

Needs Analysis of Non-Special-Education Teachers for Developing an Orthopedagogy Module through Peer-Sharing Learning Communities

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Abstract : Private special schools (Sekolah Luar Biasa Swasta/SLBS) increasingly rely on teachers without a special-education (non-PLB) background, creating a persistent gap in disability-specific pedagogical competence. This article reports the needs-analysis stage of a research-and-development project aimed at producing an Orthopedagogy Module for use within peer-sharing learning communities (Komunitas Belajar) at SLBS under Regional Education Office Branch XI, Central Java Province. Following the Analysis phase of the ADDIE model within a mixed-methods, concurrent-embedded design, data were gathered through questionnaires, interviews, and document review involving non-PLB teachers and principals. Findings show that the large majority of teachers in these schools have received no formal training in disability characteristics, early assessment, or individualized program planning, while access to government equivalency and certification programmes remains constrained by distance and cost. Learning communities already exist at school level but operate without a structured programme or dedicated learning resource. These findings establish a clear rationale for a practical, peer-mediated Orthopedagogy Module embedded in ongoing community-of-practice activities, and they provide the empirical needs profile that will guide the subsequent design and development of the module.

Keywords : Orthopedagogy Module; Non-Special-Education Teachers; Needs Analysis; Peer-Sharing Learning Community; Private Special School

Abstrak : Sekolah Luar Biasa Swasta (SLBS) semakin banyak mempekerjakan guru tanpa latar belakang Pendidikan Luar Biasa (non-PLB), sehingga menimbulkan kesenjangan kompetensi pedagogik yang terus berlangsung dalam melayani peserta didik disabilitas. Artikel ini melaporkan tahap analisis kebutuhan dari penelitian pengembangan (R&D) yang bertujuan menghasilkan Modul Ortopedagogi untuk digunakan dalam Komunitas Belajar berbagi praktik baik di SLBS Cabang Dinas Wilayah XI Provinsi Jawa Tengah. Mengikuti tahap Analisis pada model ADDIE dengan desain mixed methods tersemat (concurrent embedded), data dikumpulkan melalui angket, wawancara, dan studi dokumen terhadap guru non-PLB dan kepala sekolah. Hasil penelitian menunjukkan bahwa sebagian besar guru belum memperoleh pelatihan formal mengenai karakteristik disabilitas, asesmen dini, maupun penyusunan program pembelajaran individual, sementara akses terhadap program penyetaraan dan

sertifikasi pemerintah masih terkendala jarak dan biaya. Komunitas Belajar telah terbentuk di tingkat sekolah, namun belum memiliki program kerja maupun media belajar yang terstruktur. Temuan ini memperkuat urgensi pengembangan Modul Ortopedagogi yang praktis dan berbasis berbagi pengalaman antarguru, sekaligus menjadi dasar bagi tahap perancangan dan pengembangan modul selanjutnya.

Kata Kunci : *Modul Ortopedagogi; Guru Non-PLB; Analisis Kebutuhan; Komunitas Belajar; Sekolah Luar Biasa Swasta*

INTRODUCTION

Children with disabilities are entitled to instruction that responds to their specific developmental and learning characteristics, a principle now firmly embedded in global education policy. International bodies increasingly frame inclusive and special education not as a peripheral concern but as a shared, cross-sectoral responsibility that determines whether learners with disabilities can access a meaningful curriculum (Ydo, 2020). Delivering on this principle, however, depends heavily on the availability of teachers who possess adequate ortopedagogical competence, that is, the specialized pedagogical knowledge required to understand disability characteristics, conduct early assessment, and design individualized instruction.

