



85th Birthday  
Special Report Series

# Digital Literacy

Connecting communities through technology

August 2008



**85**  
*years*

*everyone's family*

## The Smith Family's 85th Birthday Special Report Series

Digital Literacy forms part of a special series of reports marking the 85th birthday of The Smith Family. The series provides insights into the various distinguishing features of our organisation in supporting disadvantaged children and their families to participate more fully in society through education.

The evidence has shown that in a 21st century knowledge society, wellbeing depends more than ever on the **relationships** individuals form with others. For disadvantaged children and their families, the opportunities to build these relationships are few by virtue of their relative social and economic isolation. The key to closing the gaps between these groups and wider society and creating a more caring and cohesive community is therefore connecting different people in different ways.

This is achieved through The Smith Family's innovative dual agenda, providing opportunities for greater **participation** of marginalised children and their families and connecting them with others who have the time, talent and dollars to invest through our **engagement** strategy. The diversity and impact of these relationships, nurtured through our *Learning for Life* suite of programs, has enabled tens of thousands of disadvantaged children and their families to improve their lives through education, while at the same time providing caring Australians with vital opportunities to contribute to the wellbeing of others. It is through these bridging relationships that The Smith Family truly becomes 'everyone's family'.

This series of reports celebrates these relationships from a variety of perspectives, and comprehensively illustrates how and why they form the basis of who we are (*Our History*), what we do (our *Learning for Life* suite of programs focusing on developing digital, financial and comprehension literacies) and how we do it (*Enabling Relationships*, *Building Relationships* and *Innovation Relationships*). In this way, they mark the continuing achievements of The Smith Family and our supporters as leaders in the journey towards a more caring and cohesive Australian community.

**To read other reports in The Smith Family's 85th Birthday Special Report Series, see our website: [thesmithfamily.com.au](https://thesmithfamily.com.au)**

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# Message from Elaine Henry

In this our 85th birthday year, it is timely to celebrate our achievements in developing approaches to help disadvantaged children realise their potential through education.

As we entered the 21st century, it became clear that disadvantaged families in Australia were experiencing new forms of exclusion related to the rapid expansion of information and communications technology within the emerging knowledge society. It was obvious in this context that the personal support and development opportunities provided within our *Learning for Life* suite of programs would need to build not only the comprehension and financial literacies of our families, but also their skills in using computers and the internet – their *digital* literacy.

National and international research has shown that today, digital literacy is a key component of engaging individuals in lifelong learning and contributing to social inclusion. It has the capacity, if used in the right environment and with sufficient support, to influence attitudes towards learning. Education levels, opportunities and motivations to learn are strongly tied to a person's ability to access and use technology to its fullest capacity. This has significant implications for individuals who have become disengaged from learning – largely those with the lowest skill, education and employability levels. These individuals are usually those who could benefit most from training or education, but who often lack the motivation and understanding of the benefits of further education and/or training. Informal, community-based education where learning can be self-directed and self-paced has been found to be successful in engaging these individuals.

The Smith Family has worked to provide digital literacy support to our families and their children since our first Computer Clubs opened in Victoria in 2000, offering after-school access to computers for *Learning for Life* children in a safe, informal

learning environment. Since then, our support has expanded in collaboration with a variety of corporate partners, notably Microsoft Australia, with which we now provide access and basic computer training to disadvantaged individuals through Community Technology Learning Centres across Australia as part of the *Unlimited Potential* program. Recognising the importance of connecting more families to technology within the home environment, we have also developed the Technology Packs initiative, through which disadvantaged families are able to purchase a subsidised home computer with internet access and undertake basic training to improve the Digital Literacy of family members through shared learning. Most recently, in line with our focus on early childhood, we are also introducing children aged between 0 and 5 to technology through the IBM KidSmart Early Learning Program, ensuring that they are able to start school with the digital experiences many other children take for granted.

These digital experiences across the education life course will help to equip disadvantaged children and their families with the technological skills that are now prerequisites for fuller participation in employment and society in general. Perhaps more than anything, technology now has the power to contribute to the transformation of Australian education, connecting those on the margins with mainstream opportunities and knowledge, and mitigating the disparities in educational achievement typically opened up through family background.

I hope you enjoy reading this report.



**Elaine Henry, OAM**  
Chief Executive Officer, The Smith Family



# Digital literacy and the digital divide

## Understanding the digital divide

In the 20th century, everything was about building big things that did things for others – national rail systems and schools, for example. But in the 21st century, all the economic success stories are about helping people to help each other. From Google and eBay to communities of practice this is a century built on people and communication; the century of contribution rather than consumption. As Charles Leadbeater, Advisor to the Innovation Unit at the UK Department of Education, observed:

*“In the economy of things, you are identified by what you own: your land, house, car. In the economy of ideas that the web is creating, you are what you share: who you are linked to, who you network with and which ideas, pictures, videos, links, comments you share.”*<sup>2</sup>

The spectacular pace of technological change has been the driving factor behind this shift, rapidly (and continually) multiplying the channels through which people can now connect to each other across geographical, cultural and economic boundaries. As a result, digital literacy – the ability to use information and communications technology such as computers and the internet – has become one of the most critical skills for participation in today’s knowledge society.

Yet while the many and varied benefits of this new technology became clear from the early 1990s, so too did the fact that not all individuals were enjoying these benefits. Our own research in 2002 among the families participating in our *Learning for Life* suite of programs confirmed that their access to and use of computers and the internet were significantly below national averages, further compounding their disadvantage.<sup>3</sup> At an international level, this inequality in digital literacy across population groups quickly became known as the digital divide, to the point where one commentator remarked that ‘in the age of the

information economy, modems – not mountains – separate the population’.<sup>4</sup>

Placed in context, digital literacy is a privilege enjoyed by a minority of the global population, but for those living in societies where opportunity depends on being able to bridge the digital divide (such as Australia), the deprivation compares, in the eyes of the former UN Secretary-General Kofi Annan, to a lack of food, shelter and basic survival sources.<sup>5</sup> Research focusing on the digital divide has since revealed a number of groups in particular that are missing out on the technological boom, namely:

