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Thinking Routines as Cultural Praxis: Reclaiming the Ethical and Epistemic Core of Education

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Abstract

This article examines the philosophical, pedagogical, and ethical dimensions of thinking routines as cultural tools that foster critical and participatory learning in education. Moving beyond their instrumental use, we conceptualize thinking routines as elements of a praxis-oriented pedagogy that supports epistemic justice, dialogic inquiry, and transformative curriculum design. Drawing on sociocultural theory, critical pedagogy, and the ethics of education, we argue that thinking routines have the potential to reshape the teacher's role, position students as epistemic agents, and align curricular form with ethical purpose. The discussion highlights the risk of instrumentalizing thinking routines within performance-oriented systems and instead advocates reinterpreting them as ethical and political practices that deepen pedagogical engagement. Ultimately, we propose that, when thoughtfully enacted, thinking routines function not merely as tools for cognitive engagement but as carriers of human subjectivity, democratic dialogue, and pedagogical renewal.

Keywords

Thinking routines,
Epistemic justice,
Dialogic pedagogy,
Curriculum design,
Ethics of education

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1. Introduction

In recent years, *thinking routines* have emerged as prominent pedagogical strategies designed to support metacognitive engagement, foster inquiry, and make students' thinking processes more visible (Ritchhart, Church, & Morrison, 2011). Originating within Harvard Project Zero's *Visible Thinking* framework, these routines are presented as simple yet powerful cognitive scaffolds that promote deeper reflection and meaning-making across disciplines.

However, the cultural and philosophical foundations of thinking routines have not received sufficient critical attention. Despite their widespread implementation in classrooms across diverse contexts, they are often framed in procedural or instrumental terms, rather than as *mediational structures*—that is, cultural tools embedded in historically and socially situated learning environments (Vygotsky, 1978). Yet epistemic tools shape not only knowing but also identity, participation, and epistemological orientation (Wertsch, 1991; Wells, 1999).

In this regard, revisiting the philosophical and ethical dimensions of thinking routines becomes essential. The literature on epistemic justice (Fricker, 2007; Medina, 2013; Anderson, 2017) demonstrates that pedagogical tools shape not only the transmission of knowledge but also the conditions of recognition, participation, and subjectivity. From this perspective, routines may serve as critical instruments for fostering epistemic agency and inclusive participation—particularly in multilingual and culturally diverse classrooms.

At the same time, the increasing dominance of measurability and performance standards in contemporary educational policy has intensified the risk of instrumentalizing pedagogy (Ball, 2017; Lingard & Sellar, 2020). Within such conditions, positioning thinking routines not merely as techniques for visible thinking but as *praxis-oriented epistemic tools* constitutes a vital step toward reclaiming pedagogy as an ethical practice.

Accordingly, this article seeks to reframe thinking routines not only as pedagogical techniques but also as *cultural technologies of thought* that hold transformative potential within educational settings. Drawing on sociocultural theory, critical pedagogy, and the ethics of education, the paper explores how thinking routines contribute to epistemic justice, dialogic participation, and praxis-oriented pedagogies. In doing so, it argues that thinking routines can be understood not solely as pedagogical mechanisms but as a *philosophical concern*—offering an original contribution to the literature on the philosophy of education.

2. Theoretical Framework

2.1. Thinking Routines as Epistemic Tools

Thinking routines are commonly understood as structured cognitive strategies that support students' abilities to observe, interpret, question, and construct meaning across disciplines (Ritchhart, Church, & Morrison, 2011). Yet beyond promoting metacognitive awareness, thinking routines can also be conceptualized as *epistemic tools*—that is, as practices that shape how knowledge is accessed, framed, and valued within educational settings.

The notion of epistemic tools originates from science studies and the sociology of knowledge, referring to the conceptual, methodological, and symbolic resources that both enable and constrain ways of knowing (Kuhn, 1970; Collins, 1990). In educational contexts, such tools are not limited to theories and frameworks; they also include classroom routines, interactional norms, and discursive structures that guide learners' cognitive and social participation. As recurring patterns of structured inquiry, thinking routines show students not only *what* to think but *how* to think—and, perhaps more importantly, whose voices are heard and recognized in the process.

This epistemic dimension is crucial for designing equitable and inclusive learning environments. Wiertz and Rosé (2011) argue that epistemic tools do more than support cognition—they position learners within particular discourses and knowledge systems, thereby shaping participation and identity. Similarly, Vossoughi, Hooper, and Escudé (2020) emphasize the significance of *epistemic subjectivity* in learning environments, referring to students' capacity to frame problems, make judgments, and challenge assumptions.

