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Trends and patterns in the use of grounded theory in educational research in South Africa¹

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Abstract

The calls for the decolonisation of knowledge in South Africa is a challenge that educational researchers cannot ignore. The problem is, however, that research and knowledge development traditions in education have not contributed in significant ways to enhancing cognitive justice in society. The focus of this article is on grounded theory, a research methodology tradition that is assumed to be relevant and valuable to the possibilities of transformational changes in education because it allows, by design, for research that produces theories in ways that are inductive, data based, and bottom-up. The purpose is to review research in education in South Africa, since 1994, and to identify trends and patterns in order to understand how grounded theory methods contribute to the development of new education theories and to transformation. We have reviewed articles published during the period 1994–2016 and found that they cover different academic domains. We also found that the majority of studies utilised grounded theory methodology meticulously and with varied levels of sophistication, leading to around one third of the studies articulating theories in the comprehensive sense of the word. The findings are discussed with reference to the role of educational research in the changing times of decolonisation. Recommendations are made to improve educational research: to be more relevant and transformative.

Keywords: cognitive justice, decolonisation of knowledge, grounded theory, educational research, transformative grounded theory

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Introduction

Educational research in South Africa is faced with a number of challenges such as those that touch on transformation issues with respect to decolonisation of knowledge, the widening of opportunities for the marginalised, and the implementation of programmes on participatory development (Mbembe, 2016; Patel, 2014). These calls encourage the rethinking of knowledge production that could help to get rid of the dominant top-down research paradigms (van der Westhuizen, 2017). The endeavour is about finding ways in which research, as knowledge production, can contribute to the validity and dominance of diverse knowledge—knowledge that is of civic origin and basis and can benefit, in direct ways, all of humanity (Ndimande, 2012).

Key to the current debates about changes in education systems, both internationally and in South Africa, are questions about knowledge development through research (Lather, 2004a). These include concerns raised about knowledge traditions in education (Lincoln & González y González, 2008), which have been pointed out as problematic by a number of international scholars (Gill, Purru, & Lin, 2012; Lather, 2004b).

The challenge of rethinking educational research needs to be considered in terms of relevance and authenticity of research traditions and methodologies (Fataar, Robinson, & Daniels, 2017). The insinuation is that there is something wrong with current practices of knowledge production in educational research characterised by the dominance of paradigms and methodologies that promote what Odora Hoppers (2014) has described as *cognitive injustice*. We live in times when education needs to promote fairness and justice and move beyond the Western, European modernistic science of truth. Therefore, the call is to integrate into the current body of knowledge, knowledge that is part of livelihoods and local, indigenous and community knowledge, which should not be subjugated (Visvanathan, 1998, 2009) but be allowed to grow without duress (Odora Hoppers, 2017).

Education in South Africa, post 1994, is still hampered by the lack of cognitive justice as has been argued convincingly by several authors in South Africa, including (Fataar, 2000; Fataar & Subreenduth, 2015; Keet, 2014; Odora Hoppers, 2014). Recent reviews of grounded theory studies in South Africa have argued in favour of the possibility and value of grounded theory methods for research in management (Burden & Roodt, 2007), career research (Janse van Rensburg & Ukpere, 2014), occupation studies (Martin & Barnard, 2013), and in the social sciences (Corbin & Strauss, 1990; Ngulube, Mathiapa, & Gumbo, 2015; Schurink, 2003). These authors claimed that grounded theory methods are valuable because of the benefits of theory building from the bottom up, and on account of the fact that ground theory works inductively, is less theory bound, often conducted in local languages, and can capture real life experiences and narratives (Charmaz, 2006; Kolb, 2012).

Grounded theory, as a research methodology tradition, has seen varied forms and there have been changing conceptions and utilisations of grounded theory methods (Charmaz, 2007; Glaser, 1978; Glaser & Holton, 2004), including changes from positivist to constructivist interpretations (Burden & Roodt, 2007; Corbin & Strauss, 1990). More recently, critical theory perspectives of grounded theory methodology have been articulated by authors such as Charmaz (2017), including reconceptualisations in terms of the decolonisation theory (Lincoln & González y González, 2008) and methodological advancements towards what is called *transformational grounded theory* (Redman-MaLaren & Mills, 2015).

We do this review from the premise that grounded theory, by design, would make a significant contribution towards the transformation and decolonisation of educational knowledge. One of the reasons why the rethinking of educational research needs to be taken seriously is the reality that educational research, as a knowledge production enterprise, is of systemic importance—it is central to and impacts on educational thinking, policies, and practices in various sectors of society, including schooling, higher education, and community education and training. Educational research is central to human development and the imperative of government to advance citizenship, social development, and education for all (Sayed, Motala, & Hoffman, 2017).

