New Media: Engaging and Educating the YouTube Generation

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Jack stares malevolently up through a ship porthole. Kate runs breathless and panicked through narrow hallways trying to escape. She breathes in terror, standing in the dark. He breaks down doors in angry rage. With a few choice selections of video and audio clips, four freshmen in a writing seminar at the University of Pennsylvania[1] have created a three-minute trailer for a film that has never existed—*Titanic* as a stalker flick. Cherry-picked scenes from the movie cleverly combined with excerpts from the soundtrack convey a meaning significantly different from that intended in the original film.

The *Titanic* trailer is one of 300 new media projects created by undergraduates as graded assignments last spring at Penn's Van Pelt-Dietrich Library Center. Supported by the Library's David B. Weigle Information Commons, these projects spanned a range of disciplines and employed a variety of technologies. Since its opening in April 2006, the Commons has fostered student engagement with technology and, more significantly, faculty interest in incorporating new media[2] into the classroom has grown—a direct result of the resources and services the Commons provides. In this paper we will describe the process and structure by which the Penn Libraries have supported student and faculty exploration of new media use in course assignments.

Today's undergraduates are clearly comfortable as consumers of technology and new media—purchasing ring tones for their cell phones and tunes for their iPods, text-messaging from handheld devices, scanning and tinkering with photos, keeping up with their Facebook friends and watching viral YouTube videos, sometimes all simultaneously. Of more than 26,000 undergraduates surveyed nationwide in 2007 by Educause, 22% reported owning five or more electronic devices (phones, iPods, etc.) and 86% reported owning three or more.[3] Nationally, 91% of undergraduates who live on campus own laptops. [4] Routinely, students enter our libraries with laptop in tow and it is not uncommon to see a study group of six students along with six laptops, some of which may be library-provided. Furthermore, the capabilities of today's personal laptops allow students to easily perform the kinds of video- and audio-editing tasks that would have required rooms full of equipment just a few years ago. Use of cell phones and texting is also ubiquitous. Library staff have commented on the number of emails received that include a "sent from my Blackberry" or "sent from my iPhone" tagline and we have noticed on occasion that students seated at the computers situated

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[1] Andy Cao and classmates created the video for Jacqui Sadashige's freshman writing seminar at the University of Pennsylvania in Spring 2007.

[2] New media is a term that describes the variety of forms of electronic communication that have appeared since the original, mainly text-and-static picture forms of online communication have been available. See, e.g. http://searchsoa.techtarget.com/sDefinition/0,,sid26_gci213507,00.html.

[3] Gail Salaway, et. al., *The ECAR Study of Undergraduate Students and Information Technology 2007* (Boulder: Educause, 2007): 36.

[4] Judith Borreson Caruso and Gail Salaway, *The ECAR Study of Undergraduate Students and Information Technology, 2008 (*Boulder: Educause, 2008): 40. Retrieved from http://net.educause.edu/ir/library/pdf/ers0808/rs/ers08084.pdf.

less than 50 feet from the reference desk will choose to contact the library's IM/Chat service for assistance rather than walk the short distance to speak to a librarian face-to-face. Students sit in large lecture halls, their attention divided among the speaker at the front of the room, the images on their laptops, and the ongoing text message conversations they are conducting by cell phone. What can arguably be characterized as the frenetic nature of undergraduate technology use complicates the work of faculty, who are faced with the challenge of engaging these students in both lecture halls and seminar rooms. While not yet true for the majority, some faculty are interested and willing to try and harness the allure of ever-present new media into productive academic activity. In many of the scenarios we will discuss, the shift in the student's role from consumer of technology to media producer and designer has been a key element in increasing both the level of engagement with the process and commitment to the assigned project.

What do Students Know and What do They Need to Know?

Educause's annual report, the ECAR Study of Undergraduate Students and Information Technology, describes rapid changes in how undergraduate technology use has shifted in the last decade.[5] The Pew Internet & American Life Project[6] notes that young people view modes of communication such as texting, email and video quite differently from their parents and grandparents. Students' expertise with texting, twittering, managing their Facebook presence, sharing viral videos, and mixing music tracks is well-documented. Gaps and weaknesses in their technological knowledge are harder to perceive and redress.

