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Socio-Ecological Perspectives and the Hierarchy of Collaboration in Finnish Preparatory Education

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Abstract
This study examined collaboration among Finnish preparatory education teachers to support newly arrived immigrant students. Using a mixed-methods design, we analysed survey data from 308 teachers to explore their collaborative practices. A socio-ecological perspective was combined with a novel hierarchy of teacher collaboration to capture how individual, institutional, and systemic factors shape everyday professional interaction. The results show that teachers frequently exchange teaching materials and discuss students' learning and well-being, whereas more structured forms of collaboration, such as joint lesson planning and co-teaching, remain rare. Key barriers include time limits, geographical isolation and weak institutional support. The findings suggest that collaboration in preparatory education is uneven and often confined to lower levels of engagement. By integrating socio-ecological and hierarchical perspectives, the study clarifies why deeper collaboration is difficult to sustain and provides practical implications for teacher education, school leadership, and policy development aimed at strengthening collaborative capacity in linguistically diverse school settings.

Keywords: teacher collaboration, preparatory education, socio-ecological framework, immigrant students, hierarchy of collaboration

Introduction: Enhancing Teacher Collaboration in Preparatory Education

Collaboration among preparatory education teachers and their mainstream colleagues, including class teachers, subject teachers and Finnish as a second language teachers, is central for the academic and socio-emotional integration of newly arrived immigrant students. In Finland, preparatory education aims to provide students with the Finnish or Swedish language skills and other competencies needed for transition to pre-primary or primary and lower secondary education (Finnish National Agency for Education, 2022). The term *preparatory education teachers* refers here to teachers working with students enrolled in preparatory education and supporting their linguistic, academic and educational transition. In the Finnish education system, *class teachers* are responsible for all subjects in grades 1–6, *subject teachers* specialise in particular subjects in grades 7–9, and *Finnish as a second language (S2) teachers* support the language development of students whose first language is not Finnish. *Integration* refers to the educational and social participation of newly arrived immigrant students in Finnish schools (see, e.g., Akinyi Obondo, 2018; Norozi, 2023; Sinkkonen & Kyttälä, 2014).

In the context of Finnish preparatory education, collaboration connects assessments of students' prior schooling with day-to-day instructional adjustments and inclusion practices, reducing teacher

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isolation and supporting continuity in students' learning pathways (Sinkkonen & Kyttälä, 2014, pp. 168–170). Beyond information exchange, collaboration co-ordinates guidance, aligns pedagogy and distributes responsibility for students' transitions (Hedman & Magnusson, 2021; Schleifer et al., 2017).

Prior studies have consistently highlighted the positive impact of teacher collaboration on student achievement, particularly in immigrant education, by bridging linguistic, cultural and socio-emotional gaps (Akinyi Obondo, 2018; Mora-Ruano et al., 2019; Norozi, 2023). Nevertheless, in primary and lower secondary preparatory education, collaboration is often constrained by a lack of time, training and administrative support (Tajic & Bunar, 2023). Collaboration with colleagues, and where relevant, external experts, is essential for addressing the multifaceted challenges of preparatory education. Beyond improving individual teaching, it offers structures for sharing expertise, aligning practices and reducing teacher isolation.

Research on teacher collaboration has largely focused on subject-specific or within-discipline teamwork (Hiltunen et al., 2020; Lakkala et al., 2021; Rautaparta-Pennanen et al., 2024), and interdisciplinary collaboration remains underexplored (Tajic & Bunar, 2023). Responding to this gap, the present study systematically explored the scope, frequency and perceived barriers of teacher collaboration in preparatory education.

The study addressed the following research questions:

1. How often do preparatory education teachers collaborate with their colleagues, and how do they justify the lack of collaboration?
2. What forms of collaboration are most common, and what barriers constrain them?

By answering these questions, this article makes both theoretical and practical contributions to the literature: it refines the conceptualisation of teacher collaboration in diverse educational contexts and offers actionable insights for policymakers, administrators and teacher educators.

Literature Review and Theoretical Framework

Conceptualising teacher collaboration

Teacher collaboration is conceptualised in diverse ways across educational research, reflecting its structural, interpersonal and professional dimensions. In Nordic educational contexts, collaboration is closely tied to traditions of teacher autonomy, collective professionalism and shared responsibility for student learning (Haapaniemi et al., 2021; Niemi, 2015). Although scholars differ in their emphases, several recurring perspectives lead us to understand collaboration as both a practical arrangement and a professional culture.

Structural and process-oriented perspectives

Some studies have highlighted the organisational and procedural aspects of collaboration. Woodland et al. (2013, p. 443) define it as a structured process of professional interaction designed to enhance student learning, whereas DuFour et al. (2013, pp. 11–15) describe collaboration within professional learning communities as sustained, interdependent work aimed at improving outcomes for students, teams and schools. These definitions stress formalised structures, scheduled interactions and accountability mechanisms.

