**YOUNG NETWORKS FOUNDATION (YNF) PROJECT**

**DUE DILIGENCE REPORT**

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# Executive Summary

## Internet, Mobile & Social Media Usage

Internet, mobile phone and social media technology usage in Australia continues to grow in terms of the proportion of users, frequency of use, and the diversity of activities carried out online.

* In 2008-09, 72% of households in Australia had home internet access, and 78% of households had access to a computer.
* In the 12 months prior to April 2009, an estimated 2.2 million (79%) children accessed the Internet either during school hours or outside of school hours.
* At the end of December 2009, there were 9.1 million active internet subscribers in Australia.
* More than 8 in 10 Australians check their email at least once a day.
* In 2009, 76% of 12-14 year olds in Australia had their own mobile phone.
* The internet has increased the time people spend communicating with friends and family.
* The internet is considered by many users as the most important source of information, outweighing other traditional sources of information such as news media.

## National Policy Agendas

* Digital Economy
* Digital Education Revolution
* National Broadband Network

|  |  |
| --- | --- |
| Opportunities for IndustryNational Broadband NetworkIndustry innovationResearch & development Job & service designSustainability & competitivenessCommercialisation & new enterprise Knowledge co-creation & sharing Workforce development | Opportunities for EducationNational Broadband NetworkDigital literaciesKnowledge co-creation & sharingLearning environmentsLearning design Digital & Social Inclusion Education futures Digital economy career & learning pathways |
| Opportunities for CommunityNational Broadband Network User-based design Collaboration platformsKnowledge co-creation & sharingCommunity services workforce developmentJob & service design New forms of volunteering Digital & social inclusionSocial innovation & enterprise | **Opportunities for Parents**National Broadband NetworkDeveloping digital literaciesSupporting children’s learningExtending children’s learningNew forms of volunteeringDigital economy career informationDigital economy career & learning pathwaysSupporting community participation Supporting informal & social learning |

# Australia’s Digital Economy

## Overview

According to the [Department of Broadband, Communications and the Digital Economy](http://www.dbcde.gov.au/digital_economy), the digital economy is:

*... the global network of economic and social activities that are enabled by platforms such as the internet, mobile and sensor networks. A successful digital economy is essential for Australia's economic growth and our ability to maintain our international standing. It offers new opportunities for businesses to a larger, potentially global, audience and for individuals to connect and collaborate.*

*The Australian Government released the Australia's Digital Economy: Future Directions paper on 14 July 2009 which outlines:*

* *why the digital economy is important for Australia*
* *the current state of digital economy engagement in Australia and why current metrics point to a need for strategic action*
* *the elements of a successful digital economy*
* *the role for the Government in developing Australia's digital economy, and*
* *case studies of Australians who have successfully engaged with the digital economy from a diversity of industries including content, e-health, maps, banking, education, smart technology and citizen journalism.*

*Advancing Australia's digital economy requires action by government, industry and the community. The key areas of focus for government, industry and the community in order to maximise the benefits of the digital economy for all Australians are:*

* *for Government, to:*
	+ - *lay the foundations Australia's digital infrastructure*
		- *facilitate innovation*
		- *set conducive regulatory frameworks*
* *for industry, to:*
	+ - *demonstrate digital confidence and build digital skills*
		- *adopt smart technology*
		- *develop sustainable online content models*
* *for the community, to:*
	+ - *enjoy digital confidence and digital media literacy skills*
		- *experience inclusive digital participation*
		- *benefit through online engagement.*

*This Australia's Digital Economy: Future Directions paper discusses the key initiatives being undertaken by government, industry and the community in each of these key areas. It also includes case studies of Australians from a diversity of industries who have successfully engaged with the digital economy.*

**Policy Agendas in the Digital Economy**

**Department of Education, Employment & Workplace Relations (DEEWR)**

The aim of the [Digital Education Revolution](http://www.deewr.gov.au/Schooling/DigitalEducationRevolution/FAQs/Pages/DERFrequentlyAskedQuestions.aspx) (DER) is to contribute sustainable and meaningful change to teaching and learning in Australian schools that will prepare students for further education, training and to live and work in a digital world.  In the May 2010 Budget $200 million was provisionally allocated for 2013-14.

The DER is now governed by the Digital Education Revolution National Partnership with the State and Territories and by Digital Education Revolution Funding Agreements with the Catholic and Independent education authorities. The implementation of the DER will be guided by the DER Strategic Plan and Roadmapand supported by the Digital Education Revolution Projects, Infrastructure and Support Program Guidelines.

[Digital Education Revolution Implementation Roadmap](http://www.deewr.gov.au/Schooling/DigitalEducationRevolution/Documents/AICTEC_DER_ROADMAPAdvice.pdf) was produced in January 2009 by the Australian Information and Communications Technology in Education Committee and aims to identify priority areas where a national, collaborative and cross-sectoral approach is required to underpin and facilitate the implementation of the Digital Education Revolution and to drive substantive improvements in how technology is being used across Australian education and training to improve educational outcomes for students.

[Success Through Partnership: Achieving a National Vision for ICT in Schools](http://www.deewr.gov.au/Schooling/DigitalEducationRevolution/Documents/DERStrategicPlan.pdf) was produced in August 2008 and outlines a vision for Information and Communication Technologies (ICT) enabled learning in our schools which guides Governments, individually and collectively, through the identification of high level goals, and possible areas for investment.

**Department of Broadband, Communications & The Digital Economy**

The [Australia’s Digital Economy: Future Directions paper](http://www.dbcde.gov.au/digital_economy), released in July 2009 by the Minister for Broadband, Communications and the Digital Economy, outlines the key areas of focus for government, industry and the community to maximise the benefit of the digital economy for all Australians.

**National Broadband Network (NBN)**

The [NBN](http://www.nbn.gov.au/) is an Australian Government initiative which will deliver high speed broadband to all Australians. The NBN is a new, wholesale only, open access high speed broadband network. The NBN will involve the laying of fibre optic cabling to at least 90 per cent of Australian homes, schools and businesses, capable of delivering speeds of 100 megabits per second, or up to 100 times faster than many people experience today. The remaining premises will be connected via a combination of next generation high speed wireless and satellite technologies delivering broadband speeds of 12 megabits per second or more. The Government has established a new company, NBN Co Ltd, to design, build and operate the new National Broadband Network.

