Revista Iberoamericana para la Investigación y el Desarrollo Educativo
ISSN 2007 - 7467

https://doi.org/10.23913/ride.v15i30.2240

Essays

Los saberes significativos: La secante de la enseñanza y del aprendizaje en la educación

Significant knowledge: The secant of teaching and learning in education

Conhecimento significativo: A intersecção entre ensino e aprendizagem na educação

Enyth Fadira Burbano Palacios
Universidad Internacional del Ecuador, Ecuador
enyth_burbano@yahoo.com
https://orcid.org/0009-0004-5751-6662

Resumen

La educación actual enfrenta numerosos desafíos, lo que exige una reflexión crítica para transformarla y adaptarla a las formas de aprendizaje de las nuevas generaciones. Las estrategias de enseñanza tradicionales están lejos de alcanzar este objetivo. La brecha entre los saberes recibidos en años anteriores con los que se tienen hoy en día a disposición en varios formatos y espacios, es muy evidente. Los docentes aprendimos bajo una realidad y contexto que difiere a la manera en la que las actuales generaciones absorben conocimiento. El objetivo del presente ensayo es generar una crítica constructiva de la misión de la educación en pleno siglo XXI, haciendo una analogía entre el círculo y la circunferencia, que, en un contexto metafórico, ilustra el contraste entre los modelos educativos tradicionales y la construcción dinámica del conocimiento, siendo el círculo el limitante de la transferencia de conocimientos y la circunferencia la catalizadora de la apropiación, transformación y construcción de saberes. Esta mutación da lugar a la ruptura del arco que encierra al círculo, que lo contiene y por tanto a los constructos que cada individuo va generando en su propio proceso de aprendizaje. Esta ruptura favorece a la transmisión de lo aprendido por medio de la secante que atraviesa dicho círculo, haciendo que la enseñanza valiosa y relevante perdure y trascienda en aprendizajes significativos.

Palabras clave: enseñanza, aprendizaje, conocimiento, enseñanza comprensiva, aprendizaje significativo, educación.

Abstract

Education faces numerous challenges, demanding critical reflection to transform and adapt it to the learning methods of new generations. Traditional teaching strategies are far from this goal. The gap between past knowledge and today's accessible resources in diverse formats and spaces is evident. We teachers learned under a reality and context that differs from the way in which current generations absorb knowledge. The objective of this essay is to generate a constructive criticism of the mission of education in the 21st century, which, in a metaphorical context, illustrates the contrast between traditional educational models and the dynamic construction of knowledge, the circle being the limiting factor in the transfer of knowledge and the circumference the catalyst for the appropriation, transformation and construction of knowledge. This mutation gives rise to the rupture of the arc that encloses the circle, which contains it and therefore the constructs that everyone generates in their own learning process. This rupture favors the transmission of what has been learned through the secant that crosses said circle, making valuable and relevant teaching last and transcend into significant learning.

Keywords: teaching, learning, knowledge, comprehensive teaching, significant learning, education.

Resumo

A educação atual enfrenta inúmeros desafios, que exigem reflexão crítica para transformá-la e adaptá-la aos métodos de aprendizagem das novas gerações. As estratégias tradicionais de ensino estão longe de atingir esse objetivo. A lacuna entre o conhecimento recebido nos anos anteriores e o que está disponível hoje em diversos formatos e espaços é muito evidente. Nós, professores, aprendemos em uma realidade e contexto diferentes da forma como as gerações atuais absorvem conhecimento. O objetivo deste ensaio é gerar uma crítica construtiva à missão da educação no século XXI, fazendo uma analogia entre o círculo e a circunferência, que, em um contexto metafórico, ilustra o contraste entre os modelos educacionais tradicionais e a construção dinâmica da conhecimento, sendo o círculo o limitador da transferência do conhecimento e a circunferência o catalisador da apropriação, transformação e construção do conhecimento. Essa mutação resulta na quebra do arco que encerra o círculo, que o

contém e, portanto, as construções que cada indivíduo gera em seu próprio processo de aprendizagem. Essa ruptura favorece a transmissão do aprendido através da secante que atravessa esse círculo, fazendo com que o ensinamento valioso e relevante perdure e se transforme em aprendizagem significativa.

Palavras-chave: ensino, aprendizagem, conhecimento, ensino abrangente, aprendizagem significativa, educação.

