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Inclusive education in South Africa: path dependencies and emergences

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ABSTRACT

Inclusive education is a fundamental right of all students. Despite international policy initiatives, educational exclusion is pervasive, especially in the Global South, and disproportionately affects disabled students. Barriers to inclusive education have been itemised in the literature, but in this conceptual paper that offers a novel perspective on the topic, we argue for a complexity approach to understand its evolution. Using a qualitative deductive content analysis of South African laws, policies, reports and scholarly literature, we explore three path dependencies from colonial/apartheid times that lock the country into historical patterns of categorisation and segregated schooling. These operate alongside the emergence of new and inclusive practices by actors at a system-wide and local level, made possible by inputs into the policy ecology. South Africa represents a complex, contradictory educational environment that confounds the expectation of linear progression towards greater inclusivity. Instead of identifying barriers to inclusive education, we argue for a nuanced understanding of the imbrications of historical investments and drivers of inequality, with policy possibilities and the impetus for transformation among system actors.

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Inclusive education: global initiatives and local uptake

Inclusive education has come to global attention in recent decades. Goal 4 of the United Nations (UN) Sustainable Development Goals aims to '[e]nsure inclusive and equitable quality education and promote lifelong learning opportunities for all' by 2030 (UN 2015). This goal includes targets that specify that education must be provided to all, 'without discrimination' (Target 4.1) and that 'particular attention and targeted strategies' should reach 'persons with disabilities, indigenous peoples, ethnic minorities and the poor' (Target 4.5.1). General Comment 4 of the UN Committee on the Rights of Persons with Disabilities (CRPD) affirms inclusive education as 'a fundamental human right of all learners' (UN CRPD 2016, Section 10a). Despite these international

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commitments to inclusive education and its moral imperative, the educational exclusion is pervasive (UNESCO 2020).

The failure of inclusive education to gain a secure foothold in education systems across the world has led to a body of research that catalogues barriers to the implementation of inclusive education. This research includes work by scholars such as Braun (2020), Genova (2015) and Sharma (2020), as well as findings published by General Comment 4 (UN 2016) and the General Education Monitoring Report of 2020 (UNESCO 2020). These sources identify barriers such as persistent prejudice and discrimination; negative attitudes about inclusion; a lack of research and data with which to monitor progress; inadequate laws and policies, government will and financial provision; poor quality teacher education; and inaccessible schools and curriculum. Addressing these barriers, according to this framing of the problem, creates the conditions for the successful implementation of inclusive education.

Our experience as scholars in the field suggests that the barriers and enablers approach to inclusive education is limiting because it suggests linear progress towards the goal of inclusive education as successive barriers are identified and eliminated. This approach reflects what Scott (1999, 22) calls 'legibility', the tendency to simplify phenomena and reduce complexity to 'manageable dimensions', which can be bureaucratized into administrative processes. Human educational endeavours are complicated and variable and defy legibility. We maintain that it is necessary to engage with the complexity of historical contexts and to question the interconnecting relationships between entrenched power relationships and inequality within social settings. It is within these intersections that the meaning of inclusive education has relevance and can reposition itself within educational systems (Grech 2011; Tefera, Powers, and Fischman 2018). Researchers have increasingly called for the recognition of the complexity of inclusive education enactment in reconstructing and revisioning the education of children with diverse needs, including disabilities, within complex contexts (Grech 2011). Complexity theory has been identified as a useful framework for the study of inclusive education (Schuelka and Engsig 2020), leading us to pose the following research question: How can complexity theory advance an understanding of the development of inclusive education in South Africa?

Approach and methodology

The research question is answered through conceptual research in the 'theory adaptation' tradition which develops existing knowledge by 'introducing alternative frames of reference to propose a novel perspective on an extant conceptualization' (Jaakkola 2020, 23). Described by MacInnis (2011) as 'Revision', this type of conceptual work is concerned with 'reconfiguring or taking a novel perspective on something that has already been identified' (143). The 'novel perspective' is a complexity theory approach to the development of inclusive education in South Africa. Our research process commenced with an overview of South African laws, policy documents and official reports and of published scholarly literature on special and or inclusive education from 1948 to 2021. Given both the expansiveness of complexity theory, and the volume of extant literature, we narrowed our focus to two concepts in complexity theory: path dependencies and emergences. Path dependencies advance an understanding of historically entrenched patterns of exclusion. Emergences explain shifts in policy and practice at different levels of the system that have

the potential to disrupt exclusionary practices and bring about change. We conducted an exploratory, qualitative deductive content analysis which allowed us to ‘test the implications’ (Graneheim, Lindgren, and Lundman 2017, 30) of these two concepts against the evidence in law, policy, reports and scholarly literature. This enabled us to identify apparent contradictions in the South African education system: co-existing path dependencies of exclusion originating in colonial/apartheid special education policies and practices (Christie 2020), but also emergences that offer ‘ripples of hope’ (Kennedy 1966) or ‘reasons to be cheerful’ (Slee 2014, 13). Our findings suggest that the current discussions on barriers and enablers to the implementation of inclusive education need to be expanded to account for complexity.

