



Multigrade teaching and learning: Developing theoretical frameworks through mapping conceptual territories with an inclusive education lens

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ARTICLE INFO

Keywords:

Multigrade
Mixed age
Diverse
Pedagogy
Theoretical frameworks
Knowledge
Inclusion

ABSTRACT

This paper offers an engagement, through an inclusive education lens, with the theoretical frameworks and concepts used in multigrade teaching and learning. With the aim of developing and extending thinking about pedagogies in diverse education settings, it employs a scoping literature review to identify and examine the various conceptual frameworks which underpin thinking about and practice within multigrade classrooms. It is argued that close study of the knowledges used by teachers in multigrade classrooms, which are implicitly diverse education spaces, offers a useful way with which to consider pedagogies in *all* diverse education settings. Study of multigrade classrooms also offers space to develop understanding of the tensions for inclusive education generated through 'mainstream' organisation of schooling as single age classes. Emerging in the body of literature resulting from the scoping study are five 'knowledge territories' which appear to be contributing to the work of educators in multigrade settings: Child centred approaches, constructivist thinking; inclusion; cooperative and collective education; Education for All. Through the process of working together with the five strands, looking at where they overlap and interact, we suggest that it is possible to assemble a 'core pedagogik' for multigrade classrooms. The article concludes with arguments for the potential of and capacity for multigrade settings to be productive spaces for development of pedagogical practices and theoretical understandings of all diverse classrooms.

1. Introduction

A new research agenda was proposed by Kvalsund and Hargreaves (2009) in a special issue of the International Journal of Educational Research, for developing understanding of rural schools and their communities. They advocated for research that addresses the life-world, namely, the 'empowerment of persons, groups, organisations and communities at the local level' (ibid., p.141). This agenda encourages researchers to prioritise the examination of the interplay of people and places, focussing on the first-hand experiences of, for example, teachers and students. In keeping with this, we consider pedagogy in multigrade classrooms, a common feature of schools in rural areas, through interrogating current scholarship regarding conceptual understandings that underpins work in multigrade classrooms.

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<https://doi.org/10.1016/j.ijer.2025.102675>

Received 21 November 2024; Received in revised form 10 June 2025; Accepted 11 June 2025

Available online 26 June 2025

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It is estimated that a third of classrooms globally estimated to be deploying multigrade provision (Consortium for Research on Educational Access, Transitions and Equity, 2008). Whilst acknowledging this world-wide phenomenon in our investigation, we prioritise the life-world of teachers in multigrade teaching and learning settings. We also recognise the contexts, systemic barriers and affordances that shape local circumstances for multigrade provisions.

There is little clarity in definition of multigrade settings and in recognition of this, Cornish (2006) proposed a continuum of multigrade arrangements. The starting point is taken to be classes arranged as age-heterogeneous with several year groups under one teacher, formed as a permanent feature of the school. Cornish's continuum proceeds with situations where classes with multiple age groups are regularly combined for specific specialist taught subjects and finally, classes that are occasionally put together for activities or events. Structurally, multigrade classes can arise in an educational system as an alternative to the norm of monograde, appearing as the default, last resort option; as a by-product of other educational arrangements; as mandated by authorities for certain categories of students. Multigrade classes may also be purposeful, established in keeping with local educators' ideological positions (Cronin, 2019).

We are using the phrase multigrade but many other similar terms are used to denote arrangements that are other than mono-age groupings in school; these include mixed age, multilevel, multiple/composite class, family, vertical or split groups, and incomplete classes. Owing to the age-heterogeneous composition of the pupil cohort, we adopt the position that multigrade is an inherently diverse form of provision (Bjørn, 2023). These classes comprise learners who bring forward significant ranges of ages, life and schooling experiences.

This article presents the findings from a narrative scoping review carried out using relevant extant literature on classroom diversity, to analyse and map the conceptual knowledge underpinning multigrade practices. The review draws on knowledge of pedagogies surrounding inclusion in schooling as well as pedagogies directly and explicitly linked with multigrade teaching and learning. We begin with our rationale for drawing together inclusion, diversity and multigrade knowledges through the scoping review. The methodology for the narrative approach is then explained and justified and finally we present an overview of five emergent conceptual territories and identify a *core pedagogik* for multigrade classrooms.

