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A Background to Rural Education Schooling in Australia

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I introduce a brief history of rural education in Australia by first providing a geographical description of the country and then by discussing the development of education in remote areas. I then consider the history of rural education in one state, Queensland, as an illustration of developments elsewhere in the country. I conclude by considering the impact the Commonwealth government had on Australian rural education since the 1960s.

Introduction

This article sets an historical perspective on rural education in Australia. Australia's education began by copying the English system, familiar to the first white immigrants, until factors of great distance, harsh climate, and sparse population produced a peculiarly Australian education system. It is based on centralised state bureaucracies which supervise and administer the human, physical, and financial resources comprising educational service delivery. They also determine the curriculum. Australian rural education has been characterised by the themes "free, secular, and compulsory." Pragmatism, and a consideration for efficiency and economy, also shape rural education in Australia. Rural educators, in their attempts to overcome the difficulties of remoteness and isolation, have become world leaders in adopting and modifying a range of techniques to cater for their clients.

Anyone who writes in the area of rural education must come to grips with the problem of definitions. For the purpose of this article, and in keeping with the pragmatic nature of Australian educational administrators, the following may suffice. States have attempted to provide the minimum one-teacher primary school where approximately 10 pupils could be guaranteed to attend daily. This usually meant that those children lived within a radius of five kilometres of the school in rural areas when the horse transported students. The same regulations apply today but many families travel up to 90 minutes daily to attend a school, using either private vehicles or school buses. Secondary education is provided by adding secondary teachers to a primary school secondary department when there are sufficient students to warrant the provision of at least five secondary school teachers. The minimum number would be about 40 students. Most places having 300 secondary-aged students would warrant the establishment of a secondary school. Distance education services may be provided to any student who lives too far away to attend a school, and to the smallest secondary departments when curriculum expertise for specialist subjects cannot be found among the four or five secondary teachers. It should be apparent from the following description that each state government is responsible for providing education to all students and that distance education is a method of ensuring that provision. There is no significant involvement of the non-government schools sector in the provision of distance education, except for the establishment of boarding schools (Commonwealth Schools Comission, 1988).

Geography

Australia is a low, slightly oblate, continent characterised by a dry interior and a tropical northern third. Running down the eastern edge is the Great Dividing Range. To the west of this range lie rolling plains drained by the Murray-Darling river system. Further to the west, the land becomes even drier to the point where it no longer supports large trees. On the western side of the Nullarbor lies the Archaean Plateau and a hot,

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dry, western coast. The dry inland is characterised by weathered low ranges and deserts, brought to bloom by infrequent rainfall. Monsoon rains flood the land in the northeast, but most of this water drains away from the inland. That which finds its way south evaporates in the large inland basins. The Kimberley mountains in the northwest are heavily dissected and very sparsely populated. A small island, Tasmania, lies off the southeast coast. Australia's distance from west to east is about 4000 km and a little less from north to south.

Before white people arrived in numbers, Australian indigenous people lived off the land in a nomadic manner. Historical records suggest that Aboriginal people have lived in this way on the continent for upwards of 60,000 years. The white population is concentrated in a crescent from Brisbane on the mid-east coast through Sydney and Melbourne in the south to Adelaide on the mid-south coast. The city of Perth lies on the lower west coast and Darwin on the mid-north coast. In addition, there are the north coastal cities of Cairns and Townsville and the inland cities of Mt. Isa, Alice Springs, Broken Hill, and Kalgoorlie. Population in the remainder of the inhabited country is found in small townships on transport lines or in stations and properties (i.e., large farms). Most Aboriginal people live in urban cities or towns. Only a few maintain a traditional lifestyle. Torres Strait Islanders live on islands to the north.

The size of Australia, the characteristics of its landforms, the sparsity of inland rainfall, and the colonial history of its political boundaries explain, in part, how Australians see themselves. They do so not as urban dwellers, but as rugged outdoor individuals capable of enjoying life in both the bush and the surf. The Australian rural myth, centred on songs like *Waltzing Matilda* and poems like Dorothea MacKellar's *My Country* ("I love a sunburnt country"), perpetuate the quintessential Australian image.