Our focus is the Global South, where the challenge to realise a more inclusive education system is layered on existing conditions of poverty, underdevelopment, legacies of colonialism and current global inequity. There is evidence that many precolonial societies were disability-inclusive in their education practices (Duke et al. 2016; Kisanji 1998; Mahlo 2017). Despite this, inclusive education is usually said to have originated in high-income countries, with concerns about the violation of the educational and social rights of disabled people and their families. The discourses of inclusive education over the past half-century have been dominated by knowledge and practices from higher-income countries (Walton 2018). Shifting these practices to lower-income countries with diverse social expectations, ideologies, cultures, and beliefs has given rise to simplified and problematic conceptualisations of inclusive education (Armstrong, Armstrong, and Spandagou 2011). Implementation strategies from higher-income countries have increasingly proved to be irrelevant to lower-income countries (Kalyanpur 2016). Inclusive education, as exported from the Global North, has often ignored critical and complex issues related to society, cultures and histories, including the multiple factors that lead to exclusion in schools (Kalinnikova Magnusson and Walton 2021; Muthukrishna and Engelbrecht 2018). An analysis of inclusive education in a global South context that uses complexity theory offers an understanding of the imbrication of these complex issues and multiple factors.

Some notes on complexity theory and associated concepts

Complexity theory originates in the natural sciences, but social scientists, including education researchers, have increasingly found it to be a generative way to think about social challenges (Tikly 2020). A number of concepts, which help to explain how systems function, constitute the theory. At its core, complexity challenges linear predictability and mechanistic explanations of cause and effect, and the reduction of systems to their constituent parts. It suggests that systems are mutually constitutive, they are interactive and dynamic, they are in flux and they adapt and change. Complexity views each system, or institution, or organisation as part of a complex and connected arrangement of interacting agents located in overarching networks or systems, such as a political, social, or economic system (Trombly 2014). A complexity framework allows for an examination of the patterns and relationships among the parts of systems and illuminates the unpredictable dimensions of engaging with agents and actors in dynamic organisations and institutions (Mason 2008; Uhl-Bien, Marion, and McKelvey 2007).

Complexity theory enables an understanding of organisations and institutions as complex adaptive systems (Uhl-Bien, Marion, and McKelvey 2007). Change is a key property of complex systems, and they take up the challenge of adapting to a changing environment. Rather than reflecting stability and symmetry, complex systems continuously evolve and transform. They are dynamic, emergent, and self-organising (Mason 2008). Feedback loops operate in complex systems in a process whereby elements in a system cyclically affect each other, eventually looping back to affect the first element (Walby 2007). Feedback loops can be negative, to sustain system equilibrium, or they can be positive as mechanisms that drive ‘small changes in a system onwards, escalating change’ (Walby 2007, 463). Other concepts central to complexity theory are those of path dependence and emergence (Corning 2012; Christen and Franklin 2004; Tikly 2020; Walby 2007).

Path dependence occurs where ‘initial conditions ... produce a long-term momentum’ (Tikly 2020, 41). Domains such as economics, policy studies and education have found path dependence to be a useful explanatory mechanism. Path dependence shows that history matters in the evolution of a system, and that outcomes are a consequence of the system’s history (Arestis and Sawyer 2009). Historical patterns and practices become self-reinforcing (Boeger and Corkin 2017) and systems become resistant to change. Path dependency means that, ‘... once a path is entered into, the costs of leaving it are too high to make it a reasonable option’ (Van Buuren, Ellen, and Warner 2016, 43). This is evident in the education systems of postcolonial countries, which revert to path dependent ‘elitist models’ after liberation (Tikly 2020, 118). The path dependence in our argument is derived from the initial condition of the colonial/apartheid governance in South Africa. This has shaped the education system, producing a compelling momentum towards exclusion in various forms.

