become less technical and assume a more reflective and critical character. This goal can be achieved with a curricular reform based on learning management and its guiding principles.

The challenge, therefore, is to implement pedagogical processes that help students to become active, empowering and training them for life. This fact requires investment in new teaching approaches that allow the learner to critically gather knowledge, in a dialogical and interdisciplinary perspective, having in the learning management an instrument of transformation.

References

RESUMO:
A gestão da aprendizagem fundamenta uma proposta de ensino organizada em torno da aprendizagem, a partir do protagonismo do aprendente. Este estudo teve por objetivo identificar a efetividade do conceito de Gestão da Aprendizagem descrito na literatura científica. Foi realizada Revisão Sistemática da literatura Publicada entre 2010 e 2020. O protocolo PRISMA foi utilizado, e foram selecionados 50 artigos. A literatura científica aponta que a gestão da aprendizagem é tratada de forma indireta e fragmentada nos estudos deste conceito e estabelece pouca relação entre os seus princípios norteadores. Fica evidente a importância de uma maior apropriação e divisão das responsabilidades no processo de ensino-aprendizagem.

PALAVRAS-CHAVES: Gestão da aprendizagem; autonomia; metacognição; autorregulação.

RESUMEN:
La gestión del aprendizaje se basa en una propuesta didáctica organizada en torno al aprendizaje, en función del rol del aprendiz. Este estudio tuvo como objetivo identificar la efectividad del concepto de Gestión del Aprendizaje descrito en la literatura científica. Se realizó una revisión sistemática de la literatura publicada entre 2010 y 2020. Se utilizó el protocolo PRISMA y se seleccionaron 50 artículos. La literatura científica señala que la gestión del aprendizaje es tratada de manera indirecta y fragmentada en los estudios de este concepto y establece poca relación entre sus principios rectores. Es evidente la importancia de una mayor propiedad y división de responsabilidades en el proceso de enseñanza-aprendizaje.

PALABRAS-CLAVES: Gestión del aprendizaje; autonomía; metacognición; autorregulación.