The National Educational Technology Standards (NETS)[7]—developed by a national network of K-16 educators—set broad goals for what every student should know before entering college. The evolution of NETS, from the 1997 standards to the 2007 standards, reflects changing perceptions of technology—a movement away from narrowly defined skill sets ("can you do mail-merge?") to broad fluencies ("can you create original works in new media formats?"). The NETS 2007 standards include six basic components:

1. Creativity and Innovation
2. Community and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem-solving and Decision Making
5. Digital Citizenship
6. Technology operations and concepts

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[5] Salaway 36.

[6] Jeffrey Boase, et. al., *The Strength of Internet Ties* (Washington DC: Pew Internet and American Life Study, 2006).

[7] *The ISTE National Educational Technology Standards (Eugene: ISTE, 2007).*

As discussed above, undergraduates are typically educated consumers of technology but they are not necessarily confident or adventurous content creators. Nor do they always understand the limitations and the complexities inherent in the online environment in which they work and live. Furthermore, the finely-honed critical thinking skills that are integral to their future success are often lacking when they arrive on campus. The NETS standards provide a framework within which these competencies can be addressed. Also important to mention here is the concept of lifelong learning, which will be critical as these students move from campus to the workplace. The rate at which technology changes—in quantum leaps rather than gradual shifts—will undoubtedly challenge students' ability to meet employer expectations. The ability to think creatively, to develop original ideas, as well as to build something new based on the work of others are all integral to understanding, utilizing, and exploiting technology. Several of the new media projects we have supported at the Commons rely on these skills and, for many student participants, were eye-opening experiences.

Supporting Student Learning: The Weigle Information Commons

The David B. Weigle Information Commons opened in April 2006 as a high-tech collaborative space in Van Pelt-Dietrich Library Center, Penn's main humanities and social sciences library. A result of a shared vision between the Penn Libraries and School of Arts and Sciences, the Commons addresses a long-standing need on the Penn campus, namely centrally-located academic support services and technology-rich study spaces for students that facilitate collaboration, experimentation and the exchange of ideas. In addition to a number of group study rooms and flexible work spaces the Commons includes:

Data Diner Booths: These 12 booths are equipped with one or two computers and a monitor that pivots easily so four to six students can read each other's writing, conduct peer review and collaborate on documents.

Videorecording Rooms: These three rooms include ceiling-installed cameras and microphones and a self-serve DVD recording system. The video can be "directed" through camera controls or, for projects that are less complex, the process can be as simple as pressing the record button.

Seminar Room: With 40 laptops, clickers, cameras, microphones and other peripherals, the seminar room is a high-tech teaching space. Faculty who utilize the technology can teach in the space or they can arrange a class session where library staff provide instruction on such software as iMovie, Audacity, or PhotoShop. Faculty can also bring their students in for intensive work sessions with expert media-authoring assistance from library staff shortly before project deadlines.

Vitale Digital Media Lab: Although a relatively small facility with 11 workstations, the media lab has become a collaboration hub. Designed to primarily support individual project work, the lab is equipped with multimedia conversion and editing capability. Staff provide one-on-one assistance to patrons with video, multimedia, comic book and web graphic creation, poster design, and the extract and digitization of short video clips. The lab supports conversion from several media formats including multi-region DVD, VHS, slides, film and vinyl records, and provides short-term loans of video and still cameras, audio recorders and microphones.

Student Assistance Services: Central to the Commons' mission are the services provided by the "Program Partners," a group of administratively disparate campus agencies that have joined forces in this central space to collaboratively support undergraduate education. Together the partners develop services, design workshops and plan events geared to undergraduate students. Full-time staff and peer tutors offer walk-in and appointment-based one-on-one assistance as well as group workshops. In addition to librarians, who provide reference and research assistance, the partners include:

Communication Within the Curriculum (CWiC), part of the School of Arts and Sciences, the largest undergraduate school at Penn. CWiC is a peer-mediated communication program where undergraduates trained in public speaking help their peers prepare for class presentations, job interviews, conference sessions and other public speaking situations. CWiC provides a walk-in Speaking Center in the Commons where a student can meet with an advisor to learn how to structure a presentation, to practice an existing presentation and gain feedback, or to get tips on reducing nervousness. CWiC also works closely with individual classes through their affiliation program. In this, more targeted, model, every student in the class meets individually with a CWiC peer mentor in preparation for a graded presentation at the end of the semester.

