OHSU Faculty Digital Image Needs Assessment: Full Report

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Executive Summary

The OHSU Digital Resources Library was developed in 2003 without the benefit of a user needs analysis. This survey, the OHSU Faculty Digital Image Needs Assessment, was designed to fill that information gap and to gauge how our faculty use images and what visual resources they need for teaching and research. The results of the survey will be used to improve Library services to faculty and the University community with regards to visual images in digital formats. The OHSU Faculty Digital Image Needs Assessment was IRB#6163.

Background of Digital Resources Library

The OHSU Digital Resources Library (DRL) houses collections of multimedia digital objects related to health sciences, engineering, biomedical research and the OHSU community. The DRL was originally designed to be a clearinghouse of multimedia objects for and by the University community. We continue to provide this service as many of the digital objects in the Digital Resources Library have been created or donated by members of the OHSU community. The collections of images of the campuses of OHSU and of the Pacific Northwest are popular for web sites and presentations. The Clinical Outcomes Research Initiative Collection contains gastrointestinal endoscopy images from the National Endoscopic Databases. The DRL has had several successful projects with external partners such as the National College of Naturopathic Medicine Library. The Naturopathic Medicine Historical Collection contains digitized books from both NCNM and OHSU in the field of complementary and alternative medicine. Funded by an LSTA grant, these books were previously unavailable in digital form. Our largest digital collection is the Historical Collection & Archives Collection which contains digitized books and images of people, places, and artifacts related to the history of medicine, medicine in the Pacific Northwest, and the history of the University.

Survey Methodology

The OHSU Faculty Digital Image Needs Assessment was distributed to the OHSU faculty email list via the Office of the Provost on December 14, 2010 as a Survey Monkey survey. At the time of publication of the survey there were 1947 faculty at OHSU. Two hundred twenty-eight faculty members responded to the survey producing a return rate of twelve percent.

Results

- Image use among respondents is high: 91% of faculty respondents use images in their teaching and research
- Searching for images: 93% of faculty respondents use Internet search engines. Google was specifically mentioned sixteen times.
- Difficulty of searching: 79% of respondents have difficulty searching for images; a recurring theme in the comments was "finding and using the right image"; Sixty-one respondents

gave specific answers to items they had difficulty finding, ranging from anatomy to microbes to people in various settings.

- Faculty are very familiar with popular presentation and image software packages: 98% of respondents use PowerPoint; 44% of respondents use Photoshop
- 75% of faculty respondents search for diagrams
- 73% of faculty respondents were not aware of the Library's digital image resources
- 67% of faculty respondents use online databases or resources for searching
- Many searches are discipline-specific: 67% of faculty respondents search for anatomy images; 56% of faculty respondents search by disease; 43% of faculty respondents search by condition
- Local creation of digital images is common: 79% of faculty respondents use digital images from a personal or departmental camera; 37% of faculty respondents use scanned images from negatives or film
- 36% of faculty respondents search for photos of campus
- 39% of faculty are unsure of visual resources in their department
- 24% of faculty respondents said they use images for patient care

Recommendations

- Report the survey results to the faculty via Library and OHSU staff blogs
- Support faculty images needs by promoting the Library's visual/digital resources which currently include the OHSU Digital Resources Library collections, Netter presenter human anatomy collection, SpringerImages, and A.D.A.M. interactive anatomy.
- Support faculty use of images by providing a class on copyright and use issues for visual resources (12% of respondents discussed feeling uneducated on copyright issues including how to obtain permissions and/or licensing)
- Support search and discovery of the Library's visual resources by offering a class and additional web resources (examples: Create a library guide to visual resources, Tips & Tricks for Image Searching webpage)
- Support discovery of campus images by creating an interactive campus map that links to images of campus within the OHSU Digital Resources Library
- Partner with Library liaisons for those departments which self-identified in the survey
- Partner with Academic Technology to discuss technology issues from the survey
- Continue to add campus images to the Campus Collection (based on comments in the survey there is a need for images of campus for promotional items and presentations)
- Continue to use Medical Subject Headings (MeSH) in the indexing of digital resources (comments on discipline-specific searching show there is a need to support medical vocabulary searching)
- Continue to add images of people in various roles to the Campus Collection (seventeen respondents gave specific examples of their need for images of people in various roles for promotional items and presentations)

A Closer Look at the Data

The first question of the survey was "Do you use images in your teaching/research?" Of the 228 respondents:

- 91% use images in their teaching and research
- 90% use images specifically for teaching
- 88% use images in their presentations
- 45% use images for research purposes
- 24% use images for patient care

Most departments (48%) do not have a visual resource collection while 13% do have an internal resource/database for images. Seventy respondents (39%) did not know if their department had a visual resource collection. It was necessary for this survey to require anonymity for Institutional Review Board purposes. Three departments did self-identify in the comments area of this question and these groups should be contacted for further collaborative opportunities: Pathology, Surgery, and Organ Donation.