This Australian image commenced in 1788 when Captain Arthur Phillip disembarked some 1,030 British migrants at Sydney Cove. The main problem during the first 30 years of British settlement was to keep the convicts, soldiers, and officials alive. The historical records of Australia showed the English government's neglect to send regular food supplies. This, when combined with loss of seed during the shipment and drought, resulted in what might be called the "hungry years" (Greenwood, 1968). Nevertheless, the colonists settled the land, dispossessing the Aboriginals in the process. Blainey (1975) estimated that there were 300,000 Aboriginal people in Australia in 1788. Today, there are 17 million Australians.

Meinig (1972) schematised the development of remote communities. Australia passed through its frontier development stage by 1900. With the movement of people through the outback came the spread of an education system, based very much on the beliefs and cultures prevalent in the United Kingdom.

The history of education in Australia is covered well in standard texts by Barcan (1980), Austin (1972; Austin & Selleck, 1975), and Goodman (1968). Pictorial histories can be found in Burnswood and Fletcher (1980) and Holthouse (1975). These publications provide detailed histories of the most significant themes and events affecting the entire educational spectrum for the periods in question.

Distance education is a sub-set of general educational provision and has been influenced by the same factors, albeit much compounded by geography and sparsity of population. This paper will consider some of the broader implications of the development of distance education services, especially as such provision had, and continues to have, a great impact on teachers working in rural areas.

Educational provision in rural and remote areas has been a matter of providing teachers and schools to places where sufficient students could be brought together for the purpose of instruction. By definition, then, there have always been places where there were insufficient students to warrant the provision of a teacher as the first priority, or the establishment of a school as a second priority. This does not mean that there was no educational provision in Australia, even before the arrival of Europeans.

Early History

Prior to the arrival of white people in Australia, Aboriginal and Torres Strait Islander people provided education to children. The curriculum consisted of detailed knowledge of the social system, factual knowledge of nature, vocational skills, and knowledge of ideology and beliefs. Each group of people used instructors to impart knowledge, success being indicated by rites of passage or initiation. Methods of instruction involved

repetition of songs and dances, storytelling, imitation of elders' behaviour, and ceremony.

The arrival of white people's education in 1788 meant the importation of an English system based on the capacity of churches to organise education for young children. The first schools taught children of military and convict families the rudiments of literacy and numeracy, often using the Bible as the basic textbook. Various governors found teachers among the soldiers and convicts, especially among the women, whose incapacity for heavy labour precluded them from early colonial work. For example, in 1798 the Anglican Reverend Richard Johnson combined three classes under one roof to teach between 150-200 children (Barcan, 1980). By October 1798, convicts succeeded in burning the school. The London Missionary Society provided four missionaries to Sydney as teachers between 1798 and 1802. Governor Bligh's administration catered for over 400 children in the Sydney region (Barcan, 1980).

Teaching methods copied those from England, where, under the Bell monitorial or Lancastrian systems, head teachers taught lessons to monitors (or assistants) who relayed the lesson content to pupils sitting in rows, assembled by age. Monitors used drill and recitation as the means of instruction. The main books used were spellings, catechisms, dictionaries, and grammars.

Governor Macquarie took office in 1810 and immediately publicised his view of the main purposes of education:

> [T]hat the Rising Generation of this Infant Colony should receive Instruction in those Principles which alone can render them dutiful and obedient to their Parents and Superiors, honest, faithful and useful members of Society, good Christians. (Barcan, 1980, p. 19)

This view suggests that, in colonial times, education existed for religious, social, and moral purposes. Australia, however, having a small population, could not rely on widespread religious organisations to foster and propagate education. The Anglican Church in the English-speaking world faced challenges from non-conformist religions (Wesleyan, Congregationalist, Methodists, and Baptists). Not only did each group find voice in Australia, but a rising number of Roman Catholic immigrants, forced from Ireland by crop failures and transportation, brought with them Roman Catholic clergy and beliefs. Each group sought to provide education for its followers, but found it difficult to accommodate needs in the rural areas. The Anglicans, being the predominant English religion, attempted to monopolise educational provision, but were unable to do so.