Emergence has the potential to disrupt path dependencies. Emergence is a contested concept (Corning 2012). We take it to refer to new norms, patterns, behaviours, theories or structures that result from the combined activity of the system (Lichtenstein 2015). Weaver-Hightower (2008, 166) speaks of emergence as ‘new ecologies’ that appear when ‘resources and actors are available for their sustenance’. Emergent phenomena thus represent more than system change or adaptation, they offer a break from trajectories that systems may be locked into. Our argument points to emergences in South African education that refuse neat and reductionist explanations at either the individual or wider system. Instead, they show that schools and other educational communities find multifaceted spaces within policy, resource, and attitudinal affordances and constraints to provide inclusive educational opportunities that confound entrenched patterns of discrimination and exclusion.

Path dependencies and emergences can co-exist in an education system. This points to the complexity of the overall ‘policy ecology’, which includes ‘actors, relationships, environments and structures, and processes’ (Weaver-Hightower 2008, 155–156) in any particular context. In the sections that follow, we show this complexity in the South African context.

Colonial/apartheid special education path dependencies

From the twentieth century until 1994, South Africa was ruled by successive minority white governments who legislated the disenfranchisement and systematic oppression

of the lives and livelihoods of other races. The systematic and legislative discrimination in favour of white people in South Africa under the National Party government of 1948–1994 was known as apartheid. During the years of legalised apartheid, racial differentiation and inequality and the resultant creation of separate schools for children of different racial classifications were legally and rigidly entrenched (McKeever 2017). Education for disabled children also received significant legislative attention, setting three paths in place, namely the distinction between normal children and deviant children, a pre-occupation with rigid categories of disability, and the presumption of the need for separate ordinary and special education settings. In this section, we show the origins of these paths in apartheid-era legislation and the structures, dispositions and practices that this legislation engendered. Then, with reference to post-apartheid education, we show how these paths have become path dependencies, reinforced rather than disrupted by the new democratic order and its signal of commitment to inclusive education. These three path dependencies are mutually constitutive and mutually reinforcing, and each is sustained by the beliefs and practices of the others.

Normal children and deviant children

Apartheid-era legislation divided children according to whether they were *handicapped* or *normal*. Handicapped children were considered as belonging to a different category of children. Section 1 of Act 9 of 1948 defined the ‘handicapped child’ as one who

deviates to such an extent from the majority of children in body, mind, or behaviour, that

- (a) he cannot derive sufficient benefit from the instruction normally received in the ordinary course of education; or
- (b) he requires special education in order to facilitate his adaptation to the community; or
- (c) he should not attend an ordinary class in an ordinary school because such attendance may be harmful to himself or to the other pupils in the class (South Africa (SA) 1948).

Notwithstanding the presumption of the child as male, this Act (SA 1948) created a legal framework for the distinction between normal and deviant children that would continue throughout the apartheid years. As late as 1991, Du Toit grappled with questions of the limits of ‘normal’ in demarcating children with problems and the degree of difference among children ‘before the child is considered deviant’ (1991, 24). This distinction between handicapped or children with problems and normal children constitutes and is reinforced by the distinction between special and ordinary schools, which we discuss later in this section.

The path dependency that this created is in two distinct types of children. There are those who are seen to be regular, normal or ordinary children and those who are exceptional, with special needs or barriers to learning. ‘Handicapped’ has been replaced as an appellation, but the distinction remains. The path dependency is sustained to this day through research, teacher education, and policy and is echoed in the sentiments of teachers. Research singles out children with ‘barriers’ (Bornman and Donohue 2013; Tlale 2007) or ‘impairments’ (Donohue and Bornman 2015) as the objects of teachers’

attitudes. Teacher education programmes and textbooks reinforce this binary through modules, courses and learning material that engage with the characteristics of ‘different’ or ‘diverse’ children who are represented to be ‘a challenge to teachers and a burden to the system’ (Walton 2016, 86). Policy, such as the Strategy for Screening, Identification, Assessment and Support (SIAS) (SA DBE 2014), makes a clear distinction between all children who need support and those children who ‘require additional support for learning’ (vii). It offers processes and procedures for the provision of this ‘additional support’ for children who are ‘vulnerable’ and who ‘experience barriers to learning’ (1). Teachers confidently talk about ‘slow learners’ and attribute internal and fixed characteristics to those learners they believe are beyond their ability to teach (Engelbrecht et al. 2015).

