

# Integrating information skills into the curriculum: the web- based approach

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# Challenges

- Demographic Changes
- Broadening Access
  - Numbers
  - Background
- Volume & Array of Information
- ‘Google Culture’
- Multiple Information Technologies and Formats
- Developments in Teaching and Learning

## Information Literacy Levels

Universal experience - too much Information

- 32% of undergraduates use Internet first
  - Justeis (JISC user surveys: trends in electronic information services) project.
- 86% of end users feel that “web searching could be more efficient”
  - Roper Starch Worldwide survey(2000)

## Impetus for Change

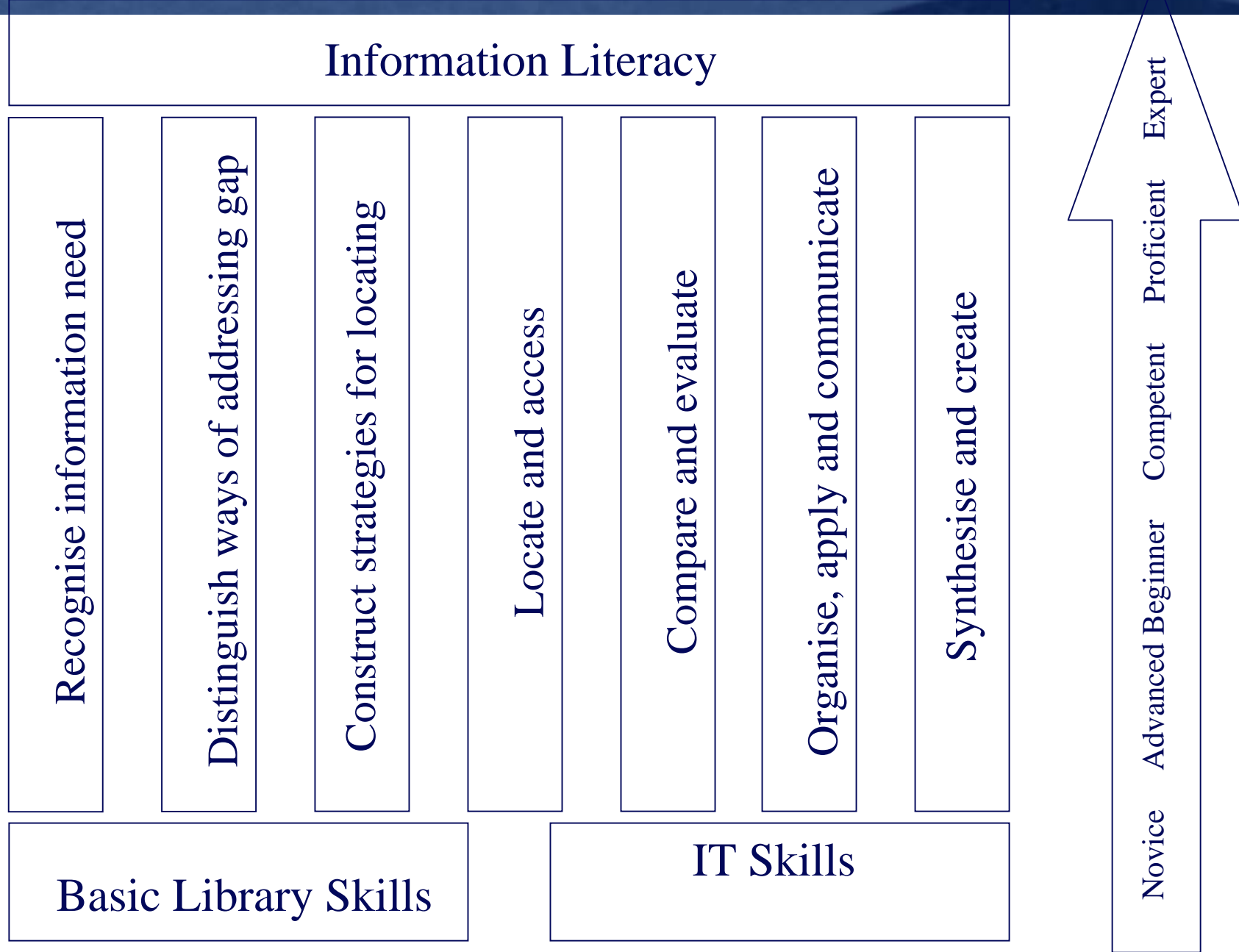
- International & National
  - Bologna Declaration
  - Skilbeck Report
- College
  - Strategic plan
  - Teaching & Learning working group
  - Broad Curriculum Initiative
  - Life-long Learning working group

## What is Information Literacy?

*“To be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information”*

– American Library Association  
Presidential Committee on Information  
Literacy

