



EdNA: An Historical Snapshot

Jon Mason

ABSTRACT The implementation of Education Network Australia (EdNA) provides a useful case-study of diverse educational communities coming together to achieve common outcomes aimed at maximising the benefits to education of information and communications technologies. The pursuit of common outcomes minimises duplication of effort and adds value to individual and organisational endeavour such as the development of a framework for lifelong learning support. Initially conceived in 1994 as a means to facilitate access to the Internet for schools and vocational education providers, EdNA has now developed as a national framework for collaboration and co-operation throughout all levels of the Australian education community – involving the participation of schools, vocational education and training, higher education, government departments and professional associations. A major outcome of this collaboration is *EdNA Online*, a website servicing EdNA stakeholders and providing linkages between each of the sectors. Multiple pathways for information retrieval and resource discovery are an important feature. Quality content is ensured through agreed standards and the implementation of metadata. Further, because *networking* generates opportunities to pursue ‘added value’, *EdNA Online* provides services and resources for teachers, principals, schools, trainee teachers and many others to develop their own good practice in the usage of online technologies for education.

BEGINNINGS

Some accounts of the beginnings Education Network Australia (EdNA) cite 1995 as the critical date as this was when the World Wide Web was just starting to captivate mainstream interest in Australia (Mason, 1998a; Mason, 1998b; Mason and Dellit, 1998; Mason and Ip, 1998). However, for the purposes of this paper and my PhD thesis the real beginnings of EdNA can be identified as taking place in 1994 and even earlier. In October of that year the then Prime Minister, Paul Keating, announced the *Creative Nation* statement. It was in this statement that Keating pledged to allocate funding to the level of \$300 million for computer learning centres in all schools (van Niekirk, 1996). This was also coincident with a most significant report was published by the Australian Science and Technology Council (ASTEC) titled ‘*The Networked Nation*’, a report that had been commissioned 12 months earlier in October 1993 by the then Minister for Science and Technology. Recommendation 1 from this document states:

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ASTEC recommends that the Minister for Employment, Education and Training, in consultation with other relevant Ministers, initiate the establishment of a not-for-profit consortium, involving governments, telecommunications carriers, industry and the research and higher education communities, to provide a national information network for the research and higher education communities and the wider community. (ASTEC, 1994a)

In the Response to this report it was further stated:

The continuing development within AARNet, the development of other on-line service providers and various other Commonwealth, State and Territory initiatives, is giving rise to a dynamic “community of networks” through a bottom-up user-driven approach, which is responding to opportunities and the demands of particular sectors and communities. This community of networks is characterised by devolution of control, and leaves the way open for creative ideas to emerge from various communities of interest. Nevertheless, Internet will continue to be a key part of the national information services infrastructure.

It would be unwise in such a climate to adopt a centralised approach, albeit one in which a range of interested parties are involved, to manage the development of “the national information network”. There is a risk that a centrally driven approach would result in the government being locked into inappropriate technologies or services, while the market moves in other directions. (ASTEC, 1994b)

By April 1995, in the immediate aftermath of this and other closely related reports (Johns, *et al*, 1995), a number of key Commonwealth Government initiatives were as a new comprehensive ‘national strategy’ complementing the vision of *Creative Nation*. These initiatives were all somehow aimed at capturing some of the potential of the ‘digital revolution’. Along with the Co-operative Multimedia Centres EdNA has endured the test of time since then, as well as a number of changes in government. Originally, the name ‘Australian Education Network’ (AEN) had been suggested for the network but because this name had already been registered by a commercial enterprise an alternative had to be found and the name EdNA soon emerged. In a Media Release from the DEET Minister’s Office dated 6 April 1995 it was stated:

The first phase of the network, which will start this year, will develop a directory of educational services and an interactive electronic message system that can be accessed at affordable rates by students and teachers from education institutions and the home, regardless of location (Crean, 1995)

An EdNA Network Business Requirements Reference Group was set up at this time by the Department of Employment, Education, Training (DEET) involving the secretary and senior staff of the Department and representatives from each main educational sector (including Government and non-Government Schools, Vocational Education and Training, and Higher Education). This initial working group was the foundation from which a much broader reference group was to evolve, as the EdNA Reference Committee (ERC), convening its inaugural meeting in July 1996. Within

DEET, and shortly after DEETYA (Youth Affairs portfolio being integrated into a restructure Department) an EdNA Task Force was also established in order to project manage the initiative.

