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Forecasting Learner Needs in a VUCA World: A Systems Approach to Educational Planning

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Abstract: This study aims to construct a conceptual model for educational planning that is both contextually grounded and future-oriented, particularly within the framework of Indonesia's Kurikulum Merdeka. Integrating Soft Systems Thinking (SST) and foresight, the research employs Soft Systems Methodology (SSM) to analyze qualitative data collected from school actors—principals, teachers, students, and parents. The methodology maps systemic tensions, actor worldviews, and transformation opportunities in school-based planning practices. Findings reveal a fundamental disconnect between aspirational curricular visions and the operational realities of school planning. Participants expressed a collective need for a planning system that empowers learner agency, accommodates contextual diversity, and anticipates future competencies such as digital literacy, ecological consciousness, and collaborative intelligence. Based on these insights, the study formulates a root definition and a conceptual model of a school planning system that is reflective, dialogical, and foresight-informed. The proposed model offers a feasible framework for reconfiguring educational planning as a dynamic learning ecosystem—one that is inclusive, adaptive, and strategically aligned with the demands of a rapidly changing future.

Keywords: Educational Planning, Soft System Thinking, Foresight Education.

Introduction

The education sector is now swept up in a fast paced and often unpredictable tide of global transformation. Climate change, the digital technology revolution, the dynamics of the global labor market, and transnational humanitarian crises are creating learning environments marked by high uncertainty. In global literature, this phenomenon is encapsulated by the concept of VUCA (Volatility, Uncertainty, Complexity, Ambiguity)a framework that underscores extreme disruptions in social, economic, and political systems, directly impacting how education must be designed, implemented, and assessed (Brylina et al., 2021). As the world confronts increasingly complex challenges, education must evolve beyond reactive responses to present conditions and become a proactive instrument for shaping the future.

Unfortunately, many education systems including Indonesia's still rely heavily on linear, historically driven, and reactive planning frameworks. These approaches often fail to timely address learners' shifting needs. A global study indicates that policy development in education rarely adopts integrated anticipatory approaches, despite growing pressure to produce adaptive, visionary graduates (Beni, 2018). While learners today require reflective thinking, cross-cultural collaboration, and technological and sustainability literacy, education systems continue to be anchored to outdated academic standards (OECD, 2024). This results in a significant mismatch between 21st-century learning aspirations and technocratic planning practices.

The urgency to address future learning needs has been increasingly spotlighted in international education forums. Calls for flexible, contextually relevant, and sustainable learning have taken center stage in key reports, including OECD's Future of Education and Skills (2020) and UNESCO's Education 2030 (Hynes et al., 2020; OECD, 2024). However, a persistent conceptual and empirical gap exists between global discourses and their implementation in national and local education systems. A key challenge lies in the absence of a framework that holistically integrates policy planning with learning needs foresight. Without robust anticipatory efforts, education systems will remain ill-equipped to face multifaceted future crises.

It is within this context that foresight, or futures thinking, becomes essential to educational planning. Foresight not only projects emerging trends but also empowers policymakers and educators to construct more inclusive and realistic change scenarios (Beni, 2018). When applied in education, foresight helps surface latent yet critical learner competencies for instance, systems thinking, global ethical consciousness, and climate literacy which remain absent in many national curricula, despite their importance for civilization's sustainability (OECD, 2021). In other words, foresight serves as a bridge between macro-level future narratives and micro-level classroom needs.

Yet foresight alone is insufficient to address the complexity and socio-political dynamics embedded in educational systems. Therefore, this study adopts Soft Systems Thinking (SST) a perspective suited for exploring unstructured problems, actor ambiguity, and stakeholder diversity in education (Bell & Morse, 2021). SST emphasizes dialogue, cross-perspective learning, and participatory approaches in shaping change solutions, aligning with education's value-laden and culturally nuanced nature. From an SST viewpoint, the education system is not a static technical structure but a dynamic social network that constantly evolves. Stakeholder values, assumptions, and perceptions are part of the systemic logic shaping change (Kirwan et al., 2020). SST is particularly powerful for navigating the complexity of education planning, as it promotes dialogic engagement across multiple levels from classrooms and schools to ministries.

