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SITUACIONES DE APRENDIZAJE EN EDUCACIÓN PRIMARIA Y SECUNDARIA

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LEARNING SITUATIONS IN PRIMARY AND SECONDARY SCHOOL

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Abstract

The scientific literature highlights that learning situations is not a new concept, since this expression, of a didactic nature, has been linked to the approach of appropriate contexts that facilitate student learning.

With the intention of delving into the true meaning of the learning situation, this article sets out the following objectives: to carry out an analysis of the scientific literature from the perspective of the psychology of learning and from pedagogy, to determine the cognitive processes that a didactic sequence so that it becomes a learning situation. And, finally, give an example in the area of Social Sciences in Primary Education and Geography and History in Secondary Education.

Keywords: curriculum, programming, cognitive processes, learning situations, Social Sciences and Geography and History.

1. INTRODUCTION

The new curricular design established by the Organic Law 2/2006 of May 3 of Education, modified by the Organic Law 3/2020 of December 29 (LOMLOE) and developed by each of the royal decrees that regulate the different teachings, is based on a series of curricular elements that converge in the design of learning situations. This design requires the determination of certain phases or elements that contribute to organize the didactic proposals of each teacher in the classroom, guaranteeing, in any case, the development of specific competences, within the current regulatory framework.

The objectives of this article are the following: to analyze the scientific literature from the perspective of learning psychology and pedagogy, to determine the cognitive processes that a didactic sequence must develop in order to become a learning situation, and to give an example in the area of Social Sciences in Primary Education and Geography and History in Secondary Education.

2. THEORETICAL BASIS

The concept of "learning situation" has been one of the novelties introduced in the curricular development by the Organic Law 3/2020, of December 29th, which modifies the Organic Law 2/2006, of May 3rd, on Education (LOMLOE). A priori, it might seem that it is a new curricular element, but this expression, of a didactic nature, is linked to the approach of appropriate contexts that facilitate student learning. In this sense, it is a pedagogical perspective intrinsic to the concept of teaching, which recognizes that learning does not only take place in the classroom, but is influenced by other social, cultural, and emotional factors that surround the student in his or her daily environment.

Historically, the context of learning has been a constant concern since antiquity. Philosophers such as Plato and Aristotle already recognized the importance of context in the learning process.

Plato believed that the context of learning was fundamental to the process of knowledge acquisition. He believed that the environment where learning took place should be calm, peaceful, and harmonious, as a disruptive environment was detrimental to the learner and could diminish his or her ability to learn. In addition, he emphasized the importance of interaction between students and teachers (Banchio, 2004).

On the other hand, for Aristotle the context where learning takes place is significant, but it is not a decisive factor. He placed more emphasis on the student's ability and on the role of the teacher to help develop the potentiality of each student (Calvo, 2003).

However, it was in the twentieth century, with the development of the psychological theory of learning and research on Teaching-Learning processes, when the concept of "learning situation" acquires greater importance and becomes a topic of research on pedagogical practice.

Context in learning is part of the framework of psychological theory and has been a key element in pedagogical research and practice throughout history. The scientific literature addresses the context in which learning occurs as a fundamental aspect of knowledge construction in human beings. The most representative author was Vygotsky, who emphasized in his sociocultural theory of learning the importance of the environment and social interaction (Vygotsky, 1978).

The psychologist Jerome Bruner, who proposed the theory of discovery learning, also emphasized the importance of the context and situation of learning, as well as the active role of the learner in his or her own learning process (Bruner y Maldonado, 1980).

On the other hand, Jean Piaget, the father of the theory of cognitive development, who has had a decisive influence on both curriculum development and teaching practice, emphasized the importance of learning situations in the development of intelligence and the construction of knowledge (Piaget, 1985).

Likewise, Ausubel, who developed the theory of meaningful learning, maintains that the context and the situation in which learning takes place are decisive for the student to be able to relate the new knowledge to his or her previous experiences (Ausubel, 1970). This approach is gaining more strength today with recent neuroscientific research on learning, which shows that the more connections are established between the knowledge and the base or previous experience and the knowledge and the new experience, the more meaningful the learning will be (Ruiz, 2020).

John Dewey (1995) recognizes the importance of experiential and situational learning in the Teaching and Learning processes, where the student is actively involved in the learning process through interaction with his environment and reflection on his own experiences.

