



Enacting Inclusive Values through Special Education Management: Integrating the Index for Inclusion within Educational Governance in Indonesia

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ABSTRACT

This study examines how inclusive values are enacted through special education management by integrating the Index for Inclusion (culture, policy, pedagogy) with a Tetra Helix governance lens. Using an explanatory sequential mixed-methods design, survey data from 78 stakeholders across primary, secondary, and special schools in South Kalimantan, Indonesia were analysed, followed by interviews, focus groups, and structured observations. Results show culture rated strongest, while policy and pedagogy were lower and more variable, indicating a culture–implementation gap. Qualitative findings identify uneven capacity-building coverage, weak post-training monitoring, role clarity (including GPK functions), and collaboration routines as key mechanisms shaping routinised support. The study reframes special education management as a governance site where values are translated into operational practice and offers a diagnostic contribution for strengthening alignment in inclusive systems.

KEYWORDS

Inclusive values; Index for Inclusion; educational governance; special education management; Tetra Helix; Indonesia.

INTRODUCTION

Inclusive education is widely recognised as a values-driven commitment to equity, participation, and belonging within educational systems. International scholarship consistently emphasises that inclusion extends beyond the physical placement of learners with disabilities into mainstream classrooms to encompass the cultural, policy, and pedagogical conditions that shape everyday schooling (Ainscow, 2020; Booth & Ainscow, 2011). Inclusion is therefore an ongoing normative project in which educational values are translated into institutional routines, professional judgement, and organisational decision-making; its practical meaning depends on how these values are enacted within governance structures and school management practices. Viewed this way, inclusion is also a governance problem.

A substantial body of research has examined factors influencing inclusive implementation, including teacher beliefs, professional learning, self-efficacy, and resource conditions (Alnahdi et al., 2022; Avramidis & Norwich, 2002; Florian, 2011). Cross-national studies further demonstrate that inclusive practice is shaped by institutional support, collaborative structures, and system-level capacity (Charitaki et al., 2022; Koliqi & Zabeli, 2022; Li & Rupp, 2021). From a systems and policy-enactment perspective, inclusive education requires alignment between formal commitments and the organisational conditions that enable classroom enactment, including practical supports, professional norms, and routinised institutional arrangements (Mitchell, 2015; Rapp & Corral-Granados, 2021). These conditions are especially pressing in Indonesia as policy commitments expand faster than institutional capacity to coordinate support across schools and stakeholders.

Despite this growing body of scholarship, several gaps remain. First, research has often concentrated on teacher-level variables, with comparatively less attention to how inclusive values are operationalised through school governance and special education management structures (Dignath et al., 2022). In this article, special education management refers to the organisational and governance work that translates inclusive commitments into routinised support: clarifying roles (including GPK functions), coordinating provision and referrals, aligning resourcing and professional learning, and sustaining monitoring and feedback mechanisms. This positions special education management as an enactment infrastructure—beyond administrative compliance yet its role in shaping the institutionalisation of inclusive values remains insufficiently theorised (Prisiazhniuk et al., 2024).

Second, although the Index for Inclusion provides a well-established framework for analysing inclusion across culture, policy, and pedagogy within schools (Booth & Ainscow, 2011), limited research has examined how these internal dimensions interact with broader multi-actor governance arrangements beyond the school. As a result, the frequently cited “policy–practice gap” is often identified descriptively but less often explained in structural and managerial terms, including how leadership, coordination, and external support infrastructures shape implementation capacity (Schuelka, 2018).

These issues are salient in Indonesia, where inclusive education policies have expanded significantly over the past decade, signalling a formal commitment to equity (Hata et al., 2021). In this setting, a governance question becomes central: what management routines and coordination arrangements make inclusive values actionable and sustainable in everyday schooling? Persistent inconsistencies between system-level directives and classroom-level enactment particularly in curriculum differentiation, assessment adaptation, and coordinated support provision suggest that the problem is not reducible to compliance. Rather, it reflects interactions among school culture, institutional policy arrangements, pedagogical routines, and cross-actor coordination in local education ecologies (Ainscow, 2020; Booth & Ainscow, 2011; Florian, 2011).

To address these gaps, this study integrates the Index for Inclusion with a Tetra Helix governance perspective. The Index conceptualises inclusion as a systemic pattern across culture, policy, and pedagogy within schools (Booth & Ainscow, 2011). Because schools operate within broader governance ecosystems, inclusive enactment depends on the alignment of governance roles and capacities across four interdependent actors: the Education Office (Dinas Pendidikan), schools (leaders and teachers, including GPK), families (parents), and learners (students). Where these actors are not coordinated through clear routines and feedback loops, inclusive commitments may be culturally affirmed yet inconsistently operationalised through school procedures and classroom supports. Drawing on helix-based models of collaborative governance (Carayannis & Campbell, 2009; Etzkowitz & Leydesdorff, 2000), the Tetra Helix framework enables analysis of how coordinated roles, institutional trust, and shared problem-solving shape implementation capacity within educational systems.

Using an explanatory sequential mixed-method design, this study examines how inclusive values are enacted through special education management and educational governance in Indonesian schools. Specifically, the study seeks to: (1) profile school-level conditions across culture, policy, and pedagogy using the Index for Inclusion; (2) analyse how multi-actor governance relationships and special education management routines influence implementation capacity; and (3) explain divergences between formal policy commitments and classroom-level enactment. By integrating diagnostic school-level analysis with multi-actor governance theory, the study contributes theoretically by extending the Index for Inclusion into a governance–enactment framework and methodologically by applying an explanatory mixed-method approach to clarify structural mechanisms underlying the policy–practice gap, advancing a more systematic explanation of how inclusive values are institutionalised through special education management and educational governance in context.