- People who earn low incomes
- Those who do not have tertiary level education
- Women
- People who live in rural and remote areas
- People of Aboriginal or Torres Strait Islander heritage
- People with a disability
- People from non-English speaking backgrounds
- Unemployed people
- People aged over 55.<sup>6</sup>

In Australia, a range of government policies has attempted to address inequalities in access to technology since the late 1990s.<sup>7</sup> Despite these attempts, the marginalisation of the groups listed above is proving to be persistent. For example, data from the 2006 Australian Census show that while the overall Australian household internet access rate is 61%:

- Just 30 percent of the 1.4 million households that earn less than \$500 per week have home internet connectivity.
- 59 percent of single parent family households have the internet at home compared with 75 percent of dual-parent households.
- For households with an Indigenous person resident, household internet access falls to 40 percent.<sup>8</sup>

Our *Barriers to Participation* research in 2003 found that one of the reasons for this was the notion that

the digital divide stemmed from a simple inequality of access to physical hardware and connectivity, and the subsequent policy response almost solely focusing on supply-side infrastructure.<sup>9</sup> In reality, meaningful access to technology must also include basic training to ensure the user understands how to operate their new resources, and support to assist them in appropriately negotiating the vast amount of content available. This more nuanced understanding has been called the ‘ABCs of the digital divide – Access, Basic Training and Content’, and is akin to The Smith Family’s concept of digital literacy in recognising the need to ensure that people have the requisite resources and skills to maximise the benefits of this new technology.<sup>10</sup>

### The benefits of digital literacy

Technology is therefore merely the means to possible change and its ability to produce positive outcomes is contingent on a number of factors (notably the ABCs discussed above). When these are in place, the potential benefits of digital literacy are many and varied, and include:

**Cultivation of a learner mentality** – introducing marginalised individuals to a wide range of information and communication technologies that build their confidence and stimulate their interest to re-engage with educational opportunities, both formal and informal.

**Community connectedness** – providing previously marginalised individuals with new channels through which to make contact, share experiences with and learn more about other members of their community.

**Family connectedness** – building the capacity of parents to interact with, monitor and support their children’s technological involvement, mitigating the development of inter-generational rifts.

**Interpersonal skills enhancement** – improving the self-esteem and self-confidence of disadvantaged individuals by providing them with new technological skills and knowledge with which to build relationships with others.

**Academic skills enhancement** – providing skills and access to extra-curricular learning resources (e.g. the internet) that research has shown to be

correlated with better performance in key school subjects.

**Improved financial management** – motivating individuals to improve their financial literacy skills by taking advantage of the organisational and mathematical abilities of computer technology to manage their limited resources more effectively.

**Employability enhancement** – providing individuals who have disengaged from (or not yet entered) the workforce with the technological skills required for them to meet the demands of the 21st century workplace.<sup>11</sup>

Many of these benefits relate to improvements in an individual's ability to manage and process information. As research has shown, digital literacy often works to develop five key skills in this area:

- **Access** – knowing about and how to collect and retrieve information;
- **Management** – applying an organisational or classification scheme to information;
- **Integration** – interpreting and representing information;
- **Evaluation** – making judgments about the quality, relevance, usefulness or efficiency of information; and
- **Creation** – generating information by adapting, applying, designing, inventing or authoring information.<sup>12</sup>

As participants become more adept at these skills, the benefits are likely to spill over to all other areas in their life beyond their engagement with technology, assisting them in improving their decision-making and thereby becoming more independent. One study from the United States found that around one-third of American adults – approximately 60 million people – reported that the internet had played a crucial or important role in helping them sort through their options when making a major life decision. These significant decisions included finding a place to live, coping with a major illness of themselves or others, changing jobs and getting additional training for a career.<sup>13</sup>

In this way, digital literacy is not only able to positively affect the lives of individuals who happen

to be on the wrong side of the digital divide, but also society as a whole. From an economic perspective, Australia's productivity depends on the capacity of its population to exploit the benefits of technology, just as the cohesion of its society depends on ensuring the technological skills required to participate are not the preserve of an exclusive minority.

In light of this evidence, The Smith Family took the step, as part of our organisational transformation in 1999, to make digital literacy one of the three key literacies supported through our *Learning for Life* suite of programs (the other two being comprehension literacy and financial literacy). The remainder of this report takes a closer look at how we set about providing these opportunities, and illustrates the powerful impact digital literacy has had on many of our families.

### **Technology and educational transformation**

*“We are witnessing the birth of a different way of approaching how we organise ourselves, one that offers significant opportunities to improve how we work, consume and innovate.”<sup>14</sup>*

Education in Australia is today at a crossroad. Never before has it commanded such high profile in policy discussion and debate, with calls for an ‘education revolution’ to transform our classrooms into more interactive spaces of learning where persistent achievement disparities between boys and girls, Indigenous and non-Indigenous students, and schools in rural and urban areas as well as low and high socio-economic settings become a thing of the past.

The new opportunities for communication and learning provided through technology are playing a powerful role in both underpinning the need for, and assisting in the development of, an educational transformation in Australia. From the perspective of infrastructure, new technologies will connect students to a globalised world and help those in rural and remote regions access learning resources previously out of reach. Most importantly, technology will change the way in which students and teachers relate to each other, learn from each other and work together in a 21st century knowledge society.

Brian Caldwell, Managing Director of Educational Transformations and Professorial Fellow at the University of Melbourne, argues that while Australian

education has taken small steps towards this new learning era, if it is to develop a world-class education system it must undertake large-scale transformation, defined as:

‘significant, systematic and sustained change that secures success for all students in all settings, especially under challenging circumstances, thus contributing to the wellbeing of each and every student and of society.’<sup>15</sup>

In many countries, technology is already facilitating traditionally marginalised people to participate and learn through peer-to-peer and mentoring opportunities in addition to the traditional model of ‘curriculum delivered, wisdom received’. In fact, learning is now more in fashion than ever before, but despite being the powerhouses of intellectual engagement, schools are being neglected and left behind because their policy and pedagogical approaches are struggling to keep up.<sup>16</sup> According to Professor Stephen Heppell, recently described as “Europe’s leading online education expert”, the framework for leadership in schools must change from standing at the front and preaching to the masses to a more collaborative and participatory direction.<sup>17</sup>

In his work on the international ‘Learnometer’ project, examining the role of technology in changing the learning environments of schools, Heppell has identified a number of shifts in practice that education systems will need to adopt in order to remain relevant in the 21st century.<sup>18</sup> (see ‘Trends’ chart below).