Meanwhile, a number of States were beginning to respond in their own ways to the challenges and opportunities of multimedia and the Internet for education. Notable among these was the Global Classroom Project in Victoria which was based upon the idea of linking up schools from around the world to engage in collaborative projects which involved the exchange and sharing of data as well as communications aimed at inter-cultural understanding. This was based on the well-established International Education and Resource Network (I*EARN). The Global Classroom Project soon developed a wider agenda which resulted in the Victorian Department of School Education launching its own website called SOFWEB (Schools of the Future Web). In terms of servicing the education profession with high quality online resources the State-based initiatives also demonstrated the continued importance that the State education systems have. But while many in the teaching profession at the time may have been somewhat confused about the apparent duplication of effort this has proved not to be the case at all.

EVOLUTION

In surviving as an ongoing and strategic initiative, EdNA has been through some significant transformations. Initially, while acknowledging the recognition made regarding the need for “a bottom-up user-driven approach” pointed out above, it was conceived more to be a physical infrastructure project aimed at providing cost-effective connectivity to all Australian educational institutions while also addressing, in part, the principle of equity of access. The cost-effectiveness was to be brought about through leveraging the combined might of the whole education sector to drive down costs. In practice, this really indicated all educational institutions *other than universities* because the Australian Academic Research Network (AARNet) was well-established for the universities and had been since 1990 as the primary Internet gateway for Australia. The Internet was clearly seen as having a lot of potential for education and therefore a policy response which addressed equity of access was required, at least to some degree. However, despite the ‘visionary’ intentions which very early saw Microsoft and Telstra poised in a partnership to deliver the new network, there was considerable confusion in the community, and particularly the Schools sector, as to what the Internet (read the World Wide Web) would really bring for education. This lack of understanding and confusion about physical and online networks was compounded by the deregulation of the telecommunications sector and the rapid rate of bandwidth uptake associated with data communications. At one stage, the whole endeavour was nearly disbanded.

1996 was a year in which technical development of the online directory service (to be known as the EdNA Directory Service) as a website took place in earnest. The

design and prototype for this website was based upon a 'browsing' (as opposed to a 'searching') paradigm. At this time this approach was consistent with state-of-the-art Internet directories such as *Yahoo!*. Technical advisers contracted by DEETYA recommended the use of database software and when implemented soon after it was the first such database-driven website in Australia and very much 'state-of-the-art'. Later that year, however, it was recognised that a 'searching' capability was also required and this was integrated into the overall system implementation.

While this development work was taking place tenders for the supply of computer equipment to the whole education sector were assessed and shortlisted. The EdNA 'Reception Working Party' issued a 'preferred list' of six suppliers from 38 interested parties stating that the prices achieved through the tender process would serve as an industry benchmark. (*The Australian*, June 25 1996, p.30)

Significant technical and policy advice was contributed at the time by representatives from each of the education sectors. By July 1996, a formal entity was established in order to progress this as the EdNA Reference Committee (ERC). Membership of the ERC included representatives from each sector as well as nominees from Chief Executive Officers from the Schools and VET systems, the National Catholic Education Commission and the National Council for Independent Schools. In order to progress the project further the Ministerial Council for Employment, Education, Training, and Youth Affairs (MCEETYA) engaged the services of their company, the Open Learning Technology Corporation (OLTC), with a view to bring about the agreed wish of Ministers that online services through EdNA be 'substantially operational from the beginning of the 1997 calendar year' (Gibbons & Arthur, 1996). For the Schools sector in particular, momentum was also building at the State level with significant resourcing made available to Schools both for hardware and Internet connectivity purposes as well as for teacher professional development.

The July 1996 inaugural meeting of the ERC established the ERC as the peak policy advisory forum on matters concerning information technology in Education and Training. This followed in the wake of the July 1996 MCEETYA meeting in which the Ministers agreed that 'the focus of EdNA has shifted from development of a network to fostering collaboration and cooperation between key education stakeholders in the use of the Internet as a tool for the delivery of education in Australia' (Gibbons & Arthur, 1996). The functions of the ERC were to provide advice to a restructured OLTC Board on strategic directions for EdNA, implementation and governance issues, and to guide the development of the online service, the EdNA Directory Service. Significantly, development of 'community building facilities' was seen as a strategic direction for the EdNA Directory Service and it was an agenda item in its own right at the ERC's inaugural meeting (Gibbons & Arthur, 1996).

By 1997, the transformation of EdNA into what it is today (December 1998) has consolidated – a collaboration between all education and training sectors in Australia

(Schools, Vocational Education and Training [VET], Adult and Community Education, and Higher Education) aimed at maximising the benefits of information and communications technologies, and in particular the Internet, to the whole education sector. In the short federated history of Australia such collaboration in education is unprecedented. This has taken place in an environment where 'lifelong learning' and 'just-in-time training' have become marketable and higher education and vocational training are increasingly organised as a market and highly competitive propositions (West, *et al*, 1998).

