

TRANSITIONING FROM UNIVERSITY TO TEACHING IN SCHOOLS LOCATED IN RURAL AND REMOTE SETTINGS

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ABSTRACT

This paper reports the findings of research which focused on fourth year pre-service teachers' perceptions of the issue of their transition from pre-service university student to in-service teaching, specifically in rural and remote settings. The results of a survey which focused on students' perceived levels of readiness and comfort when considering teaching in a rural or remote school as a first posting are presented. Background data were collected revealing that the majority of the pre-service teachers ($n=39$) identified their hometown as rural and/or as a small city within a 400 km radius from the regional University. Analysis of data indicated 32 of the participants wanted to teach in a rural school, two wanted to move closer to the coast and five were unsure. Leximancer text-mining software was employed to examine the responses to five questions including: how they would describe themselves as a teacher; what differences existed between rural and urban teaching; what their ideas were regarding what constituted good rural teaching; and what may be the difficulties in rural teaching. The last section of the results provides a profile of the number of preservice teachers (PSTs) intending to teach in rural settings. The findings confirmed previous research that suggested that many teachers in rural settings originate from small rural and remote communities. The concepts and themes emerging from the analysis of the open ended survey data are presented as the major findings. Implications of the research include recommendations that pre-service teacher education programs could be more responsive to student needs, resulting in greater preparation for teachers entering the teaching profession in rural and remote settings.

Keywords: rural and remote; pre-service teachers; preparedness to teach

BACKGROUND

With reference to the map (see Figure 1) provided by the Australian Government (2016) this island continent has very large areas that are classified as 'rural' or 'remote' (R & R). These locations are well documented as having difficulty in attracting teachers and health care workers, in addition to other public servants (Herrington, Herrington, Kervin, & Ferry, 2006; Yarrow, Ballantyne, Hanford, Hershell, & Millwater, 1999). There is compelling evidence that schools in some R & R areas can be described as being 'hard-to-staff', just as are some schools located in metropolitan areas, even in first world countries such as Australia (Commonwealth of Australia, 2003). Furthermore, it has been said that an appointment to a 'hard-to-staff' school maybe an unofficial 'rite-of-passage' for early career teachers (ECTs), that is, teachers with fewer than five years' experience; a situation that is either specifically encouraged by government policy initiatives (Kelly & Fogarty, 2015; NSW Department of Education, 2015), or is an outcome of free-market, competition-based employment processes (Caldwell, 2015).