Given the contextual challenges in education in terms of calls for cognitive justice and decolonisation of knowledge, and the promising advances in conceptions of transformational grounded theory, this study is a review of grounded theory studies in South Africa in order to establish the value of grounded theory methodology for educational change and decolonisation of knowledge.

Research Questions and Objectives

In view of the above, the study questions and objectives follow. This review was designed to answer the following questions:

- What was the frequency of articles published in education journals by year, location, and domain of foci over a period of 22 years (1994–2016)?
- What were the trends and patterns in terms of domain, theory foci, and artefacts in the publications?
- What are the levels of theorising in the different publications?
- What is the practice or utility value of the publications in terms of the education transformation agenda?

The objectives are as follows:

- To present the frequency of articles published in education journals by year, location, and domain of foci over the period 1994–2016.
- To identify the trends and patterns in terms of domain, theory foci, and artefacts in the publications.
- To discuss the levels of theorising in the different publications.
- To discuss the practice or utility value of the publications in terms of the education transformation agenda.

The Perspectives and Methods in Grounded Theory Research

Credit for the development of grounded theory methodologies in the human and social sciences can go to a number of authors and to the prominent publications that captured the original intentions, reconceptualisation, criticisms, and possibilities of this theory for the 21st century researcher. These publications include the original, “classic” texts by Glaser and Strauss (1965) and Glaser (1978), and subsequent additions and revisions by Corbin and Strauss (1990), Strauss and Corbin (1994), Glaser and Holton (2004), Charmaz (2007), Charmaz (2014), and others.

From a cursory review of international literature on grounded theory, one may distinguish between two strands, namely, interpretivist grounded theory and grounded theory studies from social justice research paradigms. The former seems to be the mainstream, dominant type of grounded theory

studies and include positivist grounded theory and constructivist grounded theory (Birks & Mills, 2015), while the latter and more recent interpretations have been articulated by authors such as Charmaz (2005), Redman-MacLaren and Mills (2015), and Charmaz (2017). Recent reviews of the value of grounded theory in educational research have called for the inclusion of matters of paradigmism and action theory by drawing on texts by Mertens (2007), Smith (2013), Lincoln and González y González (2008), Morse et al. (2016), and others. These calls are about the need to use social research as tools for promoting positive social transformation in society.

Across approaches and paradigms, grounded theory research works according to a specific methodology aimed at theory development; it seeks to develop theory that is grounded in data that is gathered and analysed systematically. It involves processes of data collection and preliminary analysis that take place prior to consulting and incorporating research literature. Grounded theory research is characterised by:

- Multiple stages of collecting, refining, and categorising the data (Strauss & Corbin, 2008).
- Constant comparisons and application of theoretical sampling (Creswell, 2007; Locke, 1996; Strauss & Corbin, 2008; Taylor & Bogdan, 1998).
- Data collection and theory gathering that are regarded as two parts of the same process (Glaser & Strauss, 1967) and are deliberately fused so that initial data analysis can be used to shape continuing data collection.
- Data collection that requires increasing the density and saturation (no new information) of recurring categories as well as following up on unexpected findings.
- Constant comparison that involves methods to develop concepts from the data by coding and analysing at the same time (Taylor & Bogdan, 1998). It "combines systematic data collection, coding, and analysis with theoretical sampling in order to generate theory that is integrated, close to the data, and expressed in a form clear enough for further testing" (Conrad, Neumann, Haworth, & Scott, 1993, p. 280), while integrating categories, delimiting the theory, and writing the theory (Glaser & Strauss, 1967, p. 105).

The perceived value of grounded theory research is in the expectation that the researcher continually reinforces theory generation through the process of theoretical sampling, accepting that a substantive theory will emerge through constant comparison (Glaser & Strauss, 1967). Document collection and analysis are aimed at gaining a deeper understanding and description of the participants' convictions, conduct, and experiences (Bogdan & Biklen, 2006), and also to establish trustworthiness (Glesne & Peshkin, 1992).

The interactive nature of interviewing is a typical practice in grounded theory research (Strauss & Corbin, 2008). The researcher attempts to analyse data for purposes of developing a theoretical interpretation of what is acquired through observation (Kvale & Brinkmann, 2008). In grounded theory research, coding methods include open coding, axial coding, and selective coding (Strauss & Corbin, 2008), which require the researcher to continuously draw comparisons and ask questions about what is and is not understood. Axial coding involves making connections between categories possible by means of the inductive and deductive thinking processes of relating subcategories to a category (Strauss & Corbin, 2008).

