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WHY WE SHOULD STRIVE TO ESTABLISH A SINGLE PARADIGM IN DIDACTICS: ON RELATIVISM, LANGUAGE, AND LEARNING IN A CONSTRUCTIVIST CONTEXT

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This article critiques the ambiguous use of the term *constructivism* in education, highlighting the risk of its trivialisation into a mere set of teaching methods and techniques. It proposes an interpretation of constructivism from the perspective of epistemology and cognitive science, presenting it as an anti-relativist position grounded in rational accountability and sustained by a communicative community. From this standpoint, education is conceived as a process of jointly constructing knowledge, continually shaped by experience and intersubjective critique. Such a perspective requires a redefinition of the teacher's role and an understanding of the classroom as a space of dialogue and inquiry. The analysis presented in this article shows that constructivism – when interpreted through the lenses of the philosophy of language, cognitive science, and epistemology – is neither an ambiguous theory nor one open to arbitrary variants. On the contrary, its core is defined by four irreducible dimensions: a) the linguistic–communicative character of learning; b) its grounding in the learner's cognitive structures; c) its reference to the external constraints of reality; d) the intersubjective control of claims with respect to their rationality. Didactics requires a single paradigm: only an interpretation that incorporates the four elements listed above avoids relativism and trivialisation while providing methodological coherence. Any account of constructivism that neglects any of these dimensions reduces the paradigm to an oversimplified version, stripped of explanatory power and thus losing its status as a serious scientific proposal. The author of the article argues that only a coherent constructivist paradigm can preserve the scientific status of didactics and provide a viable alternative to behaviourist models.

Keywords: constructivism, didactics, paradigm, education, language, relativism.

Introduction. In pedagogical literature, the concept of constructivism is used in multiple and often ambiguous ways, frequently reduced to the implementation of a supposedly "appropriate" set of teaching methods or classroom techniques, such as project-based learning or group work. Such reduction leads to a trivialization of the theory and the loss of its epistemological substance. Constructivism in didactics is not a collection of methods (including techniques) or forms of instruction; fundamentally, it is a philosophical position rooted in Immanuel Kant's transcendental idealism, Jean Piaget's genetic psychology, and Hilary Putnam's anti-realist intuitions, and further developed in contemporary cognitive science and the philosophy of language. I

consider the thesis that multiple equivalent paradigms exist in didactics to be harmful, for it reinforces the belief in the relativistic nature of the discipline, thereby weakening its explanatory and predictive power.

In this article, I argue that didactics *requires*: (i) a coherent constructivist paradigm grounded in epistemology and the philosophy of language; and (ii) a paradigm that avoids both relativism and the methodological inflation of theories. The core of such a paradigm should be an understanding of education as a process of constituting knowledge that remains subject to rational control and critique. Only under this interpretation can constructivism retain its critical, yet scientific and anti-relativistic character, opening new possibilities for both educational analysis and practice.

I. Why Constructivism Does Not Have to Be Relativistic

Constructivism in didactics requires a solid epistemological grounding. Thomas Kuhn's (2001) conception of the paradigm – partly inspired by Ludwik Fleck's (2006) idea of "thought styles" – has become one of the most frequently invoked ways of describing the development of science, both in philosophy and in the humanities. Its popularity stems not only from the originality of Kuhn's ideas but also from the simplicity with which it portrays the emergence and transformation of scientific theories. Kuhn rejects Karl Popper's (2005) realist narrative, which interpreted scientific progress in terms of the rational "logic of scientific discovery." Instead, he proposes an image of science as a transition from one paradigm to another – a transition often understood more as a kind of "mystical conversion" than as the result of rational rules. As Imre Lakatos notes (1995, p. 5), in this view paradigm change belongs more to the realm of the "psychology of discovery" than to that of methodology.

To properly assess the consequences of this perspective, however, we must return to a fundamental question: what is the object of scientific inquiry? How does it appear to the knowing subject, and do we have direct access to it, or is such access always mediated? I argue – drawing on Hilary Putnam's (1998) line of reasoning – that we do have cognitive access to the world, yet this access must necessarily be mediated. There are no grounds for assuming that we can apprehend reality directly; it is, in fact, difficult even to imagine such unmediated insight into the states of affairs that exist. Putnam's "no miracles argument" (Putnam, 1975) can be interpreted in various ways, but even from an epistemologically anti-realist standpoint it is hard to deny its persuasive force. The question of the sources and limits of knowledge has accompanied philosophical reflection since antiquity, when a metaphysical perspective predominated and knowledge was understood as the discovery of an independently existing reality, one that is what it is "in itself". For centuries this conviction remained largely unquestioned, and even today many scientists and philosophers defend the thesis that we do indeed know the external world – pointing precisely to the so-called success of science. It is difficult to deny that achievements such as space travel or the development of information technologies testify to a kind of correspondence between

theory and reality. Their practical effectiveness is a strong indication that our models and cognitive schemas "fit" the world in a significant way. However, philosophical reflection does not allow us to rest with this common-sense conclusion. The world appears cognitively accessible and describable only if we abstract from the entire philosophical tradition that problematizes the very concept of "knowledge".