When asked about the teaching tools that faculty use to show images:

- 98% use PowerPoint
- 44% use Photoshop
- 39% use Video
- 22% use Sakai
- 4%   use Side-by-side projection

The side-by-side projection percentage was previously unknown. The high use of PowerPoint comes as no surprise.

Searching and Finding the Right Image

Roughly half the respondents (47%) said they were able to find what they needed when searching. The other half (49%) said they sometimes found what they needed and they also expressed frustration in the difficulty of searching and the types of images they were trying to find.

Where are faculty searching?

- 93% use Internet search engines (Google was specifically mentioned sixteen times)
- 79% use Digital images from personal or departmental camera
- 67% use Online databases or resources
- 37% use Scanned images from negatives or film
- 33% use Resources on CD-Rom or DVD

Seven respondents noted that they also create their own images or scan from paper books and journals to get the image they need. At least two departments have their own in-house illustrator.

When asked about the types of images for which they search, respondents said:

- 75% search for Diagrams
- 67% search for Anatomy
- 56% search by Disease
- 43% search by Condition
- 36% search for Photos of campus

Twenty-six percent (26%) of the respondents regarding types of images said "other". Of the "other" categories, the majority were "people" in various capacities (patients, staff, older adults, teaching in clinical settings, etc.) and "my teaching area" though respondents did not self-disclose their teaching specialties.

Under the topic of "challenges of finding digital images" 37% said they had no problem in finding what they need. 16% of respondents said they had trouble searching, primarily because they either did not know where or how to search. Trouble finding the "right" or "ideal" image was discussed by eleven respondents. 12% of respondents discussed feeling uneducated on copyright issues including how to obtain permissions and/or licensing. On the technical side nineteen respondents discussed not being able to find good quality or the right format of images, and another five discussed having issues with the transfer of file formats and/or image manipulation. Sixty-one respondents gave very specific answers to items/topics they had difficulty finding, ranging from anatomy to microbes to people in various settings.

When asked "Have you used these Library resources?" which included the OHSU Digital Resources Library collections, Netter presenter human anatomy collection, SpringerImages, and the A.D.A.M. interactive anatomy, 73% of respondents to this question did not know the resource existed. This is a clear educational gap that the Library should address.

Those of us who create and manage digital images know it is a lengthy process and it is much appreciated that nine respondents discussed the need to find time to create and/or search for images.

Survey Issues

Responses showed that the comments portion of the questions in the latter part of the survey needed to be reworded for greater clarity. The question logic for Question #9 specifically was found to be misleading in that it allowed both positive and negative answers when the author's intent was specifically to determine technological barriers to digital image use. The number of respondents who skipped questions increased over the length of the survey leading to a conclusion that increased survey design should be examined for any follow-up surveys.

Although the intent of the survey was specifically still images (photographs, diagrams, illustrations, etc.) the inclusion of video in one question led to a few outlying comments regarding moving images/video. A survey on the use of video would be a good follow-up research topic.

Appendix A: Survey Data from the OHSU Faculty Digital Image Needs Assessment
Survey Posting: Dec. 14-31, 2010
Survey Distribution: 1947 (all faculty, from 2009 OHSU FactBook)
IRB#6163

1. Do you use images in your teaching/research? (N=228)
Yes   91%   208
No   9%   20
228/1947= 12% return

2. How do you use these images? Please check all that apply. (N=206)
Teaching   90%   186
Presentations   88%   182
Research   45%   92
Patient care   24%   50
Other (specify below)   2%   4 (Website, Marketing)
Skipped question: 22

3. Are you finding the images you need for your teaching/research? (N=204)
Sometimes   49%   99
Yes   47%   95
No   5%   10
Skipped question: 24

4. What types of image content do you search for? Please check all that apply. (N=195)
Diagrams   75%   147
Anatomy   67%   131
Disease   56%   110
Condition   43%   83
Photos of campus   36%   70
Other (specify below)   26%   51
Skipped question: 36

Comments: 51 (answer total greater than 51 due to multiple answers per response)
- People   10
    o Patients, staff, events
    o People across the lifespan of different ethnic groups receiving care
    o Pictures of older adults mostly
    o People with health and illness issues
    o Photos of faculty, staff, patients, people
    o People pictures in life and clinical settings
    o Photos of clinicians
    o Patient photos
    o Teaching occurring in the hospital and clinic