LITERATURE REVIEW

Inclusive Values: Definition and Operationalisation

Inclusive education is widely described as grounded in commitments to equity, participation, belonging, and respect for diversity (Ainscow, 2020; Booth & Ainscow, 2011; UNESCO, 2020).

These commitments position inclusion not simply as access to schooling, but as the active reduction of exclusionary barriers and the widening of meaningful participation for all learners, including those with disabilities or additional support needs. In this normative sense, inclusive values refer to shared ethical orientations that affirm the equal worth of learners and the responsibility of educational systems to accommodate diversity rather than normalise conformity.

However, values are analytically meaningful only when they are translated into institutional practice. Inclusive values become visible not as abstract declarations but as patterns of decision-making, role allocation, and everyday routines within schools. A commitment to belonging, for example, is reflected in whether school cultures promote mutual respect and safety; a commitment to equity becomes tangible when policies minimise segregating practices and clarify responsibilities for support; and a commitment to participation is realised when pedagogical routines enable diverse learners to engage meaningfully in classroom activity. Values, therefore, are enacted through organisational arrangements that either sustain or constrain inclusive practice (Dube & Baleni, 2022).

In this study, inclusive values are operationalised through the three interrelated domains of the Index for Inclusion: inclusive culture, inclusive policy, and inclusive pedagogy (Booth & Ainscow, 2011). Inclusive culture captures shared norms of respect, collaboration, and belonging; inclusive policy refers to institutional routines, resource allocation, role clarity (including the functions of special education support teachers/GPK), and procedures that reduce exclusion; and inclusive pedagogy concerns classroom-level adaptation, participation structures, and instructional practices responsive to learner diversity (Griful-Freixenet et al., 2020). By linking value commitments to these measurable domains, the study treats inclusive values as empirically observable through stakeholder ratings and institutional conditions.

This operationalisation allows the analysis to move beyond definitional statements toward an enactment perspective. Rather than asking whether schools endorse inclusive principles, the study examines how values are sustained or rendered fragile through special education management routines and cross-actor governance coordination. In doing so, inclusive values are conceptualised as normative commitments that become institutional realities only when supported by coherent management structures and aligned governance roles.

Special Education Management as an Institutional Mechanism

Special education management in this study is conceptualised not merely as administrative oversight but as the institutional mechanism through which inclusive values are translated into organisational routines. While inclusion is often framed as a pedagogical agenda, systems-oriented accounts emphasise that classroom enactment depends on organisational conditions and support structures that stabilise implementation over time (Li & Rupp, 2021; Mitchell, 2015). Consistent with policy enactment perspectives, formal commitments require routinised procedures, role clarification, and practical supports if inclusion is to move beyond rhetorical compliance (Rapp & Corral-Granados, 2021). In this sense, managerial decisions regarding role

allocation (including the functions of GPK), access to specialist support, time for collaborative planning, and monitoring processes directly shape whether inclusive values are embedded in practice (Beyazoğlu & Özbek, 2025).

From a governance perspective, management routines determine how responsibilities are distributed, how communication flows across actors, and how accountability for inclusion is maintained. Collaborative governance research suggests that role clarity and shared decision routines are crucial for sustaining implementation across stakeholders (Ansell & Gash, 2008). Where special education management provides stable coordination structures and clear procedural guidance, inclusive commitments are more likely to be institutionalised; conversely, when management functions are fragmented or person-dependent, enactment becomes uneven and vulnerable to resource constraints (OECD, 2023).

The Index for Inclusion as a Measurement Architecture

To render enactment analytically visible, this study employs the Index for Inclusion as a measurement architecture (Booth & Ainscow, 2011). The Index conceptualises inclusion across three interrelated domains inclusive culture, inclusive policy, and inclusive pedagogy which together provide a structured way to assess how inclusive values materialise within school environments. This domain structure aligns with the view that inclusion requires not only a welcoming ethos but also coherent policies and pedagogical practices that widen participation and reduce exclusion (Ainscow, 2020; Booth & Ainscow, 2011).

Inclusive culture captures shared norms of belonging, safety, and mutual respect. Inclusive policy refers to institutional arrangements role clarity, procedural routines, resource allocation, and coordination mechanisms that reduce exclusion and clarify responsibility. Inclusive pedagogy concerns classroom-level adaptation, differentiation, and participation structures that enable diverse learners to engage meaningfully in learning processes (Lindner et al., 2021). By mapping inclusive values onto these domains, the study links normative commitments to observable institutional patterns and provides a basis for diagnosing where culture–implementation gaps may emerge (Booth & Ainscow, 2011; Kielblock & Woodcock, 2023).

Tetra Helix Governance Configuration

Because schools operate within broader governance ecosystems, enactment is not confined to internal school processes. Drawing on helix-based models that emphasise collaborative production across distinct but interdependent actors (Carayannis & Campbell, 2009; Etzkowitz & Leydesdorff, 2000), this study conceptualises inclusive implementation as co-produced across four interdependent actors: the Education Office (Dinas Pendidikan), schools (leaders and teachers, including GPK), families (parents), and learners (students). This configuration makes visible how coordination, trust, and shared problem-solving shape implementation capacity within education systems.