**NBNCo**

[NBN Co’s](http://www.nbnco.com.au/) role is to realise the Australian Government’s vision for the development of a next generation NBN. The NBN will provide the infrastructure that will allow wholesale and [retail service providers](http://www.nbnco.com.au/our-network/glossary-of-terms#rsp) to deliver advanced digital services to the nation. This multi-billion dollar investment will be the single largest nation building infrastructure project in Australian history.

# Digital Economy Government & Industry Reports

## *Digital Economy*

[Australia in the Digital Economy: Research Report Series](http://www.acma.gov.au/WEB/STANDARD..PC/pc%3DPC_311655) was produced in March 2009 by the Australian Communications and Media Authority and builds an evidence base to inform regulatory development and advice to key stakeholders regarding the developing digital economy. The report series aims to contribute to a greater understanding of the digital economy and covers issues such as: attitudes and behaviours to online security and privacy; digital confidence and skills; take-up and use of the internet; and factors which influence people's decisions to participate or not participate online.

[Statistical Snapshot of the Current Status of the Digital Economy in Australia](http://www.digitalagency.com.au/digital_2008.pdf), produced by the Department of Broadband, Communications and the Digital Economy.

## *Smart Infrastructure*

[Smart Meter Customer Protection & Safety Review - Draft Policy Paper 1](http://www.ret.gov.au/Documents/mce/_documents/smart_meters/Smart%20meter%20customer%20protection%20and%20safety%20issues%20-%20draft%20policy%20paper%201.pdf) was produced in August 2009 by the Ministerial Council on Energy Standing Committee of Officials and contains draft policy proposals on the smart meter customer protection issues that are most relevant to the National Energy Customer Framework (NECF), using the first exposure draft of the NECF as a base reference document. The paper also identifies a number of areas where the Ministerial Council on Energy Standing Committee of Officials considers further work is required.

[Infrastructure Australia's National Infrastructure Audit](http://www.infrastructureaustralia.gov.au/files/A_Report_to_the_Council_of_Australian_Governments.pdf) was produced in December 2008 by Infrastructure Australia and signals a change in direction and a step-up in leadership on infrastructure at the national level. It introduces a bold new approach to identifying, planning, funding and implementing infrastructure of national significance across Australia. It also introduces rigorous and robust economic analysis of infrastructure investments prior to government decision-making.

[Infrastructure Australia's National Infrastructure Priorities](http://www.infrastructureaustralia.gov.au/files/National_Infrastructure_Priorities.pdf) was produced in May 2009 by Infrastructure Australia and details infrastructure priorities for an economically, socially, and environmentally sustainable future.

## *e-Health*

[National E-Health Strategy Summary](http://www.ahmac.gov.au/cms_documents/National%20E-Health%20Strategy.pdf) was produced in December 2008 and commissioned by the Australian Health Ministers' Conference to develop a strategic framework and plan to guide national coordination and collaboration in E-Health.

[National Health and Hospital Reform Commission Report - A Healthier Future for all Australians](http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/NHHRC) was produced in July 2009 for the National Health and Hospital Reform Commission and identifies actions that can be taken against three reform goals: access and equity issues; redesign of our health system and creating an agile and self-improving health system.

[Building a 21st Century Primary Health Care System *-* A Draft of Australia's First National PrimaryHealth Care Strategy](http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/twentyfirst-Century-Primary-System) *w*as produced in August 2009 by the Department of Health and Ageing and sets out a road map for the future - to provide Australians with a primary health care system which is among the best in the world and which is equipped to meet future challenges.

[Primary Health Care Reform in Australia- Report to Support Australia's First National Primary Health Care Strategy](http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/Primary%20Health%20Care) was produced in August 2009 by the Department of Health and Ageing and highlights the need for primary health care to be established as the cornerstone of a future person-centred health system.

[National E-Health Transition Authority Strategic Plan (2009-2012)](http://www.nehta.gov.au/about-us/strategy) was produced in October 2009 by National E-Health Transition Authority (NEHTA) and outlines how NEHTA will fulfil their mission to lead the progression of e-health in Australia.

[Clever Networks projects impacting hospitals and health facilities in regional, rural and remote Australia](http://www.dbcde.gov.au/broadband/clever_networks/health_sector) was produced in August 2009 by the Department of Broadband, Communications and the Digital Economy and highlights how Clever Networks projects are impacting on hospitals and health facilities across regional, rural and remote Australia by improving service delivery and reducing costs.

## *e-Business*

[The Shape of Things to Come: long run forces affecting the Australian economy in coming decades](http://www.treasury.gov.au/documents/1643/PDF/QUT_Address.pdf) is a speech delivered on 22 October 2009 to the Queensland University of Technology Business Leaders Forum by Secretary to the Treasury, Dr Ken Henry. In the speech Dr Henry outlines four longer term trends that had been strongly influencing economic outcomes in Australia before the onset of the Global Financial Crisis, and which are likely to become even more influential in the next growth period. One of these trends is the use of information, communications and technology.

# Digital Technology Participation Statistics

## Australian Bureau of Statistics – Internet Use

ABS data indicates that internet use continues to grow in Australia.

The [2008-09 Multipurpose Household Survey (MPHS)](http://abs.gov.au/ausstats/abs%40.nsf/mf/8146.0/) revealed that 72% of households in Australia had home internet access, with 78% of households having access to a computer.

*Between 1998 to 2008-09, household access to the internet at home has more than quadrupled from 16% to 72%, while access to computers has increased from 44% to 78%.*

*The number of households with a broadband internet connection increased by 18% from the previous year, to an estimated 5.0 million households. Broadband is accessed by close to two-thirds (62%) of all households in Australia and 86% of all households with internet access. A small proportion of respondents (2%) did not know the type of their internet connection at home.*

 **

At the end of March 2010, the ABS published updated data on Australia’s internet use in the form of the [Internet Activity Survey (IAS)](http://www.abs.gov.au/ausstats/abs%40.nsf/mf/8153.0/), conducted in December 2009:

* *At the end of December 2009, there were 9.1 million active internet subscribers in Australia.*
* *The phasing out of dial-up internet connections continued with nearly 90% of internet connections now being non dial-up. Australians also continued to access higher download speeds, with 62% of access connections having a download speed of 1.5Mbps or greater.*
* *Digital subscriber line (DSL) continued to be the major technology for connections, accounting for 51% of non dial-up connections. However, this percentage share has decreased since June 2009 when DSL represented 57% of non dial-up connections.*
* *Mobile wireless via a datacard, dongle or USB modem was the fastest growing technology in internet connections, increasing to 2.8 million in December 2009. This represents a 40% increase from June 2009.*