Selective coding refers to the process of identifying and choosing the core category, systematically connecting it to other categories, validating those similarities and relationships, and then completing

categories that need further refinement and development (Strauss & Corbin, 2008). The grounded theory can emerge only after the process of crucial integration and weaving and refining of all the major categories into the selection of a core category has been finalised (Strauss & Corbin, 2008). In grounded theory, research theories are defined in terms of propositions or sets of propositions, which are used to explain observations (Charmaz, 1990). The process continues until no new insights are revealed into these relationships in terms of the core idea. Only then can a new theory be defined. Once a theory has been arrived at, the process itself is complete. No testing of the theory is required to confirm its status, as validly grounded (Strauss & Corbin, 2008). Above all, however, one of the hallmarks of the transformative component of grounded theory is that the theory arrived at needs to make positive contributions in the lives of the research participants concerned (Morse et al., 2016).

Conceptual Framework

The utilisation of grounded theory methods varies in terms of the level and form of theory developed. The processes of theorising in grounded theory research include working from seed concepts to slices of data, to categorisation, to establishing relations between categories (Glaser & Strauss, 1967), and then to formulating theory resulting from levels of abstraction (Urquhart, Lehmann, & Myers, 2010). This means that the level of theory produced is directly related to the extent to which data is analysed and conceptualised. In this context, Urquhart et al.'s (2010) model (Figure 1) proves suitable as the framework for reviewing the publications. This model is based upon the earlier distinctions made by Strauss (1987) and Glaser and Strauss (1967).

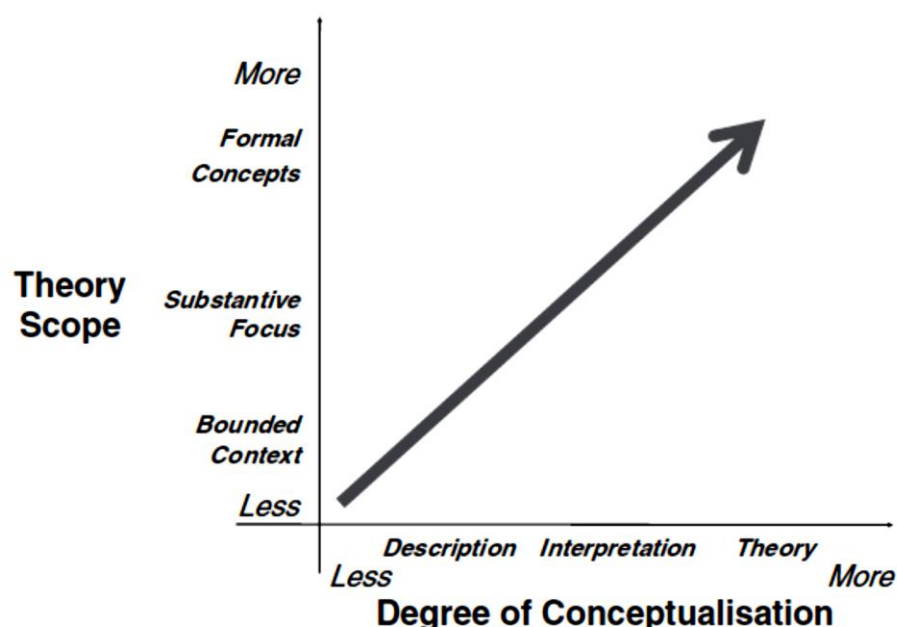


Figure 1: The Urquhart et al. (2010, p. 366) Model as the Conceptual Framework

Two dimensions of theorising are distinguished in the above model, namely, the degree of conceptualisation and theory scope. The degree of conceptualisation deals with the level of analysis, while the theory scope deals with the outcome of theory building.

The Urquhart et al. (2010) model is relevant to the problematic and research questions of this inquiry. It allows for the evaluation of the transformative value of grounded theory studies and the decolonisation of knowledge imperatives in educational research (refer to Bhaskar, 2009, 2013; Charmaz, 2017; Hockey, 2010; Keet, 2014; Lincoln & González y González, 2008; Ndimande, 2012; Patel, 2014; Popkewitz, 1997, 2015; Redman-MacLaren & Mills, 2015; Sayed et al. 2017; Smith, 2013;

and Visvanathan, 2009). Our argument is that such imperatives are advanced in cases where grounded theory studies involved the use of concepts and categories in data up to the level of theoretical coding as proposed by Charmaz (2017). In this way, theorising is done formally by means of a bottom-up process, which is the ultimate purpose of grounded theory research. On one level, this is about enriching existing Western-oriented theories and, on another level, it is about replacing current mainstream theories with local and indigenous theories.

