



*Article*

**Digital Images in Teaching and Learning at York University: Are the Libraries Meeting the Needs of Faculty Members in Fine Arts?**

Mary Kandiuk  
Visual Arts, Design and Theatre Librarian  
York University Libraries  
Toronto, Ontario, Canada  
Email: [mkandiuk@yorku.ca](mailto:mkandiuk@yorku.ca)

Aaron Lupton  
Electronic Resources Librarian  
York University Libraries  
Toronto, Ontario, Canada  
Email: [aalupton@yorku.ca](mailto:aalupton@yorku.ca)

Received: 21 Dec. 2011

Accepted: 27 Apr. 2012

© 2012 Kandiuk and Lupton. This is an Open Access article distributed under the terms of the Creative Commons-Attribution-Noncommercial-Share Alike License 2.5 Canada (<http://creativecommons.org/licenses/by-nc-sa/2.5/ca/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly attributed, not used for commercial purposes, and, if transformed, the resulting work is redistributed under the same or similar license to this one.

---

**Abstract**

**Objective** – This study assessed the needs for digital image delivery to faculty members in Fine Arts at York University in order to ensure that future decisions regarding the provision of digital images offered through commercial vendors and licensed by the Libraries meet the needs of teaching faculty.

**Methods** – The study was comprised of four parts. A Web survey was distributed to 62 full-time faculty members in the Faculty of Fine Arts in February of 2011. A total of 25 responses were received. Follow-up interviews were conducted with nine faculty members. Usage statistics were examined for licensed library image databases. A request was posted on the electronic mail lists of the Art Libraries Society of North America (ARLIS-L) and the Art Libraries Society of North America Canada Chapter (CARLIS-L) in April 2011 requesting feedback regarding the use of licensed image databases. There were 25 responses received.

**Results** – Licensed image databases receive low use and pose pedagogical and technological challenges for the majority of the faculty members in Fine Arts that we surveyed. Relevant content is the overriding priority, followed by expediency and

convenience, which take precedence over copyright and cleared permissions, resulting in a heavy reliance on Google Images Search.

**Conclusions** – The needs of faculty members in Fine Arts who use digital images in their teaching at York University are not being met. The greatest shortcomings of licensed image databases provided by the Libraries are the content and technical challenges, which impede the ability of faculty to fully exploit them. Issues that need to be resolved include the lack of contemporary and Canadian content, training and support, and organizational responsibility for the provision of digital images and support for the use of digital images.

---

## **Introduction**

The increasing growth of digital images offered through commercial vendors and licensed by libraries has provided new opportunities for teaching and learning at universities. Offering a significant number of high-resolution digital images with educational use permissions, licensed image databases are intended to facilitate the use of digital images in pedagogy and research. Given the significant financial expenditures on image databases such as ARTstor by Canadian academic libraries, it is critical to know whether the needs of library users are being met through these electronic resources. Informal feedback from faculty members in Fine Arts at York University suggested that subscription image databases are not being used and pose pedagogical and technological challenges. This included messages from faculty members frustrated when trying to use licensed image databases (ARTstor in particular); poorly attended ARTstor training sessions on campus; the inclusion of Web sources for images on course readings lists as opposed to licensed image databases; and requests from faculty members that York University participate in FADIS (a shared common repository and content management system designed for the teaching, studying, and researching of art, architecture, and visual culture). In an effort to ensure that future decisions regarding the provision of digital images by the Libraries meet the needs of teaching faculty, the authors conducted a four-part study in 2011 to assess the needs for digital image delivery to faculty members in Fine Arts at York University.

As recently as 10 years ago faculty members in Fine Arts at York University relied on a Slide Library, established in 1971 and housed in the Department of Visual Arts, for images to support their teaching. The Libraries meanwhile were responsible for monograph and periodical collections. A variety of factors contributed to the demise of the Slide Library – a deteriorating slide collection which included damage sustained during renovations, decreased staff support for its operation precipitated by budget cuts, as well as the advent of digital images via the Web and licensed image databases provided by the Libraries. The original plan to digitize the Slide Library collection – which at its pinnacle contained over 250,000 slides, including substantial Canadian and contemporary content as well as unique material relating to prominent York art teachers – was never realized.

York University Libraries were an early Canadian adopter of the ARTstor Digital Library, which was first licensed in 2005. This was followed in the same year by subscriptions to Corbis Images for Education (no longer available for licensing) and CAMIO, OCLC's Catalog of Art Museum Images Online. At the time these image databases appeared to be a promising campus-wide solution that would meet the needs of teaching faculty both in and outside the Faculty of Fine Arts for digital images with secured permissions for non-commercial, educational, and scholarly use as the Slide Library was quietly laid to rest. What gradually became evident was that despite initial enthusiasm, faculty members in Fine Arts were unable to exploit fully, if at all, these resources that the

Libraries had invested in so heavily financially, and the costs for which were increasingly difficult to rationalize. The challenge therefore was twofold – how to better support faculty members in their use of digital images in teaching and how to better exploit resources provided by the Libraries that were not being used.

### Literature Review

There were several major studies published from 2001 to 2006 examining the use of digital images in teaching and learning at American colleges and universities. These studies, on a much larger scale than ours, were conducted at a time when faculty members were still making the transition from the use of analog images to digital images.

The Visual Image User Study at Penn State University, conducted over several years starting in 2001, was an extensive needs assessment study that explored the “use of pictures in higher education in order to inform the design of digital image delivery systems” (Pisciotta, Dooris, Frost, & Halm, 2005, p. 33). The project included the study of current and expected use of pictures by students and faculty, a survey of the image resources supporting those uses, and a review of current practices related to software and metadata. The summary of the critical factors influencing the willingness to use an image delivery system for teaching included: desired content; user-selected technology for classroom presentation; ability to create presentations with images from many sources; help with understanding permitted uses; methods of selecting, sorting, naming groups, and other personalization of portions of the data; and easy coordination with image-use systems.

Surveying 33 colleges and universities in the United States in 2006, Green’s study, *Using Digital Images in Teaching and Learning: Perspectives from Liberal Arts Institutions* (2006), focused on the pedagogical implications of the widespread use of the digital format, revealing issues of infrastructure and support that “need to be resolved before their deployment can be effective” (p. 3). It examined image sources,

image use, technology and tools, support and training, and institutional infrastructure issues. It was the infrastructure issues that proved to be the biggest challenge of all.

Schonfeld, in *The Visual Resources Environment at Liberal Arts Colleges* (2006), examined the role images play in teaching and learning at seven liberal arts colleges in the United States in 2005 and 2006. The report focused on the issues of organizational structure and organizational culture and the role they played in supporting strategies for the provision of digital images. The role of the slide library or visual resources collection proved to be the key variable, and “those campuses at which the slide library takes a campus-wide perspective (rather than serving the art history department alone) seemed to see much easier and more successful transitions to digital images” (p. 1).

In 2005, Waibel and Arcolio, as members of the RLG Instructional Technology Group for OCLC, set out to test “assumptions about how digital images are discovered, acquired and used – and about preferences for the future” (p. 1). Their primary conclusion was that “image databases need to leverage the breadth and simplicity of online search engines such as Google Images Search to achieve higher use” (p. 3).

What is missing from the literature is current research relating to the use of digital images in teaching by fine arts teaching faculty. The main purpose of our study was to determine how digital images are located, stored, and used by fine arts faculty members in their teaching at a large university with a strong fine arts program; to examine the shortfalls of available image databases and barriers inhibiting their use; and to explore potential future models to support the use and availability of digital images and strategies to maximize the potential of existing digital resources. In addition, our study sheds light on the specific needs of fine arts teaching faculty in Canada. The Canadian Research Knowledge Network (CRKN, a national consortium comprised of 44 Canadian ARTstor subscribers) is licensing image databases as part of its large-scale content acquisition and

licensing initiatives designed to “build knowledge infrastructure and research capacity” at Canadian universities (Canadian Research Knowledge Network, 2011). This study serves in part to evaluate the effectiveness of those initiatives.

