Embedded Librarianship in Academic Health Sciences Programs: Cases from the Frontline

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Embedded Librarianship in Academic Health Sciences Programs: Cases from the Frontline

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Eastern Michigan University
Metropolitan Detroit Medical Library Group
March 20, 2014
The Many Faces of the Embedded Librarian
So, What **Can** Being an Embedded Librarian Mean?

- Provides online, synchronous presentations & research assistance
- Creates video tutorials that users can view at point-of-need
- Reviews research assignments
- Conducts office hours in an academic department
So, What Can Being an Embedded Librarian Mean?

• Embeds a library link into courses as part of the course management systems
• Answers reference questions via email or chat
• Creates electronic research guides, e.g. LibGuides
• Attends or participates in face-to-face courses
• Attends rounds or clinicals w/ medical staff
• ‘Informationsist’ – hybrid role betw. librarianship, computer science, and subject scholarship; viewed as the technology expert on the team
  • (Grabowsky, 2013)
Working Definition

- Librarian who is involved in teaching research instruction sessions that are:
  - written into the program or course curriculum OR
  - based on an agreement between the librarian and the instructor
- Minimum of two sessions with each group of students
- Scaled information is incorporated into each session
- Ultimate: librarian has access to the final learning objects
Problem, Problems, Problems, with One-Time Sessions

• Too much information in too short a time span
• Students do no retain the information
• Little time for hands-on portion which helps with information retention
• Student research skills remain at a basic level
Problem, Problems, Problems, with One-Time Sessions

• Result in poor quality of research papers & projects
• Faculty frustrations with students’ level of research concepts & skills
• Faculty unsure which resources to direct students towards for difficult or interdisciplinary subject research
• Students do not become information literate, lifelong researchers & savvy information consumers
## Embedded Courses Overview

<table>
<thead>
<tr>
<th>Class or Courses</th>
<th>Number of sessions w/ Librarian</th>
<th>Tiered Instruction Written Embedded into Curriculum</th>
<th>Librarian &amp; Instructor Initiated Agreement</th>
<th>Librarian Provides 1-1 Research Asst. for Students</th>
<th>Librarian Views End Product</th>
<th>End Product</th>
</tr>
</thead>
</table>
| **Ugrad. Nursing Course Sequence** | Course #1-1  
Course #2-1  
Course #3-1 | Yes | Yes | Yes | No | -Debates  
-Papers  
-Presentations |
| **Master's OT Phil. & Research** | Philos. -2  
Research -3 | Yes | Yes | Yes | Yes | Papers & Posters |
| **Master's Clinical Research Admin. Proposal Develop.** | Course - 3 | No | Yes | Yes | Yes | Research proposal |
## Overview of Embedded Graduate Courses

<table>
<thead>
<tr>
<th>Class or Courses</th>
<th>Number of Sessions/semester</th>
<th>Length</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Res. Admin. Proposal Dev.</td>
<td>3</td>
<td>50 min</td>
<td>#1 – Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>#2 – Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>#3 - Library</td>
</tr>
<tr>
<td>Occupational Therapy Phil.</td>
<td>2</td>
<td>Session 1 – 1 h</td>
<td>#1 – Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Session 2 – 3 h</td>
<td>#2 – Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>#3 - Library</td>
</tr>
<tr>
<td>Occupational Therapy Research</td>
<td>3</td>
<td>Session 1 – 3 h</td>
<td>#1 – Library</td>
</tr>
<tr>
<td>Methods</td>
<td></td>
<td>Session 2 – 3 h</td>
<td>#2 – Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Session 3 - 2 h</td>
<td>#3 - Classroom</td>
</tr>
</tbody>
</table>
# Overview of Embedded Undergraduate Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Frequency</th>
<th>Number of Librarian Lead Sessions/Class</th>
<th>Length</th>
<th>Location</th>
<th>Number of Course Sections/Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 275</td>
<td>1x/semester</td>
<td>1</td>
<td>1.5 h</td>
<td>Library, Off campus</td>
<td>7</td>
</tr>
<tr>
<td>NURS 372</td>
<td>1x/semester</td>
<td>1</td>
<td>1.5 h</td>
<td>Library, Off campus</td>
<td>2</td>
</tr>
<tr>
<td>NURS 375</td>
<td>1x/semester</td>
<td>1</td>
<td>3 h</td>
<td>Library, Off campus</td>
<td>7</td>
</tr>
</tbody>
</table>
## Curriculum of Embedded Courses - Clinical Research Administration
### Proposal Development