## ARC Centre of Excellence for Creative Industries & Innovation (CCi)

In May 2010, the ARC Centre of Excellence for Creative Industries and Innovation (CCi) released the CCi Digital Futures 2010 Report, [*The Internet In Australia*](http://cci.edu.au/sites/default/files/sewing/CCi%20Digital%20Futures%202010.pdf)*.* The Highlights of the report are below:

***Most Australians are internet users…***

*The overwhelming majority of Australians are internet users. When we talked to them, four in five Australians had used the internet in the past three months, up from 72.6% in 2007. By international standards Australia’s level of internet use is very high. In terms of home access, the vast majority of connections are now broadband (94.2%). Internet use still varies between different groups although these differences have lessened since 2007. Students, employed persons, younger people, higher educated and higher income individuals are all more*

*likely to use the internet than retired people, home-makers, older people, lower educated and lower income individuals.*

***… but there is still a digital divide.***

*Slightly more than an eighth of the population has never used the internet, while just fewer than six percent of Australians are ex-users. Ex-users and non-users have different reasons for not using the internet. Exusers are more likely to cite being too busy or not having a computer or internet connection while non-users are more likely to say they are confused by the technology or have no interest in the internet. Although broadband is growing quickly just under a quarter of Australians do not have broadband access at home.*

***The internet in Australia is maturing and broadband is still growing***

*The internet is a maturing technology in Australia. A third of internet users have been online for more than ten years while a further half have been online for five years or more. A very small proportion of users had taken up use in the past year. On average men have been online 19 months longer than women. Broadband access however, is still in a take-up phase, with new users coming mostly from non-connected households. In 2007, just under four in five households with internet access had a broadband connection, by 2005 this had increased to just under 95%.*

***The internet is becoming increasingly integral to Australians’ lives***

*Well over half of our sample of internet users describe the internet as ‘very important’ to their current way of life while almost three in ten say that it is ‘important’. Three-quarters of users feel that the internet makes life easier while more than 9 in 10 say that it is a fast and efficient means to gain information.*

***Internet use is increasing***

*Across almost all activities that we asked about, there was an increase in the proportion of people undertaking the activity as well as an increase in frequency. When combined with the 10% increase in the number of people using the internet, this represents a large increase in overall internet use in the last two years.*

***The internet is an important way for people to keep in touch.***

*Overall internet use has increased the time people spend communicating with friends and family and this effect has strengthened in the last two years. This impact of the internet is particularly strong in Australia which recorded the highest levels of increased contact with both friends and families amongst our comparison countries. On the other hand, for a significant proportion of people their internet use has resulted in less time spent face-to-face with household members but this effect has not changed in the last two years.*

*Email is the most popular means for communicating online and its use has grown in the last two years. More than 8 in 10 Australians check their email at least once a day. Instant messaging is also a popular and growing communications tool with more than a quarter messaging daily. There was strong growth in the use of the internet to make telephone calls with almost 3 in 10 now doing this and those born overseas recording even higher levels underlining the importance of internet as a communications tool.*

***The internet changes media use.***

*The internet is now users’ most important source of information and its importance has increased slightly in the last two years. This is a global phenomenon- in all but one of our comparison countries the internet was now users’ most important source of information.*

*Just under three-quarters of Australian users described the internet as ‘important’ or ‘very important’ compared to just under 40% for television and just over 40% for newspapers or radio. Around 7 in 10 users would visit an online news service if either a large international or large local story was breaking.*

*Television watching is the media-related activity most affected by internet use. Four in ten users say they watch less television since going online and this impact is strongly related to age. Nearly half of those aged18-24 watch less television since access compared to only 14% of those aged 65 or more. Overall less than a quarter of internet users feel they read newspapers or books less often since gaining internet access. The question of whether Internet users are prepared to pay for journalism is now topical, with many commentators foreseeing the demise of newspapers. We asked respondents whether and how much they would be prepared to pay to read an online newspaper. Nearly three quarters of Australians say they would not consider paying (71.4%). Just 7.2% would pay the current price of a printed newspaper ($1.50).*

***The internet enables creativity.***

*The proportion of users posting pictures or photographs increased dramatically from 25 to 46 per cent from 2007 to 2009, and the proportion of people posting video also more than doubled. Despite this, a smaller proportion of users in 2009 than 2007 felt that their internet use had enabled them to share both creative work they liked with others, and to share their own creative work. The proportion of users who agreed that the internet had encouraged them to produce their own creative work did not change significantly over the two year period.*

***The internet is a major source of entertainment.***

*The internet is an increasingly important source of entertainment, and is now challenging television as Australians’ most important entertainment medium. In 2009 a higher proportion of users described the internet as a ‘very important’ source of entertainment than television. (Although if we look at sources of entertainment considered ‘important’ as well as ‘very important’, television moves ahead of the Net.) We would expect that as broadband access improves in both speed and coverage that entertainment uses of the Internet will evolve further, and grow in significance.*

*Downloading or listening to music online, surfing or browsing the web, finding out information about food such as recipes, looking for information about restaurants and visiting sites dedicated to particular artists are the most popular entertainment-related internet activities — all of these activities recorded significant growth between 2007 and 2009. While downloading content increased in the last two years internet users were more likely to access their movies and music off-line than online. Even in terms of digital music, users are more likely to copy their own or a friend’s CD than to buy online. Relative to our comparison countries Australia is around mid-level in terms of downloading or watching video content online. Preparedness to do this is heavily related to age, six in ten young Australians were downloading or watching video content online at least weekly compared to only 1% of those aged 65 or more.*

*Australians’ preparedness to substitute digital for hard copy content does not appear to have increased in the last two years. Half of our internet users would not consider downloading music or movies instead of buying hard copy at any price. Only around one in twenty users would be prepared to pay a price comparable to an offline version.*

***The internet changes politics.***

*The proportion of users who agreed that the internet has become important for the political campaign process increased markedly in the last two years (45.6% to 58.3%) while non-user agreement increased even more (35.8% to 57.2%). In 2007 non-users were more sceptical than users about the internets’ capacity to empower citizens. Perhaps more importantly, a sizeable proportion of non-users simply didn’t know what impact the internet was having on politics. In 2009 the differences between users and non-users on this question decreased and non-users were less likely to answer ‘don’t know’. Internationally Australia is amongst the more sceptical countries in terms of our attitude to whether internet use can help people have a greater say in what governments do.*