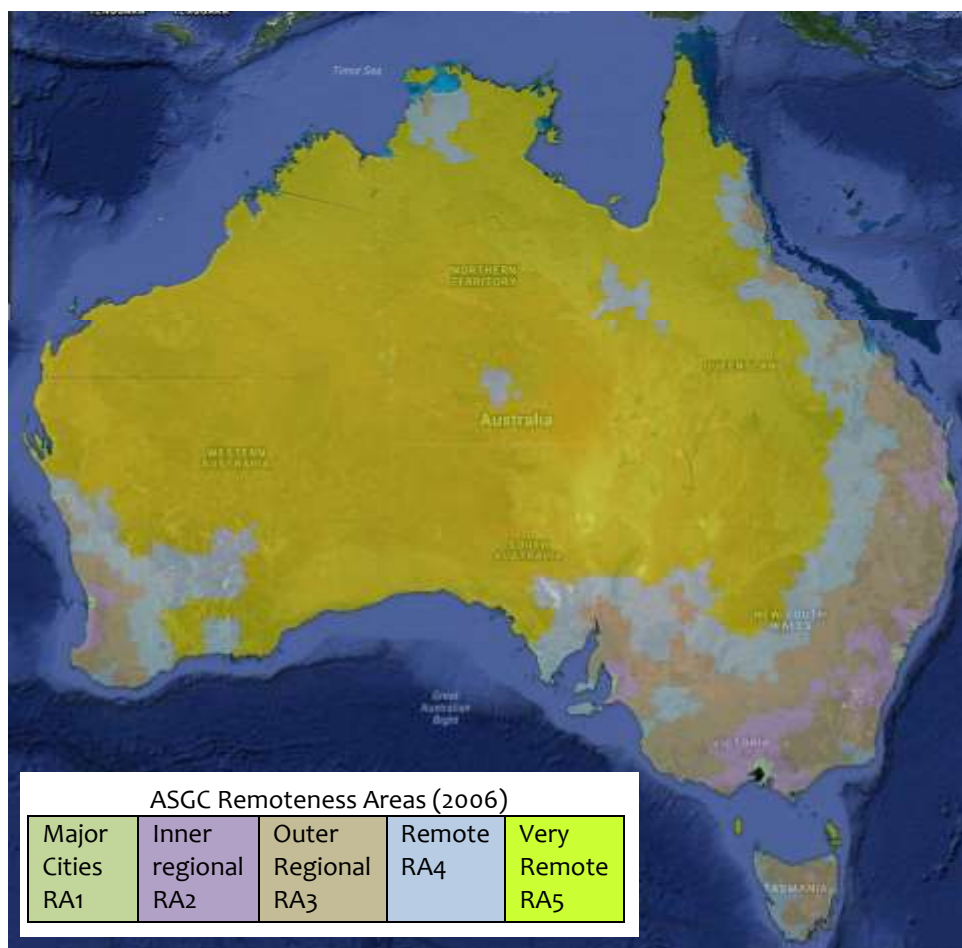


Figure 1: Classification of the Australian Continent as Rural and Remote (Australian Department of Health, accessed August 2, 2016).

According to Buchanan et al., (2013) the experiences of ECTs are inextricably linked to their teacher preparation at university with some students claiming they were ill prepared by their university to meet the practical challenges of teaching in a range of different contexts (Lortie, 1975; TEMAG, 2015). Consequently, it is essential for teacher educators to be aware of, and analyse, what the experiences of teachers have been in R & R areas, or other hard-to-staff schools, so that they can modify their teacher preparation courses to ensure support for graduates in their early years (Richards et al., 2013, p. 115).

The importance of rural experience in preservice teacher education, which is highlighted in the research literature related to R & R teaching, is acknowledged in the teacher preparation programs that include opportunities for experiences in rural settings, and specific courses of study that address the cultural and learning needs of R & R communities (Richards, 2012; Trinidad, Sharplin, Ledger, & Broadley, 2014). Inclusions of specific education topics or units of work that focus on teaching in R & R locations and issues of inequality, are regarded as worthwhile in both preparing teachers for the challenges of teaching in rural and/or remote locations and, possibly stimulating an interest in teaching in these settings (Delano-Oriaran, 2012; Green & Reid, 2004; McFarland & Lord, 2008; Reid et al., 2010; White & Kline, 2012). By way of example, one school of education at a university where teacher preparation is undertaken, developed a unit of work (based upon the information provided by AITSL) that includes ‘Foundations of Professional Practice’ which is concerned with ‘Knowing your Students’ (AITSL, 2011, p. 8). Furthermore, at this particular

institution the research findings of a number of authors including Miller, Graham and Paterson (2006) and more recently Graham and Miller (2015), have been taken into consideration in the development of a pre-service unit named 'The Graduate Teacher', the content of which deals specifically with the expectations of those PSTs who are destined to teach in R & R areas.

So who are pre-service teachers? This cohort includes all individuals who are enrolled in a teacher education course. Given that they will soon become Early Career Teachers (ECTs) and that the prospect of being appointed to a 'hard-to-staff' school is high, this research was focused on determining their impressions of what it means to be a teacher and more specifically, what it means to contemplate teaching in a 'hard-to-staff' school given that it is likely to be in a rural setting.