The Education Office provides policy interpretation, capacity-building, and oversight; schools translate directives into organisational routines and classroom practices; families

contribute knowledge about learner needs and participate in decision processes; and learners experience whether inclusive commitments are realised as belonging and meaningful participation. Where coordination routines and feedback loops are weak, governance intent may be culturally endorsed yet inconsistently operationalised in policy routines and pedagogy, reinforcing policy–practice gaps under capacity constraints (OECD, 2023).

Integrated Enactment Logic of the Study

Bringing these elements together, the study advances an integrated enactment logic linking values, management, measurement, and governance. Inclusive values represent normative commitments to equity and participation (Ainscow, 2020; Booth & Ainscow, 2011). Special education management translates these commitments into organisational routines and decision-making structures, consistent with policy enactment accounts emphasising the importance of routinised supports and institutional conditions (Mitchell, 2015; Rapp & Corral-Granados, 2021). The Index for Inclusion renders enactment empirically visible across culture, policy, and pedagogy (Booth & Ainscow, 2011). The Tetra Helix configuration explains how coordination among governance actors conditions the strength or fragility of enactment (Carayannis & Campbell, 2009; Etzkowitz & Leydesdorff, 2000).

This integrated framework clarifies how the study's variables work relationally rather than independently. Values do not operate in isolation; they are institutionalised through management routines, measured through school-level conditions, and shaped by multi-actor governance coordination. In doing so, the framework responds directly to calls for governance-sensitive analyses that link inclusive ideals to operational practice in resource-constrained systems (OECD, 2023).

Guided by this framework, the study addresses three analytically connected research questions:

- (1) How do stakeholders rate inclusive culture, policy, and pedagogy (Index for Inclusion) across school contexts?*
- (2) What quantitative gaps and patterns indicate areas of enactment that require further explanation?*
- (3) How do actors across the Tetra Helix explain these patterns through governance coordination, special education management routines, and support infrastructures?*

METHODS

Research Design

Grounded in the integrated enactment framework outlined above, this study employed an explanatory sequential mixed-methods design (Creswell & Poth, 2018). The design was structured to examine inclusive enactment in two analytically connected phases: first, by identifying patterned differences across institutional domains using quantitative data; and second, by explaining those patterns through qualitative accounts of governance and management practice.

The study was guided by three research questions that correspond explicitly to the two strands of the mixed-method design:

RQ1 (Quantitative strand – institutional profiling): How do stakeholders rate inclusive culture, policy, and pedagogy (Index for Inclusion dimensions) across school contexts?

RQ2 (Quantitative strand within-dimension analysis): Where are the most pronounced differences between culture, policy, and pedagogy, and how do these patterns vary by stakeholder group?

RQ3 (Qualitative explanatory strand – governance enactment): How do actors across the Tetra Helix interpret and enact inclusive values, particularly through special education management routines and coordination infrastructures?

RQ1 and RQ2 are addressed through structured survey data based on the Index for Inclusion dimensions, generating numeric indicators of institutional enactment strength. RQ3 is addressed through qualitative interviews and focus group discussions as an explanatory follow-up to the quantitative findings. Specifically, the qualitative strand was used to explain three patterns: stronger ratings of culture relative to policy and pedagogy, the non-significant difference between policy and pedagogy, and low-scoring sites indicating uneven enactment. These results informed the focus of the qualitative inquiry and the interpretation of how governance and management processes accounted for the observed patterns.

The explanatory logic of the study proceeds as follows: quantitative results first identify areas of convergence and divergence among culture, policy, and pedagogy. These patterns are then used to purposively guide qualitative inquiry toward sites, actors, and practices that may account for observed gaps. Integration occurs at the interpretation stage, where institutional patterns (Index dimensions) are analysed alongside multi-actor governance dynamics (Tetra Helix) to generate meta-inferences about how inclusive values are translated through special education management.

This sequencing ensures analytic coherence between variables, research questions, and data sources. The Index for Inclusion provides the measurable institutional domains (culture, policy, pedagogy), while the Tetra Helix framework provides the explanatory governance structure through which those domains are interpreted. In this way, the mixed-method design is not additive but integrative, linking quantitative profiling with qualitative explanation within a single enactment model.

Participants and Context

The quantitative strand involved 78 respondents (49 teachers/school staff, 24 students, and 5 parents) drawn from primary, lower-secondary, upper-secondary, and special school settings in South Kalimantan, Indonesia. Participation was voluntary, questionnaires were completed anonymously, and the sample was designed for diagnostic profiling rather than statistical representativeness. In line with the study's enactment framework, the purpose of the quantitative strand was to generate comparable numeric indicators of perceived inclusion

across the Index dimensions (culture, policy, pedagogy) to identify patterns requiring qualitative explanation.

Respondents were recruited between 23 June 2025 and 21 November 2025 through schools participating in local inclusion networks facilitated by education authorities. Recruitment prioritised maximum variation in school type mainstream and special schools (SLB) and stakeholder role (school staff, students, parents) to capture multiple perspectives on enactment. The primary field sites were located in Banjarbaru City and nearby localities within the same functional service area (hereafter referred to as “surrounding areas”), defined as schools situated in locations that are administratively within South Kalimantan Province and practically accessible through the same coordination and support channels used by schools in Banjarbaru. This definition clarifies the geographic reference while recognising that the study’s analytic focus is institutional enactment patterns rather than geographic comparison.

