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Learning in time and space through teacher agency and rhythmic pedagogies of inclusion

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Abstract

This article reconceptualises inclusive pedagogy in South African special schools as a rhythmic and relational praxis enacted through teachers' spatial and ethical agency. Special schools sit at the sharp edge of South Africa's educational polycrisis, where infrastructural precarity and rigid policy demands converge. Drawing on Lefebvre's rhythmanalysis and Freire's critical pedagogy, the study explores how teachers navigate these constraints through everyday improvisation. A critical ethnographic design was employed within an interpretivist paradigm, involving fieldwork at a Cape Town special school, with data generated through observations and interviews with six teachers. The analysis proposes rhythmic pedagogy as a provisional framework comprising three dimensions: adaptive spatial praxis, temporal sensitivity, and relational counter-narratives. Teachers reconfigured curricular space and time, challenging deficit framings by positioning learners as capable and agentic. Given the small scale of the study, these findings are offered as a starting point for further research rather than as broad claims.

Keywords: inclusive pedagogy, teacher agency, Lefebvre, spatial theory, rhythmanalysis, Freirean praxis, learners with special education needs

Introduction

The imperative for inclusive pedagogy (IP) has cemented its status as a global standard, predicated on the principle that all learners must be educated within a common learning ecology. Contemporary scholarship defines IP not through prescriptive, remedial strategies, but as a continuous practice aimed at eliminating school and social exclusion (Ioannidi & Malafantis, 2022). This evolving definition emphasises that learner diversity is a valuable resource, necessitating a teaching approach that is adaptive, relational, and committed to ensuring all students access a shared curriculum through differentiated practices (Florian & Beaton, 2018). While the core principles of IP are well-established in the literature, empirical research consistently identifies a significant implementation gap between policy ideals and the

complex realities of the classroom, particularly in contexts characterised by resource limitations.

This implementation gap is best understood through the lens of policy enactment, where policy texts are not merely applied, but are actively negotiated and adapted by practitioners (Brennan et al., 2021; Sanger & Gleason, 2020). The literature confirms that effective IP relies heavily on the adaptive design and personalisation of learning environments (Brooks et al., 2020). However, this work is perpetually challenged by systemic constraints. In the South African context, this tension is acute, particularly in schools for learners with special educational needs (LSEN), where rigid national curricula (such as CAPS) frequently clash with the profound cognitive, physical, and socio-emotional diversity present in these schools (see Naicker, 2006). The realisation of inclusive ideals in this landscape remains uneven due to inherited structural disparities, infrastructural limitations, and ambiguity about teachers' roles. The literature thus points to an urgent need to theorise the moment-to-moment decision-making of teachers operating at this policy–practice interface, particularly in contexts of polycrisis where overlapping systemic pressures demand creative and affirmative responses.

This article addresses a crucial theoretical gap: the insufficient attention paid to the embodied, temporal, and relational dynamics of IP as a lived, improvisational praxis. I argue that understanding how teachers effectively mediate structural constraints requires shifting analytical focus away from compliance metrics to examine the fine-grained, moment-to-moment pedagogical work that constitutes inclusion. Specifically, the existing literature often overlooks how the use of time and shaping of space in diverse classrooms become powerful mechanisms for either exclusion or belonging.

Drawing on ethnographic research with six LSEN teachers in South Africa, this study proposes rhythmic pedagogy, a provisional framework that begins to capture this situated, improvisational work. Rhythmic pedagogy theorises inclusion as the teacher's orchestration of space, time, and relational counter-narratives to work toward temporal belonging and spatial justice. By extending rhythmanalysis to the specific terrain of IP in an LSEN setting, this article examines how teachers engage in curricular recoding (explained below) and cultivate pedagogical eurhythmia to transform policy into accessible learning experiences, illustrating how inclusion can emerge through the navigation of structural limitations. The article concludes by presenting rhythmic pedagogy as a framework of affirmative ethics, built on three interlocking principles—adaptive spatial praxis, temporal sensitivity, and relational counter-narratives—that together constitute a pathway of hope for inclusive teaching in contexts of constraint.

Conceptual considerations

Lefebvre's spatial and rhythmic theory has been increasingly mobilised in South African education research, yet this scholarship has not yet been extended to IP in LSEN settings. At the broadest level, Christie (2013) and Karlsson (2002) demonstrate the value of Lefebvrian theory for understanding South African school space as historically and politically produced: Christie reading the production of school space through rhythmanalysis to surface unequal

tempos across scales, and Karlsson tracing how apartheid and post-apartheid school space carries historical and political sedimentation that continues to shape redress. Closer to classroom practice, Jacklin (2004) offers the closest methodological precedent for the present study, using rhythmanalysis to interrogate pedagogic practice directly and showing how repetition and difference in classroom time and space regulate the quality of learners' pedagogic experience. A related strand examines how learners and teachers actively inhabit and remake school space: Fataar's (2015) work on schooling subjectivities and place-making, Fataar and Rinquest's (2019) use of Lefebvre's spatial triad to examine how learners turn school space into place, and Rinquest (2024), which draws on the same broader study as the present article to examine how special needs teachers in this Cape Town school positioned themselves within the institutional culture, drawing on Bourdieu's habitus and Nespor's account of bodies in space. Most recently, Davids and Fataar (2026) extend this rhythmic-spatial lens beyond the school to first-generation commuter students' educational engagement, tracing how students rhythmically negotiate uneven spatial and temporal infrastructures in their daily educational lives. The present article extends this body of work by turning from teacher subjectivity to teachers' enacted pedagogical practice. It asks not how teachers survive or position themselves within institutional culture, but how they orchestrate curricular space and time, moment to moment, in the specific work of teaching, learning and assessment. Read alongside this literature, the present article's contribution is more specific; it uses rhythmanalysis to make visible the fine-grained temporal judgement involved in IP in an LSEN setting.