## Methods

The information-gathering portion of our study was comprised of four parts.

### *Part 1*

A Web survey was distributed to 62 full-time faculty members in the Departments of Visual Arts, Design, Fine Arts Cultural Studies, and Theatre in the Faculty of Fine Arts in February of 2011. As one of the authors is the liaison librarian for these four departments, there was a particular interest in conducting a needs assessment. Each of these departments provides a comprehensive, balanced program of creative work and academic studies, combining scholarly work with practical training. Faculty members teach in a variety of settings, which include the lecture hall, classroom, laboratory, and studio. The survey was comprised of 26 questions (see Appendix A). The Faculty Image Use Survey conducted as part of the Penn State Visual Image User Study proved very useful for the formulation of the questions for our survey. Respondents were also provided with the opportunity to provide additional comments throughout the survey.

### *Part 2*

At the end of the survey respondents were asked if they would be willing to be contacted for a follow-up interview. Interviews were conducted in person where possible and otherwise by telephone during April 2011 (see Appendix B).

### *Part 3*

Usage statistics were examined for licensed library image databases. Statistics were compiled for ARTstor from 2005 to 2011 and for CAMIO from 2007 to 2011. ARTstor and

CAMIO sessions and searches per FTE for York University were also compared to the average of institutions within CRKN and the provincial consortium OCUL (Ontario Council of University Libraries).

### *Part 4*

As the final part of the information gathering, a request was posted on the electronic mail list of the Art Libraries Society of North America (ARLIS-L) and the Art Libraries Society of North America Canada Chapter (CARLIS-L) in April 2011 as follows:

I have just finished conducting a survey of faculty members in Fine Arts at my institution regarding the use of digital images in teaching. Preliminary results indicated that ARTstor is highly underutilized as a source for digital images and that faculty members are relying heavily on Google Images. I am interested in hearing whether the experience has been the same at your institutions. I am also particularly interested in hearing from those who have had success in promoting ARTstor at their institutions and where faculty members are using ARTstor on a regular basis in their teaching. Feedback regarding the use of other licensed image databases in teaching is also welcome.

## Results and Discussion

### *Part 1 – The Survey*

There was a 40% response rate, with 25 faculty members in total responding to the survey. The 25 responses received from faculty members were distributed across the following Departments: Visual Arts (11 respondents – 44%), Theatre (7 respondents – 28%), Design (4 respondents – 16%), Fine Arts Cultural Studies (3 respondents – 12%).

## *Analog Images*

### *How Often Are Analog Images Used in Teaching?*

There were 3 faculty members (12%) who reported always using analog images in their teaching; 4 (16%) reported using them frequently; 6 (24%) sometimes; and 12 (48%) not at all. The greatest reason for using analog images was that content suited their needs (11 respondents – 44%) and ease of use (7 respondents – 28%). Those least likely to use analog images in their teaching were faculty members in Visual Arts and Theatre. Those most likely to use analog images were faculty members in Design.

### *Why Are Analog Images Used?*

The reasons faculty members gave for using analog images included: preference for working with tangible objects; lack of access to a projection system; difficulty in manipulating digital images; preference for using their own person slide collections; and availability of images only in slide form.

## *Digital Images*

### *How Often Are Digital Images Used in Teaching?*

The conversion from the use of 35 mm slides to digital images is described by Sonia Staum (2010), Director at IUPUI Herron Art Library, as “perhaps one of the most significant transitions for our collections in the past decade” (p. 77). Faculty members in Fine Arts at York University appear to have made the transition (although not always successfully) from the use of analog to digital images, with 13 respondents (52%) reporting that they always use digital images in their teaching, 7 (28%) reporting frequent use of digital images in teaching, and 5 (20%) reporting that they sometimes use digital images in their teaching. No one indicated that they never use digital images.

### *What Sources Are Used for Digital Images?*

This question was divided into three parts: (1) licensed image databases, (2) creation of own

images, and (3) external sources, including photo sharing sites, image collections and portals from other libraries, purchased CD collections, and web search engines.

For licensed digital image databases, very low use of ARTstor was reported with only 1 respondent (4%) using it always and 4 respondents (16%) using it frequently. There were 7 respondents (28%) who reported using ARTstor sometimes, while another 10 (40%) reported no use of ARTstor whatsoever. Not a single faculty member in Design used ARTstor, which was puzzling given the inclusion of design collections in ARTstor (e.g., MoMA Architecture and Design Collection, Cooper Union for the Advancement of Science and Art Graphic Design Collection). There was negligible use of CAMIO reported by all respondents.

As reported by Waibel and Arcolio in their study in 2005, we discovered what we already suspected, that “by and large, the library plays only a small role in supplying the faculty with digital image content” (p. 2).

When asked to elaborate as to why they did not use licensed digital image databases in their teaching, faculty members’ responses included:

- “Images are scanned from my own book collection.”
- “Use my own personal images. I am a photographer. Or I search Google images.”
- “Use my own research on line and my own work.”
- “I didn’t know about CAMIO; I use a lot straight off the internet but not for lectures – for print info.”
- “Locate images from museum websites and anywhere else I can find them.”
- “Use CCCA open source for contemporary Canadian art.”

As for sources used for the creation of their own digital images, the most frequent method used by all faculty members was using a digital camera (14 respondents – 56% always

or frequently use) followed by scanning from books (10 respondents – 40% always or frequently use). Faculty members in Visual Arts were the group most likely to create digital images by digitizing slides (7 respondents – 28% always or frequently). When specifically asked about which Web/Internet sources were used for digital images, the most often used source was Google Images Search (17 respondents – 68% always or frequently use). Faculty also reported frequent use of image collections from other libraries, museums, or archives (15 respondents – 60% always or frequently), followed by public photo sharing sites such as Flickr (8 respondents – 32% always or frequently). Additional sources most frequently cited include images scanned from a private library, printed materials such as books and magazines, and unique digital documents provided by other artists/educators.

The majority of faculty members reported that they were able to combine images to meet their needs if more than one source was used. In fact, only one respondent (in Visual Arts) reported being unable to combine images for the reason of time constraints and file/software incompatibility.

When asked about their favourite sites for digital images, faculty member responses are as follows:

- Web search engines/tools (e.g., Google Images, Flickr, Cooliris, YouTube)
- Virtual museum websites (e.g., Centre for Contemporary Canadian Art, National Arts Centre: The Secret Life of Costumes, Web Gallery of Art)
- Museum/gallery websites (e.g., National Gallery of Canada: Cybermuse, Carnegie Museum of Art, Guggenheim Museum, MoMA, Metropolitan Museum of Art, Tate Online, the Barnes Foundation)
- Library digital image collections (e.g., Metropolitan Toronto Reference Library: The Canadian Theatre Record, Digitized Images from the Bodleian

Libraries Special Collections, Gallica Digital Library)

- University digital image collections (e.g., University of Amsterdam Flickr collection)
- Stock photography websites (e.g., Getty Images, Stock.xchng)
- Auction house websites (e.g., artnet)
- Personal websites (e.g., Typefoundry: Documents for the History of Types and Letterforms)

What other licensed image databases should be made available? What was telling about this question is that 8 faculty members (32%) responded that they did not have enough knowledge to suggest any sources, revealing a general unfamiliarity with licensed digital image databases. The following resources grouped by department were suggested by respondents:

- Design: Berg Fashion Library, AIGA Design Archives
- Fine Arts Cultural Studies: Alinari, Art Resource
- Visual Arts: Vtape, FADIS (3 respondents)

When asked to indicate what criteria are most important to them, as is illustrated by Figure 1, ease of finding the images they needed ranked highest followed by image resolution/quality. As was also revealed by Waibel and Arcolio in the OCLC study, “almost every faculty member interviewed regarded Google Image Search as a quick, reliable way of retrieving images for teaching. While the common deficiencies in terms of file size and color fidelity are apparent to them, ease of use and the search engine’s ability to deliver a suitable image for almost any request outweigh those shortcomings” (p. 2). Furthermore, “in their dream of the future, faculty envision access to high-quality, rights-cleared, persistently available images with the same retrieval success rate as Google Image Search” (p. 3). Meanwhile, cleared copyright and permissions, a concern at the top of the library’s mind, received more of a mixed response. Copyright, as was revealed in the

interviews, is perceived as a barrier to expediency and convenience.

