

2008

## Changing Preservice Teachers' Attitudes for Teaching in Rural Schools.

Peter Hudson

*Queensland University of Technology*

Sue Hudson

*Queensland University of Technology*

---

### Recommended Citation

Hudson, P., & Hudson, S. (2008). Changing Preservice Teachers' Attitudes for Teaching in Rural Schools.. *Australian Journal of Teacher Education*, 33(4).

<http://dx.doi.org/10.14221/ajte.2008v33n4.6>

This Journal Article is posted at Research Online.

<http://ro.ecu.edu.au/ajte/vol33/iss4/6>

## Changing Preservice Teachers' Attitudes For Teaching In Rural Schools

Peter Hudson & Sue Hudson  
Queensland University of Technology

*Abstract: Australia continues to face teaching shortages in rural schools. Indeed, preservice teachers may be reluctant to apply for rural teaching positions, particularly as most have had no rural teaching experiences. What may motivate non-rural preservice teachers to seek employment in rural schools? This study investigates 17 preservice teachers' first experiences of teaching and living in rural areas. These second and third-year preservice teachers were involved in a five-day rural experience, which included interacting with local communities, living with host families, observing teaching practices, and teaching rural middle-school students. These self-nominated preservice teachers were placed in a variety of rural schools centred around a feeder high school. Data from written transcripts before their rural placements and reflections on their teaching and rural experiences indicated very significant attitudinal changes for teaching in rural areas and dispelled misconceptions about rural living and teaching. Non-rural universities can contribute towards motivating their preservice teachers to seek employment in rural areas. Providing these preservice teachers with a rural experience can create attitudinal changes for teaching and living in rural areas.*

### Issues for Rural Schools

Teacher shortages in rural schools have been an issue for many decades in Australia (Lyons, Cooksey, Panizzon, Parnell, & Pegg, 2006), and the last decade has been no exception (Australian Education Union, 2001; Gregson, Waters, & Gruppetta, 2006). Educators have highlighted this shortage as a national crisis for rural Australia (White, Green, Reid, Lock, Hastings, & Cooper, 2008). This problem has affected rural teaching and leadership roles. Australia has a growing shortage of school leaders (Mulford, 2003), and "was likely to face increasing shortages of teachers due to age-based retirement" (MCEETYA, 2004, p. 1), which may further affect filling leadership and teaching roles. Yet, this problem is not specific to Australia, for example, the United States is experiencing shortages (Martinez, 2004), and England has a severe shortage of head teachers in rural areas (Politics.co.uk, 2007). There is also a shortfall for specialist teachers in rural schools, such as science teachers (Harris & Farrell, 2007) and mathematics teachers (Williams, 2005), which is not unlike cases in the United States (Collins, 1999). Australia's relatively small population scattered throughout a wide country intensifies the problem of teacher shortages.

Social, cultural, and professional isolation may be reasons for losing rural teachers (Collins, 1999). Geographical isolation with strong cultural differences such as recent immigrants, Indigenous people, or isolated rural dwellers may present issues for retaining teachers in rural schools (Watson & Hatton, 1995). Classroom burnout also appears to trigger an exodus from rural classrooms. According to *The Age* (26 February, 2007) "Younger teachers point to

