RESEARCH ARTICLE

AUTONOMOUS LEARNING IN THE EDUCATIONAL CONTEXT: A PSYCHOLOGICAL PERSPECTIVE

Yrisela Liset Delgado Hernández[*], *Oscar López Regalado*[*], *María Rosa Calua Cueva*[*], *Juan Pablo Moreno Muro**

[*]**Department of Psychological, Universidad Cesar Vallejo, Chiclayo, Perú.**

Abstract

At present, it is necessary to strengthen the competences in educational agents, from a know how to be, know how to do, know how to act and know how to live together, and enhance autonomous learning in students and teachers. The objective of this paper was to analyze the conceptual, methodological contributions and instruments used in autonomous learning within the educational context from 2017 to 2020. This is a documentary review done in databases such as Scopus, Ebsco, Academic One File and Proquest. The Prism diagram was used to define the inclusion and exclusion criteria taking into consideration authors, date of publication, definition, approach, type and design, instrument and conceptual contributions; exclusion criteria were duplication, publication date, language, title and abstract and full text. The population was 1001 documents; and the sample selected for the research, 25 scientific articles. Most authors agree on the conceptualization of autonomous learning. The qualitative approach, with non-experimental, cross-sectional and descriptive designs, is predominant; and the documentary guide and questionnaires are the most frequently used instruments. Autonomous learning is the student´s ability to be the main character of his (her) own action; to achieve it, he (she) has to comply with internal and external demands, and its development will depend on the attitude and commitment of the educational agents. *ASEAN Journal of Psychiatry, Vol. 22(9), November 2021: 1-13.*

Keywords: Self-Learning, Self-Education, Teaching Method; Self-Regulation, Self-Taught

Introduction

The Peruvian State expects from teachers a quality performance, developed with ethical, reflexive, critical and autonomous action [1]. Autonomy, as a means and final goal, allows them to improve themselves and their pedagogical practice, surpassing traditional initial training. Autonomous learning allows them to reflect on the social and ethical implications of their pedagogical procedure, to problematize the contents, purposes and strategies of their work, and to redefine them and improve his(her) work accordingly [2]. The effective teacher generates meaningful learning, closes learning gaps and impacts the student´s future; particularly in remote learning demanded by Covid-19. Consequently, autonomous teachers must be aware of the learning process, and be able to propose viable goals and strategies for action and self-regulation to achieve those goals. The definition of learning has gone through different stages; at the beginning it was considered as the acquisition or increase of knowledge, its foundation being based on memorization. It was more repetitive than comprehensive and less applied to various situations. [3,4]. It is also the faculty that a person has to direct, control, regulate and evaluate, consciously and intentionally, his way of learning [5].

Autonomy to learn dates back to Confucius (551-479 BC), who considered that children and young people should be formed from the beginning to face life by themselves [6]. Specifically, the concept of autonomous learning, is based on several sources, for example: behaviorism, constructivism and historical, socio cultural approach [7].

Etymologically, the word professor comes from Latin professor and the participle profiterol, from pro and fateri; and according to article 56 of the Peruvian General Law of Education, the teacher's mission is to contribute effectively to the integral formation of students [8] likewise, article 4 prescribes that his (her) service concretizes the right of students and "the community to an education of quality, equity and relevance [9]. Consequently, the teacher, as a reflective subject, is able, or at least should be, to build his (her) learning on his (her) pedagogical work wherever it is performed, through the use of cognitive, motor and social tools. That is, the teacher, as part of an educational community, takes deep thought on his (her) pedagogical work, which allows him (her) to transform teaching practice [10].

It is necessary to ensure that students achieve the development of competences [11]. In autonomous learning, the teacher has the willingness to act and to take charge of his (her) own learning [12], which is framed in processes, domains and levels, and is reached throughout life [13].

