Choices in the design of inclusive education courses for pre-service teachers: The case of a South African university

First Author: Elizabeth Walton (Corresponding author)

Email address: Elizabeth.Walton@wits.ac.za

Institution: University of the Witwatersrand, Johannesburg, South Africa

Postal Address: 27 St Andrews Road, Parktown, Johannesburg, 2193, South Africa

Institution: University of the Witwatersrand, Johannesburg, South Africa

Tel: ++27 00 717 3768

Co Author: Lee Rusznyak

Email address: <u>Lee.Rusznyak@wits.ac.za</u>

Institution: University of the Witwatersrand, Johannesburg, South Africa

Postal Address: 27 St Andrews Road, Parktown, Johannesburg, 2193, South Africa

Tel: ++27 11440 0707

Acknowledgement of grants

This work was enabled by a National Research Foundation Education Research in South Africa

Grant

Disclosure of Interests

As authors of the above original research, we declare that we do not know of any financial, commercial, legal, or professional relationship between other people / organisations and ourselves or our employer that influenced our research.

Choices in the design of inclusive education courses for pre-service teachers: The case of a South African university

Abstract

It is expected that that pre-service teachers are adequately equipped to meet the needs of diverse students. This paper discusses the choices that teacher educators must make in designing inclusive education courses. The first choice is whether inclusive education will be infused into the curriculum or presented as a stand-alone course. If the latter, the second decision is what determines the content of courses—teacher need, policy directives or the authority of the field where knowledge is produced. If teacher educators look to the field of knowledge production, they might choose among inclusive education as an issue of student diversity; teaching competence; and schools and societies. We animate these choices as we describe an inclusive education course taught in a South African university. Our conclusion suggests that pre-service teacher education for inclusive education would be strengthened by more critical appraisal of the assumptions and orientations informing the design of courses.

Key words:

Inclusive education; pre-service teacher education; teacher education for inclusive education; student diversity; South African education; curriculum design; inclusive pedagogy; knowledge selection

Introduction: Inclusive education in pre-service teacher education

In the quest to secure teaching and learning for all students¹, teacher education for inclusive education has become a major focus. An extensive and growing body of literature attests to interest in pre- and in-service teacher education for inclusive education. The concerns in this literature are primarily content (what it is that should be taught and learnt), pedagogy (how inclusive education is best taught and learnt) and location (where learning for inclusive teaching best happens). This paper focuses on institution-based learning that prepares preservice teachers to be pedagogically responsive to diverse students. We write as South African teacher educators, and so want to show not only the broad theoretical issues that we believe are relevant for inclusive education courses within pre-service teacher education programmes internationally, but also how these have informed curriculum design choices made at a particular university. This paper moves from the international literature to the South African context, with a discussion about the conceptual and contextual considerations that might inform the teaching of inclusive education. We conclude by arguing for ongoing and rigorous interrogation of the theories, assumptions and processes that inform what, how, and to what effect inclusive education is taught to pre-service teachers.

The increasing diversity of students in mainstream classrooms internationally has been identified as 'One of the most challenging developments within education' (Lancaster & Auhl, 2013, p. 363). Teacher education has had to respond to this challenge by providing preservice teachers with the knowledge required to develop inclusive practices (Banks et al., 2005). The extent to which initial teacher education has been successful in this endeavour is questionable (Lancaster & Auhl, 2013), which suggests that ongoing work is needed in

¹ For the purpose of this article, we use 'students' (rather than learners or pupils) to indicate school-going children and young adults, except where quoting, and 'pre-service teachers' as the term for student teachers in initial teacher education programmes.

conceptualising and enacting initial teacher education programmes for inclusive education. There is, however, no shortage of literature on this topic, like the volumes edited by Forlin (Forlin, 2010a, 2012a) and special issues of journals (like *Teaching and Teacher Education*, (2009), volume 25, issue 9). This body of literature comprises many accounts of the content or effects of innovations and interventions in various pre-service or in-service contexts. We are concerned, however, that these descriptions do not pay sufficient attention to the choices that must be made about the content and orientation of inclusive education courses and how these courses come to be positioned within teacher education programmes².

In the first section of this paper, we explore the choices that teacher educators might make in the design and delivery of courses in inclusive education and comment on the implications of these choices. Figure 1 shows the decisions that might follow after each successive choice is made, and indicates the structure of the discussion that follows.

² A note on terminology: We use 'programme' to indicate a qualification, like a B.Ed. 'Curriculum' is used broadly to encompass all the teaching and learning activities that constitute the programme. 'Course' refers broadly to a unit of study within a programme.

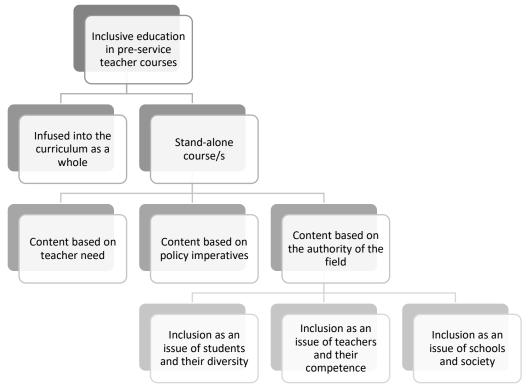


Figure 1: Choices to be made in teacher education for inclusive education

The second section of this paper turns to a case study of one South African university, as we explore the rationale for the choices made in this context.

Inclusive education: infused into the curriculum or standalone courses?

Having conceded that pre-service teachers need to be prepared to teach diverse students in broadly inclusive classrooms, the first decision that needs to be taken relates to the extent to which inclusive education is integrated into, or separated from the rest of the curriculum. We identify two approaches in the literature: inclusive education as infused into the curriculum as a whole, and inclusive education taught as a stand-alone course. The infused approach assumes that inclusivity should be a principle that informs pedagogical practices, and that inclusive education cannot be isolated from teaching as a practice (Florian & Graham, 2014; Forlin, 2010b). This approach seeks to embed inclusivity into all teacher education courses and activities, so that inclusive education does not have a discrete identity or knowledge base

apart from teaching and learning about the daily work that teachers do. There are a number of significant advantages to this approach, not least of which is that pre-service teachers are introduced to inclusive teaching as something that is generally expected of teachers. When all teacher educators have to integrate inclusive education into their course offerings, 'inclusion ... forms part of the discursive language and practices of teaching staff' (O'Neill, Bourke & Kearney, 2009, p.592). While the infused approach has the advantage of being conceptually bound up in how teaching is presented to pre-service teachers, it is unlikely systematically to develop their conceptual tools for interrogating the inclusive and/or exclusionary practices they observe at work in schools and in broader aspects of society. Some difficulties in implementing the infused approach include monitoring, uneven faculty expertise and time, and scheduling limitations (Loreman, 2010).

