Rurality research and rural education: Exploratory and explanatory power

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This article presents analysed data from the first year of the Rural Teacher Education Project (RTEP 2007–2009) with a view to illustrating how a generative theory of rurality as education research was developed, and for which ends it might be utilised. The article suggests that data from projects in rural communities, which take the rural as context, need to interrogate the role and purpose of education in such contexts in relation to notions of social and professional identity. I argue for the application of a social theory in which the rural is linked to the possibilities of identity and interaction in terms of the quality of teacher education and the quality of education in rural communities. The theory accounts for the ability of people (in this case teachers) to sustain themselves in space and time – both as subjects and agents able to resist or transform the environment, depending on resources available. It also illuminates the reality, or otherwise, of subjectivities and perceptions in our collective imaginary concerning education and the transformation project in South Africa.

Keywords: Rurality, generative theory, agency, forces, resources, identity, community development.

Introduction

In 2007, Balfour, Moletsane and Mitchell launched a project entitled the Rural Teacher Education Project (RTEP) in the Faculty of Education at the University of KwaZulu-Natal. The project, funded by Nedbank, Toyota and the National Research Foundation, was part of the NRF niche area (Every Voice Counts: Rural teacher development in the age of AIDS (De Lange, Mitchell, Moletsane, Balfour, Wedekind, Pillay & Buthelezi, 2010) and was completed in 2009. The RTEP focused on issues such as numeracy, literacy, gender and violence in schools. Findings pertaining to these issues are discussed in a range of publications (Islam, 2007; Islam, Mitchell, De Lange, Balfour & Combrinck, 2011; De Lange *et al.*, 2010). In 2008, an article published in the Journal of Rural and Community Development (Balfour, Moletsane & Mitchell, 2008) conceptualised a generative theory of rurality as education research, drawing from RTEP. This social theory was aimed at analysing assumptions about rurality and education in rural contexts, and its premise was that people make use of time, space and resources differently to transform an environment, rather than be subject to it. While the article written in 2008 explained how this might occur, it was not with reference to the data that inspired the theory. In this article, I illustrate the uses of the theory and draw from the RTEP data to argue that significant insights may be elicited in this regard.

The article is structured in four sections. The first introduces rurality studies and suggests its applicability to education in rural contexts. The second section describes the RTEP research methodology, with a focus on the development of a teacher education cohort, as well as research methods to be applied by participants in the cohort. The third section summarises the features of the generative theory of rurality as education research as a means by which data emanating from RTEP (and by implication from other education research located in rural areas) may be analysed . The final section analyses data by means of the theory, and uses the theory to provide an explanation for perception, identity and activity in relation to issues concerning rurality and education in rural schools.

Rurality, development and theory

Internationally, rurality studies are not without theoretical precedent or development. Goodwin (2006: 309) in relation to Regulation Theory and rurality studies, argues that "the political, cultural and social constitution of particular nodes or regulation" influenced rurality studies and focused on the role of the state in exploiting, developing and then conserving rural areas. Other theorists such as Murdoch (2006: 177) focused on the changing relationship between urbanisation and rural communities, arguing that "evidence of counter-urbanisation" shows that networks developed between urban and rural communities disrupted assumptions regarding conventional kinship networks and "spatial proximity". For Murdoch, the importance of such networks arises from a need to explore how "rural assets and resources are mobilised within networks" (Murdoch, 2006: 182). Cloke (2006) surveys rurality studies and suggests that "the changing relationship between space and society has rendered traditional divisions between rural and urban increasingly distinct" (Cloke, 2006: 19). Because education is a field implicit in rural livelihoods, and yet has not been explored (as seen, for example, in Cloke, Marsden & Mooney, 2006), there remains a critical need to theorise the education project within a differentiated and dynamic understanding of ruralities. African social philosophies such as Ubuntu (Seepe, 2004) focus on the self in the environment, and the self in the community from an African perspective, but the extent to which these develop an ecological awareness, or self-as-part-of-environment, is not clear. A South African survey of some rural education research (Nkambule, Balfour, Pillay & Moletsane, forthcoming) between 1995 and 2004 (74/3774 or 2.1% of the corpus of postgraduate education research for that period) demonstrates that the area is under-researched and underdeveloped in South African universities.

