



Human Capital Index

Developing Human Capital Across Australia



Brought to you with the generous support of Bendigo and Adelaide Bank

Table of Contents

Executive Summary	2
What's in the Index?	5
Gap or chasm? Differences between regions and metropolitan areas.....	7
Starting off on the right foot – early childhood development	12
Skills for life – primary and secondary literacy and numeracy	15
<i>Primary Literacy and Numeracy</i>	<i>15</i>
<i>Secondary Literacy and Numeracy.....</i>	<i>17</i>
A key milestone - high school completion	19
Learning and earning in regional Australia	22
Let's get technical – technical qualifications across regional Australia	25
Challenge of the brain drain - university qualifications across regional Australia	27
Workforce skill mix	29
Going back to school - adult learning rates in regional Australia.....	31
Conclusion.....	33
<i>End Notes.....</i>	<i>34</i>



Executive Summary

The concept of Human Capital describes *the skills and capacities that reside in people that are put to productive use*ⁱ. It represents the value of the skills, knowledge, talents and abilities of people and their potential to drive innovation and economic growth.

Although natural resources remain a competitive advantage for regions, not least those in Australia, over the past few decades, new technology has continually challenged and altered how we work and live. There are many predictions and projections about how different jobs will be in 2030.ⁱⁱ Whatever the future of work looks like, with each new disruption there is a change in the demands placed upon people.

More than ever it is the capabilities of people which are central to success. The World Economic Forum has even gone so far to say that 'a nation's human capital endowment ...can be a more important determinant of its long term economic success than virtually any other resource'.ⁱⁱⁱ

Developing a region's Human Capital is therefore critical to its future.

The capacity to respond to challenges such as those identified above is founded in the development of people in early childhood, through the formal education system, in the transition to work and in the continual development of skills once in the workforce.

This update of the Regional Australia Institute's [In]Sight Human Capital Index focusses on development through the lifecycle, firstly during early childhood, the acquisition of foundational skills of literacy and numeracy in primary and secondary school^{iv}, completion of high school, and attainment of further skills in technical and university-level qualifications.

This update to [In]Sight also provides a measure of the extent to which young people are learning or earning, and a measure of adult learning. Finally, for each region, an overall assessment of the skill level of the engaged workforce is provided.

As this report clearly shows, it is regional areas that exhibit lower measures of Human Capital development (see figure 1 over page).

- There are higher rates of children who are considered 'developmentally vulnerable' in regional areas. Analysis of the 2009, 2012 and 2015 **Early Childhood Development** Census shows that the rate is 2 percentage points higher across regional local government areas - 12.4 per cent compared to the metropolitan average of 10.4 per cent.
- The foundation for continued learning and higher-skilled employment, teaching of **literacy and numeracy** in schools is critical for development of Human Capital. The 2015 NAPLAN test results show clearly that outcomes remain significantly poorer in regional Australia.
- Rates of **high school completion** have increased tremendously over the past several decades, however the improvements have not been evenly distributed. Standards of schooling and parental characteristics are significant determinants of whether a child will



complete high school, however accessibility of high school campuses is an additional burden for regional families, particularly in smaller communities.

Dramatically low levels of '**learning or earning**' - participation in either education or the workforce for youth (15-24 years) – are a significant problem for many regional communities: 91 of the lowest 100 LGAs in terms of youth engagement are Heartland Regions.

Although youth disengagement may be a considerable problem in some communities, the problem of disengagement is not confined to school-leavers: there is substantial evidence that a large number of older Australians are dropping out of the workforce.

In regional areas it is likely that the decline in net workforce requirements for relatively low skilled roles within traditional rural industries (such as agriculture, mining and forestry) may be resulting in significant numbers of older workers becoming disengaged. For such people, opportunities for re-skilling are likely to be particularly limited in regional areas.

The problem may be exacerbated in regional areas where long-term decreases in the requirement for low-skilled labour in traditional rural industries, poor access to opportunities for re-skilling, and remoteness from alternative employment combine to result in disengagement of a significant number of older workers.

- There is a significant differential in achievement of **technical and university qualifications** between metropolitan and regional Australians.
- High school completion and levels of higher education have improved markedly since the 1970s, however once the initial post-school education is undertaken in late teens and early 20s, rates of **adult learning** across Australia are below 10 per cent for the over-30s. Rates of attendance are highest for those in the CBDs and decline from there by remoteness. Again, the accessibility of educational opportunities is likely a significant problem. Access to quality, industry-relevant training – potentially delivered online – may be important, yet ultimately the regional economies will also need to develop their opportunities for higher-skilled work to lift demand for adult learning as well.
- The summary **workforce skills** indicator provided within this release of [In]Sight reflects the structure of regional economies – their industry strengths and the labour requirements of those industries. Continued out-migration of young people creates a much sharper problem for regional development. This brain drain – the pattern of young people leaving to access post-school education in large metropolitan areas sometimes never to return – has become one of the biggest factors in the shortages of skills and knowledge across regional Australia^v. This spatial redistribution of Human Capital out of the regions creates an environment where it is increasingly difficult for regions to fully realise their potential.



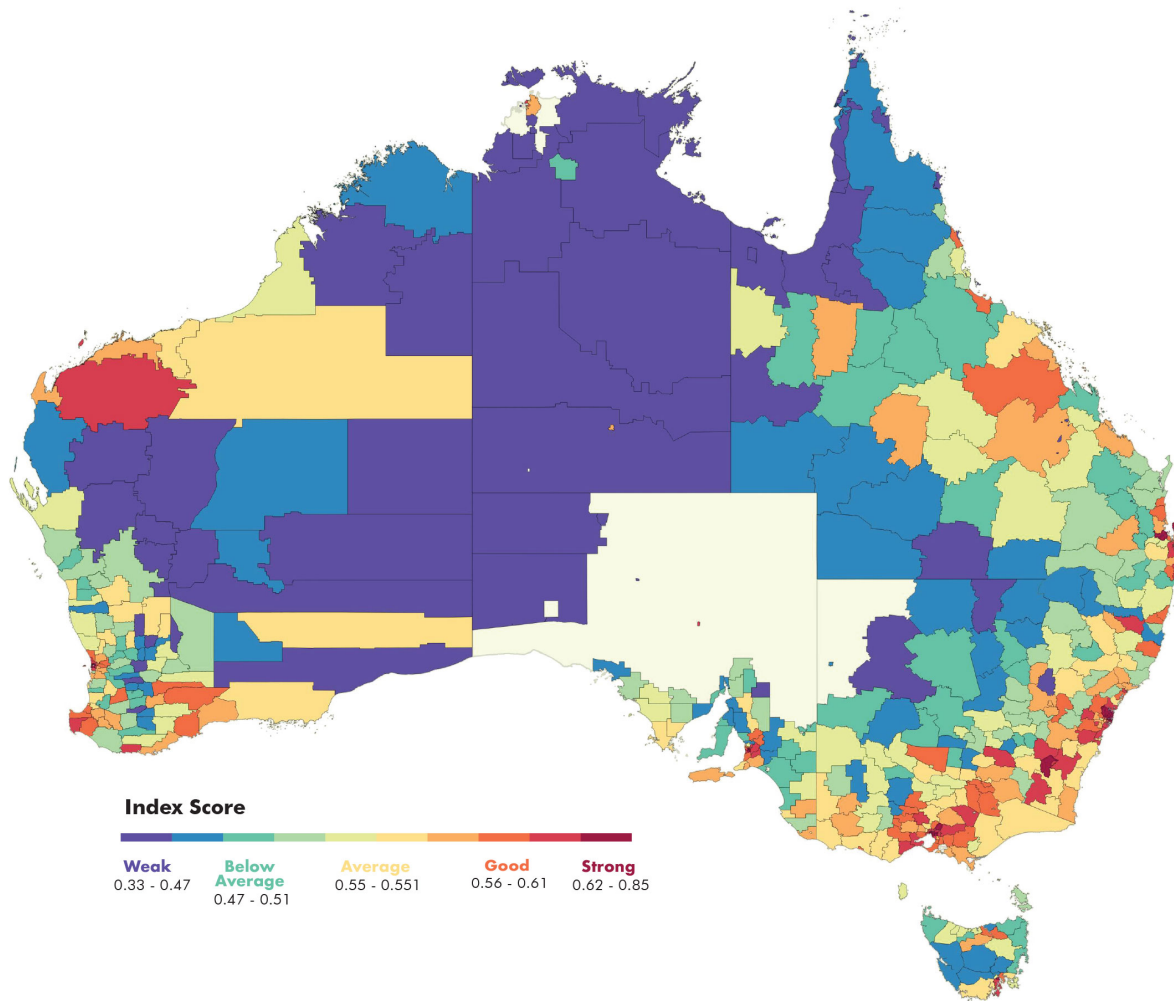


Figure 1: Overall Human Capital Index Performance by LGA*

*Blank areas denote unincorporated areas or unavailable source data



What's in the Index?

Human Capital represents the skills, knowledge and capacities which reside in people and are put to productive use^{vi}. The World Economic Forum has even gone so far to say that “a nation’s human capital endowment...can be a more important determinant of its long term economic success than virtually any other resource”^{vii}. As the future of work increasingly demands new skills and capabilities of people, this has never been more true.