This path dependency makes it almost impossible to make fundamental changes to the architecture of schooling (Slee 2011) that inclusive education demands. It sustains a deficit conception of some children in relation to their peers, and valorises the normate pupil in the system, namely one who has no barriers to learning and does not require additional support for learning. This normate pupil does not require lengthy documentation in ‘Support Needs Assessment’ forms (SA DBE 2014) that itemise areas of concern, needs and risks. By contrast, the child with additional support needs is constructed through a bureaucratic process that scrutinises their learning, behaviour, health, personal care and home and family situation to identify the level of support required. As a result of this path dependency, it becomes difficult to implement an inclusive pedagogy which

[r]equires a shift in teaching and learning from an approach that works for most learners existing alongside something ‘additional’ or ‘different’ for those (*some*) who experience difficulties, towards one that involves the development of a rich learning community characterised by learning opportunities that are sufficiently made available for *everyone*. (Black-Hawkins and Florian 2011, 814. Italics in the original)

Andrews, Walton, and Osman (2021) confirm that some South African schools continue to ‘see difference as problematic’ and instead of pursuing inclusive teaching strategies, ‘direct their activities towards finding alternative education provisions’ (12). The apartheid special education legislation did not only set a path dependency on the distinction between normal and other children but also locked in a preoccupation with disability categories and other distinctions.

Preoccupation with disability categories

Various typologies of difference were advanced during the apartheid years. Section 1(xiv) of Act 41 (SA 1967) referred to white children only and defined a handicapped child as one ‘belonging to a category of children’, described in a schedule of eight possible handicaps (‘Deaf children, Hard of hearing children, Blind children, Partially sighted children, Epileptic children, Cerebral-palsied children, Physically handicapped children, Children suffering from a defect who have been designated by the Minister’). The De Lange Report (1981) identified ‘scholastically impaired pupils’ in mainstream education, ‘handicapped pupils’ in special education and ‘highly gifted pupils’ (29) Other classification categories had traction during the apartheid-era. Murray (1969) distinguished between (white) children who had slight difficulties and who could, with remedial assistance, function in the

mainstream; children with moderate difficulties who would require temporary but full-time remedial assistance; and children with severe disabilities who required special education. Du Toit (1991) found it necessary to subdivide children's problems into those relating to development, learning, and behaviour, with a further distinction made between restraints and handicaps.

South African education appears to be locked in a medical-deficit path dependency of classifying and categorising those who require additional support. The distinction between intrinsic and extrinsic barriers to learning was one of the earliest typologies in the post-apartheid conception of educational support. Intrinsic barriers to learning were deemed to arise from medical or organic causes with extrinsic barriers arising from social, economic, and educational disadvantages (Donald 1996). The SIAS policy (SA DBE 2014) builds on the distinction between intrinsic and extrinsic barriers to learning, and further distinguishes between low, medium, and high levels of support that a child might have. Appendices to this document offer a range of disabilities or medical conditions that children may be diagnosed with, and the possible 'areas of functional limitation' associated with listed conditions and disorders. The Guidelines for Inclusive Teaching and Learning (SA DBE 2010) confirm that teachers need to know the characteristics of various disabilities, difficulties and conditions, their impact on learning, and appropriate educational responses. Various textbooks, written for pre- and in-service teachers, offer accounts of different barriers to learning. Walton (2016) shows that these present categories of difference among children as 'absolute and discrete' and 'scientific and objective ... drawn from evidence in the fields of medicine and psychology'. The message conveyed is that understanding these categories is a 'precondition for understanding learners' and that the categories are 'pedagogically significant, with different categories demanding different pedagogical responses' (97).

This path dependency works against the development of inclusive education. We recognise that information about disabilities and other conditions raises awareness about educational difficulties, promotes understanding of children, and may lead to effective support (Lauchlan and Boyle 2007). Our concern is the preoccupation with sorting and labelling children that this path dependency represents, and the exclusionary effects that it may have. Contestations about definitional boundaries and diagnosis must be acknowledged (Graham et al. 2020) and there is scant evidence of distinct disability-specific pedagogy (Lewis and Norwich 2005). The focus on disability categorisation potentially detracts attention from individual experiences at the nexus of a range of identity markers, not only disability. Classification inevitably leads to the specialisation of professionals who assert their expertise in niche areas of educational support (Mckenzie and Macleod 2012). This becomes the reason for teachers to claim that they are inadequately prepared to teach certain children, believing that 'teaching learners who do not 'fit in' with the others [is] ... the skill-set of specialists' (Andrews et al. 2021, 8). This is reinforced by the third path dependency, which is the presumption of the need for separate (disability-specific) special education.

