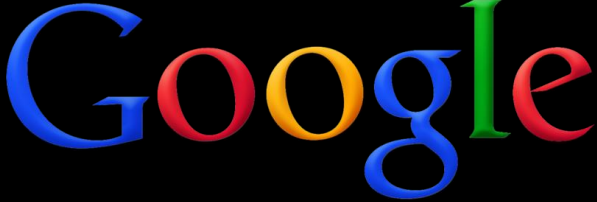


Trying to stop the  
kids using  
  
(and get a paper out  
of it too...)

Or...

**An evaluation of the effectiveness of information literacy training for undergraduate midwives to improve their ability to access evidence for practice**

# A study involving...

Greg Sheaf (Trinity College Dublin)

Joan G. Lalor (Trinity College Dublin)

Mike Clarke (Trinity College Dublin; Queen's University Belfast)

and over 100 undergrad midwifery students from TCD. Thanks guys!

Before we  
start...

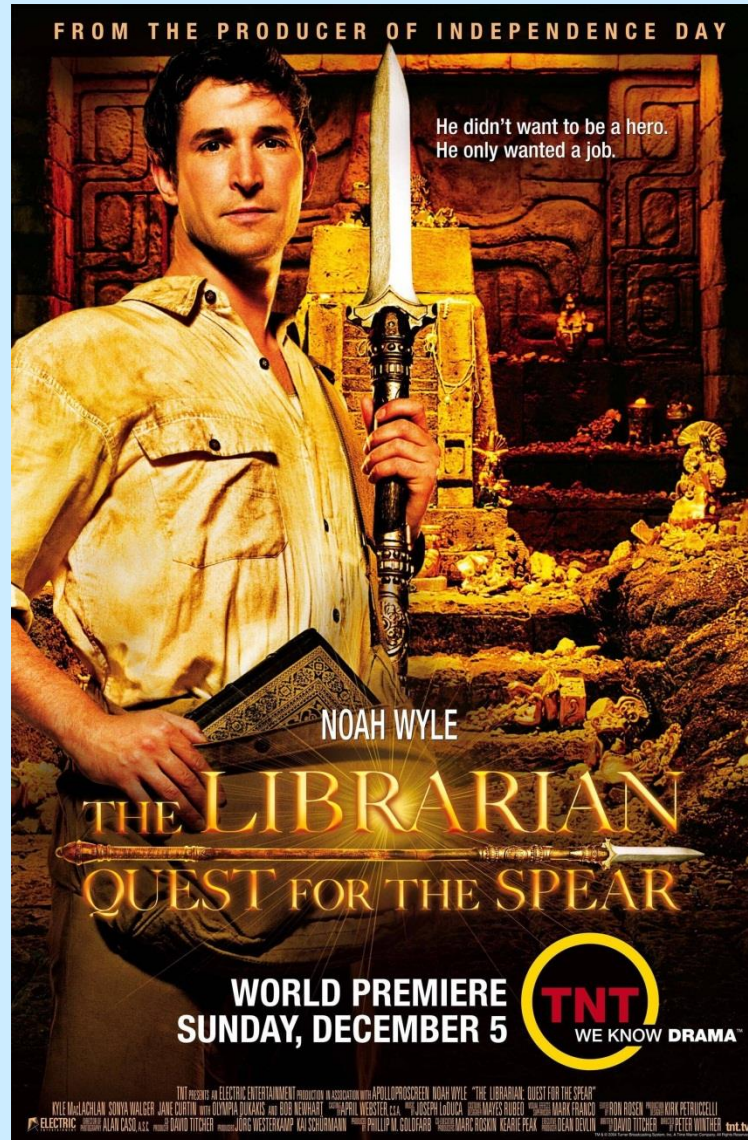
Who is this guy?

# Target audience...

- Elements of this presentation were first given to health practitioners at the 13th Annual Interdisciplinary Research Conference in Dublin, November 2012.
- ...so I had to explain a bit about what librarians do. I thought you'd enjoy looking at that, hence...



