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Transfer of Control through Adaptive Structure: Classroom Management for Independence in Indonesian Special Schools - A Multi-Site Study

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Abstract
This study aims to examine how structured classroom management promotes independence among students with special educational needs across two Indonesian special schools with contrasting institutional contexts. A qualitative multi-site design was conducted at SLB Negeri Balongsari Jombang and SLB Pelita Bangsa Jombang, involving 25 informants comprising principals, vice principals, classroom teachers, vocational teachers, parents, and students. Data were collected through semi-structured interviews, participant observation, and document analysis from August to September 2026. Data analysis employed condensation, display, conclusion verification, and within-site and cross-site comparisons. The findings identified three interconnected mechanisms supporting student independence: individualized environmental organization, structured visual and procedural work systems, and systematic prompting-fading. Individual assessments informed classroom arrangements and learning routines, while predictable work systems facilitated task completion with progressively reduced adult assistance. Collaboration among schools, families, and vocational educators supported the generalization of independent skills across settings. Reduced assistance emerged as a central observable indicator of developing independence. These findings suggest that structured classroom management is most effective when instructional support is systematically adjusted to students' individual capabilities rather than uniformly implemented. Consistent with structured teaching and gradual-release principles, the study proposes a provisional transfer-of-control model emphasizing adaptive structure, progressive autonomy, and coordinated learning environments. Given its qualitative scope and limited institutional coverage, further longitudinal and intervention-based research is recommended to evaluate the model's applicability and effectiveness across diverse special education settings.

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Introduction

Independence is a central outcome of special education because it affects how students participate in learning, daily living, social relationships, and later adult roles. Yet independence cannot be reduced to performing tasks without any assistance. For students with diverse intellectual, sensory, communication, physical, and behavioral profiles, meaningful independence is better understood as increasing control over actions with support calibrated to individual need. Self-determination research similarly emphasizes autonomy, competence, and relatedness rather than the simple absence of help (Burke et al., 2024; Willow et al., 2024). This perspective shifts the educational question from whether support is present to whether support is organized in ways that allow

students to do progressively more for themselves. Recent reviews of self-determination interventions emphasize choice, goal setting, and agency for learners with intellectual disabilities, while recognizing differences in support needs (Alsaeed et al., 2023; Kuld et al., 2023).

Structured teaching provides one influential response to this challenge. The TEACCH tradition emphasizes physical organization, visual schedules, work systems, task organization, visual structure, and predictable routines to make expectations more comprehensible and reduce dependence on repeated adult direction (Ardianingsih et al., 2023). Evidence reviews continue to identify structured and visual supports among relevant practices for autistic learners and related populations (Hume et al., 2021; Zhou et al., 2024; Zhu et al., 2025). However, the presence of visual materials or clearly divided classroom zones does not in itself demonstrate that students are becoming more independent. A visual schedule is useful only when the learner can interpret and act on it; a work system matters when it reduces the need to wait for a teacher's next instruction. The functional use of structure is therefore more important than the visible quantity of structure. Evidence syntheses further identify systematic instruction, visual supports, and prompting among commonly studied school practices; they do not imply that one format suits all learners (Strnadová et al., 2024; Rodgers et al., 2021).

This distinction is especially important in special schools, where heterogeneity is substantial. Classroom management in such settings extends beyond behavior control and classroom order. It includes the organization of space, materials, routines, instructional supports, staff roles, family communication, vocational opportunities, and progress monitoring. Contemporary work on classroom management in inclusive and special education likewise points to the need to understand management as an ecological and instructional system rather than a set of disciplinary techniques (Küçükalkan et al., 2023; Lutz et al., 2024). Small-group arrangements and resource configurations may shape opportunities for individualized support, but resources alone do not determine the quality of practice (Bondebjerg et al., 2023). A universal-design perspective likewise supports adapting accessibility and task representation to individual profiles (AlRawi & AlKahtani, 2022; Goyibova et al., 2025).

A further issue concerns the mechanism through which structure becomes independence. Three related constructs need to be distinguished. Instructional scaffolding refers to temporary support that is adjusted as competence develops; behavioral prompting refers more specifically to the hierarchy of cues or assistance used to evoke a target response; and autonomy-supportive guidance concerns the way adult support preserves the learner's agency, choice, and active participation. These mechanisms may overlap in practice, but they are not interchangeable. When assistance is not reduced as competence grows, support can become a source of dependency. Prompt selection and systematic fading are therefore critical in special education (Ciletti et al., 2025; Kutlu, 2023). From a self-determination perspective, autonomy-supportive guidance should increase the learner's active role instead of replacing it (Willow et al., 2024). Work systems can contribute to this transfer because information about what to do, how much to do, when a task is finished, and what comes next is moved from the teacher's moment-to-moment verbal direction into the environment itself (Zhou et al., 2024). A meta-analysis of prompting procedures and a study combining visual prompts with graduated assistance provide additional, task-specific illustrations of how cues can be adjusted (Kutlu, 2023; Bosley et al., 2024).

Independence also has to generalize beyond a single lesson or room. Home-school collaboration can align expectations, routines, and support strategies across settings, while vocational experiences provide opportunities to use skills in more authentic and productive contexts. Research on parent-teacher collaboration has shown the importance of shared problem solving and aligned practices for students with autism and other support needs (Santiago et al., 2022; Azad et al., 2021; Friend & Barron, 2025). In Indonesia, family participation is likewise shaped by the relational and contextual characteristics of schooling (Halimah & Sit, 2024). For older students, transition research indicates that authentic work experiences and self-determination-related skills are associated with more meaningful postschool outcomes (Mazzotti et al., 2021; Coñoman et al., 2024). Reviews of family-school partnerships and school transitions additionally highlight consistency of targets and participation in planning (Santiago et al., 2022; Vlcek et al., 2024; Strnadová et al., 2023).