Separate ordinary and special education

The apartheid government inherited a system from the previous colonial regime that had entrenched separate special and ordinary education. Act 9 (SA 1948), which relates to the

'education of handicapped children' was enacted just before the imposition of apartheid. This Act defined special education as 'education of a specialised nature provided to suit the needs of handicapped children' (SA 1948, Section 1). The specialised nature of special education is predicated on a distinction between professionals who are deemed to have the knowledge and skills to work with either ordinary children or special needs children. This is confirmed by De Lange (1981) who said: 'The personnel and necessary infrastructure involved in the education of these [handicapped and impaired] children need to be more comprehensive and more specialized' (2). Thus, the distinction between ordinary and special needs teachers was entrenched, as well as a role stratification with allied and support professionals, such as speech, occupational and physical therapists, psychologists, medical personnel, and social workers. Engelbrecht (2006, 256) speaks of the 'specialist culture' that developed as an effect of the 1948 Act.

Apartheid-era separate special education presumed the need for separate schools for different categories of 'handicap'. Section 2(1) of Act 9 (SA 1948) made provision for 'special schools and homes for the classes of handicapped children', with the assumption that different types of handicap demanded different schools. This thinking prevailed throughout the apartheid years. In making recommendations for the design of special schools, Urry (1970) assumed that separate special schools would be required for 'different handicaps' (11), with specific school requirements based on types of disability. This view was moderated somewhat by the De Lange Report (1981), which noted the tendency for specialised provision according to handicap and recommended a more comprehensive list of special schools 'rather than separate schools for 22 or more kinds of handicapped pupils' (187).

During apartheid, special education for different racial groups was organised, financed, and researched separately. The focus was on white children, even though they were the racial minority. They enjoyed a disproportionate expenditure, with 42% of the public special education budget spent on white special schooling in 1987 (Partington 1991). The relative neglect of special education for other race groups was justified by the apartheid policies that made education a matter for the administration of those race groups. De Lange (1981) acknowledged that special education provision was well developed for white children but that 'the provision for Black pupils is extremely inadequate' (176). The recommendation of the De Lange Report was that infrastructure similar to that of white special education should be implemented by all the systems of education. This recommendation did not suggest racial integration into existing special education, just that the levels of provision for white children be replicated for children of other racial groups.

Education White Paper 6 (SA DoE 2001) is the post-apartheid government's framework for the development of an inclusive education system. In many respects, it draws on the Salamanca Statement (UNESCO 1994) in setting a vision for equal access, participation and inclusion of all learners. It noted that at the time of publication, 280,000 children and young people with disabilities or impairments were not in school. This document makes it clear that the system of separate special education was not to be dismantled with the introduction of inclusive education. Instead, special schools would be strengthened so that they could become 'resource centres' for other schools (SA DoE 2001, 7). Children deemed to have 'high support needs' would be educated in special schools (SA DBE 2014). But, as a result of inequitable apartheid resourcing, most

special schools inherited by the post-apartheid regime were in formerly white residential areas. Instead of heeding the Salamanca Statement's advice that 'Countries that have few or no special schools would, in general, be well advised to concentrate their efforts on the development of inclusive schools' (UNESCO 1994, 13), the post-apartheid government has, and continues to build more special schools (SA DBE 2015). Many of these new special schools are disability-specific, for example, for children with autism or low vision, further reinforcing the path-dependency of separate special schooling.

Beliefs and practices at school levels further reinforce the path-dependency on separate special schooling. High levels of referrals to special schools are evident, and waiting lists for places at special schools are long (Human Rights Watch 2015). Many pre-service and in-service teachers are convinced of the pedagogical benefits of special school placement (Adewumi, Mosito, and Agosto 2019; Walton and Rusznyak 2013), despite the fact that the social and educational experiences and outcomes of children attending special schools are not always positive (McKinney and Swartz 2015). The path-dependency of a dual-track special and ordinary schooling system has meant that increasing access to separate special schooling is seen as the solution to the very real problem of the exclusion of disabled children. This solution is emphasised in government responses when challenged about the number of disabled children out of school (SA DBE 2015) and also advocated in the press (Macupe 2020). This is in contrast to the requirements of Article 24 of the UN CRPD, which South Africa has signed and ratified. Section 39 of General Comment 4 on the UN CRPD (2016) makes it clear that state parties

Have a specific and continuing obligation to move as expeditiously and effectively as possible towards the full realization of article 24 [Education]. This is not compatible with sustaining two systems of education: a mainstream education system and a special/ segregated education system.