Importantly, Human Capital is not a static concept. The Human Capital capacities in regions and communities across Australia are constantly changing, whether it be through changing skills mix from migration or new opportunities to learn and develop skills with emerging technologies. With this in mind, the updated index shifts focus to measures of the **development of Human Capital**.

The updated index also recognises that people develop their skills and capabilities differently at various stages of their lives (Figure 2). Therefore it takes a lifecycle approach, whereby each indicator relates to a specific stage during a person’s life.

A life-cycle approach to measuring Human Capital provides regions with a dynamic picture of their capabilities both now and looking ahead. For regional Australia, where regions often face specific challenges or opportunities, it also allows for more targeted and effective action.



Figure 2: Human Capital Stages of Lifelong Learning

Altogether, the [In]Sight – Human Capital Index is made up of 9 indicators outlined in Table 1.



Indicator name	Description	Measurement	Source
Early childhood development	% of children developmentally vulnerable on two or more domains.	% of children developmentally vulnerable on two or more domains, average of 2009, 2012 & 2015 Australian Early Development Census results. Children who score below the 10 th percentile (in the lowest 10 per cent) of the national AEDC population are classified as 'developmentally vulnerable'. These children demonstrate a much lower than average ability in the developmental competencies in that domain.	Australian Early Development Census, 2009, 2012, 2015
Primary school literacy & numeracy	Summary of nationally-consistent literacy and numeracy test results for primary school students	Average of 5 NAPLAN test scores (years 3 & 5)	Australian Curriculum Assessment Authority, Australian Government, 2016, RAI Calculations
Secondary school literacy & numeracy	Summary of nationally-consistent literacy and numeracy test results for secondary school students	Average of 5 NAPLAN test scores (years 5 & 7)	Australian Curriculum Assessment Authority, Australian Government, 2016, RAI Calculations
High school completion	% of population that completed year 12	% of population completing year 12 (persons usually resident over 15)	2011 Census of Population and Housing, ABS
Learning or earning	Young adults' participation in education or the workforce (15-24 years)	% of people aged 15-24 years engaged in education or employment (persons usually resident)	2011 Census of Population and Housing, ABS
Technical qualifications	Presence people with certificate and diploma level qualifications	% of population with certificate and diploma qualifications (persons usually resident)	2011 Census of Population and Housing, ABS
University qualifications	Presence of university level qualified people	% of population with university qualifications (persons usually resident)	2011 Census of Population and Housing, ABS
Workforce skills	A summary measure of the overall skill level of the workforce	Index of ANZSCO occupational skill level: a higher value indicates that the region has a workforce mix of higher-skilled occupational groups	2011 Census of Population and Housing, ABS, RAI calculations
Adult learning	Engagement in learning after entering the workforce (25-64 years)	% of population aged 25-64 attending an educational institution (persons usually resident)	2011 Census of Population and Housing, ABS

Table 1: [In]Sight's Updated Human Capital Indicators



Gap or chasm? Differences between regions and metropolitan areas

The most alarming finding from the updated index is the continued disparity between regional and metropolitan Australia. Across Australia, few regional LGAs perform as strongly as metro areas in terms of Human Capital measures. This deficit places regional Australia at a clear disadvantage to the rest of the country in terms of responding and adapting to structural changes reshaping the nation's economy.

Inequitable access to services as well as limited employment options for regional Australians have left them with a significant handicap. It's not only a shortage of formal education services, but also non-traditional forms of training like job readiness or upskilling programs. Most of all, it's poverty of opportunity. And the more remote you get, the wider the gap becomes.

Left unaddressed, this glaring disparity is likely to only grow, from a gap to a chasm.

Metropolitan areas not only occupy the top ten performing regions overall (Table 2), but also make up 83 of the top 100 regions. Only a few regional areas like Hobart (27), Queenscliffe (72), Armidale (84) and Roxby Downs (94) crack the top 100 performing regions.

LGA	State	Ranking
North Sydney	NSW	1
Sydney	NSW	2
Subiaco	WA	3
Port Phillip	VIC	4
Lane Cove	NSW	5
Stonnington	VIC	6
Willoughby	NSW	7
Melbourne	VIC	8
Mosman	NSW	9
Boroondara	VIC	10

Table 2: Top Performing LGAs Ranked by [In]Sight - Human Capital Index Scores

When each regional type is compared across the range of indicators (Table 3), it is clear that remoteness has a significant impact on the index measures. The further away from a major urban center, the more likely it is the region will exhibit lower measures of Human Capital development. (Figure 3)



Regional Type	Metro	Regional City	Connected Lifestyle Region	Industry & Service Hub	Heartlands
Early childhood development	10.4%	11.8%	10.8%	12.9%	14.4%
Primary school literacy & numeracy	466.2	448.7	443.2	432.8	423.0
Secondary school literacy & numeracy	567.1	548.7	543.1	535.9	524.7
High school completion	59.2%	43.3%	40.5%	36.1%	33.8%
Learning or earning	93.4%	91.9%	90.3%	89.4%	86.2%
Technical qualifications	21.7%	25.9%	24.9%	25.1%	22.4%
University qualifications	18.7%	10.8%	10.5%	8.3%	7.4%
Workforce Skills	0.59	0.49	0.49	0.45	0.48
Adult learning	7.2%	6.2%	5.1%	5.0%	3.9%

Table 3: [In]Sight – Human Capital Index Indicators by Regional Type (averages)

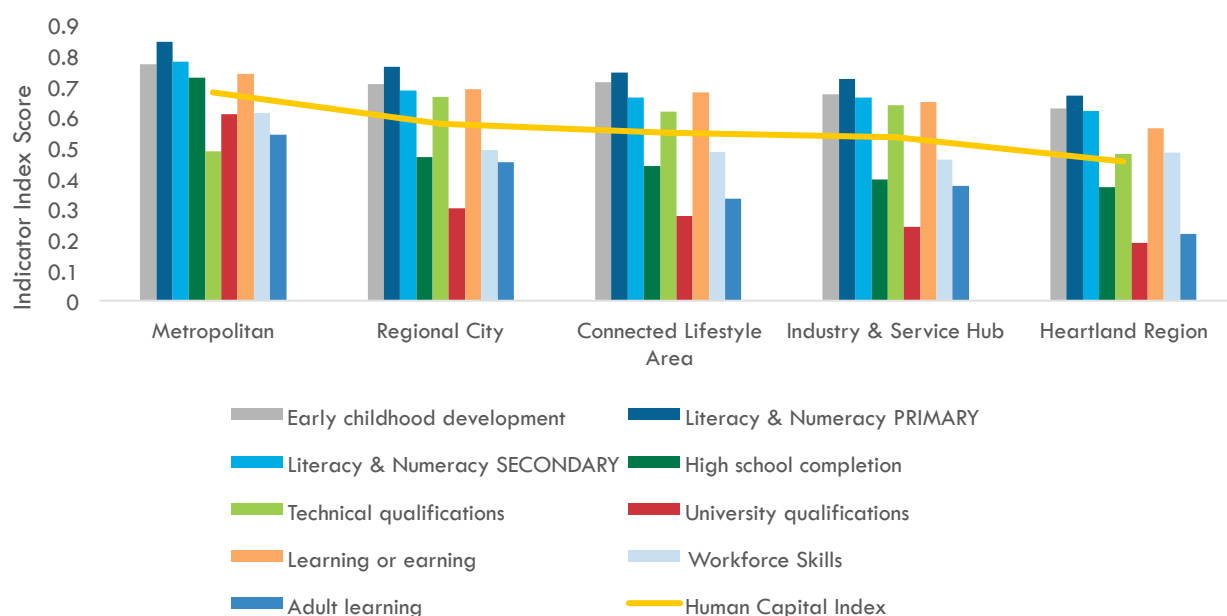


Figure 3: [In]Sight – Human Capital Index at a glance – Regional Types



Amongst regional LGAs Connected Lifestyle areas perform strongest. They boast the most LGAs within the top 100, as well as performing strongly overall with regions like Queenscliffe (72), Byron (80) and Yass Valley (90).

LGA	State	Ranking
Kiama	NSW	71
Queenscliffe	VIC	72
Surf Coast	VIC	79
Byron	NSW	80
Kingborough	TAS	81
Queanbeyan	NSW	85
Palerang	NSW	89
Yass Valley	NSW	90
Macedon Ranges	VIC	92
Wingecarribee	NSW	108

Table 4: Top Performing Connected Lifestyle Areas

Regional Cities tend to mirror metropolitan performance albeit at a lower level. While they perform strongly overall, only three regional cities crack the top 100. Regional cities also claim the best performing regional LGA in the overall index with Hobart coming in at 27th.

LGA	State	Ranking
Hobart	TAS	27
Newcastle	NSW	74
Darwin	NT	91
Wollongong	NSW	101
Wagga Wagga	NSW	103
Gold Coast	QLD	106
Gosford	NSW	107
Ballina	NSW	111
Greater Geelong	VIC	113
Albury	NSW	124

Table 5: Top Performing Regional Cities



Heartland Regions tend to be a diverse group, with a number of strong performers thanks to relatively small populations and highly concentrated skilled workers. Especially across Western Australia, regions like Denmark (95), Augusta-Margaret River (96) and Ashburton (112) all perform highly. However, the bottom end of the Index is dominated by Heartland Regions, with more remote regions linked with lower Human Capital measures.

