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HERBERT'S DIDACTIC THEORY AND 21st-CENTURY SKILLS: INFERENCE AND SCIENTIFIC GROUNDING

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ABSTRACT

Johann Friedrich Herbart's theory holds a central place in the history of European education, as it shaped understandings regarding the structure of learning and the systematic organization of teaching. The aim of this study is to explore Herbart's didactic model through the lens of contemporary educational demands and to connect it with the development of 21st-century skills. The article investigates the principles Herbart established for the learning process and their compatibility with modern approaches that foster creativity, critical thinking, and interdisciplinarity. The research focuses on how classical didactic conceptions can be redefined to meet the needs of today's educational reality.

Key questions addressed concern the extent to which the Herbartian model remains relevant, how it can be interpreted through contemporary pedagogical theories, and what its contribution is to the shaping of a learning framework that supports both cognitive development and metacognitive skills. The article argues that the five stages of Herbart's didactic approach can be re-evaluated as mechanisms for enhancing core competencies such as critical thinking, creativity, collaboration, and problem-solving.

The analysis is based on a theoretical and literature-based exploration of the interdisciplinary relationship between Herbart's theory and contemporary pedagogical approaches. Through a comparative examination, the article seeks to highlight the ways in which the Herbartian model can be adapted to modern teaching practices, strengthening the connection between theory and practice. The article contributes to the discussion on the transformative potential of classical pedagogical theories in the modern educational landscape.

Keywords: Herbart's theory, theory-practice integration, 21st-century skills, structured teaching, timeless educational value, resilience of pedagogical theories

1.0 INTRODUCTION

The educational theory of Johann Friedrich Herbart constitutes one of the central pillars in the development of didactic thought during the 19th century. Conceiving learning as a process grounded in structured teaching, he developed a system organized around the systematization of pedagogy, considering the prevailing psychological understandings of his time (Biesta, 2014). His approach sought to ensure a shift from the passive reception of knowledge to the organized construction of learning through the conscious linking of new information with students' pre-existing knowledge (Westbury, Hopmann, & Riquarts, 2000). The influence of his theory, which served as the foundation for systematic didactics, remains evident even in

contemporary approaches that attempt to connect learning with the development of skills and adaptation to new socio-economic conditions (Garrison, Neubert, & Reich, 2012).

Education in the early 21st century is no longer confined to the mere transmission of knowledge but is increasingly oriented toward the development of competencies that enable learners to continuously adapt in a rapidly changing environment. Twenty-first century skills include critical thinking, creativity, collaboration, and metacognitive awareness, elements that are deemed essential to the modern educational process (Trilling & Fadel, 2012). The revision of classical teaching theories and their integration into today's educational framework is a practice that enables the productive utilization of historical educational models, adapted to contemporary needs (Voogt et al., 2013).

Herbart's theory offers a rich analytical framework, as it focuses on structured teaching and the formation of moral and cognitive development through instruction (Abduljabbar, 2023). Although developed in a different socio-economic context, its connection to current pedagogical needs allows for an assessment of how Herbart's fundamental pedagogical principles can inform contemporary learning strategies. The emphasis on the conscious processing of knowledge, as well as on the recognition of the importance of prior knowledge, are features that resonate with modern pedagogical approaches such as constructivist learning and experiential education (Sawyer, 2014).

The transition from Herbart's era to today's educational landscape is not merely a matter of pedagogical adaptation but also one of political and social reconfiguration of education. The emergence of European Union educational policies, which focus on shaping the "student-citizen" through the cultivation of skills, raises questions about the extent to which classical theories can contribute to achieving these goals (Grek, 2024). The systematic organization of teaching, as proposed in Herbart's theory, can serve as a bridge between traditional didactics and the current need for students to continuously adapt to the demands of a changing world (Deng, 2022).