- A life-long learning skill



## **Information Literacy Standards**

- The ability to recognise a need for information
- The ability to distinguish ways in which the information 'gap' may be addressed
- The ability to construct strategies for locating information
- The ability to locate and access information
- The ability to compare and evaluate information obtained from different sources
- The ability to organise, apply and communicate information to others in ways appropriate to the situation
- The ability to synthesise and build upon existing information, contributing to the creation of new knowledge

## Other Standards & Guidelines

- Association of College and Research Libraries - 2000
  - *“Information Literacy Competency Standards for Higher Education”*
- The Council of Australian University Librarians (CAUL) - 2001
  - *“Information Literacy Standards”*



## Information Skills Training – National Context

- CONUL Working Group on Information Skills Training
  - Established to investigate current IST practice in the CONUL libraries.
  - Report being submitted to CONUL

# Information Skills Training – TCD Context

- 2000 – Library Skills Training Group established:

## Aims:

- Co-ordinate provision of Junior Freshman Orientation in collaboration with IS Services
- Co-ordinate provision of Library Skills training sessions.

# Information Skills Training in TCD - Traditional Delivery Methods

- Junior Freshman Induction/Orientation
  - (Computing/Library Tour and Tutorial)
- Library Skills Training Programme
  - General sessions open to all on :
    - How to Search Library Catalogue (**Generic**)
    - Library Web pages (**Generic**)
    - How to Search Electronic Resources (**Subject Specific**)

**Start with the...**

## *Seven Basic Survival Skills*



**1.** *Get to know the Library*



**2.** *Use the website*



**3.** *Use the catalogue*



**4.** *Follow-through: Use the system*



**5.** *Take control: the D.I.Y. library*



**6.** *Seek help*



**7.** *Get skilled-up*

- Special Library induction customised for specific groups:
  - Mature Student
  - The Trinity Access Programmes Students (TAP)
- Integrated
  - Programmes of instruction delivered by subject librarians .
    - **Subject specific**

# Success in Information Literacy Training

- Academic Affairs Committee
  - Endorsing integration of information skills into curricula.
  - Establishment of pilot programmes.

# Key Issues

- Integration into Curriculum
- Meaningful to Students
- Student Motivation
- Recognition of the student load
- E-learning not an add-on

## Generic Model – Inadequacies

- Not Embedded
- Lack of Context/Relevancy
- Lack of Motivation
- Not Tailored to Different Learning Styles
- Does not Support New Approaches to Teaching & Learning.



## Specific Model – Inadequacies

- Not Embedded
- Piece meal approach – Library staff and faculty staff
- Reinventing/Labour intensive
- Requires Specialised Maintenance
- Difficult to Sustain & Transfer
- Lack of interactivity
- Not Tailored to Different Learning Styles
- Inefficient deployment of resources

## Solution ?

### Contextualise the Generic Model

- “Content is in the Context”
- The generic model requires fitting to the relevant context and community.

# Requirements

- Collaboration
- Organisational aspects of liaison
- Resources
- Selecting the appropriate course

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Collaboration	Piece meal approach
Greatest Impact	Not Embedded
Reduces Duplication	Inefficient deployment of resources
Transferability/ Genericity	Reinventing/Labour intensive
Supports Different Learning Styles	Not Tailored to Different Learning Styles

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# E-learning – TCD Context

## Background

- 1998/9 - Trinity embarked on a strategic review to identify policies, structures and examples of best practice in the use of Information and Communication Technology to enhance student learning within College (Wright 1998, Wade 1999).
- This review led to the establishment of the 'Centre for Learning Technology'
- Over the past 4 years the CLT has supported over 200 e-learning courses across College
- 7,500 E-Learners in TCD
- 2003 – Centre for Academic Practice and Student Learning established:
  - CLT, Academic Practice, Learning Development

## E-learning -TCD Context

### CLT Objectives:

- To support and empower academic staff in creating and developing “learning innovation using ICT”
- To foster and grow best practice in applying e-learning within TCD
- To assist in the design, development and deployment of e-learning content and resources

## MIR as case study

### Background

- 2002 – the Library and Dept. of Pharmacology jointly submitted a project proposal to the CLT.
- Project selected for targeted support.
- Aimed to deploy during academic year 2002/2003
- Grant from CLT was used to devise and implement a course consisting of two modules for the Junior Freshman students

## The MIR Project

The Medicines Information Retrieval Project (MIR) Project is the development of a combined lecture and comprehensive web-based interactive course to meet the information retrieval learning needs of B.Sc (Pharm) students.