In contrast to an infused approach, inclusive education can be packaged into discrete and identifiable courses, strongly classified and insulated from other courses in the programme. This approach presupposes that there is specialist knowledge that 'belongs' to inclusive education, and that this knowledge has a 'special quality of otherness' (Bernstein, 2000, p. 10). Thus conceived, inclusive education becomes an explicit object of study for pre-service teachers, providing an opportunity for the systematic development of the concepts of inclusion, exclusion and marginalisation, and the literature and discourses associated with the field. There is ample evidence from the literature that stand-alone courses in inclusive education have become a common feature of pre-service teacher education programmes, with much of this literature concerned with evaluating the effect of these courses (see, for example, Forlin and Chambers (2011), Sharma, Simi and Forlin (2015), Stella, Forlin and Lan (2007), and Varcoe and Boyle (2013)). Accounts can also be found of innovative components or emphases in stand-alone courses, such as Scorgie's (2010) discussion of a pre-

service teacher education course designed to enhance empathy and understanding for parents of children with disabilities; and Hornby's (2010) description of a course which prepares preservice teachers to work effectively with parents of students with special education needs. A stand-alone option is not without its limitations. If a course on inclusive education or teaching students with disabilities is completely separate from what pre-service teachers learn elsewhere, it could too easily be seen as an additional rather than a core part of the everyday work that teachers do (Westbrook & Croft, 2015). If the body of knowledge is located in an elective course, it would reinforce a notion that inclusive education is a valuable body of knowledge for some, but not all, prospective teachers. If, despite these limitations, a curriculum design decision is made to strongly classify inclusive education by offering a stand-alone course, the question of knowledge selection for such a course arises.

Knowledge selection for inclusive education courses

Decisions about knowledge selection for pre-service teacher education courses concern what concepts should be included and excluded. The selection of knowledge could be informed by the needs of in-service practitioners, various policy imperatives and the authority of the field in which the knowledge is produced.

Knowledge selection based on teacher need

As classrooms worldwide reflect increasing student diversity, there is a vast (and what should now be exhaustive) body of literature that attests to practising teachers' beliefs that they lack sufficient 'training' to meet the educational needs of diverse students (for example, Harvey, Yssel, Bauserman and Merbler (2010), Lancaster and Bain (2007); Rouse (2010)). Much space in the literature has, as a result, been given to what it is that teachers 'need' for inclusive teaching. This need is generally framed in terms of knowledge, skills, and attitudes,

dispositions or attributes (for example, Carrington (1999) and Avramidis, Bayliss and Burden (2000)). The logic of this approach to knowledge selection is to identify what practising teachers need, and then work backwards to address these specific needs in pre-service teacher education. While not contesting that teacher need is a valid consideration in knowledge selection, it is not unproblematic. There is a significant disagreement in the literature regarding the relative weight that should be given to each of knowledge, skill and attitude/disposition/attributes in preparing teachers for inclusive education. Carroll, Forlin and Jobling (2003, p. 66) maintain that university preparation programmes 'overemphasise knowledge' to the detriment of providing pre-service teachers with the 'practical skills' needed for working with diverse students and learning needs. Waitoller and Kozleski (2010, p. 65), however, maintain that an obstacle to the preparation of 'inclusive teachers' is where 'skills and technical content' is the focus at the expense of the development of 'critical sensibilities that question what is being done, for the benefit of whom' (p. 66). These authors regard the learning of skills as 'necessary but not sufficient' in preparing teachers for contexts where 'differences are considered assets for learning' (Waitoller & Kozleski, 2010, p. 69). Avramidis, et al (2000, p. 562) cite Mittler in their concern that 'procedural knowledge' is emphasised in preparation for inclusive education at the 'expense of consideration of values and attitudes'. Cook (2002), however, takes issue with an emphasis on values and attitudes in pre-service teacher education for inclusion. He voices concerns that while engendering positive attitudes and dispositions about inclusive education and students with disabilities may be important, it does not follow that pre-service teachers will actually have the knowledge and skills needed for effective instruction of students with diverse learning needs. Determining knowledge for pre-service teachers on the basis of practising teacher need is also problematic in that it potentially blurs the significant differences in the developmental needs of pre-service and beginner teachers, and those of more experienced teachers (FeimanNemser, 2001; Liston, Whitcomb & Borko, 2006). Given these contestations, we would argue that teacher need should be seen as a necessary but not sufficient driver of knowledge selection for preparation for inclusive teaching.

Knowledge selection based on policy

The second impetus for courses in inclusive education in teacher education comes from policy imperatives in countries where inclusive education has been adopted. Forlin (2012b, p. 11) attests to the fact that the 'training models to prepare teachers for inclusion' in various regions are 'underpinned by international and/or local legislation and policy'. While policy may play an important role in securing the place of inclusive education in teacher education programmes, there may also be good reasons to resist policy as the primary determinant of knowledge selection for inclusive education in pre-service teacher education. Not only are policies transitory, they usually represent 'contradictory discourses' which can be interpreted in various ways (Liasidou, 2012, p. 81). Forlin (2012a, p. 11) also cautions against policy being too directive in a curriculum on the grounds that universities have to be able to modify courses in response to 'the different needs of their students'.

Knowledge selection based on the authority of the field

Inclusive education is a very broad field, with knowledge produced on a variety of topics from which teacher educators could select content for courses. Attesting to this, Slee (2011) comments on the scope of the field. He identifies "neo-special education", critiques of special education, and the inclusion or exclusion on the basis of various identity markers as "groups of work" (p.63) currently evident in the field. Allan and Slee (2008, p.16) identify a spectrum of researchers in inclusive education, and categorise them as special education research, school improvement/reform, disability activism and critical research. We suggest that in

surveying the field of knowledge production to select content for courses, teacher educators would find inclusive education is variously positioned as an issue of students and their diversity; as an issue of teachers and their competence; and as an issue of schools and societies. Choosing among these positions, or combining them will, to an extent, reflect the ideological positioning of teacher educators themselves and the institutions within which they work (Bernstein, 2000).

