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## **The Resources Boom: Cash Cow or Crisis for Preservice Teacher Education in Western Australia?**

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*Abstract: This is a research paper describing the impact of globalisation on the provision of preservice teacher education in Western Australia. The author utilises a range of research methodologies to gather and analyse current data, finally a range of possible futuristic scenarios are presented. The paper has significance for those concerned with future policy and planning in the area of preservice teacher education yet has a broader impact for all educational planners. It is written from the perspective of a concerned tertiary educator with over twenty-five years experience in education. The author currently co-ordinates a post-graduate course in preservice teacher education at a university in Western Australia.*

We need to understand the nature of growth processes and how to catalyse them. But we also need to understand the forces and challenges that impede progress, and to develop workable strategies for dealing with these challenges. We need to understand the dance of change, the inevitable interplay between growth processes and limiting processes (Senge, 2001, pp.11.).

In this paper I make connections between the current resources boom in Western Australia and preservice teacher education. I begin by portraying the Resources boom as a direct consequence of globalisation, and then proceed to notice how this economic boom is impacting on preservice teacher education. Following this, problems and dilemmas in preservice teacher education will be presented and the roles played by state and federal government in encouraging enrolments and providing resources for teacher education courses will be critiqued. Finally, forecasting models will be used to create a range of scenarios for the future provision of preservice teacher education in WA.

### **Globalisation**

Globalisation has been described as “*an unavoidable train that is rolling towards us*” (Mc Shane & Travaglione, 2005, pp.8). International competitiveness has emerged as a driving factor of world economies. The competition has shifted from being based on geography to a worldwide perspective. Regardless of whether we agree or disagree with the underlying principles of globalisation, it seems inevitable that we will be touched by its influences. Although we are very geographically isolated in Western Australia,

we are subject to the influence of globalisation. However, there are areas where governments do have a measure of control over those influences. In this paper two questions will be put to readers. Firstly, are the state and federal governments thinking “smartly” about preservice teacher education, given the windfall from the Resources boom? Secondly, can both state and federal governments use the state of disequilibrium or crisis caused by the forces of globalisation to drive meaningful change in preservice teacher education? The way in which both state and federal government respond to the emerging situation of a potential teacher shortage in WA is critical.

In this paper globalisation will be considered from the perspective of systems theory (Bronfenbrenner, 1990), which has emerged from the literature on organisational management. Bronfenbrenner (1990) describes ecological systems theory as a concept of interrelated systems in which all layers of the system are connected, rather like how when you drop a pebble into a pond the ripples will radiate from the point of entry to the edges.

The global system has become increasingly interconnected due to advances in technology and to international policies and trade agreements (Bronfenbrenner, 1990). When we consider our society from a systems perspective, it becomes apparent that there are no longer clear divisions between economic, educational and social policies and all are likely to impact on any decision making process (Hveem & Nordhaug, 2002). A characteristic of globalisation is that systems have become more open to outside forces. As an open system, organizations need to be aware of any changes in the environment and change their behaviour to fit the new conditions

Globalisation impacts on the issue of preservice teacher education when the economic activities of one state are extended to other parts of the world (Mc Shane & Travaglione, 2005). In a globalised society local markets are open to economic forces and pressures from beyond its state or national borders and have to survive the economic, ethical and cultural pressure of the wider marketplace. There are currently large demands for resources by, in particular China and India. The effect of this demand has impacted on the social and economic conditions in Western Australia. This can be seen in the rapid population growth caused by internal and external immigration, labour shortages, increased personal wealth and windfall growth in royalties to government. There has also been a loss of market share from the public education sector. The teaching sector has failed to compete with other professions to attract and keep staff due to uncompetitive wages and general career prospects. There has also been a decline in the funding base for universities. These are some of the forces of globalisation, which are currently having a direct effect on the number of students enrolling in preservice teacher education courses in Western Australia. These points will be discussed further in this paper.