***Most Australians support internet regulation and the NBN***

*The majority of Australians do not think that the internet is over-regulated. Just over four in ten think that the current amount of regulation is about right. A further four in ten would like more regulation. There is very strong support for restricting children’s access to the internet. An overwhelming 82.8% felt there should be some restrictions but almost all of these people felt that responsibility should be shared by parents, schools, government and internet service providers.*

 *Just under three-quarters of Australians think the development of Labor’s National Broadband Network is a good idea. Support for the NBN is slightly stronger amongst younger people and more strongly supported by internet users than non-users.*

***People shop online, with reservations.***

*Australia had the highest level of both looking for information about goods and services online and purchasing online of our comparison countries. In 2007 less than half of our sample of internet users purchased at least one product a month. By 2009, this had increased to two-thirds. Those who used the internet for purchases spent on average $200 per month online (the median amount spent was $100). Older Australians are less likely to purchase goods online. Almost 9 in 10 users research products online. Making travel bookings (76.1%), paying bills (71.6%), banking (75.0%) and purchasing event tickets (65.1%) were all popular online activities. While a majority of users are concerned about credit card security online, fewer report being ‘very’ or ‘extremely concerned’. Privacy concerns involved with e-commerce have stayed around the same level.*

## ABS Survey of Children’s Participation in Cultural & Leisure Activities

The [2009 ABS survey of Children's Participation in Cultural and Leisure Activities](http://www.abs.gov.au/ausstats/abs%40.nsf/Latestproducts/4901.0Main%20Features9Apr%202009?opendocument&tabname=Summary&prodno=4901.0&issue=Apr%202009&num=&view=) indicates that the vast majority of children aged between 5-14 years in Australia are accessing the internet on regular basis:

*In the 12 months prior to April 2009, an estimated 2.2 million (79%) children accessed the Internet either during school hours or outside of school hours. The proportion of males (80%) accessing the Internet was not significantly different from females (79%). The proportion of children accessing the Internet increased by age, with 60% of 5 to 8 year olds accessing the Internet compared with 96% of 12 to 14 year olds (Table 19).*

***HOME INTERNET USAGE,*** *By age (Table 19)
*

*A higher proportion of children used the Internet at home (92%) than at school (86%). Children using the Internet at home used it for a wide variety of activities, with the most popular being educational activities (85%), playing online games (69%) and listening to or downloading music (47%). Of the 2 million children who used the Internet at home, 42% usually used it for 2 hours or less per week, while 17% used it more than 10 hours per week (Table 20).*

A similar proportion of older children aged between 12-14 years had their own mobile phone:

*In 2009, this survey collected data on children's mobile phone ownership for the first time. It is estimated that 31% (841,400) of children had a mobile phone at the time of interview. A higher proportion of girls had a mobile phone (33%) compared with boys (29%). Older children were most likely to have a mobile phone (76% for 12 to 14 year olds), while amongst the youngest group (5 to 8 year olds) only 2% of children had a mobile phone (Table 19).

Tasmania had the highest proportion of children with a mobile phone (41%), while in the Northern Territory 27% of children had mobile phones. There was no difference between the proportion of children who had a mobile phone by their location (living in a state capital city or outside of a state capital city (including Northern Territory and Australian Capital Territory)). Mobile phone ownership was 33% for children living in outer regional areas, 31% for children living in major cities and 30% for children living in inner regional areas. Mobile phone ownership also varied by family type, with children in one-parent families more likely to have a mobile phone (38%) than those in couple families (29%). (Table 19)*

***MOBILE PHONE OWNERSHIP,*** *By state/territory*

 **

 *More children used their mobile phone more for contacting family (60%) than for contacting friends (36%). The proportion of children using their mobile phone more for contacting family varied with age, with 95% of 5 to 8 year olds using it for this purpose compared to 52% of 12 to 14 year olds. Only 4% of children had used their mobile phone to access the Internet in the 12 months prior to interview (Table 19).*

The [Australian Mobile Phone Lifestyle Index](http://www.aimia.com.au/enews/mobile/090929%20AIMIA_Report_FINAL.pdf) by the Australian Interactive Media Industry Association (AIMEA) presents national survey results on mobile phone use for a range of respondents aged between 8 and 83 years. The survey found that:

*• 77% of respondents used their mobile for a purpose other than voice and SMS.*

*• Most participants used voice (95%) and SMS (98%).*

*• 56% of respondents used their mobile phone to get information at least once a month.*

*• 51% of respondents used their mobile phone for entertainment purposes at least once a month.*

*• 21% of respondents said they visit websites on their mobile phone at least once a day, while 25% of respondents said they carry out mobile searches at least once a week.*

*• Overall, 34% of respondents accessed websites on their mobile phone by typing in a URL, 18% were likely to access the Web using the mobile phone company’s portal and 17% accessed the Web from a text message.*

*• Only 30% used their mobile phone exclusively for personal use. This result is consistent with previous surveys.*

## Australian Communications & Media Authority (ACMA)

2007-08 data provided by the [Australian Communications and Media Authority (ACMA)](http://www.acma.gov.au/webwr/_assets/main/lib310654/digital_economy_forum.pdf) indicated a steady increase in “participative non-transactional activities” on the Internet in Australia:

*The new applications (‘blogging’ and the ‘use of social networking sites’) emerge at the top of online non-transactional activities. In 2008, 4 in 10 Australians used the internet to read a blog or used a social networking website.*

*Drilling down a little further, however, the levels of ‘active participation’ adn content creation remain comparatively low. 2 in 10 Australians (aged 14 plus) report belonging to an online community; and only 1 in 10 had written a blog or uploaded content.*

*But internationally, user generated content is on the increase, and of course the trend is reflected amongst young Australians. Drilling down further again, ACMA’s 2007 research shows that 42 per cent of 8 to 17 year olds had authored online content – clearly reflective of generational differences (or, perhaps even more accurately, ‘age of life stage’ differences).*

*More than 2 in 10 Australians report using the internet to make VOIP phone calls in the past year, an 8 per cent increase in a year.*

In the same study, the ACMA (2008) found that 7 out of 10 Australians think the internet has a positive effect in their lives.