LGA	State	Ranking
Snowy River	NSW	93
Roxby Downs	SA	94
Denmark	WA	95
Augusta-Margaret River	WA	96
Mansfield	VIC	105
Ashburton	WA	112
Jerramungup	WA	120
Lake Grace	WA	121
Conargo	NSW	139
Alpine	VIC	146

Table 6: Top Performing Heartland Regions



Of the four regional types, Industry & Service Hubs had the least LGAs in the top 100, with just Armidale Dumaresq able to crack into the top performers.

LGA	State	Ranking
Armidale Dumaresq	NSW	84
Warrnambool	VIC	144
Busselton	WA	149
Wangaratta	VIC	159
Alice Springs	NT	177
Dubbo	NSW	188
South Gippsland	VIC	189
Albany	WA	192
Bega Valley	NSW	196
Singleton	NSW	198

Table 7: Top Performing Industry & Service Hubs



Starting off on the right foot – early childhood development

The emotional, social and physical development of young children has a direct effect on progression through education and ultimately the adult they will become. Research has found that a positive early childhood experience creates both short and long term benefits to the individual and society in general. Children with positive early childhood experiences are more likely to achieve higher education attainment, demonstrate greater self-esteem and social development as well as develop fewer social and health problems^{viii}.

It is therefore central to the future wellbeing and productivity of the regions.

Heartland regions, particularly those in WA, dominate the top performing non-metro LGAs. Despite performing highly individually, Heartland Regions overall also have the highest rates of developmentally vulnerable children.

LGA	Regional Type	State
Williams	Heartland Region	WA
Jerramungup	Heartland Region	WA
Mansfield	Heartland Region	VIC
Boyup Brook	Heartland Region	WA
Ashburton	Heartland Region	WA
Kulin	Heartland Region	WA
Irwin	Heartland Region	WA
Nannup	Heartland Region	WA
Gloucester	Heartland Region	NSW
Narrandera	Heartland Region	NSW

Table 8: Top Performing non-metro regions in early childhood development

When compared to metropolitan areas, regional LGAs on average achieve much lower outcomes. On average, 14.1 per cent of children in regional areas are considered developmentally vulnerable. On the other hand, metropolitan areas average just 9.1 per cent.

In particular, this gap becomes wider the more remote the region.



LGA	[In]Sight Indicator
Heartland Region	14.4%
Industry & Service Hub	12.9%
Regional City	11.8%
Connected Lifestyle Area	10.8%
Metropolitan	10.4%
Australia	11.2%

Table 9: Early Childhood Development Average by Regional Type

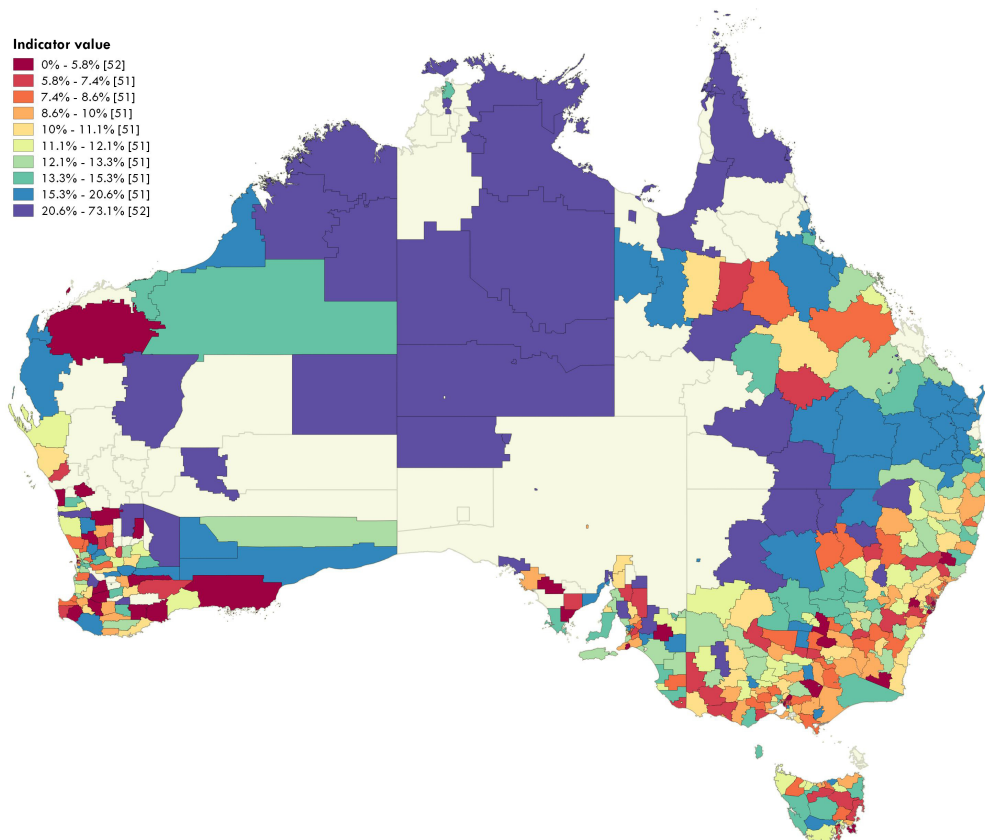


Figure 4: Early Childhood Development by LGA*



Although the Australian Institute of Health and Welfare emphasises that in the last few years “across all population groups, the proportion of children who were developmentally vulnerable fell”, regional children are disproportionately represented^x. For regions with low scores in this indicator, improving childhood development should be a serious priority. These early years have a profound impact on their future cognitive, social, emotional and physical development^x.



Skills for life – primary and secondary literacy and numeracy

Literacy and numeracy skills are core building blocks for the development of young people. The Productivity Commission has described literacy and numeracy skills as central to both social and economic participation, reporting that higher literacy and numeracy skills ‘are linked to better labour market outcomes’^{xi}.

As the demand for higher skilled workers increases, educational outcomes will become more and more important. Literacy and numeracy skills aren’t just important in terms of developing foundational skills but also in keeping kids in education for longer. Higher levels of literacy and numeracy are associated with higher rates of student retention to the completion of secondary education.

Primary Literacy and Numeracy

Again, Heartland regions are amongst the top performers of non-metro LGAs in Primary Literacy and Numeracy levels.

LGA	Regional Type	State
Hobart	Regional City	TAS
Williams	Heartland Region	WA
Narembeen	Heartland Region	WA
Victoria Plains	Heartland Region	WA
Kimba SA	Heartland Region	SA
Wudinna	Heartland Region	SA
Queenscliffe	Connected Lifestyle Area	VIC
Buloke	Heartland Region	VIC
Chapman Valley	Heartland Region	WA
Byron	Connected Lifestyle Area	NSW

Table 10: Top Performing non-metro regions in Primary Literacy and Numeracy

NAPLAN results however, demonstrate that regional areas perform significantly lower compared to metro regions.



LGAs	Year 3 value (avg)	Year 5 value (avg)	Primary School Literacy & Numeracy (avg)
Metropolitan	427.8	504.6	466.2
Regional	401.5	480.1	440.8
Australia	417.6	495.1	456.4