Individual scientific disciplines differ in their methods and objects of inquiry, yet they share a common denominator: the pursuit of uncovering the order and structure underlying observable phenomena. At the foundation of science lies the continual need to identify regularities – whether concerning the physical nature of the universe, the biological mechanisms of life, or the principles governing social systems. However, in order to speak meaningfully of categories, laws, or rules, we must accept three fundamental assumptions: (i) an external reality exists and possesses a structure that can be captured within a conceptual system; (ii) the human cognitive system is capable of grasping this structure; and (iii) it is possible to create a language through which this structure can be described[33].

Realism grows out of the intuitive conviction that the world "simply" exists. In philosophy, however, one does not argue with common-sense beliefs but with refined, logically coherent positions. The debate over realism acquires particular significance when it is contrasted with contemporary forms of anti-realism, which are no longer mere repetitions of classical idealism. It is precisely the tension between realism and anti-realism that opens the space for analysing cognition, the role of language and concepts in shaping the scientific image of the world, and the legitimacy of attributing "objectivity" to knowledge despite its inevitable entanglement in conceptual and methodological frameworks.

Putnam (1998) rejects both the metaphysical claim that there exists a "reality in itself" and the conventionalist view that ontological commitments are purely matters of agreement. In his account, the adoption of a particular conceptual scheme is not the result of an arbitrary decision or a social convention but is grounded in rational considerations: (a) its effectiveness in explaining phenomena, (b) its usefulness in scientific practice, and (c) its ability to solve specific cognitive problems. "Descriptions of the world" remain relative to the conceptual framework adopted, but they are not arbitrary; on the contrary, they are the result of reflection on experience and the rational adjustment of cognitive tools to practical purposes.

In this article, I advocate a moderate epistemic scepticism, understood as the rejection of both extreme epistemological realism – which assumes full adequacy of cognitive representations with respect to reality – and relativism, according to which every judgement (or theory) is considered equally valid. We must remember, however, that – as Adam Grobler writes – "it is impossible to observe anything without prior expectations shaped by the theories we already possess" (Grobler, 2006, p. 70–71). In

[33] The last assumption differs from the first: while the first posits the existence of a non-amorphous structure, the third emphasizes the capacity of language and conceptual systems to capture that structure.

practice, this means that conducting scientific research – making observations, justifying claims, or formulating hypotheses – requires a firm grounding in a particular theory or model that makes interpretation of reality possible. Knowledge, therefore, although constructed, remains subject to the criteria of rationality and intersubjective verification. In his account of internal realism, Putnam (1981) showed that truth, understood as a property of judgements or sentences, is neither an absolute correspondence with a language-independent world nor an arbitrary narrative, but rather a form of rational acceptability within a cognitive community. Internal realism (see Putnam, 1998) makes it possible to avoid both extreme relativism and naïve objectivism.

Constructivism grounded in internal realism (a form of anti-realism) emerges as a project in which knowledge is neither a simple reflection of reality nor a purely subjective construction. The cognitive limitations of the individual are counterbalanced by linguistic rules, communicative practices, and standards of rationality shared by the scientific community. This makes it possible to build a didactic theory that avoids both arbitrariness and dogmatism.

I adopt the position of moderate epistemic scepticism because, although we cannot know how things exist "in themselves," this does not entail cognitive arbitrariness. Epistemic models must be anchored in something that does not reduce to individual acts of cognition. Science – including the humanities – makes sense only when its models are intersubjectively verifiable and subject to criteria of rationality. In this perspective, constructivism appears not as a relativistic doctrine but as a project of internal realism (see Putnam, 1998): knowledge is not a simple mirror of reality, yet neither is it an arbitrary narrative. One of the main sources of misunderstanding surrounding constructivism is its frequent identification with epistemological relativism. Ernst von Glasersfeld's (2007) radical constructivism is often interpreted as a thesis about the arbitrariness of interpretation, which leads to the belief that truth (or truthfulness) is a relative category. Yet Jean Piaget (1996) had already emphasized that the process of constructing knowledge takes place within the cognitive structures of the individual and under the constraints imposed by reality. Hilary Putnam, in introducing the notion of "internal realism", stressed that the truth of statements is determined within a linguistic–cognitive community, in accordance with standards of rationality.