## Partners

- Department of Pharmacology
- Library

### *Support*

Centre for Learning Technology

KDEG (Knowledge Data Engineering Group)

I.S. Services

## Course Objectives

- to teach the necessary information retrieval skills to enable students to exploit print and electronic resources in the area of drug information
- to enhance the students' ability to identify, locate, evaluate and use the relevant medical and pharmacy references and resources
- to develop the students' critical understanding of the strengths and limitations of the resources
- to assess the attainment of these skills through web-based technology
- to enhance utilization of information resources

# The Student Experience

- Active not passive
  - Interactivity
    - 25 interactive demos
    - 4 interactive floorplans
    - 5 repeatable interactive self-tests
      - MCQs
      - Hot spots
      - Drag and drop
    - In-context interactivity
      - ‘clickable’
      - repeatable
      - ‘revealable’
    - Navigational

**= CHOICE**

# Medicines Information Retrieval

The Worlds of Information

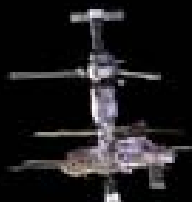
Module 1



Module 2



Module 3



[e-mail for Help](#)



# Systematically Searching The Library

[<Introduction>](#)

[<Finding>](#)

[<Searching>](#)

[<Getting Help>](#)

[<Summary>](#)



## Welcome to MIR Module2

Throughout your professional life you will have access to one or more libraries. They all use common systems, so learning about Trinity's library will help you to use other libraries as well.

All libraries contain and organise information on a wide range of subjects, so it is important to learn how to get the most out of them.

You will need to use a consistent and systematic approach like the Basic Six Questions and the Systematic Search to do this.

Trinity College Library has over 4.25 million volumes. Every week it receives many more. So it is always changing. And it contains a lot more than just books!

In MIR Module 1 we developed the concept of the systematic approach to information retrieval based on the Basic Six Questions. Here in Module 2 you will have the opportunity to apply that approach to finding information amongst the resources of the library.

[<Introduction>](#)

[<Finding>](#)

[<Searching>](#)

[<Getting Help>](#)

[<Summary>](#)



## Outline of Module 2

1. Introduction

2. Finding: Know Your Library

2.1 Resources: for Pharmacy in TCD Library

2.2 Locations: where the resources are located

2.3 Access: how the resources are organised and accessed

3. Searching: using the Catalogue effectively

4. Getting help: what to do when your search is unsuccessful

5. Summary: Putting it all together

# The Student Experience

- **Assessments for each Module**
  - WebCT
- **Catalogue Search Test**
  - MEGs (Group Adaptive Systems)
  - Paper-based back-up

Save answer

**Question 11** (1 point)

Who is your Subject Librarian? Is he/she...

- a. Robin Adams
- b. David Mockler
- c. David Lass
- d. Donal Mackey

Save answer

**Question 12** (1 point)

When searching for the following in the Library's catalogue, what is the most effective search type to use? Match the required material with the search type.

Matching pairs:

- Biochemical Pharmacology Symposium (4th: New Haven, 1989) - proceedings —
- Drugs Quarterly [volume 6, number 2, Summer 2003 - you need to check if it has been received yet] —
- Federation of European Pharmacological Societies [- you'd like to see the publications of this body] —
- All of the books in the Library about St. John's Wort (Hypericum) —

Save answer

Finish Help

Time Remaining

27 : 4 (min:sec)

Question Status

- Unanswered
- Answered
- Answer not saved

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**Control Panel**

MIR

View

**Designer Options**

[Homepage](#) > ... > [Manage Course](#) > [Manage Students](#) > [Edit Record](#) > [Submissions](#) > **[View Submission](#)**

**Question 11** (1 point)

Who is your Subject Librarian? Is he/she...

Student response:

Percent Value	Correct Response	Student Response	Answer Choices
0.0%			a. Robin Adams
<b>100.0%</b>			b. David Mockler <b>Well done - you are absolutely correct</b>
0.0%			c. David Lass
0.0%			d. Donal Mackey

General feedback:

David Mockler is your Subject Librarian

Score:

1 / 1

Override score:

Comments:

MIR - WebCT 4.1.1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

All the Internet Search News e-Cards Calc Games Tools Media

**WebCT** myWebCT Resume Course Course Map Check Browser Log Out Help

**Control Panel** View **Designer Options**

Homepage > Quizzes/Surveys > Detail > **Summary**

**Question: Subject Librarian**

Who is your Subject Librarian? Is he/she...