issues such as overwork, pay structures, being put on contract without assurance of permanency, community expectations, student management and lack of social status” as reasons for leaving rural areas. Other reasons may include inadequate housing, economically deficient surrounding communities, and an expectation that teachers will teach multiple grade levels or multiple subjects (McClure et al., 2003). In addition, there is the diversity challenge in rural education that includes social and cultural diversity (Nelson, 2004). Rural schools also have similar issues to address as their non-rural counterparts, such as students who are gifted and talented and/or those with disabilities (Rosenkoetter, Irwin, & Saceda, 2004). Government policy and inaction have been blamed for the rural education crises in various countries, including Australia. For example, “The Teacher Shortage is a problem for the nation. If we want a good future for our children we need good teachers. We call on federal and state governments to stop pretending there is no problem and to start addressing it” (Australian Education Union, 2001, p. 8). The 1998 United States’ government amendment aimed at creating grants to support the supply of rural teachers (Collins, 1999). “The extent of the shortfall would depend on the success of policy initiatives to attract and retain teachers and the effectiveness of teacher workforce planning, the responsibility for which lies with government and non-government education authorities in States and Territories” (MCEETYA, 2004, p. 1). There continues to be campaigns (Australian Education Union, 2001) and inquiries (Lyons et al., 2006) for high-quality programs that facilitate employment and retention of teachers in rural schools. These campaigns and inquiries focus strongly on teacher supply, resources, and mentoring to aid the retention of rural teachers. Equity for rural students is a key argument for developing rural education (e.g., Gregson et al., 2006; HREOC, 2000; Watson & Hatton, 1995), as their non-rural counterparts access a range of schools and school systems with greater security of retaining teachers, especially those with expertise in specialty areas. Not surprisingly, addressing educational equity for rural schools comes at a cost. Distances, human resources, physical and technological resources, and a wide range of contextual situations appear far more variable for rural schools (Imazeki & Reschovsky, 2003). However, equity does not mean equal, and for rural circumstances it implies receiving opportunities that aim to equalise educational and future employment prospects for its rural citizens.

There are particular contexts for teaching and learning in rural schools that make it significantly different from non-rural teaching. Teachers in rural and remote schools can feel isolated and may require support through mentoring, modelling, and counselling (US Department of Education, 1998). Yet, it is also important that the positive aspects of rural teaching placements are promoted, where many preservice teachers appreciate gaining valuable experiences with diverse people in safe, quiet and aesthetically-appealing environments (Wright & Osborne, 2007). For example, there are rural teaching experiences that go beyond urban experiences (Danaher, Moriarty, & Danaher, 2003), particularly with the serenity of rural living, the flora and fauna, an emphasis on outdoor activities, familiarity with the community, and unique contextual situations. The advantages of rural service must be highlighted to potential beginning teachers by targeting the preservice teacher level. Indeed, “schools in rural Western Australia were looking to recruit final year undergraduates, who had not yet qualified as teachers, to fill some vacancies” (Zimmer, 2001).

### **Selecting Rural Teachers**

It is difficult to select teachers for rural areas (Lyons et al., 2006). Indeed, attracting teachers to rural schools has presented a challenge for education departments for years (Collins, 1999). Some early career teachers may identify rural service as a way to develop their promotional

prospects or gain “points” for securing a position in “preferred” areas. There are schemes to tackle teacher shortages with incentive initiatives (Lonsdale, 2003; MCEETYA, 2004, 2005). Gaining equity for rural schools means taking measures to ensure, among other matters, equitable teacher salaries to compensate for regional inequalities (Bradley, 1998). If teachers are attracted to rural education, then another problem arises, namely, retaining these teachers for extended periods of time (McClure, Redfield, & Hammer, 2003; McClure & Reeves, 2004). The national framework for rural and remote schools (MCEETYA, 2004) stresses the importance of promoting:

the contextual and professional advantages of working in remote, isolated and rural areas in addition to offering financial and industrial conditions packages raising the profile of the profession by acknowledgment of the professional qualities of country teachers, leaders and support staff. (p. 9)

Collins (1999) argues that candidates for rural teaching placements need to come with personal characteristics, rural backgrounds, or educational experiences that predispose them to live in rural areas. However, personal characteristics suited to rural teaching would be difficult to determine, and employing teachers with only rural backgrounds would limit teacher selection, hampering the diversity of expertise required for rural schools. In contrast, broadening educational experiences for potential teachers may open the field for selecting teachers suitable for rural schools. Hence, universities need to be proactive by introducing rural education as part of preservice teacher preparation (Boylan, 2004; Collins, 1999; Roberts, 2005). Rural schools need high-quality teachers who understand rural areas, which necessitates contextualising preservice teacher preparation (Monk, 2007; Wenger & Dinsmore, 2005; Wright & Osborne, 2007).