Reception Date: April 2024 **Acceptance Date:** January 2025

Introduction

This work addresses the problem of teaching practices that are insufficient or irrelevant for students. The way in which new generations learn differs significantly from how teachers learned, creating a gap that restricts education. The text incorporates contributions from prominent authors in the pedagogical field, such as Antelo Estanislao, Félix Temporetti , Silvina Gvirtz, Carina Rattero , Edith Litwin , Mariana Maggio , among others.

Throughout the essay, an analogy between the circle and the circumference is used to analyze education. First, the concept of school is described as a space limited by a logic of confinement, represented by the circle. Then, the essay reflects on the prior knowledge that individuals internalize from childhood and the social environment, as well as that knowledge that is not transformed or lacks practical use. Limitations of current education are raised and questions are raised about the role of the teacher and the training schemes affected by the changing dynamics of the educational environment.

Finally, strategies are explored to impact the student through relevant content that gives meaning to the educational process. The role of the teacher as a transmitter of knowledge that permeates, permeates and endures is analyzed. Thus, what is taught is fundamental, but equally important is how it is taught and how the student is prepared to be nurtured and guided. This process transforms knowledge, transcends it, and takes it from the circle to the circumference.

Classroom education: the circle

The concept of school as we know it today arises from the need to bring children and adolescents together in a safe space where they can be protected from external threats and where the transmission and construction of knowledge can be encouraged (Pineau, Serra, & Southwell, 2018). This logic of confinement is aimed at providing knowledge to

those who need to be instructed in order to overcome ignorance, incompetence and lack of knowledge.

Within this isolationist approach, criteria, perceptions and opinions are forged; interests and ways of life are shared; and distinctive cultural and behavioral practices are developed , which far from representing a neutral educational perspective, respond to political, religious or economic interests that influence what is taught and how it is taught (Temporetti, 2008). Thus, the school fulfills a colonizing function by imposing doctrines accepted by a given educational system (Pineau, 2001).

The metaphor of the circle helps to understand these limitations. As a flat figure contained by a closed curve (Repetto, Linskens, & Fesquet, 1960), it represents an education isolated from the student's reality, which reproduces ancient teachings without adapting to the current social context, and which, enclosed within the four walls of the classroom, becomes uniform and flat. This homogeneity accentuates inequalities by ignoring the historical differences that arise from the social context of each student (Rattero , 2021).

Educational needs have changed rapidly with the development of the knowledge society and the information society since the third industrial revolution and, more recently, with the fourth industrial revolution related to the digital era and connectivity. These transformations question traditional teachings, since the knowledge acquired a decade ago may be obsolete for the new generations. In this context, innovative educational practices are required that respond to these demands, as proposed by Gvirtz, Grinberg and Abregú (2011) with their concept of “productive educational practices”.

How can we meet these challenges and offer relevant teaching for today's students? To respond, it is essential to understand how students learn, what media and modalities they use, and what the role of the teacher should be in this changing scenario.

Prior knowledge: radius and diameter

From childhood, humans begin their learning process through imitation, developing skills such as speaking, moving, walking and expressing desires, all facilitated by language. During this stage, adults play a fundamental role, as they teach the “human puppy” called by Estanislao (2005)how to express needs and satisfy them.

Mirror neurons allow children to assimilate information from their environment, send it to the brain, and replicate what they see or hear. These neurons are key to the development of empathy, allowing them to understand and share other people's emotions, and even experience pain perceived in another person (Rizzolatti & Sinigaglia, 2006).

As children grow, they receive information not only from adults, but also from their peers, whether in nurseries, preschools or family circles. Through play, the main means of learning, they develop social, emotional and intellectual skills (Vosniadou, 2000). In addition, these spaces of interaction satisfy the human need for affiliation, as explained by Maslow (1991)and McClelland , (1968)by providing acceptance and belonging.

In adolescence, the social circle becomes more important as a source of knowledge. From the age of 13, young people tend to question the authority of their parents and seek information from other figures, such as friends or mentors (UNICEF, 2021). This is due, in part, to a neurophysiological change that reduces sensitivity to the voice of parents (Abrams et al., 2022), increasing their openness to new sources of learning.