However, the integration of SST and foresight remains rare in educational policy literature. Most

studies frame foresight as a predictive technocratic method, while SST is seldom applied beyond health or community development domains (Bengston, 2018; Vo et al., 2021). This reflects a key research gap: the absence of a unified approach that bridges systems thinking with future-oriented learning projections to build a genuinely contextualized, adaptive, and visionary education planning system. By exploring the fusion of SST and foresight, this study aims to develop a conceptual model for anticipatory and participatory education planning. The innovation lies in linking socially oriented systems thinking with future planning, transitioning policy formulation from top-down processes toward grounded, dialogic complexity (Jones et al., 2021). Involving multiple stakeholders in identifying future learning needs is expected to produce a more inclusive, democratic, and sustainable system.

This study also contributes to the advancement of qualitative approaches in education policy research, which are often overlooked in favor of numerical data and performance indicators. In the context of strategic education planning, narrative understanding, values, and meaning are essential elements that statistics alone cannot capture (Alford et al., 2024). Thus, SST's participatory method is increasingly relevant to co-create policy solutions rooted in social realities and stakeholder needs. For Indonesia, this approach is particularly relevant in supporting the implementation of Kurikulum Merdeka and ongoing education reform policies. Although this curriculum emphasizes contextual and flexible learning, there is still no systemic framework to forecast future learning needs across medium- and long-term horizons (Amalina, 2024). In practice, schools still struggle to align central policies with the evolving local dynamics they face. This underscores the need for adaptive, participatory, and visionary planning frameworks.

Another contribution of this research is its relevance to achieving Sustainable Development Goal 4 (SDG 4), particularly in ensuring quality and relevant learning amidst global change. UNESCO (2023) emphasizes the need for inclusive, resilient, and future-ready education systems. By applying SST, this study seeks to identify points of friction and opportunities for synergy between evolving learner needs and the direction of national education policies. Additionally, this research offers replication potential at regional or school levels, as SST is highly flexible and context-sensitive. The resulting conceptual model can inform educational planning grounded in data, dialogue, and sustained projections of learning needs. This opens space for locally responsive innovations that address diverse learner needs across geographic, social, and cultural contexts (Carney et al., 2019; Trivedi et al., 2021).

Methodologically, the study employs Soft Systems Methodology (SSM) as developed by Checkland and adapted by contemporary education management researchers. SSM enables researchers to transition from problem description to ideal system modeling through participatory exploration. Stages such as rich picture, root definition, and conceptual modeling will be used to explore and reflect upon an anticipatory education planning system tailored to future learning needs.

Methods

Research Approach

This study employs a *qualitative exploratory approach*, grounded in the epistemological foundations of *constructivism* and *systems thinking*. This approach was chosen to understand the social dynamics, values, and perceptions of educational actors within the context of planning processes that are inherently complex, ambiguous, and uncertain. The study focuses on a systemic exploration of how educators particularly within school environments interpret the future learning needs of students and how they participate in education planning that is dialogic, reflective, and anticipatory in nature.

The principal methodology applied is *Soft Systems Methodology (SSM)*, as developed by Checkland and Poulter (2006). SSM is well-suited to capturing the unstructured, "messy problems" that characterize education systems, providing a space for multi-perspective exploration. Rather than producing singular solutions, SSM facilitates *collective learning* through a process that includes system context mapping (via *rich pictures*), formulation of *root definitions* and *CATWOE*, and the development of *conceptual models* that can be compared to real-world practices in order to identify feasible and desirable changes.