Even though there are rural university campuses attempting to address rural school needs, most Australian universities are located in non-rural areas (i.e., urban and metropolitan areas). For over two decades, universities generally have not provided substantial preservice teacher preparation for rural teaching (Lyons et al., 2006). Indeed, Australian universities do not require preservice teachers to undertake rural school experiences (Halsey, 2005), and it appears likely that rural university campuses draw their preservice teachers from their rural communities, which may not be sufficient to supply teachers to rural areas, particularly if a percentage of these graduates re-locate to teach in non-rural areas. Universities situated within or close to rural areas may be well placed to facilitate these programs (e.g., Boylan, 2003), especially as there has been a decline in preservice teacher enrolment from rural students, with many preservice teachers enrol in teaching degrees at non-rural universities (Lyons et al., 2006). Non-rural universities have significant preservice teacher enrolment numbers with limited teaching positions available within their vicinity. Therefore, these universities need to be part of the solution for addressing the rural teaching crisis (Roberts, 2005), particularly as teachers from non-rural areas may feel unqualified to teach in rural areas if they have not had adequate rural teaching experiences to assist their induction into such schools. Indeed, non-rural preservice teachers may be reluctant to apply for rural teaching positions, as most have had no rural teaching experience or understanding of the living and teaching contexts. They need to develop an awareness of rural education and be prepared for these diverse roles (Wenger & Dinsmore, 2005). Roberts (2005) recommends universities collaborating with education departments to devise preservice teacher programs for teaching in rural schools.

## Context

Preservice teachers who have been involved in rural teaching programs tend to apply and accept rural teaching appointments (ICPA, 1999, as cited in Lyons et al., 2006). Even though funding is an issue to conduct these programs on a larger scale, addressing the initial problem

revolves around motivating preservice teachers to undertake rural teaching positions. There are university programs operating in New South Wales (e.g., Gregson et al., 2006) and Victoria (Mays & Lyons, 2006) that provide relatively small numbers preservice teachers with opportunities to teach in rural settings. Indeed, White et al (2008) outline state initiatives that have preservice teachers immersed in rural communities for determining their rural teaching prospects. These programs occur or have occurred in NSW, Victoria, Northern Territory, Western Australia, South Australia, and Tasmania; however White et al's report does not specify any program operating within Queensland. The research question for this Queensland-based study was: what may motivate non-rural preservice teachers to seek employment in rural schools? A teaching experience was devised for preservice teachers from Queensland University of Technology (QUT) to be involved in rural or remote Queensland schools. This program aimed to: provide rural classroom experiences; challenge preservice teachers' misconceptions about teaching in rural areas; and, encourage them to consider rural teaching as an option for their careers.

The voluntary rural teaching program offered by QUT, titled *Over the Hill*, was initiated as a response to principals' calls for preservice teacher involvement in rural schools. Principals from rural schools such as Condamine, Wandoan, and Miles emphasised the difficulty in recruiting rural teachers as permanent, supply or casual teachers. QUT in coordination with Condamine principal, Michael Lawrance, who was a preservice teacher in NSW with the *Beyond the Line* program offered by Southern Cross University in 2004, coordinated the program for QUT preservice teachers.

A QUT seminar provided interested preservice teachers with information about rural or remote teaching experiences. The purpose for the experience was noted as an opportunity to further the preservice teachers' knowledge and initiate interest in teaching in rural or remote settings in order to widen their perceptions and prospects for future employment. The university campus funded this short-term project with additional support from principals within the rural schools. A code of conduct was articulated to the preservice teachers to ensure professional values and attitudes within the community settings. They were also required to take money for meals, a small bag for clothes, a small gift for the allocated host family, a lesson plan (e.g., a science lesson plan taught previously), stationery, Blue Card, and mobile phone for contact purposes. Michael Lawrance organised the preservice teachers' placements, accommodation (including staying with a teacher or family associated with a school), orientations with key personnel, and social activities. Placements occurred in a range of contexts. For example, one school was an environmental education centre established for school groups either on a daily basis or overnight camps with various outdoor activities, there were one or two teacher schools, and a feeder high school. These preservice teachers were expected to be involved in classroom activities, including teaching small groups and classes; hence, on the advice from their mentor teachers within the rural schools, they would prepare lessons for teaching in a variety of subject areas and situations.