At the beginning, as in any process, he (she) needs support, guidance [14], of mediating actions and then becomes the author of his (her) self-learning to be applied on his daily work. Hence, it is up to the teacher to build his (her) autonomous learning, which means being reflexive on his (her) own teaching practice and build knowledge with critical foundations [15].

The objective was to analyze the conceptual, methodological contribution and the instruments used in autonomous learning within the educational context during the period 2017 to 2020.

Material and Methods

This is a documentary review [16], of a simple, comparative and retrospective descriptive design [17,18], due to the use of records made without the participation of the researcher. The technique of documentary analysis was also used, where each article was reviewed in order to identify the amount of existing information about the autonomous learning variable, delimit the type of articles, the search engines used, and verify if the documents were in the search date range; select the descriptor words from the information systems [19] of the European Thesaurus of Education: self-learning, self-education, teaching method, self-regulation and self-teaching.

In order to facilitate the searching process in the selected databases, to ensure the quality of the information and avoid bias in the results, bibliographic databases that provide reliable information were used: Scopus, EBSCO, Academis OneFile, Proquest. For the search of the scientific articles, the Boolean operator "AND" was used, whose function is to show only results that contain the search terms indicated; it was used to reduce the number of articles obtained in the search of each of the selected bases.

The operator "OR" was also used to obtain results containing at least one of the terms, these commands favored the search and extraction of accurate and reliable information [20,21]. The quality standards of the PRISMA flowchart was considered as an important tool to support researchers in systematic reviews, whose purpose is to ensure the quality of information and clarify the publication of systematic reviews [22-24].

The inclusion criteria were: scientific articles published between the years 2017-2020, written in Spanish, were considered, which contained in their title the terms autonomous learning, self-learning, self-regulation, self-training; studies that developed the definition, characteristics, and contribution of each author of the indexed articles considered as a sample of the research; in addition, the population, statistical analysis, [25,26] methodology and instruments used were considered. The exclusion criteria included

duplicated articles in databases that are not scientific, books and web pages in a language other than Spanish.

Results

The results of the study sample of 25 scientific articles are presented in the tables and graphs described below: According to the analysis of Table 1, through the advanced search in the Scopus [25] database, 9 scientific articles of the autonomous [27,28] learning

variable were obtained, representing a percentage of 0.9%; the result in the EBSCO database was 144 articles, which means a percentage of 14.39%; similarly, in the Academic OneFile database, 14 articles were obtained, meaning a percentage of 1.4%; and, finally, in Proquest, [29,30] the advanced search outcome was 834 articles, representing a percentage of 83.32%. The overall result obtained in the general search was 60,427 articles; while, in the advanced search, 1001 articles were obtained, representing 1.66%.

Table 11. **Search for articles with boolean operators.**

Database	Basic search	General	Search formulas	Advanced search	%
Scopus	(TITLE-ABS KEY (LEARNING AND AUTONOMOUS) AND DOCTYPE (ar) AND PUBYEAR > 2017 AND (LIMIT-TO (LANGUAGE , "Spanish"))	18	(TITLE-ABS-KEY (learning AND autonomous) OR TITLE-ABS-KEY (self-education) OR TITLE-ABS-KEY (self-learning) OR TITLE-ABS-KEY (self-training)) AND DOCTYPE (ar) AND PUBYEAR > 2017 AND (LIMIT-TO (LANGUAGE , "Spanish"))	9	0.9
EBSCO	((aprendizaje) AND (FM P))	54,413	((aprendizaje) AND ((FM P)) AND ((autónomo) AND (FM P)) OR ((autoaprendizaje) AND (FM P)) OR ((autoformación) AND (FM P)) OR ((antieducación) AND (FM P))	144	14.4
Academic OneFile	"autonomous learning" LIMITS: Full text ANDDocument type: "Article"AND	422	"autonomous learning"ORKeyword: self-learningORKeyword: self-trainingORKeyword: self-educationLIMITS: Full text ANDDocumenttype: "Article"AND	14	1.4
Proquest	(autonomous learning)	5,574	(autonomous learning) OR (autonomous learning) AND self-learning OR self-training AND self-education Applied limits	834	83.3
Total		60,427		1,001	100