IP is a dynamic field that has decisively moved away from remedial, "add-on" models toward relational and systemic approaches. Grounded in the work of leading theorists such as Florian and Beaton (2018), IP is defined by its commitment to eliminating school and social exclusion (Ioannidi & Malafantis, 2022) by providing all learners access to a common curriculum through fundamentally differentiated and relational teaching practices. This modern view positions IP as an inherently spatial and political practice, where seemingly mundane structures form teaching–learning assemblages (McGregor, 2004) that either facilitate or impede inclusion. This process is understood through the lens of policy enactment, where teacher agency actively interprets and negotiates policy text (Brennan et al., 2021; Sanger & Gleason, 2020) to achieve inclusive ends. Effective IP, therefore, demands not only adaptive design principles (Brooks et al., 2020) but also an ethical focus on teacher subjectivity (Curtin & Hall, 2018) to resist rigid frameworks, such as the standardised South African CAPS curriculum (Naicker, 2006), through continuous curricular recoding and pedagogical transformation. Curricular recoding means the active, situated translation of conceived curriculum policy into lived, accessible classroom practice. Not merely tracking or archiving curriculum content, but the ongoing pedagogical work of reworking what policy mandates into what is actually teachable and learnable for diverse learners. This builds on what national policy terms curriculum adaptation and differentiation (Department of Basic Education, 2010, p. 10), extending these official concepts through a Lefebvrian lens that foregrounds the spatial and temporal labour such translation actually requires of teachers.

To develop the necessary robust lens for this active, situated praxis, this study adopts a theoretical integration of Henri Lefebvre's spatial and temporal theories with Paulo Freire's critical pedagogy. Lefebvre's spatial triad (1991) consisting of conceived space (policy blueprint), perceived space (physical organisation), and lived space (socio-spatial encounters), provides the foundation for analysing classrooms as socially produced environments.

Lefebvre's later work on rhythmanalysis (2004) adds the critical temporal dimension to his spatial theory. Rhythmanalysis posits that every social space is polyrhythmic, animated by the intersection of multiple, co-existing tempos: institutional rhythms (e.g. rigid timetables, lesson pacing), natural rhythms (e.g. the cyclical energy levels of a class, the teacher's breathing), and embodied rhythms (e.g. the unique learning pace or attention span of a student). For IP, this concept is vital; exclusion often manifests not merely as a lack of access, but as a rhythmic disjuncture, where learners are forced into an institutional tempo (or isochrony) that alienates them. The role of the rhythmic teacher, therefore, is to act as a rhythm-analyst, observing these cyclical and differentiated patterns and improvising interventions (slowing down, pausing, or altering the sequence) to restore pedagogical eurhythmia. Rhythmanalysis thus demonstrates that inclusion is not just about spatial access, but a fundamental matter of temporal belonging and justice.

It is worth being precise here about what "rhythm" refers to within this framework given that the term can otherwise expand to absorb every dimension of inclusive practice. Following Lefebvre (2004), rhythm refers specifically to the interaction of repetition and difference across linear and cyclical time: the pacing, sequencing, interruption, and tempo through which classroom activity unfolds. A classroom is polyrhythmic, animated by multiple co-existing tempos, and inclusion or exclusion turns on whether these tempos combine into eurhythmia, a harmonious, sustainable interaction, or collapse into arrhythmia, a discordance in which some learners are left out of step. Adaptive spatial praxis and relational counter-narratives are related but analytically distinct dimensions of rhythmic pedagogy as a whole framework: the former concerns the reconfiguration of physical and curricular space, the latter the ethical and relational work of challenging deficit framings. Rhythm, in this precise sense, is not a synonym for the framework itself, but the specific temporal register through which teachers' spatial and relational labour is paced, sequenced, and made sustainable.

The framework is synthesised with Paulo Freire's pedagogy of liberation (1970). While Lefebvre offers the analytical tools for examining the production of space-time, Freire supplies the necessary ethical and political intent. Freire challenges the "banking model" of education, advocating for a relational practice rooted in dialogue and praxis (reflection and action) aimed at mutual humanisation. Integrating Freire ensures that the orchestration of rhythms and spaces is anchored in relational accountability. Thus, rhythmic pedagogy is theorised as an ethical praxis that intentionally reworks the space-time of schooling to allow for multiplicity, slowness, rupture, and improvisation, transforming classrooms into sites of justice, voice, and dignity amidst systemic constraints.