<table>
<thead>
<tr>
<th>Session #1</th>
<th>Session #2</th>
<th>Session #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognize &amp; identify primary, secondary &amp; tertiary research sources w/ poll</td>
<td>Locate primary research in dissertation &amp; theses databases</td>
<td>Locating statistics</td>
</tr>
<tr>
<td>Basic searching of GVRL, CINAHL, PubMed, &amp; library catalog, w/ hands-on</td>
<td>Advanced searching in using subject headings, PubMed, CINAHL, &amp; WorldCat w/ hands-on</td>
<td>Cited reference searching, Web of Science, Google Scholar, w/ hands-on</td>
</tr>
<tr>
<td>Distinguishing characterizes of journal types</td>
<td>Search medical ebook collection w/ hands-on</td>
<td>Librarian research proposal consultations</td>
</tr>
<tr>
<td>Identifying characteristics of a research article</td>
<td>Librarian research proposal consultations</td>
<td></td>
</tr>
</tbody>
</table>
## Curriculum of Embedded Courses - Philosophy of Occupational Therapy

<table>
<thead>
<tr>
<th>Session #1</th>
<th>Session #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoiding plagiarism, w/ in-class exercise</td>
<td>Identifying types of journals, including peer reviewed</td>
</tr>
<tr>
<td>Generating topics w/ in-class group exercise</td>
<td>Introduction to basic searching techniques w/ hands-on</td>
</tr>
<tr>
<td>Discussion of popular resources (blogs,</td>
<td>Discussion of basic OT databases, CINAHL,</td>
</tr>
<tr>
<td>newspapers) discovery tool, general</td>
<td>OTDBASE, OT Search, PsycINFO, ERIC, w/ hands-on</td>
</tr>
<tr>
<td>information databases, GVRL, MedlinePlus,</td>
<td></td>
</tr>
<tr>
<td>etc. w/ hands-on</td>
<td></td>
</tr>
</tbody>
</table>
### Curriculum of Embedded Courses - Occupational Therapy Research Methods

<table>
<thead>
<tr>
<th>Session #1</th>
<th>Session #2</th>
<th>Session #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptions of additional OT databases, <em>PubMed, Sociological Abstracts</em></td>
<td>Evidence-based practice information retrieval &amp; evaluation, <em>Cochrane Library, AHRQ, &amp; other EBP dbs</em></td>
<td>Librarian consultations w/ student project groups</td>
</tr>
<tr>
<td>Advanced searching using subject headings, hands-on</td>
<td>Cited reference searching, <em>Web of Science, Google Scholar</em>, hands-on</td>
<td></td>
</tr>
<tr>
<td>Locating &amp; accessing print &amp; ebooks, including <em>WorldCat</em>, hands-on</td>
<td>▪ Locating statistics ▪ Evaluating a web site</td>
<td></td>
</tr>
<tr>
<td>In-class group database exploration exercise</td>
<td>In-class group topic-database selection exercise</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student project groups w/ librarian consultation</td>
<td></td>
</tr>
</tbody>
</table>
## Curriculum of Embedded Courses - Undergrad Nursing Core Course Sequence

