Australian Business

8 November 2005

At the November 2 Sydney Hearing of The Parliamentary Inquiry into Rural & Regional Skills Shortages I committed to provide the following:

- Underpinning research work, including data analysis that supported an Australian Business Limited proposal for the Illawarra Apprenticeship Creation Scheme, and
- report of survey work undertaken by ACCI, of which ABL members participated, that identified wage levels for apprentices.

Please find attached hard copies of both and if there is anything further that may be of interest to the Committee I would be happy to provide assistance.

Yours sincerely

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SD05/99
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ILLAWARRA REGIONAL PROPOSAL

GROWING THE REGION:

A PILOT SCHEME TO CREATE APPRENTICESHIPS WITHIN SMALL BUSINESS - TO ADDRESS CHRONIC REGIONAL SKILLS SHORTAGES & YOUTH UNEMPLOYMENT

prepared for

Australian Business Limited &

The Illawarra Apprenticeship Campaign

by

Judith Stubbs & Associates

July 2001

Acknowledgments

Australian Business Limited would like to thank the many Illawarra businesses and organisations that have been involved in the development of this proposal over the past 6 months. These organisations include:

Australian Industry Group (Illawarra Region)
Australian Metal Workers Union
Department of Education and Training New Apprenticeship Centre
Illawarra Area Consultative Committee
Illawarra Business Chamber
Illawarra Group Training (Hunter Valley training Authority)
Illawarra Institute of Tertiary and Further Education (TAFE)
ISD Group Training and Employment
NSW Department of State and Regional Development
South Coast Labour Council
University of Wollongong

EXECUTIVE SUMMARY

1.1. The Illawarra has a problem.

On the one hand we have:

- an extremely high rate of male youth unemployment – 4 times the Sydney Metropolitan average
- a large number of young people who are at serious risk of leaving school without a formal qualification
- a very high and increasing rate of people who have been unemployed for 2 or more years.

On the other, we have:

- A chronic shortage of skilled tradespeople in key industry sectors
- A 50% decrease in Apprenticeship start-ups in the past 12 months in the Region
- Inability of small business, our main employment growth sector, to train Apprentices due to:
  - The real cost to business in the first 2 'low productivity' years
  - The complexity of current administrative arrangements
- An increasing trend to import the skills we need.

Having skilled vocational qualification makes a person 2.5 times less likely to be unemployed than someone who has not completed school. It is comparable to having a university degree The current mismatch between skills shortage and unemployed young people makes no sense, socially or economically.

1.2. The Illawarra propose a solution

- The Illawarra proposes a **Regional Pilot** of a **special Apprenticeship program.** The pilot is strongly supported by industry, unions, training and education providers, regional development bodies and the community.

- The Regional Pilot will :
  - create 220 Apprenticeships over 3 years in regional industry sectors with chronic skills shortages
  - provide subsidies to small and micro business to offset the real cost of training Apprentices in their first 3 years.
  - Support business growth through providing tightly targeted subsidies to local small business with a proven track record in youth employment and training. These small businesses should also be taking active steps to export, and be engaged in R&D.

- The Pilot will:
  - target 4 different groups of young people who are 'at risk' of not gaining a formal qualification or of completing school
  - implement 4 different training strategies to meet the special needs of young people and specific businesses, including brokerage, mentoring, pre-vocational training and /or on-the-job training
  - ensure a very high rate of Apprenticeship completion through careful pre-Apprenticeship job matching, mentoring and business support.

- The pilot will largely be run through regional Group Training Companies, though businesses can be direct employers if they meet pilot guidelines.

The Proposal compliments 'Knowledge Nation' by:

- ✓ **ensuring that the benefits of increased education, skills and creative input of young people is shared across diverse industry sectors, and**
- ✓ **providing less advantaged young people with a real opportunity to contribute to Australia's Development.**

1.3. The pilot proposes 4 different target groups and training strategies

Training Strategy 1:

- Targets those at risk of not completing high school and who would therefore be seriously at risk of marginal labour force attachment and long-term unemployment.
- This part of pilot is costed at $23,000 over 4 years per Apprentice or around $5,500 per annum per apprentice. It includes direct subsidies to employers and brokerage fees. It replaces existing subsidies (progress payments).
- Total intake is 44 Apprentices over three years

Training Strategy 2:

- Targets those who have left school and are marginally attached to the labour force, or less than 1 year unemployed. They also face serious risk of LTU.
- This strategy is costed at $34,000 over 4 years per Apprentice or around $8,500 per annum per apprentice. It includes Training Strategy 1 provisions, but provides for an additional 26 weeks off-the-job (pre-vocational) training (eg at TAFE or GTC), mentoring and support and a reduced employer subsidy in year 1.
- Total intake is 88 Apprentices over three years.

Training Strategy 3:

- Targets those who have been unemployed for 1 year or more, and are seriously at risk of very long-term unemployment (5+ years).
- This strategy is costed at $40,000 over 4 years per Apprentice or $10,000 per annum. It includes Training Strategies 1 and 2 above, plus additional funding for intensive case management, mentoring and business support over 4 years.
- Intake is 44 Apprentices over three years.

Training Strategy 4:

- Targets those who have completed VET in Schools, but often do not gain access to an Apprenticeship. They are therefore at risk of attaining only basic vocational qualifications.
- This Option is costed at $23,000, or around $5,500 per annum per apprentice over 4 years..
- Intake is 44 Apprentices over three years.

In each of the training strategies, Group Training Companies (GTCs) will be heavily involved in the employment, brokerage and mentoring of the young people. This will enhance the role that reputable GTCs already play ensuring a high rate of apprenticeship completion.

1.4. The Apprenticeship pilot makes sound economic and social sense

1.4.1. Economic benefits

There are three different ways of assessing the economic benefits to Government and the community:

a) ***The proposal is cost neutral to Government compared with unemployment, including benefits, foregone taxation and other programs***

- The cost of the subsidy per Apprentice is far cheaper than having a person on unemployment benefits when factors such as cost of benefits, Work for the Dole, taxation and other offsets to government are taken into account (see **Section 4.4.** and **Table C** below at pp.21-22).

- In fact, in the case studies provided below show that the saving to the Government is between $6,200 and $20,800 per annum, assuming different rates of unemployment benefits (see **Table C**, pp.22).
- The savings to government clearly justifies the proposal in the case of moving a long-term unemployed person into an apprenticeship.

b) ***Subsidies proposed are cheaper alternatives than the effective subsidies that apply to a University graduate or to people on different types of unemployment benefits*** (see **Section 4.3**. pp.20-21)

- The subsidies proposed average at $5,750 per annum per apprentice over 4 years (for Training Strategies 1 and 4), and average up to $10,000 per annum (Training Strategy 3).
- By comparison with the effective subsidy that is given to a university graduate by the time they graduate, a subsidy of around $11,700 per annum could be given to an apprenticeship to achieve parity.
- In the case of an unemployed person, the subsidy for an apprentice could be between $12,900 per annum for 4 years (for a single person benefit) and $16,700 per annum for 4 years (couple with child benefit) to achieve parity. This is when factors such as lost productivity, benefits and other costs are taken into account.
- The amount of the proposed subsidy is therefore less than the amount of the effective subsidy that is given to a university graduate or to an unemployed person.