This approach is methodologically integrated with *educational foresight* a futures thinking process based on scenario exploration, global trend analysis, and horizon scanning. Foresight is used to envision the learning needs of students five to ten years ahead and to identify emerging competencies that are not yet reflected in current policy frameworks, such as data literacy, cross cultural empathy, and ecological leadership. This foresight dimension is conducted through collaborative exploration with educational actors, aimed at reconstructing a planning system that is more *contextualized, anticipatory*, and *participatory*.

The integration of SST and foresight is operationalized through a *collaborative methodological design*, in which educational stakeholders are engaged as co-inquirers in the construction of shared understanding about the systems they inhabit. Dialogue and reflection are central to the research process, ensuring that findings are not only theoretically robust but also practically situated. Consequently, data collection extends beyond interviews and document analysis to include *participatory methods* such as focus group discussions, actor mapping, and visual system exploration through rich pictures.

Overall, this research approach enables a shift from merely describing educational challenges to *co-developing an ideal education system model* that is more adaptive to the dynamics of a VUCA world. The process is intentionally reflective and iterative, aligned with the principles of systems transformation which are inherently nonlinear and continuously evolving through *collective learning*.

Data Collection and Analytical Procedures

Data collection in this study employed a *qualitative approach* focused on exploring meaning and social dynamics within anticipatory education planning systems. The techniques were intentionally designed to support the integration of *Soft Systems Methodology (SSM)* and *foresight approaches*, enabling the capture of both current systemic realities and projected future learning needs. The primary method was *in-depth interviews*, conducted with school principals, teachers, and vice principals responsible for curriculum. These semi-structured interviews were informed by the CATWOE framework, aimed at uncovering how education actors perceive systemic challenges, emerging learning needs, and their visions for an ideal planning system.

In addition to individual interviews, *focus group discussions (FGDs)* were held to facilitate collective learning and co-create *rich pictures* visual representations of education system realities on the ground. FGDs also served to compare perspectives across actors and collaboratively formulate *root definitions* of the system. To enrich contextual understanding, *observations* were conducted during school planning and decision-making activities, such as curriculum team meetings or program evaluation sessions. These observations helped illuminate informal structures, institutional habits, and interpersonal dynamics.

Supplementary data were collected through *document analysis*, including school work plans (RKJM/RKAS), documents related to *Kurikulum Merdeka* implementation, and relevant policy regulations. Document analysis focused on identifying gaps between formal policy and practical

realities.

As part of the foresight process, *horizon scanning* was used to identify global and national trends relevant to the future of education such as digital technology, climate change, or shifts in the labor market. These insights were incorporated into interviews and FGDs to stimulate participants' reflection on possible futures.

Optionally, a *mini-Delphi* process was employed to gather the perspectives of key informants on future learner competencies deemed essential. This supported the participatory development of education scenarios. All data were collected through audio recordings, field notes, and the researcher's reflective journal, and analyzed using *thematic analysis* aligned with SSM principles. Data validity was ensured through *method and source triangulation*, *member checking*, and *contextual immersion* throughout the fieldwork process.

Data Analysis

The data analysis in this study was carried out in sequential phases following the framework of *Soft Systems Methodology (SSM)*, blended with a foresight approach to support reflective, participatory, and anticipatory exploration of the education system. Analysis began concurrently with data collection, as the researcher engaged in active field reflection through journaling and memoing to capture evolving meanings and actor relationships.

The first stage involved data familiarization repeated reading of interview transcripts, FGD notes, observation records, and school documents to develop a holistic understanding of the planning system's context and content. This was followed by *initial thematic coding*, with early categories informed by CATWOE elements (Customers, Actors, Transformation, Worldview, Owners, Environmental constraints), as well as foresight dimensions such as future trends and emerging student competencies.

The analysis progressed toward *system visualization* through the construction of a rich picture a synthesis of social dynamics, actor relationships, policy tensions, and future oriented narratives emerging from the field. This visualization served as a foundation for formulating the *root definitions*: narrative descriptions of ideal systems from specific actor perspectives. Each root definition was analyzed through CATWOE to ensure systemic logic and to reflect values, transformations, and ownership within the system comprehensively.