The Anglican Church sought to establish its educational monopoly through the Church and Schools Corporation, using funds the church hoped to receive as income from one tenth of the land. This money did not materialise and opposition from other religious sects quickly arose. Governor Bourke adopted a tolerant view towards various religions in Australia by abolishing the Church and Schools Corporation, establishing state aid to schools, and favouring non-denominational education. Bourke recommended adopting the national system of education used in Ireland in which a Board of Commissioners provided overall management for the school system. Bourke's proposal floundered on religious schisms, leaving various churches to provide education. The depression of 1841-1843 saw a significant decline in schooling, resulting in the formation of a select committee under the chairmanship of Robert Lowe in 1844. This committee recommended that the Irish National System, as originally proposed by Bourke, be adopted in New South Wales. Once again the churches objected, but the depression demonstrated that they could not shoulder the expense of a denominational education system in small and isolated communities having yet smaller townships and properties to service. The Legislative Council adopted the system in 1846, beginning Australia's long history of centralised, state-controlled, secular education. Colonies other than New South Wales saw similar religious difficulties beset the establishment of a comprehensive elementary education system.

Emergence of State Systems

Each state began by encouraging denominational schools, but by the 1850s had moved towards state assistance. Concomitant with the establishment of Sydney University in 1849, Australian states saw a growth in endowed or denominational (privately funded) secondary schools, most of which modelled themselves after English grammar schools.

Concepts of democracy and secularism dominated the political stage throughout populated areas of Australia during the 1850s and 1860s. This movement expressed itself through a gener-

ous franchise and the establishment of bi-cameral government. Barcan (1980) claimed that "both liberalism and democracy led on to secularism." Secularists believed that the affairs of the Church and state should be separated—that, for instance, the state should not aid churches or Church schools (Barcan, 1980). Significantly, for rural education, secularists believed that money devoted to maintaining competing Church schools could, under a unified system, be diverted to the establishment of state schools in the thinly populated rural regions (Barcan, 1980). In Queensland, Governor Bowen supported the Primary Education Act of 1860, which introduced a comprehensive system of state schools alongside a minimal provision for Church schools. The Act allowed for non-denominational religious instruction in state schools, to be given by visiting clergymen before or after school or during the mid-day recess.

Anglican and Roman Catholic bishops agitated against state-funded schools in Queensland but to little avail. In general, Queensland's administrators believed that secular attitudes and the pressing need to found schools in rural areas should give the state the lead in establishing secular schools in rural areas.

In New South Wales, the inefficiency of a dual state and Church system became more apparent by 1855. The secular movement, expressed through the National School System, became paramount with passage of the Public Schools Act of 1866.

Insofar as rural education developed, the scarcity of clergy in remote places encouraged secularism among the population. Pragmatism also dominated rural philosophy, encouraging practical curriculum subjects in rural schools at the expense of more "academic" study. This philosophy probably discouraged the establishment of secondary education in rural areas as a state enterprise because of a prevailing view against "academic" work. Some families, usually the wealthiest, sent children to major towns to receive an academic secondary education, but not at state expense.

By the mid 1870s, Australian secondary schools split into the following systems: Church of England schools; non-conformist boys schools and Roman Catholic colleges; state-aided but autonomous grammar schools; higher class of state public schools; local grammar schools; private venture grammar schools; and home schooling. Middle class parents sought secondary education for their children because this provided access to the embryonic universities beginning in Australia at this time. Classical curricula, as taught in private schools and copied from the English public schools, provided students with little practical help in the daily skills needed in business, public service, and commerce.

