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Government Education Portal and Sibling Sites
EdNA Online
Australia.

EdNA Online is a unique national collaboration between the Australian Commonwealth government Department of Education, Training and Science and the state Education Departments. This collaboration unites learning communities as it provides free resources and online services to all education sectors, including tertiary, schools, vocational training and adult education. There is access to evaluated curriculum resources in a safe environment. The use of standards to enable sharing between states, territories and national education departments has extended knowledge networks. Free communication tools link teacher librarians, teachers and students and assist engagement in professional development.

Background

EdNA Online is a unique national collaboration between Australian Commonwealth government Department of Education, Training and Science and the state Education Departments. Barriers have been broken down between state education systems through an agreed Australia wide collaboration to provide resources and online services to all sectors of Australian education: School, Higher Education, Vocational Education and Training, Adult Community Education and International Education. The Commonwealth and each state education department contribute selected items to the database of materials, which provides educators with free access to evaluated curriculum resources in a safe environment. This participation occurs because of the use of standards to enable sharing between states, territories and national education departments. EdNA Online provides free communication tools that link teacher librarians, teachers and students and encourage engagement in professional development.

Discover with the EdNA Online database

The EdNA Online database houses a collection of over 16,000 evaluated items for all aspects of education and provides links to a further 323,000 linked items. Members of the Australian education departments and Information Officers working within each sector have selected these items. The database is unique in that it contains both information about education and training and resources to support the curriculum. It provides specific resources and tools to support and utilise the Internet in teaching and learning, while also providing resources for all subject/discipline/industry areas. (McKenny, 2002)

Curriculum items are categorised to facilitate browsing by teachers and teacher librarians. Thus the database can be searched using the EdNA search engine or the user can browse using the category structure. Because all services are free, this helps to break down the digital divide between rich and poor schools. Educational institutions are able to access an EdNA logo to put on their own sites, giving them access to safe evaluated material and an opportunity to brand their sites as quality and trusted sites.

Search and browse functions

EdNA Online users are offered a number of different ways to discover resources held in the database or linking to it. The 'standard' search option found at <http://www.edna.edu.au/discover> offers a choice of searching for items that have been evaluated, EdNA Online collections, which include noticeboards and newsletters, and sites linked to the evaluated resources. In addition, users can search external databases such as Government Education Materials (GEM) and Vocational Education (VOCED). The 'advanced' option enables more precise filtering of resources, by specifying metadata fields to be searched. A distributed search (Free EdNA Search) is also available for users who prefer to install the search tool (API) on their website and search for EdNA Online resources without leaving their own site. (White, 2003)

People coming to EdNA Online to search for resources can also use the Browse structure that has been developed to assist in resource discovery. The school section is broken into the following categories: For Students, For Teachers, For Principals, For Parents, Key Learning Areas, ICT in the Curriculum, Oz Projects and Schools, Authorities, Agencies. These are then broken into further categories.

EdNA Metadata Standard

As each item is entered into the EdNA Online database by Information Officers, it needs to be described. The EdNA Metadata Standard is used to do this. Metadata is information about information and is structured in a manner that facilitates the management, discovery and retrieval of resources on the World Wide Web. Metadata standards have been developed to support both machine interoperability (information exchange) and targeted resource discovery by human users of the Web. Metadata standards for the Internet are an attempt to bridge the gap between the comprehensive cataloguing which is done by professionals in the library context, and the free-for-all of document creation on the Web. (EdNA Metadata Standard, 2000)

The EdNA metadata standard is comprised of a set of guiding principles and a set of elements. These elements include Dublin Core (DC) elements (some with EdNA qualifiers) and EdNA elements to meet the specific needs of the Australian education and training community. Some of the EdNA elements are specifically for the administration of EdNA Online resources.