Increasing the digital literacy of both students and their teachers is a fundamental platform for undertaking these shifts within schools, and reflects the increase in learning flexibility and participation that Caldwell’s educational transformation demands. However, the technology is merely the means to an end, rather than a goal in itself.

From The Smith Family’s perspective, the ultimate value of this shift in learning emphases is not in the technological advancement that prompted it, but in the greater connectedness that it facilitates with others. As this series of 85th Birthday Special Reports demonstrates, the wellbeing of our disadvantaged families – and indeed all families – depends on the relationships they form with others. Digital literacy therefore holds enormous potential today to improve the participation of disadvantaged children and their families, in ways that are relatively inexpensive and easily scalable for effecting social change.

### Trends

From 20th century to 21st century



Source: [http://rubble.heppell.net/learnometer/trends\\_discussion.html](http://rubble.heppell.net/learnometer/trends_discussion.html)



## Digital beginnings

### Computer Clubs

In 1999, The Smith Family realised that a very different response was required for us to remain relevant and meet the emerging challenges of a 21st century knowledge society. Our seven-year transformation from a welfare-oriented organisation to a social enterprise focused on unlocking opportunities through education, discussed in detail in the 85th Birthday Reports *'Our History'* and *'Enabling Relationships'*, was a critical moment in the evolution of our organisation. It laid down, through our eight *Guiding Principles*, the elements that were to drive our expansion as a national organisation in presence as well as spirit, including: our commitment to working with and through others; to move towards prevention and early intervention; and to be evidence-based and community focused.

As part of this transformation, we were keen to begin supporting the digital literacy of children in our families to better prepare them for participation in a society increasingly driven and reliant on technology. Remaining faithful to the 'ABCs' needed to bridge the digital divide, we were able, with support from the **Microsoft** 'Young Minds in Motion' initiative, to pilot two 'Computer Clubs' at Sunshine and Collingwood in Victoria, with the goal of providing free after-school access and personal tuition around computers and the internet for students participating in our *Learning for Life* suite of programs.

The program worked by providing each Computer Club participant with access to an individual workstation, computer and internet equipment and software, and instructors to provide information and answer questions. Each of the three weekly sessions ran for two hours with a specially designed curriculum broadly covering a range of software and skill-sets that could be adapted to suit the particular needs of each group. Special emphasis was given to assisting students to use the computers to complete their homework or school projects.

Over the first two years of the Computer Clubs, close to 300 participants completed their basic training at Sunshine and Collingwood, with a further 40 attending sessions at a third Computer Club opened in Ballarat in 2001. Feedback from regular evaluations confirmed that students had responded very well to the informal learning environment provided in the Clubs, and that the curriculum had adequately addressed their various needs. Importantly, the Clubs also provided The Smith Family with the opportunity to pilot further initiatives designed to bridge the digital divide, including the *Ignite* web site (see below).

### The *Ignite* web site

*Ignite* is a joint initiative between The Smith Family and **Cisco Systems**, and was developed in 2002 to primarily address the 'C' (Content) of the digital divide 'ABCs' for students participating in the *Learning for Life* suite of programs. The web site is designed to act as a portal with three main objectives:

- To build a secure community environment in which *Learning for Life* students can communicate, build social networks, share ideas and information.
- To provide opportunities for students to learn about the internet and other technology.
- To provide access to resources for students to improve their general education; for example, mentors, tutors and on-line educational courses.

Through *Ignite*, we are able to provide students with access to digital communication and learning tools to further their educational and personal development. The web site varies in terms of design and content to reflect the needs of different age groups and educational levels, and was launched in 2002 with two separate sites for senior primary and junior secondary students. Since then, the resources have been expanded to include an *Ignite* for Youth (ages 16-24) web site supported by **Samsung** as part of their DigitAll Hope initiative. Targeted at those *Learning for Life* students preparing for their school to work/further study transition, this site offers employability skills information, course-specific educational resources, and links to mentors and other relevant youth sites.

### *I.can.connect*

This pilot project, developed in 2003, was designed to assist local communities to develop and expand their range of informal digital literacy learning opportunities. It represented a unique collaboration between The Smith Family's expertise in providing services to disadvantaged groups, the technological expertise of **Microsoft** and the research expertise of **RMIT University's** RMIT Learning Networks unit. Designed to work with and through existing partnerships (rather than developing discrete service delivery entities), *I.can.connect* aimed to strengthen the links between local community technology learning centres (CTLCs) and disadvantaged children and their families (including those participating in our *Learning for Life* suite of programs). The project did this by delivering services through three products: Computer Clubs (see above), Skills.net (a community-based program providing affordable internet training and access to disadvantaged people) and Whereveruni (an informal learning program built on participant needs rather than a set curriculum). Each of these services uses information technology as the catalyst to re-engage individuals with education and learning in a non-threatening environment.

In its pilot year, over 600 learners across 13 sites in inner city and regional areas were linked to learning opportunities through the services delivered as part of *I.can.connect*. Aside from developing digital literacy skills, participants were also able to identify their educational goals, understand how these linked to formal accreditation qualifications, and work with trainers in creating a 'road map' for achieving them.

For more information on Skills.net, go to [www.skills.net.au](http://www.skills.net.au)

For more information on Whereveruni, go to [www.whereveruni.rmit.edu.au](http://www.whereveruni.rmit.edu.au)



## Connecting communities

### *Unlimited Potential*

Having established a strong partnership with **Microsoft** in 1999 through our Computer Clubs in Victoria, The Smith Family was delighted to be selected as a Foundation Partner for the Australian launch of the international Microsoft digital literacy program *Unlimited Potential* (UP) in June 2004. The UP program is designed to broaden digital inclusion by providing technology skills through Community Technology Learning Centres (CTLCs). Whether in a remote village or a major metropolitan area, CTLCs are free or low-cost friendly places where people of all ages and abilities can learn about computers, use the internet, explore new careers, further their education, participate in community activities, and develop their digital literacy skills.