II. Language and Cognition

A key component of constructivism is language. Wittgenstein's thesis that "the meaning of a word is its use in the language" (2000) implies that the didactic process consists in introducing the learner to the language games characteristic of a given discipline and to their rules of correct use. Yet the idea of language games does not exhaust the problem: since meaning depends on usage, the question arises whether it is possible to establish unequivocal equivalents across different linguistic systems. Willard Van Orman Quine's account, emphasizing the indeterminacy of translation, shows clearly that teaching is not a mechanical transfer of information but a practice

of coordinating meanings – their establishment requires negotiation within a community and reference to accepted inferential criteria (Quine, 1999). In this sense, the epistemic correctness of the content produced takes the form of intersubjectively monitored rational acceptability. It is the (scientific) community that determines the rules of justification, which order and stabilize the uses of concepts.

Education, therefore, does not consist in "transmitting" ready-made content but in jointly constituting meanings within linguistic and cultural rules subject to critical scrutiny. Constructing in educational relations is thus a matter of co-producing meanings within linguistic rules that are always embedded in a specific cultural context. Culture functions as an essential medium: it stabilizes meanings, provides a repertoire of concepts, and offers interpretative patterns. However, the entire process cannot be reduced to cultural determinants alone, for linguistic relations remain anchored in something external both to the knowing subject and to the interpretive community. Workingly, we may assume that what lies outside both culture and the cognizing subject is the posited structure of reality – a structure that sets the limits of permissible interpretations and corrects our cognitive constructions.

In this sense, education appears as a process shaped by the interaction of three dimensions: the subjective – linked to the individual's cognitive structures; the cultural – encompassing the language and traditions of the community; and the external – stemming from the constraints of reality, which prevent certain constructions from being maintained. A particularly useful tool for describing this process is Sperber and Wilson's (2011) relevance theory. Its central claim is that human communication is guided by the pursuit of maximal relevance – a balance between interpretive effort and cognitive effect.

For didactics, this means that a teacher's messages become understandable only when the learner is able to relate them to their own cognitive context. Relevance is not given in advance; it emerges in the process of interpretation. Thus, the teacher's role is to design communication in such a way that it enables the learner to create relevant contexts. Otherwise, teaching collapses into a quasi-behaviourist model in which knowledge is treated as a "set of behaviours to be reinforced".

III.Learning in the Context of Constructivist Didactics

A school operating within the so-called behaviourist paradigm treats knowledge as a set of behaviours to be learned, ignoring the cognitive mechanisms through which knowledge emerges and the linguistic conditions that make communication possible (cf. Klus-Stańska, 2010). Based on the stimulus – response mechanism (to put it simply), the behaviourist approach to education relies heavily on the "accumulation" of data – that is, on memorization. Yet cognitive science has long shown that memory does not function by passively storing information "for its own sake," but by using information in cognitive processes oriented toward problem-solving. The accumulated content serves as material for logical inference, enabling the formulation of hypotheses, the comparison of new situations with prior experience, and the selection of appropriate strategies of action (Mietzel, 2009, p. 212–217). In this sense, memory

should be understood not as a storage bin for data but as a dynamic system whose function is to support processes of reasoning and adaptation to changing cognitive conditions.

The constructivist paradigm in didactics (grounded in the evolutionary paradigm of the mind) maintains that the learner should employ effective, adaptive cognitive strategies, focusing on solutions[34] and on the ability to "cope with reality" (see Moroz, 2019). Consequently, transmissive conceptions of knowledge are rejected. There is no universal instruction manual, no algorithm for acquiring skills, because every educational situation is contextual and dependent on the learner's conceptual structures. The classroom becomes a space of discussion, negotiation of meaning, and the creation of small learning communities. Activity is the starting point of the learner's work, for they must have time for independent – even clumsy – attempts at solving problems (cf. Klus-Stańska, 2010). The didactic process is based on the reconstruction of the learner's knowledge, the elicitation of cognitive dissonance, and the design of situations that promote changes in conceptual structures. Educational goals are not fixed: they may be redefined during the process, in line with flexible planning that is sensitive to context and to the learner's "cognitive environment." Constructivism fosters critical thinking: instead of mere reproduction, it promotes interpretation, evaluation, and the questioning of claims. At the center lies the relevance of communication (Sperber & Wilson, 2011): knowledge must be understandable and relevant to the learner, which means that the teacher does not control the learner's responses but instead shapes the conditions for meaning-generating communication. Thus, cognitive constructivism assumes that the function of cognition itself is to organise the empirical world; consequently, in didactics, learning is understood as a process that requires the learner's full engagement and curiosity, along with the activation of critical and analytical thinking mechanisms. Understanding cognitive constructivism compels a fundamental rethinking of education. It reveals that there is no universal didactic instruction manual and no algorithmic account of the processes of "acquiring" knowledge or "developing" skills. This follows both from the variability of educational situations and from the fluidity and diversity of conceptual structures characteristic of each individual. From this perspective, the teacher must redefine their role: they become a facilitator of learning and transform the classroom into a space for intellectual inquiry (Fosnot, 2005). The teacher organises the didactic process as a space for deliberation and dialogue. Their task is to create conditions that support the formulation of questions, the articulation of opinions, and the negotiation of meanings during lessons, so as to generate shared, rational, and intersubjectively controlled interpretative frameworks within which knowledge becomes the product of critical collaboration (see Moroz, 2019).