The EdNA Metadata standard consists of the following elements:

- DC.Identifier
- DC.Title
- DC.Description
- DC.Subject
- DC.Publisher
- DC.Creator
- DC.Date
- DC.Type
- DC.Format
- DC.Language
- DC.Coverage
- DC.Rights
- DC.Relation
- DC.Contributor
- DC.Source
- EDNA.Audience
- EDNA.Approver
- EDNA.CategoryCode
- EDNA.Entered
- EDNA.Indexing
- EDNA.Review
- EDNA.Reviewer
- EDNA.Version

In EdNA Online, metadata is used to aid searching by the application of details about the resources that can be searched. When searching, words that are used to describe the resources in the metadata elements are given priority over words that are used in the text of the document. Metadata is also used in the general management of the content in the database and to allocate items to the categories in the EdNA Online browse structure, which is another aid to resource discovery. It provides general cataloguing information about the items. (EdNA Metadata Standard, 2000)

Using EdNA Online as an education search engine for resource discovery

There are many advantages with using what could be termed as an education search engine to locate education resources rather than using a conventional search engine like Google.

- EdNA Online is quality assured and contains over 16,000 items that have been selected by educators as relevant to education and curriculum needs. Google is a full text index search engine that will look at all types of materials that are on the Internet and not necessarily those that are of an educational nature. For example a search by EdNA for the term “International Year of Freshwater” will bring up 8 items that have been selected as suitable for school purposes. A Google search for ‘International Year of Freshwater’ will bring up about 261,000 items that are not necessarily relevant for schools. The best resources will not necessarily be in the top 50 to 100 sites that come up. A Google advanced search using the Phrase ‘International Year of Freshwater’ has 3,240 results. Furthermore, in EdNA Online, a closer look at the results shows a theme page for ‘International Year of Freshwater’. This theme page at EdNA will show how the topic has been further broken up into sub themes such as: freshwater, water pollution, classroom activities and School/teacher created pages. These resources are ones that teachers and teacher librarians may wish to use in a classroom, but would need to do extensive and time consuming searches for in a search engine.
- The school materials contained in EdNA Online come from the Australian Commonwealth, State and Territory Education Departments, or are selected by an Information Officer who is an experienced teacher. These are all safe sites chosen for their appropriate use in a school setting. Google is not quality assured, and does not discriminate between any types of materials that are on the Internet. Inappropriate adult material can also be included in the search. Although the search in Google can be restricted to .edu and .gov domains, many students may not be sophisticated enough to search in this manner, and would be missing relevant material that can be found at .net, .org and .com sites. Search engines like Yahoo and LookSmart have people who assess content for their directories, but they may not be specialists within the education and training area. The information on EdNA Online is current and relevant, because experts in teaching and learning manage it. Search engines do not provide such information, and often may provide ‘cached’ versions of web pages, that may be old versions or copies of documents that have been removed from the website. The currency of the page will depend on when the search engine spider last visited the page. (EdNA Metadata Standard Review Discussion Paper, 2003).
- EdNA Online has access to content in what is known as the Deep Web. Deep Web sources store their content in databases that conventional search engines do not search. Information on the Deep Web is currently 400 to 550 times larger than the World Wide Web and more than half of the Deep Web content resides in topic-specific databases. (Bergman, 2003) EdNA Online’s current strategy to access the Deep Web is to develop strategic alliances with organisations that have quality digital repositories in each sector of education and training. It is able to search other educational databases such as GEM, the US Gateway to Education Materials database and the Vocational Education and Training (VOCED) database with its search engine. A search engine like Google does not search content in repositories or databases, unless this content has been ‘surfaced’ by making the database content accessible via a URL. Such a search engine misses many excellent education materials.

Specialist collections

In addition, EdNA's technical architecture enables the packaging of resources into specialised collections that can be used by all sectors of education and include the following:

- The Australian Government Education Portal <http://www.edna.edu.au> which has approximately 2,500 items that are stored in the EdNA Online database, but which has its own unique look and feel;
- Technical Standards site, which is a gateway to standards, protocols and specifications relevant to learning, education and training. (White, 2003)

Of special interest are the EdNA theme pages <http://www.edna.edu.au/schools/themes/> which contain not only themes that are useful for Australian school libraries but which have a universal appeal. These include topics like Ancient Egypt, Fostering reading, Chemistry resources, Nutrition, Oceans, and United Nations.