Interpersonal and relational perspectives

Other scholars emphasise trust, collegiality and professional culture. Forte and Flores (2012, pp. 902–904) conceptualise collaboration as a network of trust-based relationships that enable teachers to develop professionally, whereas Webs and Holtappels (2018, pp. 41–43) portray it as a social process shaped by mutual reliance and collective goals. Similarly, Scoular et al. (2020, pp. 2–3) identify persistence, team knowledge and conflict resolution as essential interpersonal components of effective collaboration.

Despite these variations, several themes emerge consistently in the literature. Teacher collaboration is commonly associated with joint responsibility and shared accountability, particularly in co-teaching

and team-based models (DuFour et al., 2013, pp. 11–15; Woodland et al., 2013, p. 445). It is also closely linked to instructional improvement and student learning, which are frequently identified as central aims of collaborative work (Mora-Ruano et al., 2019, p. 3; Norozi, 2023, p. 2). In addition, structured reflection, peer observation and feedback are described as important mechanisms for professional growth and collective learning (Forte & Flores, 2012, pp. 902–904). Across these perspectives, trust and collegiality emerge as key conditions for sustaining collaboration over time (Webs & Holtappels, 2018, pp. 41–43).

These elements demonstrate that collaboration is not a singular practice but a multilayered process that combines structural arrangements and interpersonal dynamics. However, existing studies have often treated these aspects in isolation. Building on this gap, we introduce a hierarchy of teacher collaboration. Inspired by typologies in prior research (e.g., DuFour et al., 2013; Webs & Holtappels, 2018; Woodland et al., 2013), we distinguish four progressive levels:

- informative collaboration (sharing logistical information)
- pedagogical discussions (exchanging teaching strategies)
- work-sharing and resource exchange (co-developing materials and plans)
- reflective practices and professional growth (co-teaching, mentoring, learning communities)

This hierarchy provides the conceptual basis for our analysis. Developed theoretically from prior research before the FINEEC survey findings were mapped onto it, the four-level hierarchy was subsequently used to examine how the observed collaborative practices corresponded to these theoretically derived levels. It thus enables us to locate observed practices along a developmental continuum while also connecting them to the systemic conditions outlined in the socio-ecological framework.

Socio-ecological framework: A lens for teacher collaboration

The socio-ecological framework examines how systems ranging from the individual to the societal interact to influence behaviour. It emphasises the complex interplay among individual, interpersonal, organisational, community and societal factors that affect educational experiences and outcomes (Rummler, 2014). Rather than locating action solely within the individual, it assumes that behaviour is shaped by nested and interdependent systems – from the immediate settings in which people act to the broader institutional and cultural contexts that enable or constrain these actions (Bronfenbrenner, 1979, pp. 22–27).

In Bronfenbrenner's original bioecological model, these systems form a hierarchy of influence: the microsystem (direct interpersonal contexts such as classrooms and colleagues), the mesosystem (connections between settings, such as relations between teachers and school leadership), the exosystem (external structures that affect individuals indirectly, such as municipal policies or professional networks), and the macrosystem (national policy frameworks, societal norms and cultural expectations). Later adaptations in health and organisational studies (McLeroy et al., 1988, pp. 353–355; Stokols, 1996, pp. 286–288) have emphasised that these levels are not static layers but dynamic processes: changes at one level reverberate across others.

Applied to education, a socio-ecological perspective highlights that teaching and collaboration are not only interpersonal phenomena but also systemically conditioned. Teachers' opportunities to collaborate depend simultaneously on their own dispositions and skills (microlevel), their collegial relations and school climate (mesolevel), the resources and guidelines provided by municipalities (exolevel) and national policies or societal attitudes toward inclusion (macrolevel).

This multilevel logic has also influenced research in multilingual and language-education contexts. The Douglas Fir Group (2016, pp. 22–25), for instance, drew inspiration from socio-ecological thinking to model language learning as activity distributed across individual, institutional and ideological levels. Although their framework is not a direct application of Bronfenbrenner's theory, it demonstrates how

ecological reasoning can be used to analyse complex educational phenomena that unfold simultaneously across several scales. Similar approaches have been adopted by Kangasvieri et al. (2023, pp. 34–38), who examined learner motivation in multilingual settings and offered insights into collaboration in diverse educational environments; and by Nagel and Partelow (2022, pp. 6–8), whose synthesis of research applied Ostrom's Socio-Ecological Systems Framework (SESF) and showed how individual behaviour is embedded within wider institutional environments.

Research on teacher collaboration has further extended this framework (Shestunova, 2022), highlighting how educational policies, societal norms and institutional practices can either support or hinder collaborative efforts. National and institutional policies may enable collaboration, but they must be reinforced by a professional culture that values and sustains collaborative behaviour. In Finland, this perspective is particularly relevant, as the education system has long upheld teacher autonomy while increasingly promoting collaborative practices through policy and curriculum reforms that support professional development and teamwork (Haapaniemi et al., 2021; Lavonen et al., 2020; Niemi, 2015).

