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# Online Introduction to Information Literacy: Ticking that box or Embedding that attribute??

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## **Abstract**

The University of Wollongong introduced an online compulsory undergraduate Information Literacy Introductory Program (ILIP) in 1999. Extensions and adjustments make ILIP 2003 a requirement for postgraduate coursework students as well as undergraduate students. ILIP is also highly recommended to incoming research students. Such policy initiatives for a compulsory online learning tool raise interesting questions about the interaction of University policy and learning and teaching policy, about the implementation of such policy and about the effectiveness of the tool both alone and as part of a process. This paper suggests that the compulsory ruling has effected the tool's development and implementation. The paper contends the tool should be considered both as an online learning device and in its use in developing alliances between library and learning support staff and faculty in the development of desirable student learning outcomes. Such alliances are part of the University meeting its Graduate Attribute outcomes and thus part of the current debate regarding generic skill development and employability skills. Where the Program is most effectively used is where it becomes the stepping stone to interaction and integration of information literacy - a key component of success for students in their studies and beyond. Here it can have impact!

## **Keywords**

Information literacy, graduate attributes, generic skills, research skills, policy development, quality, learning and teaching strategies, employability, higher education, online learning, compulsory programs

## **Disciplines**

Arts and Humanities | Social and Behavioral Sciences

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# Online Introduction to Information Literacy: Ticking that box or Embedding that attribute??

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## **Abstract**

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## **Introduction**

The Information Literacy Introductory Program (ILIP) was implemented as part of the University of Wollongong's Information Literacies Policy in 1996. Since that time it has been developed in stages from

- (i) intervention in first year undergraduate classes, to

- (ii) a face to face workshop or online tutorial with a compulsory single set of electronically marked of questions, and
- (iii) most recently, to an online tutorial and a compulsory faculty based individual quiz backed by an optional face to face class and one to one support.

The development of ILIP was part of the University's move to address the needs of students for Information Literacies. The University of Wollongong Information Literacies Policy (1996) was a proactive step toward ensuring students were introduced to needed research information sources through the University and particularly the Library. It attempted to cover basic skills necessary for student research in finding, locating and citing information. It was also a step to meeting the quality driven outcomes identified internally and externally in the development of quality assurance in higher education. (Department of Education Training and Youth Affairs 2000, p. 2-3).

The process of making an online check of information literacy skills compulsory for all incoming students culminated in the first online quiz being set for incoming students in 1999. All students received the same set of questions. Cynically, this could be described as the University building on a single generic quiz that could be seen as a "box ticking exercise" for quality agendas. In reality it became a development tool furthering the University Librarian's long history of early intervention with new students at a Faculty level.

As the tool has been developed into its current form, it has gained acceptance across the University community and has involved a cross section of university working groups pulling together "to make it happen". New partnerships have been formed and extended. The compulsory ruling has assisted in the moves to embed Information Literacy at all levels of teaching. University policy and practice supports ILIP from top to bottom.

The simplicity of the quiz could lead to questioning its efficacy as a learning device. However, developments of the tool from 1999 to 2003 and a growth in the depth and extent of partnerships which support both the tool and the process of embedding the attributes suggest that it is more than a "click and flick" exercise.

### **Brief Overview of Current ILIP program**

As with earlier versions of the University of Wollongong's ILIP program the current version aims to provide students with an introduction to the basic research skills necessary for University study. ILIP involves the completion of an online assignment (University of Wollongong 2003 <http://ilip.uow.edu.au> ). To facilitate the successful completion of the assignment, students have the option of attending a Library class or working their way through an online tutorial (University of Wollongong Library 2003 <http://www-library.uow.edu.au/helptraining/workshops/ilip/index.html> ). Successful completion of the assignment is compulsory for all first year undergraduates and course work postgraduates (unless they have completed undergraduate ILIP in the last 5 years). It is highly recommended for research

postgraduates. Students receive their own randomly selected individual set of questions based on their level of study, faculty of study and study location. Postgraduate students receive an extra set of questions. Students need to complete the online assignment within their first semester of study. Failure to complete leads to results being withheld with notification via the student online management package. Exemptions are handled by the University Lecturer Graduate Attributes Programs.

Behind the visible face of the program is a database which provides a random set of 20-22 questions dependant on each student's level of study, faculty of study and location of study. The results are "marked" by the database and when 100% correct can be submitted for completion. The database is linked to the University core IT systems which upon successful completion of the assignment record successful completion of a Supplementary Program (ILIP) allowing the student to continue their studies and access their examination results for their first semester of study at the University.