Metaphorically, prior knowledge is similar to the radius and diameter that form part of the internal geometry of the circle and help to describe its size and properties (Repetto, Linskens, & Fesquet, 1960). Thus, knowledge acquired at an early age and in adolescence is the basis that connects the individual with his environment and constitutes essential elements of his personal development. This knowledge forms an integral part of the subject, shaping his personality, his relationships and his attitude towards life. From this perspective, education nourishes and guides this knowledge, enabling the development of the human being to his full potential (Lesteime, 2021).

However, what happens when teaching ignores prior knowledge, lacks relevance, does not last and does not contribute to the construction of new significant knowledge?

Knowledge that is not used: the rope

The school curriculum includes content designed to meet academic needs under the supervision of the educational system. However, many of these topics can be irrelevant to students as they are disconnected from their reality. In its effort to offer a promising and inclusive program, the school system seeks to homogenize the content to facilitate its control (Pineau, 2001). This approach, however, ignores the differences between those who teach and those who learn, offering insignificant and impractical knowledge to the student community.

Homogenization leads to evaluating students solely with grades and scores, wrongly classifying them as successful or unsuccessful based on a superficial academic average. This approach values temporary assimilation and standardizes academic excellence under a limited prism (Rattero, 2002). Many of us have gone through school

classrooms obtaining outstanding grades, but upon reaching adulthood, we retain little or nothing of the curriculum, except for a few lessons that have really made an impact.

Returning to the analogy of the circle, the string, which is the distance between two points without passing through the center (Repetto, Linskens, & Fesquet, 1960), represents content that, although it exists, does not touch the center of the student's knowledge, nor is it aligned with his or her prior beliefs and knowledge. It is knowledge that does not transform or anchor itself, resulting in inconsequential, trivial and superfluous. Often, it is present as a meaningless knot or ends up disappearing, like a rope forgotten in an attic.

How much time do schools, teachers and students waste on irrelevant content that does not contribute to meaningful learning? How many curricula follow patterns imposed by systems that ignore students' individual and social differences? And, most alarmingly, how many students, upon successfully completing their formal education, face a reality check when they discover that what they have learned has no application in their lives?

Educational limitations: the arc

One of the main problems affecting the school system today is the tendency to homogenize curricular content, as it limits the diversity of students' interests and abilities, as well as the creativity of teachers (Litwin, 1998). This trend makes it difficult to personalize the educational process, especially when combined with deficiencies in infrastructure: overcrowded classrooms, lack of access to technology and a shortage of teaching materials.

The universalization of content reflects a traditional teaching focused on the unilateral transmission of information, without promoting the active participation of students or the development of critical thinking (Antelo, 2011). This approach reduces students to passive recipients of information, limiting their ability to solve problems and generate creativity. In addition, excessive bureaucracy and regulation in the educational system restricts the autonomy of teachers, preventing innovations that respond to the changing needs of society.

Rattero (2002)points out that the normalizing demands of educational institutions hinder spontaneous and lasting learning. This system emphasizes the acquisition of knowledge to avoid failure, which stigmatizes those who do not meet the established standards. As a result, an evaluative culture is generated that reinforces exclusion and marginality, turning education into a privilege conditioned to the student's merit and ability (Temporetti, 2008). This approach also causes anxiety and excessive competition,

diverting attention from meaningful learning and devaluing other relevant aspects of learning, such as reflection, oral and written expression, and collaborative work (Gvirtz, Grinberg, & Abregú, 2009).

The traditional conception of school as a natural phenomenon, rather than a historical construction, ignores the need to adapt educational programs to the social context and reality of students (Pineau, 2001). Why do we continue to promote " comenic " teaching in which the student occupies a passive role, physically controlled in a classroom, while the teacher acts as a unilateral transmitter of information? Although this model was successful in the past, are teachers prepared to face a social context radically different from the one that formed them?

A good teacher, and by extension, good teaching, is based not only on mastery and expertise in the disciplinary field that he or she addresses, but on channeling teaching practices towards reflective and critical thinking, reasoning and student involvement in the management of relevant and significant content (Litwin, 1998). However, the lack of adequate pedagogical training is a significant limitation to improving educational quality; an excellent professional cannot always be a good pedagogue (Lesteime, 2019). This is especially critical in a context where pedagogical and technological tools are needed to meet the needs of increasingly diverse and dynamic generations.

