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From Skills To Humanity: An Ontological Study Of Elementary Education In The Framework Of Educating Persons

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Abstract

This study examines the implicit ontological shift in primary education from educating persons to training for skills, where success is increasingly measured through practical activities, competencies, and measurable outcomes rather than the development of reflective awareness and student autonomy. Drawing on qualitative case study research at SD Prestasi Global Depok, this article analyzes how project-based learning practices—including STEAM, the Pancasila Student Profile Strengthening Project (P5), and environment-based learning—shape educational orientation and identifies the depth of reflective dimensions within these processes. Using an ontological analytical framework informed by Richard Pring's philosophy of education, data were collected through in-depth observation, semi-structured interviews, and documentary analysis. The findings reveal that learning is exceptionally strong in the activity dimension (doing) yet critically weak in the reflection dimension (reflecting). Activities such as Ramadhan Delight, eco-enzyme production, ecobrick crafting, and STEAM projects successfully develop practical skills, student engagement, and affective values including empathy and care. However, these values remain at the normative-emotional level and have not evolved into critical consciousness of social, economic, and ecological structures. Students comprehend what should be done without being guided to understand why phenomena occur. These findings indicate ontological narrowing in education, where learning tends to reproduce reality rather than critique it. The study concludes that educational transformation must be ontological—shifting orientation from mere activity toward the formation of reflective subjects capable of understanding, evaluating, and

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transforming reality critically.

Keywords: Educating persons; Ontological narrowing; Critical reflection.

INTRODUCTION

The debate regarding the direction of basic education is, in essence, a philosophical debate about what it means to be human and the purpose of education. Within the tradition of the philosophy of education, this tension has long been present across various schools of thought, such as idealism, naturalism, reconstructionism, existentialism, perennialism, essentialism, realism, and pragmatism (Alanoğlu et al., 2021; Parsak et al., 2024; Safrizal, 2022; Thoriquttyas et al., 2021). Traditional schools, including perennialism and essentialism rooted in idealism and realism, emphasize the transfer of universal and eternal knowledge alongside teacher authority (Parsak et al., 2024; Safrizal, 2022). Conversely, contemporary schools—progressivism, reconstructionism, and existentialism—influenced by pragmatism, position students as the center of learning and education as an agent of social change (Başaran & Candan, 2023; Prasetya et al., 2024; Yolcu & Sarı, 2022).

This philosophical tension fundamentally revolves around three core questions: why, what, and how to teach (Başaran & Candan, 2023). Naturalism believes education must align with the natural growth of human beings, while pragmatism emphasizes the principle of "if it works, use it" (Kamayanti, 2020). Idealism views truth as originating from deductive reasoning, whereas realism emphasizes the physical-concrete world. Meanwhile, existentialism stresses individual freedom and personal responsibility in education (Başaran & Candan, 2023; Karakoç & Yenen, 2023). Perennialism and essentialism demand subject-centered curricula, while progressivism and reconstructionism advocate for student-centered curricula (Diyanti & Zuhdi, 2020; Yolcu & Sarı, 2022). Empirical research indicates that teachers tend to adopt contemporary philosophies, yet do not entirely abandon traditional practices (Kumral, 2022).

In the contemporary context, this debate has become increasingly complex with the emergence of 21st-century skills-based learning approaches such as STEAM. Recent research by Wardani et al (2025) shows that STEAM-based learning within the Merdeka Curriculum is able to "encourage students to be active... and gain direct experience both theoretically and practically". These findings confirm that education is increasingly focused on direct experience, cross-disciplinary integration, and the strengthening of skills such as critical thinking, creativity, and collaboration (Ismiati, 2024; Li et al., 2021). On the one hand, this development can be seen as a

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pedagogical advancement that enriches the learning process. On the other hand, it also indicates a shift in the orientation of education from the cultivation of reason towards the strengthening of practical skills, which has the potential to obscure the ontological dimension of education itself (Amodu et al., 2023; Zhao et al., 2024).

This trend is reinforced by research demonstrating that STEAM project-based learning is effective in improving science literacy because it is able to "integrate several disciplines... and be associated with real-world problems" (Choirunnisa et al., 2023). Literacy in this context is no longer merely the ability to understand knowledge, but also the ability to identify problems, evaluate evidence, and generate practical solutions (Li et al., 2021). Meanwhile, Malagola's (2023)study on the implementation of STEAM in primary schools in West Java reveals that learning has shifted towards being student-centred, problem-solving based, and collaborative, although it still faces structural constraints such as limited facilities, teacher training, and time. These findings indicate that primary education is currently undergoing a significant shift towards contextualisation and practical utility, which implicitly alters the perspective on learners and the objectives of education (Shi & Rao, 2022; Spirov et al., 2022).