Figure 1 presents the socio-ecological framework adapted for this study, illustrating how teacher collaboration is shaped by four interconnected levels: the microlevel, mesolevel, exolevel and macrolevel. These levels interact dynamically to influence teachers' collaborative practices in preparatory education.

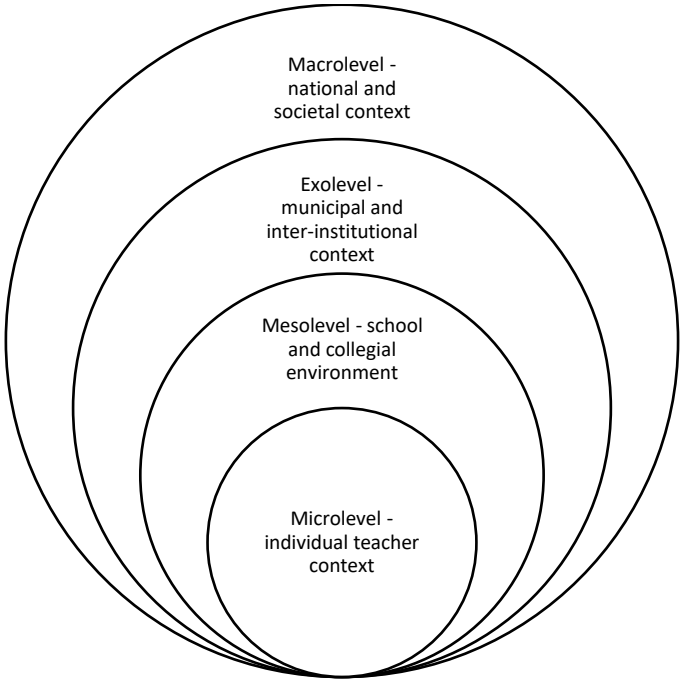

Figure 1. Socio-ecological Framework for Teacher Collaboration in Finnish Preparatory Education

By integrating these perspectives, the socio-ecological framework offers a nuanced description of how multilevel interactions shape teacher collaboration in Finland.

Hierarchy of teacher collaboration: Levels of engagement in preparatory education

To further advance the conceptual understanding of teacher collaboration, this study introduces a theoretically grounded hierarchy of collaborative practices. The model synthesises insights from previous research and proposes four levels of educator engagement. These four levels, presented in Figure 2, offer a structure for interpreting the collaborative practices observed among Finnish preparatory education teachers.

The hierarchy proposed in this study is grounded in three complementary strands of prior research. The first strand comprises typologies that conceptualise teacher collaboration as a continuum of depth,

ranging from informal exchanges to joint professional inquiry (DuFour et al., 2013; Hargreaves, 1994; Little, 1990; Woodland et al., 2013). The second strand draws on developmental perspectives that view collaboration as a learning process that deepens through reflection, feedback and mutual trust (Forte & Flores, 2012; Webs & Holtappels, 2018). The third strand reflects empirical findings from Nordic and Finnish studies of preparatory and inclusive education (Haapaniemi et al., 2021; Lakkala et al., 2021), which reveal how structural and contextual conditions influence the emergence of collaborative practices. Synthesising these insights, the hierarchy of teacher collaboration provides a developmental and context-sensitive framework for analysing teachers' professional engagement in institutional settings.

The pyramid represents a hierarchical model of teacher collaboration and illustrates how basic communication at the base progresses to advanced professional growth at the apex. The term *hierarchy* does not imply superiority or normative ranking; it denotes increasing depth, reciprocity and professional responsibility.

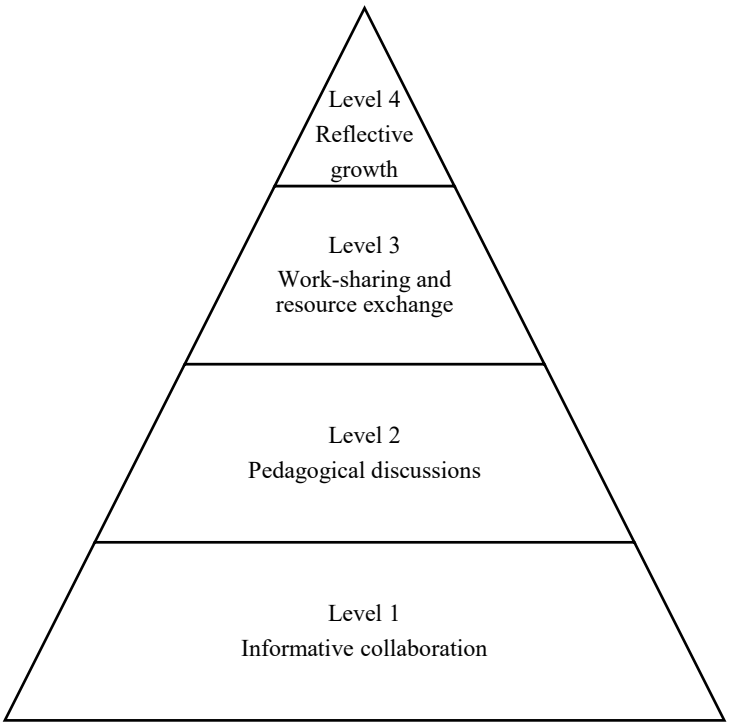

Figure 2. Hierarchy of Teacher Collaboration in Preparatory Education

Note. Synthesised from prior research (DuFour et al., 2013; Forte & Flores, 2012; Hargreaves, 1994; Little, 1990; Webs & Holtappels, 2018; Woodland et al., 2013).