# I do love books...



Source: [Moovida](https://www.moovida.com)



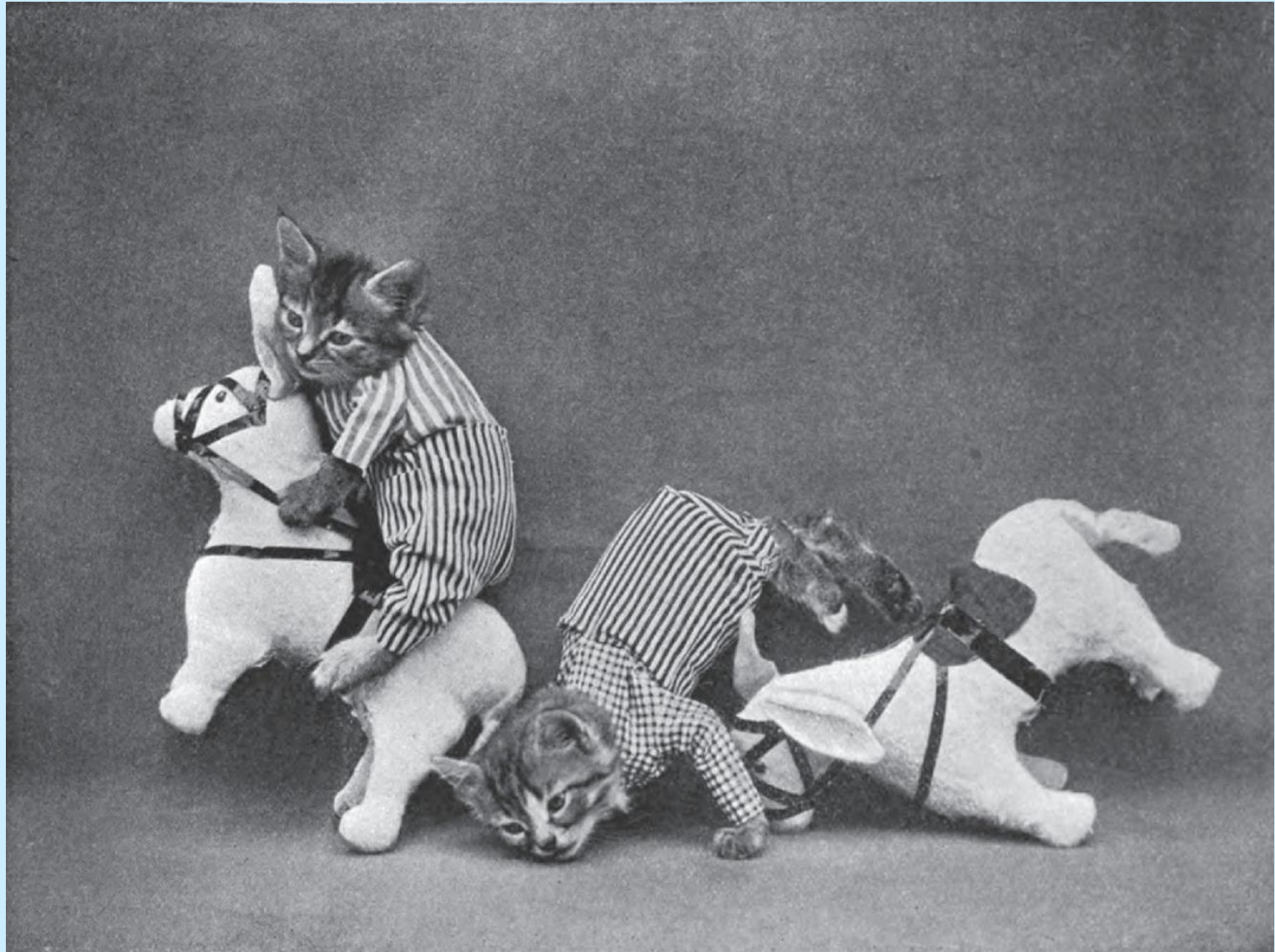
...but I *also* love the Web!

The World Wide Web is *brilliant*.

It gives us access to so much information that used to be locked away or just didn't exist.