Feminist epistemology offers an important contribution at this point. José Medina (2013) contends that epistemic tools regulate not only the production of knowledge but also the forms of justice and recognition embedded within it. Likewise, Kristie Dotson (2012) and Gaile Pohlhaus (2017) demonstrate how educational contexts may reproduce *epistemic oppression* by failing to acknowledge the epistemic capacities of certain students. From this perspective, thinking routines are not merely metacognitive habits but epistemic mechanisms that can either facilitate or hinder students' recognition as knowing subjects.

Understanding thinking routines as epistemic tools, therefore, introduces a deeper philosophical perspective on their pedagogical power. This approach reveals not only the cognitive benefits of routines but also their role in shaping the epistemic norms and practices of a learning

community. For educators, this means designing routines not as technical strategies but as instruments that open spaces where epistemic subjectivity and inclusive participation can flourish.

2.2. Vygotsky's Theory and Cultural Tools

Lev Vygotsky's sociocultural theory offers a powerful framework for understanding how thinking and learning are mediated by culturally developed tools. According to Vygotsky (1978), human cognition does not develop in isolation; it emerges through social interaction, with language, symbols, and tools serving as mediators of higher mental functions. These cultural tools not only support individual learning but also serve as vehicles for internalizing the norms, values, and epistemic practices of a community.

From this perspective, education is fundamentally a process of cultural transmission and transformation; learners do not merely acquire knowledge but also participate in historically situated ways of knowing (Wertsch, 1991). Cultural tools—such as spoken and written language, diagrams, gesture systems, and even digital platforms—are not neutral channels of information transfer; they embody particular modes of thinking and ways of organizing experience.

Through a Vygotskian lens, thinking routines can be understood as semiotic tools that mediate both the content and the forms of participation in learning—structured and recurring discursive patterns. They guide learners not only in *what* to think but also in *how* to participate in a shared intellectual activity. In this sense, thinking routines contribute to what Cole (1996) calls "mediated action," wherein individual cognition is shaped by the social and material environment in which it takes place.

Moreover, these routines may function as what Wells (1999) terms "dialogic tools," supporting collaborative inquiry and the co-construction of meaning. Rather than privileging static knowledge, they engage students in relational and reflective interaction with ideas. This interactive function aligns closely with Vygotsky's concept of the *zone of proximal development*, which emphasizes that learning emerges through participation in culturally valued practices.

In recent years, this theoretical legacy has been expanded through "post-Vygotskian" perspectives. Rogoff (2003) has explained learning not merely in terms of individuals' cognitive processes but through their participation in the historical practices of communities, demonstrating that cultural tools also shape identity formation. Similarly, Moll and colleagues

(1992), through the concept of "funds of knowledge," have emphasized that family and community resources constitute an essential dimension of pedagogical mediation. In increasingly digital learning environments, Säljö (2010) has extended the Vygotskian framework to contemporary *digital epistemologies*, arguing that cultural tools now operate not only through language and symbols but also through technological media.

As Daniels (2016) observes, contemporary sociocultural approaches have moved beyond the analysis of individual–environment interaction to examine how mediation functions within broader educational policies, institutional structures, and ideological contexts. This perspective allows us to understand thinking routines not only at the classroom level but also as mediators that shape the ethical, political, and cultural dimensions of the broader educational field.

Thus, thinking routines are not merely cognitive supports but *carriers of cultural mediation*. They operate at the intersection of the psychological and the social, offering learners structured ways to appropriate culturally sanctioned forms of reasoning and inquiry.

2.3. Philosophy of Education and Praxis

In the philosophy of education, *praxis* is not simply synonymous with "practice"; it captures the dynamic interplay between action and thought, between theory and transformation. Although rooted in Aristotle's works, the concept was revitalized in the twentieth century by thinkers such as Paulo Freire, John Dewey, and Hannah Arendt. Praxis refers to intentional, value-laden action nourished by critical awareness and directed toward social change.

Dewey (1938) argued that education should be understood as an experiential and reconstructive process in which thinking and doing are inseparable. Freire (1970), in turn, defined praxis as the unity of reflection and action—one that must be oriented toward confronting structures of oppression. In this framework, the learner becomes not the object of instruction but the subject of transformation. This notion of critical praxis has profoundly shaped contemporary educational discourse, particularly in relation to equality, subjectivity, and the moral purposes of education.