Within Australia, UP has been designed to support a range of disadvantaged groups, including low socio-economic families, seniors, disengaged youth, culturally and linguistically diverse individuals, those with a disability, people living in rural and remote areas, and Indigenous Australians. The program seeks to support these groups in three ways: at the National level, the goal is to facilitate **Access** to ICT for disadvantaged groups through a network of CTLCs, introducing opportunities for lifelong learning through technology in communities where these opportunities have been deficient for whatever reason. At the family and community level, the goal is to increase **Connectedness** in both the physical and virtual sense, i.e. connectedness between family members, between families and communities, and between individuals and information resources. The key focus here is on the engagement of disadvantaged and marginalised groups in order that they may participate more fully both from a social and economic perspective. Finally, at the level of the Individual, the goal is to increase their digital literacy **Skills**, not only those relating to technology that are accumulated during the course, but also academic skills (e.g. comprehension literacy), inter-personal and socialisation skills, all of which combine to enhance

**Table 1.0**

Global	National (Australia)	Community & Family	Individual
Broaden digital inclusion	Increased access to technology through networks of CTLCs	Improved community and family connectedness	Increased technological skills
	Improved lifelong learning opportunities	Engagement of disadvantaged groups in learning	Cultivation of a learner mentality Improved quality of life and socio-economic participation
	ACCESS	CONNECTEDNESS	SKILLS



quality of life. These skill-related outcomes then combine to aid workforce development, as shown in Table 1.0 above.

It is important to emphasise that these strategic outcomes are not prescribed or necessarily expected for each and every individual who enrolls in the UP clubs. Different communities and contexts will generate different outcomes and emphases, and from the perspective of a participant there is no measurable gauge of having ‘passed’ or ‘failed’ in the program. This is necessary because the majority of participants for UP are those for whom the concept of a ‘pass’ or ‘fail’ associated with accredited formal education has acted as a deterrent to their engagement in learning. Instead, The Smith Family seeks to engage individuals through their ‘fields of fascination’ (see below).

**Tapping into ‘fields of fascination’**

For disadvantaged parents and their children, the prospect of re-engaging with learning after bad experiences or extended periods outside formal education can be extremely daunting. Research has shown that the most common barriers to learning are not financial or time limitations, as might be commonly thought; but, rather, motivation.<sup>19</sup> Placing the emphasis of learning on qualifications and ‘hard’ outcomes could therefore have a regressive or detrimental effect on the progression of the learner, and that learner confidence, once undermined, may be irretrievable.<sup>20</sup> The Smith Family’s experience in offering the Computer Clubs and *I.can.connect* digital literacy initiatives confirmed this, along with our early evaluations of the UP program that revealed that more than half of the adults enrolling

had never undertaken any previous community education courses.<sup>21</sup> This underscored the importance of creating an environment in which the needs of the learner are central and in which they receive appropriate support to regain their confidence and see themselves as learners once again.

In particular, our work with RMIT University helped us to develop what we call the ‘fields of fascination’ approach to learning, in which participants are encouraged to use technology to re-engage in education by focusing on topics of interest to them, rather than on a pre-defined curriculum. These fields of fascination can cover any area, from gardening to cooking to V8 Supercars, and participants are motivated to learn digital literacy skills (e.g. using an internet search engine) as a way of further increasing their knowledge of the topic. Fields of fascination are also an important way of encouraging interaction with others in the UP club, as the case study on p.11 reveals.

**Evaluating the outcomes of *Unlimited Potential***

The nationwide rollout of UP across Australia has been designed and built on the collective experience, skills and networks of Microsoft, The Smith Family, RMIT University and the other UP Foundation Partners,<sup>22</sup> with the result that there are now more than 200 CTLCs delivering the UP program in every Australian state and territory. Over over 5,000 individuals have taken part in an UP training program through The Smith Family’s CTLCs alone; and in 2006 Microsoft presented us with a Global Community Affairs award in recognition of our outstanding contribution to Microsoft Community Affairs and the *Unlimited Potential* program.

## Case study: ‘fields of fascination’

Not long ago a young woman – we’ll call her Wendy – brought her children into one of our UP centres. She was a single mum, probably in her early thirties who had very little interest in, or perceived need for, computers and the internet and wasted no time indicating this to the trainer.

Sensing a challenge, the volunteer trainer – Ross – decided to take a different tack. “What is the best thing that could happen to you?” he asked her. “Win lotto” was her reply. “What would you do with the money?”

“I would take my children to Disneyland and buy a new car.” Wendy said. “Well, let’s imagine you have won lotto. Who would you tell?” Ross said. “I’d tell my friend Jen.” “Then let’s write a letter to Jen,” Ross continued enthusiastically.

It just so happens that part of Wendy’s reluctance to use a computer was her embarrassment over her poor spelling and so she was delighted when the little red squiggly lines appeared under her misspelt words, guiding her to type them correctly.

At the same time a man came into the centre. He didn’t think that learning to use a computer could be fun until Ross showed him how to surf the web and found a page on the internet which compared the fuel consumption of Holden and Ford V8s. The man was enthralled and couldn’t believe the internet could be used to source such information.

A third and older woman in the UP centre, was very interested in ‘bluestone’ buildings and castles. Again, Ross was able to help her use the internet to find a wealth of information on blue stone castles in the UK.

But here comes the most important part of this story. It wasn’t long before the man started talking to the young single mum about which car she should buy for her kids and the older lady convinced the single mum to visit a castle or two on her way to Disneyland.

This is the real strength of the UP initiative: the ability to use technology as a way of connecting people to create a strengthened sense of neighbourhood and in turn build stronger, more connected communities.

The resources provided to CTLCs through the UP program enable the delivery of an eight-week training program with a minimum of 16 student contact hours. Trainers are free to adapt the UP curriculum to the needs of participants, so that while one session could be structured around learning to use the internet, another could focus on digital storytelling. This means that the outcomes of the program vary significantly across CTLCs and among the participants themselves.

