Towards a democratic curriculum: the narrative paradigm to achieve a state of viscosity

Elsa Estrela[1] · Louise Lima[1]

Abstract
The article proposes that the goal of education should be to promote democracy in education, which can be achieved through a viscous curriculum based on narrative learning to enhance communication and inclusivity. The discussion considers different teaching and learning paradigms, including instruction, learning, and communication, to explore the conceptual relationship between curriculum, teaching, and learning. The viscosity of the curriculum ensures resistance to fluidity while allowing for some movement, also considering the dialogical relationship between its critical internal elements — knowledge, pedagogy, and assessment. It is not a prescriptive or liquid framework, but a collaborative and cooperative construction that emphasises the paradigm of communication (Trindade & Cosme, 2010) and the narrative learning approach (Goodson, 2013). These elements enable contextual adaptation and resistance to support a more democratic education. To design a curriculum that goes beyond a prescription, it is essential to recognize that learning involves cultural heritage, guided by school curricula, which must be shared, used, and recreated. Schools and educators must focus on knowledge acquisition and knowledge sharing as part of the common heritage of humanity, which is, therefore, based on the collective creation of new knowledge and new worlds (UNESCO, 2021). Such knowledge is communicated through the affirmation of the personal and social worlds of students. The challenge is to rethink the social mission of the school by collectively committing to culturally significant and humanly empowering learning. This can lead to the co-creation of a more just, humanitarian, and democratic society, especially in times of great uncertainty intensified by war.

Keywords Curriculum development · Narrative curriculum · Communication paradigm · Democratic education

Introduction

The core argument of the article is focused on the nature of the curriculum, which is typically exclusionary (Goodson, 2006), and the way this nature can be overcome by building a 'viscous' curriculum that is able to balance its internal critical elements — teaching, learning and assessment — with external conditions — socio-political, historical, cultural and economic contexts. According to Maheshwar (2018), "viscosity is a measure of the resistance of a fluid to deform under shear stress" (p. 69). This thickness is the physical property that characterises a fluid's resistance to flow. This means that the higher the viscosity, the lower the speed with which the fluid moves, as also the greater the difficulty for an object to move in the fluid (Ariyanti & Agus, 2010) .

The concept of a viscous curriculum refers to a curriculum that is like a fluid, with its internal critical elements interconnected through narrative learning based on the pedagogical paradigm of communication. This means that the internal composition of the curriculum is strengthened by the dialogical relationship generated through the narrative approach combined with the communication paradigm. The viscosity of the curriculum is also affected by external conditions, such as socio-political and economic contexts, which can decrease viscosity as they increase, and historical and cultural contexts, which can increase viscosity as they also increase. These contextual external elements represent temperature and pressure, the two external factors that influence viscosity.

A viscous curriculum is a framework that defines no hierarchical relation between teaching, learning and assessment,

✉ Elsa Estrela
elsaestrela@gmail.com

Louise Lima
louise.lima@ulusofona.pt

1 Interdisciplinary Research Centre for Education and Development, Lisbon, Portugal

as integrated and inseparable actions, including different kinds of knowledge — technical, social and personal — and ensuring cultural heritage without overlooking individual cultures and needs. These characteristics of internal critical elements ensure resistance to the fluid element, the curriculum, at the same time that they allow some movement. It is not a prescriptive framework, but neither is it a liquid one.

In this sense, it is key to understand how these internal critical elements are organised and how they relate to each other in each of the pedagogical paradigms, which will be discussed below. Recognizing that the concepts of teacher and teaching have been changing and looking for a relevant combination between personal, social, and professional learning (Estrela, 2023), narrative learning (Goodson, 2013) can be the approach to shape this curriculum under a communication paradigm (Trindade & Cosme, 2016).

Schools and educators must be concerned with knowledge acquisition and knowledge sharing "as part of the common heritage of humanity, and the collective creation of new knowledge and new worlds" (UNESCO, 2021, p. 64). Given this context, the article addresses the conceptual relationship between curriculum and learning, and its implications in pedagogical practices, from the perspective of the different pedagogical paradigms: instruction, learning or communication, focusing on the development of a curriculum based on co-constructed democratic values for a more just and democratic society. This is a discussion about democratic education, from Freire's perspective (Freire, 1968), based on the active and critical participation of subjects in the learning process. To this end, it is important to have a process of collective, dialogical, and reflective construction of one's reality, based on a reading of the world, in which the subjects contribute their experiences and knowledge to the collective construction of significant and transformative knowledge, with a view to their awareness and emancipation.

Located in a European region and belonging to transnational organisations such as the OECD, Portugal has curriculum policies that deeply interconnect society, education and the curriculum itself, requiring the problematisation of the influences of globalisation in education. In fact, Portuguese curriculum policies have wavered between curriculum flexibility and autonomy and curriculum rationality based on a narrowing curriculum. However, evidence-based policies have been the main factor influencing curriculum policies in all education systems. In this context, new forms of governance and the establishment of a neoliberal ideology have led to the reconfiguration of the mandate for education, as well as created a new relationship between the State and Education. The debates on the changes in social and economic structures featuring the role of knowledge began at the end of the 1960s, promoted by national governments and transnational or regional organisations, like the Organisation for Economic Cooperation and Development (OECD) and the European Union (EU). Society has become *an information society* (Deutsch, 1984)*, a network society* (Castells, 2000) *or a knowledge-based* society (Lane, 1966), but also a *postmodern* society (Bell, 1973) or a *risk* society (Beck, 1998).

This 'knowledge society' (UNESCO, 2005) implies a resignification of knowledge which has become the main driver of the economy and a new factor of production. Public policies shift the focus towards the creation, distribution and management of this knowledge, based on skills, and understood as "social overhead investment" (Bell, 1973). The aim is to build a new narrative for education, now based on the goal of training a new type of worker, a new type of citizen and a new type of self (Robertson, 2008), responsible and accountable for *Lifelong Learning*, carried out "anywhere, anytime, by any provider" (Dale, 2008).