From the perspective of the ontology of education, this issue touches upon the most fundamental level, namely how the reality of education is understood. Ontology does not merely ask about methods or the curriculum, but about 'what exists' in education: who the learners are, what the nature of knowledge is, and towards what end the educational process is directed (Buriro et al., 2021; Sapkota & Paudyal, 2021). If education is understood as a process of humanisation, then learners must be viewed as subjects possessing open existential possibilities that cannot be reduced to specific functions (Cullen, 2022; Hyde, 2021). Therefore, any educational practice that from an early age directs children towards specific socio-economic roles should be viewed with suspicion as a form of ontological narrowing—that is, a reduction of human existence itself (Carter et al., 2021).

Within this framework, Richard Pring's thinking serves as a critical point of reference. Pring asserts that education is not 'training for work', but rather 'educating persons' (Pring, 2013). This distinction is not merely a difference in terminology, but concerns the position of the human being in education: whether as an end in itself or as a means for external interests (Pring, 2013). When education is reduced to skills training, it implicitly affirms the logic of instrumentalism, in which human value is determined by one's utility within the economic system (Chaaban et al., 2021; Rodríguez-Nieto & Alsina, 2022). In this context, the 'Life Skills' programme has the potential to act as a subtle mechanism of social reproduction, normalising the idea that children from certain

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backgrounds are 'naturally' expected to be prepared for specific work roles from an early age (Andersson et al., 2023; Van et al., 2024).

Even more problematic is that this kind of approach is often justified by the pragmatic logic that education must be relevant to real life. However, without philosophical reflection, relevance can become a justification for the status quo (Daubney, 2021; Matu & Paik, 2021). Education no longer serves to open up new possibilities, but rather to ensure the continuity of existing structures. In ontological terms, education shifts from a revisionary function (transforming reality) to a purely descriptive one (reproducing reality) (Buch-Hansen, 2022; Martin, 2022). Consequently, learners are not equipped with the ability to understand and critique the world, but merely to function within it. Thus, the main issue raised in this article is not whether vocational education is necessary or not, but how it is positioned ontologically—without integration with liberal dimensions such as the development of rationality, critical reflection, imagination, and ethical judgement, vocational education risks becoming reductive and deterministic.

This study employs a qualitative approach with an intrinsic case study design to examine the ontological shift in primary education practice, specifically the implicit transformation from the paradigm of *educating persons* towards *training for skills* within the context of project-based learning. The research was conducted at Primary School Prestasi Global Depok, selected through purposive sampling based on its consistent implementation of project-based learning innovations such as STEAM, the Pancasila Student Profile Strengthening Project (P5), and environment-based learning. Data were collected through a combination of in-depth observation, semi-structured interviews, and documentary analysis to construct a thick description of the phenomenon under study. Observations focused on activity patterns (*doing*), social interaction, levels of student engagement, and the presence of a reflective dimension (*reflecting*) during various learning activities including the Ramadhan Delight programme, Environment Care Day, ecobrick activities, and STEAM implementation. Semi-structured interviews explored the construction of meaning, pedagogical objectives, and participants' perceptions of their learning experiences, involving the headteacher, school director, Year 5 teachers, pupils, and parents to foster a multi-perspectival understanding. Documentary data comprised learning artefacts, student work, learning modules, and relevant school policy documents. The researcher acted as the primary instrument (*human instrument*), engaging reflectively in data collection and interpretation while maintaining a moderately participatory position within the natural setting.

All data were analysed using an interactive approach developed from the Miles and Huberman model, encompassing data reduction, data presentation, and drawing conclusions, yet

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expanded to be diagnostic, comparative, and explanatory through the use of an educational ontological framework as an analytical lens. This framework incorporated dimensions of serious versus non-serious ontology and descriptive versus revisionary ontology to assess how the programme positions learners—whether as subjects capable of making choices and developing their potential, or as tools for adaptation to local economic needs. To enhance credibility and trustworthiness, the study employed source triangulation and methodological triangulation, conducted member checking with key informants to ensure consistency between the researcher's interpretations and participants' experiences, and performed peer debriefing to test the consistency and rigour of the analysis. Dependability and confirmability were maintained through systematic documentation of the research process (*audit trail*), whilst transferability was supported by the provision of rich contextual descriptions. The research was conducted over a three-month period, encompassing the initial exploratory phase, the collection of primary data, and in-depth analysis and interpretation of the findings.