What activities are important for teaching? As revealed in Figure 2, creating image sequences for presentation was ranked highest followed by being able to integrate images from several sources, and then the ability to create your own digital images with a scanner/camera.

What activities are desirable that are not currently possible? When we asked faculty members what they would like to do that current resources do not make possible, we received a variety of responses, but one common one was the ability to show two images side by side simultaneously. It was pointed out that it was possible to do this with the old slide projection, a point also raised by Schonfeld, who commented that “not all digital image teaching tools have made it easy to bring together two images side by side, which has made it difficult for some

instructors to mimic traditional art history teaching methods using digital solutions” (p. 7). A related response came from two members of Fine Arts Cultural Studies, who indicated that they would like to be able to project an image at the same time as a moving image with sound. Other singular responses included: having access to the Rare Book Room to scan images; more flexibility with copyright (specifically, the ability to use images in a course document/handout); access to more video content; access to a larger database of content; access to specifically more contemporary global art content; and more technical assistance with using images. Many of these responses would come up in future questions.

Where or how are images stored? As is illustrated by Figure 3, the most common place where images are currently stored is on faculty members’ personal computers, followed by a flash memory storage device.

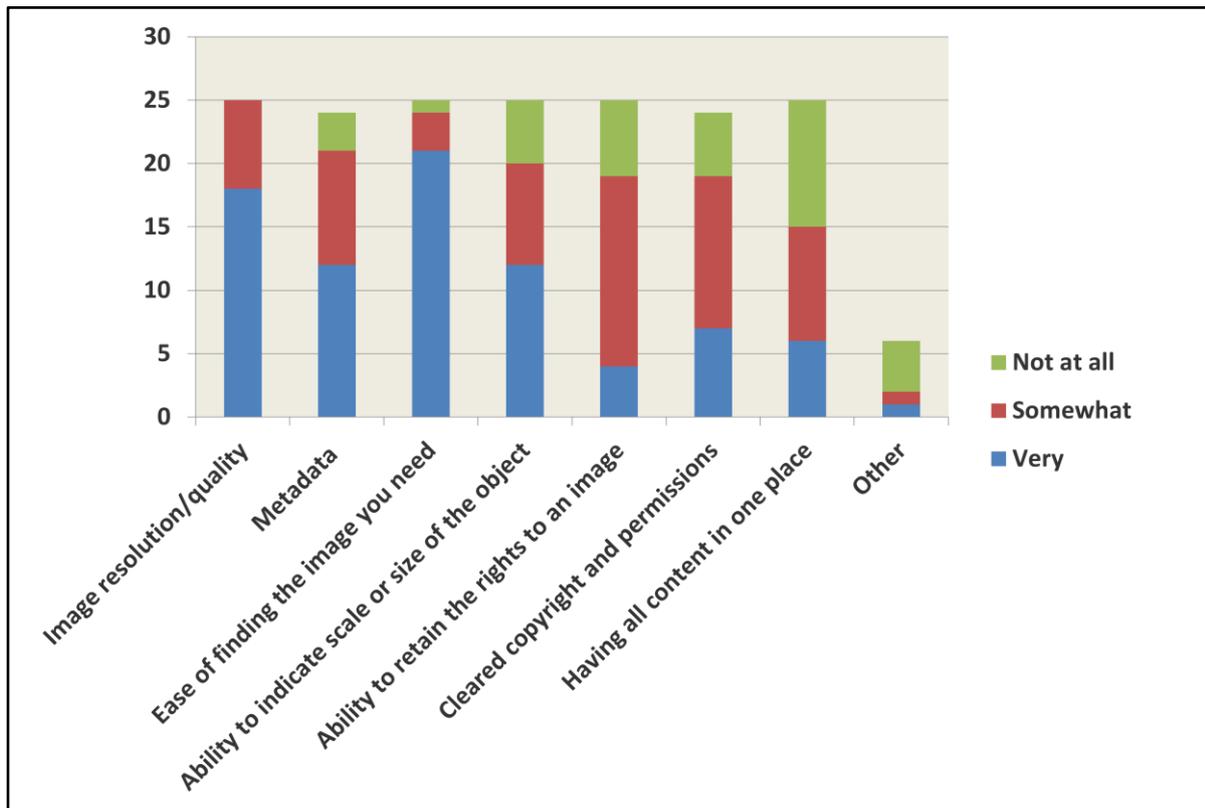


Figure 1  
How important is each of the criteria to you?