In this context, the volatility, acceleration and condensation of processes of change have definitely contributed to a liquid society (Bauman, 2007), permanently confronted with processes of recomposition that block stability and promote uncertainty. These changes have allowed the rise of new discourse spaces, both informal and non-formal, as well as new educational actors, coming from the social economic world. Assuming curriculum as the defining core of the school as well as a mobilising and organising element of teaching–learning-assessment, means its content has been under pressure to respond to the new mandates for schools. As part of modernity and as an instrument of nation-state identity, education is being challenged. Addressing inclusion, differentiation, and success for all could be considered the main goal of education in the twenty-first century.

A major challenge for the European Union (EU) is to strengthen democratic processes in education through the development of practices that prepare students to face societal challenges. The co-creation of more democratic curricula with students and their community, with the involvement of citizens in defining educational contents, learning environments and goals, is essential to ensure and promote the humanistic and citizenship values of education regarding active democratic citizenship and empowerment.

In order to meet the challenge faced by the European Union, each context has to build customised responses based on its reality. This means that each educational setting must reflect on: How, then, can a school respond to the current challenges without losing its identity? How can schooling combine individual and collective needs? How can the school contribute to the construction of an inclusive social cohesion, guided by the principle of social justice? How can schools integrate valid knowledge coming from subaltern cultures not recognized as scientific? How to build an integrated curriculum combining technical, social, and personal knowledge?

These questions guide this article, with the understanding that the investment is not just about new forms of teaching,

or 'making learning', but also involves what to teach and build in the school, and "what should be unlearned" (UNESCO, 2021, p. 64). On the other hand, the achievement of Sustainable Development Goals (SDG) compels us to invest in teaching and learning based on democratic participation in society, as well as creative and critical thinking. This would enable intervention in different problems, such as the Covid 19 pandemic, climate change, human rights or the "dismissed/ dispensable" people. This emerging social class can reach dimensions that jeopardise human rights, considering the lack of competences to follow artificial intelligence development. Therefore, inclusion must be considered in a plurality of dimensions, such as:

i)   the diversity of the public who attend school, including the disabled, expatriates, refugees, ethnic and religious minorities, with different identities, having the school as a socialising institution par excellence (Stoer & Magalhães, 2003);

ii) the dimension of contingent mitigation of the "dismissed/dispensable" people from the future labor market, replaced by workplace technologies, and therefore citizens without rights;

The acts of learning and teaching are subject to different interpretations, based on different epistemological and conceptual assumptions, which can culminate in different options (and even contradictions) regarding how to deliver the educational act. Throughout this work the premise is assumed that to become human it is necessary to learn and, precisely for that reason, every human being learns (Charlot, 2000). The new contribution of this work is that it frames the concept of curriculum through the metaphor of viscosity, referring to the principles of physics and narrative learning, based on Goodson (2006) and Goodson and Crick (2009). In this way, we will reflect on how building a path toward a democratic curriculum requires reconfiguring the school's social mission and promoting culturally significant and humanly empowering learning.

Reconfiguring the social mission of the school

The collective commitment to promote culturally meaningful and humanly empowering learning cannot ignore the challenges faced by today's society, such as socioeconomic inequalities, the dissemination of misinformation, and climate change. This setting requires a deep reflection on the social mission of the school and the role of the curriculum in the transformation of education with a view to the co-construction of a more just, humanitarian and democratic society. This is "the factor that justifies the existence of schools,

of any school, as spaces of cultural socialisation that are decisive in the world and in the societies in which we live, thus becoming an unavoidable reference of the work produced therein by teachers and students" (Trindade & Cosme, 2016, p. 1033). This is so because "education that prioritises deliberate, thoughtful engagement with knowledge helps to build epistemic, cognitive and reparative justice" (UNESCO, 2021, p. 65).

It is therefore a collective commitment based on the principles of inclusion to guarantee the learning of each and every student, regardless of their origins, abilities, or individual circumstances. In order for schools to fulfil their democratic role, they must recognize and value diversity and therefore promote respect for human dignity. Building an inclusive and therefore democratic school involves combating the structural inequalities that can perpetuate the exclusion and marginalisation of certain social groups, contributing to the construction of a fairer and more equitable society based on the democratic principles of equality and justice for all.

It is in this sense that UNESCO (2021) summons us to the construction of a new social contract for education, from a curriculum design that is based on principles of cooperation, collaboration and solidarity, in which teachers and students are agents of integrative and interdisciplinary knowledge. Morin (1999) problematizes the school experience of developing a curriculum from "disunited, divided, compartmentalised knowledge" (p. 40) while society is crossed by "realities or problems that are increasingly multidisciplinary, transversal, multidimensional, transnational, global, planetary" (p. 40). The incoherence of the fragmentation of knowledge can only be overcome through a plausible relationship between unity and multiplicity as an opportunity for students to make culturally significant connections between different areas of knowledge and to mobilise knowledge in concrete situations. This is a notion that values and acknowledges that the school continues to be a space of socially constructed knowledge in its ecological, intercultural and interdisciplinary dimensions, and that is concerned with "the acquisition of knowledge as part of the common heritage of humanity, and the collective creation of new knowledge and new worlds" (UNESCO, 2021, p. 64). To this end, curricula must be rethought through democratic processes, considering the learning subjects as beings capable of autonomy, responsibility and engagement, in a process that promotes the students' agency and their ability to make informed and ethical decisions (Biesta, 2013).

Acknowledging students' agency, as critical and interventional beings, capable of dealing with the complexity of the problems that cut across society—democratic, economic, educational and environmental disparities -, and contributing to the construction of more just and sustainable societies, requires, once again, rethinking the

social mission of the school. Indeed, "by educating about basic rights and for the dignity and freedom of all people, education itself must become a site for the promise of equality to be fulfilled" (UNESCO, 2021, pp. 73–74). The curriculum must be framed in a fluid condition, a viscous one, that highlights education for global citizenship, from a political and ethical dimension (Biesta, 2013) that prepares students for the co-construction of a democratic society. Nevertheless, the democratic processes themselves must be strengthened in education, through students' participation in the definition of learning contents, environments and objectives. Therefore, it is crucial to build a dialogue between scientific knowledge and the knowledge inherent to social practices, under the awareness that "curricula must account for the fact that the knowledge commons retains significant exclusions and appropriations that require correction in the light of justice" (UNESCO, 2021, p. 65). As Goodson (2006) points out, curriculum-making is related to cultural, political and economic power and, therefore, mirrors power relations at any one time.

