

## Case Study:

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## Using Web Resources for the Master of Education Programme at Asia e-University





## Using Web Resources for the Master of Education (M.Ed) Programme at Asia e University: A Case Study

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### Synopsis

The paper reports the design and development of the Master of Education (M.Ed) programme using OERs and Non-OERs through hyperlinking. The legal issues of hyperlinking have not been resolved with sources arguing that hyperlinking infringe copyright. However, designers of the programme have observed a set of guidelines for hyperlinking and among the guidelines is to seek permission of the owner of the website linked and acknowledge accordingly. For each course, a self-instructional module (SIM) is developed which stipulates the 'must know' body of content. The SIM controls the selection of web resources to be hyperlinked based on the learning outcomes and learning activities developed. Several examples of OERs and Non-OERs used in the M.Ed programme are presented focussing on the learning outcomes to be achieved by each of the resources hyperlinked. Five challenges are discussed which may curtail the use of web resources for teaching and learning. Most significant is the possible restriction imposed on hyperlinking which may slow down the use of web resources in colleges and universities.

### Preamble

Google estimates that there are over 1 trillion web pages (but no one really knows!). The breadth, depth and volume of resources on the web and the ability of learners to create and publish materials has introduced a new way of learning. The internet has revolutionised how information is accessed and made available to millions of people who would normally not have such access because of the lack of libraries and the formidable costs of learning materials. With increasing internet penetration, the web has become the largest library on earth making available relevant and useful information to as many people as possible in a variety of disciplines and fields at the click of a button. The new generation of learners enrolling in universities and colleges are digital natives who have grown up with personal computers, notebook computers, mobile phones, video games, the internet and virtual reality. The paper discusses how the Master of Education (M.Ed) programme offered by the School of Education & Cognitive Science, Asia e University leverages on this vast body of web resources and is divided as follows:

- Types of Web Resources
- Issues on Hyperlinking and Proposed Guidelines
- Course Design Using OERs and Non-OERs

- Examples of OERs and Non-OERs Selection and Use
- Challenges

### **Types of Web Resources**

The web is rich with various kinds of resources such as text material, audio & video clips, still and animated images, social networking tools and so forth which are accessible for use in teaching and learning. Open Education Resources (OERs) are defined as digitised materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research. OERs include content, tools and implementation resources (Speirs, 2006). Where available and relevant, OERs were used in the Master of Education programme at AeU.

Where appropriate OERs were unavailable, non-OERs were used for certain specialisations. Non-OERs are those web resources that cannot re-used or re-versioned because of copyright infringement. These resources take many forms and have been extensively used in the delivery of the M.Ed programme through hyperlinking. Hyperlinking is the practice of linking one web page with another web page which is usually highlighted and serves as an “active” or “hot zone” on the linked page. The link may be represented by text or image permitting the user to immediately gain access to the linked page simply by clicking on the hot zone. The advantage is that it eliminates the need to type in the full URL since the hot zone replaces the underlying code. The ease of linking brings with it certain legal issues when the website owner links to websites owned by another party.

### **Issues on Hyperlinking and Proposed Guidelines**

The legal issues related to hyperlinking include copyright and trademark infringement, unfair competition, commercial misappropriation and defamation. The question asked by many is whether linking involves a breach of copyright. Do I need permission to set up a link to another’s website? There have been several legal disputes on hyperlinking in the United States and Britain involving business organisations. Hofman states that “linking does not involve unauthorised copying and it is hard to see how it infringes copyright” (2009, p.67). Similarly, section 22(6) of the Digital Agenda Act (2001) in Australia states that, “that in most cases of hyperlinking, the website developer will not currently be liable for infringement by authorisation”. However, the jury is still out on the legality of hyperlinking and until and when it is resolved, the following guidelines have been observed with regards to hyperlinking for the M.Ed programme:

- It is proper netiquette to obtain the website owner’s prior consent. In most instances owners are glad to share their material because hyperlinking is a means of free publicity leading to more web traffic.
- In circumstances where either the owners are not contactable (because no email was provided) or no response was received from them, the owner and origin of the website is acknowledged accordingly.
- The website is checked to determine whether the website has a hyperlinking policy within its terms and conditions and whether the terms and conditions allow hyperlinking.
- Ensure that for the hot zones, plain-text names are used. Hot zones using the logo, slogan or trademark of another web page is avoided since this could lead viewers to conclude that the linked page endorses or is affiliated with the website.