Despite these strands of evidence, structured classroom practice is often discussed primarily as an instructional intervention. Less attention has been paid to how special-school management organizes assessment, resources, teacher guidance, cross-setting coordination, and progress monitoring as one adaptive system, particularly in Indonesia. Existing international literature explains the instructional value of structured teaching, visual supports, scaffolding, and self-determination, but it leaves less clear how these elements are assembled through day-to-day management decisions in Indonesian special schools that differ in governance, scale, staffing, and family involvement. The present multi-site design addresses this gap by comparing a public and a private special school within the same district, allowing recurrent mechanisms to be distinguished from context-dependent forms of implementation. A management lens is useful because classroom structures do not operate independently from school decisions. Planning determines what supports are designed; organizing positions supports in the environment; directing regulates prompting and fading; coordinating links school, home, and vocational settings; and monitoring informs whether support should be maintained, modified, or withdrawn. These classical functions are not treated as fixed categories imposed on practice; rather, they are adapted as sensitizing concepts for examining contemporary special-education processes and remain open to inductive themes emerging from the field (Küçükalkan et al., 2023). A study of teaching-strategy variation in a different, non-special-school context similarly illustrates why instructional responsiveness matters, but is used here only as a broad pedagogical comparison (Al Maqbali, 2025).

The contrast between institutional contexts offers an additional analytical opportunity. The two schools were selected purposively to provide a meaningful contrast in governance, resource breadth, student scale, and organizational configuration while holding the district context relatively constant. The public-private distinction and differences in institutional scale were part of the comparative rationale from the outset, whereas the relative intensity of family coordination, flexible room use, and variation in implementation became more visible during field analysis. Rather than ranking the schools, the comparison was used to identify which mechanisms replicated across contexts and which patterns were contingent on local resources and organization. Multi-site qualitative analysis is particularly suitable for distinguishing common mechanisms from contextual variations (Käss et al., 2024; Schlunegger et al., 2024). In qualitative multi-case work, within-case comparisons and explicit attention to discrepant evidence strengthen the interpretability of cross-case explanations (Käss et al., 2024; Schlunegger et al., 2024).

Accordingly, this study aimed to explain how planning, organizing, directing, coordinating, and monitoring-evaluation of structured classrooms contribute to the development of independence among students with special educational needs across two Indonesian special schools. The study contributes a process-oriented explanation rather than a causal effect estimate. It was guided by the following research question: How do planning, organizing, directing, coordinating, and monitoring-evaluation of adaptive classroom structures operate across two contrasting Indonesian special schools to support progressively greater learner control? The central proposition is that structured classroom management supports independence when it progressively transfers control from direct adult instruction to environmental cues and, ultimately, to the learner's own regulation.

Method

Research Design and Sites

This study used a qualitative multi-site design to understand structured classroom management as a context-dependent process. Each school was first analyzed as a distinct site, followed by cross-site analysis to identify replicated patterns and context-specific variations. This design was consistent with the study's emphasis on meaning, process, and implementation rather than statistical generalization (Hennink & Kaiser, 2022; Käss et al., 2024). Contemporary methodological discussions also support matching case boundaries and triangulation procedures to the research question (Käss et al., 2024; Schlunegger et al., 2024).

The research was conducted in Jombang Regency, East Java, Indonesia, at SLB Negeri Balongsari Jombang and SLB Pelita Bangsa Jombang. The public site served 63 students across primary, lower-secondary, and upper-secondary special education levels with 16 ASN/PPPK teachers and relatively broad institutional facilities. The private site served 24 students with five educators, mostly non-civil servants, and relied on more flexible room use, smaller learning groups, family involvement, and locally developed vocational partnerships. Field data for the findings reported here were collected during August and September 2026.

Participants and Data Sources

Participants were selected purposively and expanded through a snowball strategy. Recruitment prioritized participants who were directly involved in planning, implementing, receiving, or monitoring structured classroom and independence practices: school leaders with relevant management responsibility; classroom and vocational teachers who worked directly with students; parents who could describe continuity of independence routines at home; and students whose communication abilities allowed meaningful participation in simple, contextual interviews. Initial key informants at each site helped identify additional participants who met these role-based criteria. The final participant pool consisted of 25 informants across six categories. Thematic sufficiency was assessed iteratively within each site and then across participant categories by comparing incoming evidence with the developing within-site matrices; recruitment was considered sufficient when additional accounts largely repeated established patterns and did not add a materially new cross-site category. Student participation was adapted to individual communication needs and supported by a teacher or parent where necessary. Across the six student participants, profiles represented intellectual and developmental disabilities, autism-related support needs, and sensory/communication differences. Communication abilities ranged from functional spoken language to short verbal responses supported by gestures, visual cues, or familiar adult mediation; no individual diagnostic profile is reported in order to preserve anonymity. Reviews of qualitative

sample adequacy caution that saturation depends on heterogeneity and analytical goals rather than a fixed numerical threshold (Hennink & Kaiser, 2022).

Table 1. Participant Composition by Site

Participant category	SLB Negeri Balongsari	SLB Pelita Bangsa	Total
Principal	1	1	2
Vice principal	1	1	2
Classroom teacher	3	2	5
Vocational teacher	2	2	4
Parent	3	3	6
Student with special educational needs	3	3	6

Primary data were supplemented by school profiles, curriculum documents, individualized learning documents or programs, lesson modules, schedules, classroom rules, home-school communication books, student progress records, and documentation of vocational activities. These sources made it possible to compare reported practice with observed and documented practice. School-based diagnosis and instructional assessment studies in a different Indonesian subject setting underline the practical importance of identifying learner starting points before designing support (Haka et al., 2025).