In this context, to overcome the 'decoupling' between 'societal', formal institutions (which seem more and more distant from fragmented individuals, and unable to address their needs) and the 'communal' processes (which are increasingly taking the form of isolated, and in this sense exclusionary, communities) relations have to be grounded on resonance (Rosa, 2019). This means that relations must have an affective openness to the other as well as an acknowledgment of the other's differences, considering a process of identity construction that offers a permanent dialogue between the self and the other, society and the environment, people and technology, or democracy and the territory. Here, the dialogue is a tool for the co-construction of knowledge and for overcoming the relations of oppression, from a theoretical-practical dialectical unity in which critical reflection about the world questions the power structures through awareness and the search for a transformative action in its social dimension (Freire, 2016).

Indeed, in the next section, the article addresses how the school core, curriculum, simultaneously significant and signifier, built by school actors and something that builds them, can establish that dialectical relation between the constructed knowledge and the agency of its actors. While the curriculum may emerge as a central element in education, reflecting society's changing values and influencing the way knowledge is approached, a question arises: can the curriculum be truly democratic? This article also explores the various epistemological movements that lead to different curricular paradigms, considering the principles of freedom, equality and solidarity.

Towards a democratic curriculum

The concept of a *grammar of schooling* (Tyack & Tobin, 1994), in other words, "the regular structures and rules that organise the work of instruction" (p. 454) contains a principle that explains the organisation of knowledge in the school. This organisation was adopted in the eighteenth century and thus far prevalent in school institutions almost all over the world. This is the old concept of *class* which shapes the organisation, not only of students and the teachers' work, but also of the curriculum, based on subjects. This segmentation of the curriculum in subjects is submitted to another fractioning along two dimensions: horizontally, since several subjects coexist at each school level; and vertically, since these subjects are distributed by the different school levels.

Despite a genesis shaped by the notion of class, it is possible to identify in the history of curriculum and its epistemological movements, several notions that reveal social changes and their influence as regards what the school should be and address within the scope of official knowledge, but also the introduction of new ways of understanding the school curriculum, introducing new paradigms and new concepts.

Still, throughout the years the curriculum took on a central role in the school, stabilised from the school *ethos* as work *locus* with, on and for knowledge. Although this set of features — class, subjects, teachers, school timetable, and classroom — has confirmed the curriculum's key role in education, major changes have been made in the purposes of education, as well as in the type of knowledge considered in the official curriculum proposal, with clear consequences for the ways of addressing that knowledge.

Considering the curriculum as democratic pushes us to question the different epistemological movements leading to different curricular paradigms in order to identify the characteristics that may inscribe the curriculum within a democratic paradigm. Despite its exclusionary nature (Goodson, 2006), since it is built as a prescription, the curriculum can be conceptually reconstructed if the principle of democracy prevails in education. According to Biesta (2013), the issues of education are also issues of democracy as the transformation of individual desires into what can be collectively desirable, according to freedom, equality, and solidarity.

In this sense, the school is the space for the practice of democracy and its principles, to which the curriculum, the democratic curriculum, contributes, taking on three tangibilities:

(i) freedom in autonomy and participation;
(ii) equality in authenticity and co-creation; and
(iii) solidarity in cooperation and trust.

As stated above, the viscous curriculum articulates non-hierarchical interactions between the three internal critical elements based on the following framing:

– **Knowledge** — understood not as a set of contents or skills that the school must develop, but as the path through which people know the world. Rather, it is a process towards and not an end in itself. It does not disregard the major scientific areas, but implies a distinct organisation of knowledge from the one that is the most hegemonic, the disciplinary. Biesta (2013) stresses this is not only a cognitive conception, it is above all a conception that places people in relation to reality, promoting sustenance and suspension, in the sense that there is support for the difficulty, and time, space and forms for an education centered on the world and, therefore, on human dignity.

– **Pedagogy** — in a world where everyone's desires become central, education must work in the middle ground as a place of permanent dialogue between the self and the environment. According to HKW (2017), educators should foster eccentricity by trying to exist in a 'grown-up way' (20:32). This means a non-student-centred pedagogy, looking for each individual's satisfaction. Therefore, the educators' task should be based on 'arousing the desire in another human being for wanting to exist in the world in a grown-up way,' leaving behind the moralising pedagogy based on telling students what their wishes should be.

– **Assessment** — a genuinely democratic, complex pedagogical process that comes close to questioning and transformation, and which, therefore, distances itself from metrics and the normative framework. Pedagogical assessment is developed based on the definition of criteria, i.e. indicators of the learning developed through a task (Scriven, 1991). In this way, the criteria support the construction of a benchmark that allows an assessment of the learning actually carried out by the students in relation to the aims considered and the objectives guiding the action. Furthermore, pedagogical assessment is part of an ipsative benchmark, which does not compare students' learning with the stage of development of their peers, as is the case of a standardisation approach. Rather, it compares their development with criteria and with previous learning moments and their own learning stages. Thus, it is not limited to pre-defined criteria, but also considers the learning context, students' needs and interests, in a dimension of qualification. From this perspective, assessment takes on a pedagogical nature, because it distances itself from a normative approach linked to classification processes. More specifically, it is an assessment that is committed to promoting learning and is therefore integrated into curriculum development through teaching and learning, defining strategies for overcoming difficulties, and adjusting teaching strategies. In this way, and based on Biesta (2013), it also includes a second dimension of socialisation, because it recognizes students' involvement with others and with the world, as active and co-responsible participants who interact in community. It assumes students are capable of engaging democratically in society, fostered by the opportunity for reflection promoted by assessment. This same reflective process integrates the third dimension — subjectivization -, it is also an opportunity for the development of students' identity and subjectivity, as it recognizes the importance of the expression of singularity.