There were a range of factors which can be identified as influencing this evolution of EdNA: importantly, these included a growing concern throughout the broader community for mechanisms which could protect children from access to unwholesome content and individuals on the Internet while at the same time promoting appropriate and effective educational usage; an interest in minimising the duplication of effort or 're-inventing the wheel', and in value-adding through developing further networked linkages; and, a significant strengthening of commitment from State governments to information technology in education, particularly schools. Other factors such as the de-regulation of telecommunications law opening up a new marketplace in Internet services provision and the 'globalisation' or 'internationalisation' of the educational marketplace were also significant.

Since late 1996 the most visible product of the EdNA collaboration has the EdNA Directory Service. This website was designed to be an information storehouse about anything to do with education and training in Australia as well as a gateway to quality online resources evaluated by educational professionals useful for educational purposes. The EdNA Directory Service gained further interest and momentum throughout 1997, particularly from the Schools and VET sectors, and was formally launched in December of that year.

THE EdNA DIRECTORY SERVICE - FUNCTIONS AND SERVICES

The key function of the EdNA Directory Service soon consolidated as an educational information gateway specialising in provision of quality online content for general information retrieval and resource discovery. Complementing this were a range of so-called 'interactive services' such as email-based discussion groups, a noticeboards facility (dominated largely by announcements of conferences, other events, and collaborative projects) and mechanisms which invited feedback and contributions from users of the service.

Having said that, it is also important to reiterate that collaboration and cooperation across and within all Australian education and training sectors was seen as activity which should also take place online. Thus, a distributed administrative model was developed for the EdNA Directory Service which enabled management of online resources contributed to the database and administration of discussion lists by a wide

range of interested participants. However, for most users of the website this would not have been apparent because it was a behind-the-scenes activity. This 'devolved administration' model soon became a pivotal feature and stated strategic direction for the service. It was viewed as essential for spreading 'ownership' of the process.

By early 1998 the EdNA Directory Service had attracted international attention and without any formal process of submission it was identified among seventy other online educational initiatives around the world as combining social responsibility with best practice in new media implementation. By May of this year it was the only national educational project among a shortlist of six nominated for the 1998 Carl Bertelsmann prize, an award which 'recognises innovative contributions in key areas of social policy'. The other contenders for the prize included telecommunications regulatory authorities, media and educational initiatives. For 1998 the chosen theme was 'Innovation and Responsibility in the Information Society' (Bertelsmann, 1998).

EdNA ONLINE

Throughout 1998 a number of strategic projects were initiated by EdNA stakeholders which focused on bringing about ongoing enhancements to the website. Much of the routine collaboration for these projects was itself enacted in the online domain which was complemented by three-weekly teleconferences and three-monthly face-to-face meetings. In general terms these projects included but were not limited to: developing interactive services (with a view to strengthening its networking potential and in maintaining a state-of-the-art technical implementation); promoting and developing the distributed basis for administration of the website (matching the architecture of the Internet with the most effective administrative model); co-ordinating an online conference for a particular group of education professionals (the annual conference of the Curriculum Corporation); finalising and implementing a metadata standard as a foundation for ensuring effective ongoing resource discovery; developing a forum for ongoing dialogue on strategic directions; redesigning the website interface with a view to providing more effective pathways to information for the diverse groups of users of the site; establishing a mechanism for ongoing and effective monitoring and user evaluation of the service; implementing a technical process which utilised automated methods of 'harvesting' resources from accredited sources for storing in the database; extending the Search function to accommodate metadata and 'harvested' items; and, investigating the feasibility of a classified advertisements service aimed at generating a revenue stream to offset development costs.

On November 27th 1998, Online Australia Day, EdNA celebrated its first birthday of the Directory Service and to mark the occasion the website's name was changed to *EdNA Online*. This name change was instigated to reflect more accurately that the service had developed to be more than an online 'library' or directory of information. In other words, the word 'network' within 'EdNA' was seen as fundamental and it helped express better the communications capabilities of the World Wide Web.

Given the developments outlined in the preceding discussion it is arguable that EdNA itself would not exist without the World Wide Web. In the span of only about five years or so this information and communications system has been the prime driver for data communications overtaking voice as the dominant telecommunications traffic. Likewise, it is arguable that the World Wide Web itself is the most significant development in technologies enabling the boom in the so-called 'flexible delivery' of education and training. As such, and given EdNA's original intent at 'maximising the benefits of information and communications technologies', EdNA Online had to be developed.