EdNA Online is a specialist collection that is quality assured. Its sites have been reviewed and are of suitable, safe quality. It is a site, which teacher librarians can use to select resources to support the information needs of the school community and which can be recommended to save teachers work. It saves time, with teachers and students needing only to review sites for their own purposes, rather than select them from hundreds of choices.

Communicate

EdNA Online has developed a range of free communication tools including notice boards, discussion lists, forums and chat rooms. These have helped in the establishment and extension of online education networks and communities. These tools give educators the opportunity to discuss and highlight teaching, learning, research and education issues. They also support learning and professional development by the promotion of conferences and events. Online learning communities have resulted in the stimulation and maintenance of hub groups, networks and partnerships. It has also given educators the opportunity to learn new online skills in a non-threatening environment. (White, 2003)

Discussion lists, online forums, chat tools

The suite of interactive tools allows both synchronous (occurring at the same time) and asynchronous interaction by participants, while the chat room provides a real-time virtual environment for sharing views and exchanging documents. The different variety of services can be seen at <http://www.edna.edu.au> under the menu item 'Communicate'. (White, 2003)

Currently, there are over 500 mailing lists and 45 forums and chats, utilised by teachers, principals, professional associations, trainers and educational administrators. Teacher librarians and their professional associations are making good use of the free tools. For example School Libraries Associations and hub groups conduct business through online forums, linking members from country and city and state-to-state. Currently the Australian School Library Association (ASLA) shares discussions and documents with its members Australia wide, as does the South Australian School Library Association. Library computer systems are discussed and problems solved with another discussion group. When this group was initially set up, members of a similar listserv from another state were asked to join, to share their expertise and to extend the learning community. EdNA Online forums have developed communities of learners based around their interests or needs and have allowed teachers and students, especially in remote and rural locations, the same choices as their city counterparts.

The EdNA discussion lists, online forums, chat tools provide an educational setting that other services cannot provide. They are free and there is no distracting advertising on the site. Once a user has registered, they can join other educational lists that are listed on the site. EdNA Online Information Officers are available to provide in-service sessions on using the tools and can help new administrators set up the lists.

Online newsletters

EdNA Online produces a number of newsletters that aim to inform the education and training community of new developments and projects in the Australian and international education arena. Subscribers are kept up to date with what is happening in the education world and also with new items and events on EdNA Online. There are more than 14,600 first-line subscribers to the EdNA Online newsletters. (White, 2003).

The following would be helpful to an international audience:

- The Communicator, providing an extensive weekly summary of key reports, news, media releases and major national and international events,
- EdNA for Schools newsletter featuring school-related resources and information
- New in Early Childhood for educators,

These newsletters can be subscribed to at <http://www.edna.edu.au/system/tools/email.html>. It is also possible to obtain the News headlines through a Really Simple Syndication (RSS feed), and present it on another website.

Noticeboards

Currently, there are many active noticeboards on EdNA Online, featuring conferences and events in Australia and overseas, online conferences, a calendar for Australian schools, library books for schools, museums and galleries news and events, resources on appropriate and safe use of the Internet, and others. While the Information Officers provide monitoring and ongoing maintenance of the service, stakeholders and users of the site are welcome to submit notices for the noticeboards. (White, 2003)

The most useful to this audience would be the International Conference noticeboard, which features conferences and events relevant to education and training, held out side of Australia.

It can be found at <http://www.edna.edu.au/noticeboards/noticelist.html?id=690>

Another noticeboard that would be helpful is Online Conferences and Events board at <http://www.edna.edu.au/noticeboards/noticeread.html?nbid=2353&nid=2359&sort=&show=> where conferences that are held online are advertised.