Table 11: Primary School Literacy & Numeracy, Regional / Metropolitan

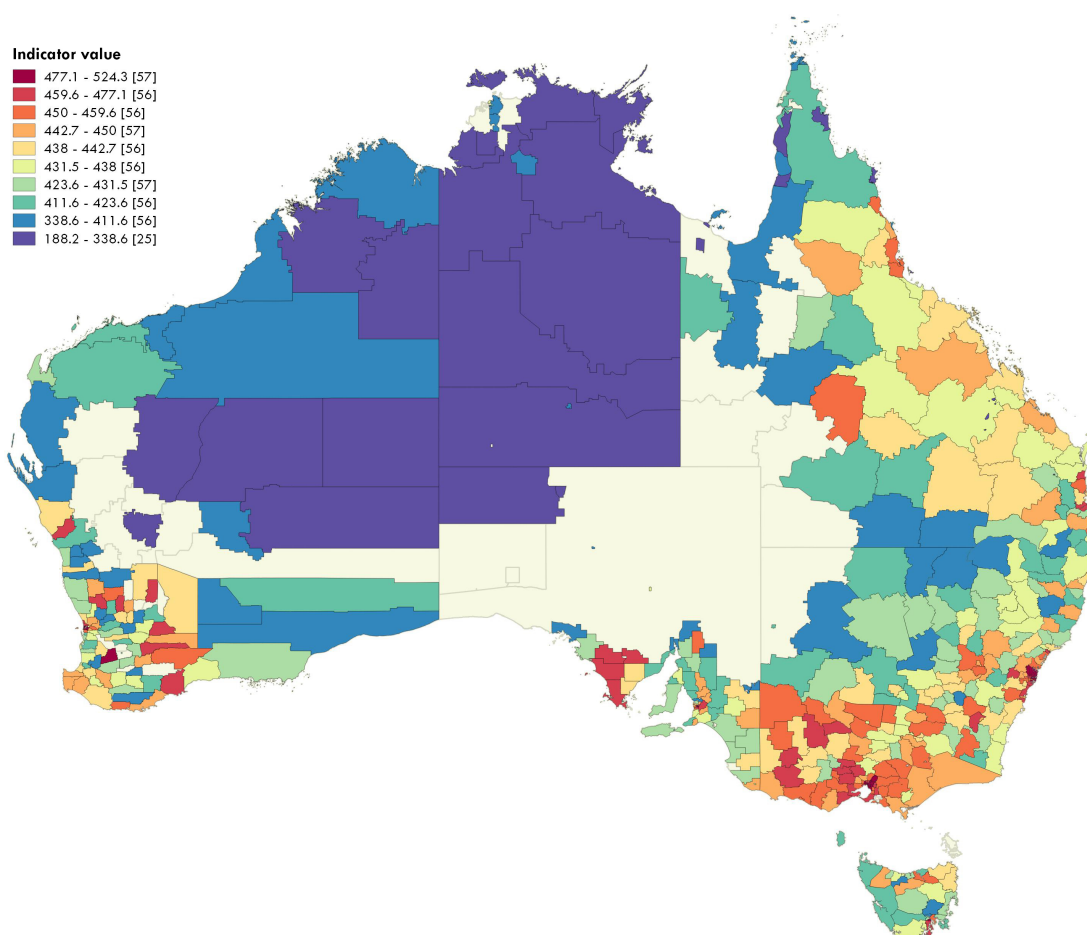


Figure 5: Primary School Literacy & Numeracy by LGA*



Secondary Literacy and Numeracy

The story is similar for Secondary Literacy and Numeracy levels, with some of the Heartland regions in particular amongst the top regional performers. However, on average regional Australia performs below the metro area levels.

LGA	Regional Type	State
Murray	Heartland Region	NSW
Grant	Heartland Region	SA
Snowy River	Heartland Region	NSW
Orroroo/Carrieton	Heartland Region	SA
Mansfield	Heartland Region	VIC
Kingborough	Connected Lifestyle Area	TAS
Newcastle	Regional City	NSW
Hobart	Regional City	TAS
Augusta-Margaret River	Heartland Region	WA
Wingecarribee	Connected Lifestyle Area	NSW

Table 12: Top Performing non-metro regions in Secondary Literacy and Numeracy

LGA's	Year 7 (avg)	Year 9 (avg)	Secondary School Literacy & Numeracy
Metropolitan	548.4	585.8	567.1
Regional	523.6	560.6	542.1
Australia	538.7	576.1	557.4

Table 13: Secondary School Literacy & Numeracy - Regional / Metropolitan



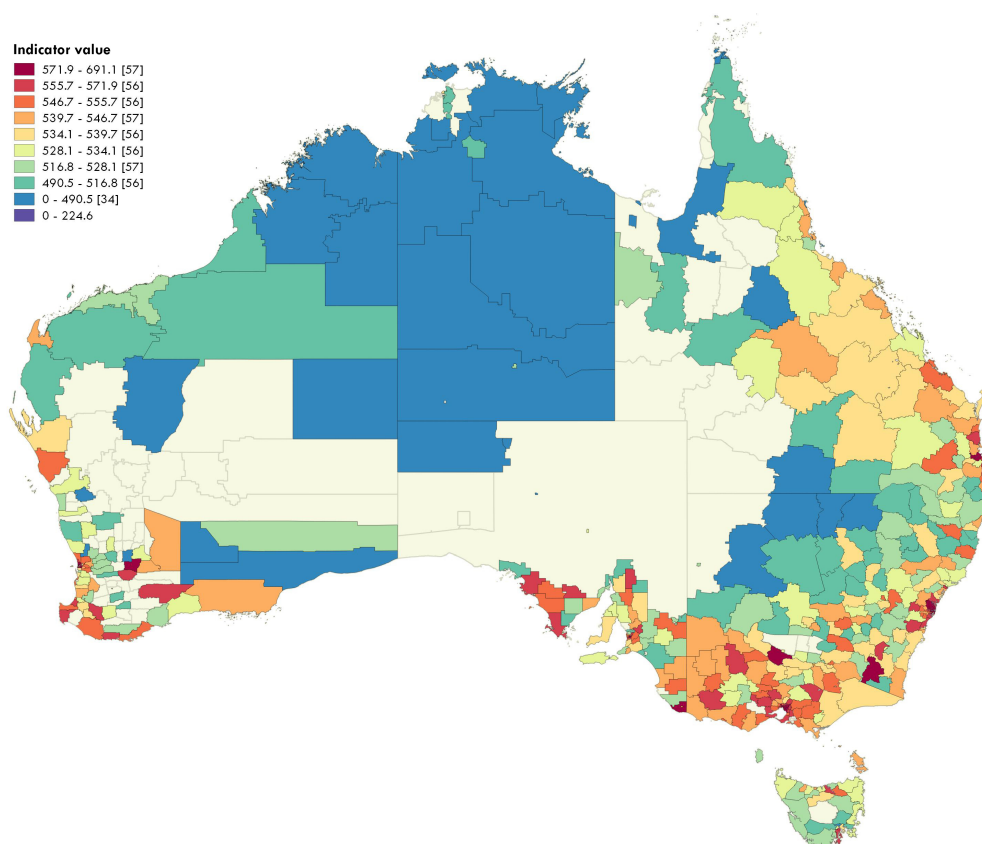


Figure 6: Secondary School Literacy & Numeracy by LGA*

These two indicators paint a stark picture for primary and secondary education outcomes for regional Australia. Research conducted by the Grattan Institute has demonstrated that the gap between city and country educational outcomes has only increased in recent years.

Specifically, students in regional areas “make up to two years less progress than students in inner city areas between year 3 and 9”^{xii}.

For regions with particularly low scores on literacy and numeracy, actions need to be taken to better engage students and more fully develop these key foundational skills if they are to be improved.



A key milestone - high school completion

Completing high school to Year 12 is considered a key influence in people pursuing higher education opportunities, increasing their earning capacity and employment outcomes across the course of their lives. Research estimates that for every additional year of schooling, earning capacity is raised by 5-10 per cent^{xiii}.

Within Australia, Year 12 attainment is regarded as a key milestone in the development of an individual's skills and knowledge^{xiv}. Year 12 completion is critical not only for the foundational skills including reading, writing, comprehension and numeracy, but for developing critical thinking and creativity – attributes more essential than ever.

Connected Lifestyle Areas are amongst the most prominent regional performers in terms of high school completion rates – regions like Palarang, Surf Coast, Yass Valley and Byron all place in the top ten.

LGA	Regional Type	State
Hobart	Regional City	TAS
Palarang	Connected Lifestyle Area	NSW
Queenscliffe	Connected Lifestyle Area	VIC
Armidale Dumaresq	Industry & Service Hub	NSW
Queanbeyan	Connected Lifestyle Area	NSW
Dumbleyung	Heartland Region	WA
Surf Coast	Connected Lifestyle Area	VIC
Yass Valley	Connected Lifestyle Area	NSW
Byron	Connected Lifestyle Area	NSW
Kingborough	Connected Lifestyle Area	TAS

Table 14: Top Performing non-metro regions in High School Completion

Over the past several decades the rate of completion of Year 12 has been steadily increasing (as shown by figure 7 below), however high school completion rates remain relatively lower in regional Australia. Looking at Year 12 attainment by age cohort shows (Figure 7 below) shows how much more important this milestone has become in recent decades. For older Australian, Year 10 was the most common point to finish schooling, and so for people over 65 under one third have completed Year 12. The big change took place in the mid 1980s, and Year 12 completion rates jump from 45-50 per cent for people over 40 in 2011 to over 60 per cent for those under 40 at that time.



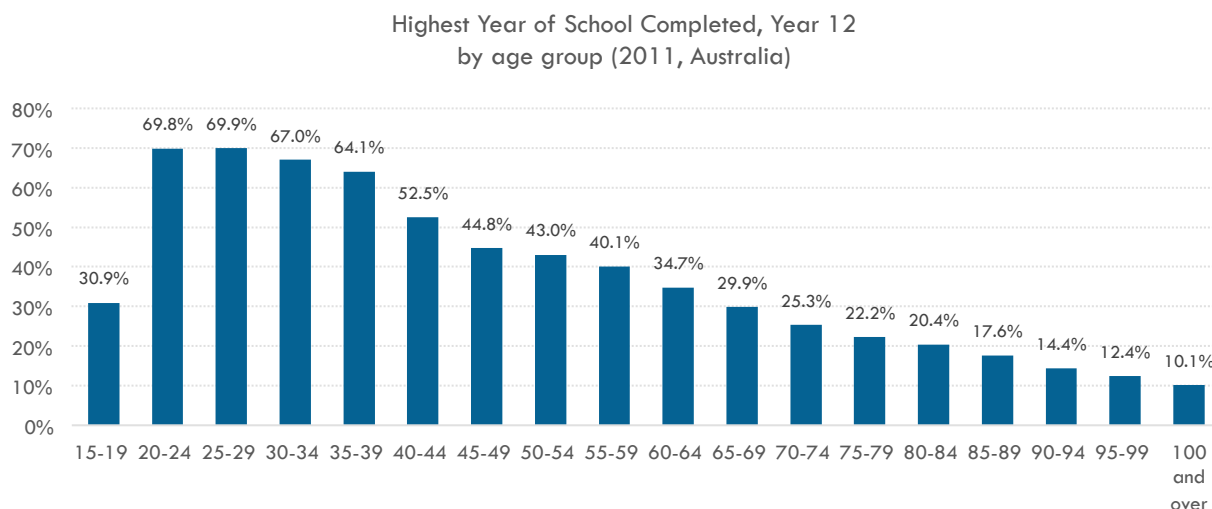


Figure 7: Year 12 completion by age group, 2011 Census of Population & Housing, ABS

LGA's	Year 12 completion (persons 15 years & over avg)
Metropolitan	59.2%
Regional	40.2%
Australia	52.0%

Table 15: Year 12 completion – Metropolitan / Regional Local Government Areas

Completing high school is a key milestone for young Australians, and it plays a major role in Human Capital development. For regions where high school completion is low, communities and regions will need to take a holistic approach that focuses on creating a supportive school culture as well as student focused initiatives that address specific challenges unique to the area^{xv}.