c) ***The return on investment for Government is considerable***

- In business investment terms, the Pilot will cost $5.8 million over 6 years but will provide very high rate of return to government compared with other actions the government is currently taking (see **Section 4.1.** pp.21)

- The $5.8 million will return:
  - $9.5 million (81%) when compared with the effective subsidy to university graduates (additional 2 years secondary schooling and subsidy over 4 years of a professional degree) with similar employability outcomes.
  - $10.3 (or 97% return on investment) to $13.5 million (156% return on investment) when compared with the cost of not training a person and suffering the risk that that person will be unemployed (single person benefit or couple with one child benefit).
    (**Note:** BHP expects 15% return on invested capital)

1.4.2. The industry benefits

- Skilled labour for business R&D and increased competitiveness
- Stimulates small business growth, especially for micro businesses
- Attracts able school student who currently 'fall through the cracks'
- Helps off-set the real costs (losses) from first 3 yrs of Apprenticeship
- Increases regional pool of skilled tradespeople in long-term
- Makes Region less vulnerable to metropolitan 'boom cycles' & skills 'poaching'

1.4.3. The social and community benefits

- Makes a real contribution to reducing regional youth unemployment
- Makes young people far less likely to be on the 'margins' of the labour market and less vulnerable to cyclical unemployment
- Has positive impacts on high rate of crime and youth suicide in Region
- Will harness the talents and creativity of young people currently excluded from the labour market in the prime of their working lives
- Makes an important contribution to structural inequalities between different areas of the Region that have increased rapidly over the past 15 years

2. BACKGROUND TO PROPOSAL

2.1. Unemployment issues and key data

Youth unemployment is still one of the most serious problems facing the Illawarra (see **Appendix 12**).

- The average unemployment rate for 20-24 year old males in the Illawarra was 26% in 2000 – 4 times the Sydney metropolitan average for this age group.
- Teenage male unemployment was 32% (only 13% for Sydney SD, and 16 per cent for NSW). [1]
- In Illawarra suburbs such as Warilla, Bellambi, Warrawong, Cringila, Berkeley and Port Kembla, 40-50% of young males were unemployed. [2]

There has been a dramatic increase in people unemployed for 1- 2 years, and for 2 or more years (see **Appendix 1**).

- In late 2000, around 108,400 Australians had been unemployed for 2 or more years, and a further 69,500 had been out of work for 1-2 years – a total of 177, 900 people (or 28% of the unemployed). [3]
- The long-term unemployed (LTU) now make up 60% of job seekers on Newstart Allowance and Youth Allowance. [4]
- There has been a much greater increase in LTU than in short-term unemployment. The vast majority of successful placements in 1999-2000 were short-term unemployed, that is 'more readily employable' people. [5]

Two groups were particularly vulnerable to long-term unemployment:

- 50% of those who had been unemployed 1 or more years had not completed school

[1] ABS Labour Force Survey 1995-2000. See Table 12.
[2] IACC, Beating the Odds: Young People and Employment in the Illawarra/
[3] ABS, 2000, Transition from Education to Work, Data Series 6227.0.
[4] Australian Business Limited 2000
[5] Ibid

- Almost 20% of the longer-term unemployed were those who had no formal qualifications after leaving school. [6] (see **Appendix 1**)

The most positive impact on **employability** comes from either:

- Having a university degree (3% unemployment compared with 9.5% average unemployment for those who did not complete secondary school)
- Having a Skilled Vocational qualification (4.1% unemployment rate). [7]
- Each of these provide significantly more advantage than having a Diploma or Basic Vocational Qualification, and make a person 2.5 to 3.5 times less likely to be unemployed than having no vocational training (see **Appendix 1**).

Many young people in the Illawarra are at **serious risk of leaving school** without obtaining a basic qualification.

- At least 850 young people in the Region are at serious risk of leaving school and are participating in the Full Service Schools pilot (Schools report that this is the 'tip of the ice berg' as the number of places in this case management program are very limited). [8]
- Nearly 45% of young people outside the labour market, most in full-time study, said that they would **prefer to work** if they were given the chance. This compared with only 25% in 1977. Young men are particularly likely to report this. [9]
- However, the **steep decline in full-time male employment** opportunities and entry-level jobs in the Region makes this impractical.

[6] Ibid
[7] Ibid
[8] Full Service Schools Program / ISD Group Training and Employment 2000
[9] ABS, Persons not in the Labour Force, Australia, September 1996.

2.2. Skill shortages & unmet demand for tradespeople

Regional small businesses needs skilled labour to grow. However, the Illawarra has chronic industry-wide skill shortages in a number of sectors.

These have been consistently identified over the past 3 years [10] and are due to:

- Competing with the Sydney labour market (eg SW Sydney manufacturing)
- One-off factors (eg the Olympics boom)
- Cyclical factors (eg. volatility of housing sector, large projects)
- Emerging demand (eg. IT&T; Specialised skills)
- Quality Issues (eg. fiance sector, breadth of skills/ experience lacking)
- Reluctance of small business, our main employment sector, to take on Apprentices due to cost and poaching(ie far more likely to take on 4th year, or fully accredited tradespeople). [11]

Over the past 3 years, there have been consistent **skill shortages** in certain sectors. The main ones are:

- Manufacturing and mining –Joiners, Motor mechanic, Boilermakers, Other motor trades and repairs.
- Construction and transport – particularly Carpenter, Bricklayer, Earthmoving operator, Roof Tilers, Heavy Vehicle Drivers.
- Fiance, Property and Business – Accountant, Financial Planner, Computer Programmer, Property Manager
- Retail and Recreation – Travel Consultant, Hairdresser, Cook, Sales Assistant, Waiters
- Other trades due to cyclical demand – local and metropolitan [12]

[10] Illawarra Regional Information Service 2000
[11] Markey et al 1999; IACC 2000.
[12] Illawarra Regional Information Service 2000.

The most recent regional figures show a sharp drop in the number of Apprenticeship commencements in a number of sectors between the years 2000 and 2001 (see **Appendix 13**). This includes:

- A steep drop in Automotive trades, various Building trades, and Food Industry.
- Manufacturing / Engineering and Communications has performed somewhat better than other industry sectors, and indicates a continuing industry demand.

The increase in Traineeships has in no way offset the decline in Apprenticeships commencements at the regional level. [13] (see **Appendix13**)

2.3. Business diversification and growth requires skilled labour

The Illawarra has a range of **diverse industry sectors**, both established (eg Manufacturing and Engineering), and emerging (eg IT&T, Business Services). Each of these is important for continued regional economic development, job growth and contribution to national productivity (see **Appendix 9** for national productivity figures).

Small business (1-19 people) is critical to the Illawarra economy.

- It employs 60% of people
- It accounts for at least three-quarters of all regional job growth, and up to 90% of national growth [14]

However, small business and self-employed people have experienced increasing difficulties over the last 5 years in the Illawarra. There has been a sharp decrease in those identifying as self-employed and employers in the Illawarra from 1990 to 2000. [15]

[13] NSW Department of Education and Training June 2001.
[14] Markey et al 1999
[15] IRIS Presentation 2001.

Regional small business needs skilled labour to grow but is increasingly unable to take on or to access skilled labour. This is a critical issue to regional economic development.

- One of the major attractions for investment of new industry in a Region is the level of skills available. This is also a key factor in the growth of existing businesses within the Region.