Sydney University was founded in 1852, soon followed by Melbourne's University College in 1857. Even by the mid-1870s, these universities—the only in Australia—graduated few students; consequently, both universities depended heavily on government subsidy. Unlike England, which used its universities to teach clergy, Australia had to rely on faculties such as law, arts, and medicine to attract students. In this regard, the Australian universities resembled those in Scotland, but lacked significant science teaching. Few Australian families saw value in university education; the very wealthy preferred to send students to study in England.

The latter part of the 19th century saw emergence of those concepts characterising Australian schooling today. The secular nature of schooling became firmly established by the mid-1870s and more forward-thinking politicians began to consider the concept of an education that would be compulsory, and, being compulsory, would also be free.

Consolidation of State Systems

An educational concern and two political ones led to the development of free and compulsory education. Educationalists advanced the pragmatic proposition that, if education was to be efficient, then it had to be regular. If it was to be regular, then it had to be compulsory. Politicians argued that the state owed its citizens a duty of education and that, through education, citizens would recognise their duties to the state.

A significant difference emerged between the English and Australian educational models at this time. Local government in England funded education from the local property-based rates. Australian local government had not matured sufficiently to be capable of supporting education. Consequently, state governments became responsible for funding education. This responsibility is enshrined in the state constitutions. States raised all their own taxes to pay for this and other responsibilities. The tradition of the large state educational bureaucracy commenced.

The Education Act of 1870 in England provided one model for state education. Queensland, leading the way, commenced free education in

1870. By 1872, Victoria established a Ministry of Public Instruction, making education compulsory for children between the ages of 6 and 15 years. South Australia followed Victoria's model in 1875. New South Wales struggled with secular education because of church influence. In 1880, the New South Wales Parliament passed the Public Instruction Act; Tasmania followed suit in 1886.

The significance of the compulsory clauses of the Education Acts meant that the state was obliged to find both teachers and structures to deliver "schooling" to the students it compelled to attend. With this compulsion came a number of systems designed to provide schooling to children living in the most remote areas.

Roman Catholic Schools

Before one discusses the states' methods for providing rural education, it is necessary to consider briefly the Roman Catholic schools that separated from the state during this period of educational reform, for it was at this time that a separate Catholic system commenced. In 1864, Pope Pius IX issued a "Syllabus of Errors" in the papal encyclical Quanta Cura, which condemned rising liberal philosophy in the western democracies.

The Roman Catholic Church in Australia found itself required to provide schooling separately from the state system because the encyclical opposed educational provision that was not based on Roman Catholic beliefs. Given the support of its congregations, the Church could provide schools in urban areas, but the cost would prove to be extreme in rural places. The Church also needed to find staff from the Roman faith capable of teaching in English. Ireland, the source of the non-denominational Irish National System for schools, provided large numbers of Roman Catholic clergy willing to work in the schools for little salary. After 1868, the Roman Catholic Church succeeded in establishing a separate school system to parallel the state system, in which the congregation funded the buildings and the Church found the staff from its clergy. It is significant, though, that the curriculum (except for the theological elements) differed little from its state counterpart.

Australian society in the second half of the 19th century contained aspects of sectarian division that had both social and educational consequences (Austin, 1972). Catholic bishops antagonised the non-Catholic Australian majority to such a degree that states simply abolished state aid to the Roman Catholic school system. The antagonism lay both in the rejection of liberalism by the Church and in Protestant fears of a "tyrannical" Papist rule where religion governed the state. Each state passed legislation removing aid to the Catholic schools after passionate debate in the Parliament, perhaps revealing the deep antipathy many Anglo-Australians held towards the Irish-Catholic immigrants. The Church went on to establish its primary schools, but could not attract any government assistance until the 1960s—almost 90 years later.

The 1890s to 1914

The Australian population grew rapidly after the 1850 gold rush, with many people moving into the more remote areas. A sparse population expanding rapidly through remote areas produced problems for the newly established educational bureaucracies.