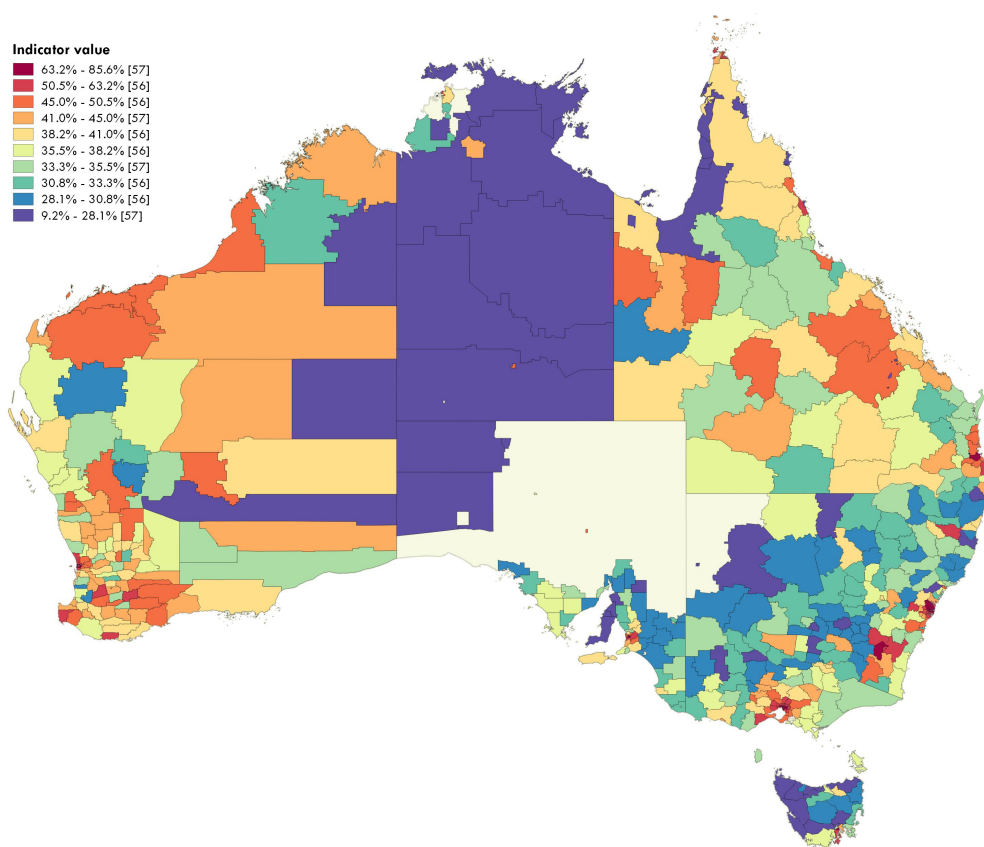


Figure 8: High School Completion by LGA*

Learning and earning in regional Australia

Today, participation in secondary school and post-school education is increasingly common for young Australians. The Year 12 apparent retention rate has increased over the past two decades, and the vast majority of young people now participate in education or training^{xvi}.

Young people often have complex combinations of work and study arrangements. In recent years 'the pathways from education to work, and from the parental home to independent living, have become more varied and complex for young people, and often extend over longer periods'.^{xvii} In the path to employment, young people are disproportionately disadvantaged by labour market downturns.

The most successful paths for youth tend to involve both the completion of Year 12 plus further study, based on a range of outcome indicators at age 25 such as full-time engagement (in work and/or study), full-time employment, financial wellbeing, job status, weekly earnings and satisfaction with life and work.^{xviii}

Conversely, young people who lack engagement with the workforce or study 'are at greater risk of unemployment, cycles of low pay and employment insecurity in the longer term'.^{xix} According to Research from the Brotherhood of St Laurence, young people who are unemployed and living off the dole have poorer health later in life and are three times more likely to be unemployed after the age of 25^{xx}.

In terms of Learning or Earning measures, some remote Heartland regions make up the most places in the top ten performing regional areas. Places like Conargo and Etheridge, as well as Connected Lifestyle Areas like Queenscliffe and Kiama all perform strongly.

LGA	Regional Type	State
Queenscliffe	Connected Lifestyle Area	VIC
Conargo	Heartland Region	NSW
Robe	Heartland Region	SA
Quilpie	Heartland Region	QLD
Kimba	Heartland Region	SA
Etheridge	Heartland Region	QLD
Kiama	Connected Lifestyle Area	NSW
Snowy River	Heartland Region	NSW
Hobart	Regional City	TAS
Cuballing	Heartland Region	WA

Table 16: Top Performing non-metro regions in Learning or Earning



However, there is a disproportionate number of young people (aged 15-24 years) not engaged in learning or earning in regional Australia as a whole – almost 100,000 (9.5 per cent of the total) compared to 121,526 (6.6 per cent of the total) in metro areas. Table 17 below shows the proportion of 15-24 year olds engaged in employment or study.

LGA's	Not in Education and Training or the Labour Force	Total Persons 15-24 years	Learning or Earning (total %)
Metropolitan	121,526	1,835,343	93.4%
Regional	97,114	1,021,905	90.5%
Australia	218,640	2,857,248	92.3%

Table 17: Learning or Earning - Metropolitan / Regional LGAs

Learning or earning levels tend to be higher in the more urbanised regions and much lower in the more sparsely populated more remote regions. The differing rates relate to the availability of educational services and diverse employment opportunities.

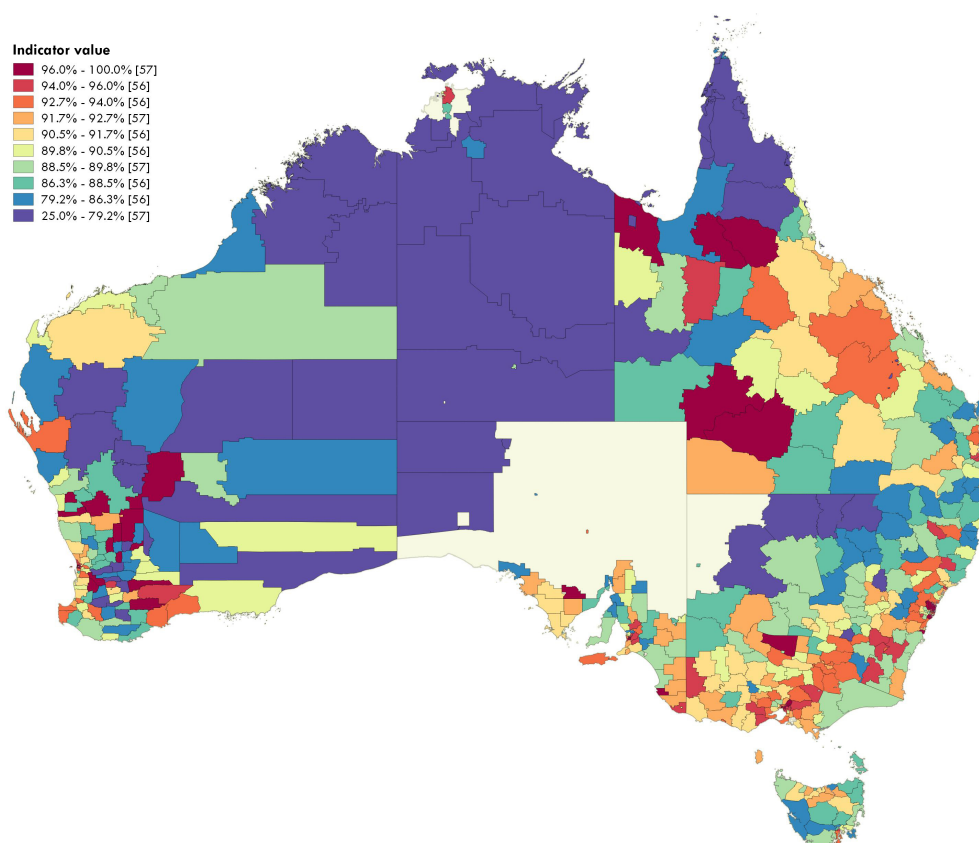


Figure 9: Learning or Earning by LGA*



Low levels of people engaged in either education, training or employment, moreover is not limited to young adults alone. There is a notable upward trend in the number of (predominantly low skilled) males who are dropping out of the workforce entirely^{xxi} as they approach retirement.