The Smith Family has led the way in terms of evaluating the outcomes of UP in the 100+ CTLCs we work with nationwide. After conducting an international literature review on the potential effects of CTLCs for communities in 2004, we have conducted regular evaluations to capture the outcomes of the program, as well as producing a *Good Practice Guide* exploring key learnings and the diversity of UP implementation within the Australian context.

A selection from the findings from this research is presented below.

### 1 Supporting relationships

Computers have a unique ability to act as a leveller, and the evidence suggests that UP is able to bridge a range of social divides that might otherwise persist in more formal education programs, mainly by improving how people communicate and learn about each other. This can occur within the family unit through improved relationships between parents and their children, and also within the community in terms of assisting in the assimilation of diverse cultural groups and people of non-English speaking backgrounds.

For parents, particularly those from non-English speaking backgrounds and those who have worked in manufacturing/industrial jobs, the increasing dominance of technology in society has posed a threat to their authority, and in some instances divided the worlds in which they and their children inhabit. As one UP adult participant observed:

*“There are a lot of parents who don’t understand computers in our community – but their kids do, and there is a danger that this might create a rift in their relationship and their ability to share time together.”*

Fear of such a rift appears to be a motivating factor for many adults in enrolling into UP, particularly with

continued high profile coverage in the media of the threats to children's security through the internet. As these two parents confirmed:

*"I don't like to play games or use computers that much, but I want to be able to help my children – and know what they're up to! At the moment, they spend a long time on the computer, and I don't even know if they're doing homework or playing games!"*

*"I think it's important for a parent to understand computers because the internet can be quite dangerous for children, and we need to know how to control this."*

By assisting parents to learn basic technological skills, UP provides valuable support in building their capacity to monitor and look after their family in the digital age. It also opens up new opportunities through which parents can relate to their children:

*"When I first started to come to the club, my mum came with me to watch over us. She even learnt some basic stuff while she was there, and she understands the language now when I talk about what I'm doing."*  
– UP teenage participant

*"I bought a very cheap digital camera and used this to turn pictures of my children into a slideshow on the computer. I also borrowed a scanner and scanned in all my youngest son's school reports so that I could keep track of how he's doing. My kids tell me all the time now how proud they are of me..."*  
– UP adult participant

The relaxed environment of UP has also positively influenced values relating to tolerance, understanding and respect for others, not only by virtue of the learning that occurs simply from sharing the same physical space on a regular basis, but also by assisting people to express themselves freely and build trust in those around them. As these two adult UP participants confirmed:

*"I love being in a class with so many different people! Chinese, Vietnamese, Sudanese, Italian... they all bring different things to the class and I think we're all learning so much about each other."*

*"The girls who sit next to me help me understand what I find hard, and I do the same for them... Mixing up abilities and ages this way is great, I think – we all get different things at different times, so we seem to fit together well."*

## 2 Re-engaging with learning

Individuals who have spent long periods of time disengaged from education and mainstream society often feel there is very little they can do to get back on track. UP evaluation data suggests that one of the most important outcome of the program has been to provide participants with an awareness of opportunities they never knew about. In the words of one UP trainer:

*"I think the biggest positive of UP is in showing people different pathways and options, that there are a lot of choices they can make about their lives, despite some appearances to the contrary. It helps them see they have the skill to learn something, that they're not dumb. In this way, I think it plants the seeds of lifelong learning."*

The relaxed and creative environment of UP classes has also succeeded in boosting the flagging motivation of those less comfortable in formal education:

*"Before I came, I was on the verge of quitting school. I didn't like it, and I was always in trouble. Lots of teachers thought I was dumb – in fact, the Principal's office was my second classroom! But I really enjoyed the centre and started to use the computers outside the club hours. It has helped a lot with my English homework and now my teachers can't believe it. I reckon I'd be failing at school without the centre, it gave me a lot of extra knowledge."*  
– UP teenage participant

Finally, for many parents attending the course, the UP club represents one of the first instances they have had to focus on their own development, both in a social sense of reconnecting to the community and on a personal level of learning:

*"It's been very exciting for me to start learning again – I work part-time at the moment and really look forward to the club. If I had to sum up how I feel about the course in one word, it would be 'achievement' – I feel like I'm doing something really positive for myself for the first time in ages!"*  
– UP adult participant

### 3 Enhancing personal and academic skills development

The positive impact of learning on self-confidence and self-esteem is one of the most commonly documented outcomes in the research on community education. UP is no exception here, and from the perspective of trainers, is an excellent vehicle for improving an individual's self-confidence, self-esteem, resilience and social skills:

*"The UP program is about so much more than learning to use computers! People attending the class, who have suffered isolation and disengagement for so long, come face-to-face with a group of people they have never met before, and must learn to build relationships and socialise within a new environment."*

– UP Trainer

Research has shown that computer use and skills training for young people in an informal environment also benefits and supports their broader academic and educational outcomes. By far the most common activity cited by young people who attended UP centres was the use of computers and the internet for assistance with schoolwork. Aside from the inherent benefit of being able to access extra-curricular resources to aid and facilitate their learning, international studies have also shown that regular computer users perform better in key school subjects than those with limited experience or confidence.<sup>23</sup>

UP participants report improved educational outcomes in a number of ways, including increased literacy skills, access to greater information resources and new methods of presentation:

*"Using computers has improved my spelling, because I search on Google and use spell check on my homework. I even write short stories now – I didn't know I was any good at this till I tried!"*

– UP teenage participant

The renewed confidence and engagement with education of children participating in UP is also visible to their parents:

*"Computer skills have definitely added to my kids' schoolwork standards... This has been the icing on the cake really, and I think it's played a part in the awards they've been getting from school. One of their Year 7 projects was actually put on display because the Principal said it was Year 9 standard! I was very proud."*

– UP adult participant with children also participating in UP

### 4 Building financial literacy

UP provides participants – particularly mothers and lone parents – with the motivation and skills for better money management. This appears to be part of a pattern in which participants take advantage of the organisational abilities of computer technology to manage their other aspects of their lives and their limited resources in a more efficient way:

*"Since doing the UP course, I use the computer very regularly, and not just for games like before. I use Excel to work out my budget for the house and children, and made a savings plan for the whole year that I will hopefully be able to stick to."*

– UP adult participant

*"Having a computer in the house was at the start pretty expensive, but I think it's saved me a lot of money over time because it keeps the kids entertained without having to go out all the time."*