The Prism diagram shows that from the advanced search in databases such as Scopus, Ebsco, Academis One File and Proquest, a total of 1,001 scientific articles were obtained, of which 15 papers were eliminated because they were duplicated. Next, 960 investigations were excluded by evaluation of title and

abstract, getting a partial total of 26 articles evaluated in full text for eligibility [31-36]. One article was excluded at this stage, so, finally, a total of 25 articles were selected as the sample for the systematic review (Figure 1).
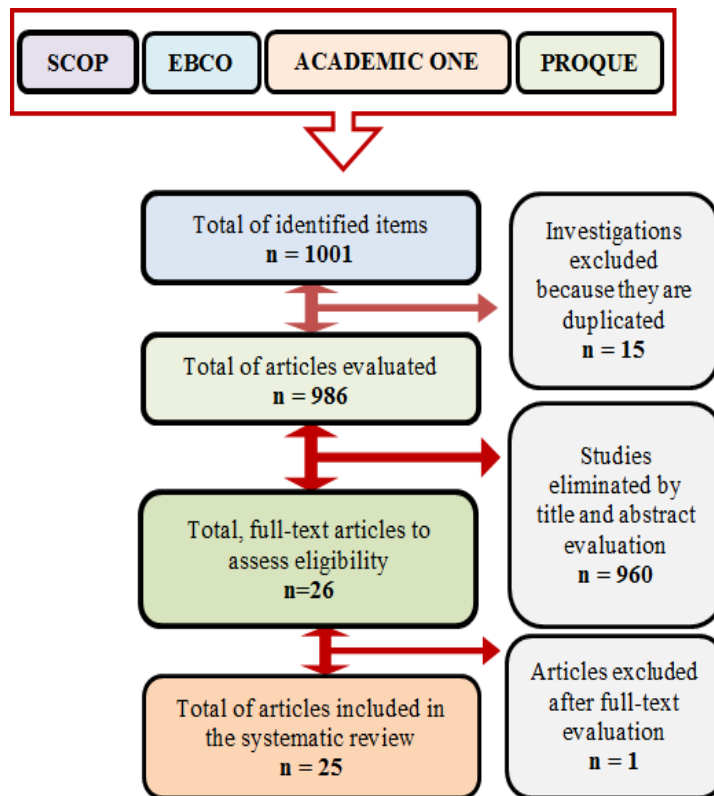
Figure 1: 1Prism diagram.

According to Table 2, from the 25 articles reviewed, learning may be defined as responsible for the students´ own action; meaning they must appropriate their context to a degree of intervention in the establishment of their own objectives, procedures, resources, evaluation and learning moments; applying cognitive, metacognitive and support strategies; likewise, teachers and students are governed in their own actions without depending on their peers [37-42].

Table 2: 2Articles according to author, title and conceptualization.

Item code	Article title	Conceptualization of autonomous learning
1	The psychological bases for the development of autonomous learning.	The development of an innovative pedagogical model requires the development of a process where creativity and innovation are key in the development of autonomous learning in students [23].
2	Characteristics of autonomous learning in kinesiology students from a higher education institution in Buenos Aires.	Students manage and build their learning with autonomy and responsibility in mind [24].