In Indonesia, this competence requirement is difficult to meet in private special schools (Sekolah Luar Biasa Swasta/SLBS), which frequently recruit teachers from general-education backgrounds because graduates of Special Education (Pendidikan Luar Biasa/PLB) study programmes remain scarce. Within the Regional Education Office Branch XI of Central Java Province, teachers without a PLB background make up the overwhelming majority of the SLBS teaching workforce, leaving many of them to rely on trial and error when handling learners with visual, hearing, intellectual, or physical disabilities, as well as autism spectrum conditions. Government-run equivalency and competency-testing programmes exist to help close this gap, but they are concentrated in provincial centres such as Universitas Sebelas Maret in Surakarta, which places them out of practical reach for many SLBS teachers because of travel distance and cost.

One promising, low-cost avenue for narrowing this competence gap is the teacher learning community (Komunitas Belajar/Kombel), a school-based forum increasingly promoted as a vehicle for continuous professional development. Comparable studies published in *ARMADA: Jurnal Penelitian Multidisiplin* illustrate both the promise and the fragility of such collaborative arrangements. Efforts to implement differentiated, learner-centred instruction under the Merdeka curriculum show that meaningful change depends on deliberate competence-building activities such as technical guidance and structured training for teachers (Barlian et al., 2023), while studies of curriculum implementation elsewhere report that teachers continue to struggle translating policy into classroom practice without sustained institutional support (Arifiani & Umami, 2023). Related work on inclusive-education implementation likewise found that primary school teachers had not yet delivered instruction consistent with the core principles of service for learners with special needs, which shows how easily good policy intentions falter without practical guidance at the classroom level (Sartika et al., 2024). Internationally, evidence from special-education settings indicates that professional learning communities can also function as a source of collegial support and shared problem-solving that helps teachers cope with the demands of working with learners who have complex needs (Matjeni & de Jager, 2025), while quantitative studies in Indonesian elementary schools confirm a measurable, positive relationship between active participation in a learning community and gains in teachers' pedagogical competence (Wuryandoko et al., 2024).

Preliminary observation at SLBS under Branch XI indicates that learning communities have indeed been formed in nearly every school, yet their activity remains limited because they lack both a structured work programme and a shared learning resource that addresses the specific competence gaps of non-PLB teachers. Informal reliance on ad hoc peer advice, without a systematic reference, risks perpetuating inconsistent practice in assessment and individualized

program planning. A structured resource, developed collaboratively with senior PLB-qualified teachers acting as resource persons, could give the existing Kombel forums the substance they currently lack, provided its content and format are first grounded in an accurate picture of what non-PLB teachers actually need. This study therefore addresses the following question: what are the professional development needs of non-PLB teachers in SLBS with respect to the development of an Orthopedagogy Module delivered through peer-sharing learning communities? The findings reported here correspond to the Analysis stage of a larger research-and-development (R&D) project and are intended to establish the empirical foundation on which the module's design and content will subsequently be built.

RESEARCH METHOD

This study constitutes the initial stage of a research-and-development (R&D) project intended to produce, validate, and subsequently test the effectiveness of an Orthopedagogy Module (Sugiyono, 2019). Within the broader R&D framework, this article isolates and reports the Analysis phase of the ADDIE instructional design model (Judijanto et al., 2024), which establishes the empirical need for a product before any design work begins. A mixed-methods, concurrent-embedded design was applied (Creswell & Creswell, 2018), in which qualitative data on teachers' lived experience of competence gaps and community-learning practice were embedded within a primarily descriptive quantitative profile of teacher qualifications. This combination made it possible to quantify the scale of the qualification gap while also capturing the contextual and psychological barriers that a purely numerical account would miss.

Participants were non-PLB teachers and school principals drawn from private special schools (SLBS) under the Regional Education Office Branch XI, Central Java Province. Three instruments were used: (1) a structured questionnaire mapping teachers' academic qualifications and self-rated understanding of core orthopedagogy competencies, namely disability characteristics, early assessment, and individualized program planning; (2) semi-structured interview guides for teachers and principals exploring how existing Komunitas Belajar currently operate and what barriers limit access to government equivalency programmes; and (3) a review of school teacher-qualification records and Kombel activity reports.