### **Relationship to University Policy**

The University of Wollongong's Learning and Teaching Plan (University of Wollongong 2003 [http://www.uow.edu.au/about/teaching/lt\\_stratplan.html](http://www.uow.edu.au/about/teaching/lt_stratplan.html)) seeks to embed the development of the tertiary literacies which underpin the Attributes of a Wollongong Graduate (University of Wollongong 2003 <http://www.uow.edu.au/about/teaching/attributes.html>). Tertiary literacies and Graduate Attributes (terms which tend to be used interchangeably at UOW) are the University of Wollongong's means of addressing the learning of desirable generic skills. Policy requires the identification of tertiary literacies in course and subject development. Many academics readily admit that identification of these outcomes is a fairly cursory affair, yet there is University wide demonstrated interest in the process. Graduate Attributes or tertiary literacies are central to a significant proportion of internally allocated research monies (Collins, Percy & James 2003). Current reviews of the Learning and Teaching policy and implementation of a Tertiary Literacy Plan in 2003 are evidence of attempts to accurately identify best practice and appropriate, measurable learning outcomes.

Collins, Percy and James (2003) suggest that these plans are indicative of the steps the University is taking to produce a cultural change which focuses on the outcomes of learning and teaching across the University. While claims about the extent of the cultural change may be debated, of relevance in this paper, is the University wide embedding of particular graduate attributes and the alliances developed in this process.

University of Wollongong's online ILIP became compulsory through a process of debate and reflection beginning in the late 80's. When online ILIP became compulsory in 1999 there had been approximately 10 years of movement towards the notion that this would be a critical step to address students' information literacy needs. Previous work by the Library in developing information literacy skills through subject based classes formed a critical part of this movement. Research (for example: Appleton and Orr 2000; George,

McClausard et al. 2000; Radomski 2000; Wright and McGurk 2000; Bruce 2001) suggests faculty/librarian partnerships in developing information literacy skills are tied to moves to develop graduate attributes like lifelong learning. The decision that ILIP would be University wide and compulsory is indicative of drivers at University of Wollongong (henceforth referred to as UOW) governance level, supported enthusiastically by the Library. Such is ILIP's present acceptance that the 2002 mandatory ruling for post graduate coursework students passed the University's governance hierarchy with zero dissent. In the same year, student representatives suggested and supported the inclusion of material and questions to address concerns regarding student lack of knowledge of plagiarism. ILIP is deemed to be a "goer" at UOW.

Of note regarding ILIP in this ongoing process are the cross faculty/cross university drivers. University teams addressing tertiary literacies matters are very broadly based. When ILIP was initiated it was widely and appropriately at that time identified with the Library. Researchers publishing on developments like UOW's ILIP talked about partnerships to create success. UOW's current ILIP's success and the breadth of its acceptance are however, the result of cooperation beyond the Library and other partners. The writers of this paper suggest that alliances is a better term to describe the range of groups which have input to creating the effectiveness of the ILIP initiative. Some of the cooperation and the spreading of partnership into alliances stems from University initiatives like appointing an Information Literacies Project Officer to support ILIP and information literacies and later the appointment of a Lecturer Graduate Attributes Programs. By placing these roles outside the Library an agenda is set that broadens the initiative. It is interesting to observe the range of inputs and support for ILIP: there is almost a web of alliances which assist in creating flow on effects for the initiative.

<b>ILIP Inputs and Support across the University</b>
Library (especially Faculty Librarians)
CEDIR (Centre for Education and Interactive Resources)
Learning Development
Information Technology Services
Strategic Planning Unit
Academic Registrar's Division
Academics
Faculty Representatives
Dean of Students
Students' Representative Council members
Uniadvice
The Printery
Various University Council Committees

Of interest is research by Lau (Lau 2001, p. 103) which points to at least three factors fostering the successful running of a totally new information literacy program at a Mexican university. The factors are i) support from university management, ii) involvement of university committees and iii) lobbying from the Library. Lau suggests these factors allowed the formation of partnerships with faculties to be an easier process and so views the matter from the

perspective of the Library. At Wollongong It seems that a step has been made to broader acceptance in creating alliances. Support and initiatives from University administration and governance bodies is important but ILIP support is spread further. Paralleling such top down initiatives are the untiring efforts of individual Librarians, academic support staff, academics, administration and other staff committed to the improvements in learning and teaching at the University. The Library is properly a critical element in information literacy across the University, however, the success of ILIP and its impact stems from a range of alliances.