The Weingarten Learning Resources Center operates under the umbrella of the Vice-Provost for University Life and provides professional consultation services to students, supporting a variety of academic skills, and also manages the campus Office of Student Disabilities Services. In the Commons, staff provide walk-in assistance with study and reading strategies, note-taking and time management. They also offer workshops on topics that help students cope with the academic pace at Penn.

The Writing Center oversees the dozens of critical writing seminars taught on campus each year that fulfill the College writing requirement for freshmen. Students can make appointments to meet with Writing Center tutors in the Commons for a critical review of a research paper or essay. In addition, writing center faculty have actively used new media for both class instruction and assignments—the small class size and program structure have proved to be a good fit. Every semester several critical writing classes meet weekly in the Commons' seminar room.

Workshops and Custom Training: The role of the Commons as a training provider for the Penn community has grown substantially over the past three years. From an initial offering of two workshops per semester, we now offer about 30 to 35 workshops each month—scheduled by faculty request for an individual class or open to the entire Penn community—on topics including podcasting, graphic design, productivity software, online library tools, new technology releases, media production, web design and data analysis.[8] Workshops are conducted by a variety of individuals including library and university staff, guest presenters, and students. One of our major efforts, the Commons' signature workshop series, "From Assignments to References," is offered over the course of each semester and integrates the expertise of all of the Program Partners. Workshops focus on research, public speaking, time management, reading strategies and writing. The series, designed for an undergraduate audience, follows the flow of the academic calendar so that, e.g. the academic planning workshop is held at the start of the semester, RefWorks is taught around midterms and the "editing and revising your writing" workshop is typically scheduled near the end of the semester.

Technology workshops, the mainstay of the Commons program, have expanded over the past year to accommodate a rise in the number of class assignments utilizing new media and we now provide customized hands-on workshops at faculty request to meet the needs of individual courses. Staff work closely with the faculty member to ensure a successful experience for the students. Preliminary conversations are held to discuss project ideas, what has worked well in the past and potential pitfalls. In some cases, the faculty members comes to the Commons with an assignment in mind that may be refined after the conversation. In other cases, staff show examples of student work to faculty with interest in a specific medium, and then a new assignments emerges from the conversation. The faculty member designs and structures the assignment, sets expectations (type of media to be used, acceptable sources of content, duration of the finished product, etc.) and deadlines. Workshops are conducted by media lab staff except in cases where the faculty member prefers to introduce the technology to the students. The most common topics have included:

- clip capture and video editing with iMovie
- adding audio commentary to a video clip
- creating podcasts and editing audio using Audacity and GarageBand
- PhotoShop or PowerPoint for poster design

Workshop outlines and online tutorials are made available on the Commons' website but it is not unusual for students to return for one-on-one assistance with an assignment from media lab staff.

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[8] A list of current workshops is available at http://wic.library.upenn.edu/workshops.