Just as the arc delimits the space between the center and the edge of the circle (Repetto, Linskens, & Fesquet, 1960), these limitations restrict the student's development, preventing them from acquiring new knowledge. What happens outside the circle, outside this traditional school that perpetuates the belief that teaching always implies learning? Is school the only valid space for the construction of knowledge? How can we break with this model and build an educational system that truly responds to the demands of the present?

Education outside the perimeter: the circumference

The new generations have transformed the established order of teaching and learning, understanding that both are interrelated but distinct processes (Litwin, 1997). This change demands productive educational practices that respond to the demands of a constantly evolving world (Gvirtz, Grinberg, & Abregú, 2011). Learning occurs both inside and outside of school; one learns from the teacher, but also from peers, influencers , YouTubers and virtual communities. Education cannot be limited to incorporating technological tools or online tutoring; it must open up to a new conception in which the teacher does not limit himself to transmitting knowledge, assuming that students arrive

empty-handed. It is imperative to adapt to a more horizontal, decentralized and modern educational system, which values students' prior knowledge and critical perspectives.

Today, motivation and learning represent a critical challenge for the educational community. Technology has been present since childhood, along with new forms of communication and social interaction. A teacher who is unaware of these realities or does not integrate them into his or her practice will have difficulty connecting with his or her students. In addition, the job and social instability experienced by the new generations influences their conception of work and education (Daura & Barni, 2016). Generational differences between teachers and students have grown, creating a disconnect: students are unable to apply what they have learned to their reality, and teachers do not understand the technological language of their students. This separation shows that knowledge is no longer the monopoly of the teacher, since students have access to multiple sources of information.

Can the student teach the teacher? And most importantly, is the teacher willing to learn from his or her students?

The connection between teachers and students requires a meeting point where both can understand each other. This implies overcoming the limitations of the traditional model, breaking the arc that confines learning and reducing generational gaps. Adapting to this reality, which will become even more complex in the future, is an urgent task for the educational system. The metaphor of the circumference illustrates this challenge: a wider and more dynamic space that transcends the limitations of the circle, inviting an education that integrates diversity and fosters meaningful learning.

From the circle to the circumference: crossing the arc

This text has explained how traditional education limits students to passive participation, preventing the appropriation of knowledge and the construction of knowledge. Understanding the complexity of the subject, their environment and their prior knowledge is essential to establish a harmonious link between educator and student that facilitates the teaching and learning process (Lesteime, 2019). Crossing the arc means changing perspective: looking beyond the circle, towards the circumference. Recognizing that the student accesses information from multiple sources and that the teacher is no longer their only main guide.

The role of the teacher is to ensure that the knowledge transmitted becomes meaningful and lasting knowledge (Maggio, 2018). It is not about learning that barely touches the circumference, drawing a tangent that does not penetrate or transform, but

about teachings that remain, transform and generate memorable moments (Litwin, 2012). These teachings transcend the limitations of the arc, bringing the teacher and the student closer to an authentic and deep connection.

As Rancière (2003, p. 8) points out, "The explainer is the one who creates and eliminates the distance, who unfolds it and reabsorbs it within his word." The educational act is therefore a mutual transformation: teacher and student grow, become and become linked in a bidirectional process that goes beyond the unidirectional transmission of information. To do so, there must be an intentional desire to teach (Estanislao, 2010)and, at the same time, a voluntary disposition to learn (Lesteime, 2021). When this does not happen, knowledge becomes the tangent, that straight line that coincides at a point on the circumference, but does not cross it, reaches it, but does not penetrate it, reaches it, but does not transform. The intention to teach is there, but the will to want to be transformed is not. As Meirieu (2008, p. 50) mentions, "no one can learn in place of another, and all learning supposes an irreducible personal decision of the student."

What can be done to make learning cross the circle? How can we foster memorable and meaningful learning? How can we reconcile the differences between generations in the classroom? These questions invite us to reflect on the future of education and to seek strategies that preserve the desire to teach and mobilize the desire to learn.

Powerful teaching and meaningful learning: the secant of the circle

Teaching and learning converge when teacher and student generate meaningful and relevant content for the learner (Temporetti, 2008). Just as the secant cuts the circle in two points (Repetto, Linskens, & Fesquet, 1960), powerful teaching and meaningful learning interrelate and merge through a "pedagogical link" (Estanislao, 2010, p. 3). This link allows the learner to appropriate knowledge, transforming it into their own knowledge: "…transmitting is also leaving space for the other to do something else with our knowledge and our desire to educate them, so that they are someone else, and not oneself" (Caruso & Dussel, 2006, p. 13).