### **Means of Implementation of ILIP**

The first set of online ILIP questions were devised and implemented in 1999. While this format of the assignment achieved the project requirements the main drawback was that students all received the same set of questions and it was felt that some students were copying each other's work. In 2000 as a joint initiative between the UOW's School of Information Technology and Computing Science (SITACS) and the Library, a project was launched to provide computing students with hands on experience of system design and implementation. Hence, their construction of a database that could randomly give questions set on various parameters. This languished for almost 2 years. However, in 2002 the original SITACS student developed tool was modified and enlarged by members of the University of Wollongong Information Technology Services division to meet current requirements. This process involved a rather intense period of database data entry, reprogramming and testing from late October 2002 to the start of the University of Wollongong's Graduate School of Business & Professional Development first session in mid January of 2003.

Alongside the actual database development has been the content development of the assignment questions, as well as the updating of existing material, and the development of new content for the associated Library class and online tutorial. Many people across the University community were directly or indirectly involved in this part of the project. As a result valuable alliances were formed University wide. Many of the assignment questions are based on the Library catalogue. As the catalogue is a dynamic system the answers to questions needed to be changed. Questions were reformulated to reflect current Library and information technology trends and now cover different content than previously gathered material. New questions were formulated to cover new directions and focuses in University policy. A good example of this is the inclusion of two questions on the University's plagiarism policy. While question types – short answer, multiple choice, etc – were pre-determined by the programming much of the problem solving of getting the database to work to current requirements was done by entering data, finding problems and with the help of UOW IT personnel, identifying solutions and then reprogramming the database to fix the problem. As the time factor became more urgent extra staff were employed to finish the data entry. Problem solving however seemed to be best achieved by having a hands on approach where the emergence of problems could be identified and solutions found and implemented in an action learning process.

Testing the database was achieved by involving as many players as possible. Library, Learning Development, Commerce faculty staff and a small group of students were all primed to enter and complete the assignment at the same time to make sure the system didn't fall over and to identify problems from an users point of view. Trials over, last minute problems resolved, the new ILIP program was released to the first intake of Wollongong Graduate School of Business and Professional Development students in mid January 2003. This provided a further and higher order trial of the tool with 150 students, many of whom are international students, on two campuses prior to the onslaught of more than 3500 students commencing their first session in February. Due to everyone's hard work in the development of the underlying database, Library classes and the online tutorial, plus an effective marketing of ILIP to incoming students, the number of early responses to the program from both international and domestic students was wonderful. Student support is encapsulated in comments made to the Lecturer Graduate Attributes Programs like "That really helped me know my way round the database stuff."

### **Strengths and Weaknesses of Current ILIP**

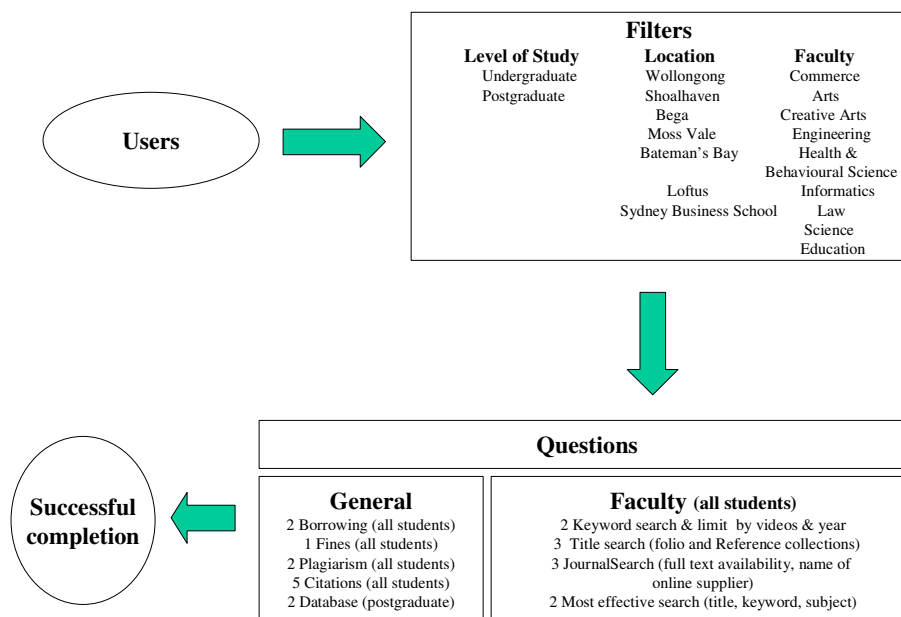
One of the strengths of the new ILIP program has been the involvement of all interested stakeholders in the process of development, the web of alliances. This has meant the development of a stronger program leading to greater coordination in the development and implementation of the program. Involvement has ranged from students testing the assignment, Librarians from remote campuses setting appropriate question content, to the University governance bodies providing policy and timeline decisions. A coordinated marketing approach facilitated by both the Lecturer Graduate Attributes Programs and the Library has meant the students have been given a consistent channeled pathway leading to the completion of the online assignment.