A major contribution to this theoretical lineage is Nel Noddings's ethics of care. Noddings (2003) re-framed praxis as an *action guided by responsiveness to the other*, arguing that education is not only a cognitive but also an ethical relationship. In this sense, thinking routines can become tools that enable students not merely to reason but to engage with others' ideas attentively and responsibly.

Similarly, Maxine Greene (1995) emphasized that praxis is nourished by imagination, defining education as a space of emancipation that cultivates individuals' capacity to see the world not only "as it is" but "as it could be." When thinking routines invite students to adopt alternative perspectives, question assumptions, and imagine possible futures, they directly embody Greene's understanding of praxis.

Hannah Arendt (1958) associated praxis with *natality*—the human capacity to initiate new beginnings. Education, from this standpoint, is not merely about adapting younger generations to an existing culture but about opening a space in which they can realize their potential to transform the world. By teaching students *how* to think, thinking routines act as instruments of praxis that prepare them for unforeseen beginnings and for the renewal of democratic life in common.

From this perspective, thinking routines can be reinterpreted not simply as pedagogical strategies but as *philosophical interventions* that structure the conditions for reflective and transformative action. They nurture epistemic virtues such as curiosity, perspective-taking, and reasoned judgment—virtues that are foundational for democratic and dialogic education (Biesta, 2006). By engaging students in structured reflection—particularly when applied to questions of justice, culture, and identity—thinking routines function as micro-practices of philosophical participation.

In sum, when considered alongside Dewey's experiential pedagogy, Freire's emancipatory approach, Noddings's ethics of care, Greene's emphasis on imagination, and Arendt's notion of natality, praxis allows us to reconceptualize thinking routines as powerful epistemic and ethical tools that serve not only content learning but also processes of subject formation and the cultivation of civic agency.

2.4. Cultural Mediation and Epistemic Justice

Learning is never a culturally neutral act. Every pedagogical encounter is shaped by cultural values, norms, and epistemological assumptions that determine whose voices are heard, how knowledge is legitimized, and what counts as meaningful participation. From this perspective, educational tools such as thinking routines should be examined not only for their cognitive functions but also for their epistemic consequences—specifically, how they position students in relation to power, legitimacy, and recognition.

Building on Vygotsky's (1978) theory of cultural mediation, scholars such as Wertsch (1991) and Cole (1996) have emphasized that tools are not passive instruments; they are imbued with

histories, ideologies, and patterns of communication. As classroom tools, thinking routines structure participation in particular ways—but these structures may inadvertently privilege certain discursive forms, reasoning styles, or types of cultural capital over others.

This concern directly relates to Miranda Fricker's (2007) concept of *epistemic injustice*, which describes how individuals can be wronged in their capacity as knowers through two primary mechanisms:

- Testimonial injustice: When a student's experience or expression is dismissed or devalued due to linguistic or cultural prejudice. For example, a multilingual student may not be taken seriously because of an accent or word choice.
- Hermeneutical injustice: When a student lacks the conceptual resources to articulate their experience. For instance, a student experiencing gender-based discrimination may find no language within the curriculum or classroom discourse to make sense of their experience, rendering it epistemically invisible.

In educational contexts, such injustices may manifest when students are ignored, misunderstood, or excluded due to linguistic, cultural, or identity-based biases. The way thinking routines are designed and enacted can either reproduce or disrupt these injustices.

For example, routines that emphasize only verbal fluency and linear logic may inadvertently marginalize students from oral traditions, neurodivergent learners, or those whose experiences fall outside dominant paradigms. Conversely, routines that open space for multiple modes of expression—such as drawing, storytelling, gesture, and metaphor—along with reflective pauses and culturally responsive inquiry, can serve as *tools of epistemic repair* (Dotson, 2012; Medina, 2013).

Moreover, Pohlhaus (2017) reminds us that epistemic subjectivity concerns not only the production of knowledge but also the capacity to be recognized as a *knowing subject*. From this perspective, thinking routines become spaces where students' epistemic capacities are either affirmed or denied. Thus, for educators, the central question is not only how routines mediate cognition, but how they mediate *epistemic recognition*.

In conclusion, conceptualizing thinking routines as culturally mediated tools necessitates a pedagogy grounded in *epistemic humility*—one that views diversity not as a threat but as a precondition of ethical learning. As Anderson (2017) argues within the framework of epistemic

virtues, such an approach requires reinterpreting humility as an intrinsic ethical practice of education.