For instance:

## Before the **WWW**...



Source: [Anthropomorphised Cat Pictures, Late 19th-  
Early 20th Century: Louis Wain and Harry  
Whittier Frees](#)

**After the *WWW*...**



Source: [Aww! Kitten Pushes His Adopted Brother in a Cart](#)

Unfortunately there's more to using  
the Web than just finding cat  
pictures, booking flights and  
Facebooking...

It's a shame, but you need more skills...



# Information Literacy?

A set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information”

“A survival skill in the Information Age”

“It forms the basis for lifelong learning. It is common to all disciplines, to all learning environments and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their learning”

**ALA** American Library Association

Why we did  
it...

# Background

Entrants to a new direct-entry midwifery degree were performing less ably than expected in conducting research...



# What they had got...

- They would have only received a tour and a one-hour lecture, giving a general introduction to the Library (catalogue, website etc.). Clearly, this wasn't enough.
- Nursing students got that \*and\* a one-hour hands-on tutorial (repeated 11 times in their tutorial groups) on CINAHL in year one, repeated in year three.
- So nurses got a bit more, but not a huge amount.

# The perception...

## How I google something

PC overheated solutions



## How my MOM googles something

My PC is overheated how do I get it to cool down because this pc is my life



Source: <http://imgur.com/gallery/7sLTM>

But is this **true**?

# The CIBER Report

- [“Information behaviour of the researcher of the future”](#), a report by CIBER (*UCL Centre for Information Behaviour & the Evaluation of Research*)
- Released in January 2008 – we started at exactly the same time...
- [‘Google Generation’ is a myth, says new research...](#)

# The Force is strong in this one...



a ciber briefing paper

information behaviour of  
**the researcher of the future**

11 January 2008



# Not only...

- The “new report, commissioned by JISC [“the UK’s expert on information and digital technologies for education and research”] and the British Library, **counters the common assumption** that the ‘Google Generation’ – young people born or brought up in the Internet age – is the most adept at using the web. The report by the CIBER research team at University College London claims that, although young people demonstrate an ease and familiarity with computers, they rely on the most basic search tools and do not possess the critical and analytical skills to assess the information that they find on the web.”

## but also...

- “The report ‘Information Behaviour of the Researcher of the Future’ also shows that research-behaviour traits that are commonly associated with younger users – impatience in search and navigation, and zero tolerance for any delay in satisfying their information needs – are now the norm for all age-groups, from younger pupils and undergraduates through to professors.”

So...

- Students think they are very good at finding information.
- On the whole, they aren't.
- So we (who?) need to help show them!



What we  
did...



Source: [DATABASE at Postmasters, March 2009](#)

What they get \*now\*...

A tour and a one-hour  
lecture, giving a general  
introduction to the Library  
(catalogue, website etc.)

PLUS...

# Year One

- Development of basic search skills for PubMed and an introduction to the TCD library catalogue and other sources (including a little bit about Google) in general terms. Delivered by the subject librarian with a subject lecturer present.
- Two 2-hour sessions in a computer laboratory. Second session is mainly revision.

# Year Two

- Further instruction on PubMed, increasing the complexity of the search skills to include setting limits and selecting certain types of publication. Introduction to the My NCBI function in PubMed, to show how to receive notices of newly published material. Introduction to CINAHL, because of the large amount of relevant material outside of PubMed with an emphasis on transferable skills rather than learning by rote. Delivered by the subject librarian with a subject lecturer present.
- Three 2-hour sessions in a computer laboratory.

# Year Three

- Introduction to additional functions in PubMed (such as MeSH) and to the Cochrane Library, in particular the Cochrane Database of Systematic Reviews. Delivered by the subject librarian with a subject lecturer present; Cochrane session delivered by Mike Clarke.
- Three 2-hour sessions in a computer laboratory.

# Databases and more...

- PubMed
- CINAHL
- Cochrane Library
- Library Catalogue
- Google and Google Scholar

# The nitty-gritty...

- Boolean operators – AND, OR and NOT.
- Using quotes and advanced Google searches.
- Limits and filters.
- Saving searches and My NCBI.
- MeSH terms and subject searching.
- Finding full-text resources.