The Calendar for Australian schools noticeboard is a calendar, which has the main Australian festivals and holidays listed. It also contains international events. All events are linked to a parent world wide web site so are very useful for finding information about important proceedings The calendar can be found at:

<http://www.edna.edu.au/noticeboards/noticelist.html?id=1981>

The availability of a word document and excel document provides schools with the opportunity to expand on it with their own events and it may be suitable as the basis for a school library calendar. It is available to download at

<http://www.edna.edu.au/noticeboards/noticeread.html?nbid=1981&nid=3291&sort=&show=>

Oz Projects

Ozprojects, which can be found at <http://ozprojects.edna.edu.au/>, are online curriculum projects, which provide students with unique learning opportunities. The site lists online projects that can be joined not only by Australian teachers and students, but also by international participants. Projects come from parts of the world as diverse as Ukraine, South Africa and the United States as well as Australia. Many projects are designed to help children gain a better understanding of children in other parts of the world. It is an excellent opportunity to either list an online project that you or your school is running or to join an online project of educational interest.

The projects are organized by stages of schooling and curriculum areas and a detailed search can also be made. For those educators who are new to online projects, there is an extensive help section that provides access to a broad range of resources and links. These provide information about getting started with an online project, participating, and developing or coordinating online projects.

Collaboration between countries is encouraged in global projects like The International Learning Quest Challenge at <http://ozprojects.edna.edu.au/challenge/>. It is for teachers and/or students to develop a web page or site following a Learning Quest format. The main aim of the Challenge is the development and sharing of online content. Quest2003 is an interactive list created to support the International Learning Quest Challenge, where participants can ask questions and obtain help in problem solving. It will also be a vehicle for information about the Quest.

EdNA Online communication tools provide teacher librarians with the opportunity to “work with school leaders to integrate Information and Communication Technology into the curriculum Role statement” and “sustain a high level of professional knowledge”. (Role Statement for Teacher Librarians 2002).

Collaborate

EdNA Online was created initially to provide a national education project that would encourage collaboration, information sharing, and assist in avoiding duplication of effort in education and training initiatives. It has achieved collaboration through its sibling sites, metadata sharing and standards development. Metadata is exchanged from other repositories and members of the education community suggest online resources.

Metadata tool and Harvesting tool

Through the agreed use of metadata standards for managing resources, the Commonwealth and State governments are now able to harvest education sites into the EdNA Online database. The barriers to sharing information have been broken down even further with other institutions like Australian Museums Online feeding into the system. To assist in the creation of metadata compatible to the EdNA Metadata Standard and to enable successful uploading of resources from external collections to the EdNA database, EdNA Online offers free tools to the education and training community. Quality assurance assessment and guidance is provided throughout the process of metadata creation and harvesting.

Use of EdNA Online as a Warehouse

Learning communities have benefited by the use of the EdNA Online database as a warehouse, which repurposes data and presents it on other sites. These sites have their own look and feel, and only selected portions of the database are used. Sibling sites have been developed using this technique. They include sites that are a result of a national collaboration to provide information for education and include:

- National Software Evaluation site (<http://www.edna.edu.au/sibling/nsep/>), which is a collaborative effort by all Australian States and Territories to bring together reviews of software for the use of Australian school communities.
- ICT (Information and Communications Technology), Leading Practice site (<http://leadingpractice.edna.edu.au/>), which is a collaborative effort by Australian States and Territories to bring together leading practice in schools and leadership in the Australian school communities.
- ICT (Information and Communications Technology) Research site which contains research material on ICT initiatives relevant to the Australian school sector.

The EdNA database can also provide information services as web services using Extensible Markup Language (XML) and Rich Site Summary (RSS), which allow information to be transmitted between organisations. These keep teachers up to date and save time. These information services include:

- Latest items added to the database (and in any category)
- Headlines
- Newsletters
- Noticeboards
- Search APIs which search EdNA Online and other quality repositories and specialist collections within EdNA Online (eg Technical Standards site at <http://standards.edna.edu.au/>)

Submit online resources

Individuals or groups are able to submit resources for consideration for entry into the database. The Australian School Libraries Association (ASLA) proposed a number of links to research about school libraries and the role of school librarians for inclusion in the database. These have been entered for general use and also given a unique search string in the metadata to identify them. A link to this group of resources will then appear on the ASLA website. This collaboration will result in the educational community having access to that research via EdNA Online, the teacher librarian community through the ASLA website, and the items themselves will be maintained by EdNA Online Information Officers, ensuring that links are kept up to date.

