

John Dewey is credited as founding a philosophical approach to life called 'pragmatism', and his approaches to education and learning have been influential internationally and endured over time. He saw the purpose of education to be the cultivation of thoughtful, critically reflective, socially engaged individuals rather than passive recipients of established knowledge. He rejected the rote-learning approach driven by predetermined curriculum which was the standard teaching method at the time. However, importantly, he also rejected child-centred approaches that followed children's uninformed interests and impulses uncritically. While he used the term 'progressive education', this has since been misappropriated to describe, in some cases, a hands-off approach to children's learning which was not what Dewey proposed. Dewey believed that traditional subject matter was important, but should be integrated with the strengths and interests of the learner.

He developed a concept of inquiry, prompted by a sense of need and followed by intellectual work such as defining problems, testing hypotheses, and finding satisfactory solutions, as the central activity of such an educational approach. This organic cycle of doubt, inquiry, reflection and the reestablishment of sense or understanding contrasted with the 'reflex arc' model of learning popular in his time. The reflex arc model thought of learning as a mechanical process, measurable by standardised tests, without reference to the role of emotion or experience in learning. Dewey was critical of the reductionism of educational approaches which assume that all the big questions and ideas are already answered, and need only to be transmitted to students. He believed that all concepts and meanings could be open to reinvention and improvement, and all disciplines could be expanded with new knowledge, concepts and understandings.

The main features of Dewey's theory of education

Dewey suggested that individuals learn and grow as a result of experiences and interactions with the world. These interactions and experiences lead individuals to continually develop new concepts, ideas, practices and understandings, which, in turn, are refined through and continue to mediate the learner's life experiences and social interactions. According to Dewey:

Interactions and communications focused on enhancing and deepening shared meanings increase potential for learning and development. When students communicate ideas and meanings within a group, they have the opportunity to consider, take on and work with the perspectives, ideas and experiences of other students.

Shared activities are an important context for learning and development. Dewey valued real-life contexts and problems as educative experiences. If students only passively perceive a problem and do not experience the consequences in a meaningful, emotional and reflective way, then they are unlikely to adapt and revise their habits or construct new habits, or will do so only superficially.

Students learn best when their interests are engaged. It is important to develop ideas, activities and events that stimulate students' interest and to which teaching can be geared. Teaching and lecturing can be highly appropriate as long as they are geared towards helping students to analyse or develop an intellectual insight into a specific and meaningful situation.



Learning always begins with a student's emotional response, which spurs further inquiry. Dewey advocated for what he called 'aesthetic' experiences: dramatic, compelling, unifying or transforming experiences in which students feel enlivened and absorbed.

Students should be engaged in active learning and inquiry. Rather than teach students to accept any seemingly valid explanations, education ought to give students opportunities to discover information and ideas by their own effort in a teacher-structured environment, and to put knowledge to functional use by defining and solving problems, and determining the validity and worth of ideas and theories. As noted above, this does not preclude explicit instruction where appropriate.

Inquiry involves students in reflecting intelligently on their experiences in order to adapt their habits of action. Experience should involve what Dewey called 'transaction': an active phase, in which the student does something, as well as a phase of 'undergoing', where the student receives or observes the effect that their action has had. This might be as simple as noticing patterns when adding numbers, or experimenting to determine the correct proportions for papier mâché.

Education is a key way of developing skills for democratic activity. Dewey was positive about the value of recognising and appreciating differences as a vehicle through which students can expand their experiences, and open up to new ways of thinking rather than closing off to their own beliefs and habits.

What empirical evidence is there for this philosophy in practice?

While there is no direct evidence that Dewey's approach improves student outcomes, Dewey's theory of students' learning aligns with current theories of education which emphasise how individuals develop cognitive functioning by participating in sociocultural practices¹, and with empirical studies examining the positive impact of interactions with peers and adults² on students' learning. Quantative research also underlines a link between heightened engagement and children's learning outcomes, with strategies such as making meaningful connections to students' home lives and encouraging student ownership of their learning found to increase student engagement³. A few empirical studies which examined the effectiveness of aesthetic experiences for students confirmed that students experienced those lessons as more meaningful, compelling and connected than a comparison group⁴.