- a. Robin Adams
- b. David Mockler
- c. David Lass
- d. Donal Mackey

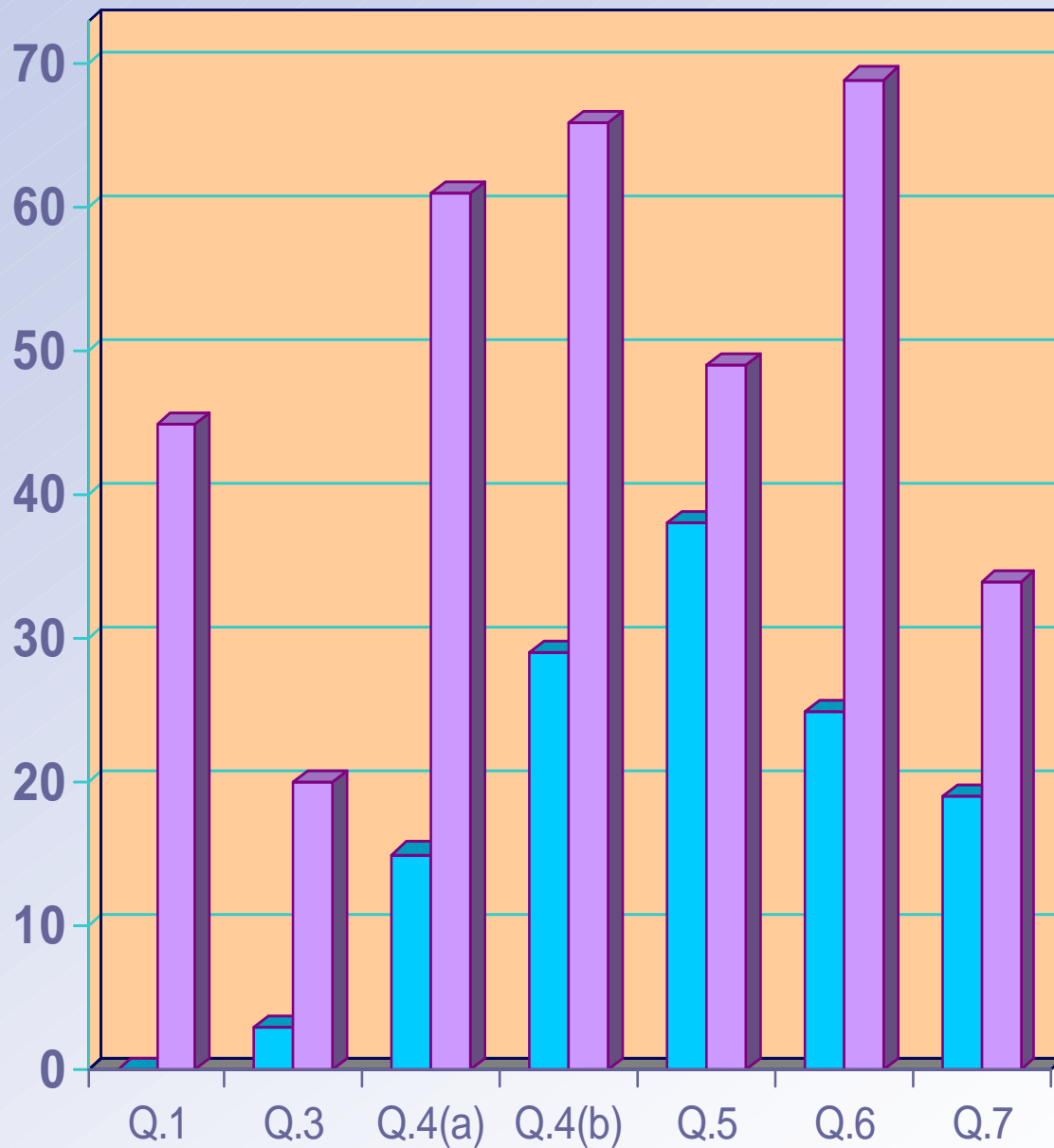
**Response Summary**

Answer	Value	Frequency	Distribution
-	0%	2	
a	0%	12	
<b>b</b>	<b>100%</b>	<b>45</b>	
c	0%	3	
d	0%	11	

Start | MIR - ... | Micros... | Micros... | Pretes... | http://... | Desktop >> | Internet | 22:23