Section 40a of the Committee of the CRPD (UN 2018) 'notes with concern' the 'continuing growth in special education as opposed to inclusive education' in South Africa. We argue that this growth can be explained by the path dependency on separate special education that had its origins in coloniality, was entrenched by the apartheid government and inherited by the post-apartheid state. Policies have created a deficit-based continuum of support strategies that range from inclusion in mainstream classrooms to placement in separate special schools depending on the severity of the 'barrier' experienced by children.

The momentum created by the imbrications of these path dependencies is sustained in policy, beliefs, practices and research, making them difficult to resist. They are further entrenched by other path dependencies that do not arise from special education legislation, such as highly authoritarian leadership styles (Bush and Glover 2016) and low levels of parent involvement in schools (McKenzie, Shanda, and Aldersey 2021). But we have reason to be optimistic. While post-apartheid policies and system actions reflect path dependencies, they simultaneously contain the possibility of rupture. In the next section we note ways in which these policies and innovative inclusive practices on local levels are contributing to the emergence of inclusive practice.

Post-1994 emergences

Inclusive education's focus on increasing equitable rights and access to education has resonated in South Africa since the transition to democracy in 1994. A transformed

education system is expected to play a fundamental role in changing inherited discriminatory apartheid social and economic structures and contribute to the establishment of a democratic society (Badat and Sayed 2014). There has been an increased awareness of the multiple and dynamic ways that individual and group characteristics (ability, race, ethnicity, socio-economic class, gender, religion, etc.) and institutional capacity interact, and ultimately shape access, acceptance and participation in schools. This has led to the emergence of examples of more hopeful and creative conditions at wider systemic levels in combination with emerging, innovative and contextually relevant practices within school communities. These conditions and practices send forth 'small ripples of hope' (Kennedy 1966), which potentially disrupt path dependencies and create emergences characterised by increasing connectivity, networking and feedback for continuity and change to occur (Kitching 2019; Morrison 2006). In the sections that follow, we describe these emergences separately for ease of discussion. They are not, however, discrete themes but are multifaceted and dynamically linked at various system levels.

System-level emergences

The South African government has reiterated the right to inclusive education for disabled children by signing and ratifying international conventions like the CRPD and publishing policy documents on the rights of disabled people like the White Paper on the Rights of Persons with Disabilities (SA Department of Social Development 2016). Furthermore, White Paper 6 (SA DoE 2001) sets a clear policy aspiration towards inclusive education not only for disabled children but for every child who is disadvantaged for reasons of poverty, language and other factors. White Paper 6 has been followed by a series of guideline documents (for example, Guidelines for Inclusive Teaching and Learning (SA DBE 2010) and Guidelines for Full-service/Inclusive Schools (SA DBE 2009) that seek to provide the detail necessary for the implementation of inclusive education. We argue here that White Paper 6 sets the conditions of possibility for system-level emergences in policy, funding, teacher education, curriculum, and collaboration with parents and communities.

Policy possibilities

The SIAS policy (SA DBE 2014) has features that might reinforce past path dependencies, as discussed previously, *and* features that might enable the realisation of inclusive education by disrupting past practices in a number of ways. These include taking a holistic account of the child in context; the expectation that parents/caregivers, teachers and older children are involved in developing support plans; the expectation that support would mostly be offered within ordinary schools and referrals to special schools would be discouraged; and the recognition of school and societal factors as barriers to learning. An intensive information and training programme on the use of the SIAS policy has been rolled out across the country. It seems that if schools and classrooms are understood as complex adaptive systems that continually evolve and transform, the policy has the potential to become a flexible and imaginative response to support needs in inclusive school communities. At this stage, it is still too early to be able to judge the impact of SIAS. It may lead to a less tightly controlled system of accountability, characterised by

creative exploration and distributed decision-making (Radford 2006), or it may be adopted in linear, inflexible ways that will reinscribe exclusion and reinforce path dependencies.

Funding

Promising budgetary developments could help to entrench and sustain inclusive education initiatives and disrupt the continuing influence of path dependencies. In 2016, the National Treasury had awarded the Department of Basic Education a conditional grant of R477 million over the 2017–2020 period for children with severe and profound intellectual disabilities to access quality public-funded education and support (Parliamentary Monitoring Group 2020). The National Guidelines for Resourcing an Inclusive Education System (SA DBE 2018) was published for comment in March 2018. The purpose of this document is to

... provide guidance on the equitable and efficient provision, distribution and use of infrastructure, personnel and non-personnel non-capital (npnc) funding for an inclusive education system using the National Norms for Post Provisioning, School Funding and School Infrastructure. (9)

These National Guidelines could, if implemented with insight and the acknowledgement of the systematic pervasive influence of historical path dependencies, improve the negative impact of chronic underfunding on schools' abilities to provide quality education for all, but especially disabled children.