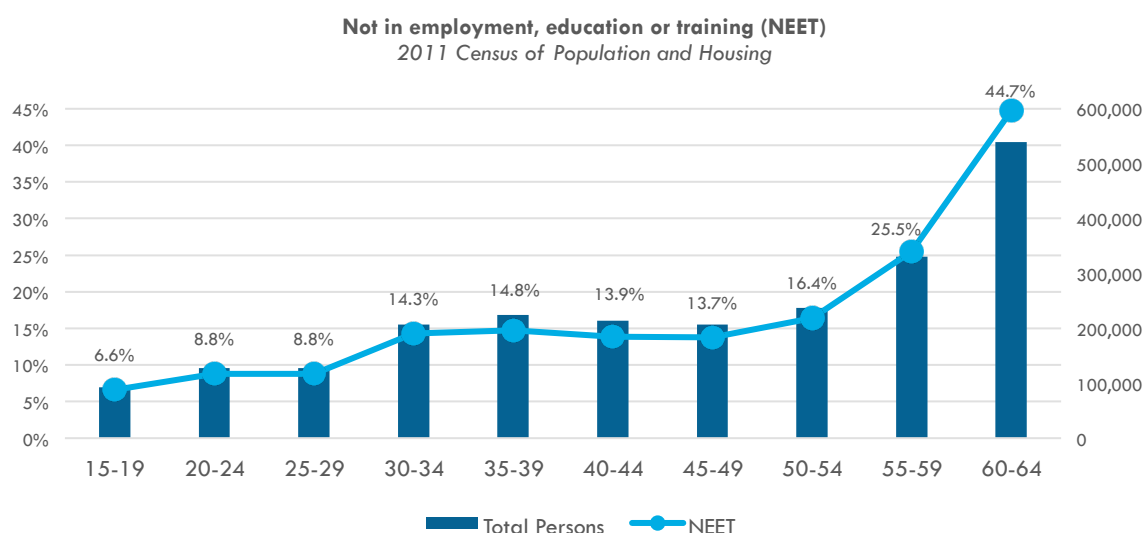


Figure 10: Learning or Earning – Not in education, training or employment by age group (NEET)

This is an important finding as it illustrates a growing cohort of workers displaced from structural economic changes. As the nature of work evolves, with many low skilled, manual occupations increasingly at risk of automation, a greater number of people are at risk of being displaced.

Moreover for young adults neither in the workforce nor education, this issue is just as much about availability of opportunities as anything else.

This means that for regions with high rates of both adults and youth not engaged in learning or earning, strategies should be put in place that keep people engaged in the region no matter their age.



Let's get technical – technical qualifications across regional Australia

Training and skills development, whether in schools or elsewhere, is an essential complement to general education in equipping people to grasp opportunities in the world of work.

Regional areas need a knowledgeable and skilled workforce to grow. Higher rates of technical qualifications are common in regional Australia reflecting the importance of primary industries to many regional economies.

Unsurprisingly, some Heartland regions and Industry & Service hubs share the majority of top performing regional areas. Regions like Karratha, Roxby Downs, and Port Hedland all feature as top performing places with high proportions of trade skilled people (see Table 18).

LGA	Regional Type	State
Wiluna	Heartland Region	WA
Yalgoo	Heartland Region	WA
Karratha	Industry & Service Hub	WA
Roxby Downs	Heartland Region	SA
Exmouth	Heartland Region	WA
Dardanup	Heartland Region	WA
Port Hedland	Industry & Service Hub	WA
Leonora	Heartland Region	WA
Wiluna	Heartland Region	WA
Yalgoo	Heartland Region	WA

Table 18: Top Performing non-metro regions in Technical Qualifications

Technical qualifications offer structured learning of key workplace-related skills, however, the Foundation for Young Australians has warned that in a world where the future of work – and the types jobs available in it – is increasingly uncertain, “we need to better understand whether the types of skills young people are developing match the needs of employers”^{xix}.



LGAs	[In]Sight Technical Qualifications Indicator
Metropolitan	21.7%
Regional	25.0%
Australia	23.0%

Table 19: Technical Qualifications – Metropolitan / Regional Local Government Areas

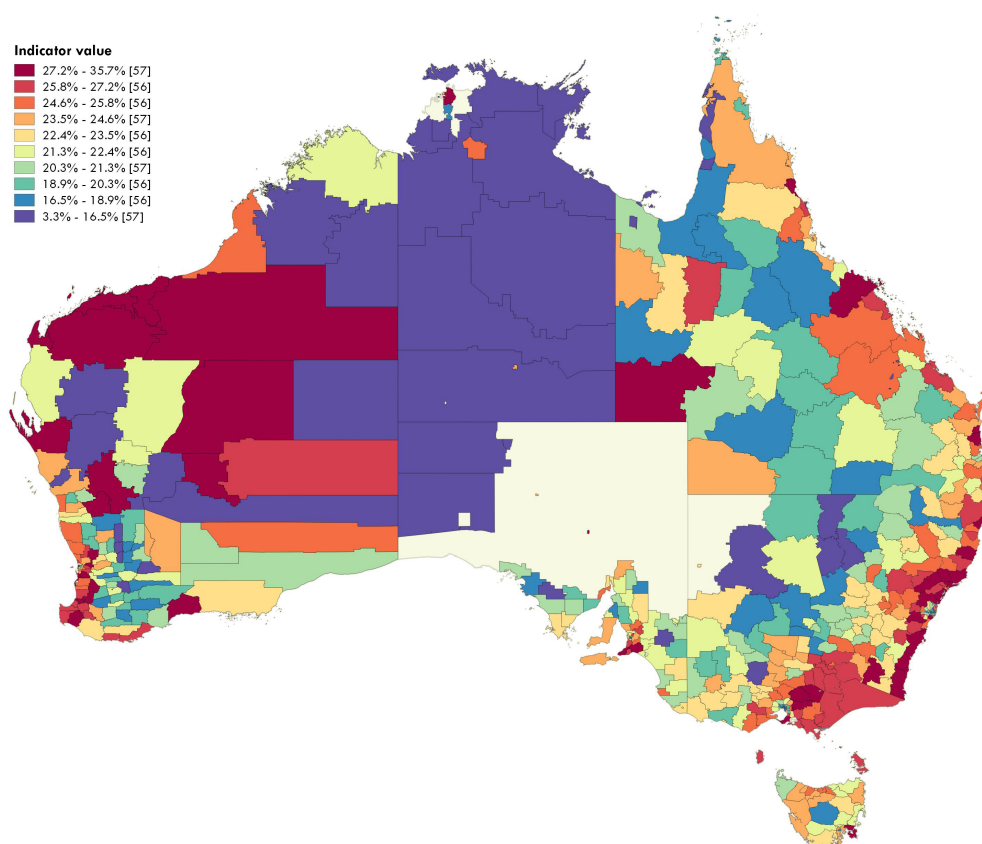


Figure 11: Technical Qualifications by LGA*

Regional Australia demonstrates a clear strength in technical qualifications. As the economy evolves, communities will need to leverage this and build on a strong skill base to keep their regions competitive.



Challenge of the brain drain - university qualifications across regional Australia

University qualifications are generally less prevalent in regional Australia compared to technical qualifications. However there are important clusters of expertise. Amongst regional LGAs, places like Hobart and Queenscliffe have the highest levels of University qualifications (30.3 per cent and 23.7 per cent respectively). These figures are significantly higher than the 9.6 per cent average across all regional LGAs.

These findings are often compounded by the fact that a high proportion of regional youth often migrate away from regional areas to metropolitan ones to gain university qualifications. On the other hand, regions with the presence of tertiary education provider often score well such as Hobart.

Increasing the demand for university educated workers should be an important goal for many regional areas to provide greater flexibility and capacity in the local economy.

Connected Lifestyle areas close to metropolitan and regional cities perform the strongest out of all regional LGAs. Places like Surf Coast, Darwin and Byron are among the top performers.