- Job losses in traditional Regional industries like Mining and Manufacturing and in the public sector, have taken a particularly heavy toll on full-time entry level jobs available to young people in the Illawarra, and on the availability of apprenticeships.

- Between 1991 and 1996 alone, the number of Illawarra teenagers employed as Tradespersons and Related Occupations fell by one-third for teenage males (from 1501 to 1061) and by almost 20 per cent for teenage females.[16]

Small business repeatedly reports that it needs additional assistance, and more flexible employment and training models, if it is to take on Apprentices. Currently, regional businesses are far more likely to take on 4th year or fully trained tradespeople. [17]

This is due to:

- Inability to sustain low productivity in the first 2 years of an Apprenticeship – estimated by a majority of businesses to be 25% and 50% productive respectively in the first 2 years (see **Appendix 6**)

[16] IACC,2000 Beating the Odds: Young People and Employment in the Illawarra
[17] Markey et al 1999; IACC 2000

- Economies of scale in micro-businesses often don't allow for full-time Apprentices
- The cost of an Apprentice is far greater than reported, and the amount of subsidies do not offset the low productivity / real cost to business in first 2 years (see **Appendix 6**) [18]
- The comparative subsidies that are provided to those who take on a fully trained Apprentice, or a university graduate.
- Government administrative and subsidy arrangements are far too cumbersome and confusing (see **Appendix 11**).

Small business reports that they need:

- Much greater parity with subsidies that currently apply to university graduates or to those who 'poach' 4th year or fully-trained Tradespeople
- More flexible Apprenticeship arrangements (eg rotational models, those provided thorough Group Training Companies)
- A genuine one-stop-shop approach, with far simpler administrative requirements (see problems with current system in **Appendix 11**)
- Better mentoring and support for their Apprentice and themselves during the early part of the Apprenticeship
- More business support for themselves throughout the process. [19]

Table A: Net Cost to business of employing Apprentices (3 Industry Case Studies)

Industry Sector	Electrical Apprentice (employed directly by industry)	Mechanical Apprentice (employed by Group Training Co	Carpenter & Joiner Apprentice (employed by Group Training Co)
Year 1	$8,754	$5,355	$10,153
Year 2	$2,351	$1,303	$5,557
Year 3	$217	-$802	-$1,988
Year 4	-$7,568	-$4,847	-$6,758

(Survey of Illawarra Businesses 2001 – see Appendix 6 for details)

[18] See IACC, 2000, Beating the Odds for comments from businesses
[19] IACC 2000

The biggest problem for small business employing Apprentices is the low productivity in the first 2-3 years. Three case studies were costed based on electrical Apprentices employed by local businesses and carpentry mechanical apprentices employed through a Group Training Company.

The above table shows that the net cost to business in the 3 scenarios outlined are between $5,355 and $10,153 dropping somewhat in the second year, and beginning to make a return to the business by Year 4. This backs up the anecdotal information constantly provided by small business that they cannot sustain an Apprenticeship in the first 2 years, particularly where they are already struggling to stay afloat. It also explains the constant reports of small business of 4th year Apprentices being poached as they enter their first 'break even' year (see **Appendix 6** for more detail).

2.5. The needs of those at risk of marginal labour market attachment

Research demonstrates that the best way of **getting a LTU person into a job** in the short-term is through the provision of a substantial employer wage subsidy, assisted by targeted job brokerage and careful employee–employer matching. [20]

The best way of **keeping a person in a job** is to provide them with a structured training arrangement. In the case of someone less employable, this will need to be complemented with intensive mentoring for the employee, and business support for the employer.

Group Training Companies are well placed to provide such support, particularly under new intensive assistance models such as the Group Training New Apprenticeships Targeted Initiatives Scheme (DETYA funded).

[20] ABS, 2000, Occasional Paper 6293.0.00.002, Labour Market Programs, UE and Employment Hazards.

3. THE PROPOSAL TO DEVELOP A REGIONAL PILOT

It is proposed that a Regional Apprenticeship Pilot be funded to meet the needs of both young people 'at risk' of labour market disadvantage, and of small business who need skilled workers to grow

- **The Regional Pilot will :**
  - create 220 Apprenticeships over 3 years in regional industry sectors with chronic skills shortages
  - provide subsidies to small and micro business to offset the real cost of training Apprentices in their first 3 years.
  - enable small business growth through providing tightly target subsidies to local small business with a proven track record in youth employment and training, that are also taking active steps to export, and engaged in R&D.

- **The Pilot will:**
  - target 4 different groups of young people who are 'at risk' of not gaining a formal qualification or of completing school (see below)
  - implement different training strategies to meet the special needs of young people and specific businesses, including brokerage, mentoring, pre-vocational training and /or on-the-job training
  - ensure a very high rate of Apprenticeship completion through careful pre-Apprenticeship job matching, mentoring and business support.

- **The pilot will largely be run through regional Group Training** Companies, though individual businesses can participate as direct employers provided they comply with tight pilot program guidelines.

- **It will allow for 4 different training strategies** to meet the particular needs of different groups of 'at risk' young people and of different industry sectors:

3.2. The 4 Training Strategies

Training Strategy 1:

- Targets those at risk of not completing high school and who would therefore be seriously at risk of marginal labour force attachment and long-term unemployment.
- This part of pilot is costed at $23,000 over 4 years per Apprentice or around $5,500 per annum per apprentice. It includes direct subsidies to employers and brokerage fees. It replaces existing subsidies (progress payments).
- Total intake is 44 Apprentices over three years

Training Strategy 2:

- Targets those who have left school and are marginally attached to the labour force, or less than 1 year unemployed. They also face serious risk of LTU.
- This strategy is costed at $34,000 over 4 years per Apprentice or around $8,500 per annum per apprentice. It includes Training Strategy 1 provisions, but provides for an additional 26 weeks off-the-job (pre-vocational) training (eg at TAFE or GTC), mentoring and support and a reduced employer subsidy in year 1.
- Total intake is 88 Apprentices over three years.

Training Strategy 3:

- Targets those who have been unemployed for 1 year or more, and are seriously at risk of very long-term unemployment (5+ years).
- This strategy is costed at $40,000 over 4 years per Apprentice or $10,000 per annum. It includes Training Strategies 1 and 2 above, plus additional funding for intensive case management, mentoring and business support over 4 years.
- Intake is 44 Apprentices over three years.

Training Strategy 4:

- Targets those who have completed VET in Schools, but often do not gain access to an Apprenticeship. They are therefore at risk of attaining only basic vocational qualifications.
- This Option is costed at $23,000, or around $5,500 per annum per apprentice over 4 years..
- Intake is 44 Apprentices over three years.