In line with the Tetra Helix framing, the Education Office (Dinas Pendidikan) was not included as a survey respondent group, because the survey was designed to measure within-school enactment as experienced by those directly embedded in daily school practice (teachers/school staff, students, parents). The Dinas role in policy interpretation, capacity-building provision, coordination, and resource allocation was therefore examined as a key-informant component in the qualitative strand.

Quantitative Instrument and Data Collection

Survey items were adapted from the Index for Inclusion framework and organised into three dimensions—inclusive culture, inclusive policy, and inclusive pedagogy with six sub-dimensions (A1–A2; B1–B2; C1–C2). The final instrument comprised 29 items, rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Items were administered in Bahasa Indonesia with wording aligned to local school practice and stakeholder accessibility.

The adaptation process followed a structured contextualisation procedure. Items that presupposed established multi-professional support systems or formalised referral pathways were either reworded or removed to reflect the organisational realities of Indonesian public secondary schools. In particular, several items related to external specialist collaboration were simplified to capture coordination practices feasible within district-level constraints.

To enhance contextual validity, the draft instrument underwent expert review by two inclusive education scholars and one district-level practitioner, followed by a small pilot to ensure clarity and contextual relevance. Minor linguistic adjustments were made prior to full deployment. Internal consistency was then assessed in the study sample, with Cronbach’s alpha coefficients for the full scale and each Index dimension reported in the Findings.

For interpretability and cross-dimension comparability, item responses were rescaled to a 0–100 metric using the transformation $(\text{item score} - 1) / 4 \times 100$. Sub-dimension scores were calculated as the mean of their item scores, and dimension scores were calculated as the mean of the two corresponding sub-dimensions; higher scores indicate stronger perceived inclusion.

Where item-level responses were missing, scores were computed using available items within the relevant sub-dimension to preserve respondent-level profiles without imputing values.

Quantitative Data Analysis

Quantitative analyses proceeded in two stages. First, descriptive statistics (minimum–maximum values, means, and standard deviations) summarised perceived inclusion across the three Index dimensions on the 0–100 scale. These summaries were interpreted diagnostically to identify relative strengths, weaknesses, and outlier profiles (e.g., sites or respondents with substantively low scores in at least one dimension), consistent with the study’s profiling purpose.

Second, paired-samples t-tests examined within-respondent differences between culture, policy, and pedagogy. Statistical significance was evaluated at $\alpha = .05$, and practical significance was assessed using Cohen’s d^2 to interpret the magnitude of within-person differences. Assumptions were screened by checking response ranges, missingness patterns, and the distribution of difference scores.

Because pedagogy items concern classroom enactment most directly, a teacher/school staff sensitivity analysis ($n = 49$) replicated descriptive and paired comparison procedures within the subgroup most closely responsible for instructional implementation. Stakeholder-stratified results (teachers/staff, students, parents) were reported descriptively to preserve the multi-actor logic while avoiding over-interpretation of small subgroups, particularly the parent subgroup ($n = 5$). Parent survey patterns were therefore triangulated with qualitative evidence rather than subjected to subgroup hypothesis testing.

Qualitative Data Collection

Qualitative participants were selected purposively to explain quantitative patterns identified in the survey, consistent with the explanatory sequential logic of the study, particularly in contexts where policy or pedagogy scores lagged behind culture or where site-level variation suggested uneven enactment. Not all survey respondents were interviewed. Instead, the qualitative strand drew on (a) a purposive subset of stakeholders from the survey pool and (b) additional key informants required by the Tetra Helix framing (e.g., Education Office officials), to ensure that governance and coordination mechanisms could be examined directly.

Data were generated through semi-structured interviews and focus group discussions (FGDs) conducted between June and November 2025. Sessions lasted 45–90 minutes, were conducted in Bahasa Indonesia, audio-recorded with consent, transcribed verbatim, and de-identified prior to analysis (e.g., T01 teacher, P01 parent, S01 student). This section distinguishes between the data collection process and the instruments used: participant selection, sequencing of interviews and FGDs, and observations refer to the process, whereas the semi-structured interview guide and FGD protocol are treated as distinct instruments.

The interview guide supported individual interviews on role-specific experiences, coordination practices, and institutional perspectives, while the FGD protocol supported group discussion of shared experiences and common patterns. Both were aligned with the Index dimensions Culture (A), Policy (B), and Pedagogy (C) and adapted for the four actor groups in the study’s Tetra Helix

configuration: government, schools, families, and learners. Across actor groups, the instruments probed: (a) how inclusive values were enacted in everyday school life; (b) how inclusion was organised through procedures, roles, coordination, training, funding, and monitoring; and (c) how curriculum adaptation, classroom support, and participation structures were sustained.

In addition to interviews and FGDs, structured classroom and school-environment observations were conducted using a frequency checklist (0 = not observed to 3 = always observed) to document enacted indicators such as inclusive social interaction, administrative support routines, accessibility features, differentiation practices, participation patterns, collaboration with support personnel, and teacher responsiveness to learning difficulties. Observational field notes were used to corroborate and contextualise participants' accounts of enactment.

Qualitative Data Analysis

Qualitative data were analysed using reflexive thematic analysis following Braun and Clarke's six-phase approach (Braun & Clarke, 2006). Analysis proceeded in two linked coding layers consistent with the explanatory purpose. First, descriptive codes captured governance and implementation conditions (e.g., capacity-building, role clarity, collaboration routines, resource constraints, and classroom practices). Second, interpretive themes were developed by mapping evidence onto (a) the three Index domains (culture, policy, pedagogy) and (b) the four actor positions in the Tetra Helix configuration (Education Office, schools, families, learners). Analytic memos and an audit trail documented coding decisions and strengthened transparent linkage between excerpts, themes, and the quantitative patterns requiring explanation. Observational notes were integrated as corroborating evidence where relevant to classroom enactment claims.