The Department of Education in 2007 established the Rural Education Directorate, aimed at ensuring that the challenges peculiar to rural schools, were addressed. At the outset, a distinction was made between focusing on rural education and the stated focus on "the particular challenges of rural and farm schools and [to] identify gaps in service delivery" (Ndebele, 2009: 1). The emphasis made by the Directorate on gaps and service delivery does not suggest a sufficiently comprehensive focus on rural education.

The Rural Teacher Education Project: design and methods

In order to focus on rural education through a combination of research and intervention strategies , one objective of RTEP was to develop a cohort model for partnerships between higher education institutions and rural schools that would equip student teachers, teacher mentors and managers to act as agents for development and social change in relation to issues affecting rural communities. From a methodological perspective, the intended outcome was to understand how schools (can) become resources for, and are positioned to stimulate and even lead, broader processes of community development and rural transformation. The RTEP aimed to yield a careful reorientation of teacher education within the Faculty of Education at the University of KwaZulu-Natal .... so that rural schools were recognised as primary community learning sites for pre-service teachers.

At the end of the first year, the RTEP team realised the need for a theoretical engagement with the project data and the extent to which data not only illuminated the role of education in rural communities, but could also be conceptualised to illuminate particular perceptions of teacher identity and effectiveness in rural schools. The participatory methodologies nudged the RTEP research team towards a deeper consideration of the need to disrupt and interrogate negative stereotyping concerning rural areas. Far from the passive and negative stereotypes associated with rurality, the team began to consider the very context as transformative, capable of positively influencing and affecting the motivation of teachers, community workers and learners. The analysis of the data derived shows the need for a conceptual and analytical framework for rural education.

The next three sections describe the cohort model and methodology, and a range of instruments developed to generate data. The research methods generated data which when we considered how it might be organised and read, lent itself also to the formulation of the generative theory of rurality as education research.

The cohort as a community of professional and research practice

The RTEP's design was influenced by Lave and Wenger's (1991) notion of the development of a community of practice. The project interpreted this work as a focus on the development of professional practice with a view to influencing teacher identity amongst South African teachers and education students in relation to rural education. Elsewhere (Wake & Staniforth, 2007; Islam, Mitchell & Balfour, 2011), the RTEP team have shown that this is an innovative addition to the professional requirements of teacher education, since, rather than assuming generic and already articulated notions of teacher identity, the cohort design articulated an understanding of the context (influenced in this case by culture, space, gender and identity) as critical.

Within the RTEP cohort, conventional notions of academics-as-experts and teachers-as-mentors, were renegotiated as student teachers became experts, academics become learners, and community workers (teachers, health care workers, parents) become co-generators of knowledge in partnership with the University. For example, a key feature of the design of RTEP was that at least half of the students who participated in Year one of RTEP moved into Years two and three of RTEP (2008, 2009) to assist the new student teacher cohort in terms of integrating, understanding and working within teacher education in rural Vulindlela (KwaZulu-Natal). The RTEP team anticipated that the 'core' group with previous experience of RTEP would become familiar with the issues, questions and challenges associated with rural education, and would engage not only with the new student teacher cohort, but also with research concerning rural education. This was achieved, and with every successive year, the experienced cohort expressed interest in further participation in the initiative, adopting the roles of both mentors to newer student teachers and as more experienced researchers (not conventionally part of an undergraduate curriculum in South African universities).

Whilst in the field, teachers and principals in the project schools also acted as mentors to the student teachers and, in so doing, assisted the project in developing a new community-based model for in-field supervision of pre-service teachers. This community-based model made use of technologies (camera, video, digital voice- recording) and arts-based approaches (photovoice, collage, drawing) not ordinarily available or used in communities on the basis that access and empowerment occur through practice and development.

The cohort as a purposive sample: selection and preparation processes

In the first year the project team selected a group of third- and fourth-year students in the Bachelor of Education at UKZN (South Africa) and McGill University (Canada). The initial cohort of twenty-two student teachers received a number of orientation and training workshops before setting off to Vulindlela for the annual practicum (a four week period of practical teaching for professional development purposes, which features in every year of the four-year B Ed curriculum at UKZN). The RTEP student teachers were selected with diversity of race and gender in mind, and consideration was given to their expressed commitment to the education of children located in communities characterised by poverty and isolation. The preparatory phase, lasting a week, provided student teachers with workshops on research and service-learning in communities. If the focus was the development of a community of professional practice within rural education, then a number of arrangements had to be effected in which students were to be accommodated not only as a community, but also within close proximity to the communities and schools. In order to effect a high level of complex in-field coordination, the project required on-site leadership and thus appointed field coordinators each year of the project, who facilitated the programme with the student teachers and ensured that the group focused on the research as well as the professional dimensions of the work.[1]

Participation by student teachers in the project was voluntary. The RTEP was widely publicised in the Faculty of Education, and students applied formally in writing and were interviewed for selection purposes. Given that the project was heavily subsidised (students' accommodation and travel were paid for) and led by prominent academics in the Faculty, it attracted considerable interest and competition amongst applicants.