Methodology

This study employed a critical ethnographic design grounded in an interpretivist paradigm to explore how classroom space, bodily presence, and teacher subjectivity contribute to inclusive pedagogical practices. The interpretivist lens allowed for an in-depth understanding of how teachers make sense of and navigate inclusivity in their daily classroom interactions (Merriam, 1998). Drawing on critical ethnography enabled an examination not only of teachers' pedagogical practices, but also of the power dynamics embedded within classroom spaces and bodily encounters (Anderson, 1989; Carspecken, 1996; Graham & Slee, 2008). This approach was well suited to interrogating how pedagogical decisions and embodied experiences intersect with the broader goals of inclusive education.

Research site and participants

The study was conducted at a public, combined primary and high special school situated in Cape Town, South Africa, referred to here as "the LSEN school." This research site was selected on the basis of its recognised attempts at advancing inclusive education. This positioning of a special school as a site of IP is not without tension. Special schools in South Africa carry a dual legacy: on the one hand, they have developed concentrated expertise, specialist knowledge, and relational care for learners with barriers to learning; on the other, they emerged from a history of classification and institutional separation that inclusive education policy explicitly seeks to overcome. This article does not resolve that tension but reads the pedagogical practices documented here as meaningful within it, recognising that the boundary between specialised support and inclusive belonging is contested and historically embedded.

The school serves a diverse population, including learners with and without formally diagnosed learning needs, and has been commended for integrating inclusive principles into its everyday practice while following the national curriculum (Department of Basic Education, 2011). This setting provided a rich site for exploring how spatial practices and embodied pedagogies are enacted in pursuit of inclusive education.

A purposive sampling strategy was used to identify participants who could offer insight into the embodied and spatial dimensions of IP. Six teachers participated in the study, representing diversity in terms of gender, age, race, sexual orientation, training, teaching experience, and subject specialisation. Teachers were drawn from across the Senior and Further Education and Training phases and grade levels to capture a wide range of perspectives and pedagogical contexts within the school. Pseudonyms are used throughout to protect participants' identities and ensure confidentiality. However, instead of using neutral names, participants are referred to by their subject specialisations to foreground the transversal nature of inclusive pedagogical practices across disciplines. This naming strategy underscores that ethical, relational, and responsive teaching is not limited to certain subjects or phases, but is enacted across the curriculum. It reflects the study's commitment to understanding pedagogy not as a technicist function tied to content delivery, but as an ethical and embodied practice shaped by who the teacher is and how they engage with space, time, and learner diversity. The six participants will

thus be referred to as: a) the Mathematics Teacher, b) the Social Sciences Teacher, c) the Life Sciences Teacher, d) the Tourism Teacher, e) the Language Teacher, and f) the LO (Life Orientation) Teacher.

Data-generation methods

Multiple qualitative methods were employed to generate data in the larger study. This paper reports on data generated through classroom observations and semi-structured interviews with the six teacher participants. Over a 10-month period, the researcher engaged in intensive classroom observations, recording interactions, spatial arrangements, and non-verbal communication between teachers and learners. Detailed field notes were maintained to capture these daily experiences, along with reflections on the atmosphere, movement, and bodily expressions within the classroom space.

Three semi-structured interviews were conducted with each participant to further probe their experiences, interpretations and strategies regarding IP. Interview prompts centred on themes of curriculum and assessment adaptations, spatial navigation, classroom management, and the emotional and political dimensions of inclusion. The flexibility of the semi-structured format allowed participants to elaborate on their experiences, while also ensuring alignment with the study's research questions.

Data were triangulated across observational and interview sources to identify recurring patterns, tensions, and strategies in the ways that teachers engaged with inclusion through their bodies, speech, spatial awareness, and pedagogical decisions. This triangulation was key to uncovering the complex interrelationships between physical presence, classroom arrangement, and pedagogical responsiveness.

Data analysis

Data analysis followed a critical thematic analysis approach informed by Braun and Clarke's (2006) six-phase process, integrated with the study's theoretical framework combining Lefebvre's spatial theory and Freire's critical pedagogy. The analysis began with intensive familiarisation with field notes and interview transcripts, followed by systematic coding using both inductive and deductive approaches. Inductive codes emerged directly from participants' language and observed practices, while deductive codes focused on manifestations of spatial production, rhythmic practices, and dialogical pedagogical approaches.

Within this coding process, rhythm was identified empirically through specific, recurring markers in the data: teachers' descriptions and observed practices of pacing (e.g. deliberate slowing of instruction, "one concept at a time," extended review periods); repetition and cyclical adjustment (e.g. iterative cycles of teaching, assessing understanding, and replanning); synchrony and collective tempo (e.g. shared reading practices that drew learners into a common temporal experience); and moments of rhythmic disjuncture or arrhythmia, where institutional timetables, lesson schedules, or assessment deadlines clashed with learners' processing pace, attention span, or fatigue. These markers were coded as instances of rhythm specifically where

they concerned the temporal organisation of teaching and learning; data concerning the reconfiguration of physical or curricular space were coded separately under adaptive spatial praxis, and data concerning relational and ethical positioning of learners were coded under relational counter-narratives, consistent with the analytic distinctions developed in the conceptual framework above.

The three principles were not imposed on the data as a pre-existing template; rather, they emerged through an iterative, abductive dialogue between the theoretical framework and the empirical material. Early coding surfaced recurring practices that did not map neatly onto a single category, for example, teachers' professional isolation in the face of limited specialist support cut across spatial, temporal, and relational dimensions simultaneously, and required sustained analytic engagement to determine where, and whether, it belonged within the eventual framework. The three principles presented below are therefore best understood as an analytic distillation of this process, rather than categories the data was made to fit.