## Method

This study investigated 17 preservice teachers' first experiences of teaching in rural areas. An expression of interest was emailed to all second and third-year preservice teachers on the university campus ( $n=65$ ). As this was an inaugural program, there were only 18 places available so a "first in best dressed" approach was used to select participants. One preservice teacher dropped out at the last moment for personal reasons; hence there were 17 participants (2 males, 15 females). Successful participants were provided with a five-day itinerary (e.g., departure and arrival places and times, community interaction days, social evening, and

school and class allocations, and teaching and learning activities). There were nine rural primary and high schools situated within two-driving hours of each other. These second and third-year preservice teachers' experiences included interacting with local communities, living with host families, observing teaching practices, and teaching rural middle-school students. The preservice teachers ( $n=17$ ) wrote about their anticipated involvement in the program. At the conclusion of the program, a reflection questionnaire guided their responses about their rural experiences, and asked about their personal and professional experiences, viewpoints on teaching in rural settings, negative aspects of the program, and recommendations for future rural programs. All data were collated into emerging common themes (Hittleman & Simon, 2006).

## Results and discussion

An expression of interest was emailed to all second and third-year preservice teachers completing a Bachelor of Education at one university campus. They were asked to state why they should be considered for this rural experience. All responses were based around extending their knowledge about teaching and providing insight into rural experiences. Although most had not considered rural teaching as a potential career move, the expressions of interest for experiencing a rural setting were generally positive. For example, "I would really love to attend the Out West trip! I think this would be a great experience for me and would reinforce the reasons as to why I am studying education". Others appeared very excited about the prospect of an out-west experience. "I WOULD LOVE TO GO!!!!" (capitals and exclamations included). One preservice teacher indicated a need for support from her peer group: "I am thinking of going on this 5 day trip that you have organised, it sounds fantastic. Is there any one else in the 3rd year cohort going?" There were concerns within the expression of interest that required further consultation: "The thought of going out west for a rural prac was intimidating and the last thing that I wanted—I have a very negative outlook on rural teaching"; and "I think it would be a fantastic learning experience and I am keen to take part in rural placements. I have a few concerns that I hope to address with you. Would I be able to chat to you on Thursday regarding these concerns?" These concerns were questions regarding the arrival time back at the university, if assignments due that week would have to be completed prior to departure, and lesson preparation requirements. Some of these preservice teachers were concerned about financial issues for undertaking a rural practicum placement. As many preservice teachers work outside university studies, employment obligations may interfere with a possible rural experience. "I just need to talk to my employers first". Nevertheless, this program presented an avenue for preservice teachers to involve themselves without additional expenses:

I have always strongly considered undertaking a 20 day field placement but was concerned about costs involved and if I would be able to cope. Experiencing this with the support of my peers and university staff would just be an awesome and memorable moment during my undergraduate degree.

There were five preservice teachers who had already considered a rural teaching placement as a possibility. For example, "I am really interested in attending this trip as my aim once qualified is to teach in a country town/remote area". A few perceived this forthcoming experience as a way to change their perspective on rural teaching. "I believe this opportunity may change my attitude towards what country service may be, which can open many future pathways as I consider teaching in the country once I graduate". Overall, there was high interest for experiencing rural schools, particularly as a new life experience:

I have spent most of my life living near a major city - Melbourne, Sydney and Brisbane. I am very interested to learn (first person) about how a rural school runs, how the

classrooms are managed, how they organise lunches and how the students and teachers travel to school on a daily basis. I suppose, I am just really interested in seeing how they do life, school and work out west (and apparently the stars at night look a lot better in the outback).

Reasons for involvement in the rural program included further investigation of rural curriculum implementation, determining differences between rural and urban education, and opportunities for understanding rural life. To illustrate: "I feel this would be a great opportunity to observe how the curriculum is implemented to meet the needs (geographical, cultural, societal and economical) of all involved"; "It will give me a chance to see other perspectives of educational environments. I'm aware that schools in rural remote areas are different compared to city schools, but how? What are their values? What are the students like?"; and "This short adventure would provide me with opportunities to speak with teachers, children, families, and locals about the lifestyle and pros/cons of rural living".