As ECTs have all undergone a learning-to-teach program at a university, or equivalent institution, of particular relevance to this study is the finding by several authors that pre-service students with knowledge and/or experience in rural settings are more likely to consider or want to teach in rural settings (Boylan, Sinclair, Smith, & Nolan, 1993; Gregson, Waters, & Gruppetta, 2006; Lyons, Cooksey, Panizzon, Parnell, & Pegg, 2006). Given that the university involved in this study is also situated within a rural area it is well placed to facilitate rural programs (Boylan, 2005), and draws PSTs from rural communities. However, it is naïve to suggest that the problem of preparing teachers for the rural schools by educating them in rural settings may solve the problem. It would be impossible for a single institution to supply all the teachers needed to meet the demand for rural areas, and to suggest so would exclude many potential teachers the right to the opportunities rural locations may afford. This notion is especially relevant since there is a decline in PST enrolments from rural students, with many future teachers enrolling in relevant degrees at non-rural universities (Lyons et al., 2006).

Theory

The notion that past experiences significantly influence individuals' expectations of teaching and teaching behaviour, is embraced by Bandura's (1997) theory of social learning. This idea regarding past experiences provides support for the notion that PSTs who came from rural communities probably expect that if they return to a rural community they will be able to cope well. However, there is a danger that PSTs who were on the 'other side of the chalk face' when they lived in these R & R communities, may find their optimism challenged when they become a practicing ECT in such a location. To this end PSTs from rural backgrounds may have unrealistic expectations brought about by their *apprenticeship of observation*; that prospective teachers have completed sixteen years of classroom experience in a rural setting, may bolster the belief that *those who have been students are equipped to be teachers* (Lortie, 1975, p. 65).

Prendergast, Garvis and Keogh (2011) assert that PSTs self-beliefs have not been widely considered. That is to say there is not a great deal of literature that examines PST beliefs in their *capabilities to organize and execute the courses of action required to produce given attainments* (Bandura, 1997, p. 3). Such beliefs are commonly referred to by Bandura (1986) as self-efficacy, or by Dewar and Lawson (1984) as subjective warrant.

Research Question

As a result of the identified gap in the literature the following research questions were developed relating to preservice teachers' preparation to transition from university to their first teaching position:

- What are the PSTs perceptions of themselves as teachers?
- What do PSTs consider constitutes good teaching in rural settings?
- What do the PSTs perceive as difficulties of teaching in rural settings?

- To what extent are PSTs intending to teach in a rural and/or remote school settings?

METHODOLOGY

This study was conducted at a university located in a rural city in NSW, Australia. The participants were all enrolled in a pre-service teacher education generalist degree, which prepares them to teach all six key learning areas in the primary level of schooling as defined by the relevant accrediting authority.

Participants

Fifty surveys were initially administered to all on-campus final year Bachelor of Education students with a return response rate of 78 per cent, comprising females ($n=29$) and males ($n=10$). The average age of this cohort was 21.6 years. The survey was designed to capture biographical data, along with perceptions of teaching in rural settings. A point to note is that this particular cohort of PSTs presented as a mix of students coming from a narrow range of locations. Table 1 indicates the categorisations of their location of origin, prior to attending University.

Table 1: Places of Origin of Surveyed Students

Origin (NSW)	Number of Students
Northern Tablelands	4
North West	13
North Coast	16
South Coast	1
Western	4
Capital City (Brisbane, Qld)	1

As shown in Table 1 the majority of students reported their origin as being in a rural or country area, with most emanating from the North Coast of NSW, an area defined as being situated along a coastal strip between Port Macquarie and Tweed Heads. The second largest number of students came from an area surrounding, and closer to, the University's location.

Survey Questions

The survey issued to PSTs comprised 27 questions, six of which were chosen as relevant to answer the research questions. These questions, designed to capture the PSTs' beliefs and opinions about teaching in R & R communities, were:

1. How would you describe yourself as a teacher?
2. Is rural teaching different to other teaching? If so in what ways?
3. What are your perceptions of what constitutes good rural teaching?
4. In your experience what are the difficulties of rural teaching?
5. To what extent do you intend to teach in a rural setting when you graduate?