3	A praxeological look at the self-regulation of learning.	For a person to be able to self-regulate his (her) learning, he (she) must have an organized process of acquiring knowledge [25].
4	The autonomy of the teacher in training: An analysis from the relational perspective in the context of pedagogical supervision.	The teacher is autonomous to think by himself, with a critical and reflective sense and takes his context into account [26].
5	Self-regulated learning and teaching interventions at the university.	Self-regulation is a capacity required of university students so that they can perform at this educational level and in the workplace [27].
6	Gender differences and self-regulated learning: the effect of academic performance.	Self-efficacy beliefs are critical aspects of motivation, influencing the control and regulation of learning [28].
7	Teachers as cognitive mediators and promoters of meaningful learning.	Self-regulated learning has contributed to reinforcing the student´s autonomous participatory learning in the educational process [29].
8	Self-regulation of learning and formative evaluation processes in group work.	Self-regulation is the key competency for success in higher education based on projects and evaluation criteria [30].
9	Development of autonomy and self-regulation in university students: an experience of research and mediation.	It is essential to deepen and rework theoretically to help explain the mechanisms of development of self-regulation and autonomy in the educational context.
10	A proposal for the teaching of derivatives based on autonomous learning.	Autonomous learning is a process that stimulates the student to be the author of his own development and to build his own knowledge [31].
11	Autonomy and ICT in the learning of young people and adults: Socio-critical pedagogy through scratch workshops.	In the performance of autonomous work, the following types of strategies are taken into account: cognitive, metacognitive and supportive [32].
12	Autonomous learning. Its role in the development of specific competencies in higher education.	Autonomous learning allows the development of individual capacities to strengthen students´ personal development [33].
13	Teaching with self-learning methodology in simulated environments (MAES©). A qualitative study among professors and undergraduate students in Nursing.	With self-directed learning, students set their own learning objectives and relate them to their educational and personal needs [34].

14	Autonomy and the ability to exercise it in learning: the case of students in language teacher training.	Students can exercise their autonomous behaviors to a lesser or greater extent due to the influence of external factors, such as the norms established by teachers or institutions [35].
15	Self-regulated learning of university students: the usages of digital technologies.	Self-regulated learning is an inter-curricular competence that supports lifelong learning by helping people become independent learners [36].
16	Self-learning in small groups for the training of school directors. Analysis of a pilot program.	Self-learning helps to promote change to generate meaningful learning in students [37].
17	Relationship between the academic-personal motivation of the novice student in education and the strategies of autonomous work.	Autonomous learning strategies allow the student to make appropriate decisions about what and how to learn according to the context and learning objectives [38].
18	Strategies of autonomous work in novice university students of education.	The personal construction of learning starts from the student´s active, autonomous and self-regulated participation [39].
19	Autonomous learning, favoring the adaptive experience in students and teachers: the division with decimal numbers.	Autonomy means that learners govern their own actions without depending on others, while self-regulating according to a core of knowledge and values [40].
20	Metacognition and autonomous learning in higher education.	Students must be able to develop skills that allow their self-education, which requires strategies that facilitate their autonomous learning and training of critical thinking [41].
21	Autonomous learning and competences.	Autonomous learning refers to the degree of students´ intervention in setting their goals, procedures, resources, assessment, and learning moments [42].
22	Self-regulated learning: state of the art and psychopedagogical challenges.	The characteristics of the students called self-regulators coincide to a large extent with those attributed to students of high performance and high capacity [43].
23	Design of tasks to promote self-regulated learning in the university.	Research on autonomous learning has been going on for more than 30 years and has succeeded in testing the relationship of the concept of learning regulation with students' academic performance [44].
24	Self-regulatory marks for the construction of the teaching profile during the initial training of teachers.	The integration of the students with their experience from the classroom as an apprentice is encouraged, guiding the person towards practices of inquiry in the professional context that creates new mental structures during the training process through self-regulated learning [45].

25	Socioeconomic context, pedagogical practice and autonomous learning in the classroom.	Autonomous learning is effective when the cultural and socioeconomic level of the student is taken into account [46].

According to Table 3, 94% of the articles considered in the sample are of a qualitative nature; they used a non-experimental cross-sectional design because no changes or experiments were made in their studies and they collected the information in a single moment; as a Study population they considered teachers and students, who represented the source of the information for the studies. Regarding the study population, in all cases, students, teachers or directors of basic or university education centers were considered [43-46].