Table 1. Research Instruments and Data Sources

No	Instrument	Data Source	Data Collected
1	Structured questionnaire	Non-PLB teachers	Academic qualifications and self-rated competence in disability characteristics, early assessment, and individualized program planning
2	Semi-structured interview guide	Non-PLB teachers and principals	Experience running the Learning Community and barriers to accessing government equivalency programmes
3	Document review	School staffing data and Learning Community activity reports	Summary of teacher qualifications and Learning Community activity records

Source: Primary Data (processed), 2026

Quantitative responses were analysed descriptively to profile the proportion of non-PLB teachers and the distribution of self-rated competence, while interview and document data were analysed thematically to identify recurring patterns related to competence gaps, structural access barriers, and the functioning of learning communities. The two strands were integrated at the interpretation stage to build a composite needs profile that will subsequently inform the Design phase of the ADDIE model.

RESULTS AND DISCUSSION

Teacher Qualification Gap

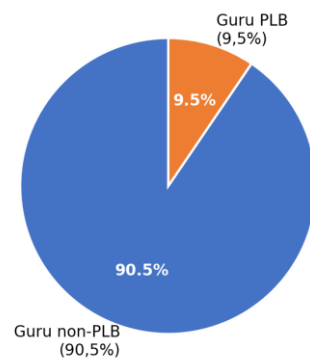
School qualification records from the SLBS under Branch XI, Central Java, show that non-PLB teachers make up approximately 90.5 percent of the teaching workforce in these schools. This figure confirms that the shortage of PLB-qualified personnel is not a marginal issue confined to a few units but a structural condition affecting nearly the entire teaching corps. Similar concerns about competence mismatches surface in other ARMADA studies on curriculum reform, where teachers repeatedly identified limited technical capacity as the main obstacle to implementing learner-centred instruction (Barlian *et al.*, 2023). The scale of the gap found in this study suggests that isolated, one-off training will be insufficient; a sustained, embedded mechanism such as a peer-sharing learning community is a more realistic vehicle for gradually closing it.

Table 2. Distribution of Teacher Qualifications in SLBS under Regional Education Office Branch XI

No	Teacher Qualification	Number (%)
1	Teachers without a Special Education background (non-PLB)	90.5%
2	Teachers with a Special Education background (PLB)	9.5%

Source: School Staffing Data (processed), 2026

Figure 1. Proportion of Non-PLB and PLB Teacher Qualifications in SLBS under Regional Education Office Branch XI



Source: School Staffing Data (processed), 2026

Gaps in Core Ortopedagogy Competence

Interview and questionnaire data indicate that non-PLB teachers generally feel unprepared in three interconnected areas: recognizing the characteristics and learning needs associated with different types of disability, conducting early assessment or detection, and translating assessment results into an Individualized Learning Program. Teachers described relying mainly on intuition and informal exchange with colleagues rather than any documented procedure. This pattern echoes the global observation that meaningful access to education for learners with disabilities cannot be separated from the availability of adequately prepared teachers (Ydo, 2020); without a shared reference for these three competence areas, the quality of service any individual teacher provides remains largely a matter of personal initiative rather than institutional capacity.

Structural Barriers to Formal Certification

Both teachers and principals pointed to the geographic distance and cost of attending government equivalency and competency-testing programmes, most of which are centred at Universitas Sebelas Maret in Surakarta, as a persistent obstacle. For teachers working in SLBS spread across Branch XI's more peripheral districts, the combination of travel time, accommodation cost, and lost teaching hours makes regular participation impractical. This finding reinforces why a school-based, low-cost alternative such as a peer-sharing learning community, supported by a purpose-built module, is a proportionate response to the access constraints these teachers face.