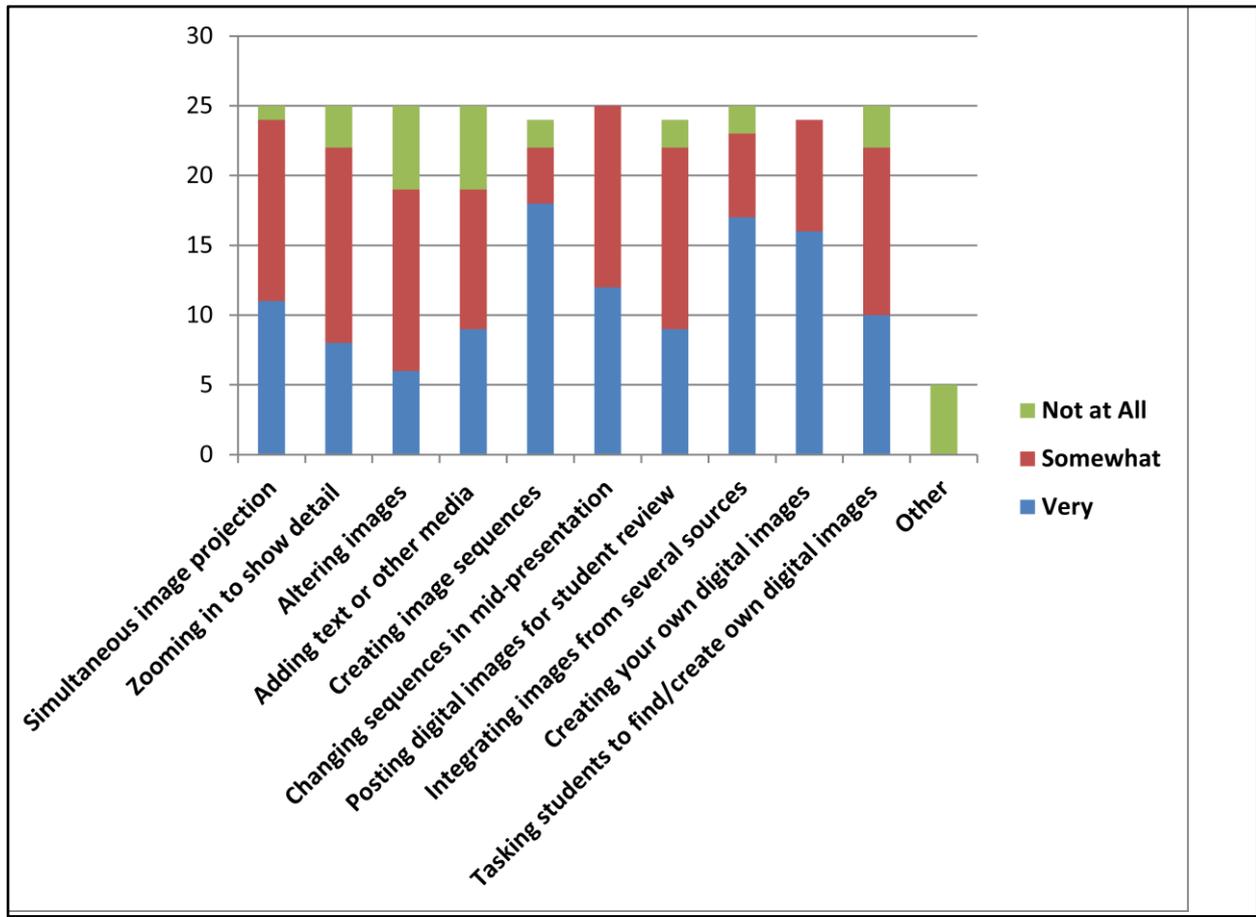


Figure 2  
What activities are important for your teaching?

What content management/courseware systems should be made available? This question revealed a lack of knowledge of other content management systems, with the most common answer being some variation of "I don't know." One respondent in Design mentioned SlideRoom and Plone, while one in Visual Arts mentioned FADIS (the Federated Academic Digital Imaging System currently housed at the University of Toronto). Frustration was also expressed about the lack of space to mount a slide show and the need for a system highly compatible with Moodle.

What presentation software is used? PowerPoint was the most popular response among Theatre and Visual Arts faculty members, with the majority responding that they use this well-known Microsoft product. It was not as popular in Design, where most respondents said they use Adobe Acrobat.

ARTstor presentation software was a distant third.

Where or how are digital images posted for review? The most common response was that faculty do not post images for student review. A number of faculty members did post images for review on a faculty/institutional server and local courseware systems. However one faculty member, who teaches an online course, indicated that the lack of space provided on the local course management system posed an obstacle to posting images for review.

What are the challenges or obstacles faced when using digital images in teaching? As is illustrated by Figure 4, a lack of content was identified as the number one obstacle, with "too few good sources" indicated as an issue by 11 respondents (44%). However, respondents also gave answers in the open-ended "other" section. These included: lack of

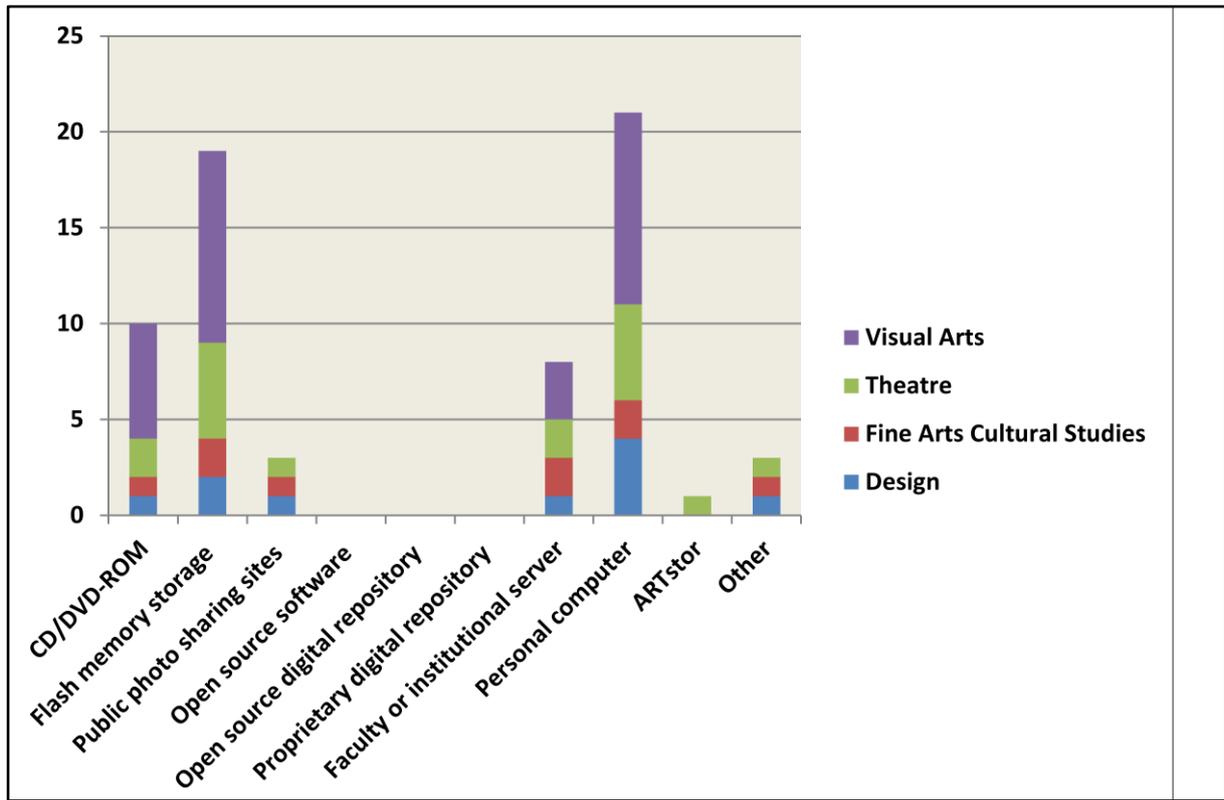


Figure 3  
Where or how do you store your digital images?

technical knowledge to work with images; material being obscure, expensive, and difficult to obtain; the time it takes to obtain material; the poor resolution of most images; a lack of contemporary material; not enough digital space to hold images; lack of video; and a lack of finding aids for images.

What are the deficiencies/challenges of licensed image databases? Again, content proved to be a challenge, with 9 respondents (36%) indicating this was an issue with York's licensed digital image databases ARTstor and CAMIO. Specifically, they indicated that these resources lack: Canadian content (mentioned five times), contemporary content (mentioned twice), typography, indigenous content, and video. Regarding the advent of image databases, Sonja Staum (2010) writes that "while these vast digital image repositories held promise for improved convenience due to their access-on-demand nature, the content in these resources often did not match the curricular needs of the respective target audience and as a result was not useful" (p.

80). Many years later this still appears to hold true. The second most popular deficiency of licensed image databases was being unable to manipulate images satisfactorily (3 respondents – 12%). Faculty members indicated that they found ARTstor "too complicated" and "laborious to use."

