

Chapter 88

The Impact of ICT in Educating Students with Learning Disabilities in Australian Schools: An ANT Approach

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ABSTRACT

The term “Learning Difficulties” (sometimes also referred to as Special Needs) is used in reference to students who have significant difficulties in the acquisition of literacy and numeracy skills and need extra assistance with schooling. This is a large heterogeneous group. Another more specific term is “Learning Disabilities” that refers to the small sub-group of students who exhibit severe and unexplained problems. This chapter presents a report on an investigation, framed by the use of actor-network theory, of how the use of Information and Communications Technologies can aid in improving the education of students with Learning Disabilities. The study involved case studies and participant observation of the use of ICT in two outer Melbourne suburban Special Schools and an investigation of the impact of Education Department policies on these school environments. Research at the two Special Schools revealed that use of Information and Communications Technologies can have a very beneficial impact on these students by improving their self-esteem and facilitating their acquisition of useful life skills.

SPECIAL NEEDS SCHOOLS

In Australia, and around the world, there are a significant number of primary and secondary school students with Learning Disabilities, otherwise also known as Special Needs. These students require some assistance and support in their learning. There are over 100 Special Needs Schools in Victoria and

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over 1,200 in Australia (Australian Schools Directory 2011). An analysis revealed over 1,000 special schools in various categories, including Learning Difficulties/disabilities of general nature, intellectual and physical – ranging from mild to physical and severe Learning Difficulties. Table 1 below provides the various categories that can be found in the directory of Special Needs Schools.

Although policies have existed for several decades to integrate students with Learning Difficulties into the mainstream classroom, this has not always provided the best learning environment for all these students (Johnson, Gersten and Carmine 1998) and this contention is supported by more recent work from Shaw, Grimes and Bulman (2005). The literature provides many examples where the demands of the students in this category could not be catered for in an adequate manner in mainstream classrooms (for example Klinger (1998) and Zigmond (1995)). In the USA many students with Learning Disabilities do attend mainstream classrooms, but most of the research on Learning Difficulties which has discussed this environment produces findings that clearly indicate that the needs of these students are not being adequately met (MacMillan and Hendrick 1993). In Europe and the UK similar learning platforms and standards exist for Special Needs students, and these are referred to there as Special Needs Education (SNE). However, in the UK, there has been strong interest to establish an understanding and recognition of the rights and privileges of Special Needs students (Riddell and Watson 2003; Shakespeare 1999).

The advent of low price, high power Information and Communications Technologies (ICT) and use of the Internet have played a major role in enhancing and shaping the knowledge, skills and self-esteem of these students.

SCHOOL CHILDREN WITH LEARNING DISABILITIES

Assistive technology has introduced awareness for both educators and students and for the past decade there has been a growing effort in the design and development of ICT-based platforms to enhance the learning outcomes of these students (Adam and Tatnall 2007; Adam and Tatnall 2008b; Adam and Tatnall 2012).

This chapter describes a study involving case studies and participant observation in two outer suburban special schools in Melbourne, Australia and also looked at the role and impact of Victorian Education Department policies on these school environments (Adam 2010). It identified several different categories of students with Special Needs, ranging from those with severe physical disabilities to mainstream students who have a need to maintain some continuity with their studies while temporarily residing in a hospital.

Table 1. Summary of Special Needs categories (Australian Schools Directory 2011)

General Disabilities	Intellectual Disabilities/Autism
Hearing Impaired	Learning Difficulties
English Learning	Moderate to High Needs
Distance Education	Multiple Disabilities
Autistic	Physical Disabilities
Emotional Behaviour	Speech / Language Disorders
High Needs	Vision Impaired
Intellectual Disabilities	Young Mothers

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