Table 3: Analysis of the population, type and design of the articles.

Code	Population	Guy	Design
1	231 Future teachers of Early Childhood and Primary Education of the University of Girona (Spain).	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
2	95 first semester students of the Bachelor's Degree in Kinesiology and Physiatry, 43% female, with an average age of 25.6 years	Quantitative	Descriptive cross-sectional study
3	53 participants, members of the first semester of the social work program of UNMINUTO, Zipaquirá Regional Center, in Colombia	Quantitative /Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
4	30 teacher trainers from 2 Private Tertiary Training Centers in the Capital (Santiago de Chile)	Qualitative	Descriptive and interpretative study.
5	75 professors of the Clinical Cycle of Medicine of a private university (UP)	Quantitative /Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
6	374 students of 2nd year of Compulsory Secondary Education (ESO)	Quantitative	Descriptive cross-sectional study.
7	Literature on the teacher as an entity to promote meaningful learning between 1980 and 2015	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
8	88 undergraduate students of Physical Activity and Sports Sciences	Quantitative	Descriptive cross-sectional study.

9	32 students (10 men and 22 women), with an age range between 19 and 22 years of the undergraduate Educational Intervention of the UPN	Qualitative	Participatory Action Research (PAR) Design Study.
10	Literature on the impact of autonomous learning on calculus education from 1961 and 2013	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
11	8 students, 4 women and 4 men between 16 and 20 years old	Qualitative	Action research (AR) design.
12	Literature on the impact of autonomous learning on higher education from 1964 to 2014	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
13	29, 4th year Nursing undergraduate students.	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
14	88 students from an English teacher training program at a Mexican public university.	Quantitative Qualitative	Descriptive cross-sectional study.
15	305 undergraduate and master's degree students, 138 belong to Spain and 166 to the Dominican Republic	Quantitative	Descriptive cross-sectional study.
16	94 school principals in exercise grouped into 14 groups of six participants plus a coach.	Quantitative Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
17	772 first year students enrolled during the academic year 2018/19 in the Degrees of Early Childhood Education and Primary Education	Quantitative	Descriptive-correlational research.
18	407 freshmen students enrolled in the 2017/18 academic year of the Degrees of Early Childhood Education, Primary Education and Social Education	Quantitative	Non-experimental, descriptive-correlational research.

19	30 sixth graders and 12 teachers from 1st to 6th grade of primary school from different schools located in Mexico.	Qualitative	Non-experimental, cross-sectional study with descriptive scope.
20	Literature on metacognition and autonomous learning between 2013 and 2017	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
21	Literature on the competences and characteristics of autonomous learning between 2000 and 2017.	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
22	Literature on the conception and evolution of the concept of autonomous learning between 1934 and 2017.	Qualitative	Non-experimental, cross-sectional study with a descriptive scope.
23	Literature on the development of strategies to promote autonomous learning between 1995 and 2019.	Qualitative	Non-experimental, cross-sectional and a descriptive scope.
24	231 future teachers of the Early Childhood and Primary Education degrees of the University of Girona (Spain)	Qualitative	Descriptive study
25	08 teachers, 16 directors and 40 children of first and second grade of four schools in the Metropolitan Region of Chile	Qualitative	Non-parametric, descriptive study

In Table 4, the authors believe that autonomy requires self-discovery by learners and their own training needs. The current demand for education requires the development of critical, reflective social thinking in future professionals capable of working independently; likewise, the researchers used interviews, documentary guide questionnaires, focus groups Error! Not a valid bookmark self-reference., validated numerical characteristics.

Table 43: Analysis of the instrument and contribution of the articles.

Item Code	Instrument	Contribution
1	Documentary Guide	Provide information that allows the development of proposals for educational improvement to autonomous learning for the benefit of the student.