The study adhered to ethical guidelines for conducting research with human participants and children. Given the immersive nature of ethnographic fieldwork, particular attention was paid to building trust, maintaining transparency, and eliciting ongoing consent throughout the observation period. The researcher adopted a reflexive stance throughout the study, acknowledging the positionality inherent in critical ethnographic work. Rather than attempting to maintain a neutral observer role, the researcher recognised the interpretive and situated nature of the research process, actively reflecting on how their own identity and assumptions shaped both the fieldwork and subsequent analysis (Saukko, 2003). This reflexivity was an essential feature of the research methodology, aligning with calls for ethical, situated, and critically engaged inquiry in education.

Data presentation and discussion

This discussion of the data provides an understanding of IP at the LSEN school, unfolding through three key themes. It details observed inclusive practices, exploring how teachers' subjectivities, including their underlying beliefs and orientations, shape their daily actions. I first discuss learner needs and teachers' adaptive spatial praxis (including curricular recoding, assessment adaptations, and accessing support services); secondly, the discussion turns to temporal sensitivity through striving for pedagogical eurhythmia, and thirdly, teachers' ethical commitments and the way that they challenge deficit framings. Finally, building on these interwoven practices and subjectivities, a framework of three interlocking principles (temporal sensitivity, adaptive spatial praxis, and relational counter-narratives) is proposed to underpin a rhythmic pedagogy for inclusive education towards social justice.

Learner needs and teachers' adaptive spatial praxis

The rigid structure of the curriculum presented significant challenges for teachers working with learners who experience a diverse range of barriers to learning. At the LSEN school, teachers consistently demonstrated how IP emerges not despite these constraints, but through creative navigation of policy limitations. The standardised outcomes of the curriculum policy

(Department of Basic Education, 2011, p. 5) force a pedagogical translation in practice because teachers must reconcile these rigid expectations with diverse learner needs rather than attempt direct implementation.

Teachers at this high school work with learners experiencing language development barriers (comprehension and/or verbal expression, reading, spelling and/or written language); numeracy challenges (dyscalculia); the inability to maintain concentration and complete tasks because of a short attention span and/or hyperactivity; and sensory constrictions (visual or auditory). These realities demand what can be deemed as curricular recoding—the systematic adaptation of conceived space (policy mandates) into lived space (accessible learning experiences).

In this context, a spatial reorganisation of curricular knowledge is crucial. The Mathematics Teacher's articulation of this challenge reveals the fundamental mismatch between standardised curriculum design and learner needs and realities:

> How are you going to make maths suitable to our kids if they can't read? How will they do mathematical literacy, which is mostly word sums? They can't read the word "geyser" and understand what it means to understand the word "sum." If they can't read that, how will they know what they are supposed to do? . . . They can't even create a picture for themselves or visualise it. We must provide these visuals; otherwise, they will be lost. You have to plan in detail for this.

Additionally, the Language Teacher's creation of alternative textual resources exemplifies this transformative approach:

> A textbook on its own does not work for these students—I have them, but then I have made another book . . . I make them resources and guidelines for writing that summarise the various structures of writing pieces. Then you don't have to search through the textbook, because they struggle to understand the index and how to go find what they are looking for. Everything must be ordered and structured for them.

This extensive adaptation work represents what I conceptualise as a spatial reorganisation of knowledge. The teacher's recognition that learners "struggle to understand the index and how to go find what they are looking for" demonstrates an awareness of how the textbook design itself can constitute a barrier to learning. The Language Teacher's creation of bound, structured resources transforms the spatial arrangement of knowledge from complex, navigational challenges into ordered, accessible pathways. Building on these spatial adaptations, teachers at the LSEN school engaged in systematic assessment recoding, transforming standardised evaluation practices into accessible and meaningful measures of learning. This work extends far beyond simple accommodations to constitute a fundamental reconceptualisation of how learning is demonstrated and valued.

The inclusive efforts of the staff at the LSEN school were emphasised in the way in which assessments were adapted according to nationally prescribed assessment accommodations and

concessions (see Department of Basic Education, 2014; Department of Education, 2001; Republic of South Africa, 1996). This LSEN school functioned as one of the leading institutions in South Africa developing these assessment accommodations, also referred to as alternative assessment. The Language Teacher was adept at developing these approaches:

> I came here and learned about "Alternative Assessments." We were the school that led the way with these adaptations, and we taught the rest [other schools]. Students here are so privileged to be here. The same learning barriers are in mainstream schools, and they don't have what we have here.

For students experiencing barriers to learning, some of these assessment accommodations included concession from a first additional language for the hearing impaired, the assistance of a speech therapist or reader/scribe for students with language difficulties, and the use of screen reading software. Assessments can be divided into continuous assessments employed by teachers in their classrooms, and tests or examinations that were held at the end of each term. During a term, teachers would assess student progress according to the national prescriptions; however, assessments were always adapted to accommodate the students' barriers to learning. A support staff member, explains that:

> Students with serious reading deficiencies are assisted by providing reading and learning material on MP3 players and helping them to utilise this aid. Tests and examination material are also presented to those students orally or on audio when writing the external Senior Certificate examination in Grade 12. Students who have serious difficulties in communicating their knowledge in writing are assisted by educators and specially trained scribes, called an amanuensis, to do oral tests or examinations. Extra time is granted to students with writing difficulties or a slow writing speed.