Table B(1): Training Strategy No.1 for 'At Risk' of School Non-Completion Target Group (see Appendix 6 for details)

Year of Apprenticeship	Training Activities	Costs **
First year	Brokerage Fee	$2,000
	26 weeks on job subsidy	$5,000
	26 weeks on job subsidy	$5,000
Second year	26 weeks on job subsidy	$2,500
	26 weeks on job subsidy	$2,500
	GTC Admin Fee	$2,000
Third year	26 weeks on job subsidy	$1,000
	26 weeks on job subsidy	$1,000
	GTC Admin Fee	$2,000
Fourth year	no subsidy	$0
Total		$23,000

**Training Strategy 1 involves a direct subsidy to employer and on-the-job training and would generally be brokered through a Group Training Company

Table B(2): **Training Strategy No.2 for Short-Term Unemployed Youth Target Group**

Year of Apprenticeship	Training Activities	Costs
First year	Brokerage	$2,000
	26 weeks off job training -Real cost of Wages for 26 weeks -Training cost and case management	 $9,000 $7,000
	26 weeks on job subsidy	$5,000
Second year	26 weeks on job subsidy	$2,500
	26 weeks on job subsidy	$2,500
	GTC Admin Fee	$2,000
Third year	26 weeks on job subsidy	$1,000
	26 weeks on job subsidy	$1,000
	GTC Admin Fee	$2,000
Fourth year	no subsidy	$0
Total		$34,000

**Training Strategy 2 involves intensive pre apprentice training with preliminary case management for 26 weeks and subsidy to employer thereafter

TABLE B(3): **Training Strategy No.3 for Long-Term Unemployed Youth Target Group**

Year of Apprenticeship	Training Activities	Costs**
First year	Brokerage	$2,000
	26 weeks off job training -Wages -Training cost	 $9,000 $7,000
	26 weeks on job subsidy	$5,000
	case management /admin	$4,000
Second year	26 weeks on job subsidy	$2,500
	26 weeks on job subsidy	$2,500
	case management/ admin	$3,000
Third year	26 weeks on job subsidy	$1,000
	26 weeks on job subsidy	$1,000
	case management	$2,000
Fourth year	no subsidy	$0
	case management / admin	$1,000
Total		$40,000

** Training Strategy 3 involves off-the-job pre-apprentice training with intensive ongoing case management and subsidy to employer

TABLE B(4): Training Strategy No. 4 to encourage VET in Schools Completion and Guaranteed Apprenticeship

Year of Apprenticeship	Training Activities	Costs
First year	Brokerage	$2,000
	26 weeks on job subsidy	$5,000
	26 weeks on job subsidy	$5,000
	case management	
Second year	26 weeks on job subsidy	$2,500
	26 weeks on job subsidy	$2,500
	GTC Admin Fee	$2,000
Third year	26 weeks on job subsidy	$1,000
	26 weeks on job subsidy	$1,000
	GTC Admin Fee	$2,000
Fourth year	no subsidy	
Total		**$23,000**

**Training Strategy 4 involves completing VET in Schools program to year 12 then direct employment subsidy over 3 years

4. ECONOMIC JUSTIFICATION

4.1. The return on investment for Government (see Appendix 8)

- An investment of $5.8 million over 6 yrs will yield the Government:
  - $9.5 million (NPV calculated over 20 years) compared with training a university graduate – an 81% return on investment
  - $10.4 million compared with not training a person and having them unemployed (single person benefit rate) – a 97% return
  - $13.5 million for not training a person and having them unemployed (person with a partner and child) - a 156% return (see **Appendix 8**).

- BHP only expects a return of 15% on invested capital. As such, the rates of return calculated above strongly support the proposed regional pilot.

- This is because of the more immediate productivity levels and taxation generating capacity of a trade apprentice compared with:

- The six years additional subsidised education of a university graduate (around $10,000 per annum for Years 11 and 12 of High School, and 4 years of a professional university degree);
- The direct costs of unemployment benefits and loss of productivity and taxation revenue to government for an unemployed person single, or with one dependent and spouse, both typical scenarios for a young unemployed person.

4.2. Greatly Increased Employability

- The biggest impact on employability is through having university degree or a skilled vocational qualification – these groups are 2.5 to 3 times less likely to be unemployed than those not completing school (see **Appendix 1**).

4.3. Subsidies proposed are cheaper alternatives than the effective subsidies that apply to a University graduate or to people on different types of unemployment benefits

- The subsidies proposed average at $5,500 per annum per apprentice over 4 years (for Training Strategies 1 and 4), and average up to $10,000 per annum (Training Strategy 3).
- By comparison with the effective subsidy that is given to a university graduate by the time they graduate, a subsidy of around $11,700 per annum could be given to an apprenticeship to achieve parity.
- **Yet** the government receives almost 3 times the economic benefit from a trade qualified worker calculated over 20 years (see **Appendix 2**).

In fact, the government could subsidise Apprentices at $11,500 pa for 4 years in addition to existing subsidies to achieve the same outcome as subsidising a university student (see Appendix 3). This pilot is asking for around $5,500 per annum for the lowest cost Training Strategy over 4 years, and $10,000 per annum for the highest cost Training Strategy.

Unemployment Subsidy comparisons

- The difference in employability between a person with a skilled vocational qualification and someone who did not complete school would justify :
  - An additional subsidy of $12,900 pa for 4 yrs (compared to person on single unemployment benefit) (see **Appendix 4**)
  - An additional subsidy of $16,700 pa for 4 years (compared to couple + one child benefit) (see **Appendix 5**)

As noted above, this is well below the amount requested for the pilot apprenticeship scheme of around $5,000 per annum for the lowest cost Training Strategy over 4 years, and $10,000 per annum for the highest cost Training Strategy.

4.4. The proposal is cost neutral to Government compared with unemployment scenarios

- The cost of the subsidy per Apprentice is far cheaper than having a person on unemployment benefits when factors such as cost of benefits, Work for the Dole, taxation and other offsets to government are taken into account (see **Table C** below).

- In fact, in the case studies provided below show that the saving to the Government is between $6,200 and $20,800 per annum, assuming different rates of unemployment benefits (see **Table C**).
- The savings to government clearly justifies the proposal in the case of moving a long-term unemployed person into an apprenticeship.

Table C: Comparison over 4 yrs of direct cost of unemployment compared to proposed subsidies at minimum, maximum and average rates proposed

DIRECT COST TO GOVERNMENT OF U/E	Single person Newstart rate Casestudy	Couple with child Newstart rate Casestudy
Newstart Allowance 12 months	$9,303	$19,815
WFTD **	$4,420	$4,420
TOTAL COST TO GOVT	**$13,723**	**$24,235**
SAVING TO GOVERNMNET FROM PROPOSAL (1)		
Total subsidy (maximum proposed average per annum)	$10,000	$10,000
Less Tax on $19,000 (including Medicare levy) – based on $19,000 Training Wage	$2,495	$2,495
Net cost of subsidy	**$7,505**	**$7,505**
SAVING TO GOVERNMENT COMPARED WITH U/E COST(p.a.)	**$6,218**	**$16,730**
SAVING TO GOVERNMNET FROM PROPOSAL (2)		
Total subsidy (maximum proposed average per annum)	$5,750	$5,750
Less Tax on $19,000 (including Medicare levy) – based on $19,000 Training Wage	$2,495	$2,495
Net cost of subsidy	**$3,255**	**$3,255**
SAVING TO GOVERNMENT COMPARED WITH U/E COST(p.a.)	**$10,468**	**$20,980**
SAVING TO GOVERNMNET FROM PROPOSAL (3)		
Total subsidy (average amount proposed per annum)	$7,500	$7,500
Less Tax on $19,000 (including Medicare levy) – based on $19,000 Training Wage	$2,495	$2,495
Net cost of subsidy	**$5,005**	**$5,005**
SAVING TO GOVERNMENT COMPARED WITH U/E COST(p.a.)	**$8,718**	**$19,230**