Based on these root definitions, the researcher developed *conceptual models* logically structured representations of an ideal education planning system grounded in foresight and SST. These models were not designed to replace the real system but functioned as reflective tools to compare the current and ideal states. From this comparison, the researcher and educational actors collaboratively identified *desirable and feasible changes* to guide system improvements.

Data from *horizon scanning* and *scenario planning* were analyzed interpretively to enrich the conceptual models with relevant future trends. Foresight elements were also examined to construct *emerging learner profiles*, outlining anticipated characteristics of future students to inform systemic transformation. The entire analysis process was iterative and reflective, supported by *data triangulation* and *member checking* during the final stage. Validity and credibility were ensured through analytical transparency, decision tracking (*audit trail*), and the use of visual techniques such as system maps, CATWOE matrices, and scenario illustrations.

Results and Discussion

Exploring the Current Education System (SSM Stage 1–2: Situational Analysis & Rich Picture)

The initial exploration of the educational planning system reveals that school actors particularly principals no longer perceive planning as a linear administrative task, but rather as a *dynamic and reflective process* aimed at creating a joyful, relevant, and empowering learning environment. While this perspective aligns with the spirit of *Kurikulum Merdeka*, in practice, the supporting system remains fragmented due to technical, structural, and resource-related barriers.

Situational analysis uncovered four major systemic challenges. First, teacher readiness as the frontline of pedagogical transformation remains a critical issue. Planning that is responsive to diverse learning needs requires teacher capacity for differentiated instruction, but not all teachers possess the necessary pedagogical competence or mindset. Second, resource constraints including limited access to technology, inadequate learning facilities, and insufficient funding continue to hinder the realization of schools' visionary programs. Third, the design of transformative assessment systems remains inconsistent, creating a gap between the reformative ambitions of the curriculum and the persistence of conventional evaluation tools. Fourth, stakeholder engagement especially from parents and the wider community has yet to reach an optimal level, despite its importance in strengthening character formation and learning habits.

Educational planning in schools is situated at the intersection of competing interests between internal actors (principals, teachers, students) and external actors (parents, education authorities). While principals serve as key drivers of change, the system's success heavily depends on the quality of inter actor collaboration. Teachers play a central role in both designing and implementing programs, and while students and parents are increasingly being involved in decision making, their participation remains largely consultative rather than deliberative.

Additionally, informants emphasized the importance of integrating global trends into local planning. Challenges such as digital literacy, climate change, and technological transformation are seen as pressing issues that need to be addressed in school plans. However, a significant gap persists between these aspirations and the realities on the ground such as limited access to devices, poor digital infrastructure, and insufficient teacher capacity for managing digital learning. Although some local education offices have launched positive initiatives (e.g., distributing laptops, providing digital training), the current planning system lacks the *flexibility* needed to anticipate students' long term learning needs.

Principals also projected a future learner profile characterized by digital literacy, creative-critical thinking, adaptability, collaboration, and emotional intelligence. Yet, the current planning system is not fully positioned as a strategic anticipatory tool for developing such competencies. This reflects a disconnect between the recognized challenges of the future and the still-dominant reliance on past-data-driven planning models.

Systemically, the CATWOE analysis revealed overlaps in identifying *Customers* and *Actors*: learners, as the primary beneficiaries of the education system, have yet to become active subjects in planning processes. Meanwhile, the prevailing *Worldview* that education is a tool for empowerment and character formation frequently clashes with *Environmental Constraints* such as bureaucratic regulations and limited resources. In this context, *Owners*, such as local education authorities, may either facilitate or inhibit innovation, depending on policy support and institutional alignment.