Teachers received little by way of training. Most commonly, primary teachers learned their skills as "pupil-teachers," which involved learning a lesson from the head teacher and transmitting it to students. After one or two years of training, teachers received a licence to teach whereupon the Department of Education sent them to remote places to one-teacher schools. The only assistance provided to them was the annual inspectorial visit. Under these conditions, the quality of teachers' work had little chance to improve. In order to ensure that minimum standards existed, education departments enacted strict rules and governed the staff both rigidly and harshly. The overall poor quality of rural teaching led to several commissions of inquiry into education around 1900. The Victorian government appointed the Fink Commission between 1899 and 1901 to examine education there. Fink produced a report "overwhelmingly critical" of the system (Austin, 1972). Other states quickly followed.

The Australian economy passed through a long depression, from the early 1890s and into the 1900s. During this time, state governments looked at ways to reduce costs, particularly education costs, an item typically comprising 24% of states' budgets. Compulsory provisions of the education acts meant that each state had to provide teachers even to the most remote places. Victoria first used the itinerant teacher system in 1874, although William Wilkins, in establishing the National School System in the 1850s, provided the paradigm for an itinerant. Queensland resisted the use of itinerants until 1909, often providing remote communi-

ties with portable tent schools instead of itinerants.

The Australian states became a Commonwealth in 1901, under one constitution. Education remained a "states right" as the newly formed Commonwealth Government took over responsibility for national activities such as defence. The states retained the power to raise all taxes. The Commonwealth levied the states for the cost of the national activities on an agreed formula based on population size.

The itinerant teacher system involved allocating a young male teacher a district in which he visited a number of remote families at least twice each year. During the visit, the teacher gave lessons, exchanged books, marked work done since the last visit, and set work to be completed before the next visit. He expected parents to supervise this work and to admonish pupils where necessary. To travel, the teacher used a horse and trap (and may have been accompanied by a youth to help with gate openings or to provide assistance in case of injury and accident). Most pupils seemed to look forward to teachers' visits and many recall these even with gratitude and fondness (Higgins, 1983). However, the infrequency of the visits caused this system to be less than efficient.

The Correspondence System

Correspondence education provided a cheaper alternative to itinerant teachers, although its major fault lay in the fact that it removed the teachers from the pupils and substituted a system of papers. In Queensland, the system worked in the manner described by Barlow (1922):

> So that educational assistance may reach parents whose children are situated at a distance from permanent country schools and away from the tracks followed by itinerant teachers, typed copies of instructions, directions, explanations and illustrations, forming a series of lessons on the most important subjects included in the Primary School Curriculum, are posted each week from the Primary Correspondence School in Brisbane. . . . The work of each class is divided into weekly portions so as to cover half a years' work in twenty (20) lessons. Typed copies of weekly lessons carefully graded are transmitted with accompanying directions, some intended for the guidance of parents. Written lessons when finished are returned to the school for correction, comments and further advice. The marked lessons are then returned to the home from which they have been received. Thus, there are three sets of work in circulation at one time—one on the way to the pupil, one at home in the process of study, and one returning for correction. The work is so well systematised and explanations so explicit, that except in the case of totally illiterate adult co-adjudicators the pupil's progress may be assured. (p. 724)

The Primary Correspondence School provided remote bush families with their own separate system of education, which continues almost unchanged in its techniques. Families on properties, though, lost contact with itinerant teachers and with teachers in any small primary schools that existed within the local district. This exacerbated the divisions between rural people living in towns and those on properties.

Teachers working in rural areas sought to reduce the impact of geographical isolation through technology. Initially, teachers used horse and trap to travel in the bush, but quickly adopted motorbikes, bicycles, and cars. Adopting communications and transport technology, education departments sought to maintain a service to remote places while keeping staff costs to a minimum. For example, advances in radio technology brought about during World War I saw broadcast radio being used for educational broadcasting. The Australian Broadcasting Commission worked with education departments, not to offer curriculum materials, but to supplement learning by broadcasting programs of a general educative nature.