### **Education in Australia**

At present (2007) there is much discussion concerning educational provision and policy in Australia. In Australia, educational provision is the mandate of both the state and federal Governments (Education-International, 2006; Joseph, 2006; Minzberg, 1996). The federal government has control over the funding

of tertiary education, while primary and secondary education are predominantly state funded, with some specially targeted funding coming from federal sources. With layers of power and control divided between state and federal governments, which may have opposing party political affiliations, there is cause for much conflict and political tension. In this paper the focus will be on both state and federal government responses to global pressures on preservice teacher education in the Western Australian context.

When considering education and globalisation in Australia one needs to look beyond the surface rhetoric to determine what is causing the shortage of preservice teachers. I now discuss some of the factors contributing to this shortage.

### **The Developing Education Crisis**

Currently the educational system in Western Australia is headed into crisis. Many teachers are leaving the profession because there is rapid change in the curriculum, the teaching workforce is ageing dramatically (Reid, 1999). In July 2006 the Minister of Education in Western Australia established a working party to investigate issues of teacher supply and demand under the leadership of Professor Lance Twomey. In an interim report released by the Twomey Task force it is acknowledged that accurate data on the teaching supply and demand situation in Western Australia is difficult to obtain because of the nature of data held by the Department of Education and Training and the independent education sectors. The report states although data is incomplete it does indicate a “very tight labour market” with “potential problems facing the state in meeting the demand for teachers in the short and medium term.”(Department of Education and Training, 2006). The Twomey task force recognise the significance of the drop in the number of students enrolling in teacher education courses (Department of Education and Training, 2006). When analysing the data provided by the Tertiary Institutions Service Centre (TISC) for education courses, over the past five years the TISC first preference figures have dropped by over 20% when averaged across education courses of study in Western Australia. The 2007 TISC first preference figures for education courses at all universities in Western Australia show an increase of 6.2% over the 2006 figures (ECU, 2007). This small increase is in the area of primary education while there has been a decrease in the TISC figures for secondary education courses of study at the three largest Universities in WA. This small increase in first preferences in primary education is not enough to compensate for the much larger decreases in this area over the past five years. There is a long term trend of reduced enrolments in secondary teacher education courses, particularly in specialist areas such as LOTE, languages other than English, mathematics and sciences(Department of Education and Training, 2006). These areas have been indicated as areas with serious shortages of trained teachers as indicated in the Twomey Task Forces’ interim report(Department of Education and Training, 2006). When these figures are viewed against the growth in population in WA, it is evident that these factors combined will almost certainly result in a serious undersupply of teachers in the near future (House of Representatives, 2007; Ministerial Council on Education, 2004).

In fact there is already an undersupply: in January 2007 and again in August 2007 there were not enough teachers to fill all positions at the start of the new school terms. Throughout the year schools have struggled to find relief teachers and a number of teaching positions were not filled. There have been teacher shortages at crucial times in the past but this situation appears to be longer term. This undersupply is being compounded by the ongoing growth in population as a result of people migrating to the state attracted by the current economic boom, and of natural growth stimulated by the “baby bonus” cash paid to parents on the birth of a child. These bumps in the birth rate will reflect in school enrolments in five years time approximately the same time when the decreased cohorts of preservice teachers are due to enter the workforce.

Professor Greg Robson, a member of the Twomey task force investigating the teacher shortage in WA stated the current economic boom in WA is significantly different to past cycles of boom and bust economics as seen in WA the past. This growth pattern is part of a long term cycle of fiscal growth underpinned by huge demand for Resources in China and can be expected to continue on this projectory for many years in the future. Professor Robson stated that we currently have a critical problem in providing trained teachers for all classrooms in WA and the situation needs urgent attention “we need a radical re-think about the career structure of teaching, the way we recruit and the need for a major re-alignment for the status of the profession. As for teacher education we do need to keep pushing forward on improvements and in how we perform our role - but a radical re-think could mean lots of things. I would prefer to use terms like improving flexibility, forging stronger links between theory and practice, and with our school partners. As well there is a need to lift the investment in teacher education.” (Robson, 2007).

Furthermore, there are frequent statements in Western Australia’s daily newspaper criticising teaching and the outcomes-based curriculum in Western Australia. Needless to say, this criticism demoralises the current workforce and does not help in attracting students to the profession. There is little evidence that the Federal and State Governments are working together for the future of this sector to avert the shortage of teachers. In the following section global factors influencing the economy of Western Australia will be examined.