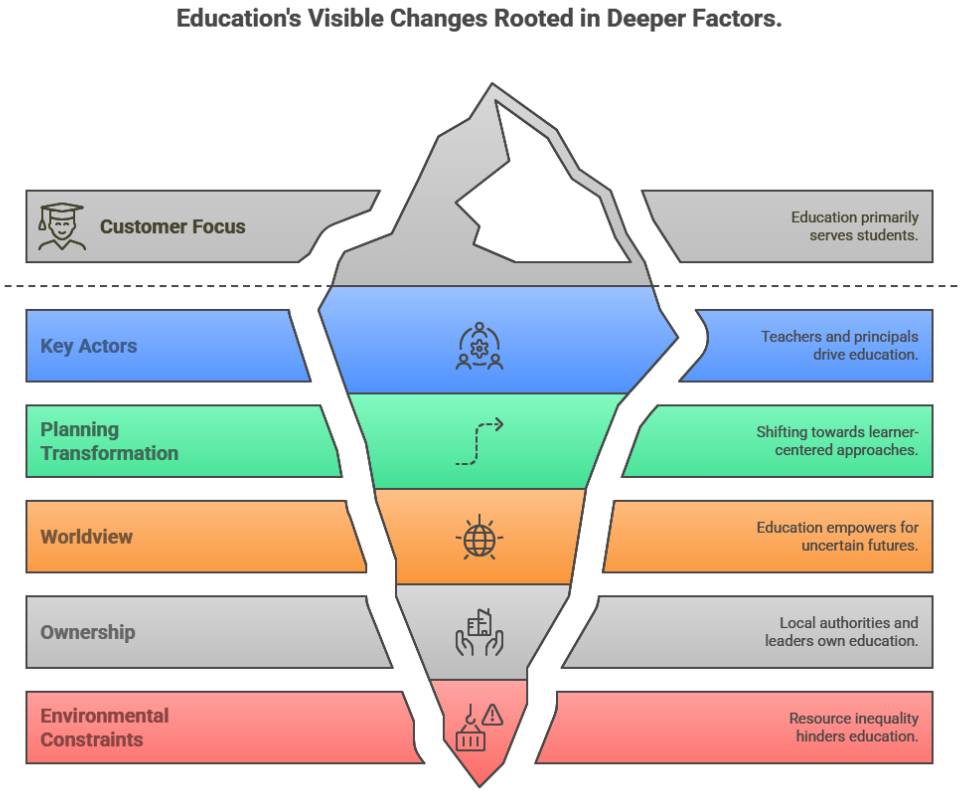

Figure 1. Rich Picture with CATWOE anotation

Figure 1 illustrates a rich picture annotated with CATWOE elements, synthesizing insights from school leaders and situational analysis. It captures key system actors, systemic challenges, interrelationships, and future aspirations confronted by practical constraints. The results offer a compelling portrait of the school education system as a *complex, dynamic social system* one filled with both tensions and transformative potential. Through these early SSM stages, a foundation for collective understanding has been established as a basis for constructing *root definitions* and envisioning ideal systems that are not only aligned with *Kurikulum Merdeka*, but also responsive to the uncertainties of the 21st century.

Actor Perspectives on the Future of Education (Foresight and CATWOE Analysis)

Interview findings reveal a strong sense of reflective awareness among education actors concerning the social, economic, and technological shifts influencing education. Principals emphasized that within the next 5–10 years, students' learning needs will become increasingly complex and multidimensional encompassing digital literacy, emotional intelligence, collaborative competence, and ecological awareness. This indicates that education stakeholders have developed sensitivity to global challenges and acknowledge the need for new competencies to help learners navigate uncertainty and change.

Foresight analysis of the data identifies several *emerging learner profiles*, portraying future students as tech-oriented, change-resilient, and socially attuned individuals. School leaders not only

highlighted the importance of ICT fluency but also expressed concern about the risks of technology misuse, especially among children and adolescents. This suggests that their foresight perspective extends beyond technological adaptation toward cultivating ethical and social capacities underlining the need for a planning system grounded not only in data, but also in *values and future oriented vision*.