Data Collection

Data were generated through three complementary techniques. First, semi-structured in-depth interviews explored planning, physical and visual organization, work systems, teacher guidance, prompting and fading, family coordination, vocational programming, and monitoring of independence. The interview corpus covered all six participant categories and was used to compare managerial, instructional, family, and learner perspectives. A total of 28 interview sessions were conducted, including three short follow-up interviews used to clarify emerging categories. Adult interviews generally lasted 35-60 minutes, while student interviews were shorter, typically 15-25 minutes, and were adapted to attention span and communication needs. Second, moderate participant observation focused on classroom layout, visual supports, routines, teacher-student interaction, independent work sequences, self-care activities, and vocational sessions. Observational records were written as structured field notes and compared across sites and settings. Observations were conducted in 16 sessions, eight at each site, distributed across classroom, self-care, and vocational activities. Individual sessions lasted approximately 45-90 minutes, yielding about 18 hours of direct observation across the two schools. Third, document analysis was used to verify institutional policies, individualized planning, schedules, home-school communication, program implementation, progress records, and vocational documentation. Together, the three sources allowed reported practice to be checked against observed routines and documentary traces rather than relying on a single evidentiary stream.

Data Analysis

Analysis used iterative data condensation, data display, and conclusion drawing/verification, with methodological triangulation across the two sites (Schlunegger et al., 2024). Condensation combined deductive codes derived from structured teaching, management functions, and independence

constructs with inductive codes generated from the field. The deductive frame operated as a sensitizing device rather than a closed coding scheme: data that did not fit the initial categories were retained, compared, and allowed to generate new or revised categories. Within-site matrices were developed first, after which site-level patterns were compared side by side to identify convergence, divergence, and negative cases. For example, codes such as repeated verbal prompting, lighter prompts, partial task completion, and reduced physical assistance were clustered into an assistance-reduction category; when this pattern recurred across participant accounts, observations, and progress records at both sites, it contributed to the cross-site theme of transfer of control. Conversely, instances in which visual structure did not reduce adult direction were retained as discrepant evidence and used to qualify the interpretation. Conclusions were repeatedly checked against raw interviews, observations, documents, and the cross-site matrices before the explanatory propositions and provisional model were finalized. Adequacy was judged in relation to repeated patterns, discrepant cases, and the different informant categories, consistent with cautions against treating a universal interview count as sufficient (Hennink & Kaiser, 2022).

Trustworthiness, Reflexivity, and Ethical Safeguards

Credibility was strengthened through source triangulation, method triangulation, repeated observation across time, member checking, prolonged engagement, and persistent observation. Confirmability was supported through an audit trail, explicit matching of findings to field evidence, process documentation, and a reflexive journal. Reflexivity was especially important because the researcher held a professional leadership role at SLB Negeri Balongsari. To reduce the risk of insider bias, interpretations were cross-checked across participant categories and data types, selected interpretations were confirmed with informants, and discrepant cases were retained rather than harmonized. To strengthen interpretive credibility, two peer-debriefing sessions were conducted with an independent qualitative researcher who was not involved in either school. The reviewer examined the developing code structure, cross-site matrices, and selected discrepant cases; differences in interpretation were discussed and documented in the audit trail. Parents provided informed consent for their own participation and for student participation; student interviews were simplified and contextualized according to communication ability and were conducted with appropriate adult support. Participation was presented as voluntary, and students were invited to indicate willingness in communication forms accessible to them, with withdrawal possible without consequence. Formal research permission was obtained from the leadership of both participating schools before fieldwork began. The study followed institutional principles of informed consent, confidentiality, voluntary participation, and protection of students with additional support needs; under the local school-based approval arrangement, no separate institutional ethics reference number was issued. The cross-source checks were designed to examine both agreement and contradiction across data forms rather than treating the number of sources alone as proof of credibility (Schlunegger et al., 2024).

Result and Discussion

Result

Cross-site analysis did not seek to identify a superior school. Instead, it examined whether similar explanatory patterns appeared under different institutional configurations and where those patterns broke down. The most consistently recurring sequence began with individual assessment, moved through adaptive environmental structure and work systems, and progressed through prompting-

fading, cross-setting coordination, and monitoring of assistance. The evidentiary basis was intentionally triangulated: interviews described the rationale for support decisions, observations showed whether students could actually use visual and work-system cues with less adult direction, and documents such as individualized plans, communication books, schedules, progress records, and vocational records provided traces of how targets and assistance were monitored. Table 2 summarizes the main cross-site patterns and also shows important qualifications, including uneven work-system use across observed classes and continuing need for verbal explanation among some students. Recent syntheses distinguish the use of systematic instruction and visual support from evidence of independence outcomes; support effectiveness still depends on the individual and task (Strnadová et al., 2024; Willow et al., 2024).