From the constructivist perspective of learning, according to the proposal of Cesar Coll (2000), the construction of knowledge is an active process that occurs in interaction with the environment, which implies the need to create educational actions aimed at developing students' competencies. In this sense, competence is understood as the ability to mobilize cognitive and emotional resources in the resolution of real-life problems. In this context, the teacher must design learning situations that allow students to explore, investigate, hypothesize, and construct their own knowledge.

Therefore, the context in learning constitutes a central element of study of the most influential authors in the field of education and psychology of learning throughout history. Analyses, studies, and research on the teaching and learning process of students have had and continue to focus on the socio-

cultural contexts where learning takes place. This is formally contemplated in current curricular developments, through which the school is structured.

Current research, such as John Hattie's (2008) macro study on learning, considers as a fundamental parameter the factors that define effective teaching, understood as teaching that helps students to develop their full potential (Hattie, 2008).

The results yield important conclusions about the factors that influence student learning. Some of these learning evidences point to the importance of creating learning situations that encourage feedback, direct teaching, decision making, metacognition, collaborative work and the activation of essential cognitive processes such as comprehension, application, analysis and evaluation in order to achieve effective learning (Hattie, 2008).

Recent research on the implications for school and classroom practices of an emerging consensus on the science of learning and development addresses the importance of creating learning environments that promote the holistic development of students (Osher et al., 2020). The various studies are conclusive, stating that learning is a complex process that not only involves the acquisition of knowledge and skills, but also the socioemotional development and the physical and mental well-being of the student.

Along the same lines, Gay (2018) and Alam (2022) propose the creation of learning environments that address these dimensions in a comprehensive manner. Among the recommended strategies, they highlight the importance of designing inclusive learning environments that respect diversity, take into account the needs and characteristics of each student, encourage autonomy, collaboration and active participation of students, their responsibility in the learning process and promote a climate of trust and mutual respect.

Another theory that we would like to highlight because of its interest is that of Krummheuer (2011), which he calls "situated learning and activity theory". He argues that situated learning is a pedagogical approach that is based on the

notion that learning occurs in concrete situations and in relation to the context in which it occurs. The author explains that this theory that learning must be contextualized and related to the learner's previous experience, an aspect that, as we have already pointed out, was proposed by Ausubel and is proposed by current neuroscience.

In addition, Krummheuer states that situated learning theory is closely related to activity theory, which holds that learning is a social activity and that it is closely related to practice and the cognitive processes it mobilizes. Both theories complement each other and can help improve the design and implementation of classroom teaching.

Considering the above, teachers should create environments in which students feel motivated to learn, and design learning situations appropriate to the level and experience of the students, as well as to their needs and learning objectives.

Given the opportunity offered by the LOMLOE to rethink the educational system and to consider the what, how and why of the education demanded by today's society, we agree with Román and Muñoz (2022). We believe that we should replace "the" with "for" and speak of "situations for learning" in the sense used by Luengo and Moya (2022).

If we analyze this change syntactically, in "learning situation", also "situation of learning", "of learning" would be a complement of the noun (situation), as if the fact of learning complemented the situation in which it takes place. However, in "situation for learning", "for learning" becomes a circumstantial complement of purpose. Learning does not complement the context; it is the context that is designed for learning to take place. A process that facilitates the development and activation of different cognitive processes.

3. NORMATIVE BASIS

The LOMLOE establishes the need to provide students with an education that allows them to develop their abilities and skills to achieve the established

educational objectives and competencies, through active and participatory methodologies that foster creativity, critical thinking and problem solving.

In this sense, the royal decrees that establish the organization of the teachings of the different educational stages introduce "learning situations" as a new element within the concept of curriculum. Thus, in the Royal Decree 95/2022, of February 1, on Early Childhood Education, it defines the learning situation as: situations and activities that involve the deployment by the students of actions associated with key competences and specific competences, and that contribute to the acquisition and development of the same.

And it specifies that learning situations must pose a challenge or problem of certain complexity depending on the age and development of the child, whose creative resolution involves the integrated mobilization of what has been learned in the three areas in which the stage is organized, from the realization of different tasks and activities.

The same line is contemplated in Royal Decree 157/2022, of March 2, which establishes the organization and minimum teachings of the primary education stages, since it states that learning situations represent an effective tool to integrate the curricular elements of the different areas, through meaningful and relevant tasks and activities to solve problems in a creative and cooperative way, reinforcing self-esteem, autonomy, reflection and responsibility. The aim is to offer students the opportunity to connect their learning and apply it in contexts close to their daily lives, favoring their commitment to learning in each curricular area.