** Work for the Dole - the average brokerage fee per participant is $1500, and the long-term employment outcome rate for WFTD is approximately 34%. That is, the Commonwealth currently spends $4411 for a sustained employment outcome folowing completion of WFTD (ie $1500 x 1/0.34)

APPENDICES

APPENDIX 1 - EMPLOYABILITY BY TRAINING							
source ABS 6227.0 May 2000							
	higher degree, postgrad or batchelor degree	Diploma	Skilled vocational	Basic vocational	completed high school	did not complete high school	
Employed persons	1701400	814300	1218800	771300	1665200	2421000	
Unemployed persons	52600	42600	52200	59800	129900	252800	
total persons	1754000	856900	1271000	831100	1795100	2673800	
% employed	97.0%	95.0%	95.9%	92.8%	92.8%	90.5%	
% unemployed	3.0%	5.0%	4.1%	7.2%	7.2%	9.5%	
CONCLUSIONS:							
The second lowest level of unemployment comes from skilled vocational training. This training decreases the chance of a person who does not complete high school							
of being unemployed by 57%.							
Basic vocational training and completion of high school decreases the the chance of being unemployed by 23%.							
Skilled vocational training is about 1.8 times as effective as getting people into employment than basic vocational and completion of high school, about 20% more							
effective than obtaining a diploma and 25% less effective than tertiary qualifications.							

APPENDIX 2

Calculation of Net Present Worth to Government of trade training compared to University education and "do nothing" option.

This table calculates the cost of four different training option to Government. The options are costed over twenty years and presented as Net Present Worth.

Year	Details	University	Apprenticeship	No training (A) (9)	No training (B) (10)
1	high school (2)	$10,000			
	TAFE (4)		$2,000		
	Training incentive		$1,325		
	Tax income (6), (11)		-$932	-$2,324	-$2,324
	Benefits			$884	$1,882
2	high school	$10,000			
	TAFE		$2,000		
	Tax income		-$1,535	-$2,324	-$2,324
	Benefits			$884	$1,882
3	University (3)	$10,000			
	TAFE		$2,000		
	Tax income		-$2,464	-$2,324	-$2,324
	Training incentive		$1,325		
	Benefits			$884	$1,882
4	University	$10,000			
	TAFE		$0		
	Training incentive		$1,500		
	Tax income		-$3,343	-$2,324	-$2,324
	Benefits			$884	$1,882
5	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
6	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
7	Income (5), (7), (8)	-$5,061	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
8	Income	-$6,130	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
9	Income	-$7,200	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
10	Income	-$8,269	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
11	Income	-$9,338	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
12	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
13	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
14	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
15	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
16	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
17	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
18	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
19	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
20	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
	NPV (1)	-$24,250	-$67,393	-$20,289	-$6,223

Conclusions:

Government receives a higher benefit (about 3 times) from apprentices when calculated over 20 years.

Over six years the total net subsidy to a university graduate is $60,000 compared to $10,150 for an apprentice

Notes:

(1) Interest rate assumed 3.6% based on CW bond rate of 6.2% (SMH 14/7/01) and CPI 2.6% for 99/00 and using Excel NPV function

(2) Cost per student in high school from Dusseldorf Skills Forum "Reality and Risk" 1999.

(3) Cost per student at university based on analysis of University Annual Reports

(4) TAFE cost based on one day attendance per week and equivalent cost structure to schools

(5) Tradesman income from ABS 6310 August 2000 (includes part time workers) $36,192 pa average for trades and related

(6) Apprentice income based on Metal and Engineering Industry (NSW) Award for mechanics

(7) Graduate income from ABS 6310 August 2000 (includes part time workers) $46,228 pa average for professionals with starting salary of $30,000 increasing to $46,228 over five years

(8) Tax calculated by rates and includes medicare levy all multiplied by probability of employment less unemployment benefit at couple rate by probability of being unemployed

(9) Benefits for No training (A) based on $9,303 per annum.(Single person rate) multiplied by 9.5% chance of unemployment

(10) Benefits for No training (B) based on $19,815 per annum.(Partnered with one child rate) multiplied by 9.5% chance of unemployment

(11) No training option income from ABS 6310 August 2000 (includes part time workers) $19,396 pa average for elementary clerical, sales and service workers and for labourers and related workers

APPENDIX 3

Calculation of Break even subsidy to Government of trade training compared to University education

This table calculates the level of subsidy to apprenticeship training which will cost government the same as university training.
The results are calculated as Net Present Worth and calculated over twenty years.

Year	Details	University	Apprenticeship	No training (A)	No training (B)
1	high school	$10,000			
	TAFE		$2,000		
	Training incentive		$1,325		
	subsidy		$11,700		
	Tax income		-$932	-$2,324	-$2,324
	Benefits			$884	$1,882
2	high school	$10,000			
	TAFE		$2,000		
	subsidy		$11,700		
	Tax income		-$1,535	-$2,324	-$2,324
	Benefits			$884	$1,882
3	University	$10,000			
	TAFE		$2,000		
	subsidy		$11,700		
	Tax income		-$2,464	-$2,324	-$2,324
	Training incentive		$1,325		
	Benefits			$884	$1,882
4	University	$10,000			
	TAFE		$0		
	Training incentive		$1,500		
	subsidy		$11,700		
	Tax income		-$3,343	-$2,324	-$2,324
	Benefits			$884	$1,882
5	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
6	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
7	Income	-$5,061	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
8	Income	-$6,130	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
9	Income	-$7,200	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
10	Income	-$8,269	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
11	Income	-$9,338	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
12	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
13	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
14	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
15	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
16	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
17	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
18	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
19	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
20	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
	NPV	-$24,250	-$24,520	-$20,289	-$6,223

Conclusions:

Government could subsidise apprentices at a rate of $11,700 pa over existing subsidies and provide parity with tertiary education subsidies

APPENDIX 4

Calculation of Break even subsidy to Government of trade training compared to single person newstart

This table calculates the level of subsidy to apprenticeship training which will cost government the same as single person newstart.
The results are calculated as Net Present Worth and calculated over twenty years.

Year	Details	University	Apprenticeship	No training (A)	No training (B)
1	high school	$10,000			
	TAFE		$2,000		
	Training incentive		$1,325		
	subsidy		$12,900		
	Tax income		-$932	-$2,324	-$2,324
	Benefits			$884	$1,882
2	high school	$10,000			
	TAFE		$2,000		
	subsidy		$12,900		
	Tax income		-$1,535	-$2,324	-$2,324
	Benefits			$884	$1,882
3	University	$10,000			
	TAFE		$2,000		
	subsidy		$12,900		
	Tax income		-$2,464	-$2,324	-$2,324
	Training incentive		$1,325		
	Benefits			$884	$1,882
4	University	$10,000			
	TAFE		$0		
	Training incentive		$1,500		
	subsidy		$12,900		
	Tax income		-$3,343	-$2,324	-$2,324
	Benefits			$884	$1,882
5	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
6	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
7	Income	-$5,061	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
8	Income	-$6,130	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
9	Income	-$7,200	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
10	Income	-$8,269	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
11	Income	-$9,338	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
12	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
13	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
14	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
15	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
16	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
17	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
18	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
19	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
20	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
	NPV	-$24,250	-$20,123	-$20,289	-$6,223

Conclusions:

The difference in employability between no training and vocational training would justify a subsidy per apprentice of $12,900 per annum when compared to the single person benefit

APPENDIX 5

Calculation of Break even subsidy to Government of trade training compared to couple newstart

This table calculates the level of subsidy to apprenticeship training which will cost government the same as couple newstart.
The results are calculated as Net Present Worth and calculated over twenty years.