2. (Age) diversity in school settings: Making use of inclusion knowledge

How practitioners promote equity for all young people, while attending to diversity in a classroom of learners with a range of abilities, remains a pressing contemporary concern across mainstream education. For instance, despite far reaching international statements, such as the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994), as well as national legislation and directives, school level attempts at inclusivity have been described by some as resulting in little more than the systematic othering of those pupils who fall outside the majority (Nilholm, 2020). Individual learners with disabilities for example, have invariably been treated as misfits (Garland-Thomson, 2011).

In the face of many negative critiques of the failure of 'inclusion' policies and practices, a community-wide approach to diversity in the classroom has been advocated. For instance, Ainscow (2020, p.128) proposed inclusive schooling and school practices should 'respond positively to student diversity: seeing individual differences not as problems to be fixed but as opportunities for enriching learning'. Inclusive schooling as conceived by Ainscow (2020a), UNESCO and others, rests upon the creation of communities comprising all learners and stakeholders, but this vision only materialises when the value of a learning community for all is aligned with what is contextually understood as the intended outcome of schooling at a systems level (Göransson & Nilholm, 2014). Similarly, Florian (2008) noted that practitioners need to remember that all learners in a cohort, diverge in significant ways and consequently, teachers working in classrooms are, by necessity, constantly making decisions in order to respond to the range of pupils in their classroom.

Historically, schooling systems have valued highly this response to the diversity of their students, seeing it as integral to the capabilities of the individual teacher. Indeed, the effectiveness of teachers are judged on this matter (in, for example, the OFSTED framework in England). In this vein, we contend that there are useful synergies between our focal topic, namely, inherently diverse multigrade classrooms (Bjørn, 2023), and knowledges of inclusive provision, where 'rich learning opportunities ... are sufficiently made available for everyone, so that all learners are able to participate in classroom life' (Florian & Black Hawkins, 2011, p. 826).

To frame the so-called rich learning opportunities, as indicated above in the relevant literature on diversity, we adopt the structure that Black Hawkins et al. (2007) expounded in relation to investigating teachers' inclusive mainstream classroom practices. These scholars indicate three overarching dimensions: what teachers are 'knowing', 'doing' and 'believing', with each dimension resting upon the other two. In relation to the multigrade context of this study, we focus on the *knowing* that teachers acquire through training courses, professional development and so on. This practice knowledge tends to fall into a series of three cognate issues identified by Rouse (2008, p. 13): teaching strategies, how and what children learn and organisation of the classroom and assessment of learners.

For the purposes of this narrative scoping review, we focus on the *knowledge* dimension and seek to analyse thematically the conceptual territories underpinning pedagogy in multigrade conditions. The terminology of *territories* acknowledges that conceptualising multigrade is likely to be broad, multifaceted and entangled, with individual teachers' dispositions influenced by school settings, proximal colleagues and school leaders (Illeris, 2003).

3. Methodology

Our narrative scoping of relevant scholarship sets out to avoid the pathway trodden by reviews that, to date, have tended to focus on the system-led challenges regarding multigrade provision, often relegated as an issue unfavourably closely associated with deficit educational settings (Fargas-Malet & Bagley, 2022; Carrete-Marín, Domingo-Peñafliel & Simó Gil, 2024; Smit & Englei, 2015). Rather,

we prioritise the unpacking of multigrade literatures in order to build depth regarding our understanding of practice knowledges used in diverse, inclusive and multigrade settings. To carry out our study, we lean into Barad's (2007) notion of 'agential realism' and favour a narrative scoping review on grounds of the opportunities it offers for paying attention to emerging patterns within and between the reviewed textual materials and inevitable entanglements in conceptual territories that this generates. As 'agential cuts cut things together and apart' (Barad, 2007, p. 381), this approach helps us to surface the intertwined underpinning practitioner knowledge that we anticipate will plot the conceptual territories of multigrade provision. We undertook our narrative scoping review by adopting the procedure outlined by Arksey and O'Malley (2005). Our inductive analyses remain consistent with our stance toward multigrade as a field requiring 'clarification and insight for which a more interpretive and discursive synthesis of existing literature is needed' (Greenhalgh et al., 2018, p.1).