LGA	Regional Type	State
Hobart	Regional City	TAS
Queenscliffe	Connected Lifestyle Area	VIC
Palerang	Connected Lifestyle Area	NSW
Kingborough	Connected Lifestyle Area	TAS
Surf Coast	Connected Lifestyle Area	VIC
Armidale Dumaresq	Industry & Service Hub	NSW
Wagait	Heartland Region	NT
Darwin	Regional City	NT
Kiama	Connected Lifestyle Area	NSW
Byron	Connected Lifestyle Area	NSW

Table 20: Top Performing non-metro regions in University Qualifications



LGAs	[In]Sight University Qualifications Indicator
Metropolitan	18.7%
Regional	9.6%
Australia	15.2%

Table 21: University Qualifications – Metropolitan / Regional Local Government Areas

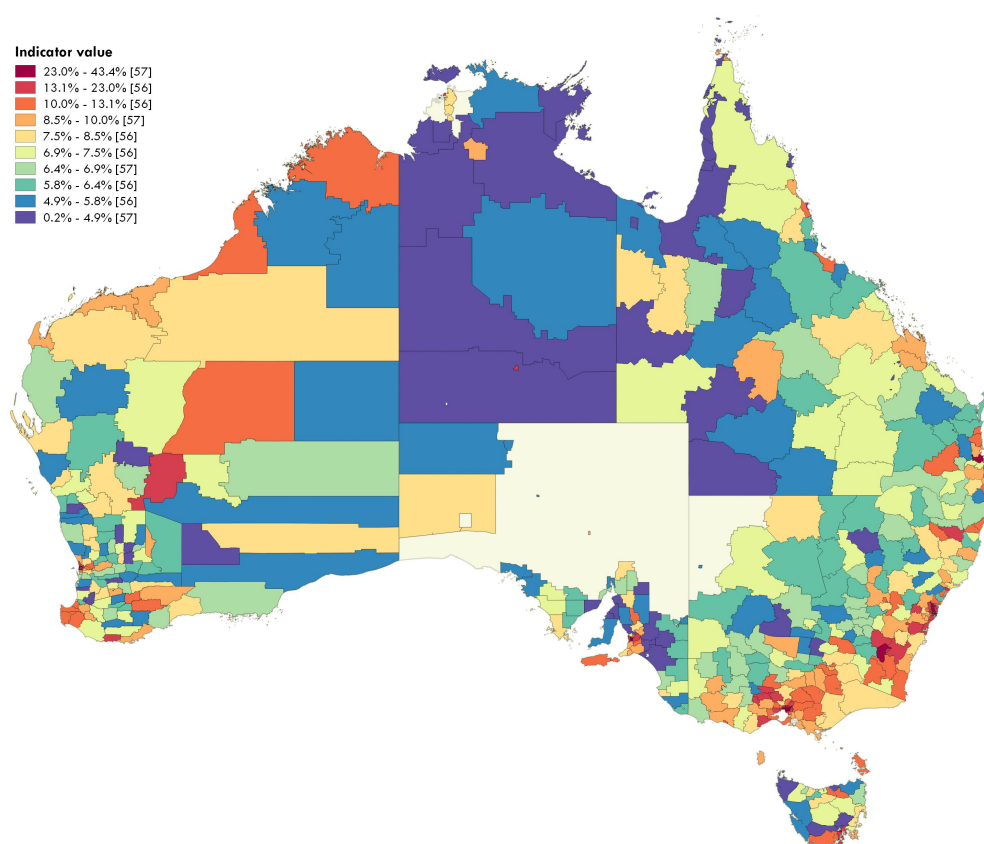


Figure 12: University Qualifications by LGA*

Workforce skill mix

This revision of [In]Sight provides a summary value representing the overall skill level of the workforce for each local government and region across Australia. [In]Sight's Workforce Skills indicator value draws upon the Australian-New Zealand Standard Classification of Occupations (ANZSCO).

ANZSCO has several top-level classifications, in descending order of the level of skills required for performance of the occupation: (1) Managers, (2) Professionals, (3) Technicians & Trades Workers, (4) Community & Personal Service Workers, (5) Clerical and Administrative Workers, (6) Sales Workers, (7) Machinery Operators and Drivers, and (8) Labourers.

Across regional Australia, some Heartland regions, especially those in Western Australia, dominate the top performers. This is likely to be heavily influenced by the mining boom, with a high concentration of skilled workers among relatively small local populations. Places like Lake Grace, West Arthur and Mukinbudin were among the top regional performers. These places also have small populations so a small number of qualified people can also drive a high indicator value.

LGA	Regional Type	State
Mount Marshall	Heartland Region	WA
Lake Grace	Heartland Region	WA
Dumbleyung	Heartland Region	WA
Mukinbudin	Heartland Region	WA
West Arthur	Heartland Region	WA
Kulin	Heartland Region	WA
Jerramungup	Heartland Region	WA
Conargo	Heartland Region	NSW
Williams	Heartland Region	WA
Dalwallinu	Heartland Region	WA

Table 22: Top Performing non-metro regions in Workforce Skill



LGA's	[In]Sight Workforce Skill Level Index (range 0 low, 1 high)
Metropolitan	0.59
Regional	0.48
Australia	0.55

Table 23: Workforce skill – Metropolitan / Regional Local Government Areas

A low workforce skill level is not necessarily a negative in the short term, as an efficient economy requires a range of skill levels to function effectively. In the long term, however, the future of work will be characterised by the demand for higher skills.

CSIRO research has highlighted a set of megatrends likely to impact on the job market over the next twenty years. Trends like transitioning to a knowledge based economy with more service sector jobs as well as increased automation of low skilled, repetitive tasks, means that the bar for skills is likely to be raised over the coming years.

For regions with particularly low overall workforce skill levels, improving skill levels and equipping communities to adapt to the changing requirements of work should be a priority.

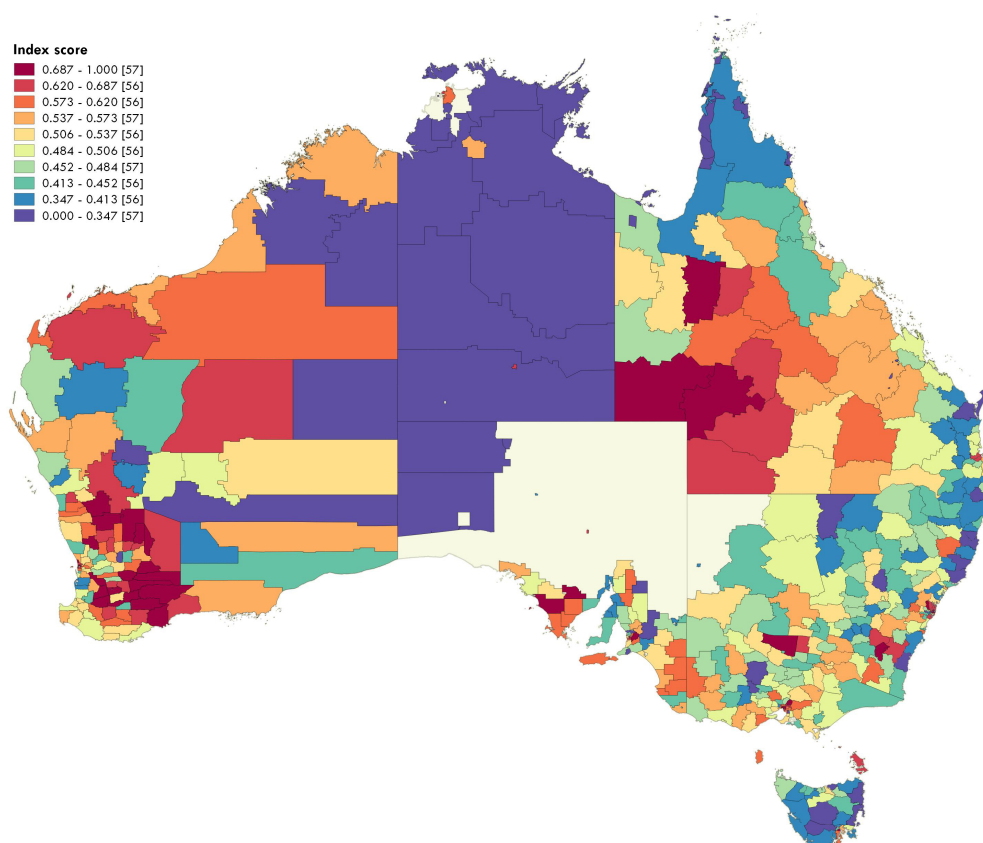


Figure 13: Workforce Skill Level by LGA*



Going back to school - adult learning rates in regional Australia

As these changing demands for skills emerge, workers will be under pressure to continually learn and adapt to evolving working environments. Especially as technology further reshapes business needs, individuals and communities will need to be engaged in developing new and higher skillsets^{xxiii}. Adult learning rates are a key indicator for understanding which regions and communities are active in this area.

LGA	Regional Type	State
Armidale Dumaresq	Industry & Service Hub	NSW
Hobart	Regional City	TAS
Newcastle	Regional City	NSW
Lismore	Regional City	NSW
Wagga Wagga	Regional City	NSW
Byron NSW	Connected Lifestyle Area	NSW
Launceston	Regional City	TAS
Wodonga	Regional City	VIC
Darwin	Regional City	NT
Queanbeyan	Connected Lifestyle Area	NSW

Table 24: Top Performing non-metro areas in Adult Learning

LGA	[In]Sight Adult Learning indicator
Metropolitan	7.2%
Regional	5.5%
Australia	6.6%

Table 25: Adult Learning – Metropolitan / Regional Local Government Areas

Across Australia, attendance at an educational institution after most Australians enter the workforce (aged 25-64 years) are significantly lower in regional areas than in metropolitan areas.

Levels of engagement with learning after the age of 25 essentially reflect the lower availability of these services as remoteness increases, as clearly demonstrated in the map below (Figure 15).



Attendance at an educational institution drops off dramatically after initial post-school education (see figure 14 below) such that less than 10 per cent of people over the age of 30 attend an educational institution.