Alliances

EdNA Online is part of a global network of knowledge, which collaborates to ensure that learning communities have access to each other's collections of quality evaluated online resources. EdNA Online has established memorandums of understanding to share the resources that are contained in many of the world's most important educational repositories. These include:

- Australia's Culture and Recreational Portal, (<http://www.acn.net.au/>), which contains over 2,200 websites and 900,000 pages about Australia's culture and recreation;
- Australian Museums Online (AMOL) (<http://amol.org.au/>), which provides educational resources from Australian museums and galleries.
- Gateway to Educational Materials (GEM), (<http://www.thegateway.org>), an initiative of the U.S. Department of Education, which provides educators with quick and easy access to high quality lesson plans, curriculum units and collections of educational materials found on various federal, state, university, non-profit, and commercial Internet sites;
- MERLOT (Multimedia Educational Resource for Learning and Online Teaching) (www.merlot.org/), a free and open resource designed primarily for faculty and students of higher education;
- European Schoolnet, (<http://www.eun.org/portal/index-en.cfm>), where educational resources, news, class activities, collaboration opportunities, online communities can be found;
- Te Kete Ipurangi - The Online Learning Centre (TKI) (www.tki.org.nz/), which is a New Zealand bilingual portal and web community which provides quality assured educational material for teachers, school managers, and the wider education;
- VOCED, produced by Australia's National Centre for Vocational Education Research (NCVER) (www.voced.edu.au/), as part of its role in a UNESCO regional centre of excellence in technical and vocational education and training, which is a large, free, web-based international database of abstracts on vocational education and training research, policy and practice;

This ability to search multiple repositories gives EdNA Online users a choice of access to the Deep Web and some of the best of the world's educational resources.

Customisation

It is possible to customise the data within EdNA Online to meet the needs of the user. When a user logs on to EdNA Online, they can personalise the EdNA tools and services to select the services and information that are relevant. After logging in, they would receive a customized view of the homepage that they may want for example the school view. They then have the opportunity to personalize the page to meet their own set of interests. They could choose the content and categories that they wish to see, add in the newsletters and noticeboards that are of interest and link to categories to see new items that have been added. They have the ability to add or delete items on the page. A school librarian could have a personalised page, which displayed the latest conferences and events, new items going into the curriculum areas, links to professional association discussion groups and school headlines. This has real value for regular users, as everything that they might want to see is stored at one point, while they still have the opportunity to revisit the main home page if desired.

Developers Kit

EdNA Online provides a free set of information to provide website developers with information about how to embed EdNA tools such as html, XML into their own website. These tools will then enable visitors to that site to search EdNA from the site, browse any of EdNA's categories from their own site. They will also be able to pick a category and see what's new in that category. Noticeboards that are useful to the education community, like the conference noticeboard and the EdNA newsletter for example, can be integrated into a website, by applying a Really Simple Syndication (RSS) feed which is available to any member of the education community.

This tool kit provides access to free high quality, evaluated educational information that is of value to the education community and which can be implemented at the client's end. The knowledge and understanding of the learning community is greatly extended by this. The Australian Government Education Portal (<http://www.education.gov.au>) is an example of the application of XML and RSS feeds. It is possible for a teacher librarian who is managing a school library website to be a leader in the school community by providing the up to date information about education news. The professional development of staff can also be enhanced by providing access to the latest conferences on the school's own library website.

Conclusion

EdNA Online is in the business of breaking down barriers in education. It has been a successful national collaboration that provides free evaluated resources for curriculum, professional development and education. Its discussion lists and forums have been instrumental in the growth of learning communities and have provided opportunities for professional growth. The use of standards to enable sharing between states, territories and national education departments has extended knowledge networks.

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Biographical Note

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