Inclusive education as an issue of students and their diversity

Where inclusive education is seen primarily as a student issue, the focus would be on the many ways students are different from one another. An underlying assumption is that individual students are unique, and they each come to the classroom with a distinctive constellation of learning needs. A teacher's capacity to recognise and respond to these needs is premised on his or her knowledge of the types and sub-types of differences among students (Brantlinger, 2006; Slee, 2011). There is a considerable field of specialist knowledge production in this tradition, with a multitude of studies on the aetiology, epidemiology and diagnostic criteria of various impairments, disabilities or 'special needs'. The knowledge selected from this work in the field would seek to inform pre-service teachers about various disabilities and special needs and how these might impact teaching and learning. Supporting this approach would be the research that has shown that pre-service teachers who have training in special education are more likely to have positive attitudes about inclusion (Varcoe & Boyle, 2013). There are, however, good reasons to be critical of this orientation to inclusive education. By focusing on student difference as a/the 'problem', teachers are exempted from taking responsibility for the educational difficulty or failure of their students. As such, learning difficulties never become opportunities to think about teaching (Rouse, 2010). In her critique of special education textbooks, Brantlinger (2006) notes that preservice teachers encounter textbooks organised by disability category in ways that suggest that "consistencies and regularities exist among students with the same disability" (p.52). This essentialising device denies the intersectionality of the experience of disability with race, gender and socio-economic status (Ferri & Connor, 2014) and ensures that disability remains a problem located in the individual (Slee, 2011). When the focus is shifted from the student to the teacher, inclusive education becomes an issue of teachers and their competence.

Inclusive education as an issue of teachers and teaching competence

Knowledge selection from this orientation in the field leads teacher educators to the extensive body of literature on promoting inclusivity through pedagogy, curriculum and assessment. Selections from this body of knowledge will be largely dependent on teacher educators' or textbook writers' (ideological) convictions regarding the extent to which differences among students call for pedagogies tailored according to type of difference. On the one hand, there would be those like Cook and Schirmer (2003, p. 204) who are emphatic in their assertion that there are specific techniques that have been verified as being 'effective for students with disabilities'. They 'postulate' that

There will always be children and youth whose learning needs and characteristics deviate from the norm in meaningful ways and who, therefore, will requires some form of special education to receive appropriate instruction.

Teacher educators convinced that student differences determine specific instructional approaches would select knowledge from the field that produces knowledge of teaching strategies that might 'accommodate' students with various types of disability in the mainstream classroom. An inclusive education course reflecting this orientation might acquaint pre-service teachers with various 'evidence-based' instructional practices and would

enable them to use these strategies with fidelity (Cook, Tankersley, Cook, & Landrum, 2008). The focus here is less on the details of the students' disabilities or additional support needs, and more on the pedagogical responses deemed appropriate to these needs. Numerous textbooks for teachers have been written in this tradition, replete with strategies, techniques and tips for teachers, all offering instructional and management ideas that might promote the 'support' and 'inclusion' of students with various disabilities (Rice, 2005). Our concern is that this approach potentially positions teachers as technicians whose role is reduced to implementing a series of prescribed interventions (Brantlinger, 2006), instead of having to make reasoned and professional judgments in response to classrooms complexified by having a variety of students with different learning needs. Moreover, the student who must be included through this array of interventions is 'an outsider and a potential burden' (Slee, 2011, p. 157), constantly requiring curriculum, instructional or assessment accommodations, concessions, adaptations or modifications.

On the other hand, there is the view that there is minimal specialist or unique pedagogy that could be regarded as distinctive for students deemed to have special education needs, and thus little need to pursue diagnosis-specific pedagogies (Lewis & Norwich, 2005). Instead, teaching that enables learning and participation for *all* is advocated in what has become known as an inclusive pedagogy. Advocates of inclusive pedagogy reject an approach to teaching that selects learning strategies applicable to 'most' students, alongside different or additional strategies for 'some' who are deemed to have learning difficulties (Black-Hawkins & Florian, 2012; Florian & Black-Hawkins, 2011). A course based on knowledge drawn from this orientation to the field would expose pre-service teachers to various curriculum, instructional and assessment approaches that are known to be more inclusive of student diversity (Ferguson, 2008). Importantly, though, pre-service teachers would need to

be alerted to the fact that differentiation, co-operative learning and other instructional approaches are not inclusive in and of themselves, and their use would determine the extent to which they promote inclusion (Black-Hawkins & Florian, 2012).

There is no shortage of literature attesting to the importance of the classroom teacher in the inclusion endeavour and yet Slee (2011, p. 102) argues that 'The diminution of exclusion and disadvantage cannot be achieved by the classroom teacher alone'. It is with this in mind that we turn a third orientation in field of knowledge production and consider inclusive education as requiring more than a responsive classroom teacher, but also a critical interrogation of how schools and societies produce and perpetuate educational exclusion.

Inclusive education as an issue of schools and society

Slee (2010, p.21) entreats teacher educators to

... dedicate courses in inclusive education to building the critical capacities of their students in order that they are equipped to identify, expose and dismantle barriers to education for all students.

This argument is for inclusive education courses to be framed first around questions about the power relations that work to marginalise students within education, and exclude them from education (Slee, 2011). These questions ask who benefits from the current arrangements in schools and schooling. Only after consideration and acknowledgement of the many ways in which schools are complicit in structuring, preserving and promoting social inequalities, should questions about resources and reorganisation be answered (Slee, 2011). Various accounts of educational marginalisation or exclusion could be recruited to equip pre-service teachers to identify, expose and dismantle barriers to access and success in education. These might include Reay (2010), Brantlinger (2003) and others who examine the workings of class in educational outcomes or Ferri and Connor (2014) who engage with the intersection of race, class and disability in the production of school failure. The work of Rizvi and Lingard (2010)

provides a compelling account of the impact of globalisation on unequal educational outcomes and Lewin (2009) offers a nuanced account of educational exclusion by identifying possible 'zones of exclusion' that operate in sub-Saharan African countries. These accounts have pedagogical value, not only in their own right by acquainting pre-service teachers with some of the theoretical turns associated with critical, poststructuralist and postmodern scholarship, but also in fostering the 'critical sensitivities' that Waitoller and Kozleski (2010, p. 66) note is so lacking in teacher education programmes.

If pre-service teachers are expected to 'reform, not just replicate, standard school practices' (Cochran-Smith, 2004, p. 24), they will have to be able to identify and resist exclusionary pressures and practices. This involves their gazing inward to confront and disrupt their own assumptions and experiences of schooling (Cochran-Smith, 2004). It also involves a critique of power relations, assumptions of reality and 'the complexities of multiple identities' (Nieto & McDonough, 2011, p. 366) that impact teaching and learning. Enabling this critical reflection is no small endeavour. It demands systematic guidance and a realistic appraisal of what can be expected of pre-service teachers in terms of structural critique and activism (Cochran-Smith et al., 2009). In addition, teacher educators would need to bear in mind that pre-service teachers need to find employment and work productively within the very system that they expected to critique.