<table>
<thead>
<tr>
<th>NURS 275</th>
<th>NURS 372</th>
<th>NURS 375</th>
</tr>
</thead>
</table>
| Avoiding plagiarism, w/ in-class exercise | Evidence-based practice information retrieval & evaluation | ▪ Discussion of additional nursing databases  
▪ Advanced searching using subject headings, CINAHL, PubMed hands-on |
| Identifying types of journals, including peer reviewed | Searching the EBP databases, AHRQ, NGC, Cochrane Library, w/ hands-on | ▪ Cited reference searching, Web of Science, Google Scholar, hands-on  
▪ Evaluating web sites w/ in-class exercise |
| Introduction to basic searching techniques, w/ hands-on | Searching CINAHL & PubMed for EBP info | Locating federal & state law, legislation re: nursing; locating authoritative opinions |
| Discussion of basic health & nursing databases, CINAHL, GVRL, w/ hands-on | | Locating & accessing print & ebooks, including WorldCat, hands-on |
Embedded Research Instruction Sequence for Information Literacy

- Time
- Build
- Relevancy
- In-class exercises
- Outside Application
- Librarian Consultation
Benefits for the Student

• Combats the information overload that occurs with “one-shot” sessions; too much information to absorb in one session
• Need repetition of the information to retain these skills
• Build the foundation then, scale-in new skills
• Gain critical analysis skills
• Time to use in-class group and individual exercises to reinforce the skills just gleaned
Benefits for the Student

• Learn that research is not a straight line, but rather a meandering path
• Experience a larger picture of research as they grow from novice to skilled researchers
• Students demonstrate a mastery of research skills via the scaled research assignments
• Improves student learning outcomes
Benefits for the Student

• Gain confidence in their research abilities
• Development of the student-librarian relationship
• Reduces plagiarism
• Greater likelihood of proposal completion because the students create their proposals step-by-step along the way
“Branching off of what we’ve already learned will help me to guide my research searches.”

“Refreshing how to use databases I was already using and how to use them more effectively.”

“I liked how there was some review information”

“Just wish (we) ...could go home attempt,...and return with questions.”

“I always forget what ! and * means, so it’s nice to be reminded.”

“I did forget a few things that I learned from previous sessions...”

“I understand that it will still take practice and tie to develop this skill”

Bring variety, detail, & depth of info to my research papers

“Learn the quirks of the different databases”

“More efficient at searching, and spend less time doing the actual research”
Benefits for the Instructor

• Ability to point to teacher-preferred information resources; embed links to those sources in class research guides
• Relationship building as it is a “joint-venture” between librarian and instructor
• Improves resources cited in student projects & papers
• Improves quality of papers
• Spend less class time discussing problems with research and more time on course content
Benefits for the Instructor

“I do not have the expertise to assist students in understanding how to locate the most appropriate information for their reviews, develop effective search strategies, and negotiate search engines.

In your involvement in the course and the project, you provide students with the tools to gather the resources they need to complete the project and answer their project clinical research questions in order to develop information fluency skills.

Prof. Andrea Gossett Zakrajsek, OTD, MS, OTRL, Occupational Therapy Research Methods
Faculty Comment

OT Professor Comment

“This year, students disseminated the best work I have seen in this project; the resources they gathered for their review were closely linked to their clinical research questions, they had an in-depth understanding of the resources the critical reviewed, and their analysis of findings reflected a high level of synthesis.

I feel that students’ performance this year was, in part, due to your willingness to provide the amount and quality of support to the process they undertake to complete their work.

I feel that your targeted instruction and guidance to the students in the course supports their development informational fluency while connecting research to practice, my key objectives of the course.”

Prof. Andrea Gossett Zakrajsek, OTD, MS, OTRL, *Occupational Therapy Research Methods*
Benefits for the Library

• We’re all in this together
• Promotes the library, “EMU provides us countless number of options when it comes to researching for a paper and this all be extremely helpful”
• Promote use of class research guides, e.g. LibGuides
• Promote use of subject-specific tools that students may never locate on their own
Caveats

• Repetition of material for the student
• **Exponential workload as classes scale out; mind the workload balance!**
• Large time commitment
  – Require multiple conversations between librarian and instructor
  – 1-1 group or individual sessions
  – Revise materials frequently
References