Within the CATWOE framework, learners are clearly identified as the primary *Customers* those who will directly experience the outcomes of system transformation. Education actors believe that students should not merely be passive recipients of policy, but rather be empowered as *active and visionary learners*. This signifies a paradigm shift in which students are no longer seen as statistical inputs in school planning documents but as central to the design of future learning systems.

The *Actors* in the current system include principals, teachers, and curriculum teams who drive the operationalization of plans. Interviews also revealed the increasing importance of parents and school committees, particularly in shaping students' character development outside of school settings. Their involvement is seen as a prerequisite for meaningful *Transformation*, which requires planning processes to offer *authentic participation*, not just ceremonial inclusion.

The desired *Transformation* expressed by school actors involves shifting from administrative, document-centered planning toward a more *contextual, flexible, and adaptive model* responsive to evolving learner needs. This includes not only curricular reforms, but also a transformation in educators' *mindsets* regarding the school's role in shaping the future of learners reinforcing the need to embed foresight thinking within the planning process.

From a *Worldview* standpoint, actors consistently articulated that education should function as an instrument for empowerment and disruption readiness, rather than as a preserver of conventional norms. They conceptualize schools as strategic spaces for cultivating adaptive, creative, and globally conscious individuals. However, this worldview often clashes with structural realities, such as limited resources, outdated assessment systems, and centralized bureaucracies.

Regarding *Owners*, both school principals and local education offices are viewed as key decision makers responsible for directing planning efforts. While principals advocate for greater autonomy to contextualize school level plans, central and district-level policies are often perceived as too normative and inflexible limiting the potential for local innovation. This tension between centralization and localization is a critical factor in designing a planning system that balances *standardization with contextual responsiveness*.

Finally, the *Environmental Constraints* highlighted include inadequate technological infrastructure, budget limitations, and low levels of digital literacy among some teachers and parents. Despite support from local governments in the form of training and device distribution, transformation remains constrained if school culture and planning structures do not allow for experimentation and flexibility. This reinforces the insight that reform must address not only the system's hardware (infrastructure and tools), but also its *systemic software* that is, mindsets, policies, and inter actor coordination.

Table 1: Foresight – CATWOE Analysis Matrix

CATWOE Component	Key Findings from School Informants
Customers	Students are identified as the primary beneficiaries. A system is needed that can support future-oriented learning based on evolving needs (e.g., digital literacy, collaboration, empathy, flexibility).
Actors	School principals, teachers, and curriculum teams play key roles in

	operational planning. Parents and school committees are increasingly positioned as supporting actors within the learning ecosystem.
Transformation	A transition is needed from administrative planning toward a reflective, participatory approach based on anticipation of 21st-century learning needs.
Worldview	Education is seen as an instrument for empowerment in a dynamic future not merely a means of preserving traditional structures. The focus is on character building, digital literacy, and student adaptability.
Owners	Local authorities (principals) seek greater autonomy to align central policies with school contexts. Education offices are seen as both regulators and resource providers.
Environmental Constraints	Limited digital infrastructure, funding constraints, and low levels of digital literacy among teachers and parents. Bureaucratic culture and centralized regulations sometimes hinder school-level innovation and flexibility.

Formulating the Root Definition and Conceptualizing the Ideal System (SSM Stages 3–4)

Based on the analysis of worldviews and actor mapping through the CATWOE lens, the following root definition is proposed:

A participatory and foresight-based educational planning system, operated by the school community (principals, teachers, students, parents), with the aim of identifying and responding to students' future learning needs in a contextual manner through processes of reflection, systemic dialogue, and sustainable curriculum adaptation within the constraints of limited resources and centralized regulations.