The coordinated approach covered the initial awareness of the program through handouts, posters, Student Handbooks, targeted student orientation talks and booklets; ILIP completion reminders such as advertising on plasma screens, promotional pamphlets, and email notification; and choice of help (online tutorial with defined content modules or a face to face ILIP class). All of this has been reinforced by automatic notification programmed on the student online management package. The aim has been to make the completion of ILIP, and thereby becoming more information literate, easier.

Statistics are not available for previous years because management tools did not exist previously. So while records for 2003 suggest very early completion rates there is need for mapping this data across time to assist future operational decisions. This mapping has been made possible because of the alliances and cooperation across units. Staff opinion is that the rule change to make completion compulsory in the first session rather than the first year of enrolment has been significant in effecting early completion. Future mapping will assist analysis.



A main strength of the program is the database itself. The first electronic version of ILIP reflected the paper and book based world from which it developed. The latest version of ILIP moves towards an information resource world based on electronic resources. Programming has allowed the questions to be individually randomised thus negating the main problem of previous ILIP programs – the single common set of questions. To demonstrate the randomising process Figure 1 shows the relationship between the user and the questions the user actually receives in their assignment. For most questions students receive 1 or 2 questions from a possible 4-6 questions in the database. For each question type there may be 2-3 different sub questions. For example students receive 5 citation questions of which they would receive 1 book citation, 2 chapter citation and 2 journal article citation questions. For each of these sub questions there is a range of questions entered into the database. The students would receive one (or two) of a possible 6 questions entered into the database for each sub question. This helps to individualise the questions the student receives. Some questions such as borrowing and fines involve no choice of question but are dependant on the student’s location of study. Postgraduate students receive an extra 2 database questions.



**Figure 1. How users receive ILIP questions**

Being study level, location and subject specific the student receives questions that are appropriate to “their” individual program of study thereby having more meaning or purpose to the student. Academics and Faculty Librarians also know the student has received basic information literacy instruction to a certain level and can plan further instruction from this base point. Research shows that while ILIP type programs are effective, the challenge for academics and librarians is ensuring “skills learnt in this program are reiterated, consolidated and extended” (Wallace, Shorten et al. 2000, p. 489).

This paper contends this is advantaged by the web of alliances supporting ILIP and information literacy at UOW.

An important feature of the database is the student's ability to save a partly completed assignment, return to the same set of questions and complete at a later date. This feature makes the system more user friendly to the student. Links within the database question window allow the student to find help, and to access the needed external systems to complete the assignment, e.g. links to the Library catalogue, online tutorial, the University's Plagiarism policy. Figure 2 shows links from the side bar within the assignment. In this example an assignment has been partially completed and returned to at a later date, showing questions that have been marked right, wrong and unanswered.