Ontological Orientation of Project-Based Learning: The Dominance of Activity over Reflection

This study reveals that project-based learning at SD Prestasi Global Depok is largely shaped by an instrumental ontological framework, where student activity strongly outweighs reflection. Across STEAM, P5, and environment-based programs, students actively participate in hands-on projects—such as parcel assembly, eco-enzyme production, ecobrick crafting, and paper boat competitions—but lack structured opportunities to critically examine the broader social, economic, and environmental contexts behind these activities. This pattern is reinforced by stakeholder perspectives that define success mainly through activity, usefulness, and achievement, forming an “instrumental ecosystem” that marginalizes reflective thinking. As a result, students develop procedural skills without sufficient capacity to question underlying assumptions or implications, indicating that education tends to reproduce existing realities rather than transform them. Empirical data further confirm this imbalance, with all observed activities scoring very high in activity but very low in reflection, suggesting that despite its progressive aims, project-based learning may still fall into a form of “banking education” where technical competence is emphasized over critical consciousness.

Table 1. Comparative Analysis of Activity and Reflection Dimensions in Project-Based Learning Practices

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No.	Learning Activity	Activity Dimension (*Doing*)	Reflection Dimension (*Reflecting*)	Dominant Ontological Orientation
1	Ramadhan Delight (Parcel Assembly & Distribution)	5/5	1/5	Descriptive—reproduces charitable norms without structural critique
2	Environment Care Day (Eco-enzyme & Compost)	5/5	1/5	Instrumental—technical procedure over ecological systems thinking
3	P5 Ecobrick (Plastic Waste Recycling)	5/5	1/5	Descriptive—object transformation without industry critique
4	STEAM Paper Boat Competition	5/5	1/5	Achievement-based—competitive outcome over conceptual depth
5	Mangrove Planting & Exploration	5/5	2/5	Affective—emotional engagement without policy/system linkage

Note: Activity dimension scored on: student engagement, hands-on participation, product completion, enthusiasm, and procedural execution. Reflection dimension scored on: structural questioning, causal analysis, ethical evaluation, self-positioning awareness, and transformative orientation. Scale: 1 (minimal) to 5 (extensive).

The data in Table 1 reveal a systematic ontological narrowing across all observed practices. Even the mangrove activity, which scored marginally higher on reflection (2/5), failed to connect experiential engagement with critical analysis of environmental policy or ecological inequality. This finding resonates with Kartamiharja (2025), who note that critical dialogue in eco-pedagogy STEAM integration "remains relatively low compared to the technical aspects of learning." The consistency of this pattern across diverse activities—social, environmental, scientific, and competitive—suggests that the instrumental logic is deeply embedded in the school's pedagogical culture rather than limited to specific programme designs. The implications for student formation are significant: without reflective depth, skills remain situational and risk obsolescence as technological and social structures evolve (Pring, 2013).

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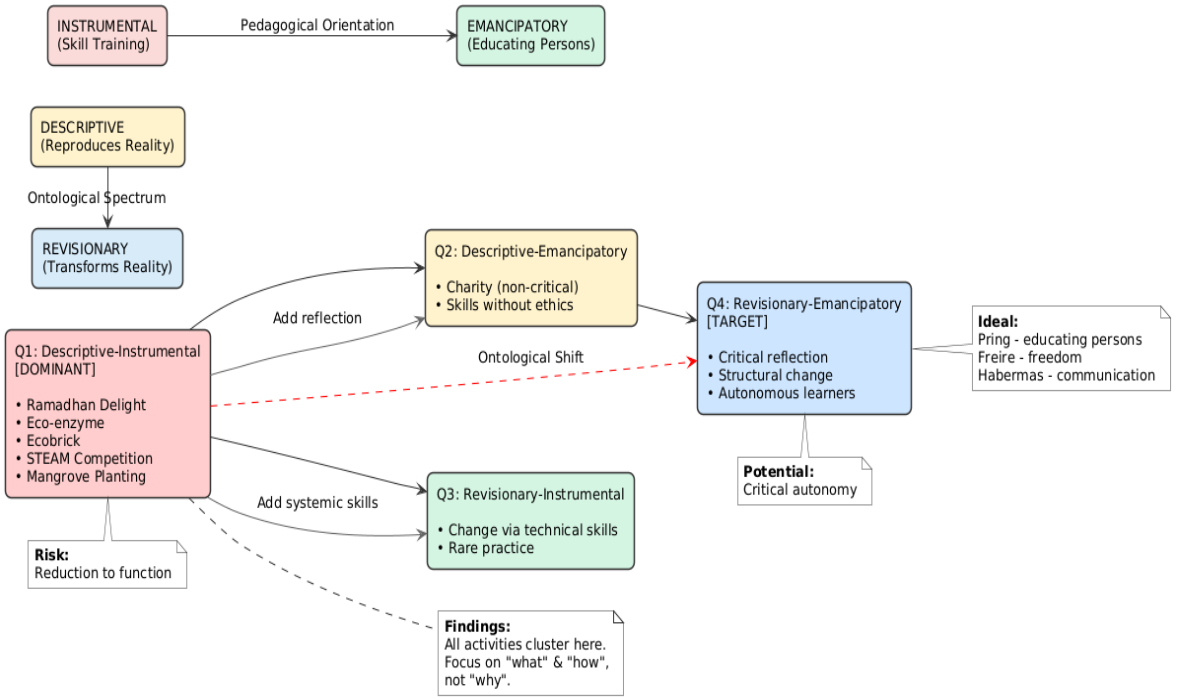