How did we  
evaluate it?

# Evaluation

- Give students a question, before the first training session for the year and after the last one. Make them use Firefox as the browser.
- Firefox stores its history in a file, so that can be found (with difficulty!), attached and e-mailed.
- A [specialist program](#) can then display those searches, including any words typed into any search boxes.

# The question

You are looking for articles on:

**routine second trimester  
ultrasound in pregnancy**

- What do you think students typed in? Where?

# Sample search history

URL	First Visit Date	Last Visit Date	V.	Referrer	Host Name	Title
http://isservices.tcd.ie/	08/02/2010 09:02:44	08/02/2010 09:02:44	0		isservices.tcd.ie	Information Systems Services - Trinity College Dublin, The University of Dublin
http://search.tcd.ie/search?q=local+homepage&xx=0&y=0&entqr=0&ud=1&sort=date%3AD%3A1%3A&ou...	08/02/2010 09:03:16	08/02/2010 09:03:16	0	http://isservices.tcd.ie/	search.tcd.ie	Search Results: local homepage
http://tcd.ie/	08/02/2010 09:06:47	08/02/2010 09:06:47	2		tcd.ie	
http://www.tcd.ie/	08/02/2010 09:06:47	08/02/2010 09:06:47	0		tcd.ie	Trinity College Dublin - The University of Dublin
http://www.tcd.ie/Library/	08/02/2010 09:06:57	08/02/2010 09:12:46	3	http://www.tcd.ie/	tcd.ie	Trinity College Library Dublin - Trinity College Dublin, The University of Dublin
http://stella.catalogue.tcd.ie/	08/02/2010 09:07:04	08/02/2010 09:12:51	3	http://www.tcd.ie/Library/	stella.catalogue.tcd.ie	
http://stella.catalogue.tcd.ie/encore	08/02/2010 09:07:04	08/02/2010 09:12:51	3	http://www.tcd.ie/Library/	stella.catalogue.tcd.ie	
http://stella.catalogue.tcd.ie/iii/encore/	08/02/2010 09:07:04	08/02/2010 09:12:51	3	http://www.tcd.ie/Library/	stella.catalogue.tcd.ie	
http://stella.catalogue.tcd.ie/iii/encore/home	08/02/2010 09:07:04	08/02/2010 09:12:51	3	http://www.tcd.ie/Library/	stella.catalogue.tcd.ie	
http://stella.catalogue.tcd.ie/iii/encore/home?lang=eng	08/02/2010 09:07:04	08/02/2010 09:12:51	3	http://www.tcd.ie/Library/	stella.catalogue.tcd.ie	Encore
http://stella.catalogue.tcd.ie/iii/encore/assets/static/dojo-0.4.3-custom-4.1.6/iframe_history.html	08/02/2010 09:07:04	08/02/2010 09:16:26	8	http://stella.catalogue.tcd.ie/iii/encore/ho...	stella.catalogue.tcd.ie	Encore
http://library.catalogue.tcd.ie/	08/02/2010 09:07:16	08/02/2010 09:17:17	3	http://www.tcd.ie/Library/	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://www.tcd.ie/Library/collections/databases.php	08/02/2010 09:07:38	08/02/2010 09:12:56	3	http://www.tcd.ie/Library/	tcd.ie	Databases & E-Books - Search Collections - Trinity College Library Dublin - Trinity College Dublin, The University of Dublin
http://www.tcd.ie/Library/using-library/	08/02/2010 09:08:01	08/02/2010 09:08:01	0	http://www.tcd.ie/Library/collections/dat...	tcd.ie	Using the Library - Trinity College Library Dublin - Trinity College Dublin, The University of Dublin
http://www.tcd.ie/Library/collections/	08/02/2010 09:08:13	08/02/2010 09:13:37	3	http://www.tcd.ie/Library/	tcd.ie	Search Collections - Trinity College Library Dublin - Trinity College Dublin, The University of Dublin