# Digital Economy Research Projects

## Research Centres & Organisations

**Australia**

* Institute for Social Research: <http://www.sisr.net>
* ACID – Australasian CRC for Interaction Design: <http://www.acid.net.au/>
* Eidos Institute: <http://www.eidos.org.au>
* Public Interest Journalism Foundation: <http://www.sisr.net/Flagships/CAC/Projects/pijf.htm>
* CCi – ARC Centre of Excellence for Creative Industries & Innovation: <http://cci.edu.au>
* CRCSI – Cooperative Research Centre for Spatial Information: <http://www.crcsi.com.au>
* NICTA - National Information and Communications Technology (ICT) Centre of Excellence: [www.nicta.com.au](http://www.nicta.com.au)
* Australian Communications & Media Authority (ACMA): <http://www.acma.gov.au>
* CSIRO: <http://www.csiro.au/>
* Cooperative Research Centre for Spatial Information (CRCSI): <http://www.crcsi.com.au>

**Global**

* Becta: <http://www.becta.org.uk/> (planned closure under new UK govt)
* Futurelab: <http://www.futurelab.org.uk>

## Current Research Projects (Australia)

[*The Searchers: Australian Information Seekers & Citizens*](http://www.sisr.net/Flagships/CAC/Projects/searchers.htm)

The Searchers is a three year Australian Research Council linkage project examining the strategic challenges for major public libraries presented by the development of on-line information provision. The project is being undertaken by the Institute for Social Research, Swinburne University of Technology in partnership with the State Library of Victoria. SLV is contributing $30,000 per year to the project as well as an in-kind contribution of facilities, staff time and data collections. The project commenced in 2007 and will run until May 2010.

[Knowledge Flows Between Science and Manufacturing: A collaboration with CSIRO](http://www.sisr.net/Flagships/TES/Projects/knowledge_flows.htm)

Knowledge Flows Between Science and Manufacturing: A collaboration with CSIRO is a one year project funded under CSIRO’s Flagship Collaboration Fund via the Future Manufacturing Flagship that examines the changing role of CSIRO in Australia’s future manufacturing industry. The project is being undertaken by the Institute of Social Research, Swinburne University of Technology in partnership with CSIRO. The project commenced in May 2009 and will run until December 2010.

[SmartHealth: The social implications of new bio-diagnostic systems for health care](http://www.sisr.net/Flagships/TES/Projects/Smarthealth.htm)

The SmartHEALTH project was undertaken by the Institute for Social Research, at Swinburne University of Technology as part of a joint European/Australian project examining the social impact of a potential new cancer diagnostic.  Funding was provided via an Australian member of the project, MiniFAB (Australia) Pty Ltd, and Small Technologies Cluster (STC) Ltd, an organization of the Victorian Department of Innovation, Industry and Regional Development (DIIRD. The SmartHEALTH project began in December 2005 and will be completed in May 2010.

[The Reinvention of Indigenous Media: Innovation, Expansion and Social Development](http://www.sisr.net/Flagships/CAC/Projects/indigenousmedia.htm)

The introduction of broadband and mobile telephony to remote communities and the establishment of the National Indigenous Television service (NITV) indicate that the reinvention of Indigenous media is just around the corner. This project will examine the activities of Remote Indigenous Media Organisations in order to identify how community-based media are assisting with communications uptake and use at the local level, as well as Indigenous content development. Combining ethnographic research with content analysis, the project will advance community media research beyond issues of ‘access and participation’ to an understanding of how local media contributes to both national narratives and communications innovation.

[The Internet and New Knowledge Production in the Twenty-First Century](http://www.sisr.net/Flagships/CAC/Projects/knowledge.htm)

Robert Hassan is working on a book exploring the ways in which new technologies are creating an "informational ecology" based on a real-time temporality. The primary theme of the study is an examination of the effects of this on teaching and learning in higher education institutions. What kind of knowledge is being produced in the increasingly commercialised higher education sector? How effectively do we learn in a real-time environment? To what extent is our capacity for critical thinking, our ability to think reflexively about subjects and issues, enhanced or impaired by learning in a real-time environment?

[The New Services Industry Model: Implications for Audio-visual Media](http://www.sisr.net/Flagships/CAC/Projects/services.htm)

Julian Thomas is working on a three-year project, commencing in 2002, examining important current changes in the understanding of audio-visual media. This project is a collaboration with Professor Tom O'Regan (Griffith University), Professor Stuart Cunningham (Queensland University of Technology), and Professor Elizabeth Jacka (University of Technology, Sydney). The project is concerned with a new "services industry model", developed by governments, academics, industry players and international organisations to map future directions and policies for audio-visual industries. However, little attention has been given to how this model may apply to the complex cultural and social role of audio-visual media. The planned research aims to fill this gap through a series of substantial publications on four key problems: the conversion to digital transmission platforms; public broadcasting and its future role; international policy dynamics; and the re-evaluation of longstanding domestic social and cultural policy objectives.

[Time Out of Mind? Australians' Experience of Time in the Network Society](http://www.sisr.net/Flagships/CAC/Projects/time.htm)

Computer-mediated communication is profoundly affecting the ways in which individuals live. The rapidity of the process has left many changes unexplored and under-analysed. The project will comprise a three-year ethnographic study to uncover the ways in which people think about time, about electronic networks, and by what means these influence how they make sense of their lives, their work and their relationships in a fast-changing and globalising world. The project will result in an international workshop on "Time and Networks", an edited collection of articles from workshop participants, and an internationally published book on the project's findings.

[Youthworx: Youth Media and Social Enterprise](http://www.sisr.net/Flagships/CAC/Projects/ywx.htm)

This five year ARC-funded collaboration with The Salvation Army and SYN-FM follows the impact on marginalised young people of Youthworx, a scheme enabling them to become trainees and producers in a youth-run community radio station. Youthworx exemplifies a new convergence between media diversity, innovation and fresh approaches to endemic social problems. Research will follow entrants to the program, over five years, as marginalised young people are challenged to become active creative producers and decision-makers. It will document the Youthworx project as a new model of social investment, offering marginalised young people the chance to extend their interest and skills as new media users and producers. Study of what young people do with the chance to be independent media producers will open new research on the link between growing diversity in independent media, young people as media users and creators and innovation, and diversity in Australian media and creative industries. This longitudinal study will have broader significance for social, educational and media research, tracking convergence between new social policy and emergent innovation and diversity in the Australian media system.

[Developing Next Generation Broadband Infrastructure: Learning from Australia's National Broadband Network](http://www.sisr.net/Flagships/CAC/Projects/broadband.htm)

This is a collaborative research project investigating the development of next generation broadband networks in Canada and Australia. It will produce case studies of public-funded wholesale broadband networks in Alberta, Canada (the Alberta SuperNet) and Tasmania, Australia and encourage the development of longer term collaboration among international researchers interested in telecommunications policy and broadband infrastructure development.