Figure 1. Ontological Positioning of Project-Based Learning Practices

The following diagram illustrates the ontological positioning of observed learning practices within the descriptive-revisionary ontology framework. The visualization demonstrates how all activities cluster within the descriptive-instrumental quadrant, revealing the absence of revisionary-transformative educational experiences.

The diagram above visualizes the critical gap between current practice and educational ideals. All five observed activities occupy Quadrant I (Descriptive-Instrumental), confirming that project-based learning at SD Prestasi Global Depok functions primarily to adapt students to existing reality rather than equip them to transform it. This positioning reflects what Kuhn (1962) termed "normal science"—operating within a paradigm that defines acceptable problems and solutions without challenging foundational assumptions. The red dashed arrow indicates the ontological transformation required: shifting from Quadrant I to Quadrant IV, where education becomes revisionary-emancipatory. This transformation demands more than pedagogical technique; it requires fundamental reorientation of how education understands its purpose and the nature of the learner (Freire, 1970; Pring, 2013).

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The Ramadhan Delight Programme: Normative-Affective Social Values without Structural Awareness

The Ramadhan Delight programme illustrates how social education can become instrumentalized at a normative-affective level, where students actively engage in charitable activities such as preparing and distributing aid while developing feelings of empathy, compassion, and satisfaction. Although the programme successfully reinforces moral values like sharing and caring, it remains limited to reproducing existing norms without encouraging students to critically examine the structural causes of poverty and inequality. Students are not guided to question why such conditions exist, to reflect on their own social positions, or to develop a deeper, more sustained form of solidarity beyond situational acts of charity. As a result, the programme fosters what can be described as "charity consciousness," where awareness stops at benevolent action without reaching causal or systemic understanding. This has important pedagogical implications, as social education becomes focused on performing good actions rather than developing structural awareness and critical reasoning. Consequently, students may act ethically within given frameworks but lack the capacity to question or transform those frameworks, leading to a form of moral engagement that is visible and measurable yet limited in its potential for fostering reflective and socially conscious individuals.

Table 2. Pedagogical Element Analysis of the Ramadhan Delight Programme

Pedagogical Element	Presence	Level	Ontological Function	Example from Observation
Emotional engagement	Strong	5/5	Affective socialization	Students express joy in giving
Procedural execution	Strong	5/5	Skill development	Efficient parcel assembly
Cooperative interaction	Strong	4/5	Social integration	Teamwork in distribution
Normative instruction	Moderate	3/5	Value transmission	"Sharing is good" messaging
Causal questioning	Absent	0/5	Critical consciousness	No discussion of poverty causes
Structural analysis	Absent	0/5	Systemic understanding	No examination of resource distribution

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Self-positioning reflection	Absent	0/5	Autonomous subjectivity	No analysis of students' class position

Note: Levels scored on observational frequency and depth: 0 (absent), 1 (minimal), 3 (moderate), 5 (extensive). Data derived from triangulated observation, interview, and document analysis

The comprehensive absence of causal, structural, self-positioning, and transformative elements in Table 2 confirms that the Ramadhan Delight programme produces what Freire (1970) critiqued as "adaptation to the world of oppression" rather than "transformation of that world." Students develop emotional sensitivity without social critical thinking—a combination that risks generating compliant rather than critical citizens. This finding resonates with Celik's (2023) observation that education systems often "do not contribute to social justice and equality, and do not open the way for social change and development." The programme's success in fostering positive emotions paradoxically reinforces its limitations: because students and teachers experience satisfaction, the need for deeper critical engagement becomes invisible. Malagola (2023) identifies similar dynamics in Indonesian STEAM implementation, where structural constraints limit the realization of genuinely transformative pedagogy.

The following diagram models the epistemological flow within the Ramadhan Delight programme, contrasting its actual instrumental pathway with the ideal critical-reflective pathway.