– UP adult participant

Using technology to improve financial literacy skills and increase savings has been shown by international research to have numerous social benefits, including improved household stability; increased personal efficacy, social connectedness and civic participation; improved labour market experiences; and improved health and wellbeing. Moreover, the same research has shown that the assets (savings) of lone mothers are positively associated with their children's educational attainment.<sup>24</sup>

## 5 Broadening social inclusion

Through the development of digital literacy skills, UP has also facilitated many participants' inclusion in a broader social sense within their communities. For example:

*"UP has got me out of the house, meeting people, raised my self-confidence and given me a bit of self-worth. I really didn't realise that finishing work would kill my motivation and self-esteem so dramatically. There were things that needed doing around the house, but I just couldn't bring myself to do them. I had a routine, and to suddenly lose this one day was very hard. The computer club has helped to bring back regularity though – it's the 'UP' in my whole week!"*

– UP adult participant

This kind of re-engagement with society through UP appears to be most strongly felt by those with physical and/or learning disabilities, who arguably face the greatest challenges to participating in communities due to their varying degrees of dependence on others. As this participant described in a PowerPoint presentation to his fellow participants, the ability to email and communicate online has brought a refreshing change in terms of being treated the same as everyone else:

*"I am 39 years of age. I have cerebral palsy and my ability to communicate was once very difficult. This presentation is to show people that my use of current technology has allowed me to access the internet and has assisted me to communicate effectively with friends and relatives. Since accessing the internet, I am able to visit places which would otherwise be very difficult for me to access. Being an avid Essendon Football Club supporter, I have been able to access its website and gather information about the club, players and the game. Using email, I am now able to keep in regular contact with people who are important to me..."*

– Extract from a PowerPoint presentation by an adult UP participant

## 6 Enhancing employability skills

Contributing to job readiness is one of the fundamental objectives behind the design of the UP program, but because of the multiple levels of additional disadvantage that participants face in their own lives, including poor literacy/language skills, poor health and low socio-economic status, it is very rarely the case that a lack of digital literacy skills is the only barrier between an UP participant and gainful employment. For this reason, the program is most successful as one piece in a jigsaw puzzle of employment support, providing participants with the confidence, motivation and technological skills to begin this difficult journey:

*"I haven't had a job since 1979... As my kids got older I used to sell Avon products door to door but I had no actual skills and it didn't get me very far. Since doing the UP course, my computer skills have given me the confidence to think more seriously about a job, and what skills I would need to apply. Since leaving the centre, I've applied for around 19 jobs in the local area."*

– UP adult participant

*"The internet skills have helped me to research the different kinds of jobs out there and find those that might be better suited to someone like me. I'm now able to use the computer at the Careers Reference Centre."*

– UP teenage participant

*"The UP club taught me a lot – when we had a Jobs Pathways day at school we were shown how to create a resume and I went and did mine at the centre. I've sent it off to K-Mart, Big W and a few other places..."*

– UP teenage participant



### VIEW online groups

On 14 April 2005, the Victorian Minister for Information and Communication Technology, Marsha Thomson, announced a \$500,000 funding boost to help more Victorian communities get online as part of the *My Connected Community* initiative. The aim of the funding was to establish virtual meeting places where community groups could interact online, including creating a website, publishing online content and communicating with other like-minded communities.<sup>25</sup>

This round of funding focused particularly on senior Victorians, and was therefore particularly relevant to the members of VIEW, a valued part of The Smith Family. VIEW (Voice, Interests and Education of Women) Clubs of Australia were originally established by The Smith Family in 1960 as a service to women and to the community by bringing together women outside the home, breaking down their isolation and giving them the opportunity to make a contribution to their local community. By extending fun, friendship and learning for women who were once isolated, VIEW has grown in strength and numbers, becoming an organisation of 21,500 women in 390 communities across Australia. Today, VIEW:

- Empowers women.
- Seriously commits to educational opportunities for Australia's children.
- Is a support network for women.

- Actively works with The Smith Family.

In mid-2005, The Smith Family began providing computer skills training to VIEW members in Victoria as part of the 'My Connected Community' initiative funded by the Victorian Government and coordinated by VICNet.<sup>26</sup> This program, entitled 'VIEW Online Groups' (VOG), had four key goals:

- 1 To provide eligible VIEW members access to the internet;
- 2 To improve the digital literacy levels of VIEW members in Victoria;
- 3 To extend the interaction of eligible VIEW members with fellow members and other VIEW clubs; and
- 4 To increase the technological capacity of individual VIEW clubs.

Members participating in the program undergo a day's intensive training on how to establish a club website/online presence as part of the 'My Connected Community' (mc2) network, with key individuals within each club taking on the role of 'moderator' or 'owner' to regulate the online content and chat forums.

Following a successful pilot evaluation, the VOG program was rolled out to VIEW clubs in South Australia and Queensland, where it has been equally well received. By February 2008, close to 600 VIEW members have been involved in the program,

and over 78 clubs have successfully established an online presence as part of the mc2 network.<sup>27</sup> This has opened up new opportunities for these clubs to attract new members and guest speakers, organise meetings and local fundraising events, and communicate more quickly and efficiently with other VIEW members from other clubs across the nation.

At an individual level, evaluation data collected from VIEW members involved in the program were very encouraging, and found that following their training:

- 93.8% reported that they wanted to continue using computers.
- 81.3% confirmed that VOG had taught them new skills.
- 59.4% reported that their usage of a computer at home had increased.
- 56.3% believed that communication with other VIEW members in their club had improved.
- 71.9% felt that communication between VIEW and The Smith Family had improved.
- 50% had shared their new computer skills with others.
- 90.6% would recommend the VOG program to other VIEW members.

These positive results were also reinforced by comments received from VIEW members participating in the program, including:

*"I see this program as a wonderful tool to bring members of VIEW together. It enables women, especially older members, to become familiar with modern technology thus bridging the digital divide."*

*"A wonderful tool to help – I hope – promote VIEW to a wider audience that will increase VIEW's profile and numbers to many more women."*

*"Improved communication helps in so many ways – it aids the feeling of inclusion – it widens the horizons – it improves the feeling of well-being..."*

Today, the 'My Connected Community' (mc2) website has become a 'go to' place for information for VIEW members across the country, and it now carries National Council Minutes and other regular official information pieces, as well as the full 2007 Convention Pack for reference by members. Through mc2, VIEW women are also meeting and forming friendships with other women involved in their community, and who have a passion for helping disadvantaged children to gain a better education.