Re-evaluating Herbart's theory within a contemporary context requires an analysis of the relationship between knowledge, learning, and skill development, as they are shaped in today's educational reality. The exploration of the fundamental principles of his theory highlights the importance of organized teaching and the formation of cognitive structures that enable a deeper understanding of knowledge. The educational process is not limited to the transfer of information but aims at creating a framework in which students can develop dynamic cognitive strategies that are critically important for the demands of the 21st century. Investigating the connection between Herbart's theory and contemporary didactics reveals the theoretical and practical dimensions of learning and teaching, contributing both to the academic discourse and to the practical applications of modern didactic approaches that define today's education.

2.0 EDUCATION IN THE AGE OF HERBART

Nineteenth-century education was shaped under the influence of the social and ideological transformations of the time, reflecting both dominant perceptions and broader quests concerning knowledge, teaching, and the role of education in the formation of society. The monitorial system, which was one of the primary methods of organizing instruction in the early part of the century, relied on the use of more advanced students as assistants in the learning

process. Although this approach was considered effective under conditions of limited resources, the need gradually emerged for a more structured educational system that would ensure the systematic development of knowledge and the formation of students' thinking (Cubberley, 1920).

The pedagogical theories of the 19th century developed during a period in which European education was transitioning from classicism toward a more pragmatic orientation. Educational interest gradually shifted from rote memorization and the repetition of classical texts to methodologies that promoted understanding and active student engagement. The connection of knowledge with experience and the recognition of the psychological dimension of learning became central principles in the construction of new didactic models (Rousseau, 1762; Pestalozzi, 1801).

Herbart's pedagogical perspective emerged within this context, seeking to combine the systematic organization of teaching with the cultivation of moral and cognitive development. In contrast to the monitorial method, which relied on a hierarchical guidance system in which advanced students taught their juniors under the teacher's supervision, Herbart's pedagogical system was based on a methodical and structured approach. In his model, instruction is organized into distinct stages, forming a coherent learning framework grounded in the gradual construction of knowledge. While Herbart acknowledged the importance of active involvement in learning, his approach remained oriented toward the systematic guidance of the learning process, as opposed to later models such as the 20th-century school of work approach, which emphasized experiential learning and student autonomy (Herbart, 1806; George, 2005).

The shaping of pedagogical conceptions and teaching methods in the 19th century was directly influenced by the social, economic, and ideological changes of the time. Industrialization and the expansion of compulsory education underscored the need for a unified and effective instructional system. Herbart's theories responded to this need by offering a model that combined cognitive development with moral formation, at a time when education was increasingly seen as a fundamental mechanism of socialization and the shaping of active citizens (Gundem, 2000).

The systematization of the teaching process became a central element of the educational reform that followed, establishing Herbart's principles as a significant point of reference for didactic practice in the decades that ensued. The transition from the empirical teaching of earlier centuries to a more organized and theoretically grounded pedagogical approach laid the foundations for subsequent educational systems, influencing both theory and practice of instruction (Westbury, 2000).

3.0 THE EDUCATIONAL CHARACTER OF SCHOOLING AND THE EMPHASIS ON SKILLS

The debate on the educational character of schooling and the growing emphasis on skills takes place within a broader context of educational transformations aimed at shaping a learning environment adapted to contemporary social and economic demands. Historically, education was associated with the provision of a stable cognitive foundation, where the transmission of theoretical knowledge occupied a central role. However, the evolution of educational systems

throughout the 20th and 21st centuries has highlighted the importance of developing skills that enable individuals to adapt to an ever-changing environment (Brockmann et al., 2008).

The distinction between knowledge and skills is a central issue in contemporary educational theory. Knowledge refers to a structured and systematized body of information that serves as the foundation for learning and scientific reasoning. In traditional educational models, knowledge was regarded as a fixed foundation passed from generation to generation through specific teaching methods. Skills, by contrast, are associated with the ability to adapt, solve problems, and apply knowledge creatively, with an emphasis on its use in everyday situations and professional contexts. The socio-economic developments of recent decades have made this distinction increasingly apparent, leading to a gradual reconfiguration of educational priorities (Winch, 2013).