It is only for ease of discussion that these three issues are presented as discrete. Teacher educators may well combine elements of these, as well as other possible orientations in the field of knowledge production. For inclusive education, *the* authority of the field is difficult to establish, given the contestations at and within the boundaries of the field. Thus teacher educators have considerable scope for knowledge selection and inclusive education can be

produced quite differently in different teacher education institutions in different contexts. In the section that follows, we focus on inclusive education in the South African context.

Inclusive education in the South African context

Contextual variations in the imagination and implementation of inclusive education have been identified over time and place, with Artiles, Kozleski, and Waitoller (2011) drawing attention to first and second generation iterations of inclusive education in various countries. Given this variation, Florian (2012, p. 215), calls for 'clarity about what inclusion means in different contexts' as a key issue in teacher education. Contextual considerations are relevant, she argues, when making decisions about the form, content, level and audience for teacher education for inclusion. South Africa comes relatively late to inclusive education, with the ideals of inclusivity in education being aligned to the wider societal changes associated with the dismantling of apartheid, and the recognition of human rights, dignity and equality for all. As a result, inclusive education in South Africa is positioned as a response to educational exclusion in general, and considers its mandate to be the identification and removal of barriers to learning, whatever their cause (Department of Education (DoE), 2001). Thus addressing the impact on education of poverty, chronic illness (particularly HIV/AIDS) and language difference would be considered an issue of inclusive education in South Africa, as would giftedness. Having noted this, however, the policy on inclusive education (White Paper Six: Special Needs Education (DoE, 2001)) does acknowledge that

... the learners who are most vulnerable to barriers to learning and exclusion in South Africa are those who have historically been termed 'learners with special education needs,' i.e. learners with disabilities and impairments (p.7).

Inclusion for students with special needs or disabilities is thus a particular focus of the inclusive education endeavour in this country, and in the wider Southern African Development Community (SADC) region where a strategy has been developed to make

issues of access to quality education for students with disabilities integral to '... all SADC member States' laws, policies and programmes' (Africa Disability Alliance, 2015, p.19).

The current policy requirements for initial teacher education programmes in South Africa make specific mention of the importance of inclusive education. This is seen both in stipulating the types of knowledge to be taught and by insisting that newly qualified teachers 'must understand diversity in the South African context in order to teach in a manner that includes all learners' (Department of Higher Education and Training, 2011). They must also '... be able to identify learning or social problems and work in partnership with professional service providers to address these' (p. 56). In order to achieve or maintain their accreditation, pre-service teacher education programmes in South Africa must be able to show how these policy requirements are met.

Inclusive education in South African pre-service teacher education: A case study

Most higher education institutions that offer pre-service teacher education in South Africa

now include courses in inclusive education. In the paragraphs that follow, we offer a rationale

for the choices made about the way in which inclusive education is positioned in a four year

pre-service teacher education qualification (a Bachelor of Education degree) taught at one

institution. The sections follow the schema presented in Figure 1.

Inclusive education: infused into the curriculum or standalone courses?

Instead of choosing between a content-infused approach and a stand-alone course in inclusive education, this programme has opted for a hybrid of the two, and in so doing, draws from the advantages of both. The infused approach is evident in year one and two as inclusivity is shown to be an implicit part of teacher's work. Pre-service teachers start their studies in

content subjects, subject-specific pedagogies and the practices of teaching. Their attention is drawn to the intersection between content knowledge and general pedagogic knowledge, with consideration of both the demands of the content and the needs of students in making pedagogic decisions. Although responsiveness to student diversity is acknowledged from the outset as an important aspect that that all teachers consider when planning lessons, this aspect remains back-grounded until the third year. Unlike Amin and Ramrathan (2009, p. 76) who 'promote foregrounding of context in the first year of study' for South African pre-service teachers, teacher educators in this institution argue for the foregrounding of content knowledge and a 'non-context-bound conception of teaching' (Morrow, 2007, p.103) in the first years of study, and the later introduction of an explicit focus on student and contextual diversity. Inclusivity is also infused into the level descriptors that would signify competence in the summative assessment of final-year pre-service teachers (Rusznyak, 2012, p.115). In terms of their planning, they should ideally demonstrate 'Deep insight into ... the needs of diverse learners ...'. In terms of their classroom performance, an exemplary nearly qualifying teacher would demonstrate competence by showing '...exceptional responsiveness to diverse learning needs ...'. In this way, principles of inclusive education are embedded in the practicum assessment rubric and present to pre-service teachers the level of competence to which they should aspire.

All pre-service teachers in this institution, irrespective of the age or subject specialization, currently undertake a full year education theory course called 'Diversity, pedagogy and inclusive education' in their third (penultimate) year of study. The course begins with a study of diversity in society, assuming that South Africa's classrooms will reflect the diversity in society more broadly. Pre-service teachers draw on a sociological lens to understand the social production of diversities, with a particular focus on race and gender. It is seen as

important that pre-service teachers come to understand that diversities are socially produced as a result of unequal power relations, and, consequently, not all identities are equally valorised in schools and societies. This establishes a foundation from which pre-service teachers can examine the way in which schools (even through practices that purport to be inclusive) exert exclusionary pressures that can marginalise students. A section that focuses on general pedagogy follows, and orientates pre-service teachers to ways in which epistemological access, as opposed to mere formal access (Morrow, 2007), can be fostered. Pre-service teachers are then introduced to inclusive education as a conceptually bounded object of study, in a short (six week) stand-alone module.

Knowledge selection for the inclusive education course

Selecting knowledge for a module in inclusive education where inclusive education is an intended but not yet pervasive practice presents challenges to teacher educators. University learning about inclusive education is seldom reinforced by pre-service teachers' observations during practicum sessions. Teachers tend to refer students who are deemed to have additional support needs for support outside the classrooms (Engelbrecht, Nel, Nel & Tlale, 2015) and teachers may not model inclusive practices (Walton & Rusznyak, 2014). This means that preservice teacher education must pre-empt what will be needed in an envisaged inclusive education system by drawing on lessons learnt elsewhere.

Knowledge selection based on teacher need

Selecting knowledge for inclusive education in pre-service teacher education on the basis of practising teacher need is particularly problematic in the South African context. Because of apartheid's legacy, many schools under resourced and many teachers have poor content and pedagogical knowledge (Taylor & Taylor, 2013). Teachers report that they need "...specific

training in reading, writing, spelling and counting" and "... training in useful identification and supporting learners with difficulties in their classes" (Du Toit & Forlin, 2009, p.656).