http://library.catalogue.tcd.ie/iii/mfpro-td/loadSearchPage.do?searchpage=simple&searchtype=simple&ac...	08/02/2010 09:08:41	08/02/2010 09:15:15	2	http://www.tcd.ie/Library/collections/	library.catalogue.tcd.ie	
http://library.catalogue.tcd.ie/iii/mfpro-td/loadSearchPageCAS.do?searchpage=simple&searchtype=simple...	08/02/2010 09:08:41	08/02/2010 09:15:15	2	http://www.tcd.ie/Library/collections/	library.catalogue.tcd.ie	
https://library.catalogue.tcd.ie/iii/cas/login?service=http%3A%2F%2Flibrary.catalogue.tcd.ie%2Fiii%2Fmfpro-...	08/02/2010 09:08:41	08/02/2010 09:15:15	2	http://www.tcd.ie/Library/collections/	library.catalogue.tcd.ie	Log in
http://library.catalogue.tcd.ie/search/X?SEARCH=die-databases%20general	08/02/2010 09:08:58	08/02/2010 09:08:58	0	http://www.tcd.ie/Library/collections/dat...	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://library.catalogue.tcd.ie/search	08/02/2010 09:10:16	08/02/2010 09:21:16	7	http://library.catalogue.tcd.ie/	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://library.catalogue.tcd.ie/search-59	08/02/2010 09:10:24	08/02/2010 09:20:24	0	http://library.catalogue.tcd.ie/search	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://library.catalogue.tcd.ie/search-59/X?routine&SORT=D&searchscope=9	08/02/2010 09:10:50	08/02/2010 09:10:50	0	http://library.catalogue.tcd.ie/search	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://library.catalogue.tcd.ie/search-59/?searchtype=X&searcharg=second+trimester&searchscope=9&sort...	08/02/2010 09:11:27	08/02/2010 09:11:27	0	http://library.catalogue.tcd.ie/search-59/...	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://library.catalogue.tcd.ie/search/d	08/02/2010 09:11:56	08/02/2010 09:21:23	2	http://library.catalogue.tcd.ie/search-59/...	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://library.catalogue.tcd.ie/search/d?SEARCH=routine+second+trimester+ultrasound+in+pregnancy&sort...	08/02/2010 09:12:15	08/02/2010 09:12:15	0	http://library.catalogue.tcd.ie/search/d	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://www.tcd.ie/Library	08/02/2010 09:12:46	08/02/2010 09:12:46	0	http://library.catalogue.tcd.ie/search	tcd.ie	
http://library.catalogue.tcd.ie/record=b12703834-59	08/02/2010 09:13:06	08/02/2010 09:13:06	0	http://www.tcd.ie/Library/collections/dat...	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://atoz.ebsco.com/home.asp?Id=1324	08/02/2010 09:13:41	08/02/2010 09:13:41	0	http://www.tcd.ie/Library/collections/	atoz.ebsco.com	
http://atoz.ebsco.com/titles.asp?Id=1324&sid=210645259&TabID=2	08/02/2010 09:13:41	08/02/2010 09:13:41	0	http://www.tcd.ie/Library/collections/	atoz.ebsco.com	Electronic Journals A-to-Z
http://atoz.ebsco.com/subjects.asp?Id=1324&sid=210645259&TabID=3	08/02/2010 09:13:51	08/02/2010 09:14:23	2	http://atoz.ebsco.com/titles.asp?Id=1324...	atoz.ebsco.com	Electronic Journals A-to-Z
http://atoz.ebsco.com/search.asp?Id=1324&sid=210645259&TabID=4	08/02/2010 09:13:51	08/02/2010 09:14:37	2	http://atoz.ebsco.com/subjects.asp?Id=13...	atoz.ebsco.com	Electronic Journals A-to-Z
http://atoz.ebsco.com/titles.asp?lang=8&lang.subjects=8&lang.menu=6&KW=routine+second+trimester+ultraso...	08/02/2010 09:14:11	08/02/2010 09:14:11	0	http://atoz.ebsco.com/search.asp?Id=132...	atoz.ebsco.com	Electronic Journals A-to-Z