Informative collaboration (Level 1). Basic logistical communication that focuses on practical co-ordination (e.g., schedules, student absences, administrative updates). At this level, collaboration promotes day-to-day functioning but does not directly influence instruction.

Pedagogical discussions (Level 2). Exchange of ideas about teaching methods, curriculum content and assessment. These informal or formal dialogues promote consistency in practice and help address student needs but remain primarily conversation based.

Work-sharing and resource exchange (Level 3). Joint development or reciprocal sharing of lesson plans, teaching materials, assessment tools and strategies. This level strengthens professional community and supports instructional improvement through concrete shared work.

Reflective practices and professional growth (Level 4). Deep forms of collaboration such as co-teaching, mentoring, collective inquiry, or participation in professional learning communities. These practices focus on refining pedagogy through shared reflection and contribute to systemic school-level development.

In this article, the hierarchy of teacher collaboration functions as a central analytical framework, guiding the interpretation of collaboration practices observed in preparatory education. Categorising collaboration into levels – from basic communication to deep professional growth – enables the study to position teachers' behaviours along a developmental continuum and to identify the points at which collaboration is more developed or constrained.

Similar distinctions between surface-level and deep collaboration have been documented in previous research (Hargreaves, 1994; Little, 1990; Woodland et al., 2013). However, the present hierarchy expands on these by explicitly situating collaboration within the socio-ecological and institutional conditions that are characteristic of Nordic education systems. This makes the model particularly suited for analysing collaboration in contexts marked by structural fragmentation, linguistic diversity and uneven access to professional networks.

Methodology

Research design

This study employed a mixed methods design to examine the collaboration practices of teachers in Finnish preparatory education. We used a convergent parallel approach, in which the quantitative and qualitative data collected in May 2021 by the Finnish Education Evaluation Centre (FINEEC) were first analysed separately and then brought together during the interpretation phase. The quantitative component offered a broad overview of the frequency and forms of collaboration, whereas the qualitative responses provided insights into teachers' lived experiences, challenges and interpretations of their collaborative work.

Participants and context

The study analysed survey data on 308 teachers working in Finnish preparatory education. The data represented 98 education providers across Finland. Most respondents (71%) worked as preparatory education teachers; others were Finnish as a second language teachers, classroom teachers or, in smaller numbers, resource, multicultural and special education teachers. The teachers' qualifications were equally diverse (see Table 1), with a predominance of educators holding advanced degrees and formal pedagogical training.

Table 1
Teacher Qualifications

Qualification type	Percentage
Class teacher	54.5%
Subject teacher	38.6%
Teacher of Finnish as a second language	20.5%
Special education teacher	19.5%
Other qualifications	10.1%
Studies in progress	6.5%
Early childhood teacher	3.6%
Social worker	1.6%

Note. Percentages exceed 100% because the respondents could indicate multiple qualifications.

Most of the participants (76%) were employed in urban municipalities, particularly in the metropolitan region (Helsinki, Espoo and Vantaa). Smaller proportions were located in Southwest and Eastern Finland (10% each), which reflects the broader demographic distribution of immigrant populations in Finland (Heino & Jauhiainen, 2020).

Most teachers reported 11–20 years of total teaching experience, but many had comparatively limited experience in preparatory education: 30.2% had taught preparatory education students continuously for 1–5 years. Employment conditions varied: 62.3% held permanent positions, whereas 37.7% worked on fixed-term contracts. The relatively high proportion of temporary contracts raises concerns about job stability and may affect both teacher retention and the overall quality of education in preparatory programmes.

Data collection and instruments

The present study built on a subset of data collected by FINEEC as part of the VOMA project, which evaluated preparatory education and mother tongue instruction in Finland (Venäläinen et al., 2022). The broader dataset included surveys of mother tongue teachers, principals and education providers, and covered several themes related to linguistic skills and learning conditions. The present article focuses exclusively on the section of data on preparatory education teachers' collaboration.

The survey included both closed and open-ended questions designed to capture the frequency and forms of collaboration and the perceived barriers and support structures. The closed items used Likert scales to assess the frequency of collaboration (e.g., 'How often do you plan lessons jointly with colleagues?') and the types of collaborative activities (e.g., sharing teaching materials, co-teaching, assessment discussions). The open-ended questions invited the participants to elaborate on their experiences of collaboration and the related challenges and unmet needs (e.g., 'What prevents you from collaborating with other teachers in your current role?'). The survey was distributed online, and participation was voluntary.