To develop the viscous curriculum, a narrative learning approach should be considered,

> a type of learning that develops in the elaboration and ongoing maintenance of a life or identity narrative (…). This type of learning has come to be seen as central to understanding how people learn throughout their lives, and it requires a different way of researching and elaborating in order to understand this type of learning as opposed to more traditional forms of formal or informal learning (Goodson, 2007, p. 248).

In this context, the narrative learning approach shapes the curriculum concept itself as well as the learning development based on narratives. According to Goodson and Crick (2009),

> first there is the life narrative of the learner; second the narratives of the community of which the learner is a part and third, the narratives embedded and uncovered by the learner in the process of co-constructing knowledge. Our argument is that when the three horizons of these narratives coalesce in a learning project, then the learning that takes place is personal, transformative and enduring. Not only is the learner constructing new knowledge in response to a particular problem – in an outcome which is measurable in the usual way - but in doing so she or he is narrating their own story through the curriculum (p. 226).

Understanding the curriculum as a narrative implies assuming that the main thread of the story is the subject, who relates to and gives meaning to the content. In this sense, in order to develop the curriculum as a narrative, we must ask ourselves: How can students get involved and deepen their knowledge and understanding of scientific content, understanding it as part of their daily lives? This reflection, based on students' prior knowledge, can support the construction of a logical sequence in which, as each core concept is taught and developed, scientific knowledge is introduced and deepened, establishing relationships with other domains and

concepts—through connections both internal and external to the discipline. It is therefore important for each student to see themselves as the builder of this narrative. To this end, it is important that they understand the reasons why the concepts they are working on are relevant to their lives and to society. As such, "the teacher must mediate by constructing a narrative that takes the learner to another place, which is 'narrative learning' and the inheritance of 'narrative capital'" (Goodson & Petrucci-Rosa, 2020, p. 13).

In this narrative and authorial exercise, with students as protagonists of their own learning, there is an interactive articulation between scientific knowledge — the engine of history -; pedagogy — by recognizing the existence of each student and the commitment to their development -; and assessment — by the action of self-reflection that can lead to self-regulation. This exercise is thus an embodiment of a viscous curriculum. Based on how literary stories work to engage their readers, Dietiker (2015) designed mathematical experiments that engaged students to interact with the scientific content and to inquire spontaneously. The sequence of mathematical tasks structured around a narrative in which the "content is slowly (or quickly) "revealed" or "obscured" for students" (Dietiker, 2015, p. 2) was designed. The elements, in adapted form, are:

i) Engine: mathematical content, such as numbers or functions.
ii) Action: the work based on mathematical content, such as adding numbers or transforming objects.
iii) Scenario: the way in which the engine and action are represented, such as manipulating concrete materials on a table or transforming geometric objects created with dynamic geometry software.

The interaction between the content, the action and the mathematical scenario requires us to reflect: "How does the mathematical content unfold throughout the sequence; Where and what are the aesthetic opportunities for students and teachers? Who are the mathematical characters?" (Dietiker, 2015, p. 2).

Along the same lines, the dynamic for the renewal of education that is underway in a network of schools run by the Society of Jesus (Jesuits) in Catalonia, first called *Horizonte 2020* and now *Horizon+* (see https://www.fje.edu/en/fje), is an example of a systemic change based on the narrative learning approach. This project is based on a different way of conceiving curriculum, a different way of organising teachers´ and students' pedagogical work, a different way of managing time and spaces. In this sense, people are at the centre of education; the curriculum is reconfigured by each school according to its own students; the spaces are variable, but large; classes may last longer; a class with 20 or 30 students is no longer the standard; Dewey's master pedagogical principle of "learning by doing" is followed; the replacement of textbooks with digital technologies is the norm; teachers work collaboratively (Alves & Cabral, 2017).

Also, the project called *Pedagogical Innovation Pilot Project* (PPIP), carried out in Portugal between 2016 and 2019, was designed by six schools with the aim of redefining the curriculum approach. Each school steered its own path trying to draw close to a democratic curriculum, and these schools show "clear signs of their ability to take ownership of the curriculum and manage it coherently and articulately, investing in the diversification of teaching–learning and assessment practices, as well as involving students more actively in these processes" (Costa & Almeida, 2019, p. 4).

These are examples of how the fragmentation of knowledge in disciplines as previously defined can be overcome, with a view to a dialogical construction of knowledge from an identity narrative. The students construct narratives that span curriculum development from the understanding of the fundamental curricular concepts while constructing their own life narrative and creating a narrative capital that can outperform social capital. It is, then, a potentially flexible narrative capital that can be adjusted according to the challenges that may be encountered throughout curriculum development. The viscous curriculum is, therefore, ensured by the common heritage providing memory. This gives it resistance to permanent changes brought by technology, and developed in a narrative landscape, allowing a contextualised identity construction.

Assuming the curriculum as a resource of and for the development of learning, it is essential to reflect on the prescriptive rationale that has defined the curriculum, reducing the teaching action to technical work in a relationship of exclusive reproduction of what is built outside the teacher profession (Lima, 2020). It is in this sense that Goodson (2008) stresses the importance of a collective questioning of the validity of curricular prescriptions, and the urgency of the shift to another paradigm that considers a narrative conception. Pedagogical paradigms are at the centre of the reflection developed in the following section, assuming teaching action includes a dimension of curricular decision-making and management, from an identity perspective as it constructs the very narrative of life. This is a setting that argues that the curricular dimension can integrate the purposes, dreams and life searches of every and all individuals, in a rationale of power transfer and transformation of the schools themselves, which would then constitute the very vectors of transformation of their students' social future Goodson (2008).

Fostering culturally significant and humanely empowering learning

The understanding of the notions of learning, teaching and assessment is related to a series of social, cultural and pedagogical climates that influence the vision of the very

pedagogical act and, consequently, the roles that students and teachers assume in this process.