- As far as possible linking to the internal pages of websites (referred to as deep linking) is avoided to the extent that the user bypasses the homepage of the linked website because it may affect potential advertising revenue.
- A 'disclaimer' is included stating that at the time the link was initially visited there was no offensive or hurtful materials and that it should be understood that one does not have control of another's content which may change after linking. The disclaimer also includes a statement stating that one is not responsible when the linked website contains infringing materials.

### Course Design Using OERs and Non-OERs

The Master of Education (M.Ed) is a 42 credit programme consisting of 10 core courses and 4 courses in an area of specialisation. The programme is delivered as a distance education programme using a blended approach. For each 3 credit course, students are required to attend 10 hours of face-to-face interaction, to discuss online and to engage in independent study over a period of 14 weeks. Students are provided with 200 page self-instructional module (SIM) which includes a course guide and an assignment guide which forms the 'must know' content. Each SIM is supported by hyperlinks to both OERs and non-OERs. What students are expected to know, to do and value are stipulated in the learning outcomes specified for each course. The Taxonomy of Significant Learning Outcomes proposed by Fink (2003) was used to guide the selection of learning outcomes:

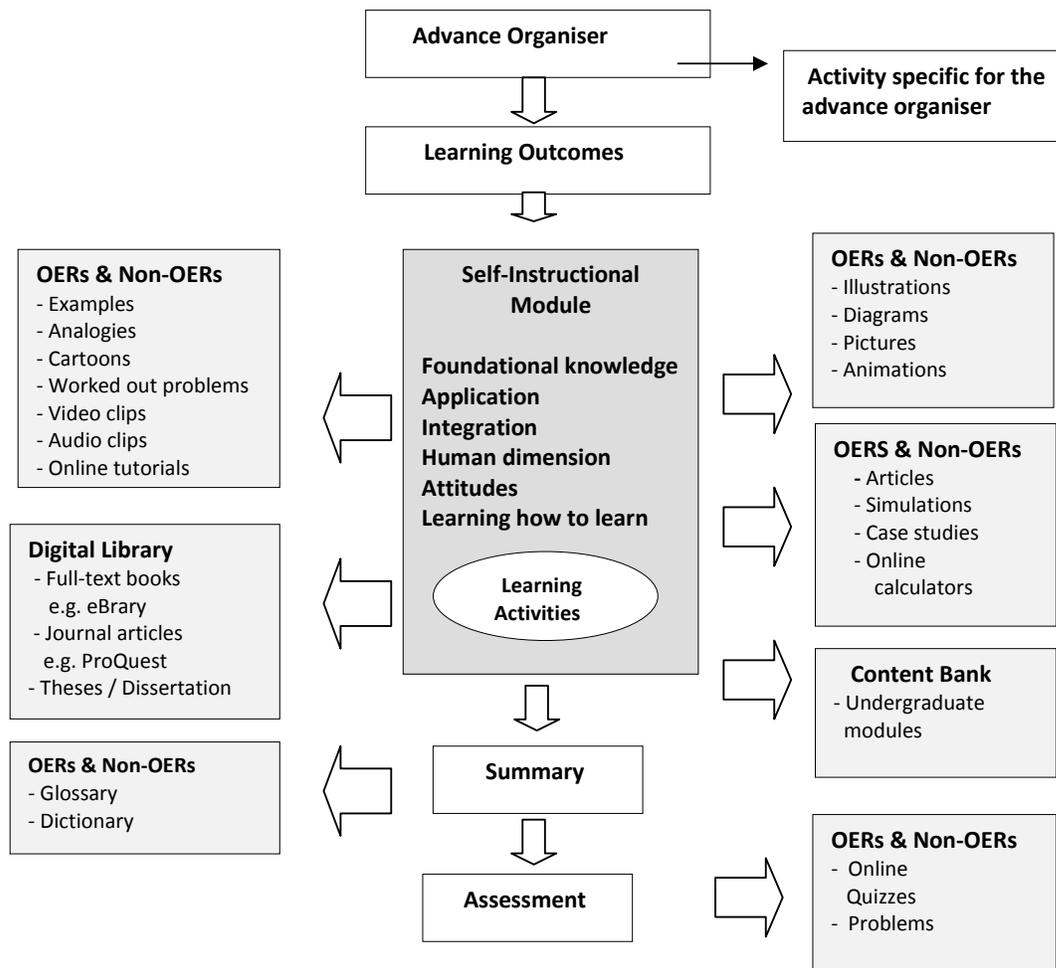
1. foundational knowledge (facts, concepts, principles),
2. application (problem solving and decision making in real-world situations),
3. integration (making connections among ideas),
4. human dimensions (learning about oneself and interacting with others),
5. attitudes (changing one's feelings, interests and values), and
6. learning how to learn (becoming a better and self-directed learner).