### **The Resources Boom and the Economy**

Western Australia is the largest of the seven states in Australia. The geographical location of its capital city Perth makes it one of the most isolated cities in the world. It has a population of only two million. However, Western Australia has been recently described as the powerhouse in the Australian economy largely as a result of exports of raw materials. Western Australia has large deposits of iron ore, uranium, magnesium, natural gas and coal, and is currently experiencing a period of economic growth because of the demand for these raw materials especially by China and India (Australian Bureau of Statistics, 2007). China is currently in an expansionist period, in keeping with its adoption of global free market principles. The demand for these raw materials has resulted in an increase in the cost price per unit of these Resources, which has facilitated the opening of new mines and the production of older mines that previously were not economically viable. These favourable

market conditions have resulted in an economic boom, with increased individual wealth, stimulating the local economy and leading to housing and labour shortage.

The taxes on the Resources have boosted the coffers of both the federal government and the state government. But there is conflict between the State and Federal Government about the equitable distribution of this wealth. A contributing factor to this conflict is the opposing political ideologies of the Liberal Party currently in federal government and the Labour Party in state government. No doubt other federal- state issues, such as industrial relations, exacerbate this conflict.

The figures from the Federal Treasury listed by the Australian Bureau of Statistics (ABS) indicate that private sector wealth in Australia exceeded \$7 trillion at the end of June 2006. A comparison of the 2005 and the 2006 statistics show that in one year the average Australian became \$11 000 richer, with per capita assets of \$348 000. Since 2001, private sector wealth has increased by 91.2 %, the biggest five-year gain in the past 46 years (Australian Bureau of Statistics, 2007). The standard of living in Australia based on the 2005 domestic income per capita lists Western Australia as having the highest % growth per annum (PA) for the last 15 years. This % growth PA of 2.6% in WA is 25% higher than the national growth rate PA of 2.0%, with NSW second highest, having a 1.8% growth PA (ABS, 2006). These figures indicate the extent of the influence of the resources boom on the economic situation in Australia and, specifically, in Western Australia. This higher annual growth rate in Western Australia can be linked to the resources boom and seen as a result of globalisation. But this begs the questions: What are the governments doing with this wealth? Is it being reinvested in areas that will benefit our society in the future?

As one might expect, the resources boom has created many jobs but this has not benefited all wage earners in the state. The unemployment rate in WA is continuing to decrease from 4.8% in 2006 to the current figure of 3.2% in October 2007 (Department of Treasury and Finance, 2007). There are now labour shortages in many areas. In order to attract labour to the mines, very attractive salary packages are being offered, which means that some school leavers and those in lower income jobs can earn large salaries for unskilled or semi-skilled work. According to figures released by the Federal Department of Employment and Workplace Relations` the skilled workplace vacancies index rose 1.2% in October 2006; and there are indications that labour shortages may not have reached their peak (Australian Bureau of Statistics, 2007)However, the demand for skilled and semi-skilled workers has contributed to the crisis for preservice teacher education in WA. In the next section I will describe the current downfall in enrolments in preservice teacher education in WA.

### **Enrolments in Tertiary Education**

The 2007 figures for first preferences for commencing students in all higher education courses WA indicates a slight increase but many areas still experienced a decrease in numbers in TISC first preferences. In November 2007 TISC figures for teacher education courses in all universities in WA are currently down 0.4% and other service professions like nursing are currently

down 7.4% over 2006 first preference data. The humanities sector is down 33% over 2006 figures (ECU, 2007). Many of the WA students enter professions linked to the resources sector, as the high salaries offered by this sector have become very attractive. The official figures for 2007 new enrolments are not yet available on ABS, but the unofficial figures are indicating a slight improvement over the 2006 figures. In 2006 there was a significant drop in demand for University places in Western Australia of between 8%-11% when compared to the 2005 data (ECU, 2007). The Australian federal government gives universities a set amount of funding for each subsidised student enrolled. In 2006 legislation was introduced requiring Universities have to return funding if enrolments did not meet the targets. The university where I work could have to pay back up to \$14.5 million because its student enrolment in 2006 was 11% short of the targets (Hiatt, 2006). In the following section the implications of the reduced enrolments will be considered.