Dewey's influence on teaching practice

Dewey's theory has had an impact on a variety of educational practices including individualised instruction, problem-based and integrated learning, dialogic teaching, and critical inquiry. Dewey's ideas also resonate with ideas of teaching as inquiry.

Individualised instruction

Dewey's ideas about education are evident in approaches where teaching and learning are designed to be responsive to the specific needs, interests, and cultural knowledge of students. Teachers therefore learn about students and their motivating interests and desires in order to find subject matter, events and experiences that appeal to students and that will provoke a need to develop the knowledge, skills and values of the planned curriculum. Students are encouraged to relate learning to their lives and experiences.

Problem-based learning and integrated learning approaches

Dewey's principles of learning are evident also in problem-based learning and project approaches to learning. These approaches begin with a practical task or problem which is complex, comprehensive, multi-layered, collaborative, and involves inquiry designed to extend students' knowledge, skills and understandings. Problem-based learning should:



- · start by supporting students to intellectualise exactly what the problem is
- encourage controlled inquiry by helping students to develop logical hypotheses (rather than
 depending on their habits of thinking to jump to conclusions), for example, by connecting or
 disconnecting ideas they already have encountered
- · encourage students to revise their theories and reconstruct their concepts as their inquiry unfolds.

Student engagement

Dewey's theory has also been extended to the problem of enhancing student engagement. Some strategies that have been found to increase student engagement and that align with Dewey's concept of aesthetic experiences include:

- engaging students in deeper perception going beyond the simple recognition of objects to look carefully at colours, lines and textures, question perceptions, and use new understandings to perceive things in new ways
- building intellectual, sensory, emotional or social connections to a topic, such as connecting to the topic of space travel through intellectual connections to the concepts of speed, power and force, sensory connections to the sounds, fire and vibrations, and emotional or social connections to the feelings of astronauts involved
- encouraging risk-taking, such as suggesting a calculation, or experimenting to make papier mâché
- encouraging sensory exploration
- using a theme or metaphor to illuminate powerful ideas and to produce a sense of wonder, imagination and anticipation, such as 'rocks have a story to tell'
- provoking anticipation with evocative materials or suggestive situations, enabling students to unravel a mystery rather than follow a recipe.

Engagement can be heightened when students have ownership of their learning, for example, by being engaged in curriculum planning and cooperatively build curriculum themes, or by selecting a topic to research rather than being assigned a topic. Students can take responsibility for judging the value, significance and meaning of their experiences as well as next steps.

Dialogic teaching

Dialogic teaching emphasises the importance of open student dialogue and meaning-making for learning, and builds on Dewey's ideas about the importance of communication and social interaction. In this approach, students are encouraged to form habits of careful listening and thoughtful speaking: for example, they might be discouraged from raising their hand to speak in a lesson, as that action triggers anticipatory thought rather than full attention to the current speaker. Attention is paid to issues of power, privilege and access that may hinder open dialogue.

Critical inquiry

Dewey's approach to education is evident in curricula focused on critial thinking skills in which students engage in intellectual reflection and inquiry, critique, test and judge knowledge claims, make connections, apply their understandings in a range of different situations, and go into depth, rather than be given quick answers or rushed through a series of content. Dewey's philosophy of education highlights the importance of imagination to drive thinking and learning forward, and for teachers to provide opportunities for students to suspend judgement, engage in the playful consideration of possibilities, and explore doubtful possibilities.



Teaching as inquiry

Dewey's perspective on teaching and learning encourages a teaching as inquiry mindset. His principles for teaching and learning suggest that teachers should cultivate an energetic openness to possibilities alongside a commitment to reflectively learning from experiences, be willing to experience ambiguity and use problems as an opportunity to get deeper into an understanding of self, students, the subject and the context.

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Endnotes

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