



# Dental Auxiliary Students Explore Online Learning

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## Abstract

The Access and Instructional Services Librarian at the Indiana University School of Dentistry developed a set of tutorials in the use of the PubMed database and IUCat, the library's online catalog, for viewing by dental auxiliary students and students from the Indiana University-Purdue University Indianapolis University College First Year Seminar who had expressed interest in Dental Hygiene as a career. This poster presents two years of data on student self-assessment and satisfaction with the online instruction.

## Background

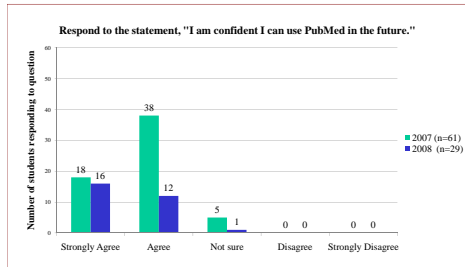
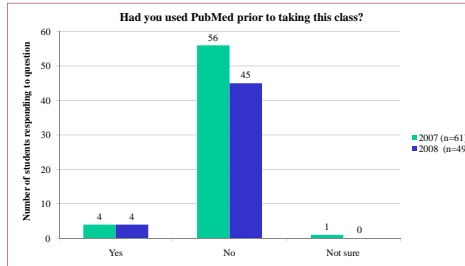
The Dental Hygiene research course, DH252 "Introduction to Evidence Based Dental Hygiene Care," was switched from the Spring to the Summer semester in 2007. The DH252 instructor contacted the AISL and requested that she develop tutorials in the use of PubMed and IUCat databases to replace the former face-to-face instruction. Due to the time constraints imposed by the shorter summer session, these tutorials needed to be relatively brief yet cover key components of each of the databases, and viewable asynchronously through Oncourse, the course management system. The Summer 2007 class of hygiene students reported high levels of satisfaction and confidence in their future use of both databases, so the AISL contacted the instructor for the Dental Assisting research course and requested that these students also view the tutorials as part of their course requirement for "Practice Management for the Dental Team" in the Fall of 2007. At the same time, the librarian was asked to provide an introduction to online searching for a group of First Year Seminar students at IUPUI who had indicated their interest in dental hygiene as a career.

## Materials and Methods

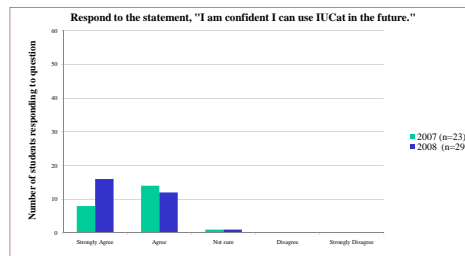
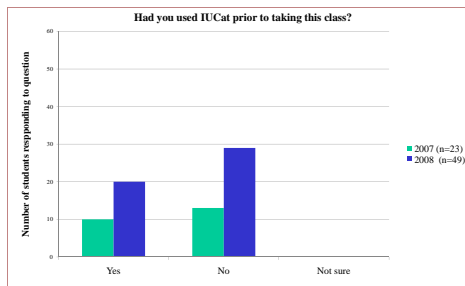
Four modules were developed using Microsoft PowerPoint™ software. Three modules explained the structure of the PubMed database and how to search it effectively. The fourth module, on the use of IUCat, included instruction on effective searching as well as management of the student's library account. Each tutorial included a short quiz and an assignment related to the information covered in that tutorial.

The AISL used material previously presented during classroom instruction sessions to create a list of key aspects of PubMed and IUCat. These were prioritized and sorted into complementary groups using a building-block approach - what should come first, second, third - and fitted into the target 15 minute segments. Additionally, quiz questions were created to determine the students understanding of the information presented.

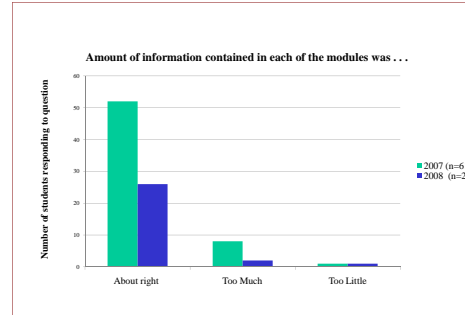
## PubMed Modules



## IUCat (online catalog) Module



## All Modules



## Student Comments

"I enjoyed learning about the MeSH database. It gives me more insight about synonyms to everyday words to add to our vocabulary or search[sic] on PubMed"

"These tutorials may have too much information just for a simple tutorial. It was hard to stay focused."

"I found the modules helpful and easy"

"I thought the information was presented well and made things easy to find. I did not have any problems with it."

"Some of the slides in the modules were repeating what the one before it had just explained. I'm not sure if that is a bad thing however because it might have been important."

"I think that PubMed is very helpful for the medical field. However, I think maybe they should open their database to other professions as well."

"The modules were very helpful; however, the database is very confusing. I think if someone were to present the powerpoint to the class it would be easier to understand the cite's [sic] complexity."

"It's very helpful especially to narrow a wide search and to add additional terms to the search. And reduce the amount of records."

"It was easy to understand and they taught me how to use pubmed and IUCat"

"I feel somewhat comfortable using Pubmed but I still am unsure on how to read all the results and be able to confidently locate material using the IUCat system. I don't feel like I had enough infor [sic] when doin[g] [sic] the modules on IUCAT. Pubmed modules were great though. I liked the tutorial clips that walked you through everything step by step instead of just telling you in words how to look something up."

## Summary

An overwhelming majority (92.2%) of the students had never used PubMed prior to taking these courses and using the tutorials. Following the tutorials 92.3% of the students Agreed or Strongly Agreed that they could successfully use PubMed in the future.

Slightly over 42% of the students had used IUCat prior to taking these courses and using the tutorial. Following the tutorial, 99.6% of students Agreed or Strongly Agreed that they could successfully use IUCat in the future.

The amount of information contained in each module was judged to be about right by 87% of the students. 11% felt there was too much information and 3% felt there was not enough.

The comments made were, for the most part, positive about the experience of learning using the self-paced modules, though problems were noted, such as problems noted by a student with a dial-up connection accessing the video clips from the PubMed website.

## Conclusions

The data displayed in this poster show that online modular instruction is a useful tool for dental auxiliary students. The modules were proposed by the course instructor, then developed and implemented by the AISL within a two-week time frame. The modules were tested by library staff and minor revisions made to the content based on their observations, comments, and suggestions.

The AISL will continue to search for ways to supplement face-to-face instruction in database searching using self-paced modular instruction that can be delivered asynchronously.

Future plans are to move the PubMed and IUCat tutorial content into an animated program (Captivate) for the 2010 summer semester. The students will again be surveyed to determine satisfaction with this method of delivery.

## Acknowledgements

The author wishes to acknowledge the contributions to this project made by IUSD library staff members Keli D'Albano and Mike Delpoit. Their testing and critical review of the modules improved the structure and content in critical ways.

Additional acknowledgement goes to Mark Dirlam from the IUSD Dental Illustrations for his usual fine work in producing this poster.