The anticipated stress accompanying assessments and outcomes often led to many learners experiencing extreme anxiety, meltdowns, epileptic seizures, and behavioural changes. The place of school, through the combined efforts of staff members, is transformed into a highly functional assessment accommodation centre for their learners. The feel of the institution changed during the last weeks of a term, when classes ceased and, in the words of the Life Orientation teacher, "the school becomes an effective special-needs school."

Internal structures were in place that had been developed over many years of implementation and were continually being revised to provide the most efficient assessment system possible. During the three- or four-week assessment programme, staff members' roles changed from classroom teacher to reader/scribe (transcribing for students who could not write or read for themselves), or the teacher in charge of a group of students with high anxiety levels, tasked with providing these specific students with a calm and structured environment before they were called on to complete a test or examination. There were many roles that teachers were asked to assume, but most important was that teachers' strengths were taken into account, and each had been assigned a particular role for which they were well equipped. Teaching staff worked

closely with support staff members to assist each student, creating an impressive collaborative and inclusive space.

The Mathematics Teacher's approach to visual support in assessment illustrates this recoding process: "We have to provide the visuals; otherwise, they will be lost. You have to plan in detail for this." As a combined spatial and temporal adaptation, his emphasis on detailed planning reveals that assessment adaptation is not an afterthought, but a central pedagogical practice requiring significant time and creative energy. The provision of visuals becomes an act of cognitive scaffolding that enables learners to demonstrate mathematical understanding despite reading difficulties.

Teachers also employed technological adaptations as part of their assessment recoding practices. The Language Teacher explained her systematic approach to slide design:

> I don't write on the board. Typed text works much better than handwriting on the board for students with barriers to learning. I have to adapt my PowerPoint slides by using bigger fonts and less information on a slide.

These seemingly simple modifications—larger fonts, reduced information density—represent sophisticated understanding of visual processing challenges and cognitive load management. The teacher's attention to typography and spatial arrangement demonstrates how curricular and assessment accessibility emerges through careful attention to the material dimensions of learning. This extended reflection demonstrates how teachers move beyond surface-level accommodations toward fundamental reconceptualisation of curriculum access. The Mathematics Teacher's recognition that learners cannot "create a picture for themselves or visualise it" speaks to deeper cognitive processing challenges that require sustained pedagogical creativity. His emphasis on detailed planning reveals the intensive spatial praxis required to bridge the gap between abstract curriculum demands and concrete learner needs.

The delivery of the CAPS curriculum to students with special educational needs is mostly prescribed by policy. Yet it is interpreted by the institution, then processed and presented through internal structures and procedures. However, teachers' pedagogical practices are the central expression of their dispositions and embodied identifications. Therefore, each individual teacher makes calculated pedagogical choices and the data show that they enact their subjective agency inside of their classrooms and through their pedagogical behaviours.

The scarcity of consistent specialist support, even at a special needs school, emerged as a significant structural constraint. Teachers navigated this by resorting to individual creativity and self-reliance, which often resulted in professional isolation. Despite the school's positioning as a resource centre with access to multidisciplinary teams, teachers described experiencing practical limitations in accessing coordinated support services. The Social Sciences Teacher's experience illustrates the gap between intended support structures and lived reality:

> I need to know how to help a kid with autism, but there's no one here to guide me. The school therapists aren't always available at the moment you need them as they serve the entire school.

This statement reveals the temporal mismatch between immediate pedagogical needs and scheduled support services. The teacher's plea for guidance highlights how the absence of readily available specialist knowledge can create pedagogical anxiety and the potential exclusion of learners with specific needs. The Language Teacher's description of district-level support further emphasises this systemic gap: "We're supposed to get help from the district-based support team [based at this school] . . . but we've seen them maybe twice this year." The infrequency of external support visits created a form of pedagogical isolation, a condition where teachers must develop inclusive strategies without adequate professional development or specialist consultation. This isolation is particularly problematic given the complexity of barriers experienced by learners at the school, and it raises a difficult question this study cannot fully resolve: "How much of what looks like IP in this account is actually compensating for an under-resourced system, rather than reflecting that system working as intended?" Teachers nonetheless demonstrated considerable resourcefulness in dealing with these support gaps, though resourcefulness of this kind should not be mistaken for sufficiency.

At this school, the school culture positioned teachers as isolated, to some extent, inside of their classrooms. While a multidisciplinary support team was available as a service for teachers, they mostly could not find the time for thorough discussions regarding each student's particular needs. This left teachers to their own devices and ways of figuring out which pedagogical approaches worked best for them. This institutional reality required teachers to develop ways to improvise pedagogically, that is, to cultivate the ability to respond to diverse learning needs without comprehensive specialist guidance. This self-reliance demonstrates teacher agency and creativity, but it should not be read as evidence that the system is working; it is, more troublingly, evidence of what teachers must do in its absence.