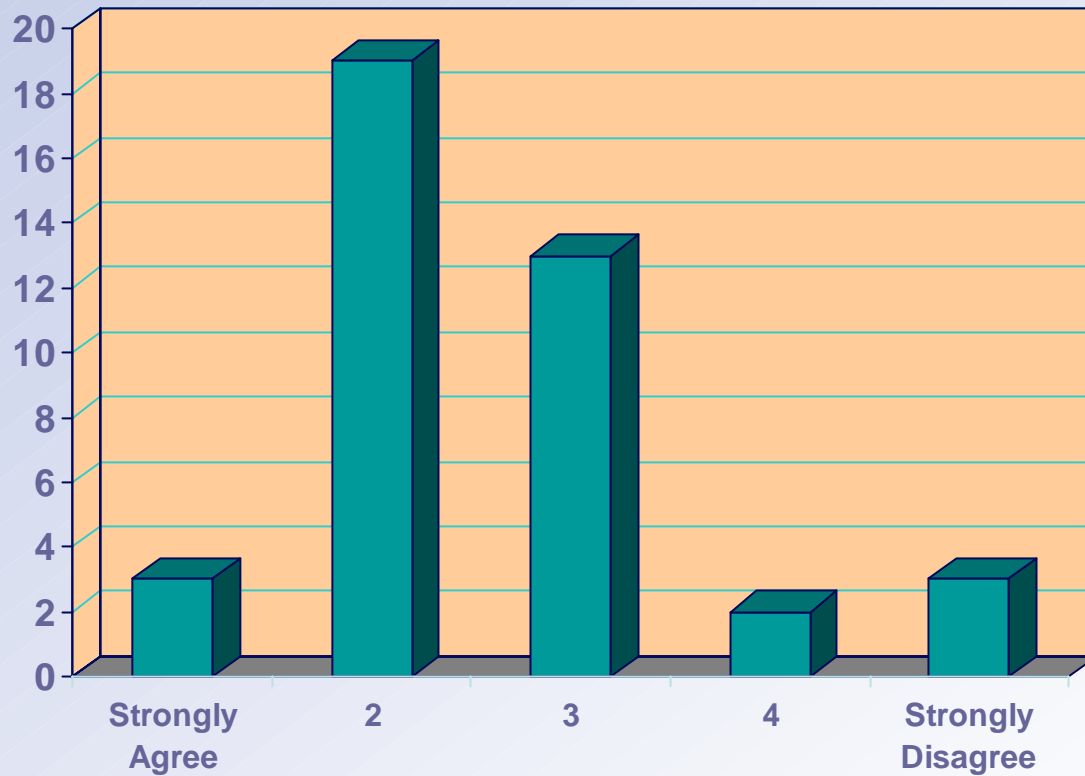
## MIR-Educational Outcomes

- Subject Specific
- Generic



■ PreCourse Test ■ Post-Module 2 Assessment

“Overall, Module 2 webcourse was a valuable educational exercise”



## Findings

### User Satisfaction

# Findings

## What the Students Liked Best...

### Design

'well presented, easy to follow'  
'Demos'  
'Interactive maps'  
'Quizzes'  
'Presentation'  
'Ease of accessibility'  
'Easy to use'

### Content

'Learning about the Library & how to use the catalogue more efficiently'  
'Advanced searching'  
Locations: 'which library'  
'interesting, did not take as long as I thought it would'  
'informative, relevant and useful'

## Findings

### What the Students Liked Least...

#### General

Timing – ‘end of term’

#### Design

‘Online – eyes sore’  
‘Internet crashed a few times’  
‘Size of font sometimes difficult to read’