The years from 1902 to 1914 saw significant reforms in both the philosophy and practice of education in Australia. The economic causes of the reforms arose when the long depression of the 1890s ended. The social reforms arose from a new nationalism and political changes occurred as a result of the growing acceptance of the Labor movement. Educationally, the beliefs of Johann Friedrich Herbart and those espousing humanist and secular beliefs about the world prevailed. New South Wales and Victoria, the most populous states and those receiving the greatest number of migrants from Great Britain, led the reforms. Smaller and more remote states followed. Another factor assisting educational change was a growth in the number of professional people and those working in commerce (Barcan, 1980).

Between the Wars

The immediate impact of World War I on rural education in Australia was limited to a dramatic reduction in the number of young male teachers. Probably the war's greatest impact occurred when soldiers returned home.. In keeping with a prevailing philosophy of agrarian socialism, returning soldiers were offered parcels of land under the Soldier Settlement Scheme. Politicians intended to create an agricultural yeomanry, but the scheme failed through poor training and the allocation of infertile or unsuitable land. The Soldier Settlement Scheme had the unintended consequence of creating many small rural communities for which no male teachers could be found. Education departments reverted to an earlier practice of appointing young women to staff these small schools. Some states adopted a policy of having the women resign their jobs upon marriage. The policy ensured a continuing flow of women to rural areas. Many women stayed in the bush after marriage, helping towns to grow and stabilise.

Australia's prosperity depended largely on rising prices for agricultural exports and a large influx of mostly British capital in the 1920s. After the stock market crash of 1929, income from primary products fell and bankers called in their loans. Many farmers walked off their properties, small towns closed and rural people moved to larger towns and cities for work. The Australian heritage of the free part of the "free, secular, and compulsory" education found itself under public scrutiny as a cost-cutting option. Small schools closed and newly commenced secondary education in some states was challenged. "The fact that many students from the post-primary schools were unable to gain positions on leaving school was seen as a fault of the education system, rather than due to any deficiencies in the organisation of society" (Hyams & Bessant, 1974, p. 136). Depression economies reduced teacher training time and salaries, but by 1933 the worst of the economic crisis had passed.

Some states saw their economic salvation in the reform of technical schools to train rural youth or those wanting to enter secondary industry. Most states increased expenditure on post-primary technical education immediately before World War II. In 1937 the Carnegie Foundation, in conjunction with the Australian Council for Educational Research, sponsored a visit to Australia by leaders of the New Education Fellowship. The speeches by American Professor I. L. Kandel "gave renewed hope to educationalists in Australia" (Hyams & Bessant, 1974, p. 164). Unfortunately, the outbreak of World War II stifled any developments in Australian rural education for the duration.

One major impact the war had on Australia was a re-organisation of the national taxation system to help pay for the war effort. The Uniform Tax Acts of 1942 put all income tax raising power in the hands of the Commonwealth government. States received their share of the income tax through agreed formulas each year. The states still retained their powers but could only allocate funds in accordance with the proportion received from the national income tax pool.

When the Commonwealth government moved into the area of education in the 1960s, it did so through a clause in the national constitution that enabled the Commonwealth and the states to enter into joint agreements to fund educational activity. The Commonwealth now plays a major role in funding education both in the public and private sectors.

1945 to the 1970s

Advances in Australian education after 1945 continued those commenced before 1939. School consolidation remained high on the agenda with closure of small schools arising from the rural depopulation of the depression and the advances in transport technology. After World War II, the climate of public opinion changed in favour of more secondary education for all students, at least to the age of 15 years. This included Aboriginal and Torres Strait Island students, although few took advantage of it because it was so culturally alien to them. The new attitude led to the creation of many small secondary departments added to existing rural primary schools. Australia rejected the English approach of selecting students for higher secondary education through an 11+ examination and adopted instead the American comprehensive system for its urban and rural schools. Only the Roman Catholic schools and the independent private schools followed separate paths. Rural people on isolated properties supported boarding schools (whether state run or as part of the private school system) because their children could not attend any local high school since there were usually none within reasonable travelling distance.

Administration in the post-war period was dominated by the maxims of economy, efficiency, inspection, and conservatism. Such educational

innovation originated in America or Britain. Yet, within the rural education sphere, the introduction of the School of the Air in 1961 created a peculiarly Australian world first.