Data analysis

Quantitative analysis

The quantitative data were analysed using IBM SPSS Statistics to produce descriptive statistics. We performed cross-tabulations to examine the associations between reported collaboration behaviours and teacher characteristics, including levels of teaching experience, teacher roles and employment types. No statistical significance tests were conducted, as the aim was to explore descriptive patterns rather than to test hypotheses.

For interpretive comparisons, respondents who reported teaching preparatory education students sporadically or continuously for up to five years were grouped as less experienced (N = 212), whereas those with more than ten years of continuous experience were grouped as experienced (N = 38). Respondents with 6–10 years of continuous experience in preparatory education (N = 56) were treated as an intermediate group.

Qualitative analysis

The qualitative data from the open-ended survey responses were analysed using Atlas.ti. The thematic analysis followed Aronson's (1995) approach, involving data familiarisation, iterative coding, theme development and theoretical interpretation. All three authors participated in the qualitative coding. During a joint coding session, each author coded responses to designated open-ended questions, and the resulting codes and interpretations were subsequently discussed collectively. Because the authors coded different subsets of the qualitative material rather than independently coding the same responses, no formal inter-coder reliability coefficient was calculated. The quantitative and qualitative findings were integrated during interpretation to identify where statistical patterns aligned or were

explained by qualitative insights. The theoretically developed hierarchy of collaboration was then used as an interpretive framework to map the collaborative practices identified in the survey data.

Ethical Considerations

The data were anonymised prior to access, and no personal identifiers were collected. Participation in the original survey was voluntary, and completion was considered to indicate informed consent. The secondary use of data for this study complied with the ethical research guidelines (see TENK, 2023).

Findings

This section presents the quantitative patterns of collaboration that we found among preparatory education teachers, and qualitative insights into the factors that shape these practices.

Frequency of collaboration: Descriptive overview

Our analysis of the survey responses revealed that the patterns of how frequently the preparatory education teachers engaged in collaborative practices varied (Figure 3). Weekly collaboration was the most common, reported by 21.4% of the respondents, but 14.6% indicated daily collaboration. Monthly collaboration was reported by 15.3%, and 14.3% reported collaborating one to three times per semester. Notably, 16.6% of the participants stated that they never collaborated with colleagues.

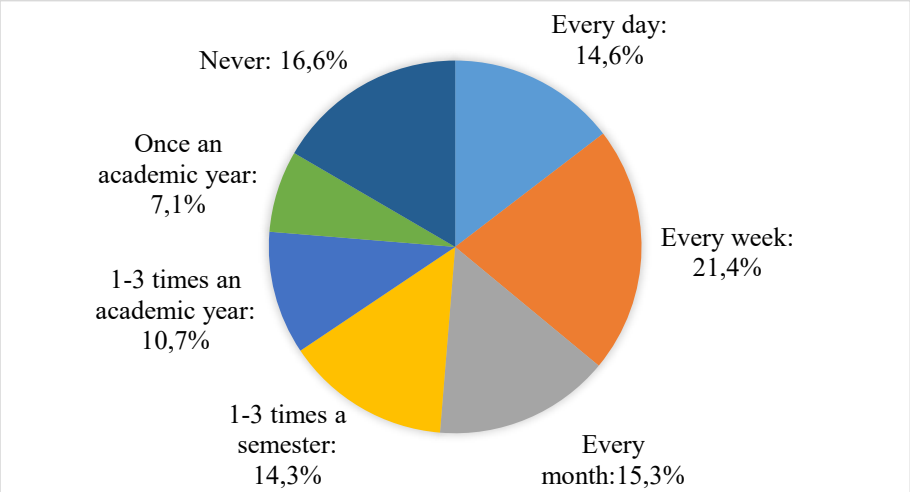

Figure 3. Frequency of Teacher Collaboration

Experienced teachers (i.e., those with more than ten years of continuous experience in preparatory education, N=38) practised more structured collaboration, such as organising joint activities with other teachers or integrating students into mainstream classes. Less experienced teachers (those teaching preparatory education students sporadically or with up to five years of continuous experience, N = 212) often mentioned difficulties such as limited time for planning or unfamiliarity with collaboration protocols. For example: 'I've just started, so I haven't had time to attend any training'.

These frequencies suggest that collaboration among preparatory education teachers is regular but mostly informal, echoing earlier findings that communication often stops at the level of co-ordination rather than developing into sustained co-teaching (DuFour et al., 2013; Woodland et al., 2013).

Frequent collaborative practices

The most commonly reported form of collaboration was discussing students' support needs (58.4%), which were typically related to socio-emotional well-being, learning pathways and situations

affecting their daily life. Sharing teaching tips (55.2%) and teaching materials (54.2%) was also common. Teachers reported exchanging lesson plans and instructional tools, particularly those designed for multilingual or language-focused classrooms.