It should be noted that as faculty explore the integration of technology into class assignments they are also refining their expectations. Time restrictions, unrealistic assumptions about students' skill levels, and the limitations of the technology itself can negatively impact the success of the experience and discourage students from taking creative risks. Several French faculty, for example, reconsidered a decision to use the Commons' self-serve video-recording rooms to record students' skits after developing a sense that too much time was being spent on technology use and not enough on the language skills themselves. Other language faculty explored video projects with original footage using cameras borrowed from the Commons and other locations on campus. After including this assignment in the course syllabus for several semesters, they became concerned about the time commitment involved and have recently decided to step back temporarily from video projects. In other instances, faculty have developed intermediate deadlines, reduced the complexity of the assignment and made grading criteria more explicit in an attempt to focus attention on course-specific content and reduce the temptation to overly emphasize clever technical effects possible in video editing.
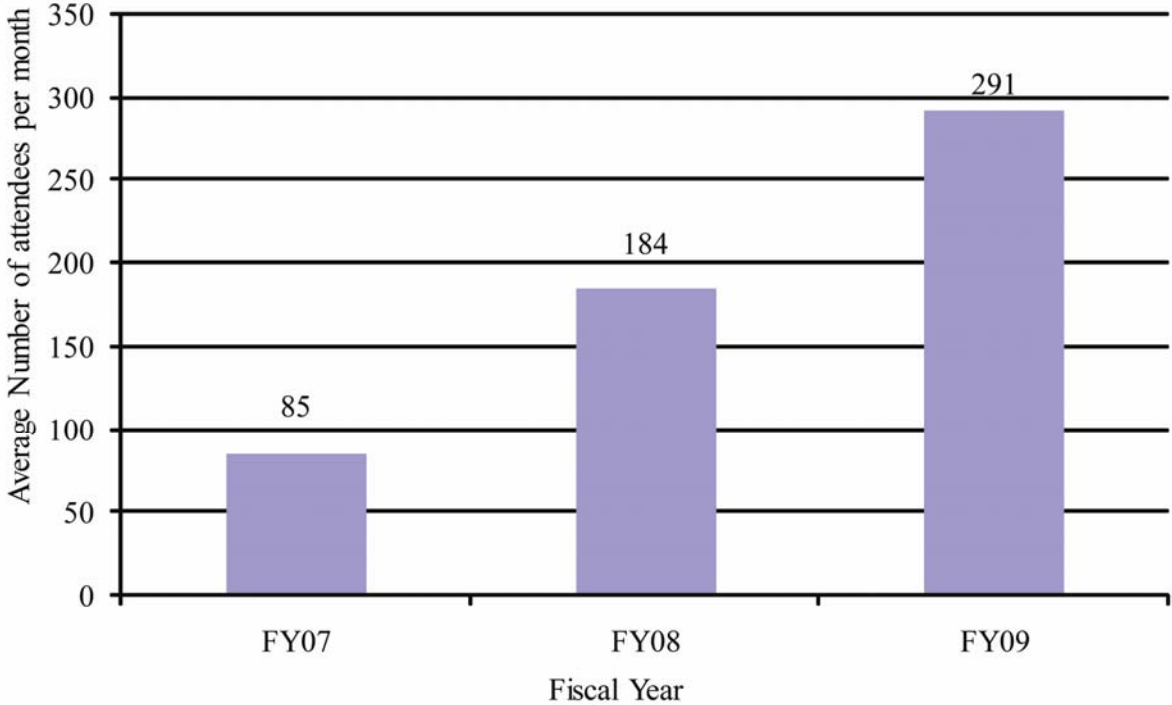