Who provides technical support? "Because images can be obtained easily online, it is falsely assumed that there needs to be little supportive infrastructure. Nothing could be further from the truth," states Green (2006, p. 99). This was also our finding. Most of our respondents (17 respondents – 68%) indicated that they turned to faculty IT support for assistance. Many (7 respondents – 28%) indicated that they had insufficient technical knowledge to use licensed image databases effectively. Several (4 respondents – 16%) indicated that technical support is too overwhelmed to provide proper support for teaching faculty and that they relied on hired consultants, family, a paid technician, or a research assistant. Very few (2 respondents –

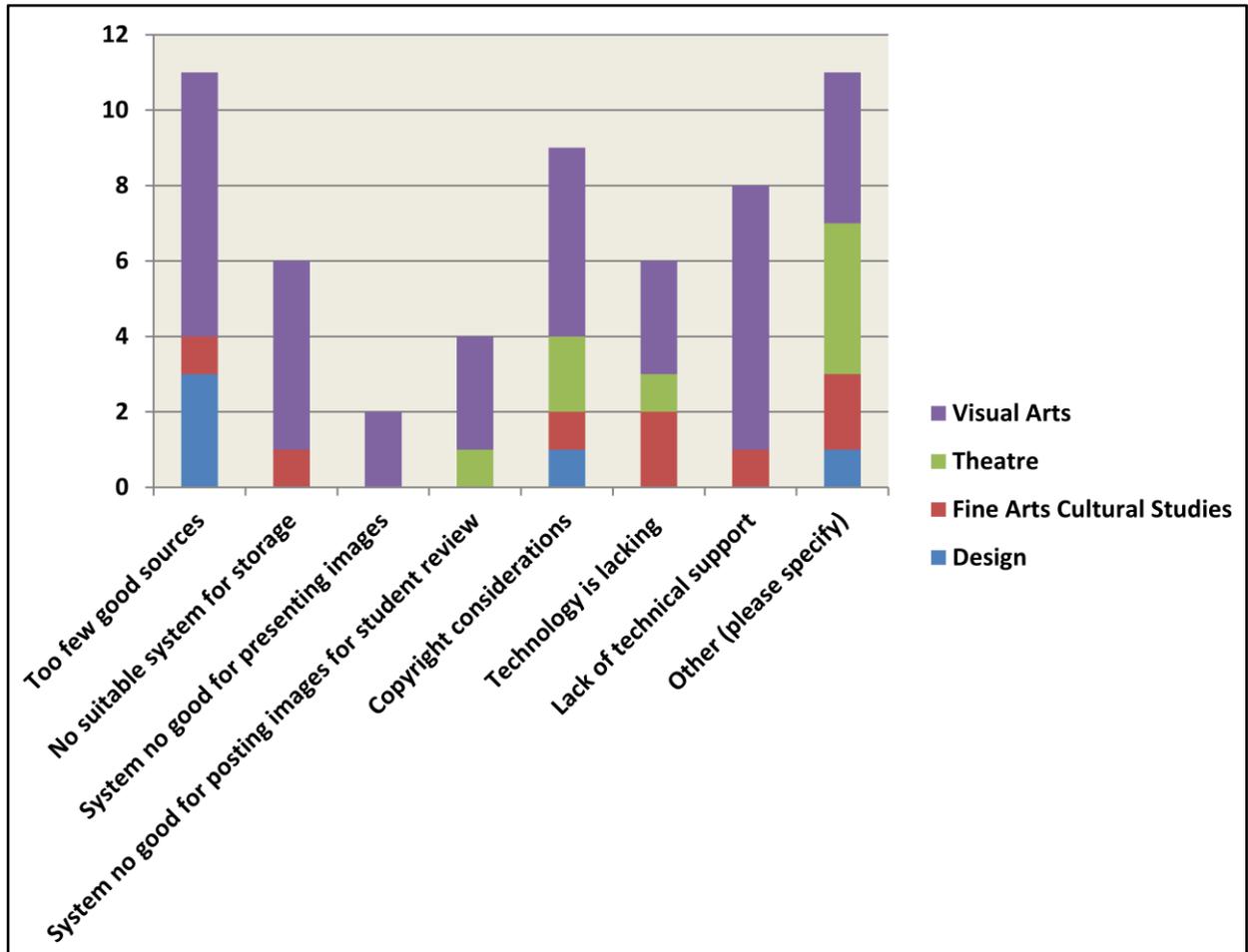


Figure 4

What are the challenges/obstacles you face when using digital images in teaching?

8%) said that they relied on support provided by licensed providers such as ARTstor.

What type of ARTstor training has been received? Again, mirroring our own experience, Waibel and Arcolio (2005) write: "while we heard about library attempts to make faculty more aware of licensed resources, these communications seem to largely bypass their audience" (p. 2). When asked what type of ARTstor training faculty members have received, the answer in every category (Figure 5) from online handouts to onsite training sessions was consistently "have not used." This was despite promotion by the Libraries of ARTstor training and support services as well as a full-day ARTstor training session organized by the Libraries and conducted by an ARTstor trainer on campus in fall 2006.

Has technical assistance been sought or received from ARTstor and was it useful? Almost no one indicated that they had sought or received technical assistance from ARTstor. Only two faculty members in Theatre had sought assistance, with one member finding it very helpful and another indicating it was not, making it difficult to draw any conclusions. However, several faculty members had indicated in the past that the lack of a toll-free number for Canadian ARTstor subscribers was an impediment to obtaining quick assistance (as well as the ability to participate in ARTstor webinar training sessions).

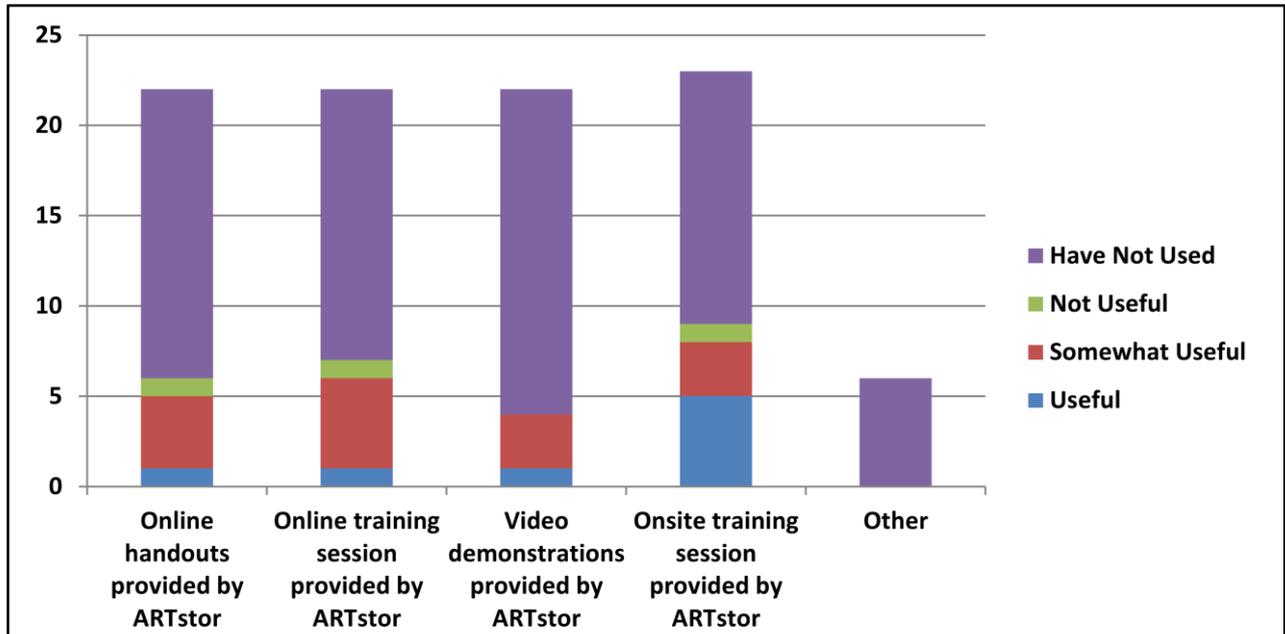


Figure 5  
What type of ARTstor training have you received?

