

ICT In Schools.

The New Zealand Case Study:

New Zealand was particularly chosen for the case study in order to examine the approach of schools towards learning of students growing up in a digital world in a nation that is “an emerging world leader in ICT education” and one that aims for “digitally minded schools”.

The government has a long established policy for ICT in education; it has implemented strategies to develop school capability; and it has committed funds to prepare teachers for ICT. Furthermore, the Ministry of Education has a clearly stated vision for ICT, namely, to focus on: learning and teaching for a new generation of young people who are growing up in a digital world, are comfortable with technology, and need their schools to reflect these realities ... It envisions a journey that takes us through learning about ICT, learning with ICT, and learning through ICT (cited in Ledesma, 2005, p. 3).

Nine schools in differing socioeconomic locations were selected for a month-long intensive study. The aim was to observe how these schools integrate ICT into regular learning and teaching. Three levels of integration were monitored: curricular, spatial and pedagogical. Three main findings emerge from the case study. In regard to curricular integration, ICT was clearly linked to curriculum goals and outcomes in all schools. All observed ICT activities meshed in naturally with other classroom learning activities. With regard to spatial integration, in contrast, many of the ICT activities observed were physically separated from other classroom activities, often taking place in a corner of the classroom, a computer lab, or the library, at times when these facilities were reserved. Observations about pedagogical integration (which describes the match of ICT use to the vision advanced for ICT in schools' technology plans) revealed a sharp divide. “Behind the ‘dazzle’ of the learning medium,” concludes Ledesma, “was traditional pedagogy.” The textbook still dictated instruction in a mathematics class; computers were often used as substitutes for typewriters in language classes; and although some exciting ICT projects were observed, these were often more like enrichment activities than a part of everyday learning.

Ledesma's fuller case study of which the above is a partial extract is significant since it provides pointers for other countries in the Asia-Pacific region. It outlines government and other initiatives taken to ensure that pre-requisites for ICT in education are in place, namely:

- _ A national plan for ICT in education;
- _ Adequate infrastructure;
- _ Strategies and funding for developing school capability;
- _ Preparing teachers for ICT;
- _ A vision for ICT in education.

Yet these pre-requisites are not in themselves sufficient. The case study shows that, although ICT offer the potential for new ways of learning, this potential is often limited because teachers do not modify their teaching approaches sufficiently. This finding indicates why the preparation of the next generation of teachers is so important. As Ledesma (2005, p. 7) puts it, "New learning cultures need to be created to respond to the opportunities and challenges of the digital world". Students entering schools are already digital natives as argued in the previous section.

Schools must build on this foundation to meet the challenges of the digital world in order to realize students' full potential. And there must be changes in the school curriculum.