Teacher education

The capacity of teachers, school leaders, and education support personnel is recognised internationally as vital for inclusive education (Symeonidou 2017). Various developments in South Africa have the potential to address the unequal outcomes created in the past due to the inadequate preparation of teachers to provide effective support for the learning of all. The Revised Policy on the Minimum Requirements for Teacher Education Qualifications (SA 2015) insists that Bachelor of Education and Postgraduate Certificate in Education graduates are 'knowledgeable about inclusive education' (23/29). Teaching standards for inclusive teaching for beginner teachers have also been developed (Walton and Rusznyak 2019). These include an emphasis on continuing professional development that can provide the impetus for teachers continually to prepare themselves for the unexpected and the unanticipated and allow for new teaching and support strategies to emerge (Engelbrecht and Muthukrishna 2019). Recent developments in the enhancement of initial and continuing teacher education have resulted in dedicated courses at specific universities for teachers of children with specific disabilities, for example, those with low vision, D/deaf pupils, and those with Autism and other neurodevelopmental disorders (McKenzie et al. 2020). Here too, time will tell if this initiative reinforces the path dependency created by the medical-deficit approach and leads to further segregation. We are hopeful, though, that the recognition of a diversity of learning needs of children with specific disabilities within an intersectional framework will increase the capacity of teachers and therapists to provide support, ideally in ordinary classrooms.

Curriculum

Curriculum development within an inclusive education system is ‘a social space in which meaning is constructed in relation to the contending vectors of power present in broader society’ (Soudien 2018, 152). An inclusive South African curriculum should therefore be aware of the complexities of how exclusion was and still is being created and maintained and should be infused with the principles and practices of social and environmental justice. There are aspects of the national Curriculum and Assessment Policy (SA DBE 2012) that support inclusive teaching, but overall, it has been criticised for its fast-paced, lock-stepped and content-heavy demands (Andrews, Walton, and Osman 2021). Other curriculum developments, though, offer more hope. These developments include the recognition of South African Sign Language as a subject of academic study and a prescribed practical and functional curriculum for pupils deemed to have severe intellectual disabilities. A proposed three-stream model adds vocational and occupational pathways to the existing academic pathways for pupils, offering the potential for learning and employment for those who do not wish to pursue an academic focus (McKenzie 2020).

Collaboration with parents and communities

Under the apartheid government, schools tended to be separated both from parents and caregivers and from the wider community (McKenzie, Loebenstein, and Taylor 2018). More recently, an acknowledgement of the important roles of collaborative partnerships between schools, education, non-governmental organisations and local communities, including community leaders, parents and children, has emerged (McKenzie, Loebenstein, and Taylor 2018). An effort has been made by the Department of Basic Education to track out-of-school disabled children and their parents or caregivers. A conditional grant finances this effort, and schools have been involved. Liaison between system actors makes it possible for the information to flow and the creation of networks that are necessary for sustainable change in complex systems.

Local-level emergences

Teachers are key role players in enacting inclusive education. Research indicates that many South African teachers define inclusive education within a human rights framework and acknowledge the rights of all children to be included in inclusive schools and classrooms (Materechera 2020; Savolainen et al. 2012). However, teachers’ understanding of differences shows the extent of path dependencies. Many view differences with ideas based on traditional medical-deficit approaches created by systemic socio-political developments of the past (Andrews et al. 2019; Engelbrecht and Savolainen 2018; Engelbrecht et al. 2017). These views impact their expectations of disabled children, and some are reluctant to accept children who they regard as different in their classrooms. Despite these negative perceptions and practices, there is evidence of an emergence of the agency. As we discuss below, there is evidence that individually and collectively, teachers interpret and adjust policy imperatives and guidelines to align with their own beliefs about human rights and meet the challenges they face within their own contexts to support the multiple learning needs of the children in their classrooms.