Table 2. Cross-Site Patterns in Structured Classroom Management

Dimension	SLB Negeri Balongsari	SLB Pelita Bangsa	Cross-site interpretation
Planning	Individual assessment with broader institutional resources	Individual assessment with flexible structures and smaller groups	Assessment is the shared starting point; scale and form differ.
Physical structure	More explicit and varied zones	Multifunctional and flexible spaces	Different forms serve the same function: predictability and readability.
Visual supports	Relatively numerous and varied; some students still need verbal explanation	Simpler and more personalized	Usability matters more than the quantity of visual media.
Work system	Present but uneven across observed classes	More frequently visible in observed routines	Both use work systems; internalization varies by student and context.
Prompting-fading	Wide variation in support needs; fading is used	Fading is used; lighter prompts were visible in some observations	Most consistent convergence: reduced assistance accompanies a transfer of control.
Family coordination	Communication books, groups, consultation	Communication books, WhatsApp, daily 7KAIH journal	Continuity is shared; coordination instruments differ.
Vocational context	Broad programs, internships, industry partnerships	Local SMEs, internships, batik/printing/sandal production	Vocational activity provides an arena for applying and extending independence-related routines.
Monitoring	Supervision and assistance-level monitoring	Supervision, assistance-level monitoring, home documentation	Decreasing assistance is the shared cross-site indicator of progress.

Note. S1 = SLB Negeri Balongsari Jombang; S2 = SLB Pelita Bangsa Jombang. Interview-source codes (e.g., S1-W1.1, S2-W2) identify site and anonymized interview records. Cross-site interpretations synthesize interview, observation, and documentary evidence and should not be read as statistical comparisons.

At both sites, planning began with the student's profile rather than with a standardized classroom model. Decisions about seating, distraction control, visual format, work sequence, self-care targets, and vocational activities were linked to current ability, communication, interests, safety, and the degree of assistance required. In the public site, the larger institutional structure supported a wider range of spaces and programs; in the private site, smaller groups and flexible room use

enabled more immediate personalization. The common mechanism, however, was the same: structure acquired pedagogical value only after the school identified who would use it. Observation and document evidence reinforced this pattern because the visible form of support varied, while individualized plans and actual task routines showed adaptation to student need. Indonesian research on visual schedules for students with mild intellectual disabilities offers a more directly comparable pedagogical example, although its participants and design differ from the present study (Iftitah et al., 2025).

A classroom teacher at the public site explained that work systems were deliberately sequenced so that students could take a task, complete it, place it in a finished location, and move to the next activity, although some still required verbal or partial physical prompts. This illustrates why individualization is not an optional adjustment after a structure has been designed; it is the condition that makes the structure usable. The finding is consistent with structured teaching literature emphasizing individualized organization and visual supports (Hume et al., 2021; Ardianingsih et al., 2023) and with person-centered conceptions of independence that reject one-size-fits-all expectations. Task-specific video modeling with graduated prompts offers another example of how information can move from immediate adult assistance to accessible instructional cues (Cottrell et al., 2024).

> *"We ensure that lesson planning starts from initial ability assessment and individual targets. Materials, activity steps, media, time, and forms of assistance are differentiated according to need." (S1-W1.1, translated from Indonesian)*

The two schools differed substantially in the appearance of structure. Balongsari had more visible zones, materials, and visual displays, whereas Pelita Bangsa frequently used multifunctional spaces and simpler personalized cues. Yet cross-site observation showed that visual abundance did not necessarily reduce adult direction. Some students in visually rich classrooms still needed repeated individual explanation, while simpler arrangements sometimes supported smoother transitions once students had learned how to interpret them. These discrepant cases are analytically important because they indicate that structure should be judged by usability rather than by surface visibility. In contrast, multimedia studies from other subject areas address learning engagement rather than independence among students with disabilities; such evidence should be treated only as contextual support for the importance of usable media (Rasyid et al., 2025).

The implication is that visual support should be evaluated by function: Can the student identify where to go, what to do, how long or how much to complete, when the task is finished, and what happens next? This functional criterion is consistent with evidence on visual schedules and classroom supports (Ardianingsih et al., 2023; Liang, 2025) and with research on the assessment of classroom management in inclusive and special education, rather than inferring quality from visible order (Chow et al., 2024; Lutz et al., 2024). The finding also cautions against using the number of pictures on a wall or the neatness of classroom zones as a proxy for quality. Recent reviews reinforce that visual schedules should be evaluated by their effects on participation and on-task activity, not by their visible presence alone (AlRawi & AlKahtani, 2022; Iftitah et al., 2025).

Across both sites, schedules and routines provided predictability, but work systems were the recurrent mechanism that converted predictability into action. They communicated the task, its sequence, the completion condition, and the next step. In vocational activities, this logic expanded into preparing tools, completing production steps, checking results, cleaning the workspace, and storing equipment. By locating part of the instruction in the environment, the system could reduce

the need for spontaneous teacher commands. Observation, however, also showed uneven implementation: work systems were not equally internalized across classes or students, and some learners continued to wait for verbal or partial physical prompts. This variation prevents the work system from being interpreted as a sufficient cause of independence. Systematic evidence on students with extensive support needs similarly favors matching instruction and prompts to the task and learner (Rodgers et al., 2021; Alsaeed et al., 2023).

This pattern aligns with earlier evidence that individual work systems can increase independent functioning when task structure is clear and accessible (Zhou et al., 2024). A school-based TEACCH meta-analysis supports improvements in independent task completion (Zhou et al., 2024), while a broader review reports benefits of structured teaching for children with autism (Zhu et al., 2025). Importantly, the present study does not claim that a work system automatically produces independence. Students with greater intellectual or communication support needs continued to require prompts. The contribution of the work system was to make the route toward reduced assistance more explicit and monitorable. More recent accounts likewise connect visual and task structure with independent participation while highlighting implementation differences across learners (Cottrell et al., 2024; Iftitah et al., 2025).