The Royal Decree 217/2022, of March 29, which establishes the minimum teachings for Secondary Education, indicates that the characteristics of the learning situations designed by teachers must be based on a clear objective, be connected to reality and invite students to reflect and collaborate in order to

achieve the educational objectives of the stage in an integrated manner and continue the development of key competences.

In short, the basic curricular developments consider learning situations as a key methodological tool for the integral development of students. They must be carefully and systematically designed to achieve the objectives and specific competencies of each area/subject.

Given that the curriculum is the responsibility of the educational administrations, it is worthwhile to briefly consider the treatment they have given to learning situations.

The normative development of the different administrations follows the line drawn in the basic royal decrees and regulates in their articles the definition and characteristics of learning situations. However, it is necessary to underline that, in some autonomous communities, the curricular development norms have added annexes with guidelines linked to the epistemology of the areas and subjects, as is the case of Aragón (ECD/1112 of 2022, and Order ECD/1172 of 2022), Comunidad Valenciana (Decree 106 of 2022 and Decree 107 of 2022), Galicia (Decree 155 of 2022, and Decree 156 of 2022) and Comunidad de Madrid (Decree 61 of 2022 and Decree 65 of 2022).

The guidelines for the design of learning situations, formulated in the regulations of the different educational administrations, are related to the pedagogical theories mentioned in this article. On the one hand, they maintain that learning is a social activity that is closely related to practice and to the cognitive processes it mobilizes. On the other hand, it requires collaborative learning environments and the mobilization of previous knowledge to assimilate new learning.

4. FROM BOTTOM TO TOP

The conclusions set out in the first point focus on cognitive processes. These processes, identified by Hattie (2008), correspond to the higher levels of Bloom's pyramid, such as application, analysis, synthesis, creation, and evaluation. However, Hattie has also emphasized the importance of lower-level cognitive processes such as retrieval and comprehension as the basis for effective learning and application at higher levels.

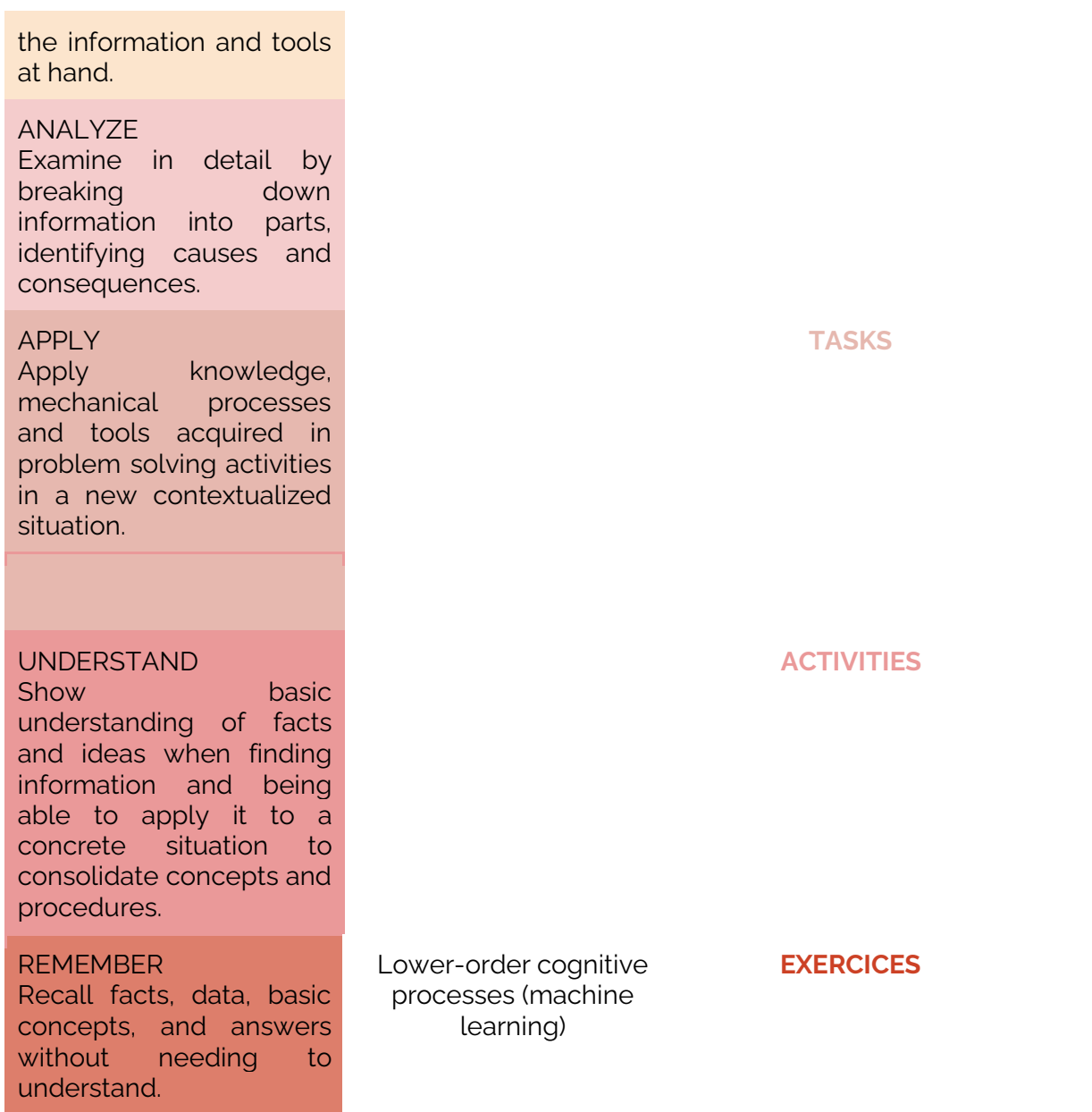
That is, without lower-order cognitive actions, higher-order cognitive actions cannot be constructed. In other words, we would be looking for student skills and aptitudes that require complex cognitive mechanisms without having given them the tools to access that cognitive level. The result of this construction of learning without foundations is frustration and often school failure, which affects both students and teachers.

