



Australia Experiences a Digital Education Revolution

Introduction

Australia's Digital Education Revolution (DER) program demonstrates the power of technology to transform education.

The ultimate goal of the DER program is to prepare every Australian student to live and work in the digital world. To that end, the Commonwealth of Australia committed AUD 2.4 billion over seven years to help schools across the country integrate technology into the classroom.

The DER program helps to address the country's digital divide, where metropolitan schools have traditionally had greater access to information and communication technologies (ICT). National, state, and territory governments are now working together to bring the benefits of eLearning to all schools, through a variety of well-funded, sustainable initiatives.

Challenges

- Deliver the benefits of ICT to rural and geographically remote schools.
- Help teachers learn to integrate ICT into the classroom.
- Develop online tools and resources for students, parents and teachers.

Solutions

- The national government committed AUD 2.4 billion over seven years to the DER plan.
- State and regional efforts complement the national DER effort.
- DER funding supports new ICT solutions and development of online tools and curriculum.

Results

- DER has provided nearly 300,000 computers for student use in 2,701 schools nationwide.
- High-speed broadband connectivity has been extended to metropolitan and regional country schools.
- More than 15,000 educators have taken part in the Intel® Teach Program to learn to integrate technology into instruction.
- Australia's national curriculum is being reformed to incorporate essential 21st-century skills, including digital literacy.



Five Key Components to Education Transformation

The education solutions adopted in Australia can be described by five general categories (see Figure 1).

In Intel's work with Australia and more than 70 other countries around the world, these five interrelated categories have proven essential to support long-term, comprehensive changes in education.

Policy ●

Governments have the power to implement policies that establish the conditions necessary to transform education.

Examples:

- New regional and national policies include tax breaks and purchase programs to encourage faster deployment of computers, software, and broadband Internet connections.
- The state of Victoria provides 50 percent tax breaks for parents who purchase education-related computers and software.

Curriculum and Assessment ●

Curriculum standards and assessment tools are necessary to track the success of education programs and build ongoing public and private support.

Examples:

- Australia's national curriculum is being reformed to incorporate essential 21st-century skills, including digital literacy.
- DER funding supports the development of online tools and curriculum aligned with national curriculum standards.



Figure 1.

Through the Intel® Teach Program, more than 15,000 educators have learned to integrate technology into instruction.

Professional Development ●

Teachers, and their professional development, must be a central element in any sustainable education solution.

Examples:

- Through the Intel Teach Program, more than 15,000 educators have learned to integrate technology into instruction.
- The DER program provides professional development to help teachers learn to integrate ICT into their classrooms.
- The state of Victoria established a development center where teachers are required to complete 40 hours of ICT-related training through the Intel Teach Program.

Information Communications Technology (ICT) ●

Optimal teaching and learning requires a full range of ICT tools, including broadband Internet connectivity, appropriate software applications, and operating environments.

Examples:

- DER has provided 292,752 computers for student use in 2,701 schools across the country.
- High-speed broadband connectivity has been provided to both metropolitan and regional country schools across Australia.
- A variety of state and regional efforts provide additional ICT to schools nationwide.

Research and Evaluation ●

Research and program evaluations provide valuable information to governments and other stakeholders as they define and make adjustments to education reform programs.

Examples:

- A study conducted by the University of Canberra¹ confirms that the ICT integration resulting from the DER program is improving learning outcomes for students.
- Ongoing evaluations are being conducted at various levels of the Australian education system to examine the impact of ICT integration and provide guidance for improvement.
- A study conducted by Deakin University on the “Victoria Notebooks for Teachers and Principals Program” alluded to improved teaching outcomes, in terms of increased self-efficacy (teachers felt they looked more professional because of their enhanced ICT knowledge and skills) and improved employee morale (made them feel that they were recognized as important by the state)². This groundbreaking program and outcomes research has since formed the basis of additional programs across the country.

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EXTENDING THE EDUCATION TRANSFORMATION TO PROVINCES

Local and regional governments can often expand upon national policies to support nationwide education transformations. Examples in Australia include:

- **New South Wales:** More than 200,000 laptop computers have been provided to secondary school students, and 25,000 to teachers. The government has also formed agreements with software companies to provide software for the laptops.
- **Victoria:** Laptop computers have been given to more than 40,000 teachers to help them improve learning outcomes for their students. The teachers also receive ongoing support and training.
- **Queensland:** To help students acquire 21st-century skills, all full-time and part-time teachers have received free notebooks as well as training to help them integrate technology in their classrooms.



1. Source: "Listening to Students' and Educators' Voices," Kathryn Moyle and Susanne Owen.

2. Source: "Notebooks for Teachers and Principals Initiative Research Project," Annette Gough, Alan Marshall, and Joan Taylor.

THREE BEST PRACTICES

The successful education transformation in Australia depended on several best practices that reflect Intel's experiences with similar programs worldwide. Other countries can follow these best practices to achieve similar success of their own.

Best Practice 1: Dedicate specific resources

Australia has been committed to integrating technology into education for more than a decade. However, it was only when the national government created the DER program and committed AUD 2.4 billion over seven years that the country was able to bridge its internal digital divide and begin to realize a nationwide education transformation.

Best Practice 2: Involve local and regional governments

The ongoing success of Australia's education transformation depends on the support and commitment of state and regional governments. The DER program spurred local action and funds some initiatives, but the national government also encourages the governments in states and territories to carry out their own education programs.

Best Practice 3: Emphasize professional development

ICT alone is not enough. Sustained change in the classroom depends on professional development that can help teachers learn how to integrate technology into their instruction. Through the Intel® Teach Program and new online tools and curriculum, Australia is making sure that new technologies will be incorporated effectively into the classroom.

Conclusion

Australia's DER program, combined with a variety of state and regional initiatives, has helped the country transform its education system. The country is successfully integrating technology into classrooms across the country, and giving all students access to the 21st-century skills they need to succeed.

The five-part, systemic model that describes Australia's efforts is equally available to other countries worldwide. Working with Intel and other public and private partners, countries can create sustainable, nationwide programs that improve outcomes for students—and, thus, for the nation as a whole.

Achieve Your Vision

What's your vision of the world ahead? Intel's model of education transformation can help governments improve the quality of the education system, leading to greater economic and social opportunities.

Contact your local Intel representative to discuss how you can implement a sustainable, technology-based education program in your country. Visit us on the Web at:

www.intel.com/education