The Analysis

The written responses were analysed using Leximancer 2.25 (Smith, 2000). This software is described by Smith and Humphrey (2006) as:

a method for transforming lexical co-occurrence information from natural language into semantic patterns in an unsupervised manner ... the software uses algorithms which are statistical, but employ nonlinear dynamics and machine learning (p. 262).

As such, according to Smith (2003), Leximancer is capable of analysing text, which may be modified as researcher driven requirements are changed. Furthermore, the software-based analysis generates clearly defined themes and concepts (Smith, 2000). A concept list is also provided by Leximancer software, which is presented in hierarchical order from most associated to least associated. The strength of the concepts can also be determined using the 'absolute count' tool, which refers to the number of times concepts are found in the text.

The data analysis from Leximancer is presented in a map format with a single word within the coloured circles showing the themes that are identified by single parenthesis in the text. The brightness of the theme is related to its frequency. The concept words clustered within the theme circle are shown as dots of colour of various sizes as well as in small print. The size of the dot indicates the strength of the concept, and the nearness of the concepts to each other indicates that they appear in similar contexts. The concepts are distinguished by italicised words within the general text. The number of themes and concepts can be manipulated to provide a lens to zoom in or out to focus on relevant areas of interest. Ranked concepts can be cross-referenced against other concepts, and the text pertaining to each cross-referenced category can then be closely examined.

RESULTS

An initial examination of the data was undertaken using all scripts ($n=39$), addressing all combined survey data in its entirety. The emergent Leximancer map was set at 60 per cent for theme size and 60 per cent for concepts, which is the setting for all maps in this paper. This process narrowed the number of themes and concepts to four or less of the most highly ranked and provided a consistent lens on the emergent themes and concepts for comparison purposes. Within the text the themes are presented in single parenthesis and the concept words are italicised.

Q1. Ideas about Self-as-Teacher

The Leximancer software package was employed to initially process all the survey questions combined. The responses to the questions regarding how these PST conceive themselves as a teacher, the following themes and concepts emerged.

The two main theme circles, which are 'teacher' and 'organised' and the accompanying concepts that are contained within each theme circle are shown in Figure 2. A third minor theme, namely 'feel', which does not contain any concepts, and can be largely disregarded at this level of analysis is also present. Disregarding 'feel' is based on the colour and size of the concept and upon further analysis appears to be a term the participants are using when considering themselves as teacher, for example, I 'feel' that I am a passionate/good/well prepared teacher, in contrast to 'feel' being than an emotive concept.

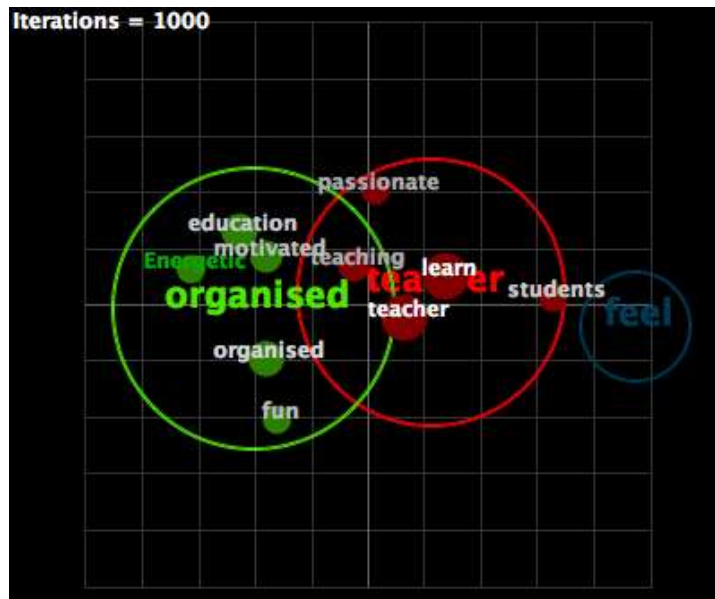


Figure 2: Summary Map of Teacher as Self

The map in Figure 2 shows ‘learn’ within the brightest/hottest circle of teacher, indicating the predominant theme, along with the other predominant theme ‘organised’. The two main concepts as indicated by the dots of colour are ‘learn’ (absolute count = 12, ranked concept = 100%) and ‘teacher’ (absolute count = 11, ranked concept = 91.6%). Lesser concepts in the theme of organised were organised, energetic, students, education and fun.