The emphasis on skills development does not entail a devaluation of knowledge but rather calls for an adjustment of the educational process to make it more flexible and responsive to contemporary demands. The transition from a strictly knowledge-centered education to a model that incorporates skills such as critical thinking, problem-solving, and creativity reflects the need to prepare students for a dynamic and demanding professional and social environment. In current pedagogical discourse, approaches that integrate theoretical knowledge with practical application are gaining increasing importance, as they address the need for an educational process that connects learning with real-world situations (Young & Muller, 2010).

Education theorists have developed differing perspectives on the relationship between knowledge and skills. While some stress the autonomy of knowledge as a foundation for scientific and cultural development, others emphasize the importance of skills as a means of dynamically utilizing knowledge in various contexts. The modern education system tries to balance between these two axes, seeking to incorporate new approaches that respond to the challenges of modern society (Biesta, 2010).

The discourse on the relationship between knowledge and skills forms part of a broader view of education as a process that extends beyond memorization and reproduction of information. It aims at cultivating the capacity to apply and transform knowledge across diverse settings. Skills do not exist independently of knowledge; rather, they complement and enhance it, providing the tools necessary for its critical processing and creative application. Contemporary educational thought acknowledges that acquiring a wider range of skills such as analysis, synthesis, and adaptability, enables learners to use theoretical knowledge in real-world contexts, thus enhancing the applicability and lasting value of learning (Winch, 2013).

The dichotomy between theory and practice constitutes a central concern in contemporary educational discourse. Theoretical knowledge offers the foundation for constructing a coherent understanding of scientific and social phenomena, while its practical application strengthens comprehension and adaptability. Modern pedagogical approaches emphasize teaching methods that combine theory with empirical inquiry, aiming to bridge the gap between abstract knowledge and practical skills. The integration of collaborative learning, the use of technological tools to simulate real-life scenarios, and the focus on solving practical problems reinforce the link between theory and practice, supporting dynamic and sustainable learning (Billett, 2015).

Education policies in recent decades reflect a gradual shift toward a model of education that places particular emphasis on skill development. In European education policy, the concept of lifelong learning has emerged as a key axis of reform initiatives, aimed at creating a flexible and inclusive educational system. The European Union, through initiatives such as the European Qualifications Framework (EQF) and the Erasmus+ Programme, promotes policies that support the development of both cognitive and metacognitive skills, to ensure that citizens are equipped to adapt to the evolving conditions of the labor market and social life (European Commission, 2018).

Adaptability has become a fundamental objective in 21st-century education, as it underscores the transition to a society characterized by rapid technological, economic, and social change. Education is no longer confined to preparation for specific career paths but aims to cultivate the capacity for lifelong learning and the redefinition of knowledge and skills within new contexts. Modern learning approaches emphasize the development of self-regulation, critical thinking, and problem-solving abilities, recognizing that flexibility and adaptability are essential skills for both professional and personal growth in an ever-changing environment (OECD, 2018).

4.0 CONNECTING HERBART'S THEORY WITH CONTEMPORARY SKILLS

Johann Friedrich Herbart's theoretical contribution to the structuring of teaching and the learning process constitutes a key reference point in the historical formation of pedagogical science. His cohesive pedagogical model can be reexamined through the lens of contemporary approaches that emphasize the integration of knowledge and practice and prioritize the cultivation of skills. Herbart's theory of instruction presents the learning process as an organized, sequential structure comprising five critical stages: preparation, presentation, association, generalization, and application. Although these stages were developed within a different historical and pedagogical context, strong parallels can be found with modern educational theories that focus on linking theoretical knowledge with practical implementation, as they promote the ongoing development of skills such as critical thinking and creativity (Biesta, 2010).

The first stage described by Herbart, preparation, concerns the activation of students' prior knowledge and its connection to new content. In modern educational practice, this concept is expanded to include the development of curiosity, cognitive readiness, and the ability to integrate new information within a broader learning framework. Through dialogic practices, inquiry-based learning, and active engagement, students are encouraged to approach new knowledge with a spirit of inquiry and reflection, thereby fostering self-directed learning skills (Sawyer, 2014).