This formulation encompasses all elements of the CATWOE framework:

- Customers: Students and the broader learning community
- Actors: School-based stakeholders
- Transformation: From administrative planning to anticipatory planning
- Worldview: Education as a reflective bridge to the future
- Owners: Principals and education authorities
- Environmental Constraints: Infrastructure limitations, bureaucratic policies, and human resource capacity

From this root definition, a conceptual model of the ideal educational planning system was developed, featuring the following key characteristics:

- Multi stakeholder dialogue based: Planning is developed through regular discussions among teachers, students, parents, and school leaders, grounded in contextual school level data.
- Foresight-informed: Planning integrates outputs from horizon scanning (technological, social, ecological trends) and anticipates future competency needs in learning goals.
- Reflective cycles: The school's work plans follow cyclical phases reflection, experimentation, adjustment, and re-reflection rather than linear trajectories.
- Locally adaptive: The model allows flexibility for planning structures to be adapted based on

the unique needs of each learning community, including schools in urban, rural, and underserved (3T) areas.

- Learner and parent co-design: Students are not merely passive recipients but contribute actively through learner forums, feedback mechanisms, and future-oriented projects.
- Technology and data enabled: The system is supported by internal school digital platforms that manage learning needs, student preferences, and non academic progress analytics.

This model is not presented as a rigid or universal blueprint but as a systemic framework that can be contextualized to each school's capacity and local values. The next phase of the study will involve comparing the actual system with this conceptual model to identify areas for feasible and desirable change, as prioritized by the school community.

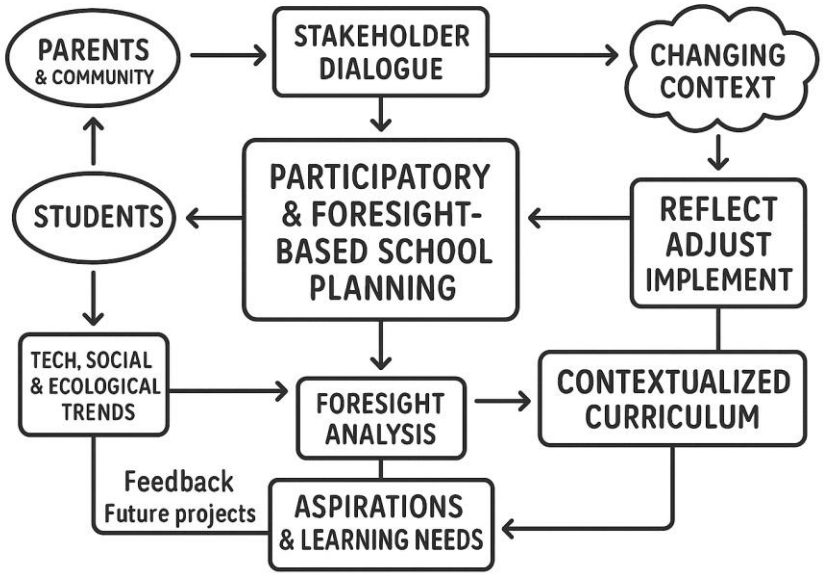

Figure 2. Conceptual Model Based on Root Definition

Key Findings and the Scheme of Desirable and Feasible Changes

Triangulated data from interviews indicate a significant misalignment between the aspirational vision of *Kurikulum Merdeka* and the technocratic, administrative practices that continue to dominate on the ground. However, across all perspectives, education actors voiced not only critical reflections on current practices but also constructive visions for meaningful and urgent change. From the perspective of school principals, educational planning should function as a *strategic platform* for cultivating a shared future vision, rather than serving merely as a procedural document.

> "We want the school plan to come alive not just end up on paper, but serve as a space to genuinely think about students' futures," one principal asserted.

This vision stems from an awareness that students are entering a vastly different world, demanding planning systems that can anticipate the need for digital literacy, adaptive capacity, and

social emotional sensitivity. Suggested feasible changes include embedding collaborative reflective activities into school planning forums and expanding the use of local data to map future trends.

Teachers, as the curriculum drivers in the classroom, echoed similar concerns. They shared that administrative demands often suppress creativity in designing learning experiences tailored to students' needs and identities.

> "We want to design instruction that truly fits our students, but we often feel trapped in rigid planning formats," a subject teacher remarked.