Cross-referenced concepts

These two most frequent concepts, namely, ‘learn’ and ‘teacher’, were cross-referenced. The extracted text for these concepts was analysed as to how they relate to each other. The analysis revealed that these PSTs considered learning as the most important concept, followed by being a good communicator.

Selected student comments

- *Competent in my ability to pass on knowledge to children.*
- *Relaxed, patient, flexible, willing to try new things and learn from mistakes.*
- *Respectful, flexible, practical, good knowledge of content.*
- *Energetic, flexible, organised, personable, willing to learn & learn from others.*
- *Awesome!!! I have excellent behaviour management skills and believe I am a competent teacher.*
- *Active person who likes hands on activities rather than textbooks. Good rapport with the students and a person who can relate learning activities to students’ lives. Good planning and communication.*

These concepts are focused on the teacher and how they perform which is confirmation of the work of Fuller, (1969), who indicated that early career teachers are more concerned with what they are, know and can do – over achieving learning outcomes for their students. So these PSTs present as being more self-centric, as they are concerned more with their capacities and skills to teach and control the students rather than a focus on students’ learning.

Q2. Survey question: Rural vs Urban

Shown in the Leximancer map in Figure 3 are the main themes, the two main themes are 'rural' and 'teach', along with their accompanying concepts.

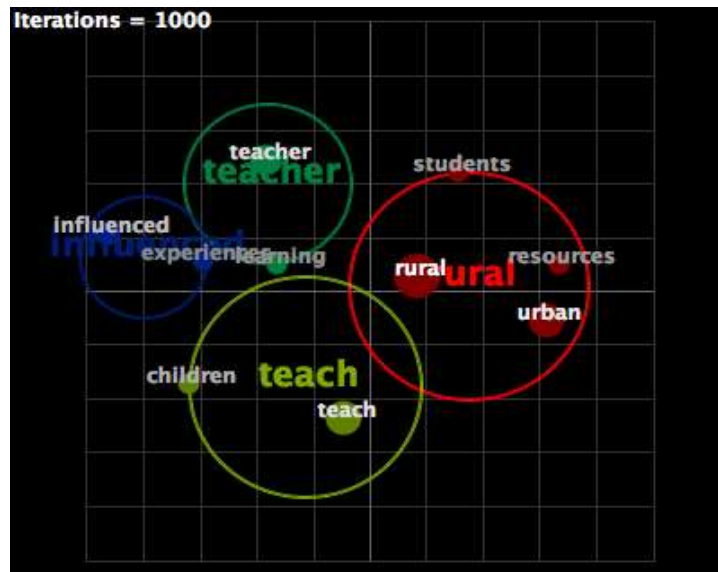


Figure 3: Summary Map of Rural vs Urban Teaching

The map shown in Figure 3 shows 'rural' as the brightest/hottest coloured circle indicating the predominant theme, with the theme 'teach' containing fewer concepts. The two main concepts as indicated by the dots of colour are 'rural' (absolute count = 190, ranked concept = 100%) and 'urban' (absolute count = 127, ranked concept = 55.7%). Note that these concepts travel together throughout the text, i.e., co-occur in similar contextual settings in the data set. Two other concepts of interest were teach (absolute count = 106, ranked concept = 32%) and teacher (absolute count = 96, ranked concept = 27.4%).

Cross-referenced concepts

Relevant concepts were examined using the Leximancer text browser. This facility extracts references with relevant surrounding text associated with selected concepts. The two most frequent concepts, namely, 'rural' and 'urban', were manually cross-referenced. The extracted text for these concepts was analysed with regard to the expression of differences between them. The analysis revealed that the PSTs agreed that the difference between rural and urban teaching is based on two premises, namely, that rural settings are more community minded and that there is less access to resources. Urban environments offered greater anonymity, more resources, and a population that is more open minded and culturally diverse.