- My teaching area (unspecified)   7
- Xrays/Imaging/Radiology   3
- Cartoons/Fun images   3
- Charts/graphs/models   3
- History of medicine   2
- Historical pictures (i.e., nursing)   2
- Patient cases/specific conditions   2
- Biological Pathways   2
- Surgical procedures   2
- Optics   1
- Health policy   1
- Plants   1
- Animals   1
- Chemical structures/Crystal structures/Molecular models   1
- Specific data items and models from reviews   1
- Art history   1
- Surgical instruments and procedures   1
- Food   1
- Histology   1
- Immunohistochemistry   1
- Dental work   1
- Biostatistical concepts   1
- Research data   1
- Technology   1
- Organisms, molecules, habitats   1
- Published scientific figures   1
- Ultrasound images, Doppler waveforms, CT/MRI images   1
- Technical content   1
- Experimental apparatus   1

5. What challenges have you encountered in finding/using images for teaching and/or research purposes? What do you search for and not find? (N=180)
Answered question: 180 (79%)
Skipped question: 48 (21%)

Comments: 180 (comments can be in more than one category)
- None/No problem finding what I need   37
- Searching (Hard to find/ how to search/where to look)   29
- Copyright/permissions/licensing   21
- Quality/Format (wrong type; low-res/high-res; poor quality)   19
- Trouble finding the "right/ideal" image   11
- Time to find/create   9

- Create my own images 8
- Format transfer/image manipulation 5
- Did not know about Library resources 4
- Image I would use is not available digitally/electronically 4
- Have not used Library resources 3
- Cost of commercial images 3
- Use commercial images 2
- Use departmental image database 1
- Make graphs from article reprints 1
- Visually similar images 1
- Can't find what I want (by discipline or theme) 61
    - Acute coronary syndrome
    - Anatomy (4)
    - Animations (2)
    - Biochemical pathways (3)
    - Campus building pictures, including Tram (9)
    - Campus map (includes VAMC)
    - Clinical Dental images (2)
    - Diagrams/Patient friendly diagrams (8)
    - Epidemiologic data
    - Figures without vendor branding
    - Flowcharts
    - Histology
    - Images suitable for a general audience
    - Information organization
    - Kreb's cycle
    - Latest/most accurate image of condition
    - Less common pathology
    - Mathematical concepts without formulas
    - Metabolism
    - Microbes
    - Microscopic slides
    - Molecules/Molecular pathways
    - Organ system mechanism
    - People as nurse/parent/patient/student/survivor (7)
    - Physiology
    - Radiologic images
    - Science specific
    - Signaling pathway (2)
    - Summaries of campus resources (graphs, charts)

6. Check if you have used any of these Library visual resources. Please check all that apply. (N=180)

Didn't know the Library offered these resources	73%	131
Other (specify below)	15%	27
OHSU Digital Resources Library collections	13%	23
Netter presenter human anatomy collection	5%	9
SpringerImages	4%	7
A.D.A.M. interactive anatomy	2%	3
Skipped question:		48

Comments: 33 (comments can be in more than one category)

- None/Never used   11
- Didn't know specific resources topics/availability   5
- Don't need images   3
- Make my own images: 3
- Internet   3
- ANKA/Eyeroute   1
- Bandwithonline.org (Hartford Foundation)   1
- CDC image library   1
- Department image library/database   1
- Electronic books   1

7. Please indicate whether you use any of the following resources in your teaching/research. Please check all that apply. (N=179)

Internet search engines (e.g., Google)	93%	166
Digital images from personal or departmental camera	79%	141
Online databases or resources	67%	119
Scanned images from negatives or film	37%	66
Resources on CD-Rom or DVD	33%	59
Other (please specify)	7%	13
Skipped question:		49

Comments: 13 (comments can be in more than one category)

- Specifically mentioned using Google   16
- Scanned images from books/journals/notes/atlases   6
- Figures from publications (digital)   3
- Make my own images: 2
- Anka/Eyeroute   1
- None   1
- Radiology images   1

8. Does your department have a visual resource collection? (N=179)

No	48%	85
Don't Know	39%	70
Yes	13%	24

Skipped question: 49

If Yes to the above question, please describe what makes your departmental collection useful to your research/teaching. Is your collection shared with students and/or other researchers?

Comments: 20 (comments can be in more than one category)
- Collection shared with department only   6
- Make my own images   4
- Yes, but held by specific individual   3
- Yes, but I don't use it   2
- Yes, but not easy to use/search   2
- Would share if asked   2
- In-house illustrator   1
- All images available to researchers on and off campus 1
- Can't afford equipment (camera, scanner, etc.) 1
- Don't need a database   1
- Image database being created   1
- Copyright (no sharing as did not get clearances) 1
- Outside database used   1

9. What teaching tools do you use re: images? Please check all that apply. (N=179)
PowerPoint   98%   176
Photoshop   44%   78
Video   39%   70
Sakai   22%   40
Other (specify below) 8%   15
Side-by-side projection 4%   7

Please use the comment box to discuss teaching tools you currently do not use (for whatever reason: accessibility, cost, technology barriers). 15 comments
Skipped question: 49