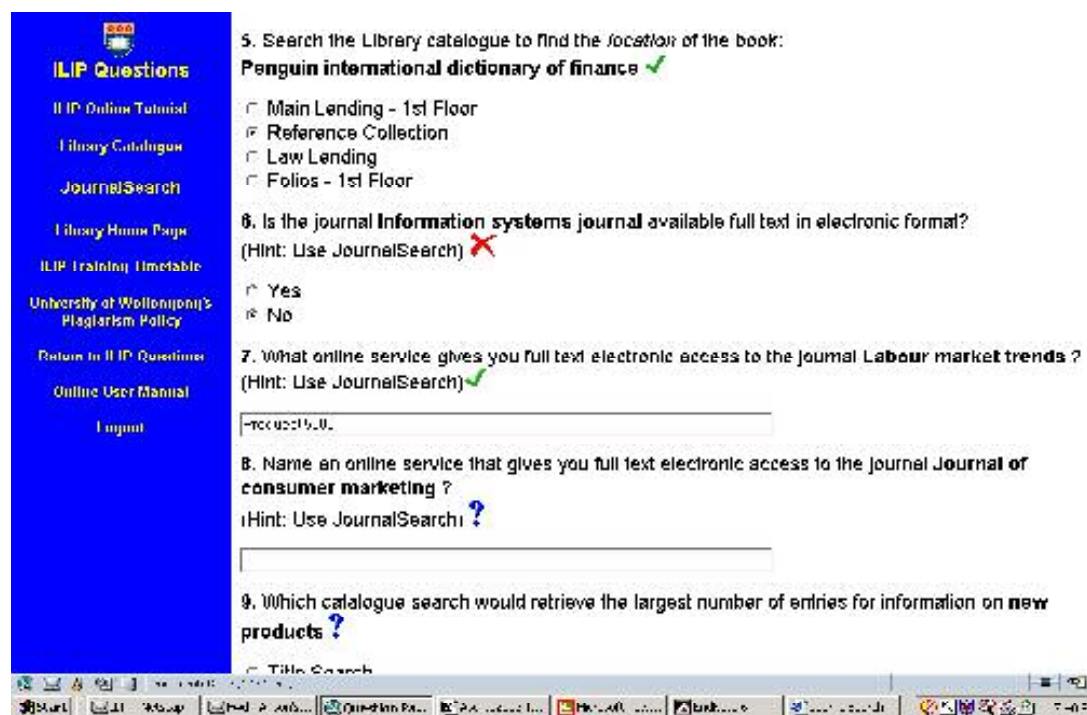


Figure 2. ILIP database

The database is self checking: a must for any program that involves large numbers of students. This means content and associated answers must be very specific, as the database can only cope with limited answer variations. An example of this is the way a student may enter the name of the online service provider of a journal title, e.g. Proquest 5000, Proquest5000, etc with variations of upper and lower case letters. To get around this the database allows for 4 possible variations of the answer and is not case sensitive. The four variations must be entered into the database and variations outside these parameters are marked incorrect. So far this solution has worked. Some problems however are not "fixable". An example of this situation is cutting and pasting the name of an online service provider from the Library's JournalSearch program with associated vertical line punctuation. This extra punctuation cannot be taken out of the JournalSearch program and is not accepted by the ILIP database. If students have a problem with this the only

solution is to make them aware of the problem. Luckily this is the only “unfixable” problem thus far encountered. This points to an inherent weakness of any database of questions – the answers in the database must be correct. As the Library and the University are dynamic organisations there will be changes that need to be taken into account in future versions of the ILIP program. Answers and questions need to be regularly rechecked for accuracy and reflection of current developments.

## **The future**

At the UOW ILIP has been critical in attempts to meet Graduate Attribute outcomes envisioned in the University’s Strategic Plan. Continuing steps to develop the outcomes need two things:

- (i) further development of the tool itself to reflect future directions, and
- (ii) continued alliances between service sectors of the University, University governance and faculty

To be truly effective ILIP needs to be viewed as part of a University wide process not as a single tool. While ILIP is currently compulsory for undergraduate and coursework postgraduate students at the Wollongong campus and all other Australian campuses, the next stage in the ILIP program is the acceptance of the program at offshore campuses and affiliated study locations. At the present despite the web of alliances, ILIP is recommended and information literacy skills built upon in an ad hoc way at Subject level in Faculties. As well, further developments in the database and content of the online tutorial will need to cater for new developments in this area, especially as students become more and more information technology aware as they enter university. There are always improvements that can be made to existing content and processes that make the whole process “easier” for students. There’s extending the range of basic skills to be introduced, reformatting questions, the question of research students, ... and the list goes on. Tracking of student completion, monitoring marketing activities and instituting effective evaluation processes are all slated for the future.

ILIP is thus an evolving tool. A process of continuous improvement and support is envisaged and for which resources are allocated. The culture of support for ILIP helps drive improved outcomes. The success of such a process depends on the electronic tool and on the alliances which support and develop its outcomes. Thus, the electronic tool and the alliances are interdependent in creating effective impact.

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