Integration of Quantitative and Qualitative Strands

Integration occurred through a **connecting–building–merging** sequence typical of explanatory sequential designs. Quantitative results were used to (1) identify the relative ordering of culture, policy, and pedagogy and (2) flag patterns requiring explanation (e.g., culture outpacing pedagogy; sites with notably low scores). These patterns then guided qualitative sampling and questioning (connecting/building). At the interpretation stage (merging), qualitative themes were mapped onto the same Index domains and Tetra Helix actor positions to generate meta-inferences about how governance coordination and special education management practices produced or constrained enactment. Convergences and divergences between strands were reported explicitly, including cases where strong cultural endorsement co-existed with weaker routinisation of policy procedures or pedagogical scaffolding.

Ethical Considerations and Trustworthiness

Formal permission to conduct the study was obtained from relevant institutional authorities and the local Education Office prior to data collection. Participants received an information sheet and provided informed consent; for student participants, guardian consent and student

assent were obtained. Participation was voluntary, withdrawal was permitted without consequence, and data were anonymised at transcription and stored securely.

Trustworthiness was established through strategies aligned to credibility, dependability, transferability, and confirmability. Credibility was strengthened through method and stakeholder triangulation (survey patterns, interviews and FGDs, and multiple stakeholder perspectives) and through member checking with selected participants to validate interpretive summaries. Dependability was supported by maintaining an audit trail (coding log, analytic memos, and decision notes) documenting analytic steps and integration points. Transferability was supported through thick description of context, participants, and implementation conditions to allow readers to judge relevance to other settings. Confirmability was enhanced through reflexive memoing to document assumptions and interpretation boundaries, and through peer debriefing within the research team to challenge and refine emerging claims.

FINDINGS

RQ1. Stakeholder ratings of inclusive culture, policy, and pedagogy (Index for Inclusion)

Across the full stakeholder sample ($N = 78$), perceived inclusivity was highest for culture ($M = 90.21$, $SD = 10.32$), followed by policy ($M = 86.73$, $SD = 11.15$) and pedagogy ($M = 85.51$, $SD = 12.12$) on the 0–100 metric (Table 1). Two schools recorded at least one dimension mean below 60, signalling substantively uneven provision across sites. Internal consistency was strong for the full scale (29 items; Cronbach's $\alpha = .955$) and for each dimension (culture $\alpha = .939$; policy $\alpha = .840$; pedagogy $\alpha = .919$), supporting the reliability of the Index-based profiling.

Table 1.

Descriptive statistics for Index dimensions (full stakeholder sample, $N = 78$).

Dimension	Min	Max	Mean	SD
Culture	48.29	100.00	90.21	10.32
Policy	52.50	100.00	86.73	11.15
Pedagogy	59.00	100.00	85.51	12.12

RQ2. Within-dimension gaps and patterns by stakeholder group

Paired-samples comparisons indicated that culture was rated significantly higher than policy (mean difference = 3.48, $t(77) = 4.35$, $p < .001$, $d^2 = 0.49$) and pedagogy (mean difference = 4.70, $t(77) = 4.06$, $p < .001$, $d^2 = 0.46$). The difference between policy and pedagogy was not statistically significant (mean difference = 1.22, $t(77) = 1.22$, $p = .226$, $d^2 = 0.14$) (Table 2). These results indicate that the most pronounced gap is between cultural endorsement of inclusion and the institutional/pedagogical routines required to sustain it in practice.

Role-stratified descriptives suggested broadly similar patterns for teachers/school staff and students, whereas parents reported lower scores across dimensions; however, parent responses were treated descriptively due to the small subgroup size ($n = 5$) (Table 3). To strengthen interpretive validity for pedagogy-related claims, a teacher-only sensitivity analysis

($n = 49$) replicated the main pattern: culture exceeded policy (mean difference = 3.14, $t(48) = 3.15$, $p = .003$, $d^2 = 0.45$) and pedagogy (mean difference = 4.08, $t(48) = 2.71$, $p = .009$, $d^2 = 0.39$), while policy and pedagogy did not differ significantly ($p = .508$) (Table 4). Together, these analyses suggest that the culture–policy/pedagogy gap is not an artefact of stakeholder mixing and is also visible among those most directly responsible for classroom enactment.

Table 2.

Paired-samples comparisons between index dimensions (full stakeholder sample, $N = 78$).

Comparison	Mean difference	$t(df)$	p	d^2
Culture vs Policy	3.48	$t(77) = 4.35$	$< .001$	0.49
Culture vs Pedagogy	4.70	$t(77) = 4.06$	$< .001$	0.46
Policy vs Pedagogy	1.22	$t(77) = 1.22$	.226	0.14

Table 3.

Dimension scores by stakeholder group (descriptive). Values are mean (SD) with min–max.

Group	Culture	Policy	Pedagogy
Teachers/school staff	91.31 (10.66); 48.29–100.00	88.16 (11.20); 52.50–100.00	87.22 (12.39); 59.00–100.00
Students	89.67 (8.44); 77.14–100.00	85.42 (10.90); 60.00–100.00	83.19 (11.94); 64.00–100.00
Parents	82.06 (13.35); 62.57–100.00	79.00 (9.78); 70.00–95.00	79.90 (7.55); 72.00–92.00

Table 4.