After participating in this program, the preservice teachers reflected on their five-day rural experience with remarkably positive responses. The following response exemplified most of these preservice teachers' experiences:

In all honesty, I believe the trip out west was one of the best life experiences I will ever encounter. The trip has been an eye opener and has quashed many stereotypes I considered true of the country. Through this experience I am now considering to complete my next prac placement at a country school. This experience overall has changed me both personally and professionally as a future teacher. It has allowed me to consider teaching at a small school and moreover has allowed me to start developing skills in which will assist me if I am placed in a rural area.

All but one reflection highlighted the rural experience as exceptionally positive. A somewhat negative reaction was: "I thought it would be a piece of cake, easy and fun but when I actually got there I realised it was tougher". However, this reaction was followed by a positive outcome, "Nevertheless, I would still really enjoy the opportunity to do a rural prac". This short experience changed the preservice teachers' attitudes about rural teaching and living, "I was not really even considering a rural teaching placement prior to this trip, however after seeing the environment and community where we were taken, I now want to teach there". It convinced nearly all of them that rural teaching was a possibility even if they had not considered such teaching before:

I have never wanted to teach in a rural or remote school because I thought that I would be all alone, so far away from family and friends. This trip has certainly changed my view. I now know that you are surrounded by people who are very supportive professionally and personally. After this experience, I want to teach in a rural school.

One preservice teacher commented that as a result of this experience, "I have become more confident in myself personally and professionally". Three others claimed, "This trip has not changed my mind, but confirmed it is a great decision and alleviated any worries that I had about resources and support", "I was of the opinion that I wasn't looking forward to ever doing rural service. My opinion has changed drastically and I now want to do one of my pracs there", and "seeing what life was like out there was indispensable - social, family, everyday - and realised it would perhaps dispel many preservice teachers' fears or apprehensions". The preservice teachers were impressed by the teaching conditions, "The classroom/school in regards to resources and behaviour management was exceptional", which also changed their attitudes for rural teaching and living:

Before going on the 'Over the Hill' trip I had every intention of staying on the coast and in my local area to teach. The thought of going out west for a rural prac was intimidating and the last thing that I wanted to happen, I had a very negative outlook on rural teaching. In a rural setting you come to realise how important education is and how valued it can be. The level of involvement of the teachers in the community of a rural setting is enormous and overwhelmingly rewarding. After having spent some time in a country

setting it has now changed my views in regards to teaching in a rural setting and I would be more than happy to head out west after graduation.

Indeed, there was one preservice teacher who was considering not becoming a teacher at all; however this experience changed her mind about rural teaching and teaching in general:

To be able to observe and teach in an area, geographic and socioeconomic, so different to what I'm familiar with, not only cemented my desire to teach in a rural or remote area but strengthened my perhaps weakened resolve to be a teacher at all. It was very interesting and refreshing to observe the quality educational experience teachers are able to provide their students, both in terms of resources and being able to focus on teaching in depth, as opposed to behaviour management, as seen in many other classrooms.

Although these middle-school preservice teachers were focused mainly on upper primary, the *Over the Hill* program may lead towards addressing the shortage of science and mathematics teachers in rural schools. For example, "It served to enhance my ambition of teaching in a remote/rural area and also opened me to the option of teaching in a high school setting". This rural experience changed attitudes for teaching in rural areas, but it also changed perspectives for teaching in one particular education sector or another. For example, these preservice teachers were involved in middle-school education with a firm direction for upper primary schools. This rural experience extended to the high school environment, which facilitated a dramatic mind change:

What possibly shocked me the most was my strong pull away from the primary sector to the high school sector. Having helped and observed in a range of junior and senior classes at the high school gave me a clear indication of where I want to teach. What I realised from the 'Over the Hill' program is that I could easily see myself working and living in a rural area. The experience enlightened me to a different lifestyle to the coast that would suit my interests and character and am now very excited to finish my degree and finally start teaching.