### **Implications of Reduced Enrolments for Preservice Teacher Education**

This loss in student numbers in preservice teacher education courses has led to a significant budget shortfall in the university resulting in cutbacks and large-scale retrenchments of staff in order to cut costs (Angus, 2006). Budgets have been cut significantly in all education courses, limiting innovative teaching strategies and forcing course redesign to reduce contact hours and thereby cut costs. There has also been an increase in the number of sessional staff used with resulting increases in the workloads of tenured staff who co-ordinate these units. Furthermore, minimum course entry levels have been lowered in order to attract more students. Students are now admitted to teacher education courses via portfolio pathways. These students do not have to provide a TER score but have an interview and provide a portfolio. They do need to have passed English and obtain set scores on school assessed subjects.

The reduced intakes of students will translate into significantly reduced numbers of qualified teachers graduating in the future. Currently national data forecasts a teacher shortage from 2007 until 2009 (Lock, 2006), with demand to increase by 11% in Australia. The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) report (2004) states that there is the potential for significant teacher shortages through to 2014 (Ministerial Council on Education, 2004). Furthermore, at the international level, there is a high demand for primary school teachers in the USA, the UK, the Middle East and developing countries in Asia- all placing further demands on the available stock of teachers.

There is some disagreement about the factors contributing to the lower enrolment figures. But it is accepted that Western Australia's booming economy has induced many school leavers to take up employment instead of further study. The University where I work has traditionally relied on a large percentage of mature-aged learners, but this cohort has significantly diminished in number due to the large number of jobs available in the current booming economy in WA.

Because preservice teacher education courses in WA are currently enrolling smaller cohorts, there will be fewer graduates entering the teaching profession

in the future. Once these students graduate they will have many employment opportunities, with both local and international school systems offering attractive prospects, so there is no guarantee that graduates will pursue a teaching career in WA (Commonwealth-Australia, 2007). In fact the figures are indicating that a large number of new graduates who enter the teaching profession leave within the first five years (Department of Education and Training, 2006). Industries experiencing labour shortages offer high commencing salaries to attract staff, particularly those who are graduates. The reality is that government-dominated service industries, like teaching, are not competitive in offering market comparable salaries. In line with the free market economy, private education providers are offering higher salaries than the government sector to attract good teachers. This combined with the school-based recruitment policy, where principals recruit and select the staff needed for the school followed by private schools allows them to attract the best graduates. While school-based selection is used in some instances in the public sector, public school principals cannot offer higher pay to attract quality staff, and DET continues to impose rigorous constraints on the employment of new graduates particularly in relation to permanent employment. The public sector has made small changes to recruitment by starting to select staff earlier in the year but still relies on a central recruitment pool, which allocates staff to schools. This slow process does not use the leadership skills of principals to interview and select the right applicant for the job it relies mainly on a computer to match applicants to jobs. The government sector has not yet adjusted teacher's salaries to compete on the open market and this makes the sector even more unappealing to potential teachers in the current market conditions.

A significant proportion of DET's approximately 770 schools are located in remote and often personally challenging areas and many public schools are classified as being "difficult to staff" because of their location, community context or student profile. In the following section a training models from business and industry are examined to see if they could offer alternatives to the present forms of preservice teacher education.

### **Examples of Training Models From Other Industries**

In areas of strategic demand, apprenticeship or workplace learning models can be utilised. In these models trainees do a combination of practical and academic study. The academic component, is provided by the Government free of charge or at low cost and they are paid by the government during the training. This ensures that certain professions have a supply of well-trained workers. This funding model would be one way of investing the economic benefits of the resources boom to attract students to the teaching profession. At present preservice teachers do not earn any income during their training and are required to pay high university course fees.

All preservice teacher courses all include practical teaching components known as workplace learning (WPL) units, in which the preservice teachers work full time in schools assisting teachers while practising their skills. In their final year of study, the preservice teachers have a ten-week WPL in which they teach 100% of the mentor teachers' load and are referred to as assistant teachers. In



the current model they are given no remuneration for this period of internship. In the next section I explore challenges to government in relation to preservice teacher education in the context of the knowledge economy.