Teacher-only sensitivity analysis: paired-samples comparisons ($n = 49$).

Comparison	Mean difference	$t(df)$	p	d^2
Culture vs Policy	3.14	$t(48) = 3.15$	.003	0.45
Culture vs Pedagogy	4.08	$t(48) = 2.71$	.009	0.39
Policy vs Pedagogy	0.94	$t(48) = 0.67$	.508	0.10

RQ3. How Tetra Helix actors interpret and enact inclusive values through special education management

To explain the quantitative patterns (particularly culture rating higher than policy and pedagogy), the qualitative strand traced how inclusive values were interpreted and enacted across the four actors central to the study’s operationalised Tetra Helix configuration: government (Education Office/Dinas Pendidikan), schools (teachers/school leaders including GPK), families (parents), and learners (students). Integration is summarised through a joint

display that links survey patterns to explanatory themes and meta-inferences about enactment mechanisms.

Summary of integrated findings (RQ1–RQ3)

Across stakeholders, inclusivity was rated strongest in culture, while policy and pedagogy were comparatively lower and more variable. Paired comparisons confirmed that the strongest gap lies between cultural endorsement and the routinised institutional/pedagogical conditions required for consistent enactment. Qualitative explanations indicate that this gap is shaped by governance capacity and coordination conditions particularly the distribution and follow-up of capacity-building, the stabilisation of collaboration routines (including GPK boundary-spanning work), and the consistency of classroom scaffolding across the four actor groups.

Qualitative themes (RQ3)

Themes are presented as enactment mechanisms that account for the observed ordering of Index dimensions and the unevenness across sites.

Theme 1: Capacity-building as policy enactment, with constrained coverage

This theme shows that inclusion is enacted less through policy texts than through capacity-building that carries and operationalises inclusive values and that the visibility of these values depends on how equitably capacity support is distributed. Accounts from the Provincial Education Office of South Kalimantan (Dinas Pendidikan Provinsi Kalimantan Selatan) emphasised technical guidance and inclusive education workshops for GPK supporting mainstream schools as the primary enactment mechanism. Participants also noted that budget limitations constrained coverage, so not all schools and GPK could access training within a cycle. This uneven distribution helps explain why policy ratings tended to lag behind culture: inclusive intent was widely endorsed, but practical supports were inconsistently available across sites. Monitoring was described mainly as post-training follow-up, perceived as helpful but insufficient to offset recurrent resource constraints. Overall, inclusive values appear culturally internalised faster than they are institutionally routinised, making capacity-building a critical yet uneven pathway of policy enactment.

Theme 2: GPK as boundary spanners, but collaboration routines remain uneven

This theme foregrounds trained GPK as key boundary spanners who translate policy messages into classroom routines through task adaptation, informal coaching of colleagues, and case-by-case support for students with additional needs. Parents and students frequently linked positive inclusion experiences to the presence and responsiveness of GPK. At the same time, qualitative accounts revealed constraints that limited sustainability: heavy workloads, overlapping instructional duties, ambiguity in role expectations across schools, and the absence of clear institutional mandates defining coordination authority. Administrative backing for protected collaboration time was described as inconsistent, meaning that support often depended on individual initiative rather than routinised organisational structures. This pattern aligns with weaker enactment where collaboration routines are fragile: schools may rely on ad hoc or segregating arrangements rather than inclusive, team-based problem solving. Here, inclusive

values appear person-dependent rather than system-embedded, underscoring the importance of management structures that stabilise collaboration beyond individual actors.

Theme 3: Family co-production strengthens culture, especially where communication is consistent

Parent accounts show how inclusive values are co-produced through communication, guidance, and relational trust rather than simply mandated. Interviews described generally positive experiences of being included in school communication and receiving guidance from teachers or GPK on learning support. Parents commonly reported that trained GPK made inclusion more tangible by clarifying expectations, interpreting learning needs, and offering practical advice. These dynamics help explain the high culture ratings especially items related to respect, non-discrimination, and safety because inclusion was experienced as a shared commitment reinforced through everyday interactions. However, parents also noted that sustained support depended on the availability of trained personnel and consistent follow-up, linking cultural robustness to system capacity and coordination. Inclusive culture thus emerges as relationally strong but structurally contingent.

Theme 4: Learner experiences combine belonging with targeted support, with ambiguity around fairness

Student accounts illuminate how inclusive values are experienced affectively and interpreted in practice. Interviews reflected strong feelings of belonging and positive peer relations, consistent with high culture scores for respect and safety, and students described teachers providing additional help to classmates who experienced learning difficulties. At the same time, “fairness” was sometimes understood through targeted help (i.e., “special support”) rather than universally designed instruction. This offers a plausible explanation for the comparatively weaker pedagogy item on using learner differences as a learning resource: difference was often managed through individual assistance rather than leveraged for inclusive whole-class learning design. The theme highlights a tension between care-oriented inclusion and pedagogical transformation, indicating where inclusive values remain only partially realised in instructional design.

DISCUSSION

This study examined how inclusive values are enacted through special education management by integrating the Index for Inclusion with a Tetra Helix governance lens. Three findings emerged. First, culture was rated strongest, while policy and pedagogy were lower and more variable, indicating a recurrent culture implementation gap. Second, culture consistently exceeded policy and pedagogy, while policy and pedagogy moved together under shared constraints. Third, qualitative accounts explained these patterns through governance capacity and coordination conditions, including uneven capacity-building, weak post-training monitoring, and variable collaboration routines.