The teaching model must evolve from the traditional triangle (teacher, student, content) to a scheme that integrates the problem and the context (Gvirtz & Palamidessi, 2006). Teaching must be adapted to the environment and the context, using updated resources and strategies (Camilloni, 2016). For example, the implementation of problem-based learning (PBL) can connect content with real situations, promoting critical reflection and active participation of students.

To achieve this, we must reflect: What do we want students to learn? How do we involve them in their learning? What else do they learn, besides what we try to teach? Broadening our view, looking from the perspective of others (Maggio, 2018)is essential to understand their reality and design relevant and original content that connects with the student's present and context (Litwin, 2012).

Just as the teacher seeks to transmit knowledge, the student is predisposed to learn and generate new constructs, but not only from what has been intended. There are teachings that last because they were memorable, because they were original, because they occurred in a specific time and space, because they were magical (Rodríguez, 2004), not because the subject was interesting, but because it became interesting, because of the way of the story, the tone of the dialogue, the captivating anecdote. These teachings transform because they permeate and connect, generating a lasting impact on the student. As Estanislao points out (2010), powerful teaching not only influences the growth of others, but also gives them the tools to create something of their own with what they have learned.

What can we do to forge straight lines in education? We need to generate a new scheme that makes the educational system more flexible, as an influential actor, capable of inspiring and guiding students in the construction of new knowledge, more complete and significant, that is replicable and applicable in their lives and environment. We need teachers who understand the importance of their role in student learning, who continue to train themselves with the desire to adapt to the new needs of current and future generations, who have the freedom to innovate, propose and create. This implies embracing new technologies, fostering innovative pedagogical strategies and promoting a culture of continuous learning among teachers and students.

Conclusions

Education faces various limitations that affect teaching and learning, requiring critical reflection to improve the educational system. These limitations include homogeneity of content, the standardizing structure , lack of resources, poor infrastructure, the digital divide, socioeconomic and cultural inequality, and a rigid and outdated curriculum. In addition, there is a persistent disconnect between the reality of the student and the context in which the teacher developed.

Recognizing and valuing students' prior learning is essential, as each individual comes to the classroom with previously acquired knowledge, experiences, and skills. The

teacher must adopt a personalized approach that encourages diversity of experiences and promotes meaningful learning based on students' interests and contexts.

New generations, influenced by their early exposure to technology, have transformed the way they acquire and process information. They have access to a wide range of online resources and diverse sources of knowledge. Therefore, teachers must strategically use technology to maximize learning, adapting educational resources to the needs and language of these generations. The role of the teacher evolves into that of guide, motivator and mediator, designing meaningful learning experiences that connect with the student's reality.

Meaningful learning and powerful teaching are essential pillars of today's education, transforming the circle into a circumference through the secant in which relevant knowledge linked to the student's social context converges and connects. This approach facilitates the retention and application of what has been learned, promoting active participation, problem solving, critical thinking and reflection. Through this process, students acquire the power to build their own transformative and liberating knowledge.

To meet the challenges of contemporary education, a flexible education system is needed that values the creativity and adaptability of teachers and promotes student-centered pedagogical practices. Only in this way can we ensure an education that empowers students, fosters meaningful learning, and prepares future generations to face the complexities of today's world.

References

Abrams, D., Mistry, P., Baker, A., Padmanabhan, A., & Menon, V. (2022). A Neurodevelopmental Shift in Reward Circuitry from Mother's to Nonfamilial Voices in Adolescence. Journal of Neuroscience, 42(20), 4164-4173. doi:https://doi.org/10.1523/JNEUROSCI.2018-21.2022

Antelo, E. (2011). ¿A qué llamamos enseñar? In A. Alliaud, Los gajes del oficio. Enseñanza, pedagogía y formación (pp. 19-38). Buenos Aires: Aique Educación.

Camilloni, A. (2016). El saber didáctico. Buenos Aires: Paidós.

Caruso, M., & Dussel, I. (2006). La invención del aula. Una genealogía de las formas de enseñar. Buenos Aires: Santillana.