The didactic sequence in which the cognitive progression from lower order mechanisms to higher order mechanisms takes place is based on: exercises, activities, tasks and learning situations.

The following is Bloom's Taxonomy and its parallelism with the cognitive processes of the didactic sequence, which begins with lower order cognitive processes (exercises, activities) and ends with higher order cognitive processes (tasks and learning situations).

Table 2: Cognitive processes.

<p>CREATE Change or create something new in a model or propose alternative solutions to a contextualized problem.</p>	<p>Higher-order cognitive processes (meaningful learning)</p>	<p>LEARNING SITUATIONS</p>
<p>EVALUATE Justify, present and defend opinions by making judgments about</p>		



Own elaboration. Taking Bloom's Taxonomy (left) as a reference, from lower order thinking (base) to higher order thinking (top) compared to cognitive actions from exercises to learning situations.

5. DESIGN OF A LEARNING SITUATION

Thus, with all that has been explained in the previous points, it can be seen that learning situations are the head of the arrow, the end of the didactic sequence in which they are framed.

Therefore, learning situations will not necessarily be developed in all the didactic units, which can also be called learning units, for the simple fact that not all of them will work on higher cognitive processes. But we will have to frame all the learning situations in a didactic sequence, since the simple fact of carrying them out implies the cognitive path from the lower processes to the higher processes.

The following is a didactic sequence that allows us to order the didactic and methodological strategies in our learning units.

Table 1: Exercises, activities, tasks and learning situations.

EXERCISES	ACTIVITIES	TASKS	LEARNING SITUATIONS
Repetitive, mechanical, and procedural exercises. They are the basis for activities.	Didactic proposal that proposes situations of experience and experimentation of facts and behaviors. They are oriented to the use of some knowledge or the acquisition of a new one, the mastery of a skill or a procedure and/or understanding of concepts. They are important to consolidate concepts	Use of the tools trained in the exercises and activities for analysis, reflection and problem solving in a specific context.	Contextualized activities in which it is necessary to interact, dialogue, plan, select and make reasoned decisions.

	and procedures.		
Example: realization of the chronological axis of the History of Teruel.	Example: look for information about the medieval monuments of the city of Teruel and put them in relation to the chronological axis of the history of the city.	Example: planning a tourist route visiting the most significant medieval monuments of Teruel.	Example: trip to the center of Teruel in which the students have to act as tour guides for the teachers.

