Won Bronze now aiming for Gold
Implementing a sustainable model for using information to learn at The University of Auckland

Hester Mountifield
(Li Wang)

CCA-EDUCAUSE Australasia 2011
An information literacy instructional model developed based recent PhD research

- Graduate attributes
- Professional accrediting organisation
- ANZIIL standards

Learning theories e.g. Bloom’s taxonomy

IL curricular mapping

- Year 1 IL competency
- Year 2 IL competency
- Year 3 IL competency
- Year 4 IL competency
## Education

### Using Information to Learn

<table>
<thead>
<tr>
<th>Year I</th>
<th>Support &amp; scaffolding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloom's Taxonomy - Knowledge, Comprehension</td>
<td>Bloom's Taxonomy - Knowledge, Comprehension</td>
</tr>
<tr>
<td>SOLO - Undifferentiated, multistructural</td>
<td>SOLO - Undifferentiated, multistructural</td>
</tr>
</tbody>
</table>

### Evaluate/review on information

<table>
<thead>
<tr>
<th>Year II</th>
<th>Developing independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloom's Taxonomy - application, analysis</td>
<td>Bloom's Taxonomy - application, analysis</td>
</tr>
<tr>
<td>SOLO - Relational</td>
<td>SOLO - Relational</td>
</tr>
</tbody>
</table>

### Manage Information

<table>
<thead>
<tr>
<th>Year III</th>
<th>Independent learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloom's Taxonomy - synthesis, evaluation</td>
<td>Bloom's Taxonomy - synthesis, evaluation</td>
</tr>
<tr>
<td>SOLO - Extended, elaboration</td>
<td>SOLO - Extended, elaboration</td>
</tr>
</tbody>
</table>

### Synthesize, analyze and evaluate information

<table>
<thead>
<tr>
<th>Year IV</th>
<th>IL in Engineering curricula</th>
</tr>
</thead>
</table>

### IL in Engineering curricula

#### Year IV

- **Sem I**
  - Professional & Sustain. **ENNGEN 403**
  - Civil Eng Admin. **Civil 490**
  - Research project **CIVIL 408**
  - Elective 1
  - Elective 2
  - Elective 3

- **Sem II**
  - Research project **CIVIL 408**
  - Elective 1
  - Elective 2
  - Elective 3

#### Year III

- **Sem I**
  - Management for Engineers **ENNGEN 303**
  - Geomechanics 2 **CIVIL 322**
  - Hydraulic Engineering **CIVIL 331**
  - Transportation Eng 1 **CIVIL 360**
  - Elective

- **Sem II**
  - Math Modelling II **ENGGCI 211**
  - Land Information Sys 2 **CIVIL 201**
  - Intro to Structures **CIVIL 210**
  - Intro to Eng Geology **CIVIL 220**
  - Fluid Mechanics **CIVIL 230**
  - Technical communication **ENNGEN 204**
  - Structures & Design 1 **CIVIL 211**
  - Environ. Eng 1 **ENVENG 244**
  - Civil Eng Mater. & Design **CIVIL 250**
  - Geomechanics 1 **CIVIL 221**

#### Year II

- **Sem I**
  - Math Modelling II **ENGGCI 211**
  - Land Information Sys 2 **CIVIL 201**
  - Intro to Structures **CIVIL 210**
  - Intro to Eng Geology **CIVIL 220**
  - Fluid Mechanics **CIVIL 230**

- **Sem II**
  - General Education **(Elective outside Faculty)**
  - Materials Science **CHEMMAT 321**
  - Elect. & Dig. Systems **ELECTENG 301**
  - Intro to Eng Computation **ENNGEN 115**

- **Sem III**
  - Engineering Design **ENNGEN 115**
  - Math Modelling I **ENGGCI 111**
  - Engineering Mechanics **ENNGEN 121**
  - Bio/Chem for Engineers **ENNGEN 140**
<table>
<thead>
<tr>
<th>Faculty</th>
<th>Sessions</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>280</td>
<td>4293</td>
</tr>
<tr>
<td>Business</td>
<td>35</td>
<td>1224</td>
</tr>
<tr>
<td>Education</td>
<td>153</td>
<td>2444</td>
</tr>
<tr>
<td>Engineering</td>
<td>82</td>
<td>2306</td>
</tr>
</tbody>
</table>

**BUSINESS 101 and 102**

**Getting started**

Welcome to BUSINESS 101 and 102.

These online modules are designed to help you adjust to the university environment and succeed in your studies. Take the time to read through the complete set of modules early in your first semester of BUSINESS 101. You should then return to the appropriate modules when you are preparing your written assignments.

**Business & Enterprise Online**

**Academic Assistance**
Module Two - Business information sources

Module Three - Starting your search

Module Four - Continuing your search

Module Five

The Business report
Demonstrating the steps in preparing a business report. Learn how to gather and evaluate information effectively to write your report.

Module Six - Finding New Zealand business information

ENGEN 303
Engineering Library online tutorial

Case study
You are a student working at Criterion Furniture, reporting to the Business Innovation Manager.

Critereon is carrying out a life cycle inventory analysis on their products and processes.

They use polystyrene for packaging their products. This ends up in landfills and has an impact on the environment.

It is your job now to find out if this is really a problem and if there are viable alternatives to its use as packaging.