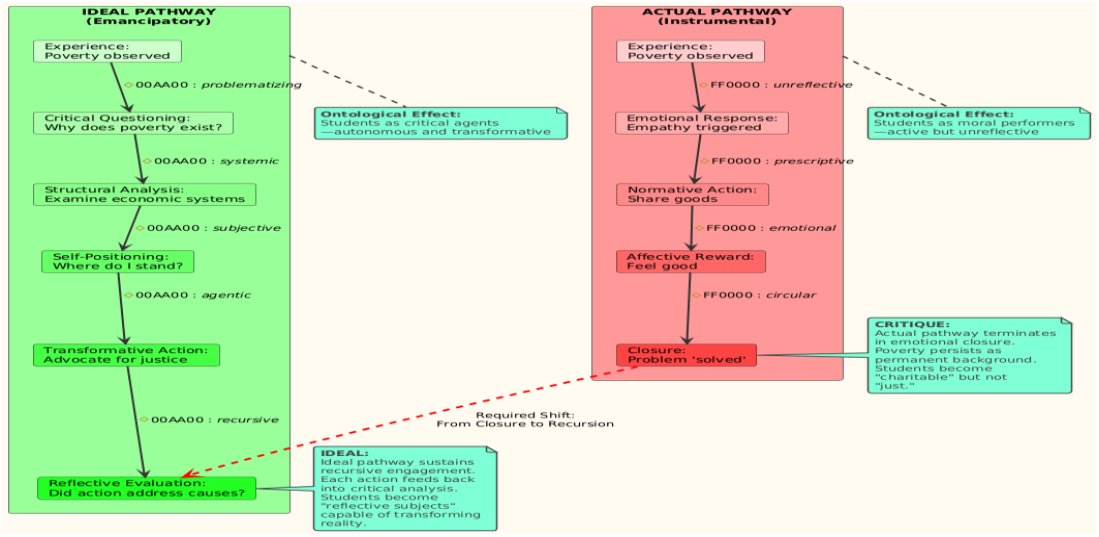


Figure 2. Epistemological Pathways in the Ramadhan Delight Programme

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This diagram exposes the circularity of the actual instrumental pathway: experience triggers emotion, emotion prompts prescribed action, action generates affective reward, and reward produces closure. The problem of poverty remains eternally present, eternally "addressed" through charity, yet never resolved through structural transformation. The ideal emancipatory pathway, by contrast, sustains recursive engagement: each experience generates questions, questions demand analysis, analysis requires self-positioning, positioning enables transformative action, and action invites reflective evaluation that feeds back into new critical questioning. The red dashed arrow indicates the ontological leap required—from terminal closure to recursive reflexivity. Without this shift, education produces what Pring (2013) warns against: "pseudo-flourishing" where well-being is superficial because unaccompanied by expanded reflective capacity and freedom of choice.

Environmental Learning: Technical Proceduralism without Ecological Systems Thinking

Environment Care Day activities—such as eco-enzyme production, composting, and the P5 ecobrick project—highlight strong development of students' technical and procedural skills, but reveal limited growth in deeper ecological and critical understanding. Students actively engage in hands-on practices like waste management and recycling, gaining skills that are directly applicable in daily life, while schools aim to foster curiosity, environmental awareness, and critical thinking. However, this "critical thinking" tends to remain descriptive rather than analytical, as students can perform and explain processes but rarely question broader issues such as consumption patterns, waste systems, or underlying socio-economic structures. As a result, these activities often lead to what can be seen as "object transformation without subject transformation," where materials are repurposed but students' critical consciousness remains unchanged. Although such approaches effectively improve practical competencies and environmental awareness, they risk producing "surface skills"—abilities that are useful yet context-bound and lacking deeper conceptual and reflective foundations, which are essential for understanding and addressing complex environmental challenges.

Table 3. Technical vs. Critical Dimensions in Environmental Learning Activities

Dimension	Eco-enzyme/Compost	P5 Ecobrick	Mangrove Planting	Pattern
Technical/Procedural				
Skill execution	5/5	5/5	4/5	Consistently strong

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Product completion	5/5	5/5	3/5	Consistently strong
Scientific knowledge (declarative)	4/5	3/5	3/5	Moderate to strong
Critical/Structural				
Consumption pattern analysis	0/5	0/5	0/5	Systematically absent
Waste industry critique	0/5	0/5	0/5	Systematically absent
Human-nature relations (philosophical)	1/5	0/5	2/5	Minimal to absent
Climate change policy connection	0/5	0/5	1/5	Systematically absent
Ecological inequality awareness	0/5	0/5	0/5	Systematically absent
Transformative agency (what can I change?)	0/5	0/5	0/5	Systematically absent

Note: Scoring based on observational data, interview transcripts, and document analysis. Scale: 0 (absent) to 5 (extensive).