Improvements in VHF radio technology led to the Royal Flying Doctors Service's pedal radio and thence to the School of the Air. Queensland began its Schools of the Air broadcasts in 1961. The Schools of the Air provided significant personal contact between teachers, families, and students that had been lost when itinerant teacher numbers declined and small schools closed. The radio system worked by using a range of frequencies for broadcast to families, the choice of frequency depending on Royal Flying Doctor Service use, allocation by the Commonwealth's Department of Communications, weather conditions, and time of day. Although clumsy to use and expensive to buy and install, the radios proved both reliable and robust.

In terms of curriculum and instruction, there was little educational congruence among Schools of the Air, the infrequent visits of the few remaining itinerants, and the lessons from the Brisbane Primary Correspondence School. Consequently, parents and students dealt with three separate curricula until 1989 when the Schools of the Air and the Correspondence Schools became Schools of Distance Education and amalgamated the three separate functions.

The success of the radio experiment encouraged educators to use the first Australian domestic satellite for educational purposes. The Department of Education in Queensland purchased satellite time for a trial period to conduct lessons through the Mt. Isa School of the Air for eight remote families. Teachers gave regular lessons to the isolated students using the satellite for two-way audio and one-way video transmissions, linked through studios in both Mt. Isa and Brisbane. The experiment succeeded in showing that the satellite could be used for educational purposes. It produced better technological results than did the VHF radio because satellite transmissions were less affected by weather, especially the consequences of thunderstorms common in the north tropical wet season. However, the cost of using the satellites proved to be too expensive.

By 1967, education in Australia "underwent changes in many respects more profound than any previously experienced" (Barcan, 1980, p. 345). Australia experienced a rise in democratic state corporate capitalism based on its white collar middle-class worker. Television, Sputnik, and men on the moon transformed Australia's view of the world. Teachers and university students became more politically active and competitive examination systems moved towards criterion-based assessment; open education philosophies dominated curriculum changes. The educational bureaucrats lost their rigid control of schools.

Rural schools benefited from the revived interest in education, particularly by the Commonwealth government, which had only limited constitutional responsibility for education. New buildings, especially libraries and science blocks grew quickly at the Commonwealth's expense. The provision of material resources expanded and open space classrooms became much more common. Even some older rural schools changed their architecture to suit the new approach. Concern for multi-culturalism began, although few migrant families found their way into the outback. Special education provision expanded into rural areas and many more students set their sights on attending the new universities created in rural areas, such as James Cook University of North Queensland in Townsville. These new country universities and colleges began to attract rural students because they no longer had to move so far from home.

The Case of Queensland

Queensland, along with New South Wales, is the largest provider of rural and distance education services in Australia. The developments in Queensland provide a good example of what happened elsewhere in the country. It is also the state that pioneered the use of Schools of the Air and satellite-based education for primary students.

Schools of Distance Education (the former Schools of the Air) began to use computers for teaching at a distance. For example, the Charters Towers School of Distance Education conducted experiments using personal computers, modems, and the telephone lines to link pupils and teachers in the Charters Towers area from 1988 to 1991. Students used commercial software on Apple IIe computers to study and sent work via modems through the telephone system to the school. Teachers marked the work received on a computer disk and returned the electronic copy. This experiment succeeded and has been expanded beyond the single class first used in the trial. Once again, the costs of providing each family with a computer, printer, modem, software, and telephone access proved to be expensive.

Insofar as remote rural secondary schooling is concerned, the Secondary Correspondence School grew out of a need to service students in small and isolated schools, overseas students, travellers, students unable to attend school for medical reasons, and other approved students (e.g., those in jails). In addition, the Secondary Correspondence School serves a large number of adult students needing to complete their secondary education.