http://atoz.ebsco.com/titles.asp?Id=1324&sid=210645259&TabID=2	08/02/2010 09:14:41	08/02/2010 09:14:41	0	http://atoz.ebsco.com/search.asp?Id=132...	atoz.ebsco.com	Electronic Journals A-to-Z
http://atoz.ebsco.com/titles.asp?btKeyword=routine+second+trimester+ultrasound+in+pregnancy&SF=Title...	08/02/2010 09:15:01	08/02/2010 09:15:01	0	http://atoz.ebsco.com/titles.asp?Id=1324...	atoz.ebsco.com	Electronic Journals A-to-Z
http://stella.catalogue.tcd.ie/iii/encore/Home/\$SearchForm.direct?formids=target&lang=eng&suitedef&fu...	08/02/2010 09:15:37	08/02/2010 09:15:37	0	http://www.tcd.ie/Library/collections/	stella.catalogue.tcd.ie	
http://stella.catalogue.tcd.ie/iii/encore/search?formids=target&lang=eng&suitedef&reservids=lang%2C...	08/02/2010 09:15:37	08/02/2010 09:15:37	0	http://www.tcd.ie/Library/collections/	stella.catalogue.tcd.ie	Encore
http://stella.catalogue.tcd.ie/iii/encore/record/C%7CRb12703834%7CSPubmed%7COrightresult?lang=eng&su...	08/02/2010 09:15:43	08/02/2010 09:15:43	0	http://stella.catalogue.tcd.ie/iii/encore/se...	stella.catalogue.tcd.ie	Encore
http://stella.catalogue.tcd.ie/iii/encore/search/C%7CSNursing.%7COrightresult?lang=eng&suitedef&fu...	08/02/2010 09:15:59	08/02/2010 09:15:59	0	http://stella.catalogue.tcd.ie/iii/encore/re...	stella.catalogue.tcd.ie	Encore
http://stella.catalogue.tcd.ie/iii/encore/search/C%7CSNursing.%7CFF%3Afacetcloud%3A maternity%252Bnurs...	08/02/2010 09:16:19	08/02/2010 09:16:19	0	http://stella.catalogue.tcd.ie/iii/encore/se...	stella.catalogue.tcd.ie	Encore
http://stella.catalogue.tcd.ie/iii/encore/search/C%7CSNursing.%7CFF%3Afacetcloud%3A maternity%252Bnurs...	08/02/2010 09:16:26	08/02/2010 09:16:26	0	http://stella.catalogue.tcd.ie/iii/encore/se...	stella.catalogue.tcd.ie	Encore
http://library.catalogue.tcd.ie/search-59/t	08/02/2010 09:18:05	08/02/2010 09:18:05	0	http://library.catalogue.tcd.ie/search	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://library.catalogue.tcd.ie/search-59/?SEARCH=second+trimester&sortdropdown=-&searchscope=9	08/02/2010 09:18:15	08/02/2010 09:18:15	0	http://library.catalogue.tcd.ie/search-59/t	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://library.catalogue.tcd.ie/search-59/?searchtype=8&searcharg=routine+second+trimester+ultrasound+in...	08/02/2010 09:18:30	08/02/2010 09:18:30	0	http://library.catalogue.tcd.ie/search-59/t...	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://library.catalogue.tcd.ie/search-59/?routine+second+trimester+ultrasound+in+pregnancy/routine+se...	08/02/2010 09:18:47	08/02/2010 09:18:47	0	http://library.catalogue.tcd.ie/search-59/...	library.catalogue.tcd.ie	Trinity College Dublin / All Locations
http://library.catalogue.tcd.ie/search/X	08/02/2010 09:19:18	08/02/2010 09:21:38	2	http://library.catalogue.tcd.ie/search-59?...	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://library.catalogue.tcd.ie/search/X#	08/02/2010 09:20:21	08/02/2010 09:20:21	0		library.catalogue.tcd.ie	
http://library.catalogue.tcd.ie/search/X?SEARCH=droutine%20	08/02/2010 09:20:21	08/02/2010 09:20:21	0	http://library.catalogue.tcd.ie/search/X	library.catalogue.tcd.ie	Trinity College Library Dublin - Library Catalogue
http://library.catalogue.tcd.ie/search/X?SEARCH=droutine%20	08/02/2010 09:20:40	08/02/2010 09:20:40	0		library.catalogue.tcd.ie	