The systematic absence of critical-structural dimensions across all three environmental activities, as shown in Table 3, indicates that environmental education at SD Prestasi Global Depok operates within what this study terms "instrumental sustainability"—education that appears environmentally friendly but fails to engage deeper structures of consciousness. This finding aligns with Habermas's (1984) distinction between instrumental action (oriented to success) and communicative action (oriented to understanding): students succeed in producing eco-enzymes and ecobricks without understanding the systemic forces that make such interventions necessary.

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The mangrove activity scores marginally higher on philosophical human-nature relations (2/5) and climate policy connection (1/5), yet these remain incidental rather than integral to the learning design. Kuhn (1962) would recognize this as "normal education" operating within a paradigm that accepts environmental degradation as given background rather than as socially produced reality requiring transformation.

STEAM Learning: Achievement-Based Education and the Erosion of Conceptual Depth

The STEAM paper boat-building competition reflects an achievement-oriented learning paradigm in which students develop design, experimentation, and teamwork skills but primarily measure success through winning rather than deep understanding. While such activities foster engagement and demonstrate students' potential in science and technology, they tend to position knowledge as a tool for achieving results instead of as a means for explaining and questioning reality. This instrumental orientation limits the development of critical scientific literacy, as students focus on optimizing outcomes within given parameters rather than examining underlying concepts or assumptions. Similarly, mangrove planting activities promote emotional connection to the environment but often lack integration with critical ecological analysis, leaving students with strong affective awareness but limited understanding of broader environmental systems and issues. As a result, across these practices, there is a consistent emphasis on practical achievement and engagement over reflective and critical dimensions, producing learners who are skilled and motivated but not yet fully equipped to analyze and respond to complex scientific and environmental challenges.

Table 4. Stakeholder Perspective Convergence on Educational Success Indicators

Indicator Category	Teachers	Headteacher/Director	Students	Parents	Convergence Strength
Activity/Engagement	5/5	5/5	5/5	4/5	Very Strong
Usefulness/Practicality	5/5	5/5	4/5	5/5	Very Strong
Achievement/Outcomes	4/5	5/5	5/5	4/5	Very Strong
Reflection/Understanding	1/5	1/5	0/5	0/5	Very Weak
Critical Consciousness	0/5	0/5	0/5	0/5	Absent

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Autonomous Subjectivity	0/5	0/5	0/5	0/5	Absent

Note: Scoring based on interview transcripts and observational field notes. Convergence strength calculated from coefficient of variation across stakeholder groups. Scale: 0 (absent) to 5 (extensive).

The near-perfect convergence on activity, usefulness, and achievement indicators—coupled with the systematic absence of reflection, critical consciousness, and autonomous subjectivity—reveals what this study terms an "instrumental consensus." This consensus is not merely a collection of individual preferences but a shared educational ecosystem of meaning that normalizes particular ontological assumptions about what education is and what students should become. Malagola (2023) identifies similar patterns in West Java, where STEAM implementation faces structural constraints that push practice toward measurable outcomes. The absence of divergent perspectives among stakeholders suggests that the instrumental orientation is hegemonic: it appears as common sense rather than as one possible orientation among alternatives. This hegemony makes the required ontological transformation particularly difficult because the very language for articulating alternatives has been eroded (Habermas, 1984; Pring, 2013).

The Ontological Transformation: From Descriptive to Revisionary Education

The empirical findings indicate that primary education at SD Prestasi Global Depok largely operates within a descriptive ontology, where learning focuses on adapting students to existing realities rather than encouraging them to question or transform them. This condition leads to what can be described as “ontological narrowing,” in which students become active and productive but lack deeper reflection and autonomy. As a result, educational practices tend to prioritize functional skills, reducing pedagogical innovation to tools for adaptation rather than critical inquiry. Addressing this issue requires not just pedagogical adjustment but a deeper ontological shift—from emphasizing what students do to what they understand, interpret, and reflect upon. Without this, learning remains procedural and shallow, limiting students’ ability to analyze broader social structures and their role within them. In this context, Richard Pring’s concept of “educating persons” becomes central, highlighting the need to view students as autonomous individuals with intrinsic value, rather than merely as future workers. While programs like Life Skills may improve practical outcomes, they risk producing only surface-level

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well-being unless accompanied by the development of critical awareness and reflective capacity that enable genuine personal and social transformation.