This suggests that their needs for the development of an inclusive education system cannot easily be isolated and extracted from the overall professional development needs of in-service teachers. Furthermore, given the long history of a dichotomous ordinary and special schooling system in South Africa, teacher need tends to be expressed in terms of a lack of "...[training] to provide the specialised support they think these learners [identified as having barriers to learning] need" (Engelbrecht, Nel, Smit, & van Deventer, 2015, p. 10). In other words, in-service teacher "needs" are voiced within an individualised and deficit approach to special educational needs (Engelbrecht, Nel, Nel & Tlale, 2015) which is not necessarily appropriate to the development of inclusive pedagogy among pre-service teachers.

Knowledge selection based on policy

There are a number of policies specifically relevant to the implementation of inclusive education in South Africa, and teacher educators must consider the extent to which the content of these policies should feature in pre-service teacher education courses. Some universities include instruction on the implementation of specific policies as part of their inclusive education courses (Walton, 2015), and at least one South African textbook for teachers defines inclusive education simply by quoting Education White Paper Six, which is the policy on inclusive education (Ntombela & Raymond, 2013). While we agree with Oswald and Swart (2011, p.401) that it is valuable for pre-service teachers to understand the 'underlying principles' that have brought about shifts towards more inclusionary educational practices and provisions in South Africa, we have reservations about foregrounding policy in a pre-service teacher education curriculum. There are contradictions and tensions evident in South Africa's inclusive education policies (Donohue & Bornman, 2014; Pather, 2011) with

individual deficit and social paradigms both evident, thus offering an uncertain direction for teacher education courses. Furthermore, we foresee a danger in orienting inclusive education courses around policy content or directive. This may result in teachers seeing inclusivity merely as policy compliance.

Knowledge selection based on the authority of the field

In the light of the limitations of basing knowledge selection decisions on teacher need and on policy, the authority of the field is taken as the primary basis of content selection in this institution, with a particular focus on inclusive education as an issue of teachers and their practice. The sections below offer an account of knowledge selection within the three positions of inclusive education, with reference to the field of knowledge production in inclusive education in South Africa.

Inclusive education as an issue of students and their diversity

There is evidence that some universities in South Africaⁱ position inclusive education strongly as an issue of students and their diversity by focusing on the identification and addressing of barriers to learning. The aetiologies and diagnoses of various special needs and the therapeutic or classroom interventions linked to specific 'special needs' is not a focus of inclusive education in the university under discussion. This decision is made for various reasons. The first is that there is vast variation in students with the same diagnosis or other identity marker, limiting the extent to which pedagogical 'prescriptions' might be applicable. Understanding the learning needs of a student within a classroom context need not be conflated with knowledge about a medical condition. Second, this approach may encourage pre-service teachers to look for individualistic student difference rather than possible common learning support needs among students with differing dis/abilities, diagnoses,

language proficiencies, concentration spans and so on. Excessively individualising a class of students may well lead to a 'pedagogical paralysis' where pre-service and novice teachers find themselves unable to imagine that they can teach in a class of diverse students. Third, in the South African context, many students may never have access to medical specialists to be formally 'diagnosed' and if teachers are led to believe that diagnosis is a prerequisite for effective instruction, many students will not get the support they need.

The decision to exclude content on specific aspects of student diversity is not unproblematic. To ensure that epistemological marginalisation does not occur, it is important to dislodge the idea that one-size-fits-all teaching is effective, with research with pre-service teachers showing that many enter their initial teacher education seeing a class of students as relatively homogenous (Rusznyak & Walton, 2014). The need for pre-service teachers to be able to identify barriers that students may experience is emphasised in the South African literature (De Jager, 2013) and in policy (Republic of South Africa, 2015). A recently released report notes that many South African teachers "... do not have basic knowledge or understanding of disabilities" (Human Rights Watch, 2015, p.54). It could also be expected that pre-service teachers should have some knowledge of the World Health Organisation (WHO) International Classification of Functioning, Disability and Health for Children and Youth and associated checklist (WHO, 2014) to enable the screening or measurement of health and disability among students in schools. Despite this, pre-service teachers in this institution do not explicitly engage with specific barriers to learning or disabilities in their inclusive education module. The extent to which this lacuna impacts the ability of novice teachers to teach inclusively is a focus of current research.

Inclusive education as an issue of teachers and their competence

Teachers, says South Africa's White Paper Six (DoE, 2001), are the primary agents for achieving inclusive education. While we query the extent to which teachers can be fully inclusive in a system that perpetuates exclusion in various ways, there is no doubt that teachers can enact pedagogies that are more inclusive of student diversity. To this end, preservice teachers in this university are introduced to Black-Hawkins and Florian's (2012, p. 575) framework of an inclusive pedagogical approach and its three requirements. To focus on the first requirement, that of 'the learning of all children in the community of the classroom', pre-service teachers learn about Universal Design for Learning (UDL) and differentiated instruction and assessment. The selection of this content is supported by research in South Africa. Dalton, Mckenzie and Kahonde, (2012, p.6) have shown "compelling reasons for using UDL as a means toward the improvement of inclusive education in South Africa" and De Jager (2013) draws on empirical evidence to promote differentiated instruction as a component of pre-service teacher education. The second requirement of an inclusive pedagogy, that of 'rejecting deterministic beliefs about ability as fixed' is addressed as preservice teachers in this institution are introduced to three models of disability and difference: a medical or individual model, a social model (Oliver, 1990), and a bio-ecosystemic model (Bronfenbrenner, 1992), with the opportunity to explore the affordances and limitations of each in developing a socially just and responsive pedagogy. Ecosystemic theory, and the work of Bronfenbrenner features prominently in the field of knowledge production about inclusive education in South Africa (see, for example, Geldenhuys & Wevers (2013) and Pillay & Di Terlizzi (2009)). Du Toit and Forlin (2009, p. 65) have noted this theory to be

"be best suited to achieve an inclusive educations system through appropriate learner support strategies" in the South African context.

The third requirement of inclusive pedagogy is 'seeing difficulties in learning as professional challenges for teachers'. Rouse (2010, p.53) is clear that the task for teacher education is helping teachers to "think about the difficulties children experience in learning as opportunities for thinking about teaching". This task is addressed by the institution under discussion as pre-service teachers are guided away from an individual deficit account of difficulties in learning and the assumption that referral to a special school is the solution to these difficulties. Instead, pre-service teachers are explicitly taught about professional judgment in the process of pedagogical decision-making in a way that positions inclusive education as a reasoned pedagogical response to difficulties in learning. The value of consultation and collaboration with parents, other teachers and therapeutic personnel, and students themselves in meeting this professional challenge is emphasised in the module and is informed by South African research on these topics (for example, Nel, Engelbrecht, Nel, and Tlale (2014) and Savolainen, Engelbrecht, Nel, and Malinen (2011)).