The tension between individual resourcefulness and the need for systematic, accessible support remains unresolved in this account, and is taken up further in the discussion below. The analysis of the dimensions of inclusive practice reveals both the complexity and creativity of teachers' work. These practices emerge not from prescribed methodologies, but from deep pedagogical commitments that are shaped by individual teacher subjectivities with a sensitivity to the rhythms of teaching, learning, and assessment.

Temporal sensitivity through pedagogical eurhythmia

Classroom management at this LSEN school emerges as a polyrhythmic practice, requiring teachers to orchestrate temporal flows that sustain engagement, while accommodating diverse attention spans and emotional rhythms. Teachers demonstrated acute sensitivity to what Lefebvre (2004) would term the arrhythmic nature of their learning environments, which are spaces where institutional time clashes with the lived temporalities of learners experiencing learning barriers. The Life Sciences Teacher's description of her responsive pedagogical rhythm reveals the iterative nature of inclusive teaching:

> I quickly recognise when I have to break the work into smaller sections, and I know my classes, so I know which modalities to use for which classes, or groups of students. I go on their feedback. . . . Then based on that feedback, I can plan the next lesson.

This continuous cycle of teaching, assessing understanding and replanning resembles familiar scaffolding practice; read rhythmically, however, it also represents a temporal practice that fundamentally challenges the notion of linear curriculum progression, substituting institutional sequence with a tempo set by learner feedback. The teacher's attunement to learner feedback creates what might be understood as pedagogical eurhythmia, a harmonious rhythm between teaching tempo and learning capacity. The Social Sciences Teacher's approach to concept delivery further illuminates this temporal sensitivity. He refers to curriculum pacing and explains that:

> You can't do more than one concept with these students at a time. Only one topic in one day. Some days you teach, and in 10 mins you teach the concept, and the students do the activity, but when there is time left, I can't do another concept, because then they'll just become confused.

This deliberate slowing of instructional pace reflects more than cognitive load management alone; it is a rhythmic, institutional act, a resistance to the efficiency-driven tempo that structures schooling more broadly, paced not only against learners' processing capacity but against the institutional clock itself. This temporal restraint becomes an act of spatial justice, creating breathing room within the compressed temporalities of schooling

The consistent practice of reading aloud by the Language Teacher demonstrates how rhythmic attunement extends beyond content delivery to encompass epistemic access: ensuring learners are not excluded from curriculum knowledge by barriers to independent reading. She relates her experience at the LSEN school to her pedagogical practices while teaching in mainstream schooling:

> One thing mainstream schooling did prepare me for was that I was a language teacher, and I have always read everything to my students. Here you have to read for them because they can't. I need to make sure that the students know what is going on in, for example, the play we are doing, otherwise they are lost.

Her practice of reading establishes what can be understood as a combined spatial and temporal adaptation: collective rhythmic participation, with a shared temporal experience that ensures no learner is excluded from narrative engagement. This embodied practice transforms the classroom into a space of mutual attention, where the teacher's voice becomes a rhythmic anchor that holds learners within the learning experience.

Teachers demonstrated sophisticated awareness of learner rhythms and capacity to adjust their pedagogical approaches based on real-time assessment of individual and collective needs. This relational flexibility emerged through sustained observation, emotional attunement, and willingness to modify planned activities in response to learner cues. The Life Sciences

Teacher's approach to lesson planning exemplifies this responsive stance: "I want to ensure that my classes are not just the boring same thing each day. Most of them . . . can't even read for themselves . . . I have to make visual representations." Her recognition that traditional instructional approaches would be boring reflects awareness of learner engagement and motivation as central to inclusive practice.

The connection between variety, visual support, and sustained attention demonstrates sophisticated understanding of how pedagogical rhythm affects learning access and participation. The Mathematics Teacher's description of individualised student support further illustrates relational flexibility:

> I have a book that I put everything in [planning]. I know the students, as such, I know which resources I need to use. This is not something that you know to do, or that anyone teaches you in a course . . . I learnt this here, through experience. The challenge with special needs is to know each student's story, you need to know their diagnosis and how to approach or handle that specific student.

This intensive documentation and individualised planning approach exemplifies a form of pedagogical ethnography: a practice of sustained observation enabling teachers to develop responsive strategies for each learner. The emphasis on learning through experience rather than formal training underscores the embodied and situated nature of inclusive pedagogical knowledge. These sophisticated spatial and temporal adaptations, however, are not merely technical responses; they spring from deeper commitments.

The next section, therefore, explores the teachers' underlying beliefs and orientations, via their pedagogical subjectivities, that profoundly drive their inclusive practices. Yet it bears stating directly that the creativity and ethical commitment documented here are not sufficient justification for the conditions that necessitate them. The improvisation, isolation, and self-reliance described throughout these findings are simultaneously evidence of individual teacher agency and evidence of structural failure: an under-resourced system that places the full weight of inclusive practice on individual teachers without adequate specialist guidance, curriculum flexibility, or institutional support.

Building relationships and challenging deficit framings

The inclusive pedagogies enacted by teachers at the LSEN school emerged not from technical compliance with policy mandates, but from deeply personal and professional commitments that shaped their spatial and temporal practices. Teachers' subjectivities, their ethical orientation, relational stance, and sense of professional identity fundamentally influenced how they negotiated the tensions between standardised curriculum demands and learner needs.