Table 5. Diagnostic Synthesis: Current State vs. Required Ontological Transformation

Analytical Dimension	Current State (Descriptive-Instrumental)	Required State (Revisionary-Emancipatory)	Transformation Mechanism
Educational purpose	Skill production for economic adaptation	Subject formation for critical autonomy	Rearticulate aims in curriculum documents
Learning design	Activity-centered, product-oriented	Reflection-embedded, meaning-centered	Integrate "why"-oriented inquiry
Teacher role	Technical facilitator of activities	Dialogical partner in meaning-making	Professional development in critical pedagogy
Student position	Active executor of procedures	Reflective constructor of understanding	Restructure classroom power relations
Knowledge relation	Declarative and procedural	Critical and transformative	Link disciplines to structural analysis
Social values	Normative-affective (charity)	Structural-critical (justice)	Connect activities to policy advocacy
Environmental engagement	Technical conservation	Ecological citizenship	Integrate systems thinking
Scientific learning	Achievement-based competition	Conceptual depth and application	Redesign assessment criteria
Stakeholder expectations	Activity, usefulness, achievement	Understanding, reflection, transformation	Public dialogue on educational aims
Ontological function	Reproduce existing reality	Open possibility of alternative worlds	Institutionalize revisionary practices

Note: Current state derived from empirical observation; required state derived from theoretical synthesis of Freire (1970), Habermas (1984), Pring (2013); transformation mechanisms proposed

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by this study.

The comprehensive mapping in Table 5 demonstrates that ontological transformation is not a single change but a systematic reconfiguration across all educational dimensions. Each current state element reinforces the others: activity-centered design requires teachers as technical facilitators, which positions students as executors, which produces declarative knowledge, which generates normative social values and technical environmental engagement, which satisfies stakeholder expectations for visible achievement. Breaking this cycle requires coordinated transformation: curriculum documents must rearticulate aims, which requires teacher development in critical pedagogy, which restructures classroom relations, which enables students as reflective constructors, which produces critical knowledge, which generates transformative social and environmental engagement, which gradually reshapes stakeholder expectations. This is what Freire (1970) understood as the "practice of freedom"—not an immediate leap but a recursive process of critical engagement with reality.

Synthesis: Toward Educating Persons in the Era of Skills-Based Education

This study shows that the tension between vocational and liberal education cannot be resolved by simply combining both, but requires a deeper ontological synthesis. Vocational learning is not inherently problematic; it can help students understand the world concretely, but it becomes limiting when detached from reflective, scientific, artistic, and philosophical dimensions, reducing skills to mechanical activities without broader meaning. Evidence from SD Prestasi Global Depok illustrates this gap, where students gain technical competence in activities such as ecobrick production or project-based tasks without critically understanding their relevance within wider social, economic, and ecological contexts. Thus, the core issue lies not in skills-based learning itself but in an ontological framework that restricts education to functional outcomes rather than fostering critical and reflective human development. While approaches like STEAM and the Merdeka Curriculum promote active, contextual learning and demonstrate effectiveness in improving skills and awareness, they often fail to bridge the gap between competence and critical consciousness, resulting in what can be termed “instrumental sustainability education.” Addressing this requires “ontological vigilance,” where curriculum, pedagogy, teacher development, assessment, and policy are reoriented toward forming autonomous, reflective learners by embedding critical inquiry, dialogue, and meaning-making as central components of education rather than as secondary additions.

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Table 6. Integrated Recommendations for Ontological Transformation in Basic Education

Level	Concrete Action	Responsible Actor	Progress Indicator	Timeline
Curriculum	Revise aims statements to prioritize "educating persons" over "training for skills"	Ministry of Education, Curriculum Developers	Document analysis showing explicit critical autonomy aims	1–2 years
Pedagogy	Mandate 30% reflective time in all project-based activities; require "why" questions in lesson plans	School Leaders, Teachers	Observation protocols showing systematic reflection	Immediate–1 year
Teacher Development	Institute critical pedagogy training; shift from STEAM technique workshops to philosophical foundations	Teacher Training Institutions, Professional Learning Providers	Pre/post assessments of teachers' ontological awareness	1–3 years
Assessment	Develop critical consciousness rubrics; include student self-	Assessment Designers, School Leaders	Portfolio samples showing structural analysis	1–2 years

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	positioning narratives in portfolios			
Policy	Revise National Framework of Skills to require conceptual integration; fund revisionary education pilots	Policy Makers, Funding Bodies	Policy documents showing coherence requirements; pilot evaluation reports	2–5 years
Stakeholder Engagement	Public dialogue forums on educational aims; parent education on "educating persons"	School Communities, Civil Society Organizations	Participation rates; shift in parent survey responses	Ongoing

Note: Timeline estimates based on typical policy implementation cycles in Indonesian education context. Progress indicators derived from this study's analytical framework.