Inclusive education as an issue of schools and society

While teachers and teaching remain a focus of the inclusive education module, pre-service teachers in this institution also confront inclusive education as an issue of addressing wider exclusionary pressures in schools and societies. They examine educational exclusion, both from and within schooling, and are presented with inclusive education as a means towards realising human rights and achieving social justice. The exclusion of students with disabilities is emphasised, with a particular focus on how disability intersects with race, gender and poverty to compound exclusion (Sayed, Subrahmanian, Soudien et al., 2007). Pre-service

teachers are also encouraged to develop critical sensibilities by examining their own takenfor-granted assumptions about teaching and schooling more generally, and to interrogate potentially marginalising or exclusionary consequences of familiar practices.

The result of these decisions about knowledge selection is a module that looks primarily to the authority of the field, with a focus on the development of inclusive pedagogy and the fostering of 'critical sensibilities' (Waitoller & Kozleski, 2010, p. 65). The module content is buttressed by an infused orientation towards inclusive teaching which pre-service teachers encounter as they prepare lessons and are assessed during the practicum. The course design takes cogniscance of the South African context where there are systemic barriers to learning, like large classes and many under-resourced schools, and also where inclusive education is currently a policy aspiration rather than a reality. Figure 2 is a diagrammatic summary of how the choices in the design of pre-service courses in inclusive education are made in this particular university.

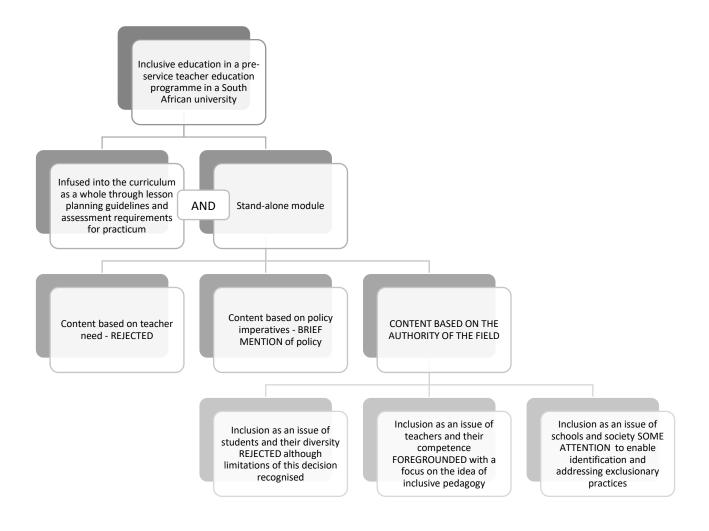


Figure 2: Choices made in teacher education for inclusive education in a South African University

Conclusion

Interrogating the conceptual and theoretical underpinnings of inclusive education curricula in initial teacher education is crucial if newly qualified teachers are to contribute to the realisation of an inclusive education system. We suspect that some of the inertia in inclusive education in a country like South Africa comes from competing, if not conflicting presentations of inclusive education that teachers encounter in their initial teacher education. This, in turn, reflects different theoretical and ideological orientations towards teaching and teacher education at the various higher education institutions more generally. While we are

not arguing for the neat resolution of these differences, we do maintain that initial teacher education for diverse students and inclusive classrooms would be strengthened by a more critical appraisal of the construction of courses in inclusive education. We believe this would add value to the field of teacher learning for inclusive education which, as Waitoller and Artiles (2013, p.219) rightfully note is 'undertheorized'. Importantly, too, a critical appraisal has the potential to promote a rigorous and conceptually coherent approach to student diversity and inclusive teaching in initial teacher education. This would provide the theoretical foundations required for much needed research into the extent to which various teacher education initiatives impact student learning (Florian, 2012). Finally, there must be a recognition of the inherent limitation to what courses in inclusive education can be expected to achieve (Forlin & Chambers, 2011). While teacher education for inclusive education is crucial, it alone cannot bear the full responsibility for addressing exclusion in education.

References

- Africa Disability Alliance. (2015). Draft Southern Africa inclusive education strategy for learners with disabilities 2016–2020. Pretoria: Africa Disability Alliance
- Allan, J. & Slee, R. (2008). Doing inclusive education research. Rotterdam: Sense.
- Amin, N., & Ramrathan, P. (2009). Preparing students to teach in and for diverse contexts: a learning to teach approach. *Perspectives in Education*, 27(1), 69-77.
- Artiles, A., Kozleski, E., & Waitoller, F. R. (2011). Introduction. Equity in inclusive education. In A. Artiles; E. Kozleski & F. R. Waitoller (Eds.). *Inclusive Education:*Examining Equity on Five Continents (pp.1–14). Cambridge: Harvard Education Press.

- Avramidis, E., Bayliss, P., & Burden, R. (2000). A Survey into Mainstream Teachers'

 Attitudes Towards the Inclusion of Children with Special Educational Needs in the

 Ordinary School in one Local Education Authority. *Educational Psychology*, 20(2),
 191-211.
- Banks, J., Cochran-Smith, M., Moll, L., Richert, A., Zeichner, K., LePage, P., . . . Duffy, H.
 (2005). Teaching Diverse Learners. In L. Darling-Hammond & J. Bransford (Eds.),
 Preparing teachers for a changing world: What teachers should learn and be able to do. San Fransisco: Jossey-Bass.
- Bernstein, B. (2000). *Pedagogy, symbolic control and identity: theory, research and critique* (revised edition). Lanham: Rowman and Littlefield.
- Black-Hawkins, K., & Florian, L. (2012). Classroom teachers' craft knowledge of their inclusive practice. *Teachers and Teaching: theory and practice*, 18(5), 567-584.
- Brantlinger, E. (2003). *Dividing classes*. New York: Routledge.
- Brantlinger E. (2006). The big glossies: How textbooks structure (special) education. In E. Brantlinger (Ed.), *Who benefits from special education? Remediating (fixing) other people's children* (pp. 45 76). Mahwah: Lawrence Erlbaum Associates Inc.
- Bronfenbrenner, U. (1992). Ecological systems theory. London: Jessica Kingsley Publishers.
- Carrington, S. (1999). Inclusion needs a different school culture. *International Journal of Inclusive Education*, 3(3), 257-268.
- Carroll, A., Forlin, C., & Jobling, A. (2003). The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. *Teacher Education Quarterly*, 30(3), 65-79.
- Cochran-Smith, M. (2004). Walking the road: Race, diversity, and social justice in teacher education. New York: Teachers College Press.