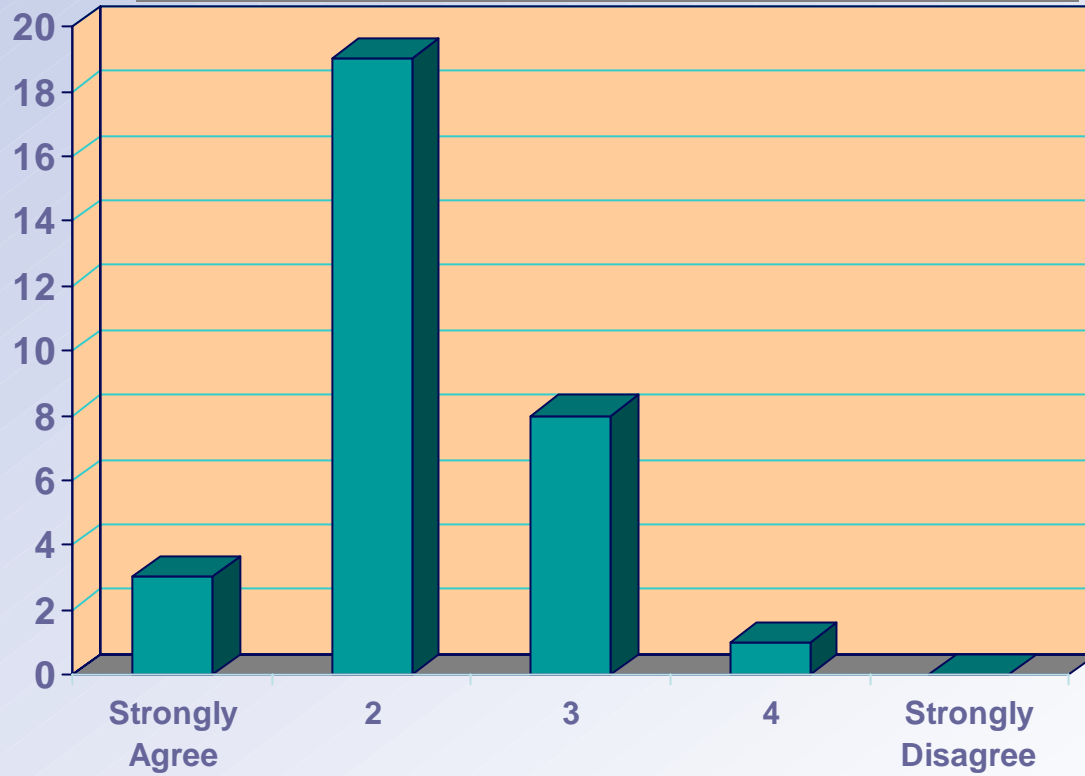
#### Content

‘Time-consuming / too long’  
‘Too obvious’  
‘No practical activities’  
‘Repetition’  
‘did not understand the aims & relevance of it’



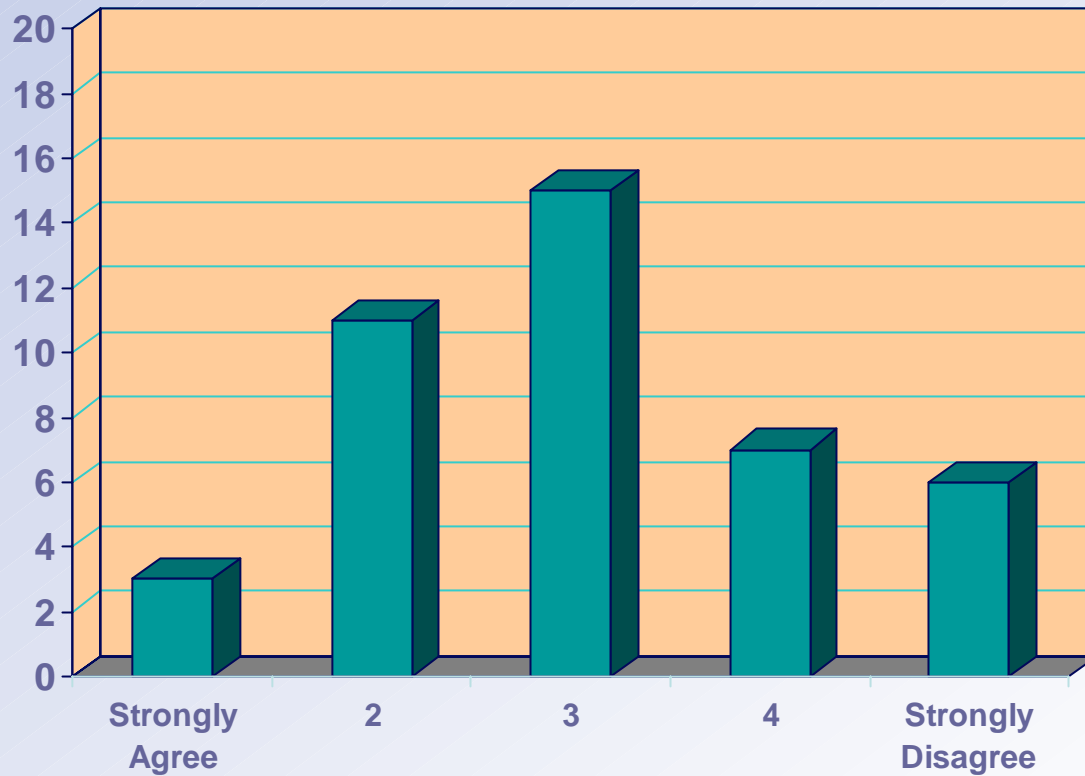
# Findings

“Webcourse was well presented”