Traditionally, the organisation of pedagogical work resorts to the simultaneous teaching mode, with students lined up facing the teacher, understood as the only one person responsible for the most decisive pedagogical act. This organisation is based on the epistemological belief that classes are homogeneous and, therefore, the teacher must (and can) teach and assess everything and everyone as if they were only one (Barroso, 1995). This is a rationale subject to the assumptions of the pedagogical paradigm of instruction (Trindade & Cosme, 2010), in which pedagogical practices are carried out from a verticalization of the relationship, in a non-democratic space – because it is imposed and not co-constructed.

From the perspective of the pedagogical paradigm of instruction, the notion of learning comes close to a "process of accretion, in which the rationale of storing and repeating information overrides the rationale of knowledge production" (Canário, 1998, p. 3). Nor is there the appreciation of dialogue from a horizontal relationship, the notion of teaching is assumed as issuing notices and moves away from what is an act of communication. Thus, being a teacher becomes the subject of a narration that leads students to memorise and mechanically repeat what was narrated (Freire, 2016), previously determined and not constructed simultaneously with the construction of each individual's identity.

The idea present in the paradigm of instruction is based on a perspective in which "it is all made 'for listening' – because simply studying lessons out of a book is another kind of listening" Dewey (1907, p. 32), in a rationale in which the narrative of a book might replace the narration of the teacher. Thus, students are reduced to silence (Perrenoud, 1995), which discourages the students' intellectual curiosity that might lead them to assign meaning to the information imparted.

This approach neglects the students' role as participants in their own education project, so that the relation of the students with what is supposedly seen as knowledge is reduced to the acquisition of what Charlot (2000) calls "object-knowledge". That is to say, an acquisition that is circumscribed to the transition process from non-possession to possession of unquestionable knowledge, "for all eternity" (Perrenoud, 1995, p. 213), which materialises in empirical objects, such as the manuals provided by the school, with contents known to teachers (Lahire, 1993), ready to be transferred in a logic that theory and practice have a mere relationship of application (Canário, 1998). Of course, it cannot be denied that this rationality shaped education in a specific time, space and historical context, such as when the goal was mass schooling. Nor can it be ignored that certain groups, especially the disadvantaged, benefited from traditional education as an opportunity for social mobility.

However, this definition supports the belief that it is possible to access a certain piece of knowledge and accept its existence without any inquiry (Magalhães, 1998) — leading to the question of whether this assumption responds to current societal challenges. In other words, it discards that students can be interpreters, producers of meanings, and co-builders of knowledge; limiting students' actions to that of uncritical performers, and curtailing their right to be co-authors of their own education, since "being born means being subjected to the obligation of learning" (Charlot, 2000, p. 53).

It is in this sense that the paradigm of instruction is based on a misconception by assuming that to know is to accumulate information that has been the object of transfer, because the process of constructing knowledge results from the search, the debate, the questioning, the reflection to which we subject the information we receive in interaction with our peers (Trindade & Cosme, 2010) and from a transformative action on its reality; besides claiming a critical reflection on the part of the subject, and their understanding of the assumptions of the knowledge they hold (Freire, 2015).

As an alternative to the paradigm of instruction, we could then agree with Piaget (1990) that learning involves "conquering by oneself a certain kind of knowledge, by undertaking free research, and through spontaneous effort, [which] will lead to retaining it much more" (p. 76) and acknowledging that it is the students' types of knowledge, interests and needs that should constitute the basis for the work to be developed in the classroom, as defended by the pedagogical paradigm of learning in the words of Trindade and Cosme (2010). Let us recall Bernstein's theory of language code (Bernstein, 1999), when he reflects on the integration of common-sense knowledge (segments of the horizontal discourse) in the pedagogical discourse as a factor to ensure accessibility to the curriculum, especially through overcoming of elitism and the possibility of an epistemological authoritarianism of the vertical discourse, corresponding to scientific discourse. Nevertheless, with a view to legitimising both discourses, it should be underlined that, if the horizontal discourse gains more status than the vertical discourse, there will be a barrier to access to each subject's assets by the more disadvantaged students, thus perpetuating inequalities. It is from this perspective that pedagogical work must not remain hostage to the students' interests, even though they may constitute the base for the work. The role of cultural empowerment assigned to the school cannot be underestimated, nor can the opportunities provided by the school curriculum for the presentation of the world and the clash with other perspectives, knowledge and attitudes (Cosme, 2018). In fact, the presence of a vertical discourse in the pedagogic discourse that considers not only its vocabulary but also its syntax is fundamental in the struggle against social inequalities.

We must bear in mind that it is not enough for students to access a type of information to enable them to establish relationships, build knowledge and mobilise knowledge. Moreover, it does not seem prudent to believe that students will always be willing to learn throughout the educational process, in a rationale of cultural self-sufficiency. The paradigm of learning perspective refers to the teaching action only to the role of mediation of the relationship of the students with the information that they decide to access, detached from previous curricular and pedagogical intentions, in a clear concern with the "development of subjective exchanges" (Bruner, 2000, p. 85), in other words, centred on the development of students' cognitive and relational skills.

Thus, the paradigm of learning, in its student-centric view, does not constitute a challenging alternative to the teacher-centric view of the paradigm of instruction, because it is not a question of opposing the act of teaching to the act of learning. It is along this line that the recognition of an alternative to the pedagogical paradigm of instruction is based on the notion of the pedagogical paradigm of communication (Trindade & Cosme, 2010), in which students' learning is the main concern. Therefore, the occurrence of educational actions in contexts of social interaction is fundamentally valued, so as to be able to promote and foster such student learning. To put it differently, the reference to the pedagogical work to be developed values the quality of the interactions that take place in the classroom environment, from the relationship between the subjects and the knowledge heritage built throughout the history of humanity, in a clear relationship with its status.