- Cochran-Smith, M., Shakman, K., Jong, C., Terrell, D. G., Barnatt, J., & McQuillan, P. (2009). Good and Just Teaching: The Case for Social Justice in Teacher Education.

 American Journal of Education, 115(3), 347-377.
- Cook, B. G. (2002). Inclusive Attitudes, Strengths, and Weaknesses of Pre-service General Educators Enrolled in a Curriculum Infusion Teacher Preparation Program. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 25(3), 262-277.
- Cook, B. G., & Schirmer, B. R. (2003). What Is Special About Special Education?: Overview and Analysis. *The Journal of Special Education*, *37*(3), 200-205.
- Cook, B. G., Tankersley, M., Cook, L., & Landrum, T. J. (2008). Evidence-Based Practices in Special Education: Some Practical Considerations. *Intervention in School and Clinic*, 44(2), 69-75.
- Dalton, E., Mckenzie, J. and Kahonde, C. (2012) The implementation of inclusive education in South Africa, *African Journal of Disability*, 1(1), 1 7.
- de Jager, T. 2013. Guidelines to assist the implementation of differentiated learning activities in South African secondary schools. *International Journal of Inclusive Education*, 17(1), 80–94.
- Department of Education (DoE). (2001). White Paper Six: Special needs education. Building an inclusive education and training system. Pretoria: Department of Education.
- Department of Higher Education and Training. (2011). National Qualifications Framework

 Act 67 of 2008: Policy on the Minimum Requirements for Teacher Education

 Qualifications. Pretoria: Government Gazette.
- Donohue, D., & Bornman, J. (2014). The challenges of realising inclusive education in South Africa. SA Journal of Education, 34(2), 1-14.

- du Toit, P. & Forlin, C. (2009). Cultural transformation for inclusion, What is needed? A South African perspective. *School Psychology International*, 30(6), 644—655.
- Engelbrecht, P., Nel, M., Nel, N. & Tlale, D. (2015). Enacting understanding of inclusion in complex contexts: classroom practices of South African teachers. *South African Journal of Education*, 35(3), 1–10.
- Engelbrecht, P., Nel, M., Smit, S., & van Deventer, M. (2015). The idealism of education policies and the realities in schools: the implementation of inclusive education in South Africa. *International Journal of Inclusive Education*, 1-16. doi: 10.1080/13603116.2015.1095250
- Ferguson, D. L. (2008). International trends in inclusive education: the continuing challenge to teach each one and everyone. *European Journal of Special Needs Education*, 23(2), 109-120.
- Ferri, B. A., & Connor, D. J. (2014). Talking (and not talking) about race, social class and dis/ability: working margin to margin. *Race Ethnicity and Education*, 17(4), 471-493.
- Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to trengthen and sustain teaching. *Teachers College Record*, 103(6), 1013-1055.
- Florian, L. (2012). Teacher Education for inclusion: A research agenda for the future. In C. Forlin (Ed.), *Future Directions for Inclusive Teacher Education: An international perspective* (pp. 212-220). London: Routledge.
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, *37*(5), 813-828.
- Florian, L., & Graham, A. (2014). Can an expanded interpretation of phronesis support teacher professional development for inclusion? *Cambridge Journal of Education*, 44(4), 465-478.

- Forlin, C. (Ed.). (2010a). Refaming teacher education for inclusion: Changing paradigms and innovative approaches. Abingdon: Routledge.
- Forlin, C. (2010b). Reframinig teacher education for inclusion. In C. Forlin (Ed.), *Teacher education for inclusion: Changing paradigm and innovative approaches* (pp. 3-12). London: Routledge.
- Forlin, C. (Ed.). (2012a). Future directions for inclusive teacher education. Abingdon: Routledge.
- Forlin, C. (2012b). Responding to the need for inclusive teacher education. In C. Forlin (Ed.), *Future directions for inclusive teacher education* (pp. 3-12). Abingdon: Routledge.
- Forlin, C., & Chambers, D. (2011). Teacher preparation for inclusive education: increasing knowledge but raising concerns. *Asia-Pacific Journal of Teacher Education*, 39(1), 17-32.
- Geldenhuys, J. & Wevers, N. (2013). Ecological aspects influencing the implementation of inclusive education in mainstream primary schools in the Eastern Cape, South Africa. South African Journal of Education, 33(3), 1–18.
- Harvey, M. W., Yssel, N., Bauserman, A. D., & Merbler, J. B. (2010). Preservice Teacher
 Preparation for Inclusion: An Exploration of Higher Education Teacher-Training
 Institutions. Remedial and Special Education, 31(1), 24-33.
- Hornby, G. (2010). Preparing teachers to work with parents and families of learners with SEN in inclusive schools. In C. Forlin (Ed.), *Teacher education for inclusion* (pp. 93-101). Abingdon: Routledge.
- Human Rights Watch (2015). "Complicit in Exclusion" South Africa's Failure to Guarantee an Inclusive Education for Children with Disabilities. Accessd from https://www.hrw.org/report/2015/08/18/complicit-exclusion/south-africas-failure-guarantee-inclusive-education-children

- Lancaster, J., & Auhl, G. (2013). Encouraging Pattern Language Development in a Preservice Inclusive Education Course: A Comparative Study. *International Journal of Disability, Development and Education*, 60(4), 363-381.
- Lancaster, J., & Bain, A. (2007). The Design of Inclusive Education Courses and the Self-efficacy of Preservice Teacher Education Students. *International Journal of Disability, Development and Education*, 54(2), 245-256.
- Lewin, K. (2009). Access to education in sub-Saharan Africa: Patterns, problems and possibilities. *Comparative Education*, 45(2), 151-174.
- Lewis, A., & Norwich, B. (2005). Overview and discussion: overall conclusions. In A. Lewis & B. Norwich (Eds.), *Special teaching for special children* (pp. 206 221).

 Maidenhead: Open University press.
- Liasidou, A. (2012). *Inclusive education, politics and policymaking*. London: Continuum.
- Liston, D.P., Whitcomb, J.A., & Borko, H. (2006). Too little or too much: Teacher preparation and the first years of teaching. *Journal of Teacher Education*, 57(4), 351-359.
- Loreman, T. (2010). A content-infused approach to pre-service teacher preparation for inclusive education. In C. Forlin (Ed.), *Teacher education for inclusion* (pp. 56-64).London: Routledge.
- Morrow, W. (2007). Learning to teach in South Africa. Pretoria: HSRC Press.
- Nel, M., Engelbrecht, P., Nel, N., & Tlale, D. (2013). South African teachers' views of collaboration within an inclusive education system. *International Journal of Inclusive Education*, 18(9), 903-917.
- Nieto, S., & McDonough, K. (2011). "Placing equity front and center" revisited. In A. Ball & C. Tyson (Eds.). *Studying diversity in teacher education* (pp. 363-384). Lanham: Rowman & Littlefield Publishers.