An interesting feature of the taxonomy is that it combines both cognitive and affective outcomes of learning. The taxonomy is interactive which means that each kind of learning can stimulate other kinds of learning. Admittedly, it may not be possible to include all six kinds of significant learning in a topic or lesson; the more that can be included will make learning richer. OERs and Non-OERs are selected based on the learning outcomes as shown in Figure 1.

The sequencing of the content followed the 'classic tutorial-in-print' (Horton, 2000) in which learners start with an introduction to the chapter and proceed through a series of pages towards more advanced concepts and principles. At appropriate points in the sequence of content, learners encounter various kinds of *Learning Activities* to reinforce accomplishment of objectives of the chapter. The classic tutorial was preferred because it is more familiar to learners and since the contents of the course may be new to the majority of students, it reduces the possibility of confusion. Another reason being that the course is written in English and for some students who are less proficient in the language the classic tutorial format may be less intimidating.

Learning is not so much a matter of getting students to read; it is getting together a set of things for students to do that is important (Ellington and Race, 1993). Students learn more and retain their learning longer if they acquire it in an active rather than a passive manner. Learning activities are designed to help students monitor their own progress, check their understanding, develop specific skills, apply what they have learned to real-world situations and to reflect on what they have done (Melton, 2002). According to Merrill (2002), the most

effective learning activities are those that are problem-centred and involve the student in activation of prior experience, demonstration and application of concepts to real-world settings. Learning activities aim to get learners to go beyond memorisation, bring in their own experience and examples, use the ideas in the material and apply them in their work or personal life, learn by doing and reflect on their own thoughts and feelings. They are presented with real-world situations (i.e. application of concepts). Case studies are introduced at relevant sections in the text in which learners analyse and evaluate (critical thinking), suggest solutions (creative thinking), solve problems and make decisions. OERs and Non-OERs are selected based on the learning activities designed for each course as shown in Figure 1.



**Figure 1: Pedagogical Model Guiding Selection and Use of OERs and Non-OERs**

[source: adaptation of John Arul Phillips, Kuldip Kaur & Ansary Ahmed, *Instructional Design Principles in the Development of an E-Learning Graduate Course*. 2005. International Conference on e-Learning, Bangkok, Thailand]

The Summary at the end of each topic is closely aligned and in many respects a repetition of the topic learning outcomes. If learners are unable to explain any of the statements summarised, they are prompted to re-read the relevant sections. OERs and Non-OERs are selected to provide a summary for each topic as shown in Figure 1. Assessment is designed not only to give a grade but more importantly to enhance student learning. The assessment tasks used in the course consists of both audit and authentic assessment with criteria and standards made explicit. Audit assessment is assessment which only determines whether students ‘got’ the material they studied or learned correctly. Authentic assessment incorporates exercises, questions, problems that create a real-life context for a given issue, problem or decision to be addressed (Fink, 2003). OERs and Non-OERs are selected to support both audit and authentic assessment designed for each course as shown in Figure 1.