Methodology

The procedure of data collection and analysis was undertaken in terms of the four objectives of this study: presenting the frequency of grounded theory-informed articles published in education journals by year, location, and domain of foci over the period 1994–2016 ; identifying the trends and patterns in terms of domain, theory foci, and artefacts produced over the period; discussing the levels of theorising in the different publications; and, finally, discussing the practice or utility value of grounded theory-based research in education.

The publications were selected to include all empirical studies of grounded theory published in South Africa over the period 1994 to 2016—the period of time after the introduction of democratic changes in government and in the education system. We selected the publications by searching data bases using the following keywords: *grounded theory* and *education* and *South Africa*. We took the inclusion of grounded theory as keyword as an indication that the studies were designed methodologically as grounded theory studies. The selection of articles included all publications we could find in academic journals, locally and internationally, in the following electronic data bases: Ebscohost, Academic Search Complete, Africa-wide Information, Education full text (HW Wilson), e-journals, and SciELO Scientific Library Online. The selection excluded master’s and doctoral reports and documents in institutional repositories.

The descriptive analysis involved frequency counts of articles according to publication year, the location of the journal (South African or international), the academic domain of the study (research) and the education and theory level. The data will be reflected in the figures and tables to follow. A qualitative summary was done in table form to include descriptions of grounded theory methodology preferences, theory foci, and artefacts produced. This involved summarising content themes based on titles, abstracts, keywords, statements of purpose, and findings; this enabled us to describe trends and patterns in theory foci and artefacts produced. The latter was done to consider the outcomes and utility value of the publications.

In reviewing the grounded theory methods used, we drew on the criteria of contextualisation, purposeful participation, accounting for power issues, and the use of decolonisation methods as per the transformative grounded theory framework of Redman-MacLaren and Mills (2015).

For the evaluation of the use of grounded theory methods, we used the framework developed by Urquhart et al. (2010). This framework defines the criteria for judging the extent of theorising on the three levels as depicted in Figure 1:

- Level 1 theorising: Bounded context description
 - Descriptive analysis—identifying concepts and categories
 - Theories in bounded context—seed concepts described in bounded context of a specific area of inquiry, with little empirical base and anecdotal evidence

- Level 2 theorising: Substantive focus interpretation
 - Interpretation of categories—drawing on selective coding and interaction between categories
 - Theories with substantive focus with extended explanatory and predictive power—based on significant empirical support
- Level 3 theorising: Formal concepts theory
 - Theoretical coding—inferential and/or predictive statements; explicating relations between interpretive constructs by means of memos
 - Formal theory—using formal concepts applicable to several substantive areas

The Findings

Frequency of the Articles Published

One important finding was that the frequency of articles varied by year, location, and domain of foci over the 22-year period (1994–2016). In Figure 2 and Tables 1 and 2, the frequency counts are reported.