3. Thinking Routines and Cultural Praxis

While often used as instructional strategies that foster student engagement and reflection, thinking routines also function as *culturally situated practices* that shape how learners participate in shared meaning-making. Beyond their cognitive benefits, these routines can be regarded as *instruments of praxis*—they guide not only what students think about but also how they interact with others, interpret knowledge, and enact their subjectivities within a particular classroom culture. In this sense, thinking routines are not mere pedagogical add-ons; they are *architectures of participation* that mediate epistemic access, inclusivity, and identity formation.

To understand thinking routines as *cultural praxis* means to examine how these tools structure interaction, normalize certain forms of reasoning, and open (or close) pathways of epistemic recognition. The form, content, and context of their implementation matter greatly: they determine who speaks, how ideas are shared, and what kinds of knowledge are legitimized. Therefore, the pedagogical use of thinking routines is not simply a technical matter but an *ethical and political practice* that shapes the conditions of subjectivation, recognition, and democratic participation (Wegerif, 2013; Biesta, 2020).

3.1. From Thought to Action: Structuring Participation

Thinking routines do more than encourage reflection—they actively structure the rhythms and relationships of classroom participation. By organizing thinking into recurring discursive patterns, they create entry points that facilitate students' access to inquiry, discussion, and interpretation. These entry points are not merely cognitive scaffolds but *social invitations* that define who participates, when, and in what ways. As such, thinking routines function as *architectures of action* that translate abstract intentions of critical thinking into visible and shared practices.

In many classrooms, participation is governed by implicit norms—who speaks first, who is expected to know, and who is permitted to ask questions. Thinking routines intervene in these dynamics by ritualizing reflective habits, redistributing authority, and decelerating interaction, thereby creating possibilities for more equitable participation (Ritchhart et al., 2011). For example, routines such as *Think–Pair–Share* or *I Used to Think… Now I Think…* democratize classroom dialogue by allocating time for personal reflection, peer interaction, and public

contribution. This deliberate sequencing ensures that every voice can be heard and valued on its own terms.

At this point, participation is not merely a pedagogical concern but also an *ethical and political commitment*. Biesta (2010, 2020) argues that education must move beyond measurable learning outcomes to create spaces for students' *subjectification*—their becoming as ethical and responsible agents. Within this frame, thinking routines help structure not only access to knowledge but also the capacity to find one's voice, to speak across difference, and to negotiate meaning within a community.

Similarly, Mercer and Howe (2012) have shown that structured interactions in dialogic learning environments support not only cognitive development but also students' ability to reason collaboratively and share responsibility for inquiry. Wegerif (2013), through his concept of the *dialogic space*, further suggests that participation is not merely a matter of turn-taking but a process of belonging to a community of thinkers and co-creating new meanings. From this perspective, thinking routines function as *architectures of dialogic space*.

In conclusion, the participation architecture offered by thinking routines is neither neutral nor merely procedural. It is a *value-laden construct*, shaped by epistemological assumptions and ethical intentions. Educators who design learning experiences that privilege dialogue, collective inquiry, and inclusive voice transform thinking routines into *tools of cultural praxis*—practices through which students enact and reflect upon their place within knowledge-producing communities.

3.2. Cultural Sensitivity Through Routine Design

Although thinking routines offer structured guidance for inquiry, their pedagogical effectiveness largely depends on how they are contextualized within *culturally responsive frameworks*. No routine is culturally neutral; each carries assumptions about communication norms, epistemic priorities, and social expectations. When these assumptions go unexamined, thinking routines may inadvertently reinforce dominant cultural patterns and marginalize students whose identities or experiences fall outside those norms (Gay, 2010).

To fully realize their potential, thinking routines must be designed or adapted in alignment with the principles of *culturally responsive pedagogy*. As Ladson-Billings (1995, 2014) argues across her works, pedagogical designs that fail to connect with the *funds of knowledge* students bring from their homes, communities, and lived experiences risk becoming not only cognitively

but also epistemically restrictive. For instance, the commonly used *See–Think–Wonder* routine can be reimagined in the context of a local history museum: students might analyze objects not merely in aesthetic or scientific terms but through cultural memory, family stories, or community narratives. In doing so, the routine becomes a bridge between school-based literacies and the diverse epistemic practices of everyday life.

Cultural sensitivity must also extend beyond content to *forms of expression*. Rather than privileging purely verbal or abstract expression, educators—particularly when working with students from oral traditions or multilingual backgrounds—can integrate multiple expressive modalities such as drawing, storytelling, gesture, or music. This approach aligns with the principles of *culturally relevant pedagogy* (Ladson-Billings, 1995), which aims to affirm students' identities while fostering academic success and critical consciousness.