Interpreting the findings in relation to the research questions

In relation to RQ1 and RQ2, the ordering of Index dimensions suggests that inclusion is widely affirmed as a moral and relational commitment yet is less consistently institutionalised through routines, resourcing, and classroom supports. As a values-in-action pattern, cultural endorsement may develop earlier than organisational routinisation: schools can be welcoming and value-aligned while lacking stable procedures for referral, documentation, role clarity, and coordinated support. The finding that policy and pedagogy did not differ meaningfully in paired comparisons indicates tight coupling between administrative routines and classroom practice; when operational supports are weak, instructional adaptation becomes contingent rather than predictable.

In relation to RQ3, the qualitative strand clarifies why culture outpaces policy and pedagogy. Inclusive values were described as a collective ethos—welcoming norms, shared responsibility, and a desire to “do right” by learners yet sustained practice depended on special education management decisions that allocate roles, define procedures, coordinate support, and stabilise collaboration. Where routines were informal or person-dependent, inclusion relied on individual initiative rather than system reliability. This helps explain why pedagogy was more variable: differentiation, scaffolding, and assessment adaptation require time, coaching, and coordination that goodwill alone cannot sustain.

Comparison with existing scholarship

The pattern is consistent with systems-oriented research showing that inclusive education depends on alignment between policy commitments and organisational conditions for enactment (Mitchell, 2015; Hosshan et al., 2020) and with policy enactment accounts emphasising institutional routines, professional norms, and material supports (Rapp & Corral-Granados, 2021). Our findings extend this work by showing how values may be strongly endorsed culturally while remaining unevenly operationalised through management routines that structure everyday implementation. The culture–implementation gap suggests that relational acceptance can be relatively resilient, whereas routinised policy procedures (e.g., role clarity, referral/documentation) and pedagogical scaffolding depend more strongly on coordination capacity an Indonesia-specific governance dynamic shaped by GPK boundary-spanning work and uneven post-training monitoring. The study also supports scholarship on teacher agency, which argues that sustainable inclusion requires discretion plus organisational scaffolding (Li & Rupp, 2021; Ediyanto & Kawai, 2023); accordingly, pedagogical enactment was most capacity-sensitive, echoing evidence that professional learning is most effective when connected to continuing support and feedback loops (OECD, 2023).

Governance mechanisms and the role of special education management

Substantively, the findings reframe special education management as a key site where inclusive values become concrete. Values were enacted through managerial work: clarifying responsibilities (including GPK roles), organising collaboration, budgeting for supports, and institutionalising monitoring and evaluation. The Tetra Helix lens underscores that inclusion is co-produced across actors: the Education Office (Dinas) shapes enabling conditions, schools

translate expectations into routines and classroom decisions, families contribute knowledge and legitimate supports, and learners experience participation and belonging. The policy–practice gap is therefore best interpreted as a coordination gap misaligned expectations and uneven feedback loops across stakeholders (Snounu, 2019).

A notable feature concerns the organisational role of special schools. They appeared as hubs that interpret policy, circulate technical guidance, and connect mainstream schools to specialist expertise. This hub function can strengthen inclusion through timely consultation and practical problem-solving, but can constrain inclusion when coordination is episodic or when mainstream schools defer responsibility rather than build internal capacity. The hub role is thus an institutional mechanism whose effects depend on routinisation and accountability arrangements.

Alternative interpretations should also be considered. Differences in perceived pedagogical adaptation may reflect role-position variation or differing understandings of inclusive pedagogy, and social desirability may elevate culture-related scores relative to operational domains. However, convergence between quantitative domain patterns and qualitative accounts of coordination constraints supports the interpretation that governance-linked capacity gaps are central.

Practical and policy implications

Implications vary across governance levels. At national and provincial levels, policy design should clarify GPK roles and establish structured coordination mandates linking schools with district support mechanisms. At school leadership level, principals should institutionalise collaborative planning time and monitoring routines that move inclusion beyond individual goodwill. For teacher education providers and professional development agencies, preparation programmes should integrate governance literacy so educators can operate within coordinated support systems rather than isolated classroom adaptation models. These differentiated responsibilities reflect a Tetra Helix view: sustainable inclusion depends on alignment across institutional actors. Recent research on students with disabilities highlights the importance of coordinated support, belonging, and school-level routines in shaping inclusive educational experiences (Arouri, 2025).

Three priorities follow. First, clarify routines and responsibilities so inclusive commitments translate into predictable support practices (Mitchell, 2015; Paju et al., 2022; Ansell & Gash, 2008). Second, strengthen material and professional conditions for classroom adaptation, including specialist support and protected collaboration time (OECD, 2023; Jothinathan et al., 2021). Third, institutionalise feedback and monitoring through shared indicators, routine follow-up, and communication channels that reach families and learners. Technology-supported communication and UDL-oriented resources may support access and participation when accompanied by practical guidance (Al-Azawei et al., 2017; Almeqdad et al., 2023; Bray et al., 2024; Vie, 2018).

Limitations

This study is diagnostic rather than representative. The quantitative sample was designed to profile enactment patterns across stakeholders and school contexts rather than estimate province-wide parameters, and the parent subgroup was small; subgroup comparisons should therefore be interpreted cautiously. Although sensitivity checks supported the culture–policy/pedagogy ordering within the teacher/staff subgroup, the study remains based on self-reported perceptions that may vary by role and social desirability. The cross-sectional design captures enactment at one point in time and cannot establish causal pathways. While triangulation across surveys, interviews, focus groups, and structured observations strengthened explanatory inference, future studies should use larger multi-province samples and longitudinal tracking of practice and learner outcomes.

