

Chapter 16

Aligning Practice and Philosophy: Opening up Options for School Leaders

Kathryn Moyle
Charles Darwin University, Australia

ABSTRACT

The educational use of digital technologies such as mobile devices, computers, and the Internet are progressively replacing pens, books, and the physical spaces known as libraries. Both online synchronous and asynchronous learning modes are emerging as part of the learning styles used with children physically attending schools. Consequently schools and school districts deploy various sorts of software applications to meet the range of teaching, learning, and management functions they perform. As leaders of schools, principals have heightened responsibilities concerning the philosophical directions of schools, as well as aligning the uses of technologies across all facets of their organizations. Set against the backdrop of Australian experiences, this chapter sets out to canvas some of the less considered factors that ought to be taken into account when schools select software applications. Gaining congruence between school philosophies and the technologies used, often-time means open source software ought to be a preferable solution to closed, proprietary software. This argument is justified from pedagogical and management perspectives. Furthermore, it is argued that making informed decisions before adopting the use of a particular technology requires that school leaders understand the educational and technical demands of that technology, and also have a socially-critical understanding of technologies in education and in society more generally. Finally, it is argued that if school principals are willing to consider open source software solutions, the options for teaching and learning with technologies and the strategies for managing the infrastructure of the school in robust and cost effective ways, opens up.

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INTRODUCTION: CONTEXTS AND CHOICES

In Australia there are 3,541,836 students attending 9468 schools (Australian Bureau of Statistics (ABS), 2011a; 2010). These students have access to computers both at home and at school. In 2010-11, broadband was accessed by nearly three-quarters (73%) of all households in Australia, and 92% of all households had ordinary Internet access (ABS, 2011b). As a result of a major rollout of computers in secondary schools since 2008, there are in excess of 780,000 computers in Australian secondary schools (Department of Education, Employment and Workplaces Relations (DEEWR) 2011; Garrett, 2011). Some of these computers run open source software but most use proprietary operating systems and software applications (Australian Government Department of Finance and Deregulation Australian Government Information Management Office, 2009; Catto, 2011).

Here 'open source software' refers to software that is freely available to anyone wishing to access and use it. There are different types of licenses that guide the use of the various open source software applications and operating systems (cf Joint Information Systems Committee (JISC), 2011), but some of the most important license requirements of open source software are the free redistribution of the software, unrestricted access to the source code, and the ability to change or modify the software and other derived works that may be distributed under the same licensing conditions (JISC, 2011). The ability to copy and redistribute open source software without any license limitations is one of its most attractive characteristics for schools where the implications of copyright can be severe (Moyle, 2006). Proprietary and commercial software in comparison, is produced to create a profit for its developers, and usually the source code is closed to redistribution through copyright restrictions (JISC, 2011).

Australian school education policies promote technologies as foundational for success in all learning areas. The *Melbourne Declaration on Educational Goals for Young Australians*, which was endorsed by all Australian Ministers of Education in 2008 states that students as a result of attending school will gain:

... the essential skills in literacy and numeracy and [be] creative and productive users of technology, especially ICT [information and communication technologies] (Ministerial Council Education, Early Child Development and Youth Affairs (MCEETYA), 2008, p. 8).

The use of many technologies used in schools is mediated through screen interfaces. Computing and mobile technologies provide opportunities for students to develop their literacy and interpersonal skills by communicating via the Internet with their teachers and peers, both nearby and around the world. Educational discourses can cover topics of various depths of sophistication, using different functionality. The Internet, for example, provides teachers and students with opportunities to share, view, discuss and learn about each other's work. Students can contribute their creations to public showcases and online events, or to collaborate on joint projects (Childnet International, 2008). Teachers and school principals can form online communities of practice around topics of interest (Bond, 2004; Duncan-Howell, 2007).

Research by the United States (US) national education nonprofit group *Project Tomorrow* suggests that over the past few years, interest in online learning has grown in popularity amongst students, educators, parents and policymakers (Project Tomorrow, 2011). This research shows that in 2010, compared with 2008, five times as many parents reported that they would incorporate online classes into their vision of the 'ultimate school' (Project Tomorrow, 2011). The characteristics of online learning reported as being attractive include self-study online courses, teacher-led online classes as

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