Two Computer Systems in Victorian Schools and the Actors and Networks Involved in their Implementation and Use

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ABSTRACT

As in Australia school education is the responsibility of State Governments, this article will consider two computer systems in the Australian State of Victoria. The article takes a socio-technical stance to examine two computer systems currently in use in schools in Victoria: CASES21 and the Ultranet. After describing these systems, the article makes use of actor-network theory to explore the actors involved in their creation, development, implementation and use (or in one case non-use), and the networks they established in doing so. It looks at the associations involving both the human and non-human actors and how these contributed to successful adoption and use of these systems. A comparison of two systems within the same organisational environment allows a unique perspective on the formation of networks. The ANT approach permits an understanding of the difference in adoption where very few factors differ between the cases.

Keywords: Actor-Network Theory (ANT), Computerised Administrative System Environment in Schools (CASES21), Education Department, Parents, School Administration, Schools, Students, Teachers, Ultranet

INTRODUCTION

This study is set in the Australian State of Victoria. The State Government is responsible for the delivery of education and requires each school to store administrative data relating to individual students and groups of students. For many years administrative computer systems in schools have been built around the need to handle this large amount of administrative data. Another need for school systems is for communication with parents and for social networking, linking with other schools and students, providing information to the school community and other educational data relating to school and student performance. Data is collected from many different formal and informal sources including: student enrolments, early years interviews, student...
observational surveys, running records, formal testing and other anecdotal notes (Tatnall & Tatnall 2007; Davey & Tatnall 2013).

**RESEARCH FRAMEWORK AND METHODS**

Many approaches to research involving socio-technical innovation treat the social and the technical in entirely different ways, either being technologically driven or socially driven, and an approach often used is to focus on the technical aspects and to treat ‘the social’ as the context in which development and adoption take place. Actor-Network Theory (ANT), which originated from research in the social studies of science in the 1980s (Callon, 1986; Latour, 1986; Law, 1986), was designed as an approach to socio-technical research that would treat the contributions of both human and non-human actors fairly and in the same way.

This research primarily involved a study of the documentation provided for the two systems. In addition to this a small number of people were interviewed to determine the range of relationships between the actors, including those interactions with the systems. Reports on the introduction of these systems including both official press reports and those from commentators were also used to identify and analyse underlying relationships. The study was motivated by the development and attempted roll out of two systems in the same school environment. This chronologically contained pair of system roll outs enabled a unique opportunity to examine networks created in one physical environment and involving mainly the same people.

**TWO COMPUTER SYSTEMS USED IN SCHOOLS IN VICTORIA**

This study aimed to examine two of the computer systems in use in Victorian schools: CASES21 and the Ultranet. The goal was to investigate the socio-technical aspects of these systems and how these contribute to school community involvement, and the difference in both the nature of the translations and the networks formed during the implementations.

**CASES21 Administrative Systems for Victorian Schools**

In Government Schools in Victoria the principal computer system used for administrative purpose is known as CASES21 (Computerised Administrative System Environment in Schools), the use of which is mandated by the Department of Education for school administrative purposes and for reporting to the Education Department. CASES-21 aims to provide school administrative support staff with secure access to data entry and reporting modules that supports school administration and finance functions. The Department of Education claims it has been designed to be modified to meet evolving school business needs and it currently has two main modules (Department of Education and Early Childhood Development, 2011; Davey & Tatnall, 2013):

- An Administration Module that provides student administration support, including a facility to manage student and family data, student pastoral data, student medical information, student attendance, student achievement, student discipline/welfare, accident and incident data, activities (including student excursions), school management information, basic timetabling, daily organisation, and information about school associations (e.g. Parents Club and School Council);
- A Finance and Local Payroll module the purpose of which is to assist schools to create and receipt family and student invoices, manage family debtors as well as sundry debtors and creditors, manage the school’s asset register, process and manage the school’s local payroll, manage school finances and budgets, and to generate appropriate financial reports.
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