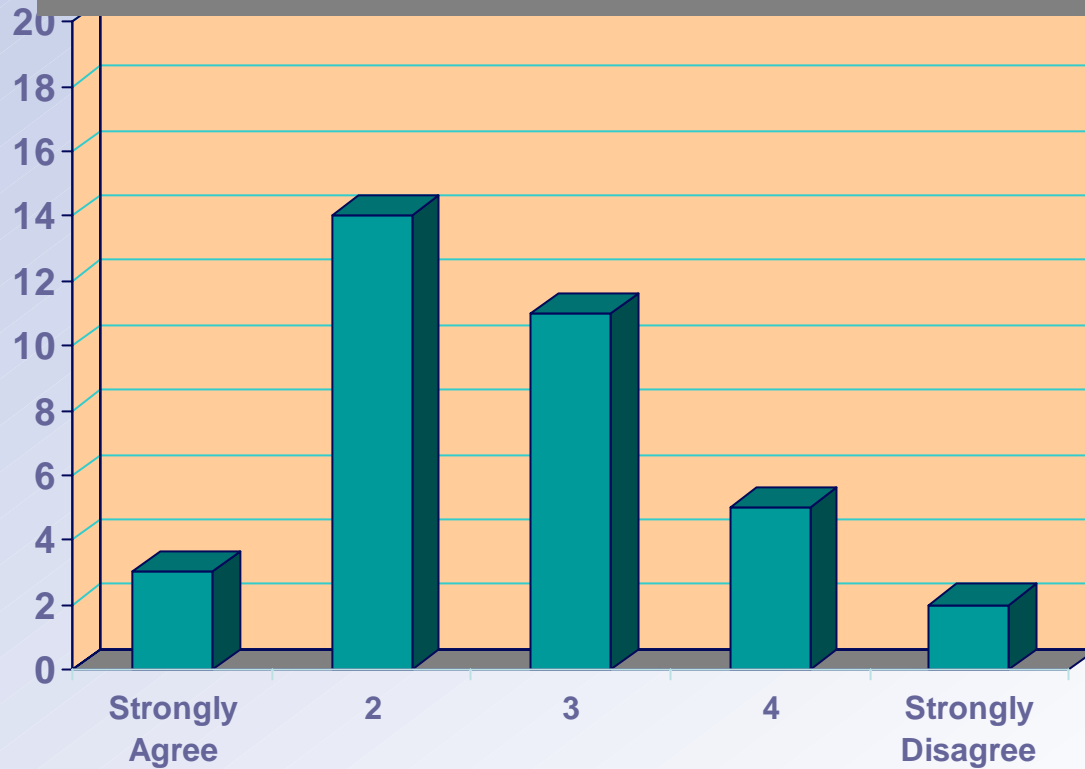
# Findings

“Content of the Webcourse was interesting”



# Findings

“Content of the Webcourse was highly relevant”



## Findings

- Educational Effectiveness
  - How quickly students learn?