## Part 2 – The Interviews

The interviews were used as an opportunity to elicit more information about the responses in the survey, and they revealed information that did not emerge in the survey. We were able to follow up directly with faculty regarding their individual responses. The nine faculty members (36% of respondents) who were interviewed were distributed across the following departments, which provided us with valuable insights into how digital images are used in different disciplines: Visual Arts (5), Design (1), and Theatre (3). We interviewed one faculty member in Visual Arts who uses only slides in his teaching (his own vast personal collection of 190,000 images created with a digital camera), and another in Theatre who relies entirely on ARTstor for digital images in his teaching. Neither of these individuals was typical or representative. Most other faculty members use the Web, pulling together images for their teaching from a variety of sources.

The following summarizes what we learned and what issues emerged in the interviews.

## Department of Visual Arts

- ARTstor: concerns primarily relate to content (especially Canadian) as well as technical challenges
- Web: overriding concerns relate to the quality of images and the patchwork of resources that need to be organized
- FADIS: it is perceived as a flexible alternative resource, offering more relevant as well as user-generated content, especially Canadian (“critical mass of material”); York University’s concerns relating to copyright have impeded participation
- Visual literacy: students are perceived to be lacking in this skill
- Federated searching: there is a need for collective software that searches across databases quickly and simply
- Copyright: this is perceived to be a bigger issue in Canada than in the United States (because of CARFAC, Canadian Artists’ Representation/le Front des artistes canadiens); York University is also perceived to be overly concerned about copyright as compared to other Canadian institutions; the need to assemble

images quickly takes priority over copyright considerations

- Technical support: there is a desperate need for more technical support; “budget cuts have eviscerated support systems” (which went from 3 full-time staff to 0.5); technical support is needed at short notice
- Libraries: there is a diversity of views about the role of the Libraries, with some indicating that they would not expect the Libraries to assist beyond a general level, while others felt that the Libraries should take more responsibility and at the very least provide curating of sources (e.g., image portal Web page)

*Department of Theatre*

- Print materials: small classes allow for the use of books or hard prints relating to costume and set design and less reliance on digital images
- Web: there is a heavy reliance on the Internet for images
- ARTstor: this database is considered technically difficult and lacking in content with poor IT/Customer Support (yet one faculty member indicated that what he wants is readily available in ARTstor and that IT/Customer Support is responsive); concerns were expressed about the technical problems with updates and the lack of Canadian content

*Department of Design*

- Print materials: they are better suited to the needs of this one faculty member who scans digital images mostly from his own material
- Web: concerns were expressed regarding the poor resolution of images
- ARTstor: this database is perceived to be lacking as it is not based on typography or graphic design

The idea of one search across all of our library resources was mentioned several times in our interviews. A similar idea was also reported by Waibel and Arcolio (2005), who write that “the idea of searching across all licensed resources and the Web at the same time found many proponents” (p. 3). The biggest issue that emerged in the interviews was the lack of a coordinated strategy for making the transition from analog to digital images, which was reported in numerous studies as the critical ingredient for success. As Green (2006) states, “perhaps the biggest challenge of all is that of institutional response: of managing change and of thinking strategically about planning the necessary infrastructure for effective use of digital resources” (p. 15). Green also discovered – which has been proven true at York – that “often issues were taken one at a time, without understanding how they were connected” (p. 15).

*Part 3 – ARTstor and CAMIO Usage Statistics*

The statistics revealed extremely low usage for CAMIO but growing usage for ARTstor. One

Table 1  
ARTstor Usage, 2005-2011

ARTstor	2005	2006	2007	2008	2009	2010	2011
Sessions	700	1,608	1,932	1,464	2,268	1,944	843*
Sessions per FTE	0.3	0.9	0.9	0.7	1.1	1	
Searches	9,584	20,307	24,987	23,640	38,559	33,648	5,756*
Searches per FTE	5	10.7	12.5	11.9	19.4	18	

\*January-March 2011 data only

department/program the user was in) and the status of the user (faculty, student, etc.). It was also impossible to tell if each search represented a unique user and whether a single user was conducting multiple searches. Updated usage statistics were available at the time of writing and are included in Table 1. ARTstor has, more or less, shown steady growth in usage since its acquisition in 2005.

While numbers may appear high, it should be noted that York is below the CRKN average in number of times accessed. Between 2010-11 and 2011-12 the University of Ottawa recorded over 452,000 searches, which is eight times York's usage over the same period. Interestingly, York is far above the CRKN average number of searches. So while fewer people are using it at York, they are spending a lot of time using it.

CAMIO usage is far lower than that of ARTstor, and when the number of sessions and searches per FTE is factored in, it still can barely be characterized as "regular usage." CAMIO is licensed through the Ontario consortium OCUL, with three subscribing institutions, including York. Table 3 shows that York is above the OCUL average in number of searches and sessions for the period December 2010 to November 2011.

Table 2  
CAMIO Usage at OCUL and York, December 2010-November 2011

CAMIO	2007	2008	2009	2010
Sessions	109*	169	254	326
Sessions per FTE	0.05	0.08	0.12	0.17
Searches	516	553	806	1393
Searches per FTE	0.25	0.27	0.40	0.74

\*Only August-December 2007 data available

Table 3  
CAMIO Usage at OCUL and York, December 2010-November 2011

Dec. 2010-Nov. 2011	OCUL Total	OCUL Average	York Total
Sessions	631	210	354
Searches	2879	960	1490

#### **Part 4 - ARLIS/NA and ARLIS/NA Canada Electronic Mail Lists Feedback**

The feedback received from art and architecture librarian and visual resources staff colleagues via the lists was very revealing. There were 25 responses received in total from 19 American institutions and 5 Canadian institutions. There were 5 respondents (20%) who reported no success with ARTstor at their institutions ("I'm afraid that our experience is similar to yours" was a common response); 3 (12%) reported success with ARTstor; 4 (16%) reported limited success with ARTstor; 6 (24%) reported that they were preparing local collections for inclusion in ARTstor Shared Shelf; and 4 (16%) requested our survey and/or the results of our survey. The remaining 3 (12%) responses were not applicable. There appeared to be no discernible difference in the experience of Canadian and American institutions, although several American institutions reported heavy use of local digital collections. Of the 12% reporting success with ARTstor, the existence of a dedicated Visual Resources Centre and/or Visual Resources Librarian or Curator, an aggressive promotion and instruction strategy, and the inclusion of in-house images through participation in ARTstor Shared Shelf seemed to suggest greater success with ARTstor.

ARTstor's Shared Shelf allows "institutions to manage, actively use, and – should an institution so choose – share their institutional and faculty image collections" (ARTstor, 2012). One US college respondent indicated: "Since we signed an agreement to add our own collections to ARTstor, we have been able to promote much more, since faculty and students can see our Museum's collections side by side with other collections in ARTstor." Meanwhile the comments received from those reporting no success using ARTstor reflected our own experience. Concerns expressed related to the lack of contemporary and Canadian content as well as the technical challenges associated with the use of ARTstor. Respondents said: "ARTstor does not have the images faculty need/want and they must go elsewhere to locate needed images," "contemporary Canadian coverage is not great in ARTstor," and faculty find "ARTstor to be unwieldy to use." In addition ARTstor required "publicity and start-up training."

To summarize the results, licensed image databases receive low use and pose pedagogical and technological challenges for the majority of the faculty members in Fine Arts that we surveyed. Relevant content is the overriding priority, followed by expediency and convenience, resulting in a heavy reliance on Google Images Search. Copyright considerations rank lower in priority and are perceived as a barrier to expediency and convenience. There is also a direct correlation between comfort level with technology and the use of digital images in teaching. Licensed image databases are challenging to use and faculty members surveyed have insufficient training and technical support to fully exploit them. Feedback received from librarians and visual resources staff at other institutions polled suggests that their experience mirrors our findings.