### **The Knowledge Economy: A Challenge to Government**

A challenge to the Australian Government is that the forces of globalisation that are pushing the resources boom and creating the labour imbalance are also the drivers of the knowledge economy. Spring (1998, p.105) has linked education to economic growth

Economic growth is the goal of the learning society organised around learning relationships. In this context education becomes instrumental to gaining a competitive edge in a global economy.

This view implies that education provision is central in a globally competitive environment(Spring, 1998). Currently there are those hardliners who see economic growth, rather than the development of the well-rounded citizen, as the goal of the learning society, they have been in the ascendant in government policy making at the national level. In this context, education is seen as being instrumental to gaining a competitive edge in the global economy. The global world economy has led to increased economic competition (Neef, 1998), forcing nations to improve their technology skills and make new demands on workers. It is likely that the workers of the future will have to have quite high-order thinking skills. The growth of knowledge-based industries and the outsourcing of production to less-developed economies, where unit labour costs are lower, have shifted the criteria for employability in developed countries like Australia from “*brawn to brains*” (Neef, 1998,P.1). A growing percentage of the gross national product (GNP) of developed countries is now coming from high-skilled services (Hargreaves, 2003).

Higher -order thinking skills, problem solving and creativity are essential skills for success in this knowledge-based economy (Pink, 2005). This means that a good quality education will be essential if our workers are to survive in the competitive workplaces of the future. Future teachers need to be able to deliver that kind of education. Thus, high quality training for future teachers is essential. We also need to be attracting the brightest and the best students to provide the type of high quality, technology-rich education, which will be needed to equip future citizens. In the following section the funding of preservice teacher education courses are discussed.

### **The Current Budget Crisis in Preservice Teacher Education in WA**

Currently, academics in preservice teacher education courses in WA are constantly being told to cut costs. As a result future of cutting-edge technology used in some preservice teacher education courses is currently in the balance. Yet research is indicating that academics and students see the teaching technology as being of considerable academic value (Donneson, 2007; Newhouse, Lane, & Brown, 2007). The use of more technology in teacher education courses is recommend by the Top of the Class Report into teacher education yet we are having to reduce the use of technology in our

courses (House of Representatives, 2007). Governments should be using the windfall of the resources boom to support this kind of innovation and high quality training for preservice teachers.

By boosting funding for preservice teacher education, the two levels of government would be investing in the country's future. If one considers global economic trends in times of economic surplus, additional funds could be used to build up infrastructure and to train workers of the future (Education-International, 2006). It is paradoxical that in WA we are experiencing an economic boom, yet the Australian government is implementing harsh fiscal cutbacks to services that are essential to the nation's long-term prosperity. By boosting funding for pre-service teacher education, it would be investing in the country's future. I now present some future scenarios showcasing how government might respond to the situation that has arisen in preservice teacher education in Western Australia.

### **Future Scenarios**

In many areas of business, experts in the field use the available past and current data to consider international and global developments and make reasonable predictions of the state of the market in the future (Mc Shane & Travaglione, 2005). In writing this paper a similar approach has been followed. A number of forecasting techniques have been used for example causal layered analysis (Inayatullah, 2006), comparative studies, and environmental scanning have been used to structure the data.

#### **Scenario 1: The Low Road Or The Crisis Model**

The federal government continues to reduce government spending on services. This may entail making preservice teacher education self-funding by allowing universities to set their own charges for courses. But the increased costs would result in an even lower demand for those courses. The net result would be that fewer teachers would be trained exacerbating the future teacher shortage. A number of possible outcomes can be suggested:

**Outcome 1: Class sizes in public schools are increased.** This increases the efficiency (cost per student) but reduces the effectiveness (achievement of educational objectives) of schooling and causes more parents to move their children to private schools. This would affect the social structure of Australian society with good-quality education a monopoly of the wealthy and allowing the development of a social underclass that would be economically disadvantaged throughout their lives.