A preparatory overview of the literature published, suggested that scholars have reported on practitioners actively adapting their professional training strategies and curriculum-based texts books which have generally focussed on mono-grade classrooms (Carrete-Marín & Domingo-Peñañiel, 2022) for working in multigrade settings. We sought to move beyond first impressions regarding teaching activities and formed the overarching question: When we examine literature with an inclusion focussed lens, *what pedagogical concepts are underpinning teaching in multigrade classrooms?*

To source materials published in the last 15 years, relating to our focal interest, we performed an online data search starting with publications from 2010 onwards, using the terms mixed age/mixed-age, along with multi-grade, which were combined with teaching and class/classroom to form a search string. The databases searched were: British Education Index; ProQuest Education; ERIC; Education Research Complete; Educational Administration Abstracts and Google Scholar. Inclusion and exclusion criteria were developed throughout the scoping process so as to maintain focus on the overarching question. We excluded materials concerning the terms: school management, leadership, pre-service preparation and school government relations. We excluded studies that sought to gauge the effectiveness of age-homogenous against age-heterogenous provision.

A total of 79 studies were identified through this screening. However, through discussing these outcomes, we decided on further refinement of the inclusion criteria as we found many governmental policy briefing documents and educational organisations' publications lacked adequate analytical depth for our purposes; hence, these were excluded. The final selection, once duplicates were removed, comprised 28 items, being peer reviewed academic journals, reports and book chapters. In sum, the 28 items included for the study met the following criteria: they were written in English and the publication date fell between 2010 and 2024. Reading the abstracts confirmed that each gave an in-depth account relevant to addressing our overarching question, with the location of the

Table 1

Scoping survey: Mapping sources into five conceptual territories.

Study/Source	Child-centred thinking	Constructivist thinking	Thinking about inclusion in classrooms	Co-operative and collective thinking	Education for all
Bailey et al. (2016)	✓	✓			
Barton and Baguley (2014)				✓	
Bjørn (2023)			✓	✓	
Carrete-Marín and Domingo-Peñañiel (2022)			✓		
Cornish (2021)					✓
Domingo Peñañiel and Boix Tomas (2015)			✓	✓	
Du Plessis and Subramanien (2014)					✓
Ecleo (2022)					✓
Fargas-Malet and Bagley (2022)					✓
Germeten (2022)	✓		✓		
Gristy et al. (2020)			✓	✓	
Hyry-Belhammer and Hascher (2015)		✓			
Kazi et al. (2018)	✓	✓			
Magnusson and Bäckman (2022)	✓				
Naparan and Alinsug (2022)		✓		✓	
Navarr (2019)	✓				
Raggl (2015)	✓				
Ramsay (2019)				✓	
Roberts and Eady (2012)	✓			✓	
Ronksley-Pavia et al. (2019)					✓
Shalom and Luria (2019)		✓			
Smeaton (2024)		✓			
Smit et al. (2015)	✓	✓			
Smit and Humpert (2012)		✓			
Stone and Burriss (2019)	✓		✓		
Taole (2014)				✓	
Vigo Arrazola and Soriano Bozalongo(2014)			✓		
Vigo Arrazola and Soriano Bozalongo(2015)			✓	✓	

reported multigrade teaching being either in one or offering comparisons across countries. As a scoping exercise, this review should not be seen as a complete account of the extant literature. As the sourced materials were in English, many potentially insightful reports and academic articles in other languages were not accessed. For a global issue such as multigrade provision, it would be useful, in future, to widen the scope of the review to begin to address this limitation.

Organising the material followed an inductive approach whereby we first familiarised ourselves with each of the items. Having charted the details of the sources on a spreadsheet, the process of initial open coding was undertaken, briefly describing the relevance of each source to the overarching question; this information was added as additional memos to the spreadsheet. Iterative coding through re-reading the full sources gave us notes, impressions and thoughts that helped with shaping high-level categories which were jointly considered by the researchers on an ongoing basis.

Recalling that our overarching question concerns practitioners' conceptual knowledge, as reported as underpinning multigrade provision, these themes are presented in our discussion below as 'territories'. Territories provide a space in which several broad strands of knowledge appear and are potentially crossing over, within a single reviewed study. In Table 1, we map each source against the conceptual territory in which it sits, with some sources aligned to more than one territory. To expand upon this matrix, we offer a narrative commentary in which we use evidence from the reviewed studies and discuss them in light of pedagogic discourses taken from outside the review data.