[34] The solutions have a practical character, yet this "practicality" is understood in a very broad sense: even those that appear "theoretical" are, within constructivism, regarded as practical– namely, as solutions that are expected to *work* in specific contexts.

Students should have opportunities not only to present their own interpretations of problems but also to subject them to empirical or logical verification and to modify adopted strategies of action in light of new arguments or data. This process leads to the development of the ability to discover independently, to evaluate critically, and to experience epistemic responsibility for one's claims. As a consequence, small learning communities – research groups – emerge, becoming model environments for constructivist didactics. In this way, the classroom takes on the character of a research environment, and the teaching process becomes closely aligned with the practice of doing science.

Conclusions

The analysis presented in this article shows that constructivism – when interpreted through the lenses of the philosophy of language, cognitive science, and epistemology – is neither an ambiguous theory nor one open to arbitrary variants. On the contrary, its core is defined by four irreducible dimensions: (i) the linguistic–communicative character of learning, (ii) its grounding in the learner's cognitive structures, (iii) its reference to the external constraints of reality, and (iv) the intersubjective control of claims with respect to their rationality. Any account of constructivism that neglects any of these dimensions reduces the paradigm to an oversimplified version, stripped of explanatory power and thus losing its status as a serious scientific proposal. In this sense, I justify the thesis that didactics requires a single paradigm: only an interpretation that incorporates the four elements listed above avoids relativism and trivialisation while providing methodological coherence. The elimination of competing variants of constructivism in didactics is not a matter of declarative preference, but a logical consequence of the analysis presented. The epistemological and linguistic narrative leads to the conclusion that alternative versions of constructivism either reduce the theory to a set of methodological techniques or fall into relativism, thereby losing their status as credible scientific propositions.

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ЧОМУ МИ ПОВИННІ ПРАГНУТИ ДО СТВОРЕННЯ ЄДИНОЇ ПАРАДИГМИ В ДИДАКТИЦІ: ПРО РЕЛЯТИВІЗМ, МОВУ ТА НАВЧАННЯ У КОНТЕКСТІ КОНСТРУКТИВІЗМУ

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Подано критичний аналіз неоднозначного використання терміна "конструктивізм" в освіті, підкреслюючи ризик його спрощення до набору звичайних методів і технік

навчання. Запропонована інтерпретація конструктивізму з точки зору епістемології та когнітивізму визначає його як антирелятивістську концепцію, засновану на раціональній відповідальності та підтриману комунікативною спільнотою. З позиції конструктивістської теорії, освіту розглядають як процес спільного конструювання знань, які постійно змінюються, формуються досвідом та суб'єктивною критикою. Конструктивістська філософія освіти потребує переосмислення ролі вчителя та розуміння класу як простору для діалогу та дослідження. Наголошено, що лише цілісна конструктивістська парадигма освіти може зберегти науковий статус дидактики та стати життєздатною альтернативою біхевіористичним моделям. Зазначено, що конструктивізм – якщо його інтерпретувати крізь призму філософії мови, когнітивістики та епістемології – не є ні суперечливою теорією, ні теорією, яка допускає довільні трактування. Навпаки, його суть визначають чотирма невід'ємними компонентами: а) лінгвістично-комунікативним характером навчання; б) ґрунтуванням на когнітивних можливостях та стратегіях учнів; в) залежністю від зовнішніх чинників; г) суб'єктивним контролем тверджень щодо їх раціональності. Будь-яке трактування конструктивізму, яке ігнорує хоча б один із цих вимірів, зводить парадигму до надмірно спрощеної версії, позбавленої здатності переконливо пояснювати і, таким способом, обмеженої у статусі серйозної наукової теорії. Дидактика вимагає єдиної концептуальної моделі: лише інтерпретація, що включає чотири вищезазначені елементи, дає змогу уникнути відносного підходу та спрощення, забезпечуючи при цьому методологічну узгодженість. Виключення альтернативних пояснень конструктивізму в дидактиці не є питанням заявленої переваги, а логічним наслідком поданого аналізу. Епістемологічна та лінгвістична аргументація приводить до висновку, що альтернативні версії конструктивізму або зводять теорію до набору методологічних технік, або піддаються впливу релятивізму, втрачаючи тим самим свій статус вагомих наукових положень.

Ключові слова: конструктивізм, дидактика, парадигма, освіта, мова, релятивізм.