Lab Patrons on average during academic semesters
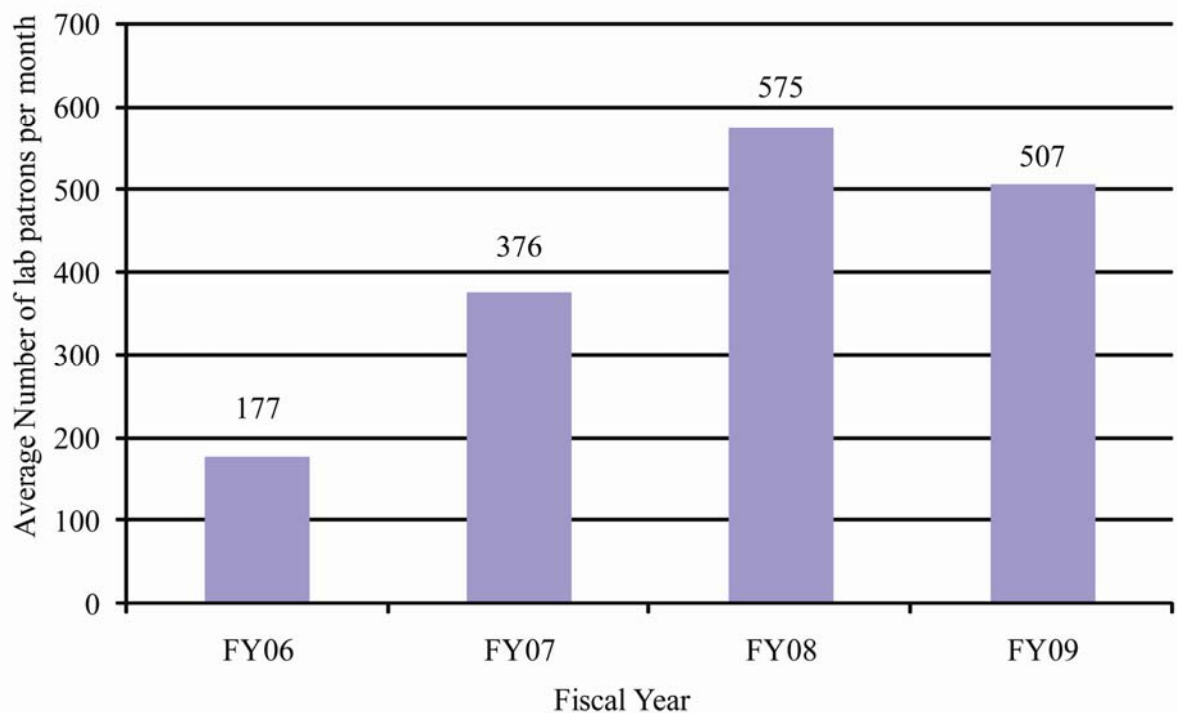
Workshops on average during academic semesters
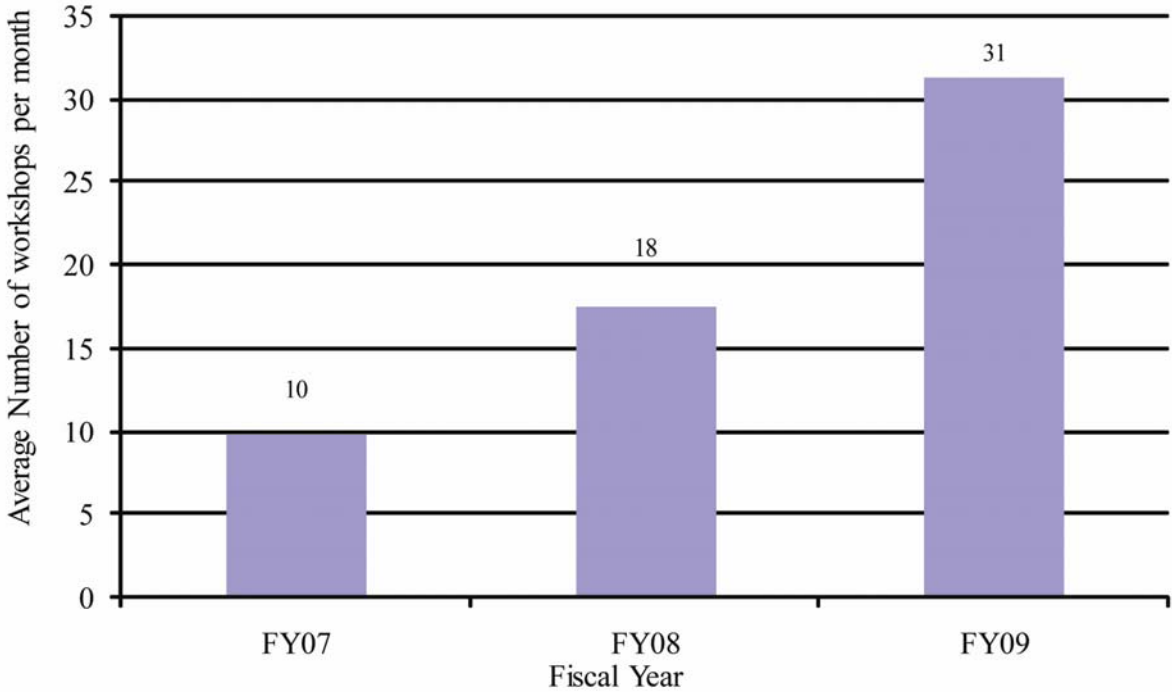
Workshop Attendees on average during academic semesters

Individual Courses Utilizing the Weigle Information Commons
2008-2009 Academic Year