## Conclusion

Our study illustrated clearly that the needs of faculty members in Fine Arts who use digital images in their teaching at York University are not being met. The greatest shortcomings with respect to licensed image databases provided

by the Libraries relate to content and technical challenges, including technical support, which impede the ability of faculty to fully exploit them. Green (2006) states:

Finally, it might serve us well to recognize the complexity, difficulty and expense of deploying digital images and to regard the transition to using them as a longer, more ongoing process than we have expected up until now: a transition that will need careful managing. As Smith College art historian Dana Leibsohn put it: "This notion of transition is interesting – but it has a really long tail and we have to think harder about it and what it means to be in transition for more like fifteen or twenty years, rather than the five to eight years we've been talking about. National initiatives will help; peer exchange will help – but I think we're not thinking about transition as seriously as we should as an ongoing process." (p. 100)

The supportive infrastructure for the provision and use of images in teaching that existed in the Faculty of Fine Arts was removed with the demise of the Slide Library, the advent of digital images readily available on the Web, and the acquisition by the Libraries of licensed image databases. The Libraries meanwhile have not historically provided technical support for the use of images; nor do they have the staff resources to provide the kind of assistance required at short notice by faculty members teaching with digital images. With respect to the use of image databases, it was believed that the support for the use of those databases would and could be provided by the licensed digital image providers. This has resulted in faculty members in Fine Arts being left, in the words of one York art historian, as "one of the biggest art departments in the country with no solution."

There are a number of strategies that will be pursued by the Libraries to address the issues and concerns that were identified in our study. The first involves working to resolve issues

relating to the lack of Canadian and contemporary content. The Libraries are currently exploring participation in FADIS and ARTstor Shared Shelf. They are also members of the OCUL Visual Resources Working Group, which has been established with a mandate to “identify opportunities for collaboration across Ontario’s universities that will improve access to visual resources and services” (Patrick, 2011). This includes exploring additional opportunities for collaboration with other Canadian universities to develop shared content and to lobby ARTstor for content that would support the needs of Canadian users. It should be noted that at the time of writing there are several Canadian universities that are considering cancelling their subscriptions to ARTstor (Trent University has already cancelled) or have renewed for only one year in order to provide an opportunity for review (e.g., University of Toronto). While we have renewed our ARTstor subscription for three years, we are reviewing other existing subscriptions with a view to cancelling image databases receiving extremely low use (such as CAMIO) and working with faculty members to identify other potentially more relevant databases. On the basis of the feedback received from our survey the Libraries are also exploring the creation of a library digital images Web portal that would provide links to image sites.

The second initiative is to address issues of training and support at the local level. This requires identifying the specific needs of faculty members with respect to training and support, working with appropriate partners at ARTstor and Instructional Technology staff in the Faculty of Fine Arts to address these issues, and potentially expanding the role of the Libraries with respect to ARTstor training and support.

The third is to raise awareness of digital collections in ARTstor in an effort to increase its use, as well as increase awareness and understanding of copyright issues as they relate to the use of digital images, with the aim of promoting the use of ARTstor and other licensed image databases. The Libraries are

currently exploring the use of a search and discovery service which would have the potential to search digital images from licensed databases. The issue of copyright meanwhile is a challenging one. As was revealed in the interviews, faculty members, particularly those trained in the United States, perceive Canada’s copyright laws to be overly restrictive (fair use vs. fair dealing) and York University’s enforcement of copyright very rigid.

The last initiative involves working to resolve issues relating to organizational responsibility regarding the use of digital images in teaching (including the digitization, management, and integration of local/personal image collections and institutional image collections). This will entail working with the Faculty of Fine Arts and other partners on campus to develop a coordinated and integrated approach to the provision of digital images and support for the use of digital images in teaching.

### Acknowledgements

An abbreviated version of this paper was presented at the Seventh Annual TRTLibrary Staff Conference, held in Toronto, Ontario (May 2011), and as a poster presentation at the 40th Annual Art Libraries Society of North America Conference, held in Toronto, Ontario (March 2012).

### References

- ARTstor. (2012). Shared Shelf. Retrieved 14 May 2012 from <http://www.artstor.org/shared-shelf/shtml/shared-shelf-home.shtml>
- Canadian Research Knowledge Network. (2011). About. In *Canadian Research Knowledge Network*. Retrieved 27 April 2012 from <http://www.crkn.ca/about>
- Green, D. (2006). *Using digital images in teaching and learning: Perspectives from liberal arts institutions*. Retrieved 3 Jan. 2011 from <http://www.academiccommons.org/files/image-report.pdf>

- Patrick, J. (2011, April 4). Re: OCUL Visual Resources Working Group. Retrieved from OCUL-L <OCUL-L@LISTSERV.UOFGUELPH.CA>
- Pisciotta, H., Dooris, M. J., Frost, J., & Halm, M. (2005). Penn State's visual image user study. *portal: Libraries and the Academy*, 5(1), 33-58.
- Schonfeld, R. C. (2006). The visual resources environment at liberal arts colleges. Retrieved 3 Jan. 2011 from [http://dspace.nitle.org/bitstream/handle/10090/6619/2006\\_4\\_3\\_schonfeld.pdf](http://dspace.nitle.org/bitstream/handle/10090/6619/2006_4_3_schonfeld.pdf)
- Staum, S. (2010). Swimming with the tides of technology in an art and design library: From Amico to Delicious to YouTube. In A. Gluibizzi & P. Glassman (Eds.), *The Handbook of art and design librarianship*. (pp. 75-90). London: Facet Publishing.
- Waibel, G., & Arcolio, A. (2005) Out of the database, into the classroom. Retrieved 3 Jan. 2011 from <http://www.oclc.org/research/activities/past/rlg/culturalmaterials/outofthedb.htm>

## **Appendix A**

### **Digital Images Survey**

The increasing growth of digital images offered through commercial vendors has provided new opportunities for teaching and learning. Given the significant financial expenditures on licensed digital image resources such as ARTstor by York University Libraries it is important for us to know whether the needs of faculty and their students are being met through these electronic databases. In an effort to ensure that future decisions with respect to the provision of digital images by the Libraries meet the needs of faculty and their students this survey is being conducted to assess the needs for digital image delivery to faculty in Design, Fine Arts Cultural Studies, Theatre and Visual Arts.

**Definition of Digital Image:** Still picture in electronic file format in any form and of any subject including those derived from analog images such as scanned photographs and slides.

It would be appreciated if you could take a few minutes to fill out this survey. If you have any questions please contact Mary Kandiuk or Aaron Lupton. Thank you.