The most consistently recurring cross-site mechanism concerned prompting and fading. Teachers described moving among full or partial physical assistance, touch, modeling, gestures, visual cues, verbal prompts, and wait time according to student need. Observations at both sites showed the same direction of change in successful routines: students performed a larger share of an activity while adult assistance became lighter, less frequent, or more distal. Documentary evidence in progress records and home-school monitoring materials further supported the use of assistance level as a practical marker of change. At the same time, the pattern was not universal or immediate. Some students with greater intellectual, communication, or task-support needs continued to require repeated verbal or partial physical prompts despite stable visual structure. Fading is therefore interpreted here as a recurrent explanatory mechanism rather than a uniformly successful pathway. Evidence on a most-to-least prompting hierarchy suggests that systematic prompt adjustments can help establish skills, without implying a universal fading schedule (Kutlu, 2023; Bosley et al., 2024).

This finding clarifies the relationship between structured classrooms and independence without treating them as causally equivalent. Assistance initially keeps successful performance within reach, while fading creates the possibility for the source of control to shift toward environmental cues and the learner's own action. Research on learner-specific prompting similarly shows that prompt selection and fading procedures require systematic adjustment (Kutlu, 2023), while recent work on scaffolding in special education emphasizes minimal yet responsive support (Ciletti et al., 2025). From a self-determination perspective, this shift matters because autonomy is strengthened when students gain authentic control rather than merely comply with adult-managed routines (Burke et al., 2024; Willow et al., 2024). The present evidence therefore supports an explanatory proposition about progressive reduction of assistance, not a statistical claim that fading predicts independence. A contemporary synthesis of self-determination research similarly distinguishes supported agency from simple compliance with adult instructions (Burke et al., 2024; Kuld et al., 2023).

> *"Assistance is adjusted to the student's ability and then gradually reduced. The goal is not to remove help suddenly, but to let the student take a larger part of the action." (S2-W2, translated from Indonesian)*

Cross-setting coordination was visible at both sites, although the instruments differed. Balongsari relied on communication books, groups, and consultation, while Pelita Bangsa combined communication books, WhatsApp, and a daily 7KAIH journal to document home tasks. These data provide clear evidence of coordination and continuity of targets across settings. They provide more limited evidence of generalization itself. In some accounts and records, similar independence tasks were carried from school into home routines, but the level of assistance could differ because of time pressure, parental habits, or safety concerns. Accordingly, the findings are best interpreted as showing that school-family coordination creates conditions and opportunities for generalization rather than demonstrating that transfer occurred uniformly across settings. In a different community-education context, a participatory Indonesian initiative also documents the value of caregiver involvement; it should not be taken as direct evidence of outcomes in special schools (Putra et al., 2025).

This finding is consistent with research showing that parent-teacher alignment can improve consistency of evidence-based practices across home and school (Santiago et al., 2022; Azad et al., 2021) and with the broader view of collaboration as a core element of special education (Friend & Barron, 2025). In the Indonesian context, family participation is also shaped by relational and cultural expectations surrounding schooling (Halimah & Sit, 2024). Thus, coordinated independence targets should be small, functional, and feasible within everyday family routines. School-family partnership research identifies the importance of trust, shared roles, and context-specific coordination (Santiago et al., 2022; Vlcek et al., 2024).

Vocational programs provided a second context in which school-based independence routines could be extended beyond conventional classroom tasks. Balongsari operated a wider portfolio of vocational activities and industry links, including internships and DUDI partnerships. Pelita Bangsa worked with local enterprises in sandal production, batik, ecoprint, printing, and related activities. Observation and vocational documentation showed that these activities required students to prepare tools, follow sequences, work safely, clean and store materials, communicate, and complete a larger share of work with less support. The evidence therefore demonstrates repeated opportunities to apply independence-related routines in more authentic settings, while the present design does not establish long-term transfer beyond the observed and documented contexts. This interpretation is consistent with transition research emphasizing authentic work experiences, self-determination, and functional participation as meaningful postschool predictors (Mazzotti et al., 2021; Coñoman et al., 2024). Systematic reviews of job-transition programming stress vocational preparation, real-world practice, and learner involvement, while indicating that long-term outcomes require follow-up (Traina et al., 2023; Coñoman et al., 2024; Yeager & Morgan, 2023).

“Each day the teacher assigns a home independence task through the communication book and 7KAIH journal; the book is returned so the teacher can check whether the task was carried out.” (S2-W4, translated from Indonesian)

Monitoring practices at both sites converged on one especially useful analytic indicator: the level of assistance still required. A completed task did not necessarily represent independence if most steps had been carried out by an adult. Conversely, movement from full physical assistance to partial physical support, gesture, visual cue, verbal reminder, or occasional prompting represented meaningful development even when the student was not yet fully independent. Across interviews, observations, and progress-monitoring documents, decreasing assistance recurred as a more

sensitive way of describing developmental change than a simple independent/not-independent label. It is therefore treated as a recurrent cross-site indicator, not as a statistical predictor. Reviews of self-determination interventions emphasize the importance of choice and individualized indicators of participation rather than reliance on task completion alone (Alsaeed et al., 2023; Burke et al., 2024).

The finding supports data-based decision making in special education, where progress monitoring is intended to inform the next instructional adjustment rather than merely document an endpoint (Gebhardt et al., 2023; Ruhter & Karvonen, 2024). In practice, a simple support-level continuum can help teachers decide when to fade prompts, when to reteach use of visual cues, and when a task needs to be redesigned. It also provides a language that can be shared with families, making cross-setting coordination more concrete. Related work stresses that professional learning and evidence-based monitoring are complementary when support levels need adjusting (Ruhter & Karvonen, 2024; Gebhardt et al., 2023).