## Connecting families at home

The rapidly expanding body of research around digital literacy has shown that access to computer technology in the home environment is associated with a range of benefits above and beyond those arising from access in CTLCs. For example, various studies have found that the educational use of technology by children outside of school is positively associated with a rise in students' attainment in key school subjects (particularly mathematics). It also brings wider benefits including motivational effects, raising the self esteem and confidence of low achievers and enabling those with special needs or high achievers to demonstrate their ability.<sup>28</sup>

Statistics show that in 2006-07, 64% of Australian households had home internet access and 73% of households had access to a computer – proportions that have increased steadily over the last decade. However, the socio-economic characteristics of households continue to influence the rate of computer and internet connectivity across Australia, such that households with lower incomes, Indigenous households and those located in ex-metropolitan or remote areas of Australia are significantly less likely to be connected to a computer and/or the internet.<sup>29</sup>

Parental characteristics such as occupational background also influence the presence of computers in households, largely through their effects on income. There is a strong relationship in Australia between occupational status and having a computer in the home, with people holding a tertiary qualification 2.3 times more likely to have internet access at home than those with a primary or secondary level of education.<sup>30</sup>

These access-related factors were confirmed by our own research with students participating in our *Learning for Life* suite of programs, which found that our families, with low incomes and low levels of education, were significantly below the national average in terms of home computer and internet access.<sup>31</sup> We realised that the next logical step in expanding our digital literacy strategy was

to build on the contribution made by Community Technology Learning Centres through *Unlimited Potential* by facilitating the installation and use of computers in the homes of our disadvantaged families.

### Technology Packs

The Smith Family's Technology Packs initiative builds on the strengths and learnings of our existing programs to provide families with the resources and motivation to continue improving their digital literacy outside their participation in our initiatives. In partnership with **GreenPC**, the program works to provide disadvantaged Australian families with a computer connected to the internet at home at an affordable cost. Remaining faithful to the 'ABCs' required to bridge the digital divide, the program is also supported by a face-to-face training session for families registering for the computer, along with online tutorials and ongoing telephone help desk support from a dedicated team.

The program brings together a number of our goals around digital literacy, including:

At a **community** level, to:

- strengthen community capacity and social capital by increasing channels for connectivity and interaction – increased social connectedness.
- increase community cohesion by engaging local businesses and community organisations through funding opportunities, volunteer activities and training opportunities.

At a **family** level, to:

- provide hardware, software, support and internet access at a significantly subsidised rate per computer; this initial payment will then be directed towards helping to cover the costs of dial up access after the first 12 month period.
- provide parents and their children with the opportunity to learn digital literacy skills required in the workplace, home and community, through a comprehensive training program, including a four-hour face-to-face induction to ensure skills development and appropriate use at home.
- extend the involvement of parents in their children's education.

- instil an understanding of the tangible and intangible value of owning a computer.
- deliver up to 600 technology packs in 12 communities over three years.<sup>32</sup>

At an **individual** level, to:

- increase individual's self esteem, social skills and participation at school.
- empower disadvantaged individuals through access to information, additional learning channels and improved academic engagement.
- provide individuals with necessary technology skills required in the work place.

In the first three pilot communities selected for the program – Deception Bay and Townsville in Queensland, Fairfield in New South Wales – we provided close to 200 technology packs to families. These communities were selected because they had low levels of home computer ownership, but where an *Unlimited Potential* centre was already established that could provide the face-to-face training component of the program. Promotion of the Technology Packs was enabled through the various relationships our *Learning for Life* workers had already built in these communities with schools, families and local service providers, ensuring that we were able to identify and work with families most in need of this opportunity. Following the successful take-up of Technology Packs in these communities, planning is now underway with a view to expanding the reach of the program nationwide, beginning in Brimbank (Vic), Ipswich, Gold Coast and Logan (Qld), Tamworth (NSW) and Canberra (ACT) by mid-2008.



Participants in the *Unlimited Potential* program at Cherbourg, Qld.

## Connecting students at school

The importance of digital literacy at school is recognised in Australia's National Goals for Schooling in the Twenty-First Century, proposing that when students leave school they should be "confident, creative and productive users of new technologies, particularly information and communication technologies, and understand the impact of those technologies on society."<sup>33</sup> Almost a decade later, findings from the first national assessment of student levels of digital literacy in Years 6 and 10 were released, revealing that:

**Digital literacy is still strongly associated with socio-economic background.**

Approximately two-thirds (68 per cent) of Year 6 students whose parents were "senior managers and professionals" attained the proficient standard of digital literacy compared to approximately one-third (32 per cent) of students whose parents were in "unskilled manual, office and sales" occupations. Similar proportions were reflected among students in Year 10.

**Indigenous students have lower levels of digital literacy.** The percentages of non-Indigenous students attaining the proficient standard for each Year were consistently greater than the percentages of Indigenous students. In Year 6 the comparison is 50 per cent compared to 30 per cent, while in Year 10 the comparison is 62 per cent compared to 35 per cent.

**Digital literacy is lower for students from remote locations than for their peers from metropolitan locations.** In Year 6, 52 per cent of students from metropolitan locations attained the proficient standard compared to 33 per cent of students from remote locations. The corresponding figures for Year 10 were 63 per cent and 46 per cent. Those differences remained after allowing for the influence of other associated factors.<sup>34</sup>

Overall, only 49 per cent of Year 6 students and 61 per cent of Year 10 students reached or exceeded the proficient standard of digital literacy expected of them at these ages.

These findings confirm the importance of two strategies: first, that children must be provided with digital literacy opportunities as early as possible in their lives (preferably before formal schooling) as a platform on which to build their proficiency during school; and second, that special effort must be made to engage disadvantaged and particularly Indigenous students in digital literacy initiatives to better prepare them for participation in a digital society. Two recent initiatives involving The Smith Family – the IBM KidSmart early learning program and an intensive computer and internet training program for Indigenous students and teachers at Cherbourg State School, Queensland – have taken the first few steps in responding to these needs.