[Spreading Fictions: Distributing Stories in the Online Age](http://www.sisr.net/Flagships/CAC/Projects/fictions.htm)

Spreading Fictions is a three-year project that asks: ‘Where do Australians now get their audiovisual stories and how might they get them in the future?’. It will provide major public analyses of audiovisual distribution in Australia, bringing together two partner organisations―the ABC and Screen Australia―and academics at Swinburne University’s Institute for Social Research and UNSW’s Journalism and Media Research Centre with experience in economics, cultural and information policy, industry analysis, law and audience research.

## Past Research Projects (Australia)

[Wired High Rise](http://www.sisr.net/Flagships/CAC/Projects/WiredHighRise.htm)

The focus of this three-year project is a new "wired community" in the inner Melbourne suburb of Fitzroy. Residents of inner high-rise public housing estates, often characterised by low income and diverse ethnic backgrounds, tend to suffer the interrelated problems of unemployment, poverty, violence, crime and technological disadvantage. The "Reach for the Clouds" project is attempting to break this cycle of disadvantage by providing free computers and software, internet and intranet access to every household in four high-rise towers on the Atherton Gardens public housing estate. The estate is wired up to give everyone broadband intranet access and tenants are given extensive hardware and software computer training with the ultimate aim of eventually passing control of the technology and its use over to the residents themselves. The network aims to break the cycle of social exclusion and isolation by building skills and linking residents to community organisations, government services and local businesses.

[Retrieving the Record: The White Australia Policy, Citizenship Education and New Applications for Archival Research](http://www.sisr.net/Flagships/CAC/Projects/retrieving.htm)

Retrieving the Record is a joint research project with the [National Archives of Australia (NAA).](http://www.naa.gov.au) Funded by a Linkage grant from the Australian Research Council, it draws on the work of Klaus Neumann, Denise Meredyth and Dinah Partridge, in collaboration with Margaret Kenna of the NAA. The project partners aim to develop and demonstrate new conceptual avenues for the use of primary historical records in secondary classrooms, and to evaluate them in terms of their potential for civics and citizenship education.

[Liberal Machines: Information Poverty, Political Culture and the Uses of New Communications Technologie](http://www.sisr.net/Flagships/CAC/Projects/liberal.htm)s

This project examines two contentious issues in scholarly and policy debate: the nature and consequences of information poverty, and the consequences of new communications technologies for western political culture. Rather than focusing on the emancipatory potential of new technologies, we see these problems through the prism of liberal government, its history and prospects. In particular we are concerned with liberalism's longstanding concerns with security, civil peace, freedom, and disadvantage. We explore contemporary developments in electronic government, digital media, online learning, cyber-democracy and wired communities. The result will contribute to our understanding of the political and intellectual uses of information technology.

[Carlton Community Lifelong Learning Hub](http://www.sisr.net/Flagships/CAC/Projects/lifelonghub.htm)

This twelve month research and community development project was undertaken for Carlton Primary School prior to the establishment of a Lifelong Learning Hub. The focus of the research part of the project was on the educational backgrounds and learning needs of the wider school community - that is, parents, grandparents, siblings and others related to the students at the school. The majority of students who attend the school are from Horn of Africa refugee backgrounds and now live in public housing in Carlton. The research investigates the previous educational attainment of a sample of the community, along with a study of what learning opportunities are currently available to residents, which services are already being used, what further needs exist and what barriers prevent residents from engaging in further learning. The report also details the process which was undertaken to bring service providers and not for profit agencies together into an integrated Learning Hub and details some of the difficulties involved in carrying out such a project.

[Digital Learning: An Australian Research Agenda](http://research.acer.edu.au/cgi/viewcontent.cgi?article=1002&context=digital_learning)

A number of agencies in Australia, Canada, Europe, New Zealand, the UK, and the USA have already embarked on developing research agendas and undertaking research into the use of digital learning. This report highlights some of the significant areas in which research has been undertaken and isolates those areas where there may be a need for further research or where there are gaps in the research agenda for Australia.

## New Media Consortium - Horizon Reports (USA)

[2010 Horizon Report - K-12 Edition (April 2010)](http://www.nmc.org/publications/2010-horizon-k12-report)

The second Horizon Report for the K-12 sector describes the continuing work of the NMC’s Horizon Project, a research project that seeks to identify and describe emerging technologies that will likely have a significant impact on K-12 education. This report was produced in partnership with the [Consortium for School Networking](http://www.cosn.org/) (CoSN) and was made possible via a grant from [HP](http://www.hp.com/).

## [2010 Horizon Report](http://www.nmc.org/publications/2010-horizon-report)

The annual Horizon Report describes the continuing work of the NMC’s Horizon Project, a research-oriented effort that seeks to identify and describe emerging technologies likely to have considerable impact on teaching, learning, and creative expression within higher education. View the work that produced the report at [http://horizon.wiki.nmc.org](http://horizon.wiki.nmc.org/)

## [2009 Horizon Report: Economic Development Edition (October 2009)](http://www.nmc.org/publications/2009-horizon-biz-report)

The 2009 Horizon Report: Economic Development Edition explores the landscape of emerging technologies as it pertains to small to medium-sized businesses.

## [Marcus Collection Catalogue (May 2009)](http://www.nmc.org/publications/marcus-catalogue)

As a result of participation in the [Edward and Betty Marcus Digital Education Project for Texas Art Museums](http://marcus.nmc.org/), museum educators, curators, and directors have successfully integrated digital media into their education and outreach activities in ways that extend their efforts to a wider audience. A community of digital storytellers has grown up across the state that can help to sustain the momentum of the work. Furthermore, this collection of high-quality materials has been created that can be used to address important needs related to visual arts education. Learn more at <http://marcus.nmc.org/> and visit the [online gallery](http://marcus.nmc.org/catalog)

## [Challenge-Based Learning: An Approach for Our Time (April 2009)](http://www.nmc.org/publications/challenge-based-learning)

In the largest study to date of the practice anywhere, new findings from the New Media Consortium confirm that challenge-based learning is extremely effective with 9th grade students, including those most at risk of dropping out. The report followed six schools across the US as they implemented the practice in high school classes.