> *"The aspects observed include following instructions, taking and using learning tools, completing tasks, putting tools away, and the level of assistance still required." (S2-W2, translated from Indonesian)*

The public school had more teachers, facilities, and program options, but also greater heterogeneity and more variation in implementation across classes. The private school had fewer resources but benefited from smaller learning groups, flexible spaces, and comparatively intensive home-school coordination. These differences show why resource volume should not be treated as a linear proxy for independence outcomes. Resources create options, but those options must still be translated into supports that students can use. The comparative evidence therefore suggests that institutional resources shape the form and range of structure, while the coherence of adaptation and support reduction is more informative for understanding how learner control develops. Research on differentiated teaching and independently usable learning materials suggests that resource deployment must be calibrated to the learner, although such findings do not directly compare these two schools (Goyibova et al., 2025; Woods & Copur-Gencturk, 2024).

This does not mean that resources are unimportant. Rather, their educational value depends on adaptation and consistency. A systematic review found that evidence about the effects of class size in special education remains limited, cautioning against treating smaller groups alone as a proven explanation for better outcomes (Bondebjerg et al., 2023). In the present study, the more recurrent cross-site pattern was not the quantity of infrastructure but the coherence linking assessment, environment, work systems, fading, coordination, and monitoring.

The cross-site findings were synthesized into a provisional substantive model of transfer of control through adaptive structure. Model development proceeded from the within-site coding matrices to a cross-site matrix, where recurrent categories were compared for sequence, convergence, and qualification. Individual assessment, adaptive environmental organization, work systems, targeted prompting and fading, cross-setting coordination, and assistance-level monitoring were directly grounded in patterns that recurred across the two sites. The sequential framing of these elements as a transfer-of-control process, together with the recalibration loop that reconnects monitoring to planning, represents the authors' theoretical integration of those empirical patterns. The model therefore does not propose that structure causes independence in a deterministic sense; it offers an analytically generated explanation of how management decisions may progressively shift the source of control over activity from adults, to environmental cues, and toward the learner.

Because the model is derived from two schools in one district, it should be treated as provisional and requires transferability testing in other institutional, regional, and disability contexts. The resulting model is also consistent with reviews emphasizing structured support and autonomy as interconnected but conceptually distinct components (Willow et al., 2024; Strnadová et al., 2024).

Table 3. Stages of the Transfer-of-Control Model

Stage	Management function	Mechanism	Expected shift
1. Individual assessment	Planning	Identify ability, communication, sensory profile, interests, target independence, and current assistance level	From generic expectations to individualized targets
2. Adaptive environmental structure	Organizing	Arrange physical space, visuals, routines, and task materials so activities are readable	From adult explanation to environmental information
3. Work system	Organizing/Directing	Specify task, amount, sequence, completion signal, and next activity	From waiting for instruction to structured action
4. Targeted prompting	Directing	Provide the minimum support needed for successful engagement	From task failure to supported participation
5. Fading	Directing	Systematically reduce assistance as competence increases	From adult-controlled performance to learner-controlled performance
6. Cross-setting coordination	Coordinating	Align realistic targets across school, home, and vocational contexts	From context-bound skill to broader generalization
7. Assistance-level monitoring	Monitoring/Evaluation	Track how much and what type of support remains necessary	From outcome-only evaluation to developmental trajectory
8. Recalibration	Planning cycle	Use monitoring evidence to redesign structure, tasks, and support	Toward increasingly self-regulated activity (provisional analytical integration)

Note. Stages 1-7 synthesize recurrent empirical categories across both sites; the sequential transfer-of-control framing and recalibration loop are analytical integrations proposed by the authors and require testing in other contexts.

Taken together, the results extend structured teaching beyond a collection of classroom techniques by showing how its elements can be organized as a management system. Planning individualizes the support target; organizing embeds usable information in the environment; directing regulates the amount and type of adult assistance; coordinating extends similar targets across school, home, and vocational contexts; and monitoring informs when support should be

maintained, faded, or redesigned. This management-function lens adds to TEACCH, scaffolding, and self-determination accounts by explaining how otherwise separate practices are connected through organizational decisions over time. The comparison also qualifies any simple resource explanation: greater infrastructure expanded options at the public site, whereas smaller groups and flexible coordination supported personalization at the private site. In both cases, visible structure mattered only when students could use it, and adult support remained necessary for some learners. The study's practical implication is therefore not to maximize visual structure, but to make support adaptive, readable, monitorable, and progressively less intrusive where student performance allows. Vocational-transition syntheses and reviews of school-wide adaptive practices provide useful external points of comparison for future evaluation of this provisional model (Coñoman et al., 2024; Traina et al., 2023).

Discussion

The findings demonstrate that structured classroom management supports the development of functional independence when environmental organization, instructional assistance, and institutional coordination are continuously adapted to students' individual capabilities. Across SLB Negeri Balongsari Jombang and SLB Pelita Bangsa Jombang, five interrelated management functions planning, organizing, directing, coordinating, and monitoring–evaluation—contributed to a recurring process of transferring control from adult instruction toward environmental cues and progressively greater learner regulation. Individual assessment established the foundation for differentiated support, while accessible visual structures and work systems facilitated task initiation, sequencing, and completion. Most notably, prompting-fading emerged as the most consistent observable mechanism through which adult assistance was progressively reduced. Nevertheless, variations across students and classrooms demonstrate that independence cannot be inferred from the presence of structured materials alone. Rather, educational effectiveness depends on whether learners can use available supports with increasing agency and decreasing direct intervention.