# Evaluation continued

- It was eventually decided the search could be evaluated as “poor”, “fair” or “good”, and this was tracked from session to session.
- For example, a student beginning her second year would have been shown PubMed in detail and overviews of other resources. Therefore they were evaluated:
  - PubMed and any other resource accessed: Good.
  - PubMed only accessed: Fair.
  - PubMed not accessed: Poor.

# Evaluation continued

- After training involving PubMed and CINAHL, the post-instruction search in year two were categorised as follows:
- PubMed and CINAHL accessed: Good.
- PubMed, or PubMed and non-CINAHL resources accessed: Fair.
- PubMed not accessed: Poor.

# Evaluation continued

- To begin with, we had to pick through all the data, as not sure what would form the evaluation criteria.
- In future, we can use the (new) feature in the software, that can be set to only display particular sites. If you know what sites you are looking for, it's a LOT quicker.

Did it work?



# Success!



Source: [Know Your Memes](#)

# Well, sort of...

- Sessions in the first and second years of their undergraduate programmes produced the hoped-for improvements, with the majority of students whose searches were rated as poor or fair in the pre-instruction phase showing better information literacy after the sessions: 59 (97%) of the 61 students who were poor or fair pre-instruction in the first and second years combined improved. Among the 27 students whose searches were categorised as good in the pre-instruction phase in these two years, 17 (63%) remained good, 9 (33%) became fair and 1 (4%) became poor.
- In general, the improvements were sustained by the start of the following year, with none of the students for whom data are available slipping back to poor. This supports the value of the sessions as a means for providing the students with the skills to find the research they will need for evidence-based practice.
- However, by the third year, it would appear that the sessions no longer provide further improvement.



# PROBLEMS

NO MATTER HOW GREAT AND DESTRUCTIVE YOUR PROBLEMS MAY SEEM NOW,  
REMEMBER, YOU'VE PROBABLY ONLY SEEN THE TIP OF THEM.

# The problems...

- Hardware – often PCs would be out of service.
- Software – a software upgrade halfway through caused problems.
- PubMed keeps changing constantly.
- Students – getting so many students to attend so many sessions was problematic.
- I'm not a tutor! I have no formal teaching training - and sometimes the students and I would get exasperated with each other...

# The successes...

- Some students actually seemed to enjoy the sessions!
- Brought the School and the Library closer together.
- An excellent way to build rapport between students and the Library (and me, as their librarian) – they seem to think of me as “theirs”.
- Students far more likely to seek help and advice from me now.
- ...and they now use PubMed rather than Google (I hope...).

# The paper...

- [An evaluation of the effectiveness of information literacy training for undergraduate midwives to improve their ability to access evidence for practice](#)

J.G. Lalor et al.

*Nurse Education in Practice, Volume 12, Issue 5, September 2012, Pages 269-272*

Plus hopefully more to come!

# This was not my idea!

- The push to provide this intervention, and to write it up as a paper, came from the tutors. I'm glad we did it, but it was a LOT of hard work. Thankfully, Joan has written numerous papers and took the lead on this one, and Mike is well versed in analysing data and statistics.
- Notice this is published in a health sciences rather than library journal – so other practitioners may see it 😊

# The Future...





This is great, but...

- It is scalable? This works well for 40 students at a time, but how about 240?
- Can we use \*elements\* of it with other students?
- Can we use screencasts or other technology?

# Why don't they get better in 3<sup>rd</sup> year?

- We recently tested the current 3<sup>rd</sup> year to see what would happen...
- A cursory look at the data seems to suggest most are forgetting to search Cochrane, despite us having given them a two-hour session on it only a fortnight before!
- Most DO search PubMed and CINAHL. So we've been successful in that respect.

# Can we do something different?

- We need to work out if it makes sense to work harder to get the knowledge retained in 3<sup>rd</sup> year, or if we should remove elements, or if the six hours would be better spent doing something completely different...

Thanks for  
your attention!

Anyone?