2	Autonomous Work Strategies Questionnaire	Autonomous work strategies are more relevant at the upper secondary level of education, with the students being responsible for managing their learning.
3	Questionnaires and video recordings	82% have adequate metacognitive strategies, while the other 18% have excellent metacognitive strategies. Both related to the theory of self-regulation of learning.
4	Semi-structured interviews Focus group	Supervisors as counselors of professional practice generate communication, accompaniment, monitoring to strengthen competencies and autonomy in teachers.
5	Field observations	To be trained integrally, students must develop self-regulation and adapt to the demands, needs to insert themselves in the labor market.
6	Patterns of Adaptive Learning Scales (PALS)	According to the study, boys are more skilled at developing emotional competencies, while girls develop self-regulation strategies to generate meaningful learning.
7	Documentary Guide	Cognitive mediation is an important resource for students' progress in the process of autonomy, metacognition, and self-regulated learning as new ways of learning.
8	Group Work Dynamics Questionnaire	Learning style did not have an impact on students' final grade, but self-regulation did have an impact on it.
9	Field observations, focus groups	The development of skills for self-regulation and autonomy requires self-discovery by learners of their own training needs.
10	Documentary Guide	It provides a proposal to develop methodological, cognitive and academic habits for the application of autonomous work.

11	Classroom observations, field notebook and semi-structured interviews	The assembly method, the creation and conception of projects and group work foster autonomy in learning, through decision-making and reflection.
12	Documentary Guide	Compilation of research advances on the need to adapt measures of autonomous learning in students.
13	Focus groups, video recordings	It was shown that the sequential process that takes place with MAES© helps students´ reflection from the beginning, making them responsible for their own learning.
14	Self-Regulation Questionnaire	The average self-regulation of qualified participants was 69% and there was an average score of 5.66 on a 7-point scale on self-learning ability.
15	AAR Inventory with Technology	Students should make use of digital technologies to self-regulate their learning.
16	Questionnaires and video recordings	Self-learning allows to improve the processes of reflection and develops leadership actions.
17	Questionnaire on Self-Employment Strategies.	There is a relationship between the student's motivations for enrolling in college and the development of autonomous learning strategies.
18	Questionnaire on Self-Employment Strategies, CETA	The use of active, autonomous and self-regulated participation strategies helps students in the understanding and assimilation of cognitive level.
19	Focus groups, video recordings	By developing complementary activities, students improve their autonomous learning to elaborate mathematical procedures.
20	Documentary Guide	Curricular designs taking into account the students´ context help the development of their autonomy and metacognitive skills.

21	It doesn't count	In this new conception, autonomous learning ceases to be an observable behavior to be resignified in processes of modification and transformation as an autonomous and competent model.
22	Documentary Guide	The evolution of the concept of autonomous learning over time, characteristics attributable to autonomous students and viable strategies for their promotion were explained.
23	Documentary Guide	A collection of proven strategies was carried out to improve self-regulation skills in students at different levels of education
25	Log analysis Ethnographic data observation	It will depend on the type of mediation offered by the teachers who reveal pedagogical practices to favor autonomy in students.

Discussion

The study aimed to analyze the progress of scientific production on autonomous learning in the educational context during the period 2017 to 2020; for this purpose, the systematic review of different indexed articles was carried out. The scientific literature reviewed corresponds to databases (Table 1).

Table 11 As a result, 9 scientific articles about autonomous learning were obtained from Scopus; an advanced search was achieved, obtaining 144 articles from EBSCO database; 14 articles were obtained from Academic One File database; and, finally, 834 articles were found in ProQuest. In this regard points out that it is necessary to have knowledge of search criteria, supported by Boolean operators; in addition, the prism flowchart was used to carry out selection processes (Figure 1), which served as a guiding instrument in the systematic review in order to take the right aspects into consideration when making decisions. Regarding conceptualization, it was determined that from the 25 authors consulted, it is feasible to affirm that autonomous learning refers to the degree of students intervention in the establishment of their objectives, procedures, resources, evaluation and learning moments [47].