Source: own elaboration.

6. PRACTICAL EXAMPLES OF LEARNING SITUATIONS

For a didactic sequence to become a learning situation, these two points must be given (Sabuco, 2021); (López, 2022):

a) Propose an experience based on the following aspects:

- Experiences based on specific competencies and in close contexts to achieve useful and meaningful learning.
- Challenging and motivating challenges to achieve cognitive, emotional, and psychomotor development.
- Diverse and appropriate methodologies are used to achieve a good classroom climate. Diversity of resources and groupings, as well as attention to diversity are essential aspects to consider.
- They demonstrate the achievement of the evaluation criteria with diverse evaluation and grading instruments.

b) Starting from the evaluation criteria and specific competencies to work, through basic knowledge, on key competencies with a view to the exit profile.

Example: Social Science, 5th Grade Primary Education.

TITLE: GUIDED VISIT TO THE CENTER OF TERUEL		
JUSTIFICATION Learning situation designed for the didactic unit 1 of the subject of Social Sciences of 5th grade of Primary Education: Our city.		
CONTEXTUALIZATION Final part of the didactic unit 1 in which the city, its functions and the human and natural resources of the urban space will have been worked on.	RELATIONSHIP WITH THE ODS 11. Sustainable cities and communities 15. Peace, justice, and strong institutions.	RESOURCES, SPACES, ADAPTATIONS AND MEASURES FOR INCLUSION - Resources: megaphone. - Space: Teruel center. - Inclusion measures: individual accompaniment of immigrant students who have recently joined the center.
CURRICULAR CONCRETION		
SPECIFIC COMPETENCE To identify the characteristics of the	EVALUATION CRITERIA 1.1. Identify the characteristics,	BASIC KNOWLEDGE Guided exploration and

<p>different elements or systems of the social and cultural environment, analyzing their organization and properties, and establishing relationships among them, in order to recognize the value of cultural heritage, preserve it, improve it and take actions for a responsible use.</p>	<p>organization, and properties of the elements of the social and cultural environment through the observation of the environment using the appropriate tools and processes in a guided manner.</p> <p>1.3. Value and show attitudes of conservation of cultural heritage (tangible and intangible) through proposals and actions that reflect commitments and behaviors in favor of sustainability.</p>	<p>observation of the physical and social environment, with special interest in the heritage, landscape, and organization of the locality.</p>			
<p>INTERDISCIPLINARITY</p> <p>Learning situation to be approached in an interdisciplinary way with Spanish Language and Plastic, Visual and Audiovisual Education.</p>					
<p>DIDACTIC SEQUENCE</p>					
PHASE	TASK	ACTIVITY	EVIDENCE OF LEARNING	METHODOLOGY	SESSION
Start	<p>Motivation. Context. Prior knowledge.</p>	<p>a) Traffic light dynamics. b) Cut-out</p>	Mock-up of the city.	ABP por grupos cooperativos	3 sessions

		model of the city of Teruel.			
Development	Research and information gathering. Knowledge structuring Knowledge consolidation.	Research three monuments. Prepare a tourist brochure. Guided visit carried out by the students.	Tourist brochure of three monuments that will be explained during the excursion to the center of Teruel.	PBA by cooperative groups.	3 sessions
Closing	Synthesis Reflection	Making a Kahoot. Compilation of individual experiences.	Kahoot statistics Cloud of concepts in mentimeter.com	Gamified individual test. Individual test.	1 session
EVALUATION					
EVALUATION CRITERIA			EVALUATION INSTRUMENT		
1.1. Identify the characteristics, organization, and properties of the elements of the social and cultural environment through the observation of			Model of the city of Teruel, graded with a checklist.		

the environment using the appropriate tools and processes in a patterned way.					
1.3. Value and show attitudes of conservation of cultural heritage (tangible and intangible) through proposals and actions that reflect commitments and behaviors in favor of sustainability.		Students' own guided visit to the center of Teruel, graded with a rubric.			
FAIL	PASS	GOOD	NOT	NOT+	EX
Interrupts the normal development of the activity. Failure to deliver the tourist brochure.	Delivery of the model and the brochure of the guided tour, but incomplete	The model and the brochure are delivered, but the presentation is not taken care of.	Deliver the model and brochure, take care of the presentation and staging.	Deliver the model and the brochure with good presentation and take care of the staging of the guided tour.	Hand in the required evidences and learn the contents so as not to read them during the guided tour.