**Implications for Education – Research Literature**

## Introduction

In this increasingly convergent and digital world, young people are reportedly using new media with high engagement outside school, yet disengaged in those schools where technology access is low or restricted. Such an apparent disconnection is magnified when predictions of their futures are tied to requisites including technological expertise, adaptability to change, innovative capacities and complex problem-solving abilities. Such future oriented capacities challenge traditional views

that basic literate and numerate proficiency is sufficient for academic success. They also raise questions about the sufficiency of digital engagement for developing higher order critical and creative skills. Collectively, these future oriented capacities heighten educational imperatives for improving the quality of young people’s learning outcomes in this rapidly changing online world.

Education, political and business sectors currently share a synergy of expectations of schooling for the 21st century. All acknowledge the fundamental difference between the educational needs of today’s young people and those of earlier generations, as future workforces inevitably become even more technologised than at present. As consequence, educators face competing demands along several continua of learning needs: from basic literate and numerate proficiency to higher order thinking and problem solving; from strong disciplinary knowledge bases to interdisciplinary perspectives and innovations; from individual capability to collaborative teamwork; and, from technological proficiency to more creative and critical technology usage. As outlined here, educators are charged with preparing young people for life in a world where survival amid unimaginable change will require far more than basic literate and numerate proficiency. Rather, accessing and selecting information sources, discerning authorship, and assembling and communicating knowledge with digital technologies will assume critical importance for personal, academic and workplace success. With the daily escalation of Internet usage, issues of (a) information access, (b) source

authentication and (c) global connectedness compound the challenge for educators in meeting 21st century learning needs.

## Engagement

The term “engagement” is typically used in educational discourse in terms of attracting and sustaining student attention, the appeal of new technologies, and as precursor to learning. Various studies have investigated the extent of young people’s engagement with new media (Ito, Horst, Bittanti, et al., 2008; Jenkins, 2006; Lenhart, Madden, Rankin Macgill & Smith, 2007) in terms of intensity of new media activity. McGonigal (2008) reported on online game players’ sustained concentration and energetic participation as they deciphered clues and formulated often collaborative solutions to the initial problem. Similar levels of engagement are evident in young

people’s involvement in specialised online communities like art, music and writing (Ito et al., 2008; Jenkins, 2006) where a variety of skills is honed by peers and community experts. Here, engagement is synonymous with interest-driven, often self-directed, informal learning. This prompts consideration of the nature of young people’s engagement in school and out of school online activities.

## Creativity

Creativity has emerged as a new priority for schooling, flowing from the contemporary working environment where it is claimed as a critical workforce capacity (Fleming, 2008; McWilliam & Haukka, 2008; Robinson, 2006) across the arts, sciences and society in general. From *All our futures: Creativity, culture and education* report (Robinson, et al., 1999), creativity has been valorised across curriculum areas and precipitated a significant financial commitment to developing creativity in British children. Many countries have taken up the creativity challenge, including Singapore

(Economic Review Committee, 2002), Australia (Prime Minister’s Science, Engineering and Innovation Council, 2005) and Canada (The Conference Board of Canada, 2008) where schools are expected to build the creative capacities of their students and hence, the innovative capacities of economies. In terms of innovation, creativity means inventiveness and high levels of ingenuity, as creativity entails higher order thinking and the ability to relate unexpected juxtapositions of information or concepts. Such a breadth of creative possibilities is as core to schooling as it is to modern working environments.

For creativity advocates like McWilliam & Haukka (2008), the building of young people’s creative capacities should be additional to their basic literacies, as creativity is the value-adding component to an individual’s capabilities and the economy more generally. Here, creativity in learning is equated with high level processing of thought, ideas and information into some innovative transformation. Interestingly, “create” has superseded “analyse” as the most complex knowledge and cognitive process in the revised Bloom’s *Taxonomy* (Anderson & Krathwohl, 2001) and was defined as “putting elements together to form a novel, coherent whole or make an original product”, with three associated skills of “generating, planning and producing” (Krathwohl, 2002, p.

215). These views support the value of creativity in classroom lesson design and expectations of student performance. They also indicate the potential for students to enhance their understanding of how the creation of multimodal texts, whether their own or others, can be considered from a critical perspective. If so, it would be feasible to assume that mere engagement with online activities could be productively extended towards more critical engagement and creativity.

This article has considered the importance of creativity in strengthening learning in digital worlds, where creativity has been aligned with higher order thinking, empathy building aptitudes and innovative challenges. Of particular note have been the conceptual advances in understanding of indicators of quality in multimodal texts, from a print dominant, emergent digital consciousness to a view more attuned to online learning. This evolution, informed by empirical data and a diverse literature field, demonstrated that what we have traditionally come to know about criteria and

standards in assessment does not carry forward into the digital world of today. Given the anticipated changes in future digital technologies, current criteria and standards have little guarantee of longevity in future schooling scenarios. What we know about achievement in former eras of schooling in defined curriculum areas does not extend to these new ways of working online. The current synergy of thinking between business, education and research suggests that today’s students require a different, more complex skill set than in the past, and that their teachers have particular responsibilities in elevating seemingly superficial levels of online activity to more

critical, creative, empathetic and ethical activity. Just as we can no longer think of knowledge as a fixed entity, we must find ways to carry forward those capabilities that can adapt to, critique and create newer notions of co-created knowledge. This assessment framework opens for discussion the portability of desired capabilities for using, creating and sharing knowledge online.

*(Australasian Journal of Educational Technology 2010, 26(5), 607-625****,*** *Secondary students’ online use and creation of knowledge: Refocusing priorities for quality assessment and learning*

*Kay Kimber and Claire Wyatt-Smith, Griffith University)*

## Emerging Technologies - 2010 Horizon Report

 The report centres on the application of emerging technologies to teaching, learning and creative expression. Horizon Reports, now published in six languages, are regarded worldwide as the most timely and authoritative sources of information on new and emerging technologies available to education anywhere.

Each year, the report identifies and describes six areas of emerging technology likely to have a significant impact on teaching and learning within three adoption horizons: a year or less, two to three years, and four to five years.