The second stage, presentation, pertains to the structured and comprehensible delivery of new knowledge. In modern educational theory, this process transcends the unidirectional transmission of information and incorporates the significance of communication skills, collaboration, and understanding through multimodal approaches. Reflecting the historical evolution of pedagogical methods, current educational techniques that utilize audiovisual media, interactive tools, and participatory strategies facilitate the integration of new knowledge while also enhancing critical information processing and the development of meaningful communication skills (Mayer & Fiorella, 2021).

In Herbart's third stage, association, students are invited to connect new knowledge with what they already know, reinforcing the link between prior and new information. In the process of integration, the development of critical thinking and metacognitive strategies becomes central to evaluating, analyzing, and comparing diverse sources of information. This stage is crucial for strengthening students' capacity to understand their own thinking and learning processes, encouraging the development of metacognitive awareness and reflective thinking (Flavell, 1979). These skills are directly aligned with contemporary educational demands for enhanced critical thinking and complex problem-solving. Students are encouraged to analyze and synthesize information, identify relationships among concepts, and develop strategies for addressing complex educational and social challenges (Brookfield, 2011).

The next stage, generalization, asks students to apply new knowledge across a variety of contexts, thereby reinforcing creativity and the ability to make interdisciplinary connections. Generalization enables learners to transfer learning to new and diverse situations, fostering the development of innovative solutions to problems and challenges. In modern educational thinking, generalization is linked to the ability of students to integrate knowledge across domains and to develop interdisciplinary approaches, thus enhancing their creativity and their capacity to engage with learning in novel ways (Gardner, 2006).

Finally, the application stage refers to the use of acquired knowledge in problem-solving and adaptation to changing environments. Innovation, problem-solving, and adaptability are foundational 21st-century skills, as students are expected to apply their knowledge in addressing challenges in both professional and personal contexts. Modern education places particular emphasis on students' ability to innovate, adapt to technological advancements, and tackle problems that require complex thinking and strategic resolution (Anderson et al., 2000). Through the creative synthesis of these skills, modern education seeks not only to enhance students' cognitive and social competencies but also to shape active and conscious future citizens, capable of responding with flexibility, reflection, and creative initiative to the complex demands of a world in constant technological, cultural, and social transformation.

The educational process is no longer merely aimed at the transmission of static knowledge but at cultivating a reflective and active mode of public engagement, capable of co-shaping the future with responsibility, creativity, and commitment to lifelong learning.

4.1 Correspondences and Applications

The correspondence between Herbart's five instructional stages and modern skills becomes clearer when examined through concrete classroom examples and everyday learning processes. The act of "preparing" students for learning, as described in Herbart's first stage, is linked to the cultivation of curiosity and the creation of a learning framework that enables students to comprehend and internalize the concepts being taught. In modern educational practice, this can be realized through active learning strategies such as presenting engaging research or conducting experiments that spark students' interest. For example, in STEM education, teachers may use real-life scenarios to motivate students and encourage them to reflect on the relevance of mathematics or physics in their daily lives, thereby stimulating curiosity and a desire to learn (Kolb, 1984).

In the presentation stage, which involves introducing new material to students, effective communication and comprehension of information are fundamental. Here, students are expected to assimilate and understand new concepts. A typical example from current teaching practice is the use of interactive technologies such as PowerPoint presentations and educational applications that incorporate graphics, animations, and multimedia content. The integration of technological tools into instruction makes content more engaging and accessible, especially when it comes to complex concepts that are difficult to grasp through traditional methods. The use of technology not only facilitates knowledge acquisition but also promotes active student participation, cultivates visual and media literacy, and redefines the pedagogical role of the teacher as a facilitator of a more dialogic and participatory educational experience (Mayer & Fiorella, 2021).

In the association stage, students' ability to identify connections between new information and prior knowledge becomes critical. The capacity to compare, evaluate, and incorporate new data into already-formed cognitive frameworks enhances critical thinking and deepens learning. In modern educational thinking, the linking of new and existing knowledge functions as a catalyst for the development of critical thinking and the systematic application of metacognitive strategies. For example, in teaching climate change, juxtaposing existing student conceptions of the greenhouse effect with historical data and contemporary scientific analyses fosters intellectual inquiry and activates students' ability to identify relationships, interpret causal sequences, and develop well-reasoned responses to complex problems (Paul & Elder, 2021). Actively associating new with prior knowledge strengthens students' ability to organize their thinking, recognize complex interconnections, and form evidence-based judgments.