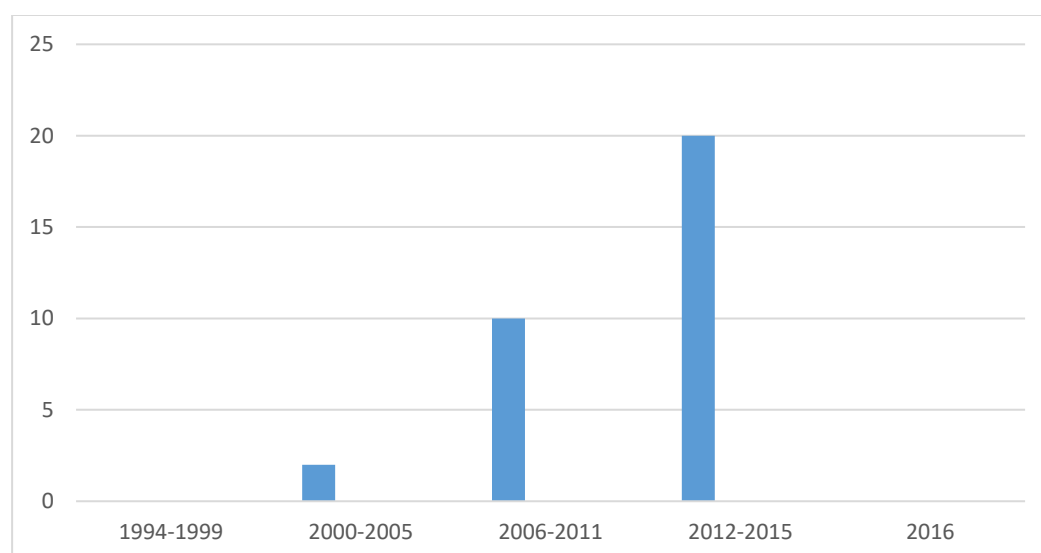


Figure 2: Number of Articles per Year

Figure 2 shows that between 1994 and 1999 no publications made use of grounded theory. From 2000 to 2005, only two publications made use of grounded theory. From 2006 to 2011, 10 publications made use of grounded theory. The data shows that the majority of articles were published in the period between 2012 and 2015, namely 19 articles; none were published in 2016. The number of publications by year and education level is reported in Table 1.

Table 1: Articles by Publication Year and Education Level

Publication Year	Education Level			Total
	Higher Education	School	Community	
1994–1995				
1996–1997				
1998–1999				
2000–2001				
2002–2003				
2004–2005	Kannemeyer		Mtshali	2
2006–2007			van Wyk	1
2008–2009	Mgqwashu	Ahmed	Mtshali Phasha	4
2010–2011	Cilliers Lemmer		Gibbs Mokgatle-Nthabu Ngcobo	5
2012–2013	Cilliers Cilliers Nompula Postma	Bhana Morgan	Lemmer Vandeyar	8
2014–2015	Brown Idahosa Mayer Pilkington van der Vyver Vandeyar Weda	du Plessis Joubert Msomi	Phiri	11
2016				
Total	15	6	10	31

Of the articles published in the period between 2012 and 2015, 11 of the 15 publications were in higher education. This was followed by studies in the area of community research (10).

The frequency of publications, by year and location, is reported in Table 2.

Table 2: Articles by Year and Location of Publication

Publication Year	Location of Publication	
	South Africa	International
1994–1995		
1996–1997		
1998–1999		
2000–2001		
2002–2003		
2004–2005	Mtshali	Kannemeyer
2006–2007	van Wyk	
2008–2009	Mgqwashu Mtshali	Ahmed Phasha
2010–2011	Lemmer Mokgatle-Nthabu	Cilliers Gibbs Ngcobo
2012–2013	Nompula Postma Bhana	Cilliers Cilliers Morgan Lemmer Vandeyar
2014–2015	Brown Idahosa Mayer Msomi	du Plessis Joubert Phiri Pilkington van der Vyver Vandeyar Weda
2016		
Total	13	18

Table 2 shows that 13 articles were published in local journals and 18 in international journals. This classification can be taken as an indication of the need to promote grounded theory studies done in South Africa.

The Findings in Terms of Five Domains on the Two Axes in the Urquhart Model

The findings from the content analysis are that the total of 31 publications can be categorised in the following five academic domains:

A: Teacher professional learning ($n = 7$)

- including the themes of teacher academic literacy, teacher professional identity formation, professional development, and practice change

B: Student learning ($n = 8$)

- consisting of online learning in higher education, assessment in medical education, academic success in higher education, and collaborative text creation

C: School curriculum and pedagogy ($n = 4$)

- comprising history textbook analysis, teaching and learning in creative arts, informational needs, and understanding mathematics concepts

D: Health and well-being ($n = 9$)

- including HIV & AIDS education, community-based nursing education, sexual abuse and school performance, homophobia in schools, youth care giving, youth programmes in rural areas, HIV & AIDS home education, and well-being development

E: Leadership and management ($n = 3$)

- containing leadership in urban multicultural schools and female leadership in higher education

Attention is now turned to the teacher professional learning theme.

Theorising and artefact produced in Domain A: Teacher professional learning.

In Table 3, we report on the theory foci and artefact produced in the first domain of teacher education.

Table 3: Theorising and Artefact Produced in Domain A: Teacher Professional Learning

Author	Theory Focus	Artefact Produced
Mgqwashu, 2009	Pedagogy for the development of academic literacy of educators	Genre pedagogy described
Lemmer, 2011	Teacher preparation for parent involvement	Pedagogic guidelines
Vandeyar, 2013	Policy formulation	Teacher ICT communities in policy implementation
Msomi, 2014	Teacher professional learning	Teacher professional learning framework
Vandeyar, 2014	Teachers professional identity formation	Guidelines for professional identity reconstruction of immigrant teachers
Weda, 2014	Teacher migration	Guidelines for improving effective teacher migration
Brown, 2015	Foundation phase teacher professional development and practice change	Reflexive practice model of teacher professional development

Table 3 shows the range of theory foci, from identity formation and professional learning to policy formulation. The artefacts produced ranged from frameworks to pedagogy as well as guidelines for identity development.