4. Thinking about multigrade teaching and learning with an inclusion lens: the five conceptual territories

This scoping study aimed to determine the bodies of knowledge being used by teachers and others, in their pedagogical work in multigrade classrooms. The five territories we have identified here, present the outcomes of our tentative agential cutting of the literature gathered in this scoping study. We are interested in the intersection with the knowledges used by teachers working in inclusive classrooms and are using the term inclusive, in the sense set out by Ainscow (2020) and UNESCO. This is somewhat different to the meaning of the term inclusive, when associated specifically with special educational needs and disability.

From the scoping study, we have identified five main conceptual territories referred to in association with educators in multigrade settings:

- *child-centred thinking*. The parameter for this is the evidence showing practitioners prioritising the individual, holistic learning needs of their pupils. This appeared to be rooted in the approaches adapted from early years settings where flourishing was deemed paramount, and teachers' relational work targeted the individual child.
- *constructivist thinking*. The parameter set for this was the inclusion of source materials where teachers were employing insights gained through training regarding key constructivist pedagogical theorists in order to shape their practices.
- commitment to social purposes of education, was specified as *cooperative and collectivist thinking*. This parameter addressed the source materials that indicated teachers' orientations toward preparing individuals for meaningful participation in a democratic society.
- materials that addressed teaching and learning as an opportunity concerning provision of education as a basic human right, 'Education for All.'
- *creating an inclusive classroom* environment. Under this parameter, we defined teachers deploying, and sometimes going beyond, the classroom strategies that they had gained for managing special educational and diverse cultural needs in mono-age settings.

4.1. Five conceptual territories - discussion

4.1.1. Child-centred thinking

Putting the individual at the heart of teaching when the cohort is age diverse, closely relates to elements of established child-centred practice. The application of child centred thinking in age-heterogenous primary settings was clearly noted by Raggl (2015) in research concerning teachers' practices in primary schools in rural areas of Austria and Switzerland. Three of the focal schools in the study were found to have teachers who appeared to be employing modelling Montessori approaches, which they were familiar with owing to their previous training; they were potentially seeking out: 'opportunities for learning beyond grades and according to the learning level of each child and not the age' (Raggl, 2015, p.134). The Montessori (Montessori et al., 1997) method extends child-centred thinking to include learning throughout the life course, making education, conceptualised from a Montessori perspective, a lifelong project relevant in contexts outside early years.

The influence of the Montessori approach on multigrade is significant, because organising an age-heterogenous classroom is an explicit requirement of the method, which is not necessarily replicated in all such child-centred approaches. This age-diverse requirement is based on the tenet that each child is an individual, who should be encouraged to develop holistically within their class community (Navarra, 2019). The child-centred practice is adopted as it enables pupils to flourish at their own pace, build relations and develop across all areas of development, including social, physical, emotional as well as intellectual, without constant teacher intervention. This is facilitated through adults, directing at arm's length, carefully curated environments, providing specific resources, and allowing the child to engage in self-directed independent learning at a suitable level (Montessori et al., 1997). In multigrade classrooms, often managed by one teacher, a high degree of learner independence is likely to be necessary.

The goal of holistic child development in age-heterogenous contexts where individual diversity is welcomed, puts child-centred approaches fundamentally at odds with many conventional education programmes. In more 'conventional' contexts, the teachers'

role is focussed on accounting for the child's progress in academic, curriculum-based subjects, as measured according to age-specific criteria. Such contrasting goals for the espoused outcomes of education may shed light on why multigrade can be seen as a challenging alternative form of provision (Marshall, 2017). However, the support that the children build through relations with each other, as well as that offered by adults in multigrade settings can be significant, for it contributes to pupils' 'resilience, responsibility, self-confidence, teamwork, problem-solving skills as well as creative and scientific thinking' (Navarra, 2019, p. 334). Evidence from our review indicates there is a clear overlap between child-centred orientation and the Colombian national school scheme Escuela Nueva (Ramsay, 2019), where all classes are multigrade and designed for self-directed and self-paced learning with the involvement of parents and the community (Colbert et al., 1993; Cornish, 2021a.). Here the advantages of child-centred age-heterogenous settings are combined with dimensions of collectivism and democratic thinking in order to mitigate challenging local conditions.