The design of the self-instructional materials takes into consideration that most learners pursuing the M.Ed programme are adult learners and that instruction for adults needs to focus more on the process and less on the content being taught, use of case studies, role playing and simulations are useful, instruction should be task-oriented instead of memorization, adults are self-directed and should learn to discover things for themselves and they want to make use of their rich experiences (Knowles, 1984).

### **Examples of OERs and Non-OERs Selection and Use**

The following are some examples OERs and Non-OERs that were hyperlinked for the 14 courses for the Master of Education (M.Ed) programme offered between January, 2009 and January, 2010.

- Video clips were incorporated to teach specific concepts in educational statistics such as ‘test of significance’, ‘hypothesis testing’, ‘meaning of the t-test’ and so forth. These short video presentations provided learners with an audio-visual explanation of concepts aligned with the learning style of particular students. e.g. YouTube, Google videos, videos from George Lucas Foundation website
- Audio-clips provide learners with correct pronunciation of key terms as well as catering to the learning styles of learners who are auditory by nature
- Case studies allow for comparative analysis of practices and procedures. e.g. curriculum implementation in Indonesia and South Africa
- An Asian-centric perspective is presented with case studies from different countries in the region
- Currency of information especially in courses such as Instructional Technology where there is need to constantly update information when new tools and technologies are introduced. e.g. twitter, four-squares
- Text material which explains similar concepts and principles in the SIM in several different ways which seeks to enhance understanding
- Animations showing function, procedures and interaction of concepts and principles which appeals to visual learners. e.g. information transmitted through neurons
- Glossary of terms professionally prepared enables quick revision
- Online dictionary facilitates understanding of definitions of key terms
- Sites such as ‘answer.com’ enable learners to get a quick grasp of key terms presented in simple language
- Powerpoint slides which specify the main points of a topic assist learners to get an overview of the topic as well as enable quick revision
- Online tests such as multiple-choice items allow for self-testing by learners on their understanding of the content as well as reinforces learning

- Blogs selected to allow learners to view the opinions of others on the topics of interest
- Reports and research from developed economies provide learners with an insight into the practices and procedures adopted. e.g. IDEAL Act from the United States is being used as a guide for special education in several Asian countries.
- Free full-text e-books by several publishers give learners access to information that may not be available in libraries in their vicinity. e.g. The National Academic Press makes available e-books on early childhood education and psychology.
- Online calculators allow for use of statistical tools for processing data. e.g. Vassar statistics provides several calculators where learners who do not have access to expensive statistical packages are able to analyse data online using these tools.
- Thousands of lesson plans are available for a variety of subject areas which educators and instructors access for use in their classrooms.

### **Challenges**

Resources on the web are increasing by the minute and a significant amount is invaluable for teaching and learning. Using such materials presents several challenges for programme developers. First, is the task of having to identify, sieve and authenticate their appropriateness for teaching and learning. It is a daunting task requiring dedicated subject matter experts who are internet savvy and willing to spend time searching for such materials. Second, relates to the monitoring of hyperlinks as some of them tend to be being 'dead' links after a period of time due to several reasons such as the movement of web servers. Hence the subject matter expert has to promptly replace these "dead" links with equivalent alternative links.

Third, relates to the practice of hyperlinking itself which is the very essence of the web. If strict restrictions are imposed on hyperlinking, especially deep linking, the use of web resources for teaching and learning will be greatly curtailed. This is especially of concern to countries where physical library services are lacking and subscription to online databases is prohibitive. Fourth, is the paucity of web materials written in English by scholars and practitioners from Asian and African countries in the different fields of education compared to materials available from the United States, Britain, Australia and New Zealand.

Finally, without doubt the web will grow as more material is uploaded and more people have not only access but faster access with high speed broadband. The web is like the universe – "billions and billions of web pages", as Carl Sagan might have said, and most of them invisible to the naked eye (Smith, 2004). This prompts the need for more powerful and intelligent search engines that are able to delve into the depths of the web. The semantic web (though there is no authoritative definition of what it is) is the next step towards making the search of web resources for teaching and learning more intuitive and easier for average internet users to find what they're looking for.

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