Discussing assessment strategies was reported by 51.9% of the participants. Teachers mentioned developing inclusive assessment tools and ways to monitor student progress during transitions to mainstream education. The most frequently reported forms of collaboration were related to students' daily support and classroom teaching.

Moderately frequent collaborative practices

The less frequently reported forms of collaboration were numerous. Just under half of the respondents (45.5%) reported discussing alternative teaching approaches. Approximately one-third of the teachers (33%) reported planning transitions to mainstream education with mainstream educators. These activities were less common than the more routine forms of daily collaboration.

Infrequent collaborative practices

Some forms of collaboration occurred infrequently. Collaboratively creating teaching materials was reported by 12.3% of teachers and joint lesson planning by 7.5%. Supporting colleagues during lessons was similarly uncommon (less than 8%).

The distribution of activities corresponds to the lower levels of the proposed hierarchy – informational co-ordination and pedagogical dialogue. Similar patterns were observed in the Finnish and Nordic contexts, where teachers frequently exchange materials and advice but seldom engage in joint pedagogical design (Lakkala et al., 2021; Tajic & Bunar, 2023).

Barriers to collaboration

The open-ended responses revealed several barriers to collaboration. Geographical distance was the most common reason for non-collaboration. Among the 51 teachers who reported never collaborating, 32 worked in different buildings, schools or municipalities. Many described being the sole preparatory education teacher in their school or even in their municipality. Typical comments were: 'Because he's in another school', and 'There are no other preparatory education teachers nearby'. Lack of time was another frequently mentioned barrier. Fourteen respondents indicated that busy schedules and diverse student needs left little room for co-operative planning or discussion. Some described their responsibilities as too demanding to allow for collaboration, with remarks such as: 'There's been no time... to be in contact and discuss teaching', and 'My group is so varied that I don't have time'. Several teachers referred to limited structural or administrative support. Many reported a lack of dedicated planning time and a limited emphasis on collaborative frameworks in their schools: 'There's no common planning time'. Some teachers also considered collaboration the responsibility of the mainstream subject or class teachers. Professional isolation was also noted. Comments such as 'I don't know any other preparatory education teachers in this region', and 'There are no other preparatory education teachers in the primary school' reveal that teachers worked alone. This was especially common in smaller municipalities in Central and Northern Finland, where teachers reported being the only preparatory education teacher in their school, or in some cases, in the entire municipality.

Discussion

The results of this study confirm and expand on earlier Nordic and international findings concerning teacher collaboration (Haapaniemi et al., 2021; Lakkala et al., 2021), while offering a theoretically grounded explanation for why collaboration among Finnish preparatory education teachers remains unevenly developed.

The socio-ecological framework (Bronfenbrenner, 1979; McLeroy et al., 1988; Stokols, 1996) conceptualises teacher behaviour as being shaped by interrelated systems – from individual characteristics (microlevel) and collegial relationships (mesolevel) to municipal policies (exolevel), national education policy and societal expectations (macrolevel).

The hierarchy of teacher collaboration draws on earlier typologies that distinguish between superficial and deep collegial relations (DuFour et al., 2013; Forte & Flores, 2012; Hargreaves, 1994; Little, 1990; Woodland et al., 2013). It highlights the depth of professional engagement by organising collaboration into four levels.

When combined, the socio-ecological framework and the hierarchy of teacher collaboration offer a coherent lens for interpreting the results. The hierarchy of collaboration is situated primarily on the mesolevel of the socio-ecological model, where everyday professional interactions and institutional support structures are formed. This interpretation is consistent with previous analyses that emphasise the influence of school culture and leadership on collegial collaboration (Forte & Flores, 2012; Webs & Holtappels, 2018). At this level, decisions about allocating planning time, the quality of collegial relationships and practical factors – such as teachers working in different buildings – directly shape opportunities for collaboration (Lakkala et al., 2021).

The integrated lens helps explain how different factors act as barriers or enablers of collaboration. At the microlevel, individual factors such as experience and training impact willingness and ability to collaborate (Kini & Podolsky, 2016, pp. 3–5). At the mesolevel, school structures such as shared planning time or the spatial organisation of staff influence opportunities for engagement (DuFour et al., 2013; Woodland et al., 2013). At the exo- and macrolevels, systemic constraints such as fixed-term employment, unequal access to in-service training and decentralised funding align with the findings of earlier Finnish studies (Taylor et al., 2023; Venäläinen et al., 2022).