**Outcome 2: Teachers are imported to fill the positions left vacant by the failure of local students to take up teaching as a career.** There are similar teacher shortages in Western countries, and non-Western teachers are likely to lack familiarity with the language and culture needed to teach students how to meet the challenges of the knowledge-based society.

**Outcome 3: The requirements and standards for teaching are "dumbed down".** This would allow inadequately qualified people to teach, lowering standards and quality. A variation on this theme would be a further lowering in

the requirements for pre-service teacher education courses in an attempt to fill quotas and retain government funding.

All of the above options would be restraining forces and deleterious for public education in WA.

### **Scenario 2: The High Road Or The Cash Cow Model**

Government invests some of the windfall from the resources boom in public education. It attract- high quality students to the profession and funds high-quality research-based pre-service teacher education courses. Government recognises that a good public education system with well-trained teachers in all classrooms is the backbone of a successful society.

**Outcome 1: Scholarships are offered to fund the tuition and living costs of preservice teachers.** These attract bright school leavers and matured-aged students to the teaching profession. These scholarships could be linked to a “bond” system that required recipients to work for the government for a specified period or repay the “bond”. This strategy worked well in the 1950`s and 1960`s over coming the teacher shortage and attracting high-quality students to the teaching profession.

**Outcome 2: Government and industry invests heavily in teacher education through public private partnerships (PPP`s).** Teacher education facilities have the funds to invest in the newest technology and research to improve courses. An example of a PPP can be seen in “The school of the future” a joint funded project between Microsoft and the school district of Philadelphia USA, in this collaboration a model school for the 21<sup>st</sup> century incorporating integrated learning areas, authentic tasks and research-based teaching methodologies in a technology rich learning environment.

**Outcome 3: Government adopts a model based on workplace learning (WPL) in which the students are paid for the work they do as teacher assistants as part of their training.** In the WPL modules action-learning allows students to engage in authentic rich tasks based on research and reflection. This model integrates research and theory with practical classroom experiences. It helps schools by providing more collaboration in classes; it helps pre-service students by giving them valuable hands on learning experience; and it helps existing teachers by giving them opportunities for professional development through taking on leadership enhancing mentoring roles with the students. This model is complemented by a shortened period of academic studies in which compact courses are delivered using the newest and most efficient web-based digital technologies. These enable academics to deliver high quality teaching incorporating video footage of real classrooms with input international experts in the field delivered online to students based in real classrooms. Learning materials can be accessed, by the students from any location at any time. Ipods and laptop computers are become essential learning tools.

Optional, direct teaching components can be included in the students` local areas for dynamic, researched-based workshops. One result is that students can be located countrywide, or even worldwide as they do practical components under supervision in local schools. This will ease some of the shortages of teachers in rural and remote areas by allowing students to complete their

teacher education courses while doing WPL in country classrooms. This will increase the market of courses, generating national and international income. This model would also increase the attraction of these courses for mature- aged students who cannot be on campus for four years of full time study.

## Conclusion

There is a crisis in preservice teacher education. Unless education authorities recognise that the market has changed, and modify their behaviour accordingly, they will face a serious shortage of teachers in the near future. There are at present large cash surpluses available to government as a result of the resources boom. Some of these funds should be invested to build the infrastructure and capacity of our teacher education system. Government funds could also be used to offer generous scholarships linked to tenure and so attract students. Government should develop joint undertakings between the private sector and public schools to promote partnerships and restructure our preservice teacher education courses.

We must avoid the forces resistant to change as presented in the “Crisis Model”, which entail maintaining the status quo, and “dumbing down” the entrance requirements and qualifications needed to teach. Government fiscal policies are currently forcing Universities to retrench valuable experienced staff to save money. This provides only a short-term gain and will not build capacity to meet the challenges of globalisation.

The State and Australian Governments need to work together to bring about necessary reforms. The latter could avert the crisis with a swift injection of funding for Universities to reverse recent downsizing and under-resourcing of education faculties. Academic staff should be encouraged through funding to be innovative and to develop ways of teaching using technology to deliver courses in different modes. By using the resources boom positively, investing in research, technology, training and quality staffing for teacher education, the governments would be investing in the future, enabling Australia to meet the challenges of globalisation and the knowledge-based society.

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