More recently, Paris and Alim (2017) have argued that pedagogy should not only be culturally "responsive" but also *culturally sustaining*—actively supporting the continuation and evolution of students' identities and community epistemologies. Within this framework, thinking routines can be transformed into tools that center students' narratives, linguistic practices, and communal values in the learning process. Thus, routines do not merely recognize existing cultural capital but create spaces for its development, transformation, and transmission into the future.

Ultimately, thinking routines reach their fullest potential not merely as instruments that support thinking, but as tools that *recognize, sustain, and honor* the cultural knowledge students carry. When educators design routines that are flexible, contextual, and attuned to students' needs, they transform generalized strategies into instruments of cultural affirmation and epistemic inclusivity—advancing an educational praxis that seeks equity not only in outcomes but also in *voice, visibility, and recognition*.

3.3. Dialogic Meaning-Making and Situated Knowledge

At their core, thinking routines are not simply invitations to think but invitations to *think with others*. When implemented dialogically, they transform learning from a process of knowledge transmission into one of *collaborative and situated meaning-making*. This dialogic orientation aligns closely with sociocultural theories of learning that emphasize the relational and contextual nature of knowledge (Bakhtin, 1981; Wells, 1999).

Bakhtin's (1981) concept of *heteroglossia* suggests that classroom discourse is shaped not by a single authoritative voice but by the encounter of multiple—and often tension-filled—voices.

Thinking routines can function as structures that mediate the expression of these multiple voices. For example, the *Circle of Viewpoints* routine allows students to approach the same phenomenon from different perspectives, preventing the closure of meaning along a single interpretive line and creating a heteroglossic learning space.

Such routines also enable students to externalize their thoughts, respond to peers, and continually revise their understanding. This structured repetition establishes a *shared epistemic rhythm* in which students engage productively with uncertainty, negotiate perspectives, and cultivate interpretive subjectivity. Mercer and Howe (2012) show that structured dialogic interactions of this kind enhance not only cognitive outcomes but also learners' capacities for collective reasoning and shared responsibility.

The dialogic orientation of thinking routines also reveals that knowledge is not a context-free, objective collection of facts but a *situated process of production*. Donna Haraway (1988) famously argued that all knowledge is situated, partial, and relational, critiquing the "god-trick"—the illusion of a view from nowhere that claims universal objectivity. From this standpoint, thinking routines serve as scaffolds for *context-sensitive meaning-making* that acknowledges the positionality of all participants rather than aspiring to universal cognition. As students bring their historical and cultural perspectives into dialogue, learning becomes grounded in *epistemic plurality*.

Wegerif (2013) refers to this as the *dialogic space*: a shared arena in which students do not merely exchange ideas but engage in reflection, disagreement, and re-articulation to construct shared meaning. Within such spaces, thinking routines contribute to students' becoming not only cognitively but also *ethically and politically participatory subjects*.

In sum, thinking routines function both as *tools* and as *spaces of dialogue*. They teach students not only *what* to know but also *how* knowledge is produced, questioned, and shared. In this way, they contribute to a broader praxis that understands thinking as a culturally grounded, language-mediated, and difference-enriched relational act.

3.4. Ethical Practice as Classroom Praxis

In the philosophy of education, *praxis* concerns not merely what is done in the classroom but how and why it is done—it reflects deeper ethical, political, and ontological commitments. When teachers enact thinking routines, they are not simply applying a pedagogical technique; they are engaging in an *ethical act of mediation* that shapes the very conditions under which

knowledge is produced, shared, and debated. Which questions are asked, which answers are deemed valid, and how silence is treated—all of these constitute moral choices with implications for inclusion, justice, and student subjectivity.

From a Freirean perspective, education is always a political act: it either reinforces existing structures of oppression or opens space for critical consciousness and liberation (Freire, 1970). When implemented with ethical intent, thinking routines can support what bell hooks (1994) calls *engaged pedagogy*—a mode of teaching that affirms the presence, voice, and subjectivity of all participants. Such pedagogy moves education away from the "banking model" and toward dialogic spaces in which students are not passive recipients but co-creators of knowledge.

In this regard, Nel Noddings's (2003) *ethics of care* offers a valuable framework. For Noddings, education is not merely the transmission of knowledge but a practice of ethical relationship and attentiveness to students. Thinking routines can become critical tools for cultivating this attentiveness—listening carefully to students' ideas, valuing their contributions, and fostering learning within a relational ethic of care. The classroom thus becomes not only a cognitive environment but also an *emotional and ethical community*.