Selected student comments

The following comments are derived from the interview data and were extracted manually, providing evidence of the text that informed the Leximancer text mining software results. These include:

- *Accepting of students and their views.*
- *Keen, enthusiastic and willing to teach others.*
- *Motivated for the position, flexible and ready to commit.*
- *I can aid and assist students with social, physical and intellectual needs.*
- *Relating to students' lives with an understanding of differences between city and country.*

Q3(a). What is a Good Rural Teacher?

Ranked concepts were identified regarding what the PSTs considered to be the necessary components of being a good rural teacher. Shown in Figure 4 are the main theme circles.



Figure 4: Summary Map of Good Rural Teaching

Figure 4, shows 'community' as the brightest circle indicating the predominant theme, followed by 'rural'. There are four closely matching concepts within the 'community', which are 'community' (absolute count = 14, ranked concept = 100%), 'involved' (absolute count = 13, ranked concept = 92.8%), 'resources' (absolute count = 13, ranked concept = 92.8%), and 'school' (absolute count = 12, ranked concept = 85.7%). Of note is also the fact is a large (21%) to the next the concept of 'teaching'.

Cross-referenced concepts

The two most frequent concepts 'community' and 'involved', were cross-referenced. An analysis of the text revealed that the PSTs were of the opinion that it is imperative to become involved with and support the community, gain an understanding of how the community functions, and include community resources into their teaching in every way possible.

Selected student comments:

- *Someone that is able to take into account external factors (for example resources).*
- *Being able to relate to the community that you're living in.*
- *Strong sense of community, close-knit.*
- *Adapting the needs of the curriculum to meet the needs of both the school community and individual student needs.*

Q3(b). What is Good about Rural teaching?

Shown in Figure 5 are the main theme circles, which are 'community' and 'small', and their accompanying concepts.

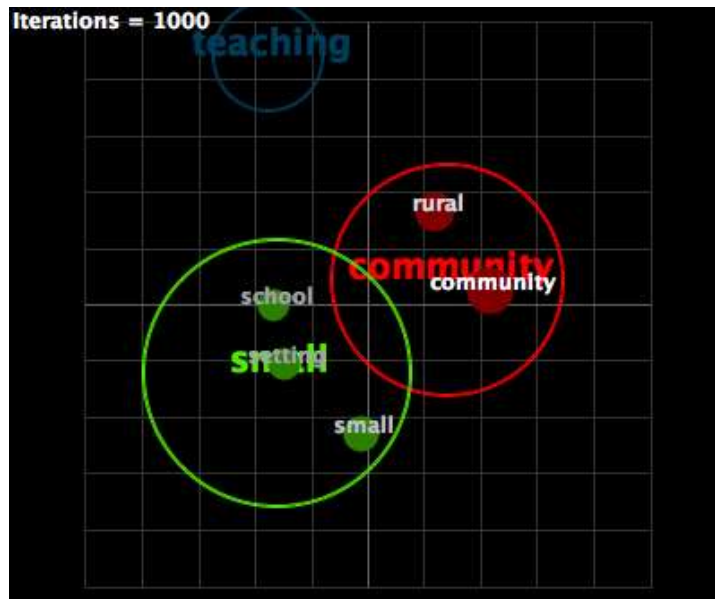


Figure 5: Summary Map of ‘What is Good About Rural Teaching.’

As is evident in Figure 5, ‘community’ is the brightest circle indicating the predominant theme, followed by the theme ‘small’. There are two equally important concepts, which are ‘community’ and ‘setting’ (absolute counts = 5, ranked concept = 100%), followed by rural, small and support.