As a website, EdNA Online has served (and serves) as a 'central' point of focus in the EdNA endeavour. It is a clear representation of an aggregation of goodwill and a demonstrable 'value-added' product. Importantly, however, EdNA is also a *network* and EdNA Online operates as a conduit, or networking facilitator, and is much more than a 'directory service'. While this has been obvious to some participants within EdNA deriving such benefits has not been clear to many of its natural constituents. This has been seen as a 'marketing' problem within EdNA and continues to be addressed. It can be argued on this point that in a number of cases organisational culture has been unable to respond flexibly to the opportunities of the digital revolution based on the 'networked model' described above. In such cases entrenched proponents of an old world empire model have provided lip-service at best where EdNA is concerned and have misrepresented EdNA as just a 'community program', a 'schools program', an 'information disseminator' or a 'database initiative'.

Together with the evolution of the network is a foundational framework for the provision of easy access to lifelong learning. In 1999, as a key project funded under the Commonwealth Government's Framework for Open Learning, will be promotion of appropriate pathways to information via EdNA Online for the 'University of the Third Age', a community-based initiative which has gathered momentum in the last decade and is aimed at enriching the learning opportunities of members of the community retired from work. Other 'online community' activity is already evident within EdNA's constituencies, particularly among though not exclusive to professional associations. It is a central argument in my thesis that many of the participants of EdNA Online services constitute an online community.

CO-ORDINATION AND MANAGEMENT

While collaboration involving a wide range of stakeholders is one of the defining features of EdNA its coordination has also been critical to its success. In a way, consultation and collaboration gains further benefit through such a coordinated approach. Forums for both collaboration and co-ordination take place as consultative and advisory groups which have been set up to represent the interests of each sector and system (where 'system' refers more to the variants of co-ordinating authorities

within the Schools sector, whether State-based, private, or religious in implementation). The peak body within the collaborative framework is clearly MCEETYA (the Ministerial Council for Employment, Education, Training and Youth Affairs) which brings together all the Ministers of Education and Training from the States, Territories and Commonwealth. Advising MCEETYA directly on broad ICT-related policy issues is the EdNA Reference Committee (ERC), the peak EdNA advisory body as outlined above. However, also advising MCEETYA on EdNA Online is the Education.Au Board which is itself guided by recommendations from the ERC and each of the sectoral advisory groups. The careful reader will notice that this framework is itself an intricate web of cross-linkages where certain protocols must be observed. To some, this may appear inefficient while to others it could be seen as a master stroke – for such a framework is not easily dismantled!

From 1995 to June 1998 co-ordination of EdNA rested with the Commonwealth Department of Employment, Education, Training and Youth Affairs (DEETYA). But given the diversity and number of stakeholders in EdNA (the Commonwealth Minister just one member of MCEETYA) it was necessary, once established, to shift the co-ordination and governance to a body that could act as a conduit and manager of all stakeholder interests and be seen to be sensitive and fair in doing so. A company, Education.Au Limited (formerly the Open Learning Technology Corporation), was selected as the obvious choice. Owned by all the government Ministers of Employment, Education and Training (State, Territory and Commonwealth) this non-profit company gained full authority to manage and co-ordinate the affairs of EdNA and in particular, the EdNA Directory Service, in July 1998. Located in Adelaide, South Australia, the company is comprised of only eight staff. Expert consultants are also hired to assist the staff on certain projects. The Board of Education.Au Limited provides policy advice directly to MCEETYA. Core funding for the company is currently derived on a formula involving a fifty per cent contribution by the Commonwealth and pro rata contributions by the States and Territories.

In many respects the functions of Education.Au can be typified as ‘management’ functions. However, while this is certainly true in the case of overseeing a number of outsourced contracts, it is not the most appropriate way in which to describe its position in relation to EdNA. This is because EdNA is a *network* of contributing stakeholders and the architecture of a network is significantly different to that of the more conventional organisational pyramid (whether inverted or not). Networks are distributed and cross-linked by nature and the linkages within them proliferate beyond the bounds of organisational structure. While it is also important not to overstate this case (there being important protocols which must be observed within the ‘authoritative’ nodes within EdNA’s network) this development is certainly unprecedented in terms of scale and is poised to make an enduring impact upon educational culture within this country.

CONCLUSION

EdNA has established a foundational framework that has demonstrated the viability to produce relevant and state-of-the-art online services to both its key stakeholders and broader constituencies. As such, its significance has been internationally recognised. The collaborative culture which underpins this framework – a “community of networks” – is further fostered through activities and services hosted by EdNA Online. This whole endeavour is self-sustaining largely through the recognition and pursuit of the aggregation of added value that networks of common interest provide.

For EdNA, it can be argued that the original, bottom up “community of networks” approach has been its enduring strength or feature. A key research topic arises from this – the relationship(s) between ‘networks’ and ‘communities’ in online educational environments and the role of each in the evolution of best practice in education.

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