School	Course Number	Course Name
Design	Fine Arts 238	Open Book
GSE	Education 546	Sociology of Linguistics
LAW	Law 979	Visual Legal Advocacy
SAS	Anthropology 231	Anthropology and Cinema
SAS	Anthropology 234	Pharmaceuticals & Global Health
SAS	Communications 405	Facing Race
SAS	East Asian Languages & Civilizations 302	Japan Reality/Fantasy
SAS	English 31	Renaissance Literature
SAS	Environmental Science 399	Junior Research Seminar
SAS	Environmental Science 533	Research Methods
SAS	Environmental Science 601	Proseminar
SAS	French 121	Elementary French
SAS	Health and Societies 003	Technology and Society
SAS	History 204	The United States in the 1970s
SAS	History 41	Church and Challenge
SAS	Music 27	Haydn and Mozart
SAS	Science, Technology & Society 061	Text Message
SAS	Visual Studies 395	Senior Project
SAS	Writing 13	Culture and Collapse
SAS	Writing 16	Race and Popular Cinema
SAS	Writing 25	Spectators, Voyeurs, Witnesses
SAS	Writing 25	World in a Frame
SAS	Writing 30	Contemporary Art in New York
SAS	Writing 41	Contemporary Art in Philadelphia
SAS	Writing 67	Music in the City
SAS	Writing 125	Broadcast Journalism
SAS	Writing 125	Television Critics

New Media in Support of Teaching and Learning

As some faculty explore non-traditional assignments (posters, short videos, audio commentaries, websites) to replace or supplement traditional research papers, others are apprehensive about the integration of new media into traditional course structures. Issues raised have included the amount of student time spent on technical tasks, perceived difficulty in assessing projects, hesitancy about the complexity of the software and hardware involved, and reluctance to devote class time to technology training. The Commons has addressed some of these concerns by providing an extensive calendar of open workshops, online tutorials, equipment resources and walk-in assistance. We have noted that concerns and the solutions that are eventually considered acceptable are often discipline-specific. Cinema studies faculty, for example, find it easy to adapt video mashups for assignments. Education faculty have found video editing to support ethnographic research and poster creation for conference preparation as good fits for their classes.

Analogies and metaphors have helped faculty and students place new media activities in a traditional academic context and increased their level of comfort with exploring unfamiliar territory. We have found the table below helpful as an explanatory tool for comparing components of video projects to similar tasks with respect to a traditional research paper.

Video / Multimedia Project	Research Paper
Finding film footage	Locating books and primary sources
Choosing clips to include in project	Selecting sections of text to quote or paraphrase
Arranging clips in timeline	Building paper outline, finding and organizing evidence, determining paper's structure
Original footage created by student, audio narration, director's commentary	Translation, original writing, student's voice in the paper
Credits and Copyright	Bibliography, footnotes, citations, references
Mashing up, reusing, repurposing	Harder to find an analogy here – can be a critical interpretation, allusion or metaphor, or drawing on a cultural context

Student reflections written after completing video and poster design assignments indicate that the students themselves have recognized the relationship between their work with new media and traditional writing assignments. Last spring one student wrote, "The fact that we had to think about the readings/texts in relation to modern videos/images pushed us to think more in-depth about the texts and provoked some

interesting conversations while creating the film." Another describes, "With a video, we were able to engage all sorts of stimuli - visual, audio and intellectual synthesis – to present our argument."[9]

Video Mashups: In the fall of 2006 the Penn Reading Project, an introduction for incoming freshmen to academic life at Penn, chose Lawrence Lessig's *Free Culture: The Nature and Future of Creativity* as that year's text. Group discussions and a lecture by Lessig during New Student Orientation were followed by a number of related campus-wide events held over the course of the semester. The Library's contribution to the effort was sponsorship of a mashup contest building on Lessig's theme that our digital culture is in fact exerting a negative impact by limiting our freedom to create. For the contest, which was directed at undergraduate students, entrants were asked to exploit the video mashup technique, i.e. to juxtapose existing, and perhaps disparate clips of film to create a new product, in this case a trailer that parodied a well-known film (cf. the description of the *Titanic* trailer at the beginning of this paper). Students were encouraged to take advantage of the Commons, where staff provided assistance and workshops. As a result of the publicity surrounding the contest, several faculty assigned mashups in their classes that year and the Commons was soon a hub of activity. While the number of entries submitted was modest, interest has remained high and the contest has become an annual event.[10] Faculty continue to be drawn to the mashup video as a viable class assignment. It is the type of project that relates well to a variety of disciplines and can incorporate a research component with the development of critical thinking, technical and creative skills. The mashup also provides students an opportunity to combine information from multiple sources in new ways and to connect themes across a variety of media. These assignments build on the behavior of today's undergraduates, who move across software programs with ease, multitasking and drawing connections across experiences with confidence, sometimes unjustified, in their ability to do many tasks well at the same time.[11]

