

ORIGINAL ARTICLE

BOOK REVIEW

Daniel Mill, *Reflections on Active and Meaningful Learning in Digital Culture*, Editora SEAD-UFSCar, São Carlos - SP, 2021.

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Daniel Mill holds a Ph.D. in Education and is a professor at the Universidade Federal de São Carlos (UFSCar), where he conducts research in the field of education in collaboration with several national and international institutions. In his work, he generally seeks to develop the predominant aspects of virtual education through tools that foster meaningful learning. Within this framework, the author develops the concepts of meaningful learning, highlighting the role of David Ausubel as an important proponent of learning based on subsumers; that is, learning that prioritizes students' prior knowledge in order to support the acquisition of new concepts.

Within this scope, the author emphasizes the importance of active methodologies in constructing a student-centered teaching process in which learners become the protagonists of their own learning. In this way, the author highlights the need for the planning and implementation of instructional activities that promote substantive learning through didactic transposition strategies grounded in dynamic methods, valuing meaningful learning over arbitrary and unidirectional learning. For the author, it is essential to engage students in instructional processes in which they are actively involved, demonstrating their learning in practical ways.

In general, the author emphasizes that the active method must be challenging, promote engagement, foster the contextualization of learning objects, and enable students to apply what they learn to real-world situations. At the same time, it should encourage practical application, stimulate student protagonism, and privilege sociointeractionism. In this way, the active teaching process decentralizes teacher-centered instruction and redirects it toward the student.

The author also highlights the importance of the learning "cone" as an analytical tool that allows for the observation of different learning potentials derived from various instructional strategies. Furthermore, the author demonstrates that the greatest learning potential is located at the base of the pyramid; that is, when active teaching methods are applied.

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Within this context, the author reveals the importance of incorporating activities into educational curricula that emphasize dialogue, practice, dramatization, contextualization, and creativity, among other possibilities that encourage students to move beyond their “comfort zone.” At the same time, the author highlights the practical challenges involved in implementing these methods, noting that they are relatively complex depending on the context of application and require educators to possess experience and carefully planned strategies.

In this way, the author seeks to highlight various types of active methodologies applied both in the physical classroom and in cyberspace, the latter being the primary focus of the work.

Throughout the work, the author seeks to develop several active teaching strategies in order to present readers with the potential of these methods within the digital context. In this regard, the author develops the concept of problem-based learning, in which students are confronted with practical problems drawn from everyday life and are required to analyze and solve the proposed problem by appropriating their knowledge and forms of approach. In this type of methodology, students must develop attitudinal and motivational skills.

Subsequently, the author presents the project-based learning method, in which students are encouraged to analyze and problematize specific situations by structuring their work through the development of well-organized plans with clearly defined goals and objectives. The author emphasizes that, in project-based learning, challenge constitutes a central element in stimulating student engagement.

Subsequently, the author conceptualizes the peer instruction methodology, highlighting its potential within the teaching process, as it allows for the redefinition of classroom dynamics traditionally centered on the instructor, enabling students to engage in systematic dialogue and provide mutual support. The author also demonstrates how this method is directly associated with modern educational technologies.

At the same time, the author continues the discussion by addressing the flipped classroom method, in which students develop a sense of responsibility and engagement through research and study activities carried out throughout the learning process. According to the author, this method redefines the role of the teacher, previously viewed as the sole holder of knowledge, transforming the instructor into a mediator of the process, while the student becomes an active agent who researches, investigates, and brings questions into the classroom environment.

The author also examines the maker movement, a contemporary methodological trend aimed at developing practical activities through spaces in which knowledge is discussed and applied in activities designed to solve contextualized problems. Through this approach, students become protagonists and creators of their own solutions, making it an example of active learning grounded in constructivism.

Finally, the author presents learning based on educational robotics, which maintains a close relationship with both project-based learning and the maker movement. Educational robotics represents a significant educational approach in which students use robotic tools to contextualize and solve problems within the field of science.

Following this discussion, the author begins the concluding remarks by reinforcing the important role of active methodologies in the development of student-centered teaching strategies, highlighting other approaches such as case studies, gamification, and discovery-based learning, among others. At the same time, the author underscores the importance of these methods when integrated with cyberspace in educational contexts, demonstrating how learning is enhanced by guiding students toward meaningful learning.

Therefore, considering the elements presented in the analyzed work, it may be concluded that this book constitutes an important reference for the study and dissemination of active learning methodologies within both physical and digital learning ecosystems.

The work provides rich details that enable readers to effectively understand the importance of active methodologies and their dynamics when associated with David Ausubel's theory of meaningful learning as an intrinsic element of the teaching process. In this way, the book represents a valuable reference for the dynamization of teaching practices, making a highly significant contribution to the field of education by strengthening and reaffirming the use of technological teaching methodologies.

We also emphasize the importance of the text with regard to its discussion of widely adopted instructional techniques, such as educational robotics, which is no less important than the other methodologies addressed throughout the work, reinforcing this methodological practice that is extensively used in science education.