Generalization encourages students to integrate their knowledge with personal experiences and to transfer it across various learning and social contexts. In modern educational practice, this often takes place through interdisciplinary approaches. For example, in science instruction, students may relate fundamental principles of physics to other sciences, such as chemistry or biology, and develop practical applications such as constructing a water filtration system to address pollution. The ability to transfer knowledge to new situations enhances creative thinking and fosters the capacity to connect concepts across different scientific domains (Larson & Miller, 2011).

Finally, the application stage invites students to use the knowledge they have acquired to solve specific problems. In modern education, this may involve problem-solving activities and practical applications that require innovation and adaptability. For instance, an educational program focused on entrepreneurship and product development incorporates both the application of newly acquired knowledge and the ability to adapt to new circumstances. Students work in teams to devise innovative solutions to social or technological problems, thus promoting creativity and strategic thinking in complex, real-world situations (Sternberg, 2003).

5.0 JUSTIFICATION AND FUNCTION OF PEDAGOGY IN THE 21ST CENTURY

The development of Herbart's five stages highlights the internal coherence of his pedagogical model and the importance of a methodically organized course of teaching and learning, in which each instructional step functions as an integral component of both cognitive and ethical formation. These stages systematically contribute to shaping students' thinking and attitudes. Each phase operates as a coherent whole that fosters and strengthens the student's capacity to

understand and apply knowledge. Preparation lays the groundwork for learning, while the subsequent stages embody the continuous interaction between theory and practice, promoting critical thinking and metacognitive strategies (Andrews, 2018). This ongoing interplay, both within instruction and in practical application, reinforces the connection between knowledge and real-life situations, helping students to integrate and transform their learning in practical and functional ways (Mayer & Fiorella, 2021). The emphasis in contemporary education on the complementary nature of theory and practice has become a foundational principle for developing adaptability and problem-solving skills, yet it also remains central to Herbart's pedagogical approach (Abduljabbar, 2023).

Re-evaluating Herbart's theory considering pedagogical models grounded in the mutual interdependence of theory and practice underscores its enduring contribution to educational development. In modern teaching, where the learning process often demands the application of theory to realistic scenarios, Herbart's work remains a cornerstone for understanding educational processes. Theories such as Piaget's constructivist learning and Vygotsky's sociocultural theory of cognitive development incorporate the active engagement of learners in their educational environment and their interaction with social contexts, an idea that resonates directly with Herbart's emphasis on the application of learning in practice (Piaget, 1972; Vygotsky & Cole, 1978). This interaction and practical use of knowledge support the development of metacognitive skills, as students move beyond understanding to thinking about how they learn and applying knowledge to solve problems, thus advancing the active and continuously evolving nature of learning (Flavell, 1979).

The development of metacognitive skills, such as the ability to recognize and improve one's own thinking processes, aligns with Herbart's view of education not as mere knowledge transmission, but as a process that strengthens students' capacity for critical thought. The integration of theory and practice enhances learning because the environment in which students apply theoretical concepts gives them opportunities to reflect on how they learn (Andrews, 2018; Jonassen, 1999). Modern pedagogical approaches, such as Problem-Based Learning (PBL) and Project-Based Learning, acknowledge the importance of metacognitive analysis within the learning process. These methods promote student reflection by encouraging them to analyze, evaluate, and adapt their learning strategies to address the demands of the problems they encounter. Project-Based Learning, as a student-centered methodology, incorporates active investigation and knowledge application to real-world problems, fostering the development of various skills. It enhances creativity, collaboration, and project management, while also building students' capacity to approach complex issues analytically and innovatively. Similarly, Problem-Based Learning promotes both group collaboration and individual initiative, motivating students to go beyond rote knowledge acquisition. It cultivates skills such as communication, critical thinking, and creativity, while also developing their ability to manage and resolve complex problems, broadening learning pathways in today's educational environment (Boud & Feletti, 1998).