This is a reflection on the assumption of diversified roles of teachers' and students' actions, so that the teacher does not replace the students, coming closer to the role of instructor, nor leaves them to their own devices, in a logic of cultural self-sufficiency, as in the role of the teacher as a facilitator/mediator. On the contrary, the challenge lies in thinking of the teaching action as an action of qualified dialogue (Cosme, 2009), responsible for the establishment of relations that it fosters between the students and the cultural heritage to promote both learning and the development of other expected skills, while questioning and being questioned within a learning community (Cosme & Trindade, 2013). Cultural heritage is understood as "the heritage of information, tools, procedures, and attitudes that serve as the reference for the work to be promoted in a classroom" (Cosme, 2018, p. 8), which forms the basis of school curricula.

Indeed, in order to learn individuals need a relationship of confrontation with others, and such confrontation requires from us a cultural dialogue, also with others who "at that moment [are] more capable and experienced, whose function is not only to provide the conditions that are necessary for the realisation of learning, but also to offer those subjects the possibility of verifying the existence of objects of knowledge that may become, or not, the objects of reference of their learning" (Trindade & Cosme, 2016, p. 1049).

In this sense, the teacher stimulates, negotiates and creates the conditions for the students to be autonomous, capable of using and adapting the cultural tools, the information and the proposed procedures, as well as becoming critical of the world around them. Therefore, teaching involves building educational challenges that can promote the development of culturally meaningful and humanly empowering learning. This is a process in which the relationship with knowledge ceases to be a relationship with an "object-knowledge", since it is the result of the various processes in which students, from the interpretation of their position in the context in which they are inserted, are required to face the need to learn as well as the multiple forms that knowledge takes on.

From the perspective of the communication paradigm, learning is the appropriation of the available cultural heritage, that is, of the "set of information, instruments, procedures, attitudes and values" (Trindade & Cosme, 2010, p. 22) present in the curriculum and whose importance is recognized. Appropriation here means the attribution of meaning to cultural heritage through a process of re-creation based on the proposition of epistemological challenges. This part of the cultural heritage is shared, used and recreated throughout the process of both affirmation and personal and social development of the students, in reference to the society in which they are inserted. It is from the appropriation of the elements that constitute this cultural heritage, from the confrontation and consequent relationships they establish with it, that students will be able to broaden their vision about and grasp of the world and, thus, understand the limitations of their personal knowledge.

The reflections on the beliefs and conceptions of ontological and epistemological nature present in the paradigm of instruction and in the paradigm of learning evidence the distancing of their assumptions and the pedagogical implications of those subordinated to the paradigm of communication. The consideration of the construction of educational projects takes into account the students' agency and the status of the so-called common cultural heritage, in an analysis that varies according to such beliefs and conceptions. While in the paradigm of instruction, it is understood that "heritage is an entity as nuclear as it is unquestionable" (Trindade & Cosme, 2016, p. 1044), in the learning paradigm there is a devaluation of the cultural dimension to the detriment of the development of cognitive and relational skills as factors that precede the appropriation of the decisive slice of the available cultural heritage. It is in this sense that the paradigm of communication acknowledges that such heritage is the result of a social construction that is aimed at responding to the challenges it has faced throughout its own history and, therefore, admits that human beings are not born culturally self-sufficient.

This premise challenges us to see the school as a place of decision-making and curriculum management, to assume the pedagogical activity as an activity of research and intervention, which can be implemented from the reflection of the various subjects of the educational community and the relationship between them. In this sense, the reflection on the pedagogical work cannot be disengaged from the understanding of the school as a social, cultural and, above all, democratic project, from the collective commitment to promote culturally significant and humanly empowering learning.

Final remarks

The COVID-19 pandemic recently did not entail a new world, it merely accentuated the insecurity, instability, and uncertainty trends of the life forms. These trends were again exacerbated and accelerated with a war in a Europe that had lived in peace for over 50 years and, as a consequence, that, created a stability that allowed the fight against the social inequalities that had arisen in long periods of lack of democracy.

Taking the European context as an example, what any citizen is currently facing is the possibility of radical life changes and the requirement of adapting almost permanently to unforeseen or improbable realities. In this context, promoting social justice, by fighting inequalities, some of which are structural in our societies, is a mission of education within a democratic culture. And this culture is fostered and defended in a set of principles that regulate what constitutes the centre of the school, the curriculum.

Let us return to the questions asked at the beginning – How, then, can the school respond to the current challenges without losing its identity? How can schooling combine individual and collective needs? How can the school contribute to the construction of an inclusive social cohesion, guided by the principle of social justice? How can the school consider valid knowledge coming from subaltern cultures not recognized as scientific? How to build an integrated curriculum combining technical, social and personal knowledge? Above all, these questions can be the driver to reflect critically on other conceptual possibilities for the school curriculum with a democratic nature, based on the specific nature of each context.

Assuming education, and the school in particular, as a space of resistance but also of transformation and emancipation prompts us to question a social construction that is more than two centuries old, that served the purposes and mandates of a society that changed and took on different forms. To legitimise itself, the school must then meet new mandates in the name of the defense of a set of democratic values that society deems crucial for the survival of the human being.

It is therefore a move away from instructional practices towards a pedagogical rationality that recognizes the construction of culturally significant and humanly empowering learning, under the logic of the pedagogical paradigm of communication.

In this sense, if the curriculum is to be claimed by both teachers and students, it must, simultaneously, respond to the challenges set forth here and favour a future construction based on citizenship of full rights and duties. However, if the notion of the curriculum can be subordinated to several assumptions and states, it should be emphasised the importance of what has been called a 'viscous' state (Estrela, 2023). In other words, a curriculum that presents a consistency that allows it to maintain its internal structure, relevant in liquid times, while, at the same time, including characteristics of communicability with the external conditions that influence and shape it.

This involves recognising the curriculum "as an educational process based on solidarity, compassion and collective agreements" (Goodson & Petrucci-Rosa, 2020, p. 3) and the "curriculum knowledge as a social process, produced by multiple actors in different fields or levels" (Estrela, 2012, p. 109). This is a process that requires co-creation from a dynamic interaction between these different actors. The communication paradigm takes on more significance since the curriculum is understood as the locus of confluence of the times – past, present, and future – assuming greater fluidity, not only to enable the dialogue between different periods, but also to ensure it does not remain trapped in the past, finding answers to the challenges of the present, envisaging the future. This human interaction assumes curriculum as conversation (Mcknight, 2023), focused on the management of relations between students and the common cultural heritage, connects the social and the personal, the public and the private (Ball & Goodson, 1985; Goodson, 1983, 1991, 2013; Pinar, 1975, 2007), the formal with the non-formal.