Next attention is given to the student learning component.

Theorising and artefact produced in Domain B: Student learning

Table 4 displays the theory foci, which include learning, academic success, and assessment. The artefacts produced included models of assessment, policy, and pedagogy guidelines for online learning.

Table 4: Theorising and Artefact Produced in Domain B: Student Learning

Author	Theory Focus	Artefact Produced
Kannemeyer, 2005	Understanding of mathematics concepts by first year students	Reference framework for clarifying mathematics understanding
Cilliers, 2010, 2012, 2012	Assessment in medical education	A model of how an assessment system influences student learning over time
Idahosa, 2014	Academic success in higher education	Implications for admissions policies of universities and accounting for the academic success of low entry-level students
Pilkington, 2014	Collaborative text creation	Online preferences for text creation among students
Postma, 2013	Online learning in higher education	Understanding of patterns of exclusion in online discussion forums
Joubert, 2015	Education for democratic citizenship	Guidelines for literacy teaching

Following, the findings on school curriculum and pedagogy are reported.

Theorising and artefact produced in Domain C: School curriculum and pedagogy

In Table 5, the theory foci include textbook construction, learning needs, and pedagogy. The artefacts include reference frameworks, tools for textbook analysis, and pedagogic guidelines.

Table 5: Theorising and Artefact Produced in Domain C: School Curriculum and Pedagogy

Author	Theory Focus	Artefact Produced
Morgan, 2013	History textbook analysis	Tools for history textbook analysis
Nompula, 2012	Teaching and learning of creative arts	Pedagogy for the integration of arts subjects—practice and theory
Phiri, 2014	Theory of ICT use in rural education	Guidelines for the use of tablets in rural education
van der Vyver, 2015	Informational needs of school children	Guidelines for meeting short-term educational needs

Next, the findings on health and well-being aspects are reported.

Theorising and artefact produced in Domain D: Health and well-being

In Table 6, the theory foci include HIV & AIDS, community education, and youth care. The artefacts include guidelines, concept clarification, and process guidelines for youth care.

Table 6: Focus of Theorising and Artefact Produced in Domain D: Health and Well-Being

Author	Theory Focus	Artefact Produced
Mtshali, 2005, 2009	Community-based education in nursing	Mechanisms for decision making conditions for CBE clarified
van Wyk, 2007	School–community partnership	Guidelines for schools
Phasha, 2008	Sexual abuse and school performance	Description of factors that trigger emotions
Ahmed, 2009	HIV education practices	Comprehensive approach for sexual health intervention programmes
Gibbs, 2010	Effectiveness of HIV & AIDS youth programmes in rural areas	Clarifying complexities of youth friendly HIV & AIDS programme implementation
Mokgatle-Nthabu, 2011	Well-being in youth headed households	Guidelines for school support
Bhana, 2012	Homophobia in schools	Guidelines for working against the climate of homophobia
Lemmer, 2013	Father involvement in child education	Education strategies

Theorising and artefact produced in Domain E: Leadership and management

The theory foci in Table 7 are about leadership in schools and higher education. The two sets of artefacts identified are guidelines for multicultural education and female leadership perspectives.

Table 7: Focus of Theorising and Artefact Produced in Domain E: Leadership and Management

Author	Theory Focus	Artefact Produced
Ngcobo, 2010	Leadership in rural schools	Practice framework
du Plessis, 2015	Leadership in urban multicultural schools	Guidelines how educational leaders may overcome challenges in multicultural education
Mayer, 2015	Female leadership in higher education	Psycho-spiritual perspective articulated

From the summaries of the theory foci and artefacts by academic domain, we observe similarities, differences, and patterns, which we will discuss in the next section.

Levels of Theorising by the Authors

Another interesting finding relates to the different ways in which the authors related to the three levels of theorising. The common finding was that the levels of theorising vary by author. Table 8 provides information on this aspect of the findings.