In modern educational practice, the rearticulation of classical theories is essential for scientific progress. The ability to adapt old theories to new contexts not only reinforces their pedagogical value but also allows teachers and students to discover new ways of linking theory with practice. Theories that originally emphasized a strict division between theory and practice have been restructured to permit ongoing interaction and transformation of knowledge through

practical applications (Schunk, 2020). In this way, Herbart's theories, along with other classical pedagogical models, are being redefined to include new perspectives on active student participation in the educational process.

The practical application of older theories is not limited to pedagogy but extends into other scientific fields. Theories related to feedback and adaptability, such as those presented by Arends (2014) and Schunk (2020), demonstrate how pedagogical models must be adapted to modern technologies and contemporary challenges. Scientific justification of adaptation is crucial to ensure educational effectiveness and to strengthen the integration of theory and practice at all levels of education.

Interdisciplinarity has become a critical element in educational research and implementation, as today's educational demands call for a multidimensional approach that incorporates various fields of knowledge. The integration of educational psychology, instructional methodology, and contemporary educational demands forms a comprehensive framework that supports the learning process at every level. Educational psychology provides tools to help us understand the psychological parameters of learning, while didactic methodology offers the strategies and techniques necessary for effective knowledge delivery. At the same time, current educational demands, such as the integration of technology and the development of 21st-century skills, foster more dynamic and flexible instruction (Darling-Hammond, 2010). When these fields converge, they create an educational process that enhances both the cognitive and emotional dimensions of learning, supporting students' holistic development. This continuous interaction elevates the value of interdisciplinarity in educational practice and highlights the need for a synthetic approach that includes not only theoretical foundations but also their application in real learning environments (Hattie & Yates, 2013).

Interdisciplinarity has become central to pedagogical research and educational policy, playing a decisive role in modern education. It enhances students' understanding of the connections among different fields of knowledge and their ability to apply knowledge and skills across diverse areas of real life. Hattie and Yates (2013) underscore the importance of interdisciplinary approaches, as they expand the horizons of learning, promoting integration across domains and the development of critical thinking. The interconnection between different subjects makes education more engaging and relevant to the everyday challenges students face. This approach reinforces the development of "21st-century learning skills," including complex problem-solving, critical thinking, and the ability to collaborate in intercultural and interdisciplinary settings (Saavedra & Opfer, 2012).

The criteria for the scientific acceptance of pedagogical application (or "reduction") depend heavily on its theoretical justification and appropriate implementation in educational practices, both of which are essential for developing 21st-century learning skills. When such application is carried out with scientific accuracy and aligns with modern educational requirements, it contributes to the enhancement of skills such as critical thinking, complex problem-solving, and collaboration across cultural and disciplinary boundaries, thus addressing the challenges of today's educational environment. Theoretical substantiation is the core of evaluating and validating any educational theory or method. When pedagogical application is backed by reliable academic references and embraces contemporary developments in education, it confirms its relevance to current school contexts. Equally important is its systematic

application in the classroom, as a theory that is not consistently implemented cannot lead to sustained learning progress. Effective application requires the development of strategies and tools that support its integration into daily educational practice (Schunk, 2020).

Support from empirical research or qualitative data is another key criterion for the scientific validation of pedagogical application. Like other educational theories, pedagogical application must be verified by empirical research and qualitative evidence demonstrating its effectiveness in the classroom. The scientific community demands documentation grounded in objective and reliable data to legitimize a method as valid and useful for contemporary education. Empirical research may include both quantitative and qualitative data, such as case studies, observations, and interviews, which provide deeper insight into the practical implications of theoretical models in the educational process (Cohen et al., 2018). Systematic research contributes to the continuous evolution of pedagogical theories and methods, ensuring their scientific credibility and regular updating to meet the needs of both society and educational systems.