Table 2

Integrated Socio-ecological and Hierarchical Framework of Teacher Collaboration

Socio-ecological level	Informative collaboration	Pedagogical discussions	Work-sharing and resource exchange	Reflective practices and professional growth
Microlevel (teacher)	Exchange of schedules or logistical updates	Informal discussions on teaching methods	Sharing materials with trusted colleagues	Self-reflection, peer feedback, mentoring
Mesolevel (school)	Communication via staff meetings or emails	Interdisciplinary planning discussions	Developing shared lesson plans, common assessments	Using co-teaching models or forming school-based learning communities
Exolevel (municipal)	Receiving information about training from local providers	Occasional pedagogical seminars	Belonging to municipal resource hubs or networks	Leading or joining regional mentoring networks, collaborative pilot projects
Macrolevel (national)	National curriculum updates shared via email/newsletters	Discussion on guidelines for inclusive teaching strategies	Nationally funded collaborative training modules	National policies mandating co-teaching and inclusive collaboration frameworks

Mapping the observed practices onto the hierarchy of collaboration and interpreting them through the socio-ecological framework reveals the uneven distribution of collaborative practices among preparatory education teachers. This multilevel pattern reinforces prior findings that effective collaboration depends simultaneously on individual agency, supportive school leadership and coherent policy environments (Haapaniemi et al., 2021; Lakkala et al., 2021; Webs & Holtappels, 2018).

Table 2 presents a conceptual synthesis integrating the socio-ecological framework with the hierarchy of collaboration. It is intended as an interpretive framework and was not empirically derived from the survey data.

Interpreting the results through the socio-ecological framework

Individual level: Teacher characteristics and professional backgrounds

The study highlights how teachers' collaboration habits vary widely (N=308). In total, 16.6% of the educators reported never engaging in collaborative activities, whereas 51.3% indicated that they collaborated at least monthly. Although collaboration is inherently a relational activity, individual-level factors such as professional experience, formal qualifications and prior exposure to collaborative environments shape teachers' likelihood of engaging in such practices. The data show that the teachers with over five years of experience in preparatory education had higher levels of collaboration (N=94). These teachers described having more established collaborative routines and were more likely to engage in professional discussions and joint planning. Similarly, compared to their colleagues with no additional training, the teachers who had completed supplementary pedagogical studies demonstrated increased levels of collaboration (N=97), particularly those who had undergone specialised training in multicultural education or Finnish as a second language. These educators described adopting more systematic and proactive approaches to collaboration, including sharing best practices to support diverse student populations and co-developing language support programmes.

In contrast, teachers with no formal training in preparatory education (N=39) often reported challenges such as feeling isolated and uncertain about collaborative practices and being unaware of opportunities to collaborate with colleagues. These barriers seemed to be more frequent among less experienced teachers (N=212, i.e., those with ≤5 years of experience or sporadic involvement), particularly those in smaller schools or rural areas. These findings are consistent with those of research showing that professional experience and targeted training enhance collaborative engagement (Kini & Podolsky, 2016).

Together, these results indicate that professional experience and specialised training enhance individual capacity and facilitate deeper engagement in collaborative practices.

Interpersonal level: Collegial relationships and informal networks

The most frequent forms of collaboration involved discussing students' needs for support, sharing teaching tips, and exchanging instructional materials. These interactions primarily occurred informally and reflected peer support networks rather than structured institutionalised collaboration. The results suggest that teachers in integrated preparatory education (who work alongside mainstream teachers) are more engaged in pedagogical discussions than teachers in standalone preparatory education, both with colleagues (73.3% vs 40%) and mainstream teachers (80% vs 20%). This indicates that teachers in standalone preparatory classes often experience professional isolation, which further limits their opportunities for collaboration.

Institutional level: School structures and organisational constraints

At the institutional level, several structural conditions in schools limited teachers' opportunities to engage meaningfully in collaboration. Lack of common planning time, geographical separation and limited administrative support were the main institutional constraints identified in the findings. Access

to in-service training also varied across regions, which may indicate potential disparities in professional development opportunities. These findings indicate that collaboration depends not only on teachers' willingness to work together but also on whether schools create the structural conditions that make such work possible. Common planning time, spatial proximity and leadership support can either enable or constrain deeper forms of collaboration. These constraints mirror those reported in other European studies that have identified time limitations, fragmented school structures and insufficient leadership support as primary barriers to teacher collaboration (Haapaniemi et al., 2021, pp. 552–554; Webs & Holtappels, 2018, pp. 41–43).

Policy level: National and systemic factors

Macrolevel policy structures also shape collaboration among preparatory education teachers. Finland's decentralised education system grants schools autonomy to allocate time and resources for collaboration, which leads to inconsistencies across municipalities. Fixed-term employment contracts also create uncertainty and reduce long-term investment in collaborative relationships. The unequal distribution of preparatory education teachers can further limit access to professional networks, particularly in rural areas. Together, these systemic features help to explain why deeper forms of collaboration remain less common, despite strong national commitments to inclusion.

Mapping out collaboration practices onto the hierarchy of teacher collaboration

The distribution of reported practices corresponds to the proposed hierarchy of collaboration, as summarised in Table 3.

