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

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The Many Faces of the Embedded Librarian



whotalking.com



Aventure-journal.com



Digital.fantast.deviantart.com



Thehomeplanet.org



Dreamstime.com



Ebay.com



Moreinfo.co.nz



Johnlund.com

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 not 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

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

Overview of Embedded Graduate Courses

Class or Courses	Number of Sessions/semester	Length	Location
Clinical Res. Admin. Proposal Dev.	3	50 min	#1 – Library #2 – Library #3 - Library
Occupational Therapy Phil.	2	Session 1 – 1 h Session 2 – 3 h	#1 – Library #2 – Library
Occupational Therapy Research Methods	3	Session 1 – 3 h Session 2 – 3 h Session 3 - 2 h	#1 – Library #2 – Library #3 - Classroom

Overview of Embedded Undergraduate Courses

Course Number	Frequency	Number of Librarian Lead Sessions/Class	Length	Location	Number of Course Sections /Semester
NURS 275	1x/semester	1	1.5 h	<ul style="list-style-type: none"> ▪ Library ▪ Off campus 	7
NURS 372	1x/semester	1	1.5 h	<ul style="list-style-type: none"> ▪ Library ▪ Off campus 	2
NURS 375	1x/semester	1	3 h	<ul style="list-style-type: none"> ▪ Library ▪ Off campus 	7

Curriculum of Embedded Courses- Clinical Research Administration Proposal Development

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

Curriculum of Embedded Courses- Philosophy of Occupational Therapy

Session #1	Session #2
Avoiding plagiarism, w/ in-class exercise	Identifying types of journals, including peer reviewed
Generating topics w/ in-class group exercise	Introduction to basic searching techniques w/ hands-on
Discussion of popular resources (blogs, newspapers) discovery tool, general information databases, <i>GVRL</i> , <i>MedlinePlus</i> , etc. w/ hands-on	Discussion of basic OT databases, <i>CINAHL</i> , <i>OTDBASE</i> , <i>OT Search</i> , <i>PsycINFO</i> , <i>ERIC</i> , w/ hands-on

Curriculum of Embedded Courses- Occupational Therapy Research Methods

Session #1	Session #2	Session #3
Descriptions of additional OT databases, <i>PubMed</i> , <i>Sociological Abstracts</i>	Evidence-based practice information retrieval & evaluation, <i>Cochrane Library</i> , <i>AHRQ</i> , & other EBP dbs	Librarian consultations w/ student project groups
Advanced searching using subject headings, hands-on	Cited reference searching, <i>Web of Science</i> , <i>Google Scholar</i> , hands-on	
Locating & accessing print & ebooks, including <i>WorldCat</i> , hands-on	<ul style="list-style-type: none"> ▪ Locating statistics ▪ Evaluating a web site 	
In-class group database exploration exercise	In-class group topic-database selection exercise	
	Student project groups w/ librarian consultation	

Curriculum of Embedded Courses- Undergrad Nursing Core Course Sequence

NURS 275	NURS 372	NURS 375
Avoiding plagiarism, w/ in-class exercise	Evidence-based practice information retrieval & evaluation	<ul style="list-style-type: none"> ▪ Discussion of additional nursing databases ▪ Advanced searching using subject headings, CINAHL, PubMedhands-on
Identifying types of journals, including peer reviewed	Searching the EBP databases, <i>AHRQ, NGC, Cochrane Library</i> , w/ hands-on	<ul style="list-style-type: none"> ▪ Cited reference searching, <i>Web of Science, Google Scholar</i>, hands-on ▪ Evaluating web sites w/ in-class exercise
Introduction to basic searching techniques, w/ hands-on	<i>Searching CINAHL & PubMed</i> for EBP info	Locating federal & state law, legislation re: nursing; locating authoritative opinions
Discussion of basic health & nursing databases, <i>CINAHL, GVRL</i> , w/ hands-on		Locating & accessing print & ebooks, including <i>WorldCat</i> , hands-on

Embedded Research Instruction Sequence for Information Literacy



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

Student Comments

“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 time 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

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