Similarly, Bingham and Sidorkin (2004) remind us that "there is no education without relation," emphasizing the fundamentally relational nature of pedagogy. Thinking routines concretely enact this *pedagogy of relation* by fostering mutual listening, shared responsibility, and the gradual construction of trust among learners.

As Biesta (2013) reminds us, good education does not merely make students functionally competent; it supports their *being*—helping them to find their voice, to take a place in the world, and to act together toward shared futures. In this sense, thinking routines function not only as cognitive stimuli but also as *technologies of care, responsibility, and humanization*.

However, this potential is not automatic. When detached from critical reflection, routines risk being co-opted into managerial or performative cultures of teaching. What transforms a routine into an act of praxis is the *stance of the teacher*—their sensitivity to power dynamics, their willingness to listen deeply, and their openness to not-knowing. Practiced with such ethical awareness, thinking routines can turn the classroom into a space not only for the exchange of knowledge but also for the *construction of recognition, care, and democratic subjectivity*.

4. Implications for Teacher Practice and Curriculum Design

The potential of thinking routines as cultural and epistemic tools can only be realized when they are thoughtfully integrated not merely into classroom interactions but into the broader

architecture of teacher practice and curriculum design. The preceding discussions have emphasized how these routines function as mechanisms mediating participation, identity, and epistemic justice. Yet their transformative capacity depends on how educators implement, adapt, and sustain them within real educational systems. This, in turn, requires rethinking teacher agency, instructional planning, and the ethical responsibilities embedded in curricular choices.

4.1. Rethinking the Teacher's Role: From Transmitter to Mediator

Traditional conceptions of teaching—where the teacher acts as an authoritative figure transmitting predetermined content to passive recipients—prove insufficient when thinking routines are understood as epistemic and cultural tools. The teacher's role must evolve into that of a *mediator of learning encounters*: one who orchestrates dialogue, scaffolds inquiry, and creates the conditions for the emergence of epistemic subjectivity.

As Biesta (2020) emphasizes, the teacher is not merely a conveyor of knowledge but a pedagogical mediator who opens spaces for students' *subjectification*. Rather than teaching *what* to think, the teacher enables students to discover *how to think together*. This conception aligns with Wegerif's (2013) notion of *dialogic space*, where the teacher facilitates an environment in which students' voices can be heard and meaning can be co-constructed.

This reconceptualization also carries an ethical dimension. Cochran-Smith and Lytle (2009) describe teaching not as the application of knowledge but as *inquiry as stance*—a professional disposition rooted in critical reflection. From this perspective, the teacher positions thinking routines not as methodological tools but as *ethical mediators* that transform how students relate to knowledge and to one another.

4.2. Designing for Participation: Integrating Routines into the Curriculum

Embedding thinking routines within curriculum design is not a matter of pedagogical ornamentation but an act of *strategic design for participation*. It requires aligning the use of routines with broader curricular goals, disciplinary epistemologies, and the social realities of learners.

Mercer and Howe (2012) demonstrate that structured dialogic interactions enhance students' capacity for collective reasoning. Integrating routines into the curriculum thus enables such collaborative reasoning practices not only within individual lessons but across interdisciplinary learning experiences.

Furthermore, Zeichner (2021) argues for the *democratization of curriculum*, contending that without processes in which students' voices are heard and knowledge is co-constructed, curriculum remains a merely technical framework. Thinking routines embody this democratic curricular vision: they create conditions in which students mobilize their own epistemic resources and engage in reshaping knowledge rather than merely receiving it.

4.3. Educating and Supporting Teachers for Epistemic Practice

The transformative potential of thinking routines depends not merely on the introduction of new techniques but on teachers' development of awareness across epistemic, cultural, and ethical dimensions. For this reason, teacher education must go beyond the transmission of "best practices" to nurture *critical professional learning processes* (Cochran-Smith & Lytle, 2009).

Teachers' professional development should be supported through *collaborative inquiry communities* where they can observe how routines function in diverse contexts and cultivate reflective practices. Zeichner (2021) argues that teachers must develop not only methodological but *epistemic awareness*—a capacity that emerges through sustained dialogue and inquiry within professional communities.

At this point, the framework of *culturally sustaining pedagogy* (Paris & Alim, 2017) should be integrated into teacher education. Teachers need to explore not only how to implement routines but also how these routines can sustain students' cultural resources and contribute to the production of *epistemic justice*.

4.4. Curriculum as Ethical Design: Aligning Content, Form, and Values

Curriculum is never merely a collection of content; it is an *ethical and epistemological design*—a structure that communicates what counts as knowledge, how learning should occur, and whose voice matters.