The refraction movements (Goodson, 2010) are, in this context, an important concept to understand how curriculum policies are assumed at each level of construction. The author pointed to the key role of the process of refraction in understanding the phenomena of educational importation. Each time there is a change in level or players, curriculum policies are altered, according to the actors operating in different fields, within an economic, political and social context. Taking curriculum policies as a process, a continuum, and observing the transnational dimension, not as a hierarchical space, from a top-down perspective, but as a relational process, drives research to analyse national and personal trajectories. According to Goodson (2019), "The emerging patterns of 'refraction' began to lead scholars to study the interaction between global systemic narratives and national and local patterns of definition and delivery" (p. 24).

In this context, the narrative approach manifests itself as the pendulum activating the different forms the curriculum takes on, based on continuity, solidarity, community and participation, values of a democratic culture. This framework also promotes cognitive justice by introducing other types of knowledge besides the scientific in the school curriculum, and enables the construction of identities based on the knowledge of the self and in the relation of the self with others and with the world. Indeed, social human beings benefit from the support of others to assign meaning to the challenges faced, and also for each personal and social construction and assertion. Cultural heritage is a social construction that evolves to meet the challenges encountered throughout history, thus affirming that human beings are not culturally self-sufficient, as the pedagogical paradigm of communication advocates.

Social relations are relations of interdependence, each human being is unique, and education must be an emancipating act that enables the fulfilment of the feasible uniqueness in the life of each individual (Freire, 1968, 1992, 2000). In this sense, situating the curriculum beyond the issues of knowledge, skills and attitudes taught in the classrooms, integrating issues and strengthening the interrelation between its three critical elements is the key of becoming the way to promote more democratic futures for all and each individual – even in a context of de-democratization. It is, therefore, a question of assuming the curriculum as a polysemic concept that goes beyond just an "ordered sequence" and "the totality of studies", but manifests itself as "defined in terms of a project, incorporated into programs/plans of intentions, which are justified by educational experiences in general and learning experiences in particular" (Pacheco, 2001, pp. 15–16).

In today's uncertain, unstable, and unpredictable world, it's vital to strike a balance between preserving our historical heritage and addressing individual interests and needs. Adopting a flexible curriculum that resists permanent change while allowing for necessary adjustments in different contexts can be the answer. In an analogy with physical concepts, this viscosity requires finding the balance between the socio-political and economic factors driving changes in education and the historical and cultural factors that ensure memory and professional culture. Narrative learning is the approach that also ensures the connection between the three critical internal elements of the curriculum, which develop their relationship through the communication paradigm.

The challenge of creating a democratic and culturally relevant curriculum requires the integration of multiple voices and perspectives from the construction of narratives that foster the development of identity. The democratic curriculum values the uniqueness of all and each individual, and acknowledges the diversity of the contexts. Thus, this also refers to inclusion, in which students are actively involved in the learning process, while they have the opportunity of developing a sense of belonging to a community. This perspective thus becomes an opportunity for the construction of a more democratic and meaningful educational path, since it invites all to rethink the social mission of the school, recognising its transformative potential as well as its role in the construction of a fairer and more egalitarian future.

Declarations

References

Alves, J. M., & Cabral, I. (2017). *Uma outra escola é possível: Mudar as regras da gramática escolar e os modos de trabalho pedagógico*. Faculdade de Educação e Psicologia da Universidade Católica Portuguesa.

Ariyanti, E. S., & Agus, M. (2010). Otomasasi pengukuran koefisien viskositas zat cair menggunkan gelombang ultrasonik. *Jurnal Neutrino, 2*(27), 183–192. https://doi.org/10.18860/neu.v0i0.1640

Ball, S., & Goodson, I. (1985). *Teachers' lives and careers*. Falmer Press.

Barroso, J. (1995). *Os liceus: Organização pedagógica e administração (1836 - 1960) - Vol. I* Fundação Calouste Gulbenkian e Junta Nacional de Investigação Científica e Tecnológica]. Lisboa.

Bauman, Z. (2007). *Liquid times. Living in an age of uncertainty*. Polity Cambridge Press.

Beck, U. (1998). *Risk society: Towards a new modernity*. Sage.

Bell, D. (1973). *The coming of post-industrial society: A venture in social forecasting*. Basic Books.

Bernstein, B. (1999). Vertical and horizontal discourse: An essay. *British Journal of Education, 20*(2), 157–173.

Biesta, G. (2013). *The beautiful risk of education* (1st ed.). Taylor and Francis.

Bruner, J. S. (2000). *Cultura da educação*. Edições 70.

Canário, R. (1998). Aprendizagem, experiência e currículo. *Ensinus, 13*, 2–4.

Castells, M. (2000). *The rise of the network society* (2nd ed., Vol. 1). Blackwell.

Charlot, B. (2000). *Da relação com o saber: Elementos para uma teoria* (B. Magne, Trans.). Artes Médicas Sul.

Cosme, A. (2018). *Autonomia e flexibilidade curricular: Propostas e estratégias de ação* (1ª ed. ed.). Porto Editora.

Cosme, A. (2009). *Ser professor: A acção docente como uma acção de interlocução qualificada*. LivPsic.

Cosme, A., & Trindade, R. (2013). *Organização e gestão do trabalho pedagógico: Perspetivas, questões, desafios e respostas*. Mais Leituras Editora.

Costa, E., & Almeida, M. (2019). *Estudo de avaliação do projeto-piloto de inovação pedagógica*. DGE.

Dale, R. (2008). A globalização e o desenho do terreno curricular. *Revista Espaço do Currículo, 1*(1). https://doi.org/10.15687/rec.v1i1.3640

Deutsch, K. W. (1984). Bildung in der informationsgesellschaft. In *Computer+ Bildung* (pp. 32–42). Bundesministerium für Forschung und Technik.