Teachers proposed more flexible lesson and instructional planning systems that accommodate future-focused projects, community-based activities, and student interest exploration. These changes were seen as feasible with more adaptive policy support and reflective, practice-based teacher training beyond formal dissemination.

Students themselves expressed a growing consciousness that the world they inhabit is far more dynamic than what formal curricula can outline. One student stated:

> "We need learning that prepares us to think and act in the future not just to chase grades."

They called for more opportunities for debate, project work, and problem solving rooted in real life community issues. This aspiration underscores the need for a systemic epistemological shift from viewing learning as the reproduction of knowledge to viewing it as the *creation of meaning and action*.

Parents added further urgency to the need for transformation. They observed that schools often over focus on programs while overlooking children's emotional and character development.

> "We see at home that our children are often confused or stressed, not because the content is difficult, but because they don't see its relevance to their lives," one school committee member explained.

Parents advocated for a planning system that involves them as *reflective partners* rather than passive recipients. They saw feasibility in establishing joint evaluation forums and including parents in shaping character development strategies. This cross-perspective analysis concludes that what is needed is not mere administrative correction but a *paradigm transformation* reimagining education planning as a *reflective, participatory, and anticipatory social process*. The changes considered feasible by education stakeholders include:

- Reorganizing planning structures to be more decentralized and context sensitive
- Providing greater creative autonomy for teachers to design future oriented learning
- Empowering students and parents as co-designers of the educational process
- Integrating foresight and multi-stakeholder dialogue into the school's medium term planning cycles

With inclusive policy support and field-based training, these changes can be implemented

gradually and sustainably not merely as localized innovations, but as *tangible contributions toward a nationally transformative education system* that is more equitable, adaptive, and future-ready.

Conclusion

This study affirms that educational planning in the VUCA era can no longer be approached through linear frameworks reliant on historical data and pseudo-predictive models. Field findings reveal that educational actors particularly principals, teachers, students, and parents demonstrate a high level of awareness regarding the urgent need to reposition education as a space for cultivating adaptive, reflective, and values-based future competencies. However, the current planning system has yet to accommodate these aspirations due to its entrenchment in administrative logics, bureaucratic structures, and top-down policy formulation.

By integrating *Soft Systems Thinking* and *foresight*, this research developed a systemic understanding of the dynamics, tensions, and opportunities embedded within school-level educational planning. The formulated root definition articulates an ideal system model that is participatory, dialogic, and informed by medium-term projections of learning needs. This conceptualization provides a transformative framework shifting educational planning from a procedural exercise to a collective reflective practice that enables schools to imagine and design their educational futures contextually.

From the principals' perspective, planning must be liberated from administrative pressures to become a space for co-constructing a shared vision. Teachers voiced the need for pedagogical flexibility and creative autonomy to design learning experiences rooted in students' future realities. Students themselves called for greater participatory and meaningful learning beyond test preparation while parents emphasized the importance of sincere engagement in supporting children's character development and life readiness. These four perspectives form a strong foundation for transformation not just in a normative sense, but also socially and ethically.

The resulting change schema ranging from the revitalization of reflective planning forums to the integration of foresight into curriculum design responds directly to systemic gaps identified in the field. These changes are considered both desirable and feasible precisely because they emerged *from within* the system, rather than being externally imposed. As such, this research not only addresses a gap in the literature regarding the integration of SST and foresight in education policy, but also provides *practical contributions* for school communities seeking to enact more empowered, inclusive, and visionary future-oriented planning practices.

Future research should investigate how foresight-informed planning models can be adapted across diverse school settings to enhance contextual responsiveness and strategic alignment. Studies may also explore the long-term impact of participatory planning on learner agency, curriculum relevance, and institutional resilience in volatile environments. Practically, schools are encouraged to establish reflective planning forums and integrate foresight tools into curriculum development cycles. Professional development for educators and school leaders should emphasize systems thinking, anticipatory competencies, and collaborative design to foster inclusive and future-oriented educational practices.

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