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,
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 be-
ing 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 includ-
ing 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 op-
portunity 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 Ultrtranet. The goal was to investigate
the socio-technical aspects of these systems
and how these contribute to school commu-
nity 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 prin-
cipal computer system used for administrative
purpose is known as CASES21 (Computer-
ised Administrative System Environment in
Schools), the use of which is mandated by the
Department of Education for school administra-
tive 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 (includ-
ing student excursions), school man-
agement 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 receive family and student in-
voices, 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 ap-
propriate financial reports.
Using ANT to Uncover the Full Potential of an Intelligent Operational Planning and Support Tool (IOPST) for Acute Healthcare Contexts
www.igi-global.com/article/using-ant-uncover-full-potential/77612?camid=4v1a

Higher Education in Further Education in England: An Actor-Network Ethnography
www.igi-global.com/article/higher-education-further-education-england/3862?camid=4v1a