The areas of emerging technology cited for 2010 are:

* **Time to adoption: One Year or Less**
* Cloud Computing
* Collaborative Environments
* **Time to adoption: Two to Three Years**
* Game Based Learning
* Mobile Devices
* **Time to adoption: Four to Five Years**
* Augmented Reality
* Flexible (Computer) Displays
* **Key Trends**
* Technology is increasingly a means for empowering students, a method for communication and socializing, and a ubiquitous, transparent part of students’ lives.
* Technology continues to profoundly affect the way we work, collaborate, communicate, and succeed.
* The perceived value of innovation and creativity is increasing.
* There is increasing interest in just-in-time, alternate, or non-formal avenues of education, such as online learning, mentoring, and independent study.
* The way we think of learning environments is changing.
* **Critical Challenges**
* Digital media literacy continues its rise in importance as a key skill in every discipline and profession.
* Students are different, but educational practice and the materials that support it are changing, only slowly.
* Many policy makers and educators believe that deep reform is needed, but at the same time, there is little agreement as to what a new model of education might look like.
* A key challenge is the fundamental structure of the K-12 education establishment.
* Many activities related to learning and education take place outside the walls of the classroom — but these experiences are often undervalued or unacknowledged.
* *(*<http://www.educationau.edu.au/technology-horizon>*)*



## Digital Culture and Education

**Education remix: New media, literacies, and the emerging digital geographies**

Lalitha Vasudevan

**Abstract**

This article explores instances of youth educating themselves beyond the boundaries of school through engagement with and production of “digital geographies,” or the emerging landscapes that are being produced through the confluence of new communicative practices and available media and technologies.

A framework of digital geographies, which is grounded in theories of spatiality, literacies, and multimodality, is used to analyse the social media practices and multimedia artifacts produced by two court-involved youth, who are part of an ongoing, multi-year ethnography of an alternative to incarceration program. Attention to digital geographies, and attendant communicative practices, can yield important insights about education beyond the school walls. The conclusion addresses the implications of this research for meaningful educational contexts for adolescents’ literacies and how learning might be conceptualized and designed within school.

The current digital moment is replete with spaces of representation, communication, and information dissemination. Temporality and synchronicity of identity performances have given way to multi-spatial and cross-temporal instantiations of the self. Drawing on recent conceptualizations of multimodality in communication and representation, this article focuses on instances of youth educating themselves beyond the boundaries of school. Specifically, I explore how youth enact education through the engagement with and production of “digital geographies,” or the emerging landscapes that are being produced through the confluence of new communicative practices and available media and technologies. In these spaces, the practices of communication and representation draw on multiple modes of expression and capitalize on technologies that facilitate social collaboration in new ways. What I am referring to as digital geographies are not limited to online spaces, but rather include the broader landscape of multimodal literacies and digital practices involved in composing of meaning and diverse texts for a variety of purposes. Thus, the digital geography of flickr.com, for example, extends to include the production of the photographs, the processes of editing and subsequent uploading and commenting that comprise the experience of interacting with this photo sharing website. Attention to digital geographies, and attendant communicative practices, can yield important insights about education beyond the school walls, which can inform how we construct spaces for education and literacy practices within schools.

An important chronology that parallels the growing availability of personal and portable technologies through the 1990s and early 2000s followed this social turn in literacy studies. The confluence of technologies and sociocultural approaches to the study of literacies inspired a body of important research that expanded the scope of NLS. The New London Group (1999) built on studies of semiotics to advance a pedagogy of multiliteracies, in which they called attention to the growing variety of texts and design practices made possible in a world of increasing technological, cultural, and linguistic diversity. An important distinction to note here is between Street’s (1995) argument for an understanding of literacies as multiple (or multiple literacies) – which was a rejection of the reductive tendencies of institutions to privilege a singular, “school standard” definition of literacy over other literacy practices – and the conceptualization of multiliteracies, which signals the multiple resources and communicative forms that inform the design of texts. The latter, then, prompted a series of studies that expanded upon the idea that technologies qualitatively change the nature of our literacy practices; these are now widely referred to as studies of new literacies (e.g., Lewis & Fabos, 2005; Squire, 2008; Thomas, 2007). Knobel and Lankshear (2007) offer a nuanced discussion of what scholars writing in the tradition of new literacies (in a slightly different, but related, posture than sociocultural studies of literacies) mean by “new literacies.” They point out that with new “technical” stuff comes new “ethos” stuff; put another way, Web 2.0 technologies have provided both infrastructure and technical capabilities in order to communicate and compose in new ways.

Despite the rich history of literacy studies and robust body of evidence to the contrary, definitions of literacy and learning that operate in schools today are often far removed from the actual practices in which children and youth engage. This dichotomy is especially true in urban institutions in the United States whose assessment practices are under heavy surveillance and regimentation. However, cultural narratives such as the “digital divide” and the “literacy crisis,” which saturate urban education discourses, are being challenged by the participatory, engaged, and multimodal communication practices of the current cultural revolution inspired by social media. Particularly for many youth who have been labeled “at risk” and are identified as “struggling readers,” school can be an alienating place (see Vasudevan & Campano, 2009 and Alvermann, 2002 for extended discussion about the negative consequences of literacy labels for children and adolescents in US schools). Often, these are young people who live digital lives but who are confined to analog rights in school. In other words, too many of our urban schools are increasingly characterized by policies that prohibit the use of digital technologies (cell phones, cameras, handheld video game consoles) and limit access to many websites (e.g., social networking sites, video sharing sites) within school boundaries. In urban contexts in the United States, such as the one in which the research reported in this article took place, classroom teachers are routinely negotiating between national and local policies that threaten to further constrain the definitions of concepts like literacy and learning, even as these very concepts are being re-imagined in significant ways through the actual practices of youth, as the ensuing discussion will illustrate. Many of these youth are among those who routinely traverse spaces that exist across online and offline, virtual and physical domains, and who are transforming the digital landscape by engaging in a range of communicative practices – e.g., creating multimedia texts to enhance their online profiles; commenting and providing feedback on a variety of blogs, wikis, and other collaboratively constructed sites; and using cell phones for text messaging and the exchange of photos and videos.

In a national curricular climate where testing too often leads discussions of pedagogy, it is imperative to seek out spaces of education that are governed by principles of discovery and play and that are free from punitive measures of learning and engagement. By paying attention to digital geographies, particularly the navigation across digital spaces and orchestration of multiple modalities, educators can cultivate youths’ literacies while at the same time inspire new sites of education. Educators engaged in teaching and learning in an age of rapidly evolving communicative landscapes are poised to take advantage of existing practices of multimodal communication and representation in the development of curriculum that supports the education of youth. For those young people whose digital geographies are under recognised and over-criminalised, opportunities to live education differently are not only desired, but can be life changing.

*(Vasudevan, L. (2010). Education remix: New media, literacies, and the emerging digital geographies. Digital Culture & Education, 2:1, 62-82.)*