The social experience was a valuable introduction and a chance to "meet and mingle with the local community and get a feel for what country events are really like". Another wrote, "I believe that the pleasant and caring atmosphere in small country towns is well suited to my personality. I look forward to completing my country service when I finish my degree and becoming a teacher at a small rural or remote school setting". Professional rewards were also very attractive to these preservice teachers who for the first time realised how beginning teachers can become very successful as a result of rural teaching. The rural-school principal who had co-organised the *Over the Hill* experience was a third-year out teacher who also had a rural experience during his preservice teacher education. This inspired the preservice teachers, for example:

Professionally it has also made a big impact. The realisation that some teachers in the rural setting have been in a classroom for 3-4 years and are already principals of schools is something that all people who would like to move up in the school should consider. It has also changed my idea of where my career path is headed over the next few years.

The preservice teachers were asked to record recommendations for future rural-teaching programs. All these preservice teachers stressed the importance of a longer experience. Most suggested at least one full week, with only one recommending a two or three-week practicum experience. Four participants suggested holding a barbecue or sports day involving the students and local community to introduce preservice teachers. Five participants indicated communicating with their respective rural placement teachers a week or two before the program commences. Indeed, most suggested, "more pre- knowledge of whom and where we would be staying", which may have "lead to more preparation and comfort, and therefore we could have taught more lessons".

This short experience was very positive, and a longer time may assist preservice teachers to gain a broader perspective of rural schools and rural living. For example, the environmental centre, middle school, high school and a range of primary schools such as a one-teacher



school may provide further insights into rural education to inspire non-rural preservice teachers. Experiencing rural or remote contexts may change a preservice teacher's career direction, for example, one preservice primary teacher had her first teaching experience in a high school setting and wrote in her recommendation, "I loved the middle years, perhaps university students who want to be only primary teachers need to experience a high school setting. They will possibly enjoy it more than they know". It was also recommended that rural teaching experiences could be opened up to more preservice teachers. One preservice teacher wrote, "More students (preservice teachers) should be able to go out west to gain this amazing experience".

Rural schools visited within the district could easily cater for more than 17 preservice teachers; however there are costs (e.g., accommodation, supervision, travel) that need to be addressed. Homestay accommodation appears an option, with preservice teachers paying for their own sustenance, and transport to and from school could be arranged according to the association between the homestay family and the visiting school. Teachers who see this as an opportunity to have preservice teacher involvement would require no payment for supervision as this program falls outside the usual practicum placement programs and does not require formal evaluations of the preservice teachers' practices. Hence, the only funding required would include transport to and from the non-rural university campus and a program coordinator who could match preservice teachers with schools and serve as a point of contact to address issues or concerns. The rural experience could be arranged outside usual university times, "Perhaps during the June-July semester break or towards the end of the examination block when most students have completed exams".

## Conclusion

Teacher shortages continue within Australia's vast rural regions. Universities are located in line with Australia's population, predominantly on its coastline. Rural campuses have been established to address rural education needs; nevertheless there may be insufficient numbers of preservice teachers to feed back into rural schools and/or preservice teachers educated in rural campuses may gravitate to more densely-populated areas in order to gain further life experiences, which can enhance their teaching practices. Conversely, non-rural universities have many preservice teachers graduating and seeking full-time employment in cities and coastal areas, with insufficient positions available for all. It appears that more successful employment may occur with non-rural universities assisting their preservice teachers into rural areas. However, preservice teachers who have not experienced rural-teaching placements may have undeveloped notions about rural living and teaching. The findings from this study support recent Australian research (e.g., Boylan, 2003; Gregson et al., 2006; Lyons et al., 2006) that show instilling confidence and empowering preservice teachers to teach and live in rural areas require first-hand experiences to create attitudinal changes.