The secondary system, often the poor cousin to the Primary Correspondence School, adopted similar teaching procedures, based on printed lesson material and assignments. The secondary school, using examinations and assignments up to Year 10 as the main assessment techniques, used the Public Senior External Examination to evaluate students in the senior years (Years 11 and 12). Large numbers of students passed through the secondary school, but its teaching did not change markedly until the late 1980s when it adopted the Rural Secondary School Support Scheme.

The Education Department always has difficulty staffing remote secondary schools, and secondary departments of primary schools, with teachers in specialist areas (e.g., music, physical education, physics) where there were low enrolments. This meant that some rural students could not take particular subjects unless they enrolled through the Secondary Correspondence School. These students tended not to complete courses without the provision of additional parental and school support.

The Rural Secondary School Support Scheme (Wallace, 1987) used the conference telephone combined with facsimile machines to teach classes of students in rural schools. Teachers based at the Secondary Correspondence School taught these lessons using the printed materials and locally accredited work programs. Local accreditation of work programs allowed the assessment to be compared with work produced by students taking the same subjects in regional secondary schools, thereby avoiding the external examination system which had not been in common use in Queensland since the early 1970s.

The significance of this scheme for teachers in small rural high schools and secondary departments is its provision of a wide range of subjects using technologically reliable methods, demanding organised supervision that is available at each end of the process. Schemes such as this benefit students because they can choose from a wider range of offerings and still be assured of high quality teaching and appropriate assessment. They also reflect a movement in Australian schooling towards more openness in educational service delivery.

Adults living in rural areas who wish to study either secondary or some tertiary level work can access courses not only through the printed correspondence mode, but also by meeting in small groups to justify the cost of using teleconference facilities and fax machines.

The families with preschool aged children in rural towns are catered for through preschool and child care centres. In most states, the education departments provide both buildings and teachers to operate preschools. Community child care centres, often funded by the Commonwealth and managed by states, provide high quality child care and education comparable to that found in cities. The most remote rural families seeking preschool education for their children can access preschool through distance education. Teachers prepare activities and lessons by way of written instructions to parents. Along with the instructions are toy libraries, audio tapes, and other educational resources for children's use.

In the Northern Territory, Aboriginal people used a satellite based system to communicate with other groups having common interests. Western Australia used broadcast approach to reach small townships. By the 1980s, all Australian states began to update their educational materials for remote people using modern desktop publishing techniques and providing families with audio and video tapes and computer software packages in the curriculum materials. Many of these packages are now being used in the small remote schools to assist beginning teachers (Higgins, 1993). Concurrent with the use of modern learning packages is a national move towards self-managing schools. Schools are becoming more responsible for their activities and less dependent on centralised bureaucracies. The learning materials prepared for rural and distance education provide high quality additional resources for classrooms and are a source of support for beginning teachers in small rural schools.

Rural education in Australia is a subset of general education insofar as the large statewide bureaucracies are concerned. Rural schools open and close according to the economic climate of the time. They all use curriculum guidelines common to other schools in the state, including the Roman Catholic and private schools. However, the attempts Australians have made to overcome the great distances in the outback have led to signifi-

cant educational innovations. These include itinerant teachers, mobile tent schools, the use of VHF radio for lessons, satellite teaching for remote properties, and interactive television teaching. Finally, the learning packages developed for those living in isolation and in small remote towns combine a range of teaching aids that are now being recognised as amongst the best in the world.

Conclusion

This article identified the major themes of pragmatism, economy, and efficiency pervading education in Australia. These themes are being affected by wider social, economic, and political issues prevalent in Australia today. Calls for smaller government and reduced taxes emanate from a depressed economic climate. Governments and schools are moving towards the democratic managerialist corporate model of self-management. They do so in the expectation that new administrative and teaching systems will enhance public ownership and reduce cost.

Australian urban schools are looking to distance and rural education delivery modes to enhance curriculum offerings. Equity, access and participation drive the educational systems towards the twenty-first century. This troika is reined in by the equally strong forces of efficiency, effectiveness and accountability. Rural education is meeting the challenges of the times by using innovative techniques for teaching, adopting appropriate technologies and by using flexible administrative structures to reach those living in the rural areas.

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