4.1.2. Constructivist thinking

Practitioner conceptual approaches regarding child-centred teaching and learning in multigrade classrooms intertwine with constructivist views on teaching. Age-heterogenous classroom settings can be seen as consistent with the work of foundational philosophers, such as Vygotsky and Bruner, who proffered that individuals co-construct their theories and knowledges through relationships built with others as well as through expressing curiosity within the environments that surround their lives. Reports reviewed in the scoping process confirmed the affordances of applying a Vygotskian lens towards facilitating what is happening in age heterogenous settings (Bailey et al., 2016; Magnusson & Backman, 2022; Shalom & Luria, 2019).

It is very likely that the practitioners, who are the subject of studies included in this scoping review (Kazi et al., 2018; Smit et al., 2015), have completed forms of professional development. Such formal training invariably includes some broadly constructivist approaches for underpinning teaching strategies. Vygotsky's scaffolding of learning, for example, appears to align with a classroom situation where students of differing developmental stages work together, regardless of their chronological age. Moreover, it is suggested that some individuals naturally adopt leadership roles and these learners, working in conjunction, help each other to succeed in completing learning tasks. Naparan and Alinsug (2021, p. 2) observed in some cases that 'teachers encourage [more advanced students] to be facilitators and little experts to their other classmates'. Through collaboration, experiences may become tailored to meet each learner's needs, thereby supporting each as an individual.

Practitioners' moves to implement the curriculum in novel formats, such as the spiral curriculum, are reported in the data to be a useful tactic for addressing age heterogeneity (Hyry-Beihammer & Hascher, 2015). This complements the notion of Bruner's work where the curriculum topic is iteratively covered with each return visit demanding more complexity of understanding (Gardner, 2001). Where age heterogeneous classes include students with prior knowledge, who are collaborating with other students, perhaps encountering the topic for the first time, both sets of students will benefit; learning is reinforced and advances from dealing with simplistic tasks toward tackling sophisticated learning matters.

4.1.3. Co-operative and collective thinking

Co-operative and collective approaches that foster participation in democratic schooling align with thinking about inclusion and diversity as they enable students to gain skills necessary for the outside world: 'this contributes towards the development of student social competences' (Ramsay, 2019, p. 6). Democratic organisation, specifically found in institutions such as Democratic or Co-operative Schools, prioritises student interaction with other more knowledgeable students; invariably engaging with partners of different ages and experiences. The aim of cooperative education is to prepare young people to live together in a democratic, harmonious society (Woodin, 2019).

In the discussion of the day to day operation of the Colombian Escuela Nueva schools, Ramsay summarised 'cooperative learning as both a learning environment and a pedagogical method/technique' (2019, p. 4). That is, it is recognised that cooperative learning 'goes beyond organising students into teams [in that it] build[s] an environment where students cannot succeed in a task unless everyone in the group contributes' (ibid.). In terms of gaining understanding of how democracy works, students are involved in every aspect of how their school operates in the Escuela Nueva programme. They make decisions about how and what they learn, thereby promoting democratic values that are essential for living peacefully in the world (HundrEd.org, 2024). The students in these multigrade settings negotiate and communicate effectively, fostering relations and forming respect through their collaborative work. The collaborative work introduces students to people of different ages as well as socioeconomic status, culture and abilities. To enhance cooperation and respect, situations in which 'the teacher is using her (*sic*) experiences as a guide for the pupils' (Naparan & Alinsug, 2021, p. 4) are identified as important. Additionally, reading is reported as effective for 'foster[ing] pupils' emotional, intellectual, social, and academic well-being' (ibid., p.4). Naparan and Alinsug (2021) further highlighted that students become engaged when a relatable situation is deployed as a topic in the classroom. Rather than direct learning, in these lessons, practitioners serve as facilitators, guiding students' mutual discussions. Providing classes with a range of creative activities that provide a sense of fulfilment and encourage students to come together for meaningful learning are worthwhile techniques (Barton & Baguley, 2014). Hedges and Cullen (2012, p. 923) illuminated the advantages of 'sociodramatic play', for developing a range of personal strengths, such as taking on responsibility and acknowledging intersubjectivity with others. Bjørn (2023) emphasised that effective sociality emerged when students came together for communal activities such as eating meals.