6.0 CONCLUSIONS- CRITICAL REVIEW

The ongoing effort to upgrade the educational system reflects a growing awareness of the need to respond to constantly evolving societal demands. The integration of theory and practice, as a central axis of the educational process, highlights the pedagogical challenge of reconciling traditional values with contemporary requirements. Embedding 21st-century learning skills, such as critical thinking and collaboration, at the core of educational practice constitutes a necessary condition for adapting schooling to the dynamics of the modern era. The interaction between classical theories and contemporary pedagogical approaches demonstrates that education is not a static process but a continuously evolving one that reflects the needs of the present and the visions of the future. Within this context, pedagogical renewal can only be achieved by embracing continuous inquiry, adaptation, and the integration of necessary changes to meet the multifaceted challenges of contemporary society.

The scientific validity of the approach examined in this study stems from the comprehensive review and interweaving of classical pedagogical theories with the demands of modern education. The convergence of theoretical foundations with contemporary educational needs reveals not only the enduring value of pedagogical principles but also the capacity of traditional models to adapt to rapidly changing conditions. The alignment of Herbart's five instructional stages with present-day learning requirements underscores the dynamic potential to harmonize the past with the present, offering a coherent foundation for pedagogical innovation. The process of educational application, as a tool for linking theory and practice, relies not only on theoretical approaches but also on empirical data, thereby establishing a scientific basis that ensures its sustainability and effectiveness within the educational process. The combination of theoretical substantiation and systematic implementation positions educational application as a key factor in understanding and continually shaping the educational reality (Schunk, 2020).

Modern education is called to respond to the constantly shifting needs of both society and learners, necessitating a profound reevaluation of pedagogical approaches. The integration of new skills, such as metacognitive strategies, is not merely a reaction to contemporary demands but a challenge to redefine learning processes. These strategies contribute to shaping a learning environment that promotes flexibility and creativity, enhancing students' capacity to develop the competencies needed for success in the 21st century (Darling-Hammond, 2010).

Interdisciplinarity and transdisciplinarity, as embedded features of modern educational policy, are essential for renewing the theoretical foundations of pedagogical research. Through the continuous reinterpretation of classical theories, new pathways are opened for educational advancement, offering not only fresh perspectives but also essential tools for reshaping learning processes in a rapidly changing world.

The necessity for the systematic application of pedagogical theories in real learning environments and their integration into educational policy highlights the deep connection between historical theories and contemporary educational needs. Pedagogical theories developed under different social and cultural conditions continue to offer valuable tools for understanding and engaging with learning processes in today's educational landscape. The transition from past to present does not merely entail the application of these theories, but also their recognition as resources for renewal and adaptation to the demands of the current era.

Scientific justification, supported by empirical studies, provides the foundation for adapting traditional pedagogical theories to the evolving needs of education. Today's educational reality, by integrating these theories with modern tools and strategies, creates a dynamic and flexible learning environment capable of responding to social, technological, and cultural developments.

The implementation of 21st-century needs in educational policy entails not only the adoption of new skills and methods but also the recognition of the historical significance of the theories that shaped the educational system, affirming their continued influence and capacity to guide current educational practices. The sustainability and adaptability of the educational system form the core of its ability to evolve and respond to ongoing and unpredictable societal changes.

The evolution of education is not confined to the mere enhancement of learning processes but aspires to the deeper transformation of the educational process itself, so that it may meet the demands of an uncertain and constantly changing world. At the heart of this transformation lies the preparation of students not just to assimilate knowledge but to acquire the skills necessary to face the challenges of the future. Students are called upon to develop a deep understanding of the world around them, so they can engage with increasingly complex social, economic, and environmental challenges with responsibility and a sense of commitment.

The revolutionary goal of education requires a complex and ever-evolving coexistence of knowledge and critical thinking, with the aim of shaping individuals capable of responding to the demands of sustainable development and continuous progress. Skills are not merely technical but encompass the ability to collaborate, empathize, and create elements that are becoming essential in a world that demands the constant evolution of the social and environmental fabric. Only through the cultivation of these competencies can education prepare future generations for the uncertain world that awaits them, equipping them with the tools needed to build a more sustainable and just future.

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