Year	Details	University	Apprenticeship	No training (A)	No training (B)
1	high school	$10,000			
	TAFE		$2,000		
	Training incentive		$1,325		
	subsidy		$16,700		
	Tax income		-$932	-$2,324	-$2,324
	Benefits			$884	$1,882
2	high school	$10,000			
	TAFE		$2,000		
	subsidy		$16,700		
	Tax income		-$1,535	-$2,324	-$2,324
	Benefits			$884	$1,882
3	University	$10,000			
	TAFE		$2,000		
	subsidy		$16,700		
	Tax income		-$2,464	-$2,324	-$2,324
	Training incentive		$1,325		
	Benefits			$884	$1,882
4	University	$10,000			
	TAFE		$0		
	Training incentive		$1,500		
	subsidy		$16,700		
	Tax income		-$3,343	-$2,324	-$2,324
	Benefits			$884	$1,882
5	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
6	University	$10,000			
	Tax income		-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
7	Income	-$5,061	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
8	Income	-$6,130	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
9	Income	-$7,200	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
10	Income	-$8,269	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
11	Income	-$9,338	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
12	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
13	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
14	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
15	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
16	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
17	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
18	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
19	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
20	Income	-$10,019	-$6,651	-$2,324	-$2,324
	Benefits			$884	$1,882
	NPV	-$24,250	-$6,198	-$20,289	-$6,223

Conclusions:

The difference in employability between no training and vocational training would justify a subsidy per apprentice of $16,700 per annum when compared to couple jobsearch

APPENDIX 6

Cost to business of employing apprentices

Case study based on electrical apprentices employed by a local business operating under an EBA

Year of apprentice	Cost of employing	productivity	Cost of tradesman (Assumed 100% productivity)	tradesman cost adjusted for comparable productivity	Net cost of apprentice to business
first year	$22,309	25%	$54,221	$13,555	$8,754
second year	$29,462	50%	$54,221	$27,111	$2,351
third year	$40,883	75%	$54,221	$40,666	$217
fourth year	$46,653	100%	$54,221	$54,221	-$7,568

Case study based on mechanical apprentices employed by a group training company. No payroll tax and using award rates.

Year of apprentice	Cost of employing	productivity	Cost of tradesman (Assumed 100% productivity)	tradesman cost adjusted for comparable productivity	Net cost of apprentice to business
first year	$13,164	25%	$31,235	$7,809	$5,355
second year	$16,920	50%	$31,235	$15,618	$1,303
third year	$22,624	75%	$31,235	$23,426	-$802
fourth year	$26,388	100%	$31,235	$31,235	-$4,847

Case study based on carpenter and joiner apprentices employed by a group training company. No payroll tax or site allowance and using award rates.

Year of apprentice	Cost of employing	productivity	Cost of tradesman (Assumed 100% productivity)	tradesman cost adjusted for comparable productivity	Net cost of apprentice to business
first year	$21,124	25%	$43,885	$10,971	$10,153
second year	$27,499	50%	$43,885	$21,943	$5,557
third year	$30,926	75%	$43,885	$32,914	-$1,988
fourth year	$37,127	100%	$43,885	$43,885	-$6,758

Average cost of employment based on three case studies

Year of apprentice	Net cost of apprentice to business
first year	$8,087
second year	$3,070
third year	-$858
fourth year	-$6,391

Average cost of employment adjusting for 15% impost from EBA, payroll tax etc

Year of apprentice	Net cost of apprentice to business
first year	$8,863
second year	$3,413
third year	-$997
fourth year	-$6,971

It is difficult to determine an average subsidy to an employer as the cost differential varies considerably with industry, whether Award, EBA or AWA and other things such as on site and industrial allowance.

We have adopted the following:

Year of apprentice	Subsidy
first year	$10,000
second year	$5,000
third year	$2,000
fourth year	$0

APPENDIX 7					
Funding Strategies					
	Details	Base case	Base case	Strategy 1	Strategy 2
		Break even against university subsidy	Break even against partnered benefit with child	Direct subsidy to employer	Intensive pre apprentice training with preliminary case management and subsidy to employer
first year					
	Brokerage			$2,000	$2,000
	26 weeks off job training				
	-Wages				$9,000
	-Training cost				$7,000
	26 weeks on job subsidy			$5,000	$5,000
	26 weeks on job subsidy	$11,700	$16,700	$5,000	
second year	26 weeks on job subsidy			$2,500	$2,500
	26 weeks on job subsidy	$11,700	$16,700	$2,500	$2,500
	GTC Admin fee			$2,000	$2,000
third year	26 weeks on job subsidy			$1,000	$1,000
	26 weeks on job subsidy	$11,700	$16,700	$1,000	$1,000
	GTC Admin fee			$2,000	$2,000
fourth year	no subsidy	$11,700	$16,700	$0	$0
Total		$46,800	$66,800	$23,000	$34,000
NPV		$42,873	$61,195	$21,702	$32,320
		Strategy 3	Strategy 4		
		Intensive pre apprentice training with intensive ongoing case management and subsidy to employer	Complete VET program to year 12 then direct employment		
first year					
	Brokerage	$2,000	$2,000		
	26 weeks off job training				
	-Wages	$9,000			
	-Training cost	$7,000			
	26 weeks on job subsidy	$5,000	$5,000		
	26 weeks on job subsidy		$5,000		
	case management	$4,000			
second year	26 weeks on job subsidy	$2,500	$2,500		
	26 weeks on job subsidy	$2,500	$2,500		
	case management/GTC admin fee	$3,000	$2,000		
third year	26 weeks on job subsidy	$1,000	$1,000		
	26 weeks on job subsidy	$1,000	$1,000		
	case management/GTC admin fee	$2,000	$2,000		
fourth year	no subsidy	$0			
	case management	$1,000			
Total		$40,000	$23,000		
NPV		$37,981	$21,702		

APPENDIX 8

Funding Proposal

Option 1 is configured for employers who favour on the job training. Consultation with employers suggests a strong preference for pre-employment training so we have allowed 20% funded under option 1. The target group would be those at risk of leaving school.

Option 2 is configured for employers who prefer pre-apprenticeship training. The target group would be those at risk of leaving school or those currently unemployed.

Option 3 is configured for employers who prefer pre-apprenticeship training. The target group would be those who are longer term unemployed.

Option 4 is configured for employers who prefer pre-apprenticeship training. The target group would be those who are currently in the VET program at high school.

Costing based on 20% option 1, 40% option 2, 20% option 3 and 20% option 4.

Proposal over three years targetting 60 apprentices in year 1, 60 in year 2 and 100 in year 3 giving a total of 220 apprenticeships.