Daura, F., & Barni, M. C. (2016). El desafío de enseñar a la generación net. Algunas estrategias pedagógico-didácticas que promueven la autorregulación del aprendizaje. VII Jornadas académicas de la Escuela de Educación. Buenos Aires.

Estanislao, A. (2005). La pedagogía y la época. Buenos Aires.

Estanislao, A. (2010). Notas sobre la (incalculable) experiencia de educar. In G. Frigerio, & G. Diker, Educar: ese acto político. Entre Ríos: Fundación La Hendija.

Gvirtz, S., & Palamidessi, M. (2006). El ABC de la tarea docente: currículum y enseñanza. Buenos Aires: Aique Grupo Editor S.A.

Gvirtz, S., Grinberg, S., & Abregú, V. (2011). La educación ayer, hoy y mañana: el ABC de la pedagogía. Buenos Aires: Aique Grupo Editor.

Lesteime, D. (2019). La construcción del educador. Entre la repetición, el control disciplinario y la resistencia crítica. Buenos Aires: Biblos.

Lesteime, D. (2021). Apuntes y reflexiones sobre la didáctica. Rosario, Santa Fe, Argentina: Homo Sapiens Ediciones.

Litwin, E. (1997). Las configuraciones didácticas: Una nueva agenda para la enseñanza superior. Buenos Aires: Paidós.

Litwin, E. (1998). El campo de la didáctica: la búsqueda de una nueva agenda. In A. Camilloni, Corrientes didácticas contemporáneas. Buenos Aires: Paidós.

Litwin, E. (2012). El oficio de enseñar, condiciones y contextos. Buenos Aires: Paidós.

Maggio, M. (2018). Reinventar la clase en la universidad (1a ed.). Buenos Aires: Paidós.

Maslow, A. (1991). Motivación y personalidad. Madrir: Ediciones Díaz de Santos S.A.

McClelland, D. (1968). La sociedad ambiciosa : factores psicológicos en el desarrollo económico.

Meirieu, P. (2008). A Mitad de Recorrido-Por Una Verdadera Revolución Copernicana en Pedagogía. In P. Meirieu, Frankenstein Educador. Barcelona: Laertes.

Pineau, P. (2001). ¿POR QUÉ TRIUNFÓ LA ESCUELA? o la modernidad dijo: "Esto es educación", y la escuela respondió: "Yo me ocupo". In P. Pineau, I. Dussel, & M. Caruso, La escuela como máquina de educar. Tres escritos sobre un proyecto de la modernidad. Buenos Aires: Paidós.

Pineau, P., Serra, M. S., & Southwell, M. (2018). La educación de las sensibilidades en la Argentina moderna: estudios sobre estética escolar. Buenos Aires, Argentina: Biblos.

Rancière, J. (2003). El maestro ignorante. Barcelona: Laertes.

Rattero, C. (2002). El fracaso de la escuela en su “para todos”. In R. Baquero, El fracaso escolar en cuestión: Concepciones, creencias y representaciones. Buenos Aires: Noveduc.

Rattero, C. (2021). Enseñanza y alteridad. Pensar la educación en lenguaje no excluyente. In C. Rattero, Ensayos sobre educación y alteridad (pp. 15-33). Arandú, Argentina.

Repetto, C., Linskens, M., & Fesquet, H. (1960). Geometría para segundo año del ciclo básico y escuelas de comercio. Buenos Aires: Kapelusz.

Rizzolatti, G., & Sinigaglia, C. (2006). Las neuronas espejo. Los mecanismos de la empatía emocional. Barcelona: Ediciones Paidós Ibérica.

Rodríguez, M. (2004). La teoría del aprendizaje significativo. In A. Cañas, J. Novak, & F. González, Concept maps theory, methodology, technology : proceedings of the first International Conference on Concept Mapping. Pamplona.

Temporetti, F. (2008). Retos educativos del Siglo XXI desde la perspectiva de América Latina. Madrid.

UNICEF. (2021). ¿Qué cambios y conductas son esperables en la adolescencia? Uruguay. Retrieved from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.unicef.org/uruguay/media/5416/file/Ficha%201%20-%20Caracter%C3%ADsticas%20de%20la%20adolescencia.pdf

Vosniadou, S. (2000). Cómo aprenden los niños. Serie prácticas educativas. Academia Internacional de Educación.