Cross-referenced concepts

When the concept of ‘community’ and ‘setting’, were cross-referenced, an analysis revealed that ‘setting’ referred mainly to the size of the community and to the closeness and friendliness of the people living in rural communities. Note here the position of the third theme ‘teaching’, located on the map at the top left and muted colouring, is well separated from the other two themes. This placement indicates that this theme appears not of major consideration when it comes to what is involved in good rural teaching practice.

Selected student comments:

- *Being open and willing to embrace the community and students interest etc.*
- *Understanding values of the community*
- *Leadership, knowledge of area, flexibility, understanding, good community spirit*
- *Teaching multigrade classes with limited resources*
- *Relating to children parents and wider community*
- *Not being prejudiced and holding negative judgements towards rural life*

Q4. What is Difficult about Rural teaching

A list of comments is perhaps the clearest way to shed light on the PSTs insights regarding what they consider may be some of the difficulties they were likely to encounter as an ECT in R & R settings. As this question asked participants to relate to their own experience, the data set were considered too small to run Leximancer. Therefore, student comments comprise the results for this question.

Selected student comments:

- *Very different lifestyle to an urban setting.*
- *Finding people to talk to about any issues or even to socialize.*
- *Low proportion of multiculturalism/close community.*
- *Need to improvise and adapt programs in order to make use of what is available.*

- If the community does not accept or embrace you, it can be very lonely.
- Being in the school and community all the time (fishbowl) – difficult to leave school at school and social lives in the social context.
- Isolated from family and friends... No wife or girlfriend would go with me for 3 years... make it a 1 year contract!
- Isolated from goods, services & teaching support.
- Distance from family and friends.
- Dealing with isolation – harder when you are single and young – it is a scary thought of being all alone...
- Expectations of community/closeness of community (gossip).
- Teaching multi-grade classes with limited resources.
- Don't know yet!!!

Q5. So, Who Wants to 'Go Bush'?

The following table, Table 2, provides information about the surveyed PST intentions to teach in a variety of locations.

Table 2: Intended Teaching Locations

Rural Setting	Coastal Location	Undecided	Total Students
32	3	4	39

The majority of the PSTs indicated the desire to teach in a rural setting. The three responses shown in the second column in Table 2 all indicated that they wished to teach in a location designated as 'coastal', which is one of the most sought after locations for teachers in NSW (NSW Department of Education, 2015). That said, when comparing the origin of the students, whereby the majority actually came from a coastal area ($n=16$) considered to be a rural location, the numbers wanting to teach in a R & R setting, other than a coastal area may be distorted. Notwithstanding this, given the comments made in the section of this paper termed 'Difficulties' it is indicative that the intended location for the desire to teach in a rural setting is not necessarily 'coastal' and there is a definite indication that an urban posting is not one of these students' main choice.

DISCUSSION

In the first data analysis whereby the combined responses to all five questions were analysed together using Leximancer under the sub heading Rural v Urban, the two concepts one might expect to be highly represented, namely, 'students' and 'children' were present, but as only a minor consideration, appearing on the periphery of the two main theme circles (see Figure 3). These two concepts are also absent from the concept maps for two of the three other questions, with the concept *students* appearing as a minor concept in the question relating to 'Teacher as Self.' This finding reinforces the literature of Fuller (1969) who reported that PSTs and to some extent ECTs tend to be ego-centric; that is, they are more concerned about themselves than the students for which they are employed to educate. Despite the date of Fuller's publication, the topic and findings are still relevant (Boz, 2008). As a consequence of this line of thought and the omission of concepts such as students per se, there is an indication that even contemporary PSTs have more concern about their personal circumstances than students' education.

Also notable absences from the concept maps are notions about the teaching of skills, knowledge, and understanding of the various syllabi. However, some change may occur when teaching positions are taken up, as according to the literature the ECTs do show a shift from a focus-on-self

to conveying content knowledge to their students (Fuller & Brown, 1975).