Teacher agency has to do with the capacity of individual teachers, as well as the dynamic interaction between teachers and contexts to exert influence and to create opportunities to develop access, acceptance and participation in inclusive classrooms (Themane and Thobejane 2019; Vansteenkiste et al. 2020). There is evidence of an increased shared belief in the importance of ongoing individual and collective learning for inclusive teaching (Andrews 2020; Engelbrecht and Muthukrishna 2019; Vansteenkiste et al. 2020). Research indicates that a large number of South African teachers can and do take the initiative for their own professional development to acquire new knowledge and skills, not only from working experiences but also from updated theoretical knowledge (Andrews 2020; Oswald 2014; Swart and Oswald 2008). A sense of agency is externalised in a change in attitudes towards diversity, as well as the confidence to practice new ways of doing, imagining themselves as agents of change who are able to create transformative, participative classroom contexts (Swart and Oswald 2008; Vansteenkiste et al. 2020).

Many teachers in diverse school contexts in South Africa are adapting to a changing policy environment. A number of recent case studies (Adewumi, Mosito, and Agosto 2019; Andrews 2020; Engelbrecht and Muthukrishna 2019; Themane and Thobejane 2019) indicate that despite various challenges such as overcrowded classrooms and a lack of resources, teachers are creating alternative approaches to include everyone. In their study in Limpopo province, Themane and Thobejane (2019) describe the resilience of teachers in rural secondary schools. These authors show how, despite the lack of resources to implement inclusive education as described in policy guidelines, teachers collaborate with one another to adapt their pedagogy to accommodate all. In this way, teachers are continually preparing themselves for the unexpected by allowing the complexity of what they are involved in to emerge and endeavouring to embrace it (Engelbrecht and Muthukrishna 2019). Continual contextual interaction, communication and exchanging information also generate opportunities for collaborative learning among teachers, which allow them to adapt behaviours and willingly develop innovative collaborative actions in locally relevant ways. Entrenched ways of thinking, based on path dependencies that negate the strengths and resources present in school contexts, are being disrupted as teachers collectively engage proactively with inclusive education (Adewumi, Mosito, and Agosto 2019; Andrews 2020; Engelbrecht and Muthukrishna 2019; Swart and Oswald 2008).

The development of inclusive school communities with a focus on enablement, participation and shared commitment has clear implications for leadership (Oswald and Engelbrecht 2013). Research indicates that authoritarian leadership styles that limit the exercise of teacher agency and their participation in decision-making do not support the development of an inclusive ethos (Andrews 2020; Fataar 2009; Oswald and Engelbrecht 2013). Many South African school principals have indicated their willingness to abandon the authoritarian leadership styles that characterised education under apartheid (Ngcobo and Tikly 2010). In the spirit of democracy and participation, they demonstrate leadership activities that allow for active engagement with the promotion of inclusive education (Oswald and Engelbrecht 2013). These enactments illustrate a growing understanding of inclusive education as a critical, ethical, and socially just agenda that is socially constructed in and from context (Muthukrishna and Engelbrecht 2018). There are encouraging examples (like Engelbrecht and Muthukrishna 2019) of schools in which leadership has embraced changes emanating from new policies, and school

community members are working collectively to create an inclusive school system. This suggests that these schools have emerged as adaptive open systems that are not managed by an outside hierarchical force (Adewumi, Mosito, and Agosto 2019; Engelbrecht and Muthukrishna 2019).

Conclusion: inclusive education in/as complex systems

Process and journey metaphors are often used to describe inclusive education, suggesting a linear trajectory towards ever more inclusive systems (Walton 2016). This linearity allows Boyle and Anderson (2020, 204) to say that inclusive education has ‘plateaued’, as they cite demands for non-inclusive settings in many countries. We have argued that much as it might frustrate the impulse to legibility, the evolution and entrenchment of inclusive education within education systems must be seen as dynamic and interactive. Addressing barriers to inclusive education seems to be less about clearing successive hurdles in a steeplechase race and more about understanding the complex ecology of education systems, and the various actors and socio-cultural, historical and economic processes that constitute these systems.

Our review supports a complexity approach to inclusive education in South Africa. The publication of White Paper 6 in 2001 was no moment of inflection but rather an input into the overall policy ecology that created possibilities for change. The educational environment is complex and contradictory, with path dependencies and emergences co-existing and competing. Different actors occupy roles and wield power in ways that dynamically shape the system, sometimes towards transformation and sometimes to preserve the status quo. Despite this, we are hopeful. The ‘ripples of hope’ that cross each other from diverse contexts (Kennedy 1966) towards a more inclusive and just education system for disabled children and young people in South Africa, as described in this paper, have the potential to function as positive feedback loops in the system. These, we believe, offer ‘new paths of development’ (Walby 2007, 455) and the potential for emergent and transformative inclusive practices over the longer term.

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