Teachers consistently articulated their practice through frameworks of ethical responsibility that extended beyond curriculum delivery to encompass learners' long-term development and wellbeing. This ethical orientation manifested in both temporal and spatial practices that prioritised relationship building and sustained support over efficiency and coverage. The Social

Sciences Teacher's description of his approach to student knowledge exemplifies this ethical stance:

> I treat them as if they know nothing of the topic and I incorporate many guiding questions to facilitate their thinking, all the time. I assume the "don't know" position and build up the lesson slowly to what they need to know. Your planning must build connections with previous lessons and specifically include concrete resources and lots of visuals.

This pedagogical approach reflects what can be understood as primarily a temporal practice, though one with spatial dimensions, prioritising understanding over progression and relationship over efficiency. The teacher's willingness to "assume the 'don't know' position" demonstrates profound respect for learners' starting points and commitment to meeting them where they are rather than where curriculum documents expect them to be. The Tourism Teacher's articulation of teaching as accompaniment further illuminates this ethical dimension: "We don't just leave a child, we walk a path with them, and we keep on walking." This metaphor of shared journey positions teaching as an ongoing relational commitment rather than a time-bounded instructional transaction. The emphasis on continuous accompaniment reflects a professional stance that recognises learning as a lifelong process requiring sustained support and connection. Teachers' professional identities were enacted through spatial and temporal practices that positioned them as facilitators, advocates, and co-learners rather than traditional authority figures. This embodied approach to teaching created classroom environments characterised by mutual respect, shared responsibility, and collaborative meaning-making.

The LO Teacher's paternal approach to student support exemplifies this embodied identity: "I often have to build up their self-confidence" and "I teach them that if they fail, it is not the end of the world." His positioning of failure as "not the end of the world" reflects a pedagogical philosophy that normalises struggle and positions resilience as a learnable skill. This relational work represents the often-invisible epistemic labour of building the conditions under which learners can access knowledge, since confidence and emotional regulation are prerequisites for curriculum engagement, not separate from it. The Social Sciences Teacher's approach to individual student understanding further demonstrates counter-narrative construction:

> The way to success here is that you have to watch the class, every student, and their behaviour, you must be ready to intervene before a meltdown occurs. If you wonder about a student's behaviour, you have to go to their file and read up on their history and their diagnosis, you learn something new about your students every day.

The teacher's commitment to learning "something new about your students every day" demonstrates ongoing investment in understanding rather than judging learner responses. While these spatial and assessment adaptations reveal the technical dimensions of IP, they emerge from deeper ideological commitments that challenge dominant assumptions about learner capacity. These teachers actively resist deficit narratives through conscious construction of alternative stories about learner potential.

The Language Teacher's direct challenge to deficit thinking exemplifies this resistance: "People say these kids can't learn, but they can. You just have to find another way to reach them." Her statement positions pedagogical creativity as a response to deficit discourse rather than learner limitation. The phrase "find another way" implies that learning barriers are not insurmountable obstacles but pedagogical challenges requiring innovative solutions. She employed strategic approaches to knowledge building that countered assumptions about memory and knowledge retention. Her use of visual reminders exemplifies this approach: "You cannot rely on their prior knowledge, but because I use PowerPoint presentations, I can quickly walk through these again before I start the new lesson." Rather than interpreting limited prior knowledge retention as failure, this teacher reframes it as an opportunity for review and reinforcement. Her systematic use of PowerPoint presentations creates visual anchors that support memory and enable cumulative learning over time.

The Mathematics Teacher's description of a learner-led teaching experience demonstrates how teachers create opportunities for learners to occupy positions of expertise: "One boy couldn't read or write well, but he could explain science concepts better than most. So, I asked him to teach the class one day." This pedagogical decision disrupts traditional hierarchies of classroom knowledge and creates space for diverse forms of competence to be recognised and valued. This moment echoes Freire's (1970) critique of the banking model of education, in which the teacher is positioned as the sole holder of knowledge and the learner as a passive recipient. By inviting the learner to teach, the Mathematics Teacher disrupts this hierarchy and repositions the learner as a co-constructor of knowledge, someone who brings valuable expertise into the classroom rather than only receiving it. For Freire, such moments are never merely pedagogical; the distribution of authority and voice within a classroom mirrors, and can begin to unsettle, the wider structures of power and inequality within which schooling itself is embedded. The teacher's recognition of the learner's conceptual understanding despite literacy challenges reflects sophisticated awareness of multiple intelligences and alternative ways of knowing.

These counter-narrative practices require not only ideological commitment but also sophisticated temporal management. Teachers must orchestrate classroom rhythms that sustain these alternative approaches, while managing the complex temporal demands of diverse learners. Teachers at this LSEN school actively challenged deficit framings through conscious efforts to construct alternative narratives of learner potential and capability. This work involved both explicit resistance to negative labelling and proactive creation of success experiences that disrupted dominant assumptions about learners with barriers. These teachers' ethical commitments, relational flexibility and embodied identities demonstrate how inclusive teaching emerges through the integration of personal values, professional knowledge, and situated practice. Teachers' spatial and temporal adaptations were not merely strategic responses to learner needs, but reflections of deeply held beliefs about human dignity, learning potential, and professional responsibility.