Participating students were accommodated in Bulwer (KwaZulu-Natal) for a period of six weeks. During this time they observed the effects of a teachers' strike, assisted with the teaching of the school curriculum, and participated in the daily school life including administrative and extracurricular activities associated with teaching. The coordinators facilitated the activities of the students, paying particular attention to research and data-collection activities. Each day was accompanied by briefing and debriefing reflection sessions (all recorded) in which ideas concerning the students' and teachers' perspectives of rural area schooling were contrasted and interrogated to make for a rigorous process of self-reflection and triangulation of data. Over the three years in which the project was active (2007-2009), sixty student teachers participated, with a core group of fifteen student teachers drawn from the previous year into the subsequent years.

What emerged from the process of reflection described above is that education as received by students and teachers is a "placed resource" (Blommaert, 2002: 20), where "resources that are functional in one particular place … become dysfunctional as soon as they are moved into other places". Understanding how such resources can be made effective across a variety of education contexts (urban, rural and class, as argued by Balfour *et al.*, 2008) is one of the key issues affecting the quality of teaching and learning in twenty-first-century South Africa.

Research methods and instruments for RTEP

While the full evaluation report on RTEP (Islam, 2007) provides a thorough exposition of all instruments and data, I discuss data here in relation to features of the theory described in the next section. Thus, selected material is utilised to explain how we arrived at the theory illustrated in part in Balfour *et al.* (2008).

When designing the instruments that would enable student teachers within the cohort to develop critical reflexive practice in rural Vulindlela, the project considered that a specially designed needs analysis, developed by students and academics, was necessary. Figure 1 provides an indication of the range of the instruments.

Figure 1: The RTEP dataset (2007)

Data type	Number
Needs analysis	1x22 students
Interviews with student teachers	5
Interviews with teachers	2
Interviews with parents	2
Interviews with RTEP academics	3
Focus groups with parents	2

Focusing not only on the material facilities in which education takes place, the needs analysis contained within it questions that referred to the five data collection foci of RTEP (numeracy and literacy education, gender and violence in schools, teacher identity and practice) as shown in Figure 2.

Figure 2: Selected questions from the needs analysis (2007)

2.6   Are there security guards at the entrance? Is there a security guard at school?
2.7   Is there a fence around the school?
2.10 Are teachers on the field during the break?
2.26 Are the buildings scattered or close?
2.27 Is the school equipped for emergency situations?
2.31 Are there good sanitary facilities?
2.32 Does the school operate on a five-day timetable or a cycle system?

2.33 Does the school have a computer room?
2.34 Does the school have a library?

Such questions were then further explored by student teachers with their mentor teachers in the project schools in the form of focus group discussions (of between five to ten people). The focus groups were thus a secondary data source and data emerging from the needs analysis was triangulated with data in the focus groups. Figure 3 provides a selection of focus group questions dealing with gender in the project schools.

Figure 3: Selected questions from the Focus Group on Gender in Rural Education (2007)

d) Who cleans the chalkboard? Why?
f) Who sweeps the floors? Why?
g) If one of the school members disclosed his/her gay/lesbian status, what would you do?
j) Do female teachers get the same respect as male teachers from the learners in the classroom?

Since RTEP sought also to explore the professional development of teachers in rural schools, interviews were held with individual teachers in which themes picked up elsewhere were extended further as shown in figure 4. The RTEP design took into account a range of learner opinions and perceptions, not only in relation to the process and experience of education, but also in relation to the networks developed by learners to support each other in and beyond the school.

Figure 4: Selected questions from the interview with learners (2007)

5.1 Is school fun/interesting? Why?
5.2 Do you come to school to learn?
5.3 Do you come to school to make friends?

In addition to more conventional research instruments, RTEP also employed tools associated with participatory research, in particular photovoice, drawing and video recording, undertaken by student teachers, teachers, and learners alike. Figure 5 refers to guidelines for generating data on the 'drawing of education'.