Example: Geography and History, 1st year Secondary Education.

TITLE: DEBATE IS TERUEL A SUSTAINABLE CITY?		
JUSTIFICATION Learning situation designed for the didactic unit 1 of the subject Geography and History of the 1st year of Secondary Education: Our little blue planet.		
CONTEXTUALIZATION	RELATION TO THE ODS	RESOURCES, SPACES, ADAPTATIONS AND MEASURES

<p>Final part of the didactic unit 1 in which our planet Earth will have been worked from an approach of sustainability of human actions in the environment.</p>	<p>11 Sustainable cities and communities.</p> <p>12 Responsible production and consumption.</p> <p>15 Peace, justice, and strong institutions.</p>	<p>FOR INCLUSION</p> <ul style="list-style-type: none"> - Space: discussion room (pine forest). - Inclusion measures: moderation of speaking turns to encourage the participation of all members.
<p>CURRICULAR CONCRETION</p>		
<p>SPECIFIC COMPETENCE</p> <p>To use digital devices and resources in a safe, responsible, and efficient way, to search for information, communicate, work individually, in a team and in a network and create digital content according to the digital needs of the educational context.</p>	<p>EVALUATION CRITERIA</p> <p>1.2. Contrast and argue about topics and events of Prehistory and the Ancient Ages, locating and critically analyzing primary and secondary sources as historical evidence.</p>	<p>BASIC KNOWLEDGE</p> <p>Sustainable Development Goals. The vision of the dilemmas of today's world, a starting point for critical thinking and the development of own judgments.</p>
<p>INTERDISCIPLINARITY</p> <p>Learning situation that is going to be approached in an interdisciplinary way with Spanish Language and English Foreign Language since it is the subject included in the bilingual line of the center.</p>		
<p>DIDACTIC SEQUENCE</p>		

PHASE	TASK	ACTIVITY	EVIDENCE OF LEARNING	METHODOLOGY	SESSION
Start	Motivation. Context. Prior knowledge.	Preparation of a visual presentation on an ODS.	Visual presentation on an ODS.	ABP by cooperative groups.	4 sessions
Development	Research and information gathering. Knowledge structuring Knowledge consolidation.	Research on the problems that the ODS are trying to solve in the specific case of Teruel.	Publication of an entry in the subject's blog with the conclusions.	ABP by cooperative groups.	3 sessions
Closing	Synthesis Reflection	Debate Recopilación de experiencias individuales	Interventions in the debate Cloud of concepts in mentimeter.com	Individual test	1 session
EVALUATION					

EVALUATION CRITERIA			EVALUATION TOOL		
1.2. Contrast and argue about topics and events of Prehistory and the Ancient Ages, locating and critically analyzing primary and secondary sources as historical evidence.			Group discussion, graded with an evaluation rubric.		
FAIL-4	PASS-5	GOOD-6	NOT-7	NOT-8	EX-10
Interrupts the normal development of the activity, does not respect the speaking time or does not participate in the discussion and does not hand in homework.	Turns in homework assignments and participates in discussion but does not state or defend a specific position.	Turns in homework and participates in the debate. States his/her position but does not know how to counter-argue.	Turns in homework and participates in the debate. Exposes his position, counterarguments, but in a not very elaborated way.	Turns in homework and participates in discussion. States his/her position, counterargues, respects the opinions of others if asked to do so.	Turns in homework and participates in discussion. State their position, counterargue, respect the opinions of others and incorporate them into their own learning.

6. CONCLUSIONS

The bibliographic review that we have carried out allows us to confirm that, during all historical stages, the development of different psychological and

pedagogical theories that have studied the what, how and why of the teaching and learning processes has been a constant.

The concern and interest in the way human beings learn has evolved with social changes and neuroscientific discoveries. As a result, it has been necessary to rethink methodologies and learning environments to respond to the needs of students.

Today, it is necessary to rethink education and move towards a truly inclusive school, which considers the individualization of learning and diversity as the essence of teaching processes. The principles of Universal Learning Design provide us with the answer to these new ways of teaching demanded by students.

The Education Inspectorate, in the exercise of its functions, must inform schools of the regulatory changes, advise teaching teams on all pedagogical aspects and educational innovation implicit in the new curricular regulations. Likewise, it must also supervise its actual application in the classroom.

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