Apple (2004) and Giroux (2011) have argued that curriculum can reproduce hegemonic narratives and thus always carries an ideological dimension. Within this context, thinking routines open a space not only for the transmission of content but for the *renegotiation of which forms of knowledge are valued*.

Biesta (2020) proposes that good education should balance three purposes: *qualification, socialization,* and *subjectification*. A curriculum built around thinking routines can nurture all three dimensions simultaneously: enabling students to acquire disciplinary tools, engage in social participation, and develop their distinctive subjectivities.

Ultimately, integrating thinking routines into the curriculum is not a technical strategy but an *ethical commitment*. Through these routines, the curriculum becomes a site of formation where students relate not only to content but also to *values, difference, and shared responsibility for the future*.

5. Discussion

5.1. Reclaiming Pedagogy as an Ethical Practice

In a policy climate increasingly dominated by metrics, performance standards, and discourses of effectiveness, pedagogy is often reduced to a technical endeavor—a collection of best practices, rubrics, and instructional frameworks oriented toward producing measurable outcomes. In this context, reclaiming pedagogy as an *ethical practice* becomes both a philosophical and political necessity (Biesta, 2013).

Pedagogical decisions are never neutral. Every choice regarding what is taught, how it is framed, and who is encouraged to speak reflects implicit values concerning knowledge, identity, and power. When educators use thinking routines not as decontextualized tools but as instruments of participation and recognition, they reposition pedagogy as an *ethical act of relation* (Bingham & Sidorkin, 2004). At this point, the teacher ceases to be a technician managing cognitive input and becomes a *moral subject* shaping the conditions of encounter and inclusion.

This orientation resonates with bell hooks's (1994) notion of *engaged pedagogy*: teaching is not merely the transmission of knowledge but a practice of reciprocity, care, and presence. As Biesta (2020) emphasizes, education is not solely a process of qualification but also one of *socialization* and *subjectification*—a field of becoming. Thinking routines make this ethical nature of pedagogy visible, especially when they open spaces for students to find their voices, to speak across difference, and to participate in democratic life.

5.2. Epistemic Justice and Participatory Learning

Knowledge in educational settings is never simply transmitted—it is also authorized, withheld, or contested. Who is regarded as a "knower," whose voice is heard, and whose experience is legitimized lie at the heart of *epistemic justice*. Fricker (2007) conceptualizes epistemic injustice as taking two primary forms:

- Testimonial injustice: when a student's expression is dismissed or deemed unreliable due to linguistic or cultural prejudice.

- Hermeneutical injustice: when a student lacks the conceptual resources to articulate their experience.

Both forms can be easily reproduced in classroom contexts. Multilingual students whose accents are not taken seriously or students who lack language to describe experiences of gender bias exemplify epistemic marginalization. Yet, when thoughtfully designed, thinking routines can function as *tools of epistemic repair* (Medina, 2013).

For instance, routines such as *Circle of Viewpoints* or *Compass Points* legitimize diverse voices and experiences, enabling students to be recognized not only as *participants* but as *epistemic agents*. Here, Pohlhaus's (2017) notion of *epistemic subjectivity* becomes central: learners appear not as consumers of knowledge but as producers and negotiators of it. In this sense, thinking routines act as bridges between *democratic participation* and *epistemic equality*.

5.3. Beyond Technique: Resisting the Instrumentalization of Routines

Although thinking routines are often introduced as practical tools to enhance classroom participation, they remain vulnerable to *instrumentalization* within neoliberal policy contexts. Ball (2017) notes that neoliberal education policies have reduced learning to measurable outcomes, thereby eclipsing the ethical and democratic dimensions of pedagogy. Similarly, Lingard and Sellar (2020) demonstrate how pedagogical practices have been subjected to regimes of standardization, performance management, and the logic of efficiency.

In this context, thinking routines risk being reduced to *checklists* or *performance indicators*. Such instrumentalization suppresses diversity and generates a pedagogical climate that privileges only what can be measured. Yet the power of thinking routines lies not in uniform implementation but in the spaces they open for *unpredictable responses, multiple voices, and creative meaning-making*.

Biesta (2010) critiques this reduction of education to what he calls *learnification*—the erosion of all educational value into measurable learning outcomes. When thinking routines fall into this trap, the broader purposes of education—democratic citizenship, ethical responsibility, and critical subjectivity—are neglected. Reclaiming routines as *praxis-oriented pedagogical forms* therefore constitutes an *ethical act of resistance* against their instrumentalization.