The integrated recommendations in Table 6 recognize that ontological transformation requires coordinated action across multiple educational levels. Isolated changes—however well-intentioned—will be absorbed by existing instrumental structures unless accompanied by systemic shifts. The recursive model presented earlier suggests that entry points at the pedagogical level can initiate transformation, but sustainability requires eventual policy and stakeholder validation. The timeline acknowledges that meaningful change in education typically requires years rather than months, yet the immediate actions (reflective time mandates, "why" question requirements) can begin without awaiting comprehensive reform. This pragmatic urgency combined with systemic patience characterizes what Freire (1970) understood as revolutionary patience: the recognition that transformation is neither instantaneous nor

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indefinitely deferrable.

This study's comprehensive analysis of project-based learning at SD Prestasi Global Depok reveals a systematic pattern of ontological narrowing across all observed practices. Whether in social education (Ramadhan Delight), environmental learning (eco-enzyme, ecobrick, mangrove), or scientific engagement (STEAM competition), the dominance of descriptive ontology over revisionary ontology produces students who are active and productive but not yet reflective and autonomous. This pattern is not accidental but structurally reinforced by stakeholder consensus, policy frameworks, and pedagogical traditions that normalize instrumental rationality. The philosophical analysis drawing on Freire (1970), Habermas (1984), and Pring (2013) demonstrates that this condition represents not merely a pedagogical limitation but an ontological reduction of education's deepest meaning.

The transformation required is therefore comprehensive yet strategically implementable. The recursive model and ecosystem framework presented in this section offer pathways for moving from "training for skills" to "educating persons" without requiring impossible immediate revolution. The key insight is that ontological transformation begins with recognizing the ontological assumptions embedded in current practice—assumptions that present themselves as common sense but are actually contingent choices. Once recognized, these assumptions can be questioned, alternatives can be articulated, and gradual systemic shift can be pursued. The ultimate aim is not to reject skills or vocational relevance but to integrate them within a richer educational framework where skills become mediums for thinking, practice becomes connected to meaning, and relevance becomes compatible with freedom. Only through such integration can basic education fulfill its highest purpose: the formation of reflective, critical subjects who are aware of their place in the world and capable of transforming it with consciousness, freedom, and dignity (Freire, 1970; Pring, 2013).

CONCLUSION

This study confirms that primary education at SD Prestasi Global Depok has undergone an implicit ontological shift from *educating persons* to *training for skills*, evidenced by the dominance of activity dimensions over reflection across all observed project-based learning practices (STEAM, P5, and environment-based learning). While these innovations effectively enhance student engagement, practical skills, and affective values, they systematically fail to cultivate critical consciousness of social, economic, and ecological structures, resulting in procedural competence without autonomous subjectivity. This ontological narrowing produces what Richard Pring (2013)

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terms *pseudo-flourishing*—superficial well-being unaccompanied by expanded reflective capacity—and risks perpetuating instrumental sustainability education that reproduces rather than transforms reality. The transformation required is therefore fundamentally ontological: education must shift from an orientation of *what students do* toward *what students understand, interpret, and reflect upon*, embedding critical reflection at the core of learning design through "why"-oriented inquiry, dialogical spaces, and explicit structural analysis. Only through this reorientation can pedagogical innovations evolve from instruments of skill production into practices of human formation, producing reflective subjects capable of understanding, evaluating, and transforming their social reality with consciousness, freedom, and dignity.

FUTURE DIRECTIONS

Future research should expand this ontological analysis beyond single-site case studies to comparative multi-site investigations across diverse socio-economic contexts, enabling deeper understanding of how structural conditions shape the possibilities for educating persons versus training for skills. Longitudinal designs tracking students from primary through secondary education would illuminate whether early instrumental orientations persist or can be transformed by later critical pedagogical interventions, while mixed-methods approaches combining qualitative depth with quantitative measures of reflective autonomy would strengthen empirical validation of ontological claims. Additionally, intervention studies testing the recursive transformation model proposed herein—embedding systematic reflection in project-based learning and measuring subsequent shifts in student consciousness—are essential to move from diagnostic critique to evidence-based reform. Comparative international research examining how other national curricula negotiate the vocational-liberal tension, particularly in Nordic and East Asian contexts with divergent cultural assumptions about education and human development, would enrich theoretical frameworks beyond Western philosophical traditions. Finally, future scholarship should engage directly with policy implementation processes, analyzing how ontological commitments become materialized—or diluted—in curriculum documents, teacher training programmes, and assessment systems, thereby bridging the persistent gap between critical educational philosophy and transformative educational practice.

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