In addition, it is a process that stimulates students to be the authors of their own development and build their knowledge [48]. It is worth mentioning that autonomous learning is the effective conduit for acquiring and developing skills that lead to the development of competences; on this account, the apprentice must take his(her) own initiatives [49]. It should also be mentioned that university students have deficiencies in autonomy and independence because in their period of basic and secondary education, they did not learn strategies that help them in their cognitive scaffolding [50]. Therefore, students can exercise their autonomous behaviors to a lesser or greater extent due to the influence of external factors, such as the norms established by teachers or institutions [51]. Self-learning is achieved through the development of skills and responsibilities as a means to potentiate learning and skills [52]; also autonomy, as the capacity for self-determination in their practice of everyday life.

In relation to the analysis of the population, type and design of the articles Table 3, the research that has been carried out is of a qualitative and quantitative nature, non-experimental design and cross-sectional because authors did not make changes or experiments in their studies and collected the information at a given time, considering the teachers themselves and also the students, who are the source of the information, as the study population. Investigations of a non-experimental approach collect data without making alterations in the

research process [53,54]. Various instruments were used (Table 4): surveys, questionnaires of autonomous work strategies, focus groups as instruments to assess the level of competence of autonomous learning

In Table 4, the authors believe that autonomy requires self-discovery by learners and their own training

[55] Aimed at measuring the opinion and level of satisfaction of the respondents. Questionnaires collect relevant information to obtain a result that attributes to different aspects [56-61]; in this way it is relevant not only for its theoretical approach but it is feasible in the operationalization of the items as a source of analysis of results.

Conclusion

The search of the scientific literature was carried out in 4 databases, making combinations of two or more terms using boolean operators, in such a way that the largest number of articles on autonomous learning in the educational context could be obtained. Using the prism diagram, the different articles found in the databases were filtered, taking into account inclusion and exclusion criteria in order to legitimize the selection processes of the variable under study. The conceptualization of the different investigations led to conclude that autonomous learning in the educational context is a process that allows students to be the protagonists of their own knowledge construction from internal and external factors, which leads to the self-management of their own skills and responsibilities as a resource to potentiate their self-learning. It can be said that the sample of 25 scientific articles had different types of population and research designs; most of them being cross-sectional, quantitative, qualitative experimental and descriptive studies. In the collection of information, questionnaires and documentary guides were used, tools that allowed to produce a large amount of data supported by open, closed dichotomous or closed questions of multiple alternatives; all this in relation to the research variable; in this way the instruments used served as guide to the teacher. As for autonomous learning, it is a priority to consider reflective spaces to be potentiated in regular basic education; teaching practice is strengthened to mediate and self-regulated learning through the design of strategies that lead to identifying strengths and weaknesses are used in different contexts.

Acknowledgements

needs. The current demand for education requires the development of critical, reflective social thinking in future professionals capable of working independently; likewise, the researchers used interviews, documentary guide questionnaires, focus groupsError! Not a valid bookmark self-reference., validated numerical characteristics. Table 4

Conflict Of Interest

The authors state that they had no conflict of interest.

Featured

Due to the learners´ interaction with the social environment, it is important to build new cognitive schemes so that, in conjugation with their environment, they will be able to integrate knowledge and produce new knowledge. Mediator actions also help to strengthen life skills, leaving behind traditional paradigms focused on the memorization of certain contents. And to be successful, unlearning to relearn must be considered facing challenges and new ways of mediating learning, hence the importance of the master tutor, even without connectivity, assuming his role as a companion, guiding the search for the realization and achievement of autonomous competences, articulating programs of different modalities and educational levels should be highlighted.

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Corresponding author: *Yrisela Liset Delgado Hernández, Department of Psychological, Universidad Cesar Vallejo, Chiclayo, Perú*

Email: ydelgadoh@ucvvirtual.edu.pe