## Findings

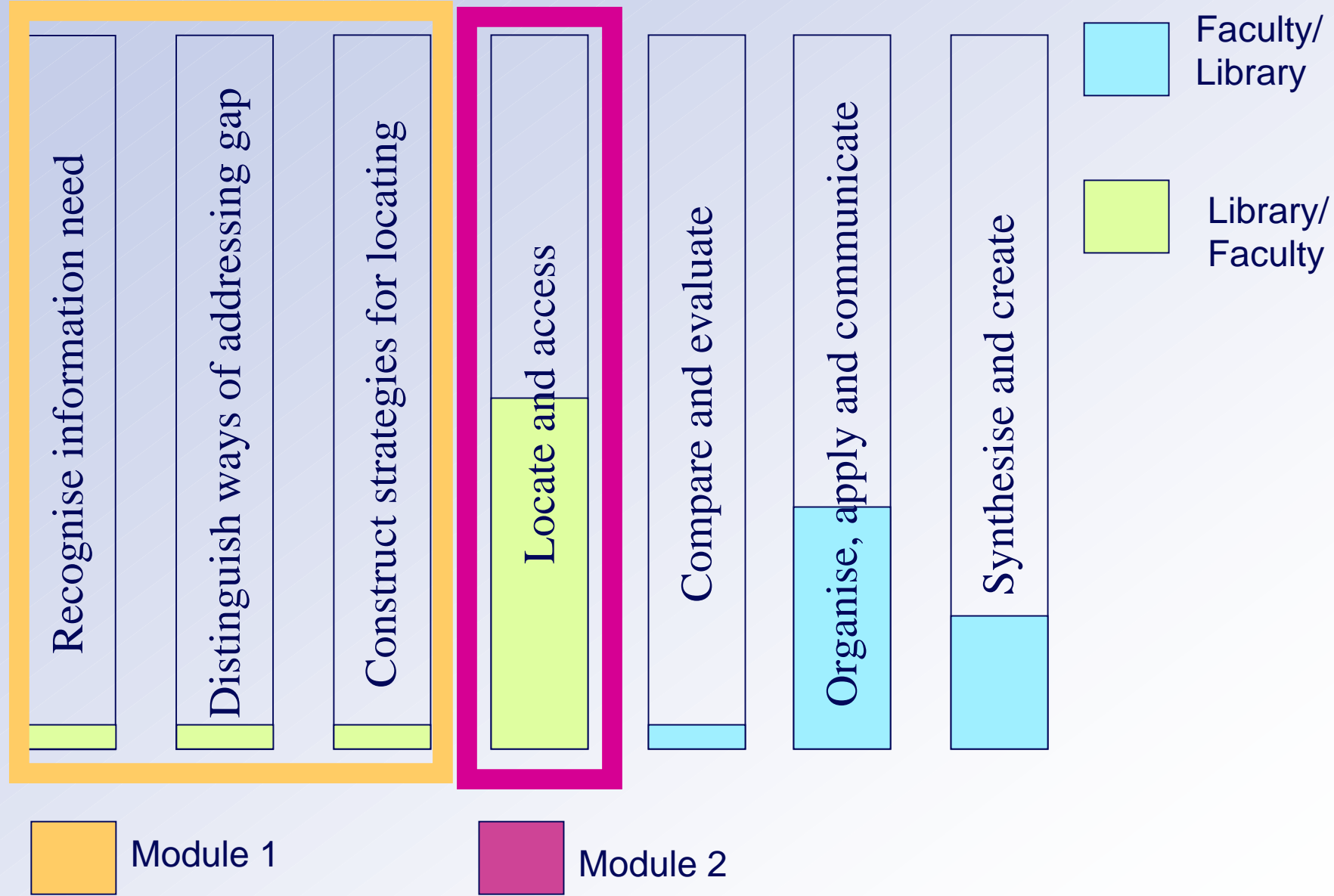
### Educational Efficiency

- Reusability
  - Scalability
  - Transferability

## Where is the Genericity in MIR?

- Narrative
- Kinds of Activities
- Templates – reusable assets
  - Animations
  - Graphics
  - Multimedia
  - Evaluation templates
- Rightsizing – granularity

# First Year Students



# What parts need to be Contextualised?

- Subject-specific activities & assessments
- Some contextualised subject matter:
  - **Subject specific information sources**
  - **Subject specific examples**

**Type of change:**

**Add / Remove**

**Selective Reuse**



## Selectively reusable parts:

- **Some subject / Level / Group-specific activities & assessments**
- **Some Subject specific information sources**
- **All types of interactive content:**
  - Demos /simulations
  - Interactive floorplans
  - Self-tests
  - In-context interactivity
  - Navigational

## Profiting from MIR

- Analyse Content
- Categorise the assets into (*broadly*):
  - **Generic**
  - **Selectively reusable (contextualise)**
  - **Subject specific**
- Sort
  - Manual / Automated
  - by*
  - Level (= scalability)**
  - Subject (= transferability)**
- Personally attend: Context (Students & Faculty)

# Trinity College Library Dublin

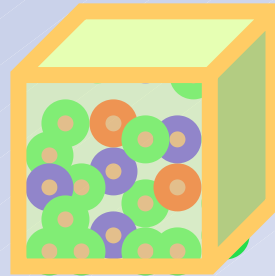
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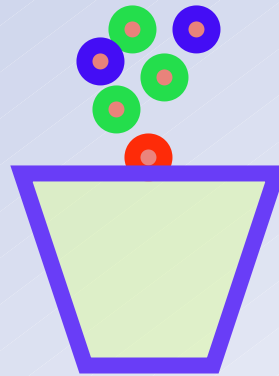
Learning Assets



Filters: Level, Subject



Extra Flavourings



Courses

# **Make / Reuse / Recombine?**

## **Freely available products:**

**Open University**

**Big Blue**

**RDN**

**PubMed**

**TILT**

**GAELS**

## **Commercial products**

**Cochrane**

**Science Direct**

**Publishers Websites**

**National / Institutional / Local needs?**

“Content is in the context”

**Context**



**Content**



**Infrastructure**



## References

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<http://INFORMS.hud.ac.uk>
- JUSTEIS (JISC user surveys: trends in electronic information services) project.
  - Uptake and use of electronic information services, trends in UK higher education from the JUSTEIS project, Christine Urquhart et al., Programme, Vol. 37, No. 3, 2003.
- Rader, Hannelore B., “Information Literacy – an emerging global priority”
  - <http://www.nclis.gov/libinter/infolitconf&meet/papers/rader-fullpaper.pdf>
- Roper

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- UK academics' conceptions of, and pedagogy for, information literacy .  
<http://dis.shef.ac.uk/literacy/project/>
- Stubbings, R & Brine, A (2003) Reviewing electronic information literacy training packages. *ITALICS*, Innovations in Teaching And Learning in Information and Computer Sciences Vol. 2 Issue 1



# Generic Online Information Skills Tutorials

- LTSN – Information Skills Tutorials
  - <http://www.ics.ltsn.ac.uk/ILS/informationsskillstutorials.html>
- RDN Virtual Training Suite
  - <http://www.vts.rdn.ac.uk/>