Dewey, J. (1907). *The school and the society*. University of Chicago Press.

Dietiker, L. (2015). Mathematical story: A metaphor for mathematics curriculum. *Educational Studies in Mathematics, 90*(3), 285–302.

Estrela, E. (2023). Curriculum as the fluid for times of unsureness: In between the solid and the liquid. In P. P. Trifonas, & S. Jagger (Eds.), *Handbook of curriculum theory and research*. Springer.

Estrela, E. (2012). From prescribed to narrative curriculum – an attempt to understand educational change in Portugal. In H. Cuadra-Montiel (Ed.), *Globalization - education and management agendas* (pp. 109–150). IntechOpen.

Freire, P. (2015). *Extensão ou comunicação?* (R. D. d. Oliveira, Trans.; 17ª ed ed.). Paz e Terra.

Freire, P. (2016). *Pedagogia do oprimido* (60ª ed ed.). Paz & Terra.

Freire, P. (1968). *Educação como prática da liberdade*. Paz e Terra.

Freire, P. (1992). *Pedagogia da Esperança: um reencontro com a pedagogia do oprimido*. Paz e Terra.

Freire, P. (2000). *Pedagogia da indignação: cartas pedagógicas e outros escritos*. Editora UNESP.

Goodson, I. (2019). From mystification to markets. In I. G. Gary McCulloch, & Mariano González-Delgado (Eds.), *Transnational perspectives on curriculum history* (pp. 12–26). Routledge.

Goodson, I. (1983). Life histories and teaching. In M. Hammersley (Ed.), *The ethnography of schooling* (pp. 129–154). Nafferton Books.

Goodson, I. (1991). Sponsoring teacher's voice. *Cambridge Journal of Education, 21*(1), 35–45. https://doi.org/10.1080/0305764910210104

Goodson, I. (2006). The rise of life narrative. *Teacher Education Quarterly, 33*(4), 7–21.

Goodson, I. (2007). Currículo, narrativa e o futuro social. *Revista Brasileira de Educação, 12*(35), 241–252.

Goodson, I. (2008). *As políticas de currículo e de escolarização: Abordagens históricas*. Editora Vozes.

Goodson, I. (2010). Times of educational change: Towards an understanding of patterns of historical and cultural refraction. *Journal of Education Policy, 25*(6), 767–775.

Goodson, I. (2013). *Developing narrative theory: Life histories and personal representation*. Routledge.

Goodson, I., & Crick, R. D. (2009). Curriculum as narration: Tales from the children of the colonized. *Curriculum Journal, 20*(3), 225–236.

Goodson, I. F., & Petrucci-Rosa, M. I. (2020). Curriculum as narrative: crossing borders for a decolonized education. *Narrativas de Maestras (os) y Normalistas en el Giro Decolonial, 8*, 15.

HKW. (2017). *Gert Biesta: The beautiful risk of education* [Video]. YouTube. https://www.youtube.com/watch?v=QMqFcVoXnTI. Accessed 1 Feb 2024.

Lahire, B. (1993). *Culture écrite et inegalités scolaire: Sociologie de <l´échec scolaire> à l´école primaire*. Presses Universitaires de Lyon.

Lane, R. E. (1966). The decline of *politics* and ideology in a knowledgeable society. *American Sociological Review, 31*, 649–662.

Lima, L. (2020). *O ensino-aprendizagem-avaliação de matemática através da resolução de problemas: intencionalidades, ações e reflexões dos docentes*. Universidade do Porto.

Magalhães, A. (1998). *A arte ensinar – Dos clássicos aos modelos pedagógicos contemporâneos*. Plátano Edições Técnicas.

Maheshwar, M. (2018). A review article on measurement of viscosity. *International Journal of Research in Pharmacy and Chemistry, 8*(1), 69–77.

Mcknight, L. (2023). It's complicated! Becoming an academic in feminist curriculum inquiry. *Curriculum Perspectives, 43*, 85–87.

Morin, E. (1999). *Ciência com consciência* (M. D. Alexandre & M. A. S. Dória, Trans.). Bertrand Brasil. (1991).

Pacheco, J. A. (2001). *Currículo: teoria e práxis*. Porto Editora.

Perrenoud, P. (1995). *Ensinar: agir na urgência, decidir na incerteza*. Artmed Editora.

Piaget, J. (1990). *Para onde vai a educação?* Livros Horizonte Lda.

Pinar, W. (1975). *Curriculum studies: The reconceptualization*. McCutchan Publishing Company.

Pinar, W. (2007). *O que é a teoria do currículo*. Porto Editora.

Robertson, S. L. (2008). Professoras/es são Importantes, Não? Posicionando as/os Professoras/es e seu Trabalho na Economia do Conhecimento Global. *Revista Electrónica Espaço do Currículo, 1*(1), 34–64.

Rosa, H. (2019). *Resonance: A sociology of our relationship to the world*. Wiley.

Scriven, M. (1991). *Evaluation thesaurus*. Sage.

Stoer, S., & Magalhães, A. (2003). Education, knowledge and network society. *Educação & Sociedade, 24*(85), 1179–1202. https://doi.org/10.1590/S0101-73302003000400005

Trindade, R., & Cosme, A. (2010). *Educar e Aprender na Escola - Questões, desafios e respostas pedagógicas*. Fundação Manoel Leão.

Trindade, R., & Cosme, A. (2016). Instruir, aprender ou comunicar: Reflexão sobre os fundamentos das opções pedagógicas perspetivadas a partir do ato de ensinar. *Revista Diálogo Educacional, 16*(50), 1031–1051.

Tyack, D., & Tobin, W. (1994). The ''grammar" of schooling: Why has it been so hard to change? *American Educational Research Journal, 31*(3), 453–479.

UNESCO. (2005). *Rumo às sociedades do conhecimento*. I. Piaget.

UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. International Commission on the Futures of Education. https://unesdoc.unesco.org/ark:/48223/pf0000379707