Figure 5: Selected guidelines from the drawing of education with the student teachers (2007)

a) Sketch the school in which you are placed.
b) Consider in your drawing the role of education/teaching in the school.
c) Place yourself and depict your role in this picture.

Having described the features associated with the RTEP design and methodology, the next part of the article explores in summary the features associated with theory generation so as to provide an introduction to a generative theory of rurality as education research (Balfour *et al.*, 2008), and its application to RTEP data.
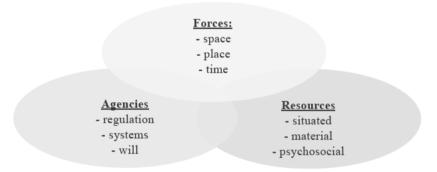
Requirements for theorisation: Models and theories

Kerlinger (1970) defines 'theory' as a set of interrelated constructs and propositions that present a systematic view of phenomena by specifying relations amongst variables, with the purpose of explaining and predicting the phenomena. Theory itself is a source of new knowledge, insight and discovery, and is thus regarded as an explicit platform for the development and advancement of knowledge. In this case, the generative theory of rurality draws from rurality studies, as well as the wide scholarship available

(Cohen, Manion & Morrison, 2007) in which the features of theories are described and categorised. Cohen *et al.* (2007) argue that theories can be descriptive (making sense of phenomena), explanatory (explaining how phenomena work through observation), explorative (raising new questions about phenomena based on the organisation of observation), or ideational (providing persuasive power and narrative to observed phenomena in relation to the larger polity). Cohen *et al.* (2007) state that theory must generate replicable, predictive outcomes, providing the grounds explicitly for its verification or falsification.

A generative theory of rurality as education research (Balfour *et al.*, 2008) considers three variables. The first variable is termed Forces and involves the movement of labour and production from the rural to the urban and back again as constituted by space, movement and time. The second variable is described as Agencies, which are identified as a series of behaviours and dispositions: "compliance and disruption, activism and entropy, and involves an exercise of will towards both ends" (Balfour *et al.*, 2008: 101). Agencies become the means by which individuals attempt to regulate relations between space, movement and time. The third variable is Resources: either purchased or generated, but whose efficacy in a context "is largely dependent on the influence of agencies and forces" (Balfour *et al.*, 2008: 102). Figure 6 describes the interconnectedness of the variables.

Figure 6: Variables associated with a generative theory of rurality as education research (Balfour *et al.*, 2008)

Forces:
- space
- place
- time

Agencies
- regulation
- systems
- will

Resources
- situated
- material
- psychosocial

In considering the differences between theories and models, Balfour *et al.* (2008) considered that, firstly, not all theories presuppose input in order for the generation of output, whereas models do presuppose a focus on input. Secondly, theories explain variables as well as describe phenomena, whereas many models aim to describe phenomena. Thirdly, within conventional models such as those associated with language acquisition studies (Ellis, 1994), data emanating from a model confirms the explanatory veracity of the model, whereas data observed by theory may not illuminate the assumptions of a theory, but must illuminate its veracity. Finally, a model often depends on the causality of relationships between observed phenomena or data. Balfour *et al.* (2008) argue that the purpose of such a generative theory of rurality as education research would be to address rural education research by ascribing a primary focus to rurality, which is the lived experience of entire communities in South Africa.

The return to theory as conceptual framework and analytical tool for rurality and rural education research

This section illustrates the manner in which the variables identified above for the generative theory of rurality as education research were used, demonstrating simultaneously the reason that they are referred to as variables (and thus dynamic and affective) rather than categories (static and unrelated). Language teachers participating in the 2007/2008 RTEP focus groups form the focus of this data (although teachers from a range of subjects were similarly involved in other focus groups) in all three schools. In response to the question, 'Do you have a library, if so describe, if not, why not?', teachers participating reported that:

There is a building but the library does not work, the books were stolen, and some of the teachers are working to get more books. But they don't have enough time for the learners to go to the library. They used to have one class a week that learners spent in the library (Focus Group on Literacy: July 2007).

And, in response to the question, 'What initiative is being taken to gain literary resources for the school?', teachers responded that:

The teachers are working to bring in books, sometimes the department helps by donating a few books. Sometimes the publishers donate books, but schools need to speak up to get these books and it isn't speaking up (Focus Group on Literacy: July 2007).