The analysis of the first question, relating to 'Ideas about Self as Teacher', showed that the concept 'learn' was the most prominent. On closer evaluation of the related text the surprise was that this concept was not applied to student learning, but to the PSTs' own learning needs, which points to a situation whereby they are apparently trying to cope with the variety of day-to-day classroom events. The notion of self-centredness is once again being expressed in that the needs of the prospective teacher surpasses what was expected of them when they were in front of a class, that is to teach children. An interesting point is that this cohort was in their final (fourth) year of their degree, but as Prendergast et al., (2011) point out, over the period of their initial teacher training PSTs self-efficacy actually decreases. In this study a scrutiny of the comments made by the PSTs indicated they were still quite self-efficacious, but in the absence of any base line data a decline in their belief over the period of their training is open to conjecture.

The second question asked students to identify if there were differences between teaching in rural versus urban settings. The responses indicated that there was a difference and the connected nature of the community and school provided a more visible role of teachers in their personal and professional lives. They also indicated that teaching in rural settings required greater contextualising of the curriculum in order to connect with the students and that approaching the students without bias was important.

Consideration of the qualities needed to be a good rural teacher, was the third question to be addressed. Analysis of responses revealed that regardless of teaching skills and ability there were two most important qualities required to be a rural teacher. The first was the ability to engage with and fit in with the community, whether social, sporting or other service activity. The other was that it is important to use all the local resources that were available, perhaps in a show of solidarity with the community that, 'we in the bush' can improvise and be successful as the city folk perhaps *because the rural is often imagined in opposition to the urban or metropolitan* (Gorman-Murray, Darian-Smith, & Gibson, 2008, np).

The second part of the third question asked for what the PSTs identified as being good rural teaching. The proximity of school and community can bring with it feelings of connectedness and the necessity of relying on each other by developing both professional and personal networks for support. However, accompanying the positive side there are also negative issues. This question, addressed difficulties of rural teaching, and most likely living, in small communities. The personal and professional lives of teachers are more visible to community members due to the close proximity (Miller, Paterson & Graham, 2005). Being close to each other can also create problems with *the idea of constant encounter inevitably produces friction* (Sorkin, 1999, p. 7). Of further interest was the extended list of perceived difficulties in the comments made by the respondents. This list appeared under the Q4 subsection of this paper.

Perceived difficulties of teaching in rural settings was addressed in the fourth question. Students quite perceptively identified the mono-culturalism that can be part of living and working in rural settings as a difficulty. They also mentioned the isolation from family, friends and in some cases partners. The smaller communities also presented challenges with fewer colleagues available as support networks, and the challenges of teaching multi-stage classes with limited resources identified as difficulties.

Anticipating teaching in a rural setting is the preferred location for the majority of the fourth year Preservice teacher education students from a rural university. These data comprised the final section of the results. This finding could demonstrate the value of preservice teacher education programs being centred in rural universities. Clearly the opportunity for professional experience placements in rural settings is higher than for the more urban located universities.

CONCLUSION

In summary, pre-service teachers' sense of self as a teacher is well aligned with the literature regarding a developmental framework of early to late career teacher concerns. The pre-service teacher education students also have a keen understanding of what constitutes good rural teaching and what it takes to be a good rural teacher, while also being aware of the benefits and the difficulties of teaching in rural settings. Given that the participants of this study are attending a regional university, it is relevant to expect they have had professional experience located in rural settings as part of their degree program. The overall findings confirm the benefits suggested by Boylan (2005) in taking students to rural settings as part of their pre-service teacher education program and providing them with a view of rural teaching to encourage greater uptake of teaching positions in rural and remote settings.

As an implication of this and other research conducted by members of the Bush Tracks Research Group (Graham & Miller, 2015) there has been a new unit of study constructed and offered to PSTs in their final year of the preservice teacher education program. Prior research informed the unit design and content and provides key insights into the opportunities and challenges inherent in teaching in rural settings. The findings from this study will contribute to this unit of study to further prepare students to transition successfully from university into teaching in schools located in rural and remote settings. Future studies would be well focused to test the effectiveness of this enhanced preparation for teachers transitioning to rural and remote schools.

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