Recommendations for future research

Future research can test whether the hub role of special schools and the identified coordination mechanisms generalise across provinces and policy environments. Longitudinal studies could examine whether strengthening governance routines post-training coaching, monitoring focused on enacted practice, and routinised collaboration reduces culture–implementation gaps and improves learner participation and progress. Comparative work across districts could clarify which arrangements most effectively distribute capacity under specialist scarcity.

CONCLUSION AND CONTRIBUTION

This study set out to examine how inclusive values are enacted through special education management by integrating the Index for Inclusion with a Tetra Helix governance lens. The findings show a consistent pattern: inclusion is strongly endorsed at the cultural level, yet less consistently institutionalised through policy routines and pedagogical practice. While stakeholders widely affirm inclusion as a shared moral commitment, the translation of values into predictable support structures depends on governance capacity, coordination mechanisms, and managerial clarity.

By linking quantitative Index profiling with qualitative explanations across government, schools, families, and learners, the study reframes special education management as a central site of values enactment rather than a peripheral administrative function. Inclusion emerges not only from classroom technique but from how responsibilities are clarified, support is coordinated, and monitoring is institutionalised across actors.

Rather than presenting a representative claim, this study offers a diagnostic contribution: it identifies how culture–implementation gaps can arise and how governance routines shape whether inclusive commitments become sustainable practice. Strengthening inclusive education therefore requires attention to institutional coordination and capacity distribution, ensuring that values are embedded not only in discourse but in the everyday architecture of educational management.

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APPENDIX

Table 5.

Joint display linking stakeholder survey patterns with qualitative explanations across Tetra Helix actors

Key quantitative finding	Education Office (Dinas)	School (Teacher/GPK/Principal)	actors Parents Students	Meta-inference (integrated interpretation)
Culture rated highest overall (M = 90.21, SD = 10.32), exceeding Policy Pedagogy.	• Inclusion framed as an equity mandate; norms and reinforced through socialisation and capacity-building (e.g., Bimtek).	• Routines emphasise acceptance and collegial support; shared language helps coordinate support for ABK.	• Feel supported and when GPK teachers/parents communicate/practice occasional teasing/peer guidance is active; impatience consistent y varies by teacher/school.	High endorsement reflects alignment, but does not ensure consistent enactment when routines and supports vary.
Policy rated below Culture (M = 86.73, SD = 11.15); Culture–Policy difference significant paired comparisons.	• Training/co-ordination but referral, budget limits coverage; post-training monitoring/evaluation weak.	• Procedures (role clarity, information documentation) are uneven and informal; expectations are exceeded operational es.	• Policy Experience often indirectly via access to support; resourcing, provision is better where routines are clear and consistent. on leadership and GPK availability.	The policy–practice gap reflects capacity constraints—uneven training reach, limited follow-up; clearer routines and monitoring are needed.

Key quantitative finding	Education Office (Dinas)	School actors (Teacher/GPK/Principal)	Parents	Students	Meta-inference (integrated interpretation)
Pedagogy was lowest and most variable (M = 85.51, SD = 12.12); but Culture–Pedagogy difference was significant. Sub-dimension change gaps were most evident between curriculum design and classroom management. A minority of sites scored below 60 on at least one dimension, signalling substantive inequities across schools.	• Training and promotes inclusive strategies, ongoing coaching is limited; without follow-up, change depends on individual initiative.	• Teachers adapt tasks scaffold; supports lesson when constraints include class behaviour management, assistive resources.	• Note explanation , extra time, simpler steps; request practical home-support guidance; limited support is less practical/inconsistent when GPK lessons unavailable preferred.	• Report re- Pedagogical enactment is most capacity-sensitive: shared planning/coaching and classroom-management supports enable more consistent practice.	
	• Without Quotas/geographic spread and limited personnel restrict training reach and monitoring/follow-up.	• Without GPK, adjustments and become ad hoc; documentation/coordination weaken; leadership and shapes institutionalisation of routines.	• Report uncertainty about contexts, procedure receive and fewer adaptations uneven communication; reliance on individual teachers increases perceived risk.	• In less-supported likely reflect inequities (training access, specialist support, leadership capacity), indicating the need for targeted capacity-building for less-supported schools.	
Teacher-only sensitivity analysis (n = 10)	• Policy constraints are felt as tightly coupled	• Policy pedagogy and support aligns	• Sense of support reflects	• Sensitivity checks suggest the pattern is not an artefact of	

Key quantitative finding	Education Office (Dinas)	School actors (Teacher/GPK/Principal)	Parents	Students	Meta-inference (integrated interpretation)
49) reproduced the overall pattern: Culture highest; and lower, Policy– Pedagogy difference significant.	classroom conditions (training access, resources, Policy unclear procedures); with weak evaluation reduces accountability.	limited supports with constrain adaptation; where GPK is and trained/supporter d, policy routines improve together.	consistency of adaptation and classroom management.	stakeholder policy routines pedagogical practice move together shared constraints, so improvements are most effective when operational supports and pedagogical coaching are aligned.	

Note. Stakeholder survey N = 78 (49 teachers/school staff, 24 students, 5 parents). Teacher-only sensitivity analysis n = 49. Qualitative evidence is synthesized from anonymized interview and FGD transcripts, as well as field notes, and is reported through thematic summaries aligned to Index dimensions and Tetra Helix actors.