- Ntombela, S. & Raymond, E. (2013). Inclusive education in South Africa and globally. . In C. Pienaar & E. Raymond (Eds). *Making Inclusive Education Work in Classrooms* (pp. 2–17). Cape Town: Pearson.
- O'Neill, J., Bourke, R., & Kearney, A. (2009). Discourses of inclusion in initial teacher education: Unravelling a New Zealand 'number eight wire' knot. *Teaching and Teacher Education*, 25(4), 588-593.
- Oliver, M. (1990). The politics of disablement: Critical texts in social work and the welfare state. London: Mac-Millan.
- Oswald, M., & Swart, E. (2011). Addressing South African Pre-service Teachers'

 Sentiments, Attitudes and Concerns Regarding Inclusive Education. *International Journal of Disability, Development and Education*, 58(4), 389-403.
- Pather, S. (2011). Evidence on inclusion and support for learners with disabilities in mainstream schools in South Africa: off the policy radar? *International Journal of Inclusive Education*, 15(10), 1103-1117.
- Pillay, J. & Terlizzi. M. (2009). A case study of a learner's transition from mainstream schooling to a school with special educational needs (LSEN): Lessons for mainstream education. South African Journal of Education, 29, 491-509.
- Reay, D. (2010). Sociology, social class and education In M. Apple, S. J. Ball & L. A.

 Gandin (Eds.), *The Routledge International Handbook of the Sociology of Education*(pp. 396-404). Abingdon: Routledge.
- Republic of South Africa (RSA). (2015). Revised Minimum Requirements for Teacher

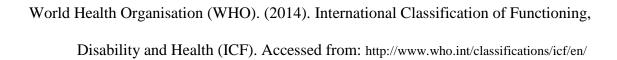
 Education Qualifications. Government Gazette No. 38487. Pretoria: Government

 Printing Works
- Rizvi, F., & Lingard, B. (2010). Globalizing education policy. Abingdon: Routledge.

- Rice, N. (2005). Guardians of tradition: presentations of inclusion in three introductory special education textbooks. *International Journal of Inclusive Education*, 9(4), 405-429.
- Rouse, M. (2010). Reforming Initial Teacher Education: A Necessary but Not SufficientCondition for Developing Inclusive Practice. In C. Forlin (Ed.), *Teacher education for inclusion* (pp. 47–55). Abingdon: Routledge.
- Rusznyak, L. (2012). Summative assessment of student teaching: A proposed approach to quantifying practice. *Journal of Education*, *56*, 91-115.
- Rusznyak, L., & Walton, E. (2014). Using metaphors to gain insights into South African student teachers' initial and developing conceptions of being a teacher. Education as Change, 18(2), 335–355.
- Sayed, Y., Subrahmanian, R., Soudien, C., Carrim, N., Balgopalan, S., Nekhwevha, et al. (2007). *Education Exclusion and Inclusion: Policy and Implementation in South Africa and India*. London, DFID. Online: http://www.dfid.gov.uk/pubs/files/researching-the-issues-72.pdf [Accessed 26 December 2014].
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O.-P. (2011). Understanding teachers' attitudes and self-efficacy in inclusive education: implications for pre-service and inservice teacher education. *European Journal of Special Needs Education*, 27(1), 51-68.
- Scorgie, K. (2010). Fostering empathy and understanding: a longitudinal case study pedagogy. In C. Forlin (Ed.), *Teacher education for inclusion* (pp. 84-92). Abingdon: Routledge.
- Sharma, U., Simi, J., & Forlin, C. (2015). Preparedness of Pre-service Teachers for Inclusive Education in the Solomon Islands. *Australian Journal of Teacher Education*, 40(5).
- Slee, R. (2010). Political economy, inclusive education and teacher education. In C. Forlin (Ed.), *Teacher education for inclusion* (pp. 13–22). Abingdon: Routledge.

- Slee, R. (2011). *The irregular school*. London: Routledge.
- Stella, C. S. C., Forlin, C., & Lan, A. M. (2007). The Influence of an Inclusive Education

 Course on Attitude Change of Pre-service Secondary Teachers in Hong Kong. *Asia-Pacific Journal of Teacher Education*, 35(2), 161-179.
- Taylor, N. & Taylor, S. (2013). Teacher knowledge and professional habitus. In N. Taylor, S. van der Berg & T. Mabogoane (Eds.). Creating effective schools (pp.204–233). Cape Town: Pearson.
- Varcoe, L., & Boyle, C. (2013). Pre-service primary teachers' attitudes towards inclusive education. *Educational Psychology*, 34(3), 323-337.
- Waitoller, F. & Artiles, A. (2013). A Decade of Professional Development Research for Inclusive Education: A Critical Review and Notes for a Research Program. Review of Educational Research, 83(3), 319–356.
- Waitoller, F. R., & Kozleski, E. (2010). Inclusive professional learning schools In C. Forlin (Ed.), *Teacher Education for Inclusion* (pp. 65–73). London: Routledge.
- Walton, E. (2015). Teacher education for inclusion: Practical or professional knowledge?Paper presented at the First International Legitimation Code Theory Colloquium held in Cape Town, South Africa, June 18-19.
- Walton, E., & Rusznyak, L. (2014). Affordances and limitations of a special school practicum as a means to prepare pre-service teachers for inclusive education. International Journal of Inclusive Education, 1-18. doi: 10.1080/13603116.2013.872203
- Westbrook, J., & Croft, A. (2015). Beginning to teach inclusively: An analysis of newly-qualified teacher pedagogy in lower primary classes in Tanzania. *Teaching and Teacher Education*, 51, 38-46.



¹ The following links show BEd courses in South African universities where the identification of barriers to learning and pedagogical responses in the light of these barriers is foregrounded:

https://www.nmmu.ac.za/Courses-on-offer/Degrees,-diplomas---certificates/Module-Details.aspx?appqual=NL&qualcode=30123&faculty=1300&modulecode=PGED301&deliverymethod=72;

http://brochure.unisa.ac.za/myunisa/data/subjects/Study%20units%20for%20BEd%20Early%20Childhood%20 Development%20Foundation%20Phase.pdf;

http://www.cput.ac.za/storage/study_at_cput/prospectus_and_handbook/prospectus_education_2015