Table 3

Hierarchy of Teacher Collaboration and Corresponding Practices in Finnish Preparatory Education

Hierarchy level	Observed practices in preparatory education
Informative collaboration (Level 1)	Teachers exchange practical information on schedules, administrative updates and student absences, often through informal interactions.
Pedagogical discussions (Level 2)	Teachers engage in conversations about teaching strategies, classroom management and student assessment with a focus on individual learner needs.
Resource-sharing and work exchange (Level 3)	Teachers collaborate by exchanging lesson materials, teaching tips and instructional resources, fostering mutual support for planning and enhancing teaching consistency.
Reflective practices and professional growth (Level 4)	Teachers collaborate through co-teaching, joint lesson planning, and shared reflection, aiming to enhance pedagogical coherence and student outcomes.

This hierarchy reflects a spectrum of collaboration that ranges from basic co-ordination to more dialogical and integrative practices. Although practices such as sharing materials and discussing student needs are widespread, more intensive forms, such as co-teaching (7.5%) and joint lesson planning (less than 8%), are less common. These forms can be particularly beneficial in contexts that demand interdisciplinary responses. In preparatory education, during which immigrant students often go through complex academic and social transitions, such collaborative approaches have shown to promote inclusion and student success (Akinyi Obondo, 2018; Sinkkonen & Kyttälä, 2014). Advancing toward more reflective and shared practices, where appropriate, may enhance both professional engagement and educational outcomes.

Thus, the hierarchical model of teacher collaboration offers a structured way to examine the diverse forms of collaboration observed in this study. By applying this framework to the analysis of preparatory education in Finland, this study was able to identify both areas of strength, such as frequent informal collaboration, and areas requiring improvement, particularly the limited use of deep pedagogical collaboration. The framework also helped illuminate the conditions that enable schools to cultivate more collaborative and reflective teaching cultures.

Limitations of the Study

A key methodological limitation of this study was its reliance on self-reported survey data, which can lead to response biases. Such data do not necessarily reflect actual collaboration practices, as perceptions and institutional expectations can influence how teachers assess their own engagement. In addition, because participation in the original survey was voluntary, the sample may be affected by self-selection bias, as teachers with stronger interests in or experiences of preparatory education and collaboration may have been more likely to respond. Future research could incorporate classroom observations, peer evaluations and in-depth qualitative approaches, such as interviews or case studies, to validate self-reported data and to examine the quality and depth of collaboration in greater detail.

Conclusion

The findings highlight persistent gaps between informal, occasional interaction and more systematic collaboration. Most practices – information-sharing and pedagogical discussions – remain at the lower levels of the proposed hierarchy, while deeper engagement such as co-teaching, joint planning, and reflective dialogue remains rare. These uneven patterns reflect multilevel constraints: limited planning time, fixed-term contracts, geographical isolation and inconsistent institutional support.

Strengthening collaboration therefore requires coherent action at several levels. At the school level, the most fundamental issue concerns the lack of dedicated time for joint planning. Introducing regular co-planning periods, formalising collaborative routines and enabling interdisciplinary team meetings or co-teaching cycles would shift collaboration from occasional exchanges towards more structured professional practices. Teachers who already collaborate regularly could serve as peer mentors, helping to distribute expertise and support colleagues, particularly in schools in which preparatory education teachers often work in isolation. Digital platforms may also help bridge geographical distance, enabling teachers to share materials, exchange strategies and participate in professional discussions.

Promoting higher levels of collaboration also requires paying attention to the pedagogical depth of joint work. Joint planning sessions aligned with Level 3 of the hierarchy could help teachers align learning objectives, co-develop instructional strategies and reduce duplication of work. Co-teaching arrangements, corresponding to Level 4, allow teachers to share responsibility for classroom practices, differentiate instruction and support more coherent student transitions. Although such practices were uncommon in the present data, they represent important avenues for strengthening instructional continuity and supporting students with immigrant backgrounds.

At the policy level, two systemic issues constrain long-term collaboration: the high proportion of fixed-term employment contracts and the unequal availability of professional development across municipalities. Increasing job stability would support the continuity needed for sustained, reflective collaboration (Levels 3–4), while ensuring equitable access to training would reduce regional disparities and support teachers' capacities to engage in deeper forms of collegial work. Municipal authorities also play a key role in providing resources and setting expectations for collaborative practices across schools.

These findings also carry implications for teacher education. Pre-service and in-service programmes could offer more systematic training in collaborative competencies, including interdisciplinary planning, team teaching and reflective peer dialogue. Although the impact of these practices on teaching quality was not examined directly, the results suggest that building teachers'

capacity for varied forms of collaboration may promote more coherent and responsive instruction in preparatory education.

Further research is needed to examine how collaboration patterns evolve over time. A longitudinal study tracking collaboration practices over several years would provide insights into the sustainability of current collaboration efforts and the long-term impact on teacher effectiveness and student outcomes. Fostering a culture of collaboration is not only a professional imperative; it is also a pathway to advancing equity and inclusion in preparatory education.

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