Non-rural universities can be involved in changing preservice teachers' attitudes for teaching in rural schools by providing these first-hand experiences. Local homestay accommodation, pairing with rural teachers that require no written reports as a non-practicum placement (hence no costs), preservice teachers willingness to cover their own sustenance and entertainment expenses, and daily school transport through local arrangements can make rural teaching placements a viable option for non-rural universities. Such involvement can promote contexts for working in rural areas and highlight the professional advantages for beginning teachers (MCEETYA, 2004). This qualitative study indicated very significant attitudinal changes for preservice teachers' willingness to teach in rural areas, which also dispelled misconceptions about rural living and teaching. Introductory preservice-teacher programs that

educate about rural living and teaching may enhance the recruitment of teachers in these areas. If preservice teachers are aware of rural living and teaching before recruitment then it may also assist in retaining these teachers in rural areas.

## References

- Australian Education Union. (2001). *A national teacher shortage: A solution from the Australian Education Union*.
- Boylan, C. R. (2004, November). *Putting rural into pre-service teacher education*. Paper presented at the Australian Association for Research in Education conference, Melbourne, Victoria.
- Bradley, A. (1998). *Uneven distribution contributes to teacher shortages, study warns*. Education Week on the Web. Retrieved 4 September, 2007, from <http://www.edweek.org/ew/vol-18/10recrui.h18>
- Collins, T. (1999). Attracting and retaining teachers in rural areas. *ERIC Clearinghouse on Rural Education and Small Schools*. Charleston WV. Retrieved 2 August, 2007, from <http://www.ericdigests.org/2000-4/rural.htm>
- Danaher, G. R., Moriarty, B. J., & Danaher, P. A. (2003). Bush lessons down under: Educational experiences in regional, rural, and remote Australia. *Journal of Research in Rural Education*, 18(3), 129-172.
- Gregson, R., Waters, R., & Gruppetta, M. (2006, July). *Breaking the ice: Introducing trainee primary and secondary teachers to rural education settings*. Paper presented at the Australian Teachers Education Association (ATEA) Conference, Fremantle, Western Australia.
- Halsey, J. (2005). *Submission to the inquiry into teacher education*. Rural Education Forum Australia. Retrieved 10 September, 2007, from <http://www.aph.gov.au/house/committee/evt/teachereduc/subs/sub045.pdf>
- Harris, K-L., & Farrell, K. (2007). The science shortfall: An analysis of the shortage of suitably qualified science teachers in Australian schools and the policy implications for universities. *Journal of Higher Education Policy and Management*, 29(2), 159-171.
- Hittleman, D. R., & Simon, A. J. (2006). *Interpreting educational research: An introduction for consumers of research* (4<sup>th</sup> ed.). New Jersey: Prentice-Hall.
- Human Rights and Equal Opportunity Commission (HREOC) (2000). *Education access: National inquiry into rural and remote education*. Sydney: Commonwealth of Australia.
- Imazeki, J., & Reschovsky, A. (2003). Financing adequate education in rural settings. *Journal of Education Finance*, 29(2), 137-156.
- Lonsdale, M. (2003). Initiatives to address teacher shortage. *ACER*, 5, 1-47.
- Lyons, T., Cooksey, R., Panizzon, D., Parnell, A., & Pegg, J. (2006). *The SiMERR national survey*. National Centre of Science, ICT and Mathematics Education for Rural and Regional Australia: University of New England. Retrieved 6 October, 2007, [http://www.une.edu.au/simerr/national\\_survey/Report/](http://www.une.edu.au/simerr/national_survey/Report/)
- Martinez, K. (2004). Mentoring new teachers: Promise and problems in times of teacher shortage. *Australian Journal of Education*, 48(1), 95-108.
- Mays, H., & Lyons, D. (2006). *A proposal for change to teacher education in and for rural and regional Australia*. Paper presented at the Australian Teachers Education Association (ATEA) Conference, Fremantle, Western Australia.