5.4. Praxis-Oriented Education: Toward Transformative Classrooms

For the pedagogical and ethical potential of thinking routines to be fully realized, teaching must be understood not as transmission or management but as *praxis*—intentional action grounded

in critical reflection and directed toward social transformation (Freire, 1970). Within this perspective, classrooms are not neutral spaces for content delivery; they are *sites of becoming* where teachers and students co-construct meaning, question assumptions, and imagine alternatives to the given order.

Arendt's (1958) concept of *natality* offers a vital contribution here: each new generation possesses, through education, the capacity to initiate new beginnings in the world. Thinking routines can open spaces for students to act not merely as *consumers of knowledge* but as *subjects who reimagine and transform* the world around them.

Greene (1995) reminds us that praxis is nourished by *imagination*. By inviting diverse perspectives, thinking routines enable students to envision the world not only "as it is" but "as it could be." In this sense, they function not merely as pedagogical techniques but as *epistemic instruments for social imagination*.

Ultimately, transformative classrooms are not only *effective* but also *ethical and political spaces*. Thinking routines contribute to this transformation by helping students become not just cognitive subjects but *active participants in the creation of a just and pluralistic future*.

6. Conclusion

This study has examined the philosophical and pedagogical dimensions of thinking routines as tools for meaning-making, cultural mediation, and epistemic justice in the classroom. Initially conceptualized largely as cognitive scaffolds, these routines have here been redefined as *praxis-oriented epistemic tools*. In doing so, the study demonstrates that thinking routines are not merely techniques for making thinking visible but *cultural practices* directly connected to central concerns of the philosophy of education—subjectivity, recognition, justice, and democratic participation.

This reconceptualization offers three original contributions:

First, it approaches thinking routines through the lens of *sociocultural theory*. Drawing on Vygotsky's (1978) theory of mediated action, Cole's (1996) notion of cultural tools, and Wertsch's (1991) analyses of mediated discourse, the study shows that routines do not merely support individual cognitive processes but also induct learners into specific *epistemic communities*. In this framework, thinking routines are understood as *cultural carriers* that mediate identity formation, modes of participation, and epistemic orientation.

Second, it foregrounds the dimension of *epistemic justice*. By engaging Fricker's (2007) concepts of testimonial and hermeneutical injustice, alongside Dotson's (2012) notion of epistemic oppression and Medina's (2013) account of epistemic resistance, the study reveals how thinking routines can either strengthen or constrain students' capacity to be recognized as *knowing subjects*. For multilingual, culturally diverse, or marginalized students in particular, the design of routines holds critical implications for epistemic equality and recognition. Thus, thinking routines should be seen not as pedagogical techniques but as *instruments of epistemic repair* and *participatory justice*.

Third, the study repositions thinking routines as *ethical and political praxis*. Drawing on Freire's (1970) critical pedagogy, Dewey's (1938) experiential learning, Arendt's (1958) concept of natality, Greene's (1995) emphasis on imagination, and Noddings's (2003) ethics of care, it conceptualizes thinking routines not as tools to answer "How can we think better?" but as philosophical instruments to engage the question "How can we build a more just, inclusive, and humane world?"

Another key finding concerns the growing *instrumentalization* of pedagogy in today's neoliberal educational context (Ball, 2017; Lingard & Sellar, 2020). When routines are reduced to *checklists* or *performance indicators*, their ethical and transformative potential is diminished. This paper therefore argues for reclaiming routines as *praxis-oriented pedagogical forms* that resist such technicization. The study's contribution to the philosophy of education lies precisely here: in repositioning pedagogy not as a technical operation but as an *ethical relation, democratic dialogue, and transformative praxis*.

In conclusion, the pedagogical value of thinking routines lies not merely in *how* they support thinking but in *what kinds of thinking* they cultivate. In an era dominated by standardization and measurable outcomes, these routines must be reimagined as *philosophical tools* that nurture critical, situated, and transformative thought. This approach offers three interrelated contributions to educational philosophy:

- Theoretical contribution: Developing a new conceptual framework by linking thinking routines to sociocultural theory, epistemic justice literature, and the philosophy of praxis.
- Pedagogical contribution: Redesigning routines as ethical and democratic tools that foster students' participation, recognition, and subjectivity.

- Political contribution: Resisting the instrumentalization of pedagogy and reclaiming it as an ethical practice and a transformative social action.

Taken together, these contributions position thinking routines not merely as classroom techniques for organizing dialogue but as *cultural technologies of praxis*—shaping the relationships, responsibilities, and possibilities that lie at the very heart of educational philosophy.

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