#### **1. What Department do you teach in?**

- Design
- Fine Arts Cultural Studies
- Theatre
- Visual Arts

#### **2. What position do you hold?**

- Full-time faculty
- Other (please specify)

#### **3. Which type of setting best describes where you teach? Please check all that are applicable.**

- Lecture hall
- Classroom
- Laboratory
- Studio
- Other (please specify)

#### **4. How often do you use analog images (images that are not in electronic form) in your teaching?**

- Always
- Frequently
- Sometimes
- Never

**5. Why do use analog images in your teaching? Please check all that are applicable.**

- Content suits my needs
- Ease of use
- Not comfortable using digital images
- Other or "NA" if you do not use analog images

**6. How often do you use digital images in your teaching?**

- Always
- Frequently
- Sometimes
- Never

**7. Which of the following sources do you use for your digital images? Please check all that are applicable and the frequency with which they are used.**

**Licensed digital image resources provided by the Libraries:**

ARTstor

- Always
- Frequently
- Sometimes
- Never

CAMIO

- Always
- Frequently
- Sometimes
- Never

Other

- Always
- Frequently
- Sometimes
- Never

If Other, please specify or write "NA" if never

**8. Which of the following sources do you use for your digital images? Please check all that are applicable and the frequency with which they are used.**

**Create own digital images using the following:**

Digital camera

- Always
- Frequently
- Sometimes
- Never

Scan from books

- Always
- Frequently
- Sometimes
- Never

Slide digitization

- Always
- Frequently
- Sometimes
- Never

Other

- Always
- Frequently
- Sometimes
- Never

If Other, please specify or write "NA" if never

**9. Which of the following sources do you use for your digital images? Please check all that are applicable and the frequency with which they are used.**

**Locate own digital images using the following:**

Public photo sharing sites (e.g. Flickr)

- Always
- Frequently
- Sometimes
- Never

Image collections from other libraries, museums, or archives

- Always
- Frequently
- Sometimes
- Never

Image portals created by other libraries

- Always
- Frequently
- Sometimes
- Never

Image search engines (e.g. Google Image Search)

- Always
- Frequently
- Sometimes
- Never

Purchase CD collections

- Always
- Frequently
- Sometimes
- Never

Other

- Always
- Frequently

- Sometimes
- Never

If Other, please specify or write "NA" if never

**10. If more than one source is used, are you able to combine digital images from these sources to meet your needs?**

- Yes
- No

If No, why not?

**11. What are your favourite sites for digital images?**

**12. Are there any other licensed digital image resources you would like the Libraries to make available?**

**13. How important are each of the following criteria to you?**

Image resolution/quality

- Very
- Somewhat
- Not at all

Metadata (information about the image)

- Very
- Somewhat
- Not at all

Ease of finding the image you need

- Very
- Somewhat
- Not at all

Ability to indicate scale or size of the object

- Very

- Somewhat
- Not at all

Ability to retain the rights to an image

- Very
- Somewhat
- Not at all

Cleared copyright and permissions

- Very
- Somewhat
- Not at all

Having all content in one place

- Very
- Somewhat
- Not at all

Other

- Very
- Somewhat
- Not at all

If Other, please specify or write "NA" if not at all

**14. How important are each of the following activities for your teaching?**

Presenting several images simultaneously

- Very
- Somewhat
- Not at all

Zooming in to show progressive detail in an image

- Very
- Somewhat

- Not at all

Altering images (cropping, changing contrast, etc.)

- Very
- Somewhat
- Not at all

Adding text or other media to accompany an image

- Very
- Somewhat
- Not at all

Creating image sequences for presentation

- Very
- Somewhat
- Not at all

Being able to interrupt or change sequences in the middle of a presentation

- Very
- Somewhat
- Not at all

Posting digital images for student review and study outside the classroom

- Very
- Somewhat
- Not at all

Being able to integrate images from several sources

- Very
- Somewhat
- Not at all

Creating your own digital images (scanning/camera)

- Very
- Somewhat

- Not at all

Tasking students to find/create digital images for their own creative work or assignments

- Very
- Somewhat
- Not at all

Other

- Very
- Somewhat
- Not at all

If Other, please specify or write "NA" if not at all

**15. What would you like to be able to do when teaching with digital images that you are currently unable to do?**

**16. Where or how do you store your digital images? Please check all that are applicable.**

- CD/DVD-ROM
- Flash Memory Storage Device
- Public photo sharing sites (e.g. Flickr)
- Open source software for managing digital images (e.g. MDID)
- Open source digital repository (e.g. DSpace)
- Proprietary digital repository (e.g. Contentdm)
- Faculty or institutional server
- Personal Computer
- ARTstor
- Other (please specify)

**17. Are there any content management/courseware systems for digital images you would like to have available?**

**18. What is the presentation software for digital images that you use in your teaching? Please check all that are applicable.**

- PowerPoint
- ARTstor
- Other (please specify)

**19. Where or how do you post digital images for student review? Please check all that are applicable.**

- Local courseware system
- ARTstor
- Open source software for managing digital images (e.g. MDID)
- Open source digital repository (e.g. DSpace)
- Faculty or institutional server
- Proprietary digital repository (e.g. Contentdm)
- Public photo sharing site (e.g. Flickr)
- Do not post images for student review
- Other (please specify)

**20. What are the challenges or obstacles that you currently face using digital images in your teaching? Please check all that are applicable.**

- Too few good sources
- Suitable system for storing images is not available
- Suitable system for presenting images is not available
- Suitable system for posting images for student review is not available
- Loan, permissions, or copyright considerations
- Technology is lacking in the setting where I teach
- Lack of technical support
- Other (please specify)

**21. If you experienced any of the challenges or obstacles listed below when using licensed databases such as ARTstor or CAMIO, please indicate the name of the database in the corresponding text box.**

Content is lacking - please specify how the content is lacking (e.g. lacks Canadian content) and which database:

Poor quality of images - please specify which database:

Duplicate images - please specify which database:

Images are insufficiently documented - please specify which database:

Way of searching does not match the way images are organized or identified - please specify which database:

Unable to manipulate images satisfactorily - please specify which database:

Difficult to integrate images from other sources - please specify which database:

Difficult to store images - please specify which database:

Difficult to post/share images - please specify which database:

Insufficient training - please specify which database:

Technology is too complicated - please specify which database:

Lack of technical support - please specify which database:

Other - please specify the challenge or obstacle and which database:

**22. From whom do you receive technical support? Please check all that are applicable.**

- Licensed digital image resource provider (e.g. ARTstor)
- Faculty IT support
- Other (please specify)

**23. What type of ARTstor training have you used or participated in? Please check all that are applicable and the degree to which it was useful.**

Online handouts provided by ARTstor

- Useful
- Somewhat useful
- Not useful
- Have not used

Online training session provided by ARTstor

- Useful
- Somewhat useful
- Not useful
- Have not used

Video demonstrations provided by ARTstor

- Useful
- Somewhat useful
- Not useful
- Have not used

Onsite training session provided by ARTstor

- Useful
- Somewhat useful
- Not useful
- Have not used

Other

- Useful
- Somewhat useful
- Not useful
- Have not used

If Other, please specify or "NA" if have not used

**24. How have you sought/received technical assistance from ARTstor? Please check all that are applicable and how frequently they were used.**

Telephone

- Many times
- Several times
- Seldom
- Never

E-mail

- Many times
- Several times
- Seldom
- Never

Other

- Many times
- Several times
- Seldom
- Never

If Other, please specify or write "NA" if never

**25. How would you rate the technical assistance you have sought/received from ARTstor?**

- Very helpful
- Somewhat helpful
- Not helpful
- Have not sought technical assistance
- Other (please specify)

**26. If you sought/received technical assistance from ARTstor and were not satisfied, why not?**

- Not timely
- Didn't resolve my problem
- Have not sought technical assistance
- Other (please describe)

**27. Would you agree to be contacted for a follow up interview?**

- Yes
- No

If yes, please provide your name and email address

## Appendix B

### Interview Schedule

Department	Position	Date of Interview	In Person/Telephone
Design	Associate Professor, Graphic Design	April 20, 2011	In person
Theatre	Associate Professor, Design	April 4, 2011	Telephone
Theatre	Associate Professor, Design	April 7, 2011	Telephone
Theatre	Professor, Production	April 13, 2011	In person
Visual Arts	Associate Professor, Art History	April 11, 2011	Telephone
Visual Arts	Assistant Professor, Art History	April 13, 2011	In person
Visual Arts	Associate Professor, Canadian Art History	April 13, 2011	In person
Visual Arts	Associate Professor, Canadian Art History	April 20, 2011	In person
Visual Arts	Professor, Medieval Art and Architecture	April 21, 2011	Telephone