4.1.4. Thinking about education for all

There remains the challenge of delivering social justice through providing education that is truly meant for all. Understanding education as a fundamental human right, indicated through agendas for achieving education across the globe, is likely to be grounded in child-centredness as well as collectivism and delivered through inclusive classroom practices.

Education as a human right was declared central to global futures in the World Declaration on Education for All (UNESCO, 1990) that confirmed it to be a fundamental entitlement for all people. In her early work Little (2006) discussed the challenges of achieving the goal of 'Education for All'. With regard to multigrade schools, Little stated that, '[f]or millions of children worldwide the only type of schooling to which they will gain access, if they gain access at all, will be multigraded' and these schools are widespread in '[e]conomically and socially disadvantaged areas' and '[a]reas experiencing conflict and civil strife' (Little, 2006, p. 1). In many places it seems that monograde approaches to classroom and school management are taken for granted. Some argue that when under resourced, multigrade delivery becomes the default position, there are generally poor outcomes for staff and learners alike (du Plessis & Subramanien, 2014). In contrast to this deficit view, a positive perspective is offered from research with other contexts. Ecleo (2022), for example, confirmed that for those students who are frequently forced to miss long periods of schooling due to environmental crises or socio-political unrest or supporting family members, multigrade schooling systems can be viewed as beneficial. Specifically, students can make up any lost schooling without having to repeat academic years, which puts them and their families at an advantage. This requirement to 'catch-up' would be a costly prerequisite, if learners were trying to keep with the pace in age-based, mono-age systems.

4.1.5. Thinking about inclusion in classrooms

Strategies for *differentiation* in education, seeking to take into account the characteristics and needs of all students (Eikeland & Ohna, 2022), which originate in mainstream mono-grade schooling, have been applied in age-diverse contexts by some practitioners (Smit & Humpert, 2012). These techniques focus on how teachers engage with a classroom of pupils who share between them considerable variation in their prior experiences, talents and interests (Cornish, 2021). Its advocates claim that differentiation is justified because it helps overcome the learning challenges that some students face and provides enrichment for all in achieving their curriculum goals. In a similar fashion, the term *accommodation* is often applied to situations where practitioners describe how they aim to match opportunities to selected pupils within the age-diverse class (Germeten, 2022). *Adaptive teaching* (Shalom & Luria, 2019) is another similar phrase used, where teachers adapt teaching activities for individual learners' needs.

To support the highly intensive sensemaking and processing needed within multigrade contexts, metacognition has emerged as a way to approach and understand inclusive multigrade teaching and learning. The teachers, as well as the pupils, benefit jointly from the strategy of habituated cycles of observing, practising and evaluating (Smeaton, 2024). For example, in her study of a remote Norwegian school, Bjørn (2023) explained how inclusivity in the observed multigrade classroom, which she defines as teaching every one of the students of different ages, was underpinned by four strategies: student group formation/subject organisation, use of personal working plans, encouraging peer-learning and social learning.

5. Assembling the five conceptual territories

We investigated multigrade provision through an inclusive education lens and from the perspective of the life-world of practitioners. The five conceptual territories being used to inform pedagogical practices in multigrade classrooms resonate with, and overlap in some places, the knowledges being used by teachers in 'inclusive' classrooms (see Graham et al. (2023) and Nilholm (2020) for detailed examination of underpinning knowledges informing inclusive practices).

In our analysis, we find teachers reporting multiple conceptual understandings being used when teaching and learning in multigrade settings. We argue that it is rarely possible to isolate a single territory of conceptual knowledge on which the teachers rely. In order to capture the complexity that we have identified through our narrative scoping of the relevant literature with regard to overlapping and intertwining of conceptual territories, we have attempted a representation of this assemblage in Fig. 1.

We acknowledge that there are likely to be certain knowledge territories that cohere, resonate and/or overlap more readily than others. Notwithstanding this, we contend that the five territories intersect with each other (and other pedagogical knowledge frameworks not included in this scoping study). An assemblage such as this may offer a *core pedagogik* for multigrade classrooms.