- McClure, C. T., Redfield, D., & Hammer, P. C. (2003). *Recruiting and retaining high-quality teachers in rural areas*. AEL. Retrieved 2 September, 2007 from [www.ael.org/page.htm?&pd=abo6721&id=764](http://www.ael.org/page.htm?&pd=abo6721&id=764)
- McClure, C., & Reeves, C. (2004). *Rural teacher recruitment and retention review of the research and practice literature*. Charleston, WV: Appalachian Education Laboratory.
- Ministerial Council on Employment, Education, Training and Youth Affairs (MCEETYA). (2004). *National framework for rural and remote education*. Developed by the MCEETYA task force on rural and remote education, training, employment and children's services. Retrieved 30 August, 2007, from [http://www.mceetya.edu.au/verve/\\_resources/rural\\_file.pdf](http://www.mceetya.edu.au/verve/_resources/rural_file.pdf)
- Ministerial Council on Employment, Education, Training and Youth Affairs (MCEETYA). (2005). *Demand and supply of primary and secondary school teachers in Australia*. Retrieved 30 August, 2007, from [http://www.mceetya.edu.au/verve/\\_resources/-DAS\\_teachers-PartsA-d.pdf](http://www.mceetya.edu.au/verve/_resources/-DAS_teachers-PartsA-d.pdf)
- Monk, D. H. (2007). Recruiting and retaining high-quality teachers in rural areas *Excellence in the Classroom*, 17(1). Retrieved 30 September, 2007, from [http://www.futureofchildren.org/usr\\_doc/7\\_08.pdf](http://www.futureofchildren.org/usr_doc/7_08.pdf)
- Mulford, B. (2003). *School leaders: Changing roles and impact on teacher and school effectiveness*. A paper commissioned by the Education and Training Policy Division, OECD, for the Activity Attracting, Developing and Retaining Effective Teachers. Retrieved 23 August, 2007, from <http://www.oecd.org/dataoecd/61/61/2635399.pdf>
- Nelson, C. G. (2004). The diversity challenge in rural education. *English Journal*, 93(6), 22. Politics.co.uk. (Friday, 31 Aug 2007). *Govt policies blamed for head teacher shortage*. Retrieved 29 September, 2007, from [http://www.politics.co.uk/news/opinion-former-index/business-and-industry/govt-policies-blamed-head-teacher-shortage-\\$477859.htm](http://www.politics.co.uk/news/opinion-former-index/business-and-industry/govt-policies-blamed-head-teacher-shortage-$477859.htm)
- Roberts, P. (2005). *Staffing an empty schoolhouse: Attracting and retaining teachers in rural, remote and isolated communities*. Sydney: NSW Teachers Federation.
- Rosenkoetter, S. E., Irwin, J. D., & Saceda, R.G. (2004). Addressing personnel needs for rural schools. *Teacher Education and Special Education*, 27(3), 276-291.
- The Age. (February 26, 2007). *Classroom burnout triggers teacher opt-out*. Retrieved 30 September, 2007, from <http://www.theage.com.au/news/education-news/classroom-burnout-triggers-teacher-optout/2007/02/24/1171734032304.html>
- US Department of Education. (1998). *Promising practices: New ways to improve teacher quality*. Retrieved 3 October, 2007, from <http://www.ed.gov/pubs/PromPractice/chapter2.html>
- Watson, A. J., & Hatton, N. G. (1995, November). *Staffing of schools: Quality and equality*. Paper presented at the Australian Association for Research in Education Conference, Hobart, Tasmania.
- Wenger, K. J., & Dinsmore, J. (2005). Preparing rural preservice teachers for diversity. *Journal of Research in Rural Education*, 20(10), 1-15.
- White, S., Green, B., Reid, J., Lock, G., Hastings, W., & Cooper, M. (2008, July). *Teacher education for rural communities: A focus on 'incentives'*. Paper presented at the Australian Teachers Education Association (ATEA) Conference, Sunshine Coast, Australia.
- Williams, J. H. (2005). Cross-national variations in rural mathematics achievement: A descriptive overview. *Journal of Research in Rural Education*, 20(5), 1-1
- Wright, D., & Osborne, J. (2007, September). *Preparation for teaching in rural schools*. Paper presented at the British Educational Research Association Annual Conference, Institute of Education, University of London.

Zimmer, E. (2001). *Severe shortage of casual teachers in disadvantaged Australian schools*.  
World Socialist Web Site. Retrieved 30 September, 2007, from  
<http://www.wsws.org/articles/2001/jun2001/edu-j15.shtml>