These findings are consistent with international research on structured teaching and individualized instructional support. Hume et al. (2021) identified visual supports and systematic instruction among evidence-based practices for autistic learners, while Liang et al. (2026) demonstrated that visual schedules, particularly when combined with prompting and reinforcement, can improve academic engagement and independent task performance. Similarly, Zhou et al. (2024) and Zhu et al. (2025) reported positive outcomes associated with structured teaching interventions. However, these investigations primarily evaluate intervention effectiveness, whereas the present study examines how school management organizes and sustains instructional processes across institutional settings. This distinction suggests that structured teaching should not be regarded exclusively as a classroom technique but as an organizational process requiring assessment, implementation, monitoring, and continuous instructional adjustment.

A particularly important finding concerns the distinction between structural availability and functional accessibility. Although SLB Negeri Balongsari possessed more extensive facilities and visual materials, some students continued to require frequent verbal explanations. Conversely, SLB Pelita Bangsa demonstrated that simpler, personalized arrangements could support relatively smooth task transitions when students understood their instructional cues. This pattern aligns with Liang et al. (2026), whose review indicated that visual schedules are frequently most effective when integrated with complementary instructional strategies. It also resonates with Benson et al. (2024),

who compared video and picture prompting for improving daily living skills among autistic children. Collectively, these studies suggest that the effectiveness of instructional media depends less on technological sophistication than on compatibility with students' learning characteristics and task demands. Consequently, the present findings challenge resource-centered assumptions that equate greater instructional infrastructure with superior independence outcomes.

The role of work systems further clarifies how predictable classroom arrangements can facilitate functional participation. Across both schools, task sequences were designed to communicate what students should do, how activities should proceed, when tasks were completed, and which activities followed. International investigations provide convergent evidence. Sun and Brock (2023) found that video-based instruction can support employment-related skill acquisition among students with intellectual and developmental disabilities, while Schroeder et al. (2023) demonstrated the usefulness of video prompting for teaching vocational tasks. Vallecillo et al. (2025) similarly identified video-based interventions as promising approaches to vocational skill development. Nevertheless, these studies also emphasize the relevance of individual responsiveness and implementation conditions. The present study extends this evidence by illustrating how instructional sequencing becomes embedded within everyday classroom management rather than remaining an isolated intervention.

Prompting-fading represents the most theoretically consequential mechanism identified in the cross-site analysis. Teachers adjusted physical, gestural, verbal, and visual prompts according to students' performance, gradually reducing assistance when learners demonstrated greater competence. This observation corresponds with findings from Kutlu (2023), Bosley et al. (2024), and Almumen (2024), which support systematic prompting procedures for teaching differentiated skills to learners with developmental or intellectual disabilities. Nevertheless, the present evidence also demonstrates that assistance reduction is not necessarily linear. Some students continued to require repeated instructional support despite stable environmental structures. This qualification is important because reducing assistance prematurely can undermine successful participation. Accordingly, prompting-fading should be conceptualized as a responsive decision-making process rather than a standardized sequence applied uniformly across disability profiles.

From a self-determination perspective, the progressive transfer of instructional control represents more than improved task performance. It concerns students' increasing ability to initiate activities, make choices, regulate participation, and demonstrate competence within accessible environments. Burke et al. (2024) and Willow et al. (2024) emphasized that self-determination involves meaningful agency rather than the mere absence of external assistance. Similarly, Wang et al. (2024) found that educational interventions informed by self-determination theory can strengthen autonomy and perceived competence. These perspectives help explain why the level of remaining assistance constitutes a meaningful developmental indicator in the present study. However, decreasing teacher prompts should not automatically be equated with psychological autonomy. A student may complete tasks independently while having limited opportunities to choose activities or express preferences. Future applications of the proposed model should therefore distinguish behavioral independence from decision-making autonomy.

Research conducted in Indonesia provides further contextual support. Rafikayati et al. (2023) investigated TEACCH-assisted interactive video learning for developing self-care skills among autistic children, demonstrating the educational relevance of structured and visually supported

instruction. Fatun et al. (2024) similarly reported improved independence and activity transitions following visual-schedule implementation at SLBN 1 Takalar. More recently, Iftitah et al. (2025) examined visual schedules for students with mild intellectual disabilities. These investigations reinforce the relevance of individualized structure in Indonesian special education. Nevertheless, they primarily focus on specific instructional interventions, whereas the present study explains how instructional planning, environmental organization, teacher guidance, family collaboration, vocational programming, and assistance monitoring operate collectively. Its distinctive contribution is therefore the integration of instructional strategies into an educational management framework.

The contrast between public and private institutional contexts provides additional insights into the organizational conditions of independence development. SLB Negeri Balongsari offered broader institutional resources and vocational opportunities, while SLB Pelita Bangsa demonstrated greater flexibility in room utilization, smaller learning groups, and comparatively intensive family communication. These differences suggest that institutional capacity influences how adaptive structure is implemented without necessarily determining its functional effectiveness. Bondebjerg et al. (2023) cautioned that evidence concerning the educational benefits of smaller special-education classes remains limited. Likewise, Küçükalkan et al. (2023) emphasized the complexity of managerial processes in special educational institutions. The present study extends these perspectives by identifying adaptation, instructional coherence, and responsive support as recurrent organizational features across contrasting settings. However, the qualitative design does not establish that either institution achieves superior student outcomes.