### Digital literacy in early childhood

#### IBM KidSmart

Children are accessing technology at increasingly younger ages. One Australian study of children aged eight or nine found that over one-third had started using the internet at age five or six.<sup>35</sup> Consistent with our focus on prevention and early intervention, The Smith Family took our existing relationship with IBM (which had supported our *iTrack* online mentoring program) to a new level in late 2006 with the provision of five IBM KidSmart units for children aged 3–7 in three of our *Communities for Children* sites in Townsville West (Qld), Raymond Terrace and Fairfield (NSW).<sup>36</sup>

Each KidSmart unit consists of colourful ‘Little Tikes’ furniture, an IBM PC and educational software specially designed to be used by young children. KidSmart builds on the understanding that pre-school children learn best through creative play and social interaction. With support from early learning educators specially trained in KidSmart by The Smith Family, the system improves the learning skills of children and encourages them to become confident technology users before transitioning from home to school.

In late 2007, we facilitated the provision of five more KidSmart units to a further two *Communities for Children* sites (Brimbank in Victoria and Mirrabooka in Western Australia), in addition to providing an extra two KidSmart units in Fairfield and Raymond Terrace, where demand continued to be strong.

An independent evaluation of the KidSmart Program in Australia has shown that participating children have improved their sharing, listening and cognitive skills.<sup>37</sup> In many cases, it has also worked to promote peer-to-peer learning at an early age, with children paired together strategically to enable a child more familiar with the computer to help one less confident. The value of facilitating this kind of peer-to-peer learning is now increasingly recognised in the literature around contemporary approaches to early childhood education, and supports the concept of the child as a strong and active contributor in their own development.<sup>38</sup>

For more information on IBM KidSmart, go to [www.ibm.com/ibm/ibmgives/grant/education/programs/kidsmart.shtml](http://www.ibm.com/ibm/ibmgives/grant/education/programs/kidsmart.shtml).

#### Digital literacy for Indigenous students and their teachers

One of the key learnings from our work with Indigenous people in Australia (see 85th Birthday Special Report ‘*Indigenous Relationships*’ for an overview) was the importance of personalising their education in ways that are sensitive to cultural differences and to Indigenous students’ learning styles. The flexibility of technology has been shown to be a powerful asset in this respect, offering a range of different mediums through which Indigenous students can express their creativity and culture at their own pace and level. This section complements the initiatives illustrated in the *Indigenous Relationships* 85th Birthday report by looking at one particular digital literacy program introduced to support the greater engagement with technology of both students and teachers at Cherbourg State School, Queensland.

#### Cherbourg State School

The community of Cherbourg is located approximately three hours drive north-west of Brisbane. It was established in 1904 as a relocation area for Indigenous people from all over Queensland who had been removed from their land under the Aboriginal Protection Act. Today, Cherbourg has a total resident population of around 2,500 and is run by the Cherbourg Aboriginal Community Shire Council, which consists of six Indigenous Councillors. The community faces a number of significant challenges, including remoteness, high substance abuse, low employment and low household incomes.<sup>39</sup>

The Smith Family first began to work with the Cherbourg community in 2005 through our partnership with the Queensland Government's 'Strong and Smart' initiative, which saw us introduce the *Unlimited Potential* program at the **Indigenous Knowledge Centre** in the grounds of **Cherbourg State School**. With low levels of computer access and ownership within the community, building the Digital Literacy capabilities of students has been a priority at Cherbourg State School for some years, in alignment with the emphasis of the 'Strong and Smart' philosophy. Competence in computer and internet use is not only important in improving Indigenous students' skill levels, but also assists in developing their self-confidence and pride when entering the 'mainstream' environment. In addition, the range of activities available through technology also helps to engage the most disadvantaged students, many of whom are very interested and attracted to technology.

While the UP program was initially targeted at students from Cherbourg State School, it quickly attracted many different people from across the community, including council workers, clients at the **Cherbourg Rehabilitation Centre** and members of the **Cherbourg Men's Group**. In this way, we were able to gradually build trusting relationships with families and institutions and develop initiatives to boost social capital and local participation within the community.<sup>40</sup>

During this time, it became evident that there was also a strong need to increase the digital literacy of Indigenous children and their teachers within the school environment. Due to poor network structure and resourcing issues, computer use in classes at Cherbourg State School was very low, and both staff and students lacked confidence and knowledge in how what little technology they had could be used to support their learning. Recognising this need, The Smith Family, Microsoft, Cherbourg State School and Strong and Smart joined forces in 2007 to improve the technological infrastructure and support an intensive 16-week digital literacy course for students of all Year groups and their teachers.

### **Integrating digital literacy into the school**

One of the key aims of the program, in addition to increasing the digital literacy of students at Cherbourg State School, was to encourage the broader acceptance and use of technology across

the school. To this end, the intensive training was provided through a series of regular sessions to students across all Years at the school. The involvement of teachers was also critical to ensuring they felt more confident and motivated to integrate technology into everyday classes, rather than view it as a stand alone subject. This would mean that rather than creating more work for teachers, the program would improve their understanding of how technology could enhance the work that students were already doing. It would also increase the likelihood of students continuing to undertake digital literacy activities following the conclusion of their training.

The intensive digital literacy training ran for 16 weeks over two school terms, and a comprehensive evaluation revealed the following:

- Cherbourg State School students exhibited demonstrable improvement in computer skills over a relatively short time.
- Providing opportunities for the most 'at risk' students to raise their digital literacy skills and awareness by increasing their hourly time on computers helped to re-engage these students into the mainstream learning environment.
- Encouraging teaching staff to integrate digital literacy activities into the school curriculum and assessment cycles helped to sustain the interest and heightened commitment to learning prompted by the intensive training.
- Peer-to-peer learning operated phenomenally well. Students with advanced skills were very quick to help or intervene when other students were struggling or misbehaving. The strong community ties here are undoubtedly helpful in this respect, and it is highly recommended that teachers tap into this strong family bond to help the skills development of participants.

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