These are two examples of questions posed and the resulting discussion which took place. Forces in the above context include the time available to access a resource. Agency(ies) may be considered the teachers acting to supplement libraries, and schools not taking action to secure books through other agencies such as the Department of Education or non-governmental organisations. Resources may be identified as books and facilities (library being accessible to learners). The analysis is straight forward, but consider that any data (interview, needs analysis, focus group, video, drawings made by learners and student teachers) may be thus mapped and utilised within such a conceptual analytical framework (or what we have termed a generative theory of rurality as education research).

Further examples for analysis are provided in relation to data arising from the arts-based approach of depicting teachers' roles and place in the rural community. Drawings made by participants have been grouped in terms of what aspects are typically foregrounded and then such images are further analysed in terms of the three variables described earlier. The following narrative emerges with respect to the data generated in the first year of the project. Of a total image bank of thirty-six pictures for 2007, the two drawings presented below describe the role of education as a force for change, care, community, upliftment and a means of control simultaneously, an arid learning space, fenced and marshalled. Both drawings portray the stresses affecting resources such as time, materials, qualifications and agencies (in terms of agency as 'will to action' and agency as an enabling 'structure for action' – as described in the previous section).

In one drawing (Figure 6), the focus is on the role of agency (the teacher, the education structure, and the possibilities of hope and of change). In another (Figure 7), the delimitation of these possibilities in terms of control, confinement and regulation (the fencing is particularly evident) is described – these aspects similarly involve the deployment of resources in a particular context, and a will to action (even if negatively constructed in terms of keeping people inside, or outside, the school).

Figure 7: Education as change

Figure 8: School as space and frame

Within the analysis of resources and agencies, two additional drawings are considered here, since they exemplify a complexity not always captured when considering written data: the conflicting potential of resources and the role that perception plays in determining whether these are possibilities or limitations. For example, in the drawing (Figure 9) titled 'animals in the classroom', dozens of children crowd around desks, learning as is surely symbolised by the comet, the airplane and the sun, occurs outside the classroom walls, whilst a hapless teacher is distracted by animals which stray in and out of the room. This was triangulated (see Islam, 2007: 12) with data arising from photos, student teacher journals and interviews. What is on the desks, in terms of learning, remains a question evidently devoid of meaning.

Figure 9: Animals in my classroom

Figure 10: Inside and outside the community

Finally, and in recognition of the role teachers and community might play, the drawing (Figure 10) titled, "Inside and outside the community", depicts reality of rural education against what is considered to be ideal. Within what appears to be a water-drop shape is a teacher holding children and surrounded by people. On the outside of this 'containment' are sad faces, without bodies and legs. The arrows suggest a need for communities to work together with schools to support learners. If one picture is located within frames of time and space, then another works on a more symbolic level, and outside time, addressing aspects of the visionary role rurally placed education might best serve. Budge (2005: 3) confirms the notion of a context in which the "peculiarities of the local … must be understood". Seldom is rurality conceptualised as "dynamic, or as a set of preferences that have value that is independent of urban influences" (Odora-Hoppers, 2004: 111).

Conclusions: Signs by which to read

Conventionally, the exposition of research begins with the theoretical and methodological frames that provide conceptual tools for the selection, organisation and analysis of data. This article began with a description of the features of RTEP, which I have argued, through reference to the design of the cohort model and selected research instruments, allowed for the emergence of a series of insights regarding rurality, education and education research in rural contexts. These insights in the article led to two points presented in the argument: firstly, that a generative theory of rurality as education research, consisting of three mutually affecting and dynamic variables, can be used successfully to account for the extent to which the context in (rural) education can be effective, transformative or dysfunctional depending on how teachers regulate the relationship between space, place and time; and, secondly, that data emerging from RTEP, and indeed other rural education research projects, might be read in terms of the provisions made in such a theory.

A generative theory of rurality as education research had not existed when RTEP began, but it emerged through data collected over a period of three years. In some ways, this article has been about reading data back to a theory of rurality, as much as demonstrating the way in which a 'reading out of the data' might also occur. What emerges through this analysis is that rurality offers a multilayering of positioning and self-awareness, filled with possibilities, despite the legacy of stereotypes which is generally experienced as damaging and disempowering in rural communities.

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Endnote

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