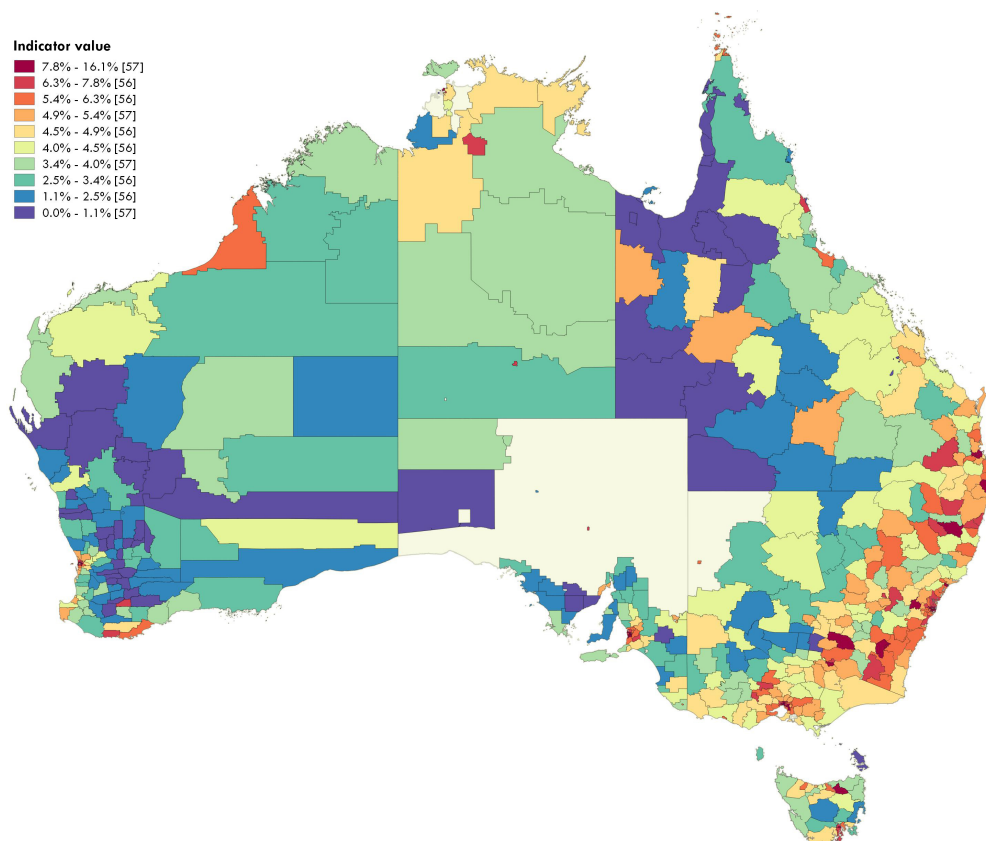


Figure 14: Adult Learning by LGA*

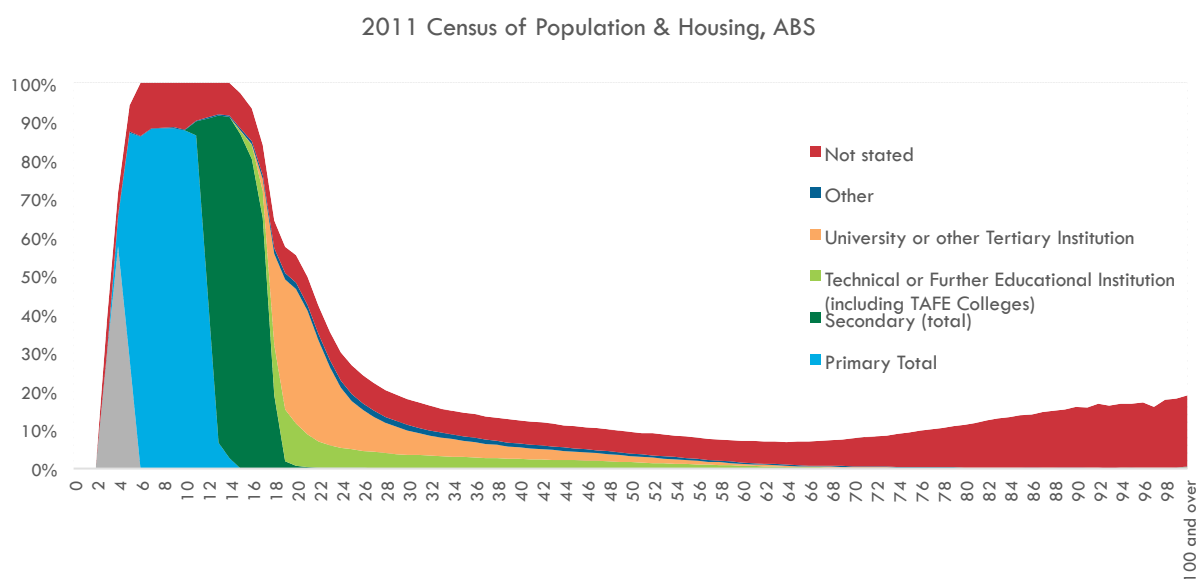


Figure 15: Type of Educational Institution Attending by Age



Conclusion

By shifting focus to a lifelong learning approach to the analysis and development of Human Capital, regions can create significant benefits through targeted intervention.

While predictions about the future of work can vary greatly, it is certain that regions (and the people in them) will need to develop a lifelong learning culture if they are to secure the new skills and knowledge required for ongoing social and economic prosperity. Developing a culture in which people of all ages have opportunities to learn will be vital.

If this report has sparked your thinking, find out about the approaches taken in Melton, Hume and Gwydir to build a lifelong learning culture in the RAI's Human Capital Talking Point or head to the [\[In\]Sight Human Capital Index](#) online to see how your region performs.



End Notes

ⁱ <http://reports.weforum.org/human-capital-report-2015/>

ⁱⁱ While the projections and predictions vary, there are some common factors which help us to imagine what the jobs mix of the future will look like. See, for example, Hajkowicz SA, Reeson A, Rudd L, Bratanova A, Hodggers L, Mason C, Boughen N (2016) *Tomorrow's Digitally Enabled Workforce: Megatrends and scenarios for jobs and employment in Australia over the coming twenty years*. CSIRO, Brisbane.

ⁱⁱⁱ *ibid*

^{iv} Recent years have seen the introduction of nationally-consistent frameworks for assessing the progress of Australia's children through their early developmental and schooling years. Through the instruments of the Australian Early Development Census and the National Assessment Program – Literacy and Numeracy, the progress of development of Australia's next generation of Human Capital can be compared.

^v Garlick S., Regional Growth, Enterprising Human Capital and Community Engagement, Institute for Sustainability, Health and Regional Engagement (iSHaRE), University of the Sunshine Coast, Queensland, Australia. Accessed at: <https://publications.qld.gov.au/storage/f/2014-02-06T06%3A58%3A01.599Z/garlick-steve-final.pdf>.

^{vi} <http://reports.weforum.org/human-capital-report-2015/>

^{vii} <http://reports.weforum.org/human-capital-report-2015/>

^{viii} <https://www.aedc.gov.au/about-the-aedc/how-the-aedc-assists-policy-reform>

^{ix} <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129552264>

^x <https://www.aedc.gov.au/about-the-aedc/how-the-aedc-assists-policy-reform>

^{xi} Productivity Commission 2014. Literacy and numeracy skills and labour market outcomes in Australia. Productivity Commission staff working paper. Canberra: Productivity Commission, page 44. Accessed 24 August, 2016 at: <http://www.pc.gov.au/research/supporting/literacy-numeracy-skills/literacy-numeracy-skills.pdf>

^{xii} <http://grattan.edu.au/wp-content/uploads/2016/03/937-Widening-gaps.pdf>

^{xiii} <https://www.weforum.org/agenda/2015/03/whats-the-value-of-a-college-education/>

^{xiv} *Australian Social Trends*, March 2011, 4102.0, ABS, March 2011., <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features40Mar+2011>

^{xv}

<http://www.education.vic.gov.au/Documents/school/principals/participation/effectivestratreport.pdf>

^{xvi} Participation of youth aged 15-24 in education and training, by age and qualification, number and per cent, 2014, ABS 2014; AIHW analysis of ABS 2015.

^{xvii} <http://www.aihw.gov.au/australias-welfare/2015/young-people/>

^{xviii} Karmel T & Liu S 2011. *Which paths work for which young people?* LSAY research report 57. Adelaide: NCVER.



^{xi} The ABS (2010b), citing Pech, McNevin and Nelms (2009)

^{xx} *Barely Working – Young and Underemployed in Australia*, Brotherhood of St Laurence (2014)

^{xxi} Hajkowicz SA, Reeson A, Rudd L, Bratanova A, Hodggers L, Mason C, Boughen N (2016), *op.cit*, page 92.

^{xxii} *How Young People are Faring 2013 – the national report on the learning and earning of young Australians*, John Stanwisk, Tham Lu, Tom Karmel and Bruidget Wibrow, Foundation for Young Australians, Melbourne, 2013, page 27. Accessed at https://cica.org.au/wp-content/uploads/FYA_HYPAF-2013_Digital1.pdf

^{xxiii} <https://www.weforum.org/agenda/2016/01/what-is-the-future-of-work/>