Funding	Strategy 1	No of apprentices	Strategy 2	No of apprentices	Strategy 3	No of apprentices	Strategy 4	No of apprentices	Total
Year 1	$12,000	12	$23,000	24	$27,000	12	$12,000	12	$1,020,000
Total									**$1,020,000**
Year 2	$12,000	12	$23,000	24	$27,000	12	$12,000	12	$1,020,000
	$7,000	12	$7,000	24	$8,000	12	$7,000	12	$348,000
Total									**$1,368,000**
Year 3	$12,000	20	$23,000	40	$27,000	20	$12,000	20	$1,700,000
	$7,000	12	$7,000	24	$8,000	12	$7,000	12	$348,000
	$4,000	12	$4,000	24	$4,000	12	$4,000	12	$192,000
Total									**$2,240,000**
Year 4	$7,000	20	$7,000	40	$8,000	20	$7,000	20	$580,000
	$4,000	12	$4,000	24	$4,000	12	$4,000	12	$192,000
	$0	12	$0	24	$1,000	12	$0	12	$12,000
Total									**$784,000**
Year 5	$4,000	20	$4,000	40	$4,000	20	$4,000	20	$320,000
	$0	12	$0	24	$1,000	12	$0	12	$12,000
Total									**$332,000**
Year 6	$0	20	$0	40	$1,000	20	$0	20	$20,000
Total									**$20,000**
Total over six years									**$5,764,000**
NPV									**$5,248,583**

	per apprentice	Total Benefit	Rate of return
Net benefit over 20 years compared to training a university student	$43,143	$9,491,460	**81%**
Net benefit over 20 years compared to no training and single person benefit	$47,104	$10,362,880	**97%**
Net benefit over 20 years compared to no training and couple with one child benefit	$61,170	$13,457,400	**156%**

APPENDIX 9			
Contribution to GDP by sector			
sorted by contribution			
Sector	contribution to GDP(1)	persons employed(2)	GDP per person employed
Manufacturing	$75,560,000,000	965035	$78,298
Property and business services	$72,938,000,000	750195	$97,225
Finance and insurance	$41,451,000,000	296451	$139,824
Transport and Storage	$34,510,000,000	332078	$103,921
Construction	$34,434,000,000	484087	$71,132
Wholesale trade	$33,942,000,000	446541	$76,011
Health and community services	$32,771,000,000	725177	$45,190
Retail trade	$32,737,000,000	1036648	$31,580
Education	$26,294,000,000	540062	$48,687
Mining	$26,183,000,000	86261	$303,532
Government administration and defence	$22,702,000,000	373426	$60,794
Communication services	$19,549,000,000	150182	$130,169
Agriculture, forestry and fishing	$19,005,000,000	324327	$58,598
Personal and other services	$13,225,000,000	277907	$47,588
Accommodation, cafes and restaurants	$12,692,000,000	355288	$35,723
Electricity, gas and water supply	$11,314,000,000	58702	$192,736
Cultural and recreational services	$10,097,000,000	179056	$56,390
total	**$519,404,000,000**	**7,381,423**	**$70,366**
Sorted by persons employed			
Sector	contribution to GDP	persons employed	GDP per person employed
Retail trade	$32,737,000,000	1036648	$31,580
Manufacturing	$75,560,000,000	965035	$78,298
Property and business services	$72,938,000,000	750195	$97,225
Health and community services	$32,771,000,000	725177	$45,190
Education	$26,294,000,000	540062	$48,687
Construction	$34,434,000,000	484087	$71,132
Wholesale trade	$33,942,000,000	446541	$76,011
Government administration and defence	$22,702,000,000	373426	$60,794
Accommodation, cafes and restaurants	$12,692,000,000	355288	$35,723
Transport and Storage	$34,510,000,000	332078	$103,921
Agriculture, forestry and fishing	$19,005,000,000	324327	$58,598
Finance and insurance	$41,451,000,000	296451	$139,824
Personal and other services	$13,225,000,000	277907	$47,588
Cultural and recreational services	$10,097,000,000	179056	$56,390
Communication services	$19,549,000,000	150182	$130,169
Mining	$26,183,000,000	86261	$303,532
Electricity, gas and water supply	$11,314,000,000	58702	$192,736
total	**$519,404,000,000**	**7,381,423**	**$70,366**

APPENDIX 9 CONTINUED			
Sorted by per capita contribution to GDP			
Sector	contribution to GDP	persons employed	GDP per person employed
Mining	$26,183,000,000	86261	$303,532
Electricity, gas and water supply	$11,314,000,000	58702	$192,736
Finance and insurance	$41,451,000,000	296451	$139,824
Communication services	$19,549,000,000	150182	$130,169
Transport and Storage	$34,510,000,000	332078	$103,921
Property and business services	$72,938,000,000	750195	$97,225
Manufacturing	$75,560,000,000	965035	$78,298
Wholesale trade	$33,942,000,000	446541	$76,011
Construction	$34,434,000,000	484087	$71,132
Government administration and defence	$22,702,000,000	373426	$60,794
Agriculture, forestry and fishing	$19,005,000,000	324327	$58,598
Cultural and recreational services	$10,097,000,000	179056	$56,390
Education	$26,294,000,000	540062	$48,687
Personal and other services	$13,225,000,000	277907	$47,588
Health and community services	$32,771,000,000	725177	$45,190
Accommodation, cafes and restaurants	$12,692,000,000	355288	$35,723
Retail trade	$32,737,000,000	1036648	$31,580
total	**$519,404,000,000**	**7,381,423**	**$70,366**
NOTES:			
(1) Figures from ABS Australian system of national accounts 5204.0 1999-00			
(2) Figures from Census 96 table B19 Industry by age by sex, employed persons in Australia			

APPENDIX 11					
Calculated on interest rate of 6%					
Year	Details	University	Apprenticeship	No training (A) (9)	No training (B) (10)
1	high school (2)	$10,000			
	TAFE (4)		$2,000		
	Training incentive		$1,325		
	Tax income (6), (11)		-$932	-$2,324	-$2,324
	Benefits			$884	$2,392
2	high school	$10,000			
	TAFE		$2,000		
	Tax income		-$1,535	-$2,324	-$2,324
	Benefits			$884	$2,392
3	University (3)	$10,000			
	TAFE		$2,000		
	Tax income		-$2,464	-$2,324	-$2,324
	Training incentive		$1,325		
	Benefits			$884	$2,392
4	University	$10,000			
	TAFE		$0		
	Training incentive		$1,500		
	Tax income		-$3,343	-$2,324	-$2,324
	Benefits			$884	$2,392
5	University	$10,000			
	Tax income		-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
6	University	$10,000			
	Tax income		-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
7	Income (5), (7), (8)	-$4,900	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
8	Income	-$5,969	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
9	Income	-$7,039	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
10	Income	-$8,108	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
11	Income	-$9,177	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
12	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
13	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
14	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
15	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
16	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
17	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
18	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
19	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
20	Income	-$9,858	-$6,432	-$2,324	-$2,324
	Benefits			$884	$2,392
	NPV (1)	-$6,681	-$49,550	-$16,522	$776
Conclusions:					
Government receives a higher benefit (about 7 times) from apprentices when calculated over 20 years at a 6% interest rate.					