School–family collaboration emerged as another important condition for extending independence-related routines beyond classrooms. Communication books, consultation, WhatsApp groups, and home-monitoring journals were used to align educational expectations with family practices. This finding is consistent with Santiago et al. (2022), who emphasized contextual congruence in family–school partnerships for autistic children. Roberts et al. (2023) further demonstrated that parent-mediated interventions require individualized approaches rather than uniform implementation. In the Indonesian context, Halimah and Sit (2024) highlighted the importance of understanding parental participation within social and relational circumstances. Nevertheless, evidence from the present study primarily demonstrates coordination processes rather than sustained behavioral generalization. Differences in parental time, safety considerations, and household routines may limit consistent implementation. Therefore, the educational value of collaboration should be assessed through observable continuity of student performance rather than communication frequency alone.

Vocational activities provided an additional context for applying independence-related skills. Students engaged in preparing equipment, following production sequences, checking completed work, maintaining cleanliness, and participating in locally relevant vocational activities. These observations align with Mazzotti et al. (2021) and Coñoman et al. (2024), who emphasized authentic work experiences and transition preparation. Schroeder et al. (2023) and Vallecillo et al. (2025) further demonstrated the potential of structured, technology-assisted instruction for vocational skill acquisition. However, participation in vocational activities should not be equated with successful employment transition. The findings establish opportunities for practicing functional independence within documented activities but do not demonstrate long-term occupational outcomes. This

distinction highlights the need for longitudinal evidence connecting classroom autonomy with meaningful postschool participation.

Theoretical, Pedagogical, and Policy Implications. Theoretically, the study proposes that independence emerges through an adaptive relationship among environmental accessibility, instructional scaffolding, autonomy-supportive guidance, and organizational coordination. This perspective extends structured teaching and self-determination frameworks by positioning school management as a mechanism for regulating the progressive transfer of control. Pedagogically, teachers should conduct individualized assessments, design accessible visual and procedural supports, implement systematic prompting-fading, and evaluate progress through observable assistance levels. Student engagement and emotional well-being may benefit from predictable, supportive learning environments that preserve meaningful choice and avoid unnecessary task-related distress. Digital tools, including video prompting and accessible communication systems, may support independence when matched to individual capabilities. Research by Rajagopal and Chandrashekaran (2025) highlights the potential of inclusive media literacy education, while Chiner et al. (2024) emphasize teacher preparation for safe digital participation among learners with intellectual disabilities or autism. Policy development should therefore prioritize individualized educational planning, teacher professional development, accessible digital resources, family collaboration, and coordinated transition services. Nevertheless, digital identity, online behavior, and mental health outcomes were not directly examined in the present research, and any related recommendations require separate empirical evaluation.

Novelty and Contribution. The principal novelty of this study is its provisional substantive model of transfer of control through adaptive structure, derived from comparative qualitative analysis across two Indonesian special schools with contrasting institutional configurations. Rather than treating classroom structure as a fixed instructional arrangement, the model conceptualizes independence development as a continuous management process connecting individual assessment, environmental adaptation, work-system organization, targeted prompting, fading, cross-setting coordination, assistance-level monitoring, and recalibration. Its theoretical contribution lies in integrating structured teaching, instructional scaffolding, self-determination, and educational management into a coherent process-oriented explanation. Methodologically, the comparison of interviews, observations, institutional documents, and cross-site patterns provides an interpretive basis for distinguishing recurring mechanisms from context-dependent practices. The proposed sequential model is an analytical integration of these observations rather than an experimentally verified developmental pathway. Accordingly, the study contributes a contextually grounded framework for understanding how educational organizations may facilitate progressively greater learner control.

Limitations and Future Research. The findings should be interpreted within several methodological and contextual limitations. First, the qualitative design involved only two special schools in Jombang, limiting statistical generalizability and potentially restricting transferability to institutions with substantially different resources, disability profiles, and cultural conditions. Second, participants were purposively selected, and researcher involvement in one participating institution may have influenced interactions, observations, and interpretations despite triangulation, peer debriefing, and reflexive procedures. Third, the relatively short observation period prevented systematic evaluation of long-term independence development and sustained generalization across

home, school, and vocational environments. Fourth, assistance reduction was identified through qualitative patterns rather than standardized longitudinal measurement, while student perspectives were necessarily mediated by differences in communication abilities. Future research should examine the proposed model across diverse special-school contexts using longitudinal, mixed-method, and intervention-based designs. Particular attention should be directed toward validating assistance-level indicators, measuring meaningful student choice, evaluating family-supported generalization, and investigating how accessible technologies support independence without creating new forms of dependence.

Conclusion

This multi-site study indicates that structured classroom management is most meaningfully associated with developing independence when structure is adaptive, functional, and linked to a deliberate reduction of adult control. Across two contrasting special schools, recurrent patterns began with individual assessment, continued through physical and visual organization, predictable routines, and work systems, and became developmentally meaningful when prompting was adjusted and gradually faded. The study's main contribution is a provisional substantive model of transfer of control through adaptive structure: planning individualizes support, organizing embeds support in the environment, directing manages prompting and fading, coordinating creates opportunities for continuity across school-home-vocational settings, and monitoring uses remaining assistance as a sensitive indicator for recalibration. For practice, special schools should therefore evaluate not simply how much structure is visible, but whether learners can use that structure to initiate, sequence, complete, and transition between activities with progressively less adult assistance.

These findings remain bounded by a qualitative two-site design in one Indonesian district and support analytic rather than statistical generalization; they do not estimate causal effects or demonstrate uniform cross-setting generalization. The researcher's professional role at one site also makes reflexive safeguards especially important. Future research should test the transferability of the model across regions, school types, and disability profiles; follow assistance levels longitudinally; examine whether school-home-vocational continuity produces sustained transfer across settings; and develop practical support-level monitoring instruments that can be evaluated through mixed-method or quantitative designs.

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