Table 8: Publications by Levels of Theorising by Author

Publication	Level 1 Theorising Bounded Context Description	Level 2 Theorising Substantive Focus Interpretation	Level 3 theorising Formal Concepts Theory
Kannemeyer, L. (2005)	X		
Mtshali, G. (2005)		X	
van Wyk, N., & Lemmer, E. (2007)	X		
Phasha, T. N. (2008)	X		
Ahmed, N., Flisher, A. J., Mathews, C., Mukoma, W., & Jansen, S. (2009)	X		
Mgqwashu, E. M. (2009)	X		
Mtshali N. 2009		X	
Cilliers, F. J., Schuwirth, L. W., Adendorff, H. J., Herman, N., & van der Vleuten, C. P.			X
Gibbs, A., Campbell, C., Maimane, S., & Nair, Y. (2010)	X		
Ngcobo, T., & Tikly, L. P. (2010)		X	
Lemmer, E. (2011)			X
Mokgatlhe-Nthabu, M., van der Westhuizen, G., & Fritz, E. (2011)			X
Bhana, D. (2012)	X		
Cilliers, F. J., Schuwirth, L. W. T., & van der Vleuten, C. P. M. (2012)		X	
Cilliers, F. J., Schuwirth L. W., Herman, N., Adendorff, H. J., & van der Vleuten, C. P.		X	
Nompula, Y. (2012)	X		
Lemmer, E. M. (2013)			X
Morgan, K., & Henning, E. (2013)			X
Postma, L., Blignaut, A. S., Swan, K., & Sutinen, E. A. (2013)		X	
Vandeyar, T. (2013)	X		
Idahosa, G. & Vincent, L. (2014)			X
Msomi, W. N., van der Westhuizen, G. J. & Steenekamp, K. (2014)			X

Phiri, A. C., Foko, T. & Mahwai, N. (2014)			X
Pilkington, C., & Sanders, I. (2014)	X		
Vandeyar, S., van Vandeyar, T., & Elufisan, K. (2014)	X		
Weda, Z. L., & Lemmer E. M. (2014)			X
Brown, B., Wilmot, D., & Ash, M. P. (2015)		X	
Du Plessis, E., & Marais P. (2015)			X
Joubert, I., Phatudi, N., Harris, T., & Moen, M. (2015)	X		
Mayer, C. H., Surtee, S., & Barnard, A. (2015)			X
Van der Vyver, A. G., & Marais, M. (2015)		X	
TOTAL	12	8	11

This Table above indicates that of the 31 publications, 12 utilised grounded theory on Level 1, eight on Level 2, and 11 on Level 3. The level of theorising seems to vary irrespective of domain.

The Utility Value of the Artefacts Across the Domains

The main finding is that artefacts were produced in all studies, and ranged from guidelines to instruments, conceptions, and frameworks (refer to Tables 3–7, where we summarised artefacts by domain).

In the case of studies on teacher professional learning, the artefacts included practice guidelines, teacher learning principles, and guidelines for the establishment of communities of practice. Studies on student learning produced artefacts such as assessment models, admission policy, and mathematics understanding. Artefacts from studies on school curriculum and policy include guidelines and principles for text book analysis and the use of tablets. In the case of health and well-being, the artefacts include guidelines for practice, education strategies, and youth programmes. Lastly, leadership and management artefacts highlighted practice strategies and theoretical perspectives. From this brief outline, it seems that grounded theory studies across the domains favour practice work and changing perspectives on education

Discussion, Conclusion, and Recommendations

The purpose of this review was to assess the trends and patterns of grounded theory studies since 1994, and to make recommendations about the use of grounded theory in these times of change. The review points to the need to rediscover the possibilities imbedded in grounded theory approaches and, with the focus on transformative grounded theory, the value of this theory for social change and transformation agendas will become clearer. Transformative grounded theory represents a rethinking of the paradigms and practices of grounded theory and has to be considered seriously in the South Africa context, given the imperatives of cognitive justice.

The period under review saw a total of 31 studies over a period of 22 years, with no studies published during the first decade of democracy in South Africa and a total of 24 published from 2010 to 2015, as pointed out in Table 2. The numbers seem low; however, over the last 10 years there seems to have been a slight increase in publications using grounded theory. This is perhaps an indication of growing support for the view that grounded theory is indeed an educational research methodology that has the potential of contributing to knowledge democracy, thus, allowing space for the educational knowledge held by people at a local and indigenous level.