The outcomes of this narrative scoping of the literature focused on reports of the day to day experiences of teachers who might be working in widely differing situations, that are generally termed multigrade. It is important to acknowledge that individual teachers

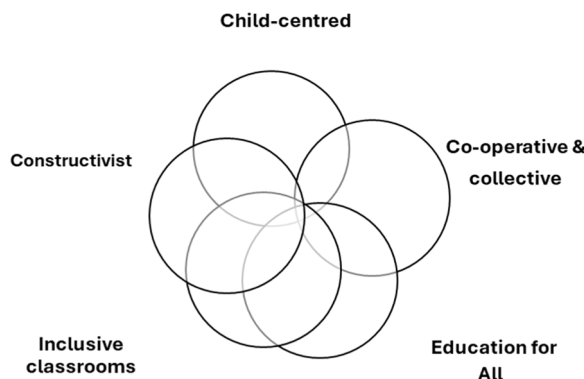


Fig. 1. An assemblage of the five conceptual territories.

respond in different ways when they encounter a multigrade setting, notwithstanding the structural contexts. Evidence from Europe points to some practitioners who are perhaps inspired to exploit its affordances (Raggl, 2015), while others try to escape the hard work and extra effort that age heterogeneity can bring to classrooms (Hyry-Beihammer & Hascher, 2015). We contend that when multigrade teaching and learning are understood as a form of inclusive pedagogy, with *inclusivity* at the heart of multigrade practices, practitioners are supported to improve on their conventional mono-age based classroom teaching. That is, through drawing on the conceptual intersectionalities that we have identified as underpinning multigrade practices, practitioners can, in effect, focus on all and every learner, promoting equity for all young people, while attending to the classroom community of learners.

We tentatively propose that inclusive informed pedagogy can be useful in all multigrade scenarios, regardless of how they have emerged or how they are viewed by teachers and should be encouraged as the pedagogical core of practice. An agenda based on the pedagogy of inclusion is an avenue to be explored in order to value affordances and encourage buy-in from staff and stakeholders.

It is timely to recall Bourn and Hatley's (2022, p. 6) global comment that an 'over-emphasis on examinations and testing' and '[t]he focus on a subject-based curriculum stifling creativity at an interdisciplinary level' contributes to teachers' inability to implement effective practices in classrooms. In this regard, teachers might find the multigrade situation overwhelming, experiencing high levels of fear, sensing confusion regarding what their job is about, and feeling the lack of effective support, perhaps exacerbated by poor pre- and ongoing teacher preparation (Ecleo, 2022). While not our key concern at the outset of the scoping review, we have become critically aware that professional development and training, pre- and in-service, that practitioners may bring to the classroom for undertaking multigrade teaching and learning can be inappropriate (Cornish, 2021). Teachers' preparation for conventional mono-grade schooling does not sit well with multigrade classrooms, and similarly, age-based teaching materials, curricula and audits are often inappropriate. Through carrying out the scoping review we have identified conceptual territories to guide their knowledge, that teachers might reach for when looking for something more than 'what works in a mixed-age classroom' (Vigo Arrazola & Soriano Bozalongo, 2014, p. 265).

The framework of conceptual territories, as proposed in this paper, gives heft to the idea that teaching and learning in multigrade settings might be recognised and understood as inclusive pedagogy. With multigrade acknowledged as an inclusive education endeavour, adequate resources, professional development and policy can be shaped, as appropriate, to national contexts.

6. Final remarks and questions for the future

Multigrade classrooms, with their inherent diversities, offer promise for pedagogical development in that they are suitable spaces for considering inclusion, in and amongst diverse student groups. Multigrade settings are ubiquitous, found all over the world in rural and urban, central and peripheral places. With the capacity to be accessible and inclusive, these are ideal spaces in which interested stakeholders can study pedagogy and develop ideas that may be brought back to challenge contemporary taken for granted ideas concerning schooling, particularly mass education models based on mono-age classes. Reflecting on how we have presented our findings from the scoping review of the relevant literature, we conclude with this provocation, centring our progressive notions of inclusion:

- What happens if we shift beyond technicist inclusion compliance and maximise the affordances of the diverse nature of the multigrade cohort?
- Can we, in practice, re-shape educational inclusivity through our theorising of the teaching and learning happening in multigrade contexts?

CRediT authorship contribution statement

Anne Parfitt: Writing – review & editing, Writing – original draft. **Cath Gristy:** Writing – review & editing, Writing – original draft. **Stuart Read:** Writing – review & editing. **Mary Catherine Garland:** Writing – review & editing, Writing – original draft.

Declaration of competing interest

We have no competing interests to declare

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