Framework for rhythmic pedagogy for inclusive education

Drawing on the enacted practices observed at the LSEN school, this framework proposes a reimagining of inclusive education as intrinsically linked to both spatial and temporal justice. It synthesises the teachers' innovative approaches into three core principles that offer a new lens for educators and academics seeking to understand and advance IP.

Principle 1: Temporal sensitivity

This principle underscores the necessity for educators to move beyond rigid, standardised timelines and instead become attuned to the diverse temporal rhythms of their learners. Informed by Lefebvre's concept of polyrhythmia, it recognises that effective inclusive practice requires a flexible and responsive approach to pacing, repetition, and the overall tempo of instruction. What the foregoing data establish is that temporal sensitivity is not a generic good-teaching practice but a specifically political one: the decision to slow down, repeat, or pause is a claim about whose tempo the classroom will be organised around. By carefully observing and responding to the affective rhythms of the classroom, teachers created more harmonious and accessible learning environments that fostered pedagogical eurhythmia, enabling epistemic access: ensuring all learners could engage with curriculum knowledge rather than being excluded by the tempo of its delivery.

Principle 2: Adaptive spatial praxis

This principle advocates for a dynamic and learner-responsive reconfiguration of the learning environment. Building on Lefebvre's notion of lived space, it stresses the need for educators to actively adapt and modify the conceived space of the curriculum and physical classroom to meet the needs of diverse learners. What the foregoing data establish is that adaptive spatial praxis is not merely differentiation by another name: it is the material and curricular enactment of the claim that conceived policy space must be actively translated into lived, learnable space for each body in the room. By embracing adaptive spatial praxis, educators transformed classrooms into lived spaces of inclusion where learning became accessible and engaging for all learners.

Principle 3: Relational counter-narratives

This principle highlights the critical role of educators in actively challenging deficit discourses and co-constructing empowering narratives of potential with learners. Drawing on Freire's pedagogy of liberation, it emphasises the importance of building strong, caring relationships that disrupt negative self-perceptions and societal biases. The relational data presented above make clear that relational counter-narratives are not supplementary to curriculum work: they are the epistemic and ethical condition under which learners whose identities have been marked by deficit can access knowledge at all. By focusing on learners' strengths and fostering a culture of possibility, educators created counter-spaces within their classrooms that resisted deficit framings and cultivated agency and self-belief.

This framework moves beyond prescriptive approaches by emphasising the crucial role of teacher agency, informed by individual beliefs and values, in creating responsive and equitable learning spaces. By foregrounding the temporal and spatial dimensions of inclusion alongside the critical importance of challenging deficit perspectives, this framework provides a valuable lens for educators, researchers and policymakers seeking to understand and promote inclusive practices that honour the diverse rhythms and needs of all learners.

Conclusion

This ethnographic study, centred on six teachers in a South African LSEN school, establishes that IP emerges not as a technical policy implementation but as a deeply relational and spatially situated practice that requires the orchestration of learning, belonging, and becoming in a context of polycrisis. The central finding is the development of rhythmic pedagogy, an approach that integrates temporal sensitivity, adaptive spatial praxis, and relational counter-narratives to navigate the tensions between standardised curriculum demands and diverse learner needs. This pedagogy manifests through curricular recoding, the transformation of conceived policy space into accessible lived learning space. Also, the cultivation of pedagogical eurhythmia, which prioritises harmonious alignment between instructional tempo and learner capacity over mere content coverage. Crucially, these spatial and temporal adaptations are rooted in profound ethical commitments, fostering pedagogical attunement that reframes challenging behaviour as communication and relies on teacher subjectivity characterised by relational flexibility and improvisational capacity in contexts of limited specialist support. The findings converge to suggest that effective IP is fundamentally rhythmic, integrating spatial justice and temporal sensitivity to emphasise teacher agency in creating responsive and equitable learning environments, an insight that necessitates further investigation into the translation of these principles within mainstream schooling and pre-service teacher education. In this sense, rhythmic pedagogy offers more than an analytical framework; it names the skilled labour, situated judgement, and ethical commitment that inclusive teaching requires, and insists that such work cannot be sustained without time, specialist knowledge, collaborative support, institutional recognition, and policy flexibility.

Aspects of this study, particularly the intensive specialist knowledge, concentrated support structures, and small class sizes, are specific to the LSEN context and cannot be assumed transferable. The relational, temporal, and spatial orientations documented here, however, carry implications that extend beyond it. In a South African educational landscape where polycrisis is not an exception but a persistent condition, the creative and relational labour documented here offers a generative model for inclusive teaching across diverse schooling contexts. Rhythmic pedagogy invites teacher educators, policymakers, and practitioners to reimagine inclusion not as a compliance exercise but as an ethical and creative vocation, one that demands attentiveness to the rhythms, spaces, and stories of every learner. As South African education continues to navigate intersecting crises of inequality, under-resourcing, and curriculum rigidity, this study insists that rhythmic, relational, and spatially responsive teaching cannot be willed into existence by individual commitment alone. The challenge for teacher education and policy is therefore to create the institutional conditions, adequate time,

training, collaborative structures, specialist support, and curriculum flexibility, within which such teaching becomes possible and sustainable.

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