This review included all published studies that made explicit reference to grounded theory as research design, as stipulated in the research methodology. We therefore assumed that studies utilised the standard grounded theory methods of data gathering and analysis, including interviews, observation, field notes, and questionnaires. All the studies also referred to the original methodology authors including Glaser and Strauss (1967), and Straus and Corbin (1994). There is, however, variation in terms of the level of sophistication with which authors applied the grounded theory methods, content analysis, coding, and categorisation. The exception is that the use of memo writing was limited to one third of the studies. This finding correlates with the finding that these were the studies that produced deeper levels of theorising. This means that authors tended to underestimate the potential transformative value of grounded theory work, which is associated with innovation in theory construction. Instead, two thirds of the studies were quite modest and limited to using grounded theory for purposes of understanding and describing empirical phenomena.

A finding that is worth further consideration, is that the majority of the research that utilised grounded theory was in the domain of health and well-being, followed by the student learning domain and then teacher education (higher education), and were published mostly internationally. Between higher education, community, and school, it is worth noting that a limited amount of research was done in schools.

As a general finding, the grounded theory findings across the five domains have an improvement focus. This means they serve the intention of doing education better, in other words, improving the quality of education. This is made possible by the impressive range of artefacts produced by each study, across domains. What is clear is that there are a limited number of grounded theory studies on transformation. The exception is Domains D and E, where the focus was on social problems and social change issues.

Our review revealed insights with regard to grounded theory methods and the levels of theorising (see Table 8). The use of methods seems to range from less to more sophisticated, with some studies focusing on generic qualitative research methods, labelling that as grounded theory. An example is the publication by Mgqwashu (2009), "Rethinking Academic Literacy for Educators: Towards a Relevant Pedagogy." Reference to the transformative value of grounded theory studies has been made in a limited number of studies. The three studies with a transformative focus should be highlighted, these are du Plessis and Marais (2015), "A Grounded Theory Perspective on Leadership in Multicultural Schools (Level 3), Ngcobo and Tikly (2010), "Key Dimensions of Effective Leadership for Change: A Focus on Township and Rural Schools in South Africa" (Level 2), and Joubert, Phatudi, Harris, and Moen (2015), "Education for Democratic Citizenship Through a Literacy-Based Approach: A Case of South African Township Children" (Level 1).

Variation in conceptions of theory were found—from initial limited theoretical understandings, to adding to existing theories, to a fully-fledged theory. Some studies clearly made contributions to the advancement of grounded theory methodologies, for instance, Postma, Blignaut, Swan, and Sutinen (2013). This article contributes to qualitative methodology in applying the generic paradigmatic

conditions within grounded theory, and illustrates both the interrelatedness and the cyclic nature of the conditions within the specific paradigms of participants.

Memo writing is a critical feature of grounded theory methods; several researchers stopped short of getting into the second level of memo writing. We found one third of the studies to have produced deeper levels of theorising (Level 3). From these Level 3 theorising studies, one stands out as an example of grounded theory, going all the way to deeper theory formulation in the fullest sense—described as originally intended by Glazer and Strauss (1967) and more recently by Charmaz (2017)—namely, Mayer, Surtee, and Barnard (2015), “Women Leaders in Higher Education: A Psycho-Spiritual Perspective.” A core theoretical idea was presented in proposing an integrated psycho-spiritual perspective, with meaningfulness as central, grounded in a motivational and relational orientation, and facilitating the potential well-being of women leaders in higher education institutions. The studies that follow suit, that is, studies that articulate and evaluate the grounded theory constructed will, hopefully, be extended and pursued as examples of the value of grounded theory in knowledge production.

A disappointing trend identified in the publications was that the levels of theorising were limited. However, this can be taken as an indication of how knowledgeable the researchers are. Despite this, the studies produced artefacts that have extensive utility value. This richness illustrates the practice value of grounded theory research.

The main features of transformative grounded theory include purposeful participation, the use of decolonising methods in knowledge creation, references to power issues, and contextualisation. We recommend planned use of grounded theory studies in dedicated and targeted research problem areas and a rethinking the value of grounded theory and educational research methods in view of the prevailing cognitive justice imperatives. There are distinct advantages for social sciences researchers in using grounded theory methods.

Grounded theory research in education will hopefully grow in number; theory contributions may be more valued, become more integrated across focuses, and be linked explicitly to transformation agendas. Researchers need to understand the theoretical perspectives that ground the decisions used for grounded theory. Future research should also examine studies for the reported theoretical frameworks that guide research design decisions. Our study probably represents a step towards increased attention to grounded theory educational research in South Africa.

Annexure A

Articles included in the review

1. Ahmed, N., Flisher, A. J., Mathews, C., Mukoma, W., & Jansen, S. (2009). HIV education in South African schools: The dilemma and conflicts of educators. *Scandinavian Journal of Public Health*, 37, 48–54.
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