Activity: Drag and Drop

Using The Catalogue, drag the numbered standards to the end of their matching titles. Click Evaluate when done.

Click to play the video (13.2MB, 01:56 mins)
http://www.cite.auckland.ac

Student interface

Upload submissions

- Submit a file for "Career Exploration" (submissions due by Sep 23, 2008 1pm)

Check your own submissions

- For "Career Exploration"
  - Career Exploration Assignment - Report.doc (uploaded Sep 19, 2008 11:02am)
  - Website evaluation Organization.xls (uploaded Sep 19, 2008 11:02am)
  - Website evaluation Personal.xls (uploaded Sep 19, 2008 11:02am)

Allocations

"Career Exploration" (Reviews due by last Friday 12pm)

Completed

<table>
<thead>
<tr>
<th>Allocation</th>
<th>View submission</th>
<th>Re-mark</th>
<th>View last mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation 1</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Allocation 2</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Allocation 3</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Allocation 4</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Follow the guide

- Introduction
- What is plagiarism and how do I avoid it?
- What is referencing?
- Why do I have to reference?
- When do I reference?
- How do I reference?
- What referencing style do I use?
- How do I paraphrase other people's words?
- How do I quote other people's words?
- Where can I get help?
Occupation overview (26%)

Overview criteria: field coverage; industry area & products; associated professional societies and well known companies.

- [ ] Mastered: More than three well-known companies and more than three products, services or industries have been explored; the discussion is exceptionally well structured.
- [ ] Proficient: Three well-known companies and three products, services or industries have been explored; the discussion is generally well structured.
- [ ] Limited: Two well-known companies and two products, services or industries have been explored; the discussion is satisfactorily structured.
- [ ] Insufficient: One well-known company and one product, service or industry has been explored; the discussion is poorly structured.

<table>
<thead>
<tr>
<th>Name</th>
<th>R-1</th>
<th>R-2</th>
<th>R-3</th>
<th>R-4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date: Sep 30, 2008</td>
<td>Date: Sep 30, 2008</td>
<td>Date: Sep 30, 2008</td>
<td>Date: Sep 30, 2008</td>
</tr>
<tr>
<td></td>
<td>R-1: Excellent structure of the argument and great examples consultancy firms and industry organisation.</td>
<td>R-2: You have mentioned many companies but none of them have been explored. There is a little discussion into what an electrical engineer might do. Services provided are that you reported on were testing and modelling.</td>
<td>R-3: Electricity Engineers' Association (EEA) Institution of Professional Engineers New Zealand (IPENZ) Electrotechnology Industry Training Electric Supply (ETOS) Association of consulting Engineers of NZ (ACE NZ)</td>
<td>R-4: You have not given much information about what the different companies do.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PeerWise

Ask | Share | Learn

What is PeerWise?

Students use PeerWise to create and explore their understanding of course-related assessment questions and to answer and discuss questions created by their peers.

Any subject

PeerWise is used in a wide range of subjects, including Anthropology, Biology, Chemistry, Computer Science, Physics, Population Health, Pharmacology, Medicine, and many more.

Free and easy to use

PeerWise is free and easy to use. Students are presented with a simple, intuitive interface and instructions that can easily serve student content and monitor participation.
Students can comment on the question

<table>
<thead>
<tr>
<th>TIME</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30 pm, 30 May</td>
<td>**** Very good, although it is not how one normally thinks of looping through an array, it is common practice and very well explained.</td>
</tr>
<tr>
<td>Author's reply</td>
<td>Thanks for the feedback! Going through an array backwards might be possible if the elements are sorted and you want to print them in reverse order.</td>
</tr>
<tr>
<td>2:30 pm, 30 May</td>
<td>*** Good wording of understanding a loop. Awesome.</td>
</tr>
<tr>
<td></td>
<td>*** While I think the question is quite confusing, it is a great question (and very great explanation by the way).</td>
</tr>
<tr>
<td>Author's reply</td>
<td>I hope it isn't too confusing... it was difficult to describe carefully while trying to keep the code to a minimum.</td>
</tr>
<tr>
<td>12:20 pm, 30 May</td>
<td>*** Not a question. A way of looping I haven't considered (and ever), but still applicable and within the scope of the course.</td>
</tr>
<tr>
<td>9:00 pm, 30 May</td>
<td>*** Thinking about the use of different increments and conditions which can be used in a loop! I think it's a nice change from the usual loop questions. Not exactly moving an ascending author of it.</td>
</tr>
<tr>
<td></td>
<td>*** Good pointers to understand loops and arrays. Good explanations as well... thank you.</td>
</tr>
</tbody>
</table>

---

A

```c
int i = 0;
while (i < array.length) {
    // code
}
```

B

```c
for (int i = 0; i < array.length; i++) {
    // code
}
```

C

```c
for (int i = array.length - 1; i > 0; i--) {
    // code
}
```

D

```c
for (int i = array.length - 1; i > 0; i--) {
    // code
}
```

E

```c
int i = 1;
while (i < array.length) {
    // code
}
```
Wang, Li. (2010). Integrating Information Literacy into Higher Education Curricula- an Information Literacy Curricular Integration Model. (PhD thesis). Queensland University of Technology, Australia.

Thank you

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