APPENDIX 12A: Unemployment Among 20-24 year olds:
Illawarra, Sydney and NSW

Period	Gender	20-24 years		
		WSR	SMSR	NSW
Oct-Dec 99	Male	26.6	6.4	8.7
	Female	9.2	4.5	6.4
	Total	18.3	5.5	7.7
July-Sept 99	Male	19.6	8.7	11.0
	Female	5.3	6.0	7.8
	Total	12.7	7.4	9.6
July-Sept 98	Male	23.4	8.6	12.1
	Female	17.1	7.4	9.9
	Total	20.7	8.0	11.1
July-Sept 97	Male	23.9	11.0	14.5
	Female	13.9	8.0	10.0
	Total	20.1	9.6	12.4
July-Sept 96	Male	17.9	7.4	9.9
	Female	11.7	8.8	9.9
	Total	14.0	8.0	9.9
July-Sept 95	Male	27.5	8.7	10.7
	Female	22.2	7.5	9.4
	Total	25.1	8.1	10.1

(Source: ABS labour Market Survey 1995-99)

APPENDIX 12B: Male Unemployment:

Sample of Average Quarterly Comparisons for Illawarra and NSW

Period	Total 15-64 years			15-19 years			20-24 years			25-34 years			35-44 years			45-54 years		
	WSR	MSR	NSW	WSR	MSR	NSW	WSR	MSR	NSW	WSR	MSR	NSW	WSR	SMSR	NSW	WSR	SMSR	NSW
July-Sept 99	9.2	5.0	6.4	31.9	12.9	16.3	19.6	8.7	11.0	7.3	4.7	6.2	6.4	3.4	4.8	4.4	2.5	3.3
July-Sept 98	13.3	5.9	7.7	34.6	15.8	20.1	23.4	8.6	12.1	8.3	4.3	6.4	9.2	5.2	5.7	11.4	5.0	6.0
July-Sept 97	10.2	6.8	8.4	27.0	16.1	20.4	23.9	11.0	14.5	6.6	6.7	8.2	5.7	3.5	5.0	8.1	5.3	6.0
July-Sept 96	9.5	7.2	8.3	23.3	17.3	19.3	17.9	7.4	9.9	6.2	6.9	8.0	4.9	5.4	5.6	9.2	5.9	6.6
July-Sept 95	12.6	7.2	8.0	32.6	18.6	21.2	27.5	8.7	10.7	9.7	6.9	7.7	4.3	6.2	6.1	11.6	4.5	4.8

(Source: ABS labour Market Survey 1995-99)

APPENDIX 12C: Sample of Average Quarterly Unemployment Rates [21] –
Wollongong Statistical Region [22], Sydney Major Statistical Region & NSW

Period [23]	Gender	Total (15-64 years)			15-19 years			20-24 years		
		WSR	SMSR	NSW	WSR	SMSR	NSW	WSR	SMSR	NSW
July-Sept 99	Male	9.2	5	6.4	31.9	12.9	16.3	19.6	8.7	11
	Female	5.7	4.9	6.5	17.5	14.6	17.1	5.3	6	7.8
	Total	7.7	4.9	6.4	24.7	13.7	16.7	12.7	7.4	9.6
July-Sept 98	Male	13.3	5.9	7.7	34.6	15.8	20.1	23.4	8.6	12.1
	Female	11.3	5.7	6.8	18.8	13.1	14.8	17.1	7.4	9.9
	Total	12.5	5.8	7.3	26.3	14.4	17.5	20.7	8	11.1
July-Sept 97	Male	10.2	6.8	8.4	27	16.1	20.4	23.9	11	14.5
	Female	10.2	6	7.2	12.8	12.7	14.9	13.9	8	10
	Total	10.2	6.4	7.9	19.1	14.5	17.8	20.1	9.6	12.4
July-Sept 96	Male	9.5	7.2	8.3	23.3	17.3	19.3	17.9	7.4	9.9
	Female	9.2	6	7.4	20.9	11.2	16.1	11.7	8.8	9.9
	Total	9.4	6.7	7.9	22.3	14.5	17.9	14	8	9.9
July-Sept 95	Male	12.6	7.2	8	32.6	18.6	21.2	27.5	8.7	10.7
	Female	11	6.1	6.8	19.2	13.2	15.6	22.2	7.5	9.4
	Total	12	6.7	7.5	25.7	15.9	18.5	25.1	8.1	10.1

(Source: ABS L/F Survey 1995-99)

[21] Raw data supplied by IRIS
[22] Includes Wollongong, Shellharbour and Kiama LGAs
[23] Period selected considered to be least volatile re seasonal factors, except in the case of Oct-Dec 1999 which was given as it was the last quarter available from IRIS

APPENDIX 12D: Sample of Average Quarterly Unemployment Rates (continued) [24] – Wollongong Statistical Region [25], Sydney Major Statistical Region & NSW

Period [26]	Gender	25-34 years			35-44 years			45-54 years		
		WSR	SMSR	NSW	WSR	SMSR	NSW	WSR	SMSR	NSW
July-Sept 99	Male	7.3	4.7	6.2	6.4	3.4	4.8	4.4	2.5	3.3
	Female	4.2	4.4	5.9	4.3	4.2	5.8	5.3	2.5	3.7
	Total	6.0	4.6	6.1	5.6	3.8	5.2	4.5	2.5	3.5
July-Sept 98	Male	8.3	4.3	6.4	9.2	5.2	5.7	11.4	5.0	6.0
	Female	5.7	3.9	5.1	12.4	5.5	6.6	10.1	4.6	4.6
	Total	7.2	4.1	6.0	10.5	5.3	6.1	10.9	4.8	5.4
July-Sept 97	Male	6.6	6.7	8.2	5.7	3.5	5.0	8.1	5.3	6.0
	Female	11.4	5.6	6.8	5.7	5.0	5.8	10.6	4.4	5.8
	Total	8.4	6.2	7.6	5.7	4.2	5.3	11.8	4.9	5.3
July-Sept 96	Male	6.2	6.9	8.0	4.9	5.4	5.6	9.2	5.9	6.6
	Female	5.7	6.2	7.3	4.7	4.1	5.1	15.8	4.7	6.0
	Total	6.0	6.6	7.7	4.8	4.9	5.4	11.4	5.3	6.4
July-Sept 95	Male	9.7	6.9	7.7	4.3	6.2	6.1	11.6	4.5	4.8
	Female	7.8	6.5	6.6	9.7	5.6	5.6	6.8	3.3	3.6
	Total	9.1	6.7	7.2	6.5	5.9	5.9	9.6	4.0	4.3

(Source: ABS L/F Survey 1995-99)

[24] Raw data supplied by IRIS
[25] Includes Wollongong, Shellharbour and Kiama LGAs
[26] Period selected considered to be least volatile re seasonal factors, except in the case of Oct-Dec 1999 which was given as it was the last quarter available from IRIS

APPENDIX 12E: UNEMPLOYMENT BY AGE GROUP, 1986, 1991 and 1996

Age Group	1986		1991		1996	
	Aust.	WSD	Aust.	WSD	Aust.	WSD
15-19 years	20.3%	30.2%	23.1%	27.4%	18.7%	25.3%
20-24 years	13.5%	19.1%	17.4%	20.7%	13.9%	18.0%
25-54 years	7.0%	9.2%	9.3%	10.3%	7.5%	9.0%
All ages	9.2%	13.1%	11.6%	13.7%	9.2%	11.6%

(Source: ABS 1986, 1991 and 1996 Census)