Underused Learning Communities

Nearly every SLBS visited had already established a Komunitas Belajar, yet most described its activity as sporadic and undirected, without a work programme or dedicated learning material addressing ortopedagogy content. This is consistent with evidence from Indonesian elementary schools that active, well-organized participation in a learning community is positively associated with gains in teachers' pedagogical competence (Wuryandoko *et al.*, 2024), and with findings elsewhere that curriculum reforms tend to stall when schools are left to interpret new expectations without structured support (Arifiani & Umami, 2023). International evidence further suggests that, beyond building technical competence, professional learning communities give teachers in demanding special-education roles a space for collegial support that helps sustain their engagement with the work (Matjeni & de Jager, 2025). Read together, these findings imply that the existing Kombel forums in Branch XI are not failing because teachers are disengaged, but because the forums currently lack the structured content that would let participation translate into competence gains.

Implications for Module Development

The converging needs identified above, namely the qualification gap, low self-rated competence in three specific skill areas, restricted access to formal certification, and underused but existing Kombel forums, together indicate that the most feasible next step is a practical, peer-delivered Orthopedagogy Module rather than a conventional training programme. Consistent with the national mandate under Law No. 8 of 2016, Article 41(2), on basic instructional skills for learners with disabilities, the module content is planned to be organized around recognizing the diversity of disability, conducting early assessment, and designing an Individualized Learning Program, synthesized from established Guru Pembelajaran training materials produced by PPPPTK TK and PLB Bandung. Evidence from a recently validated e-module for secondary-school instruction shows that a well-designed module developed through the ADDIE stages can achieve very high expert-validity and practicality scores once it proceeds to formal testing (Gevi & Zen, 2026), offering a useful benchmark against which the Design and Development phases of the present module can later be measured. Finally, studies on school leadership suggest that a principal's active, hands-on support is a decisive factor in embedding any new competence-building initiative into everyday school culture (Yusuf *et al.*, 2023); this points to school principals, not only teachers, as an essential audience for the module's eventual rollout through Kombel.

Table 3. Summary of Qualitative Findings by Theme

Finding Theme	Summary of Main Finding	Supporting Reference
Qualification Gap	Non-PLB teachers dominate the SLBS teaching workforce (90.5%), indicating a structural condition rather than an isolated case	Barlian <i>et al.</i> (2023)
Core Ortopedagogy Competence	Teachers feel unprepared in three areas: disability characteristics, early assessment, and Individualized Learning Program planning	Ydo (2020)
Structural Barriers	Distance and cost of reaching the equivalency centre at Universitas Sebelas Maret limit teacher participation	-
Learning Community	Learning Communities are already established in nearly every school but operate without a structured work programme or materials	Wuryandoko <i>et al.</i> (2024); Arifiani & Umami (2023); Matjeni & de Jager (2025)

Source: Interview and Document Study Results (processed), 2026

CONCLUSION AND RECOMMENDATIONS

This study identified four converging needs among non-PLB teachers in SLBS under Regional Education Office Branch XI, Central Java: a severe qualification gap affecting roughly nine in ten teachers, low self-rated competence in disability recognition, early assessment, and individualized

program planning, restricted practical access to formal certification pathways, and Komunitas Belajar forums that already exist but lack a structured programme or dedicated learning resource. Together, these findings substantiate the rationale for developing a practical Orthopedagogy Module intended for peer-sharing delivery within existing learning communities, and they define the specific competence areas the module's Design phase should prioritize.

Based on these findings, several recommendations are proposed. First, the subsequent Design and Development phases of this R&D project should be guided directly by the three competence clusters identified here. Second, senior PLB-qualified teachers should be formally engaged as resource persons within Kombel sessions to anchor the peer-sharing process. Third, school principals are encouraged to schedule and actively support regular Kombel activity rather than leaving it to teachers' informal initiative. Fourth, the Regional Education Office may consider satellite or regional arrangements that reduce the distance and cost barriers currently limiting access to equivalency and certification programmes. Finally, future research should proceed to test the validity and practicality of the developed Orthopedagogy Module, building on the needs profile established in this Analysis-stage study.

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