Poster Design: The full-size poster printer that is housed in the Commons has proved to be one of the most popular services we offer. Students and faculty can design and print posters for display at conferences at a low cost and the availability of an onsite printer with graphic editing assistance has made it possible for faculty to consider poster design and creation as a viable class assignment. A prime example is an assignment created by a faculty member in the Urban Studies program,[12] who

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[9] Submitted to Andrew Lamas at the conclusion of his Religion, Social Justice, and Urban Development class at the University of Pennsylvania in Spring 2008.

[10] Prize-winning mashup videos may be viewed at http://wic.library.upenn.edu/mashup.

[11] See Nancy F. Foster and Susan Gibbons, eds. *Studying Students: The Undergraduate Research Project at the University of Rochester* (Chicago: Association of College and Research Libraries, 2007): 67.

[12] Andrew Lamas for his Community Economic Development course at the University of Pennsylvania in Fall 2006.

challenged students to design evocative posters to convince the general public to support a specific social cause. He invited a professional graphic designer to the class to critique the students' first drafts. The students then revised their poster designs based on the comments received. With this project the faculty member noted improvements in his students' visual literacy skills as well as in the clarity and focus of the revised posters.

Subsequently, several courses have included as an assignment option the design of a persuasive or research poster. Rather than write a traditional research paper, students present their work graphically in a format that they will likely use as professionals within the workplace and at conference poster sessions. Workshops on how to design an effective poster address a number of important elements including appropriate graphic design software (PhotoShop, PowerPoint), layout choices (balance, sizing, colors), writing (brevity, clarity, organization) and creativity in visual design.

Comic Book Creation: In the last two semesters several classes have explored comic book design using ComicLife, a powerful and inexpensive software program. The initiative began with an anthropology faculty member, who gave students the choice of several media including comic books for a comparison and synthesis of two movies. [13] Her initial foray and resulting presentation at a teaching and learning symposium in Fall 2008 inspired several writing seminars to explore ComicLife as a tool for helping students articulate their thesis and supporting arguments before writing a traditional research paper. The ease of use and features that support integration of web and video content promote ComicLife as an excellent organizational tool for several disciplines, including some that have taken on serious social issues.[14]

Engaging Faculty

Talking about Teaching: In an effort to capture the impressions of faculty who have incorporated new media in the classroom, in March 2008 we engaged five of our faculty-users from a broad array of disciplines—Cinema Studies, Anthropology, Urban Studies, Contemporary Writing and the Law School[15]—in a conversation about their experiences with video assignments. During this informal and loosely-structured discussion, the participants were surprised by the commonality of experience among

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[13] Louise Krasniewicz for her teaching Anthropology and the Cinema course at the University of Pennsylvania in Spring 2008.

[14] Examples of student work may be viewed at http://wic.library.upenn.edu/faculty/anthcinema2008.html.

[15] Faculty participants included Peter Decherney, Assistant Professor of English and Cinema Studies, Louise Krasniewicz, Senior Research Scientist at the University of Pennsylvania Museum of Archaeology and Anthropology, Andrew Lamas, Lecturer in the Urban Studies Program, Jacqui Sadashige, Lecturer in the Center for Programs in Contemporary Writing, and Regina Austin, the William A. Schnader Professor of Law.

different disciplines, although the role of the student differed across courses: the law students served as directors of their films but did not tackle video editing; cinema studies students focused on film critique; urban studies students conducted interviews and shot original video footage; and the anthropology and writing students were intensely involved in video editing and re-mixing. The resulting video, "Thinking Creatively about Video Assignments"[16] has been highlighted on SPARC's Sparky Award website[17] and has engendered interest from a variety of individuals and institutions. Most recently, the library received a grant from MERLOT ELIXR to transform the video conversation into a formal module that can be used to support faculty development.[18] This project, which is expected to conclude in December 2009, will result in five separate case stories, each focusing on an individual faculty member, and will incorporate examples of student work combined with personal reflections and interviews.

Sharing Information: We continue to explore ways to engage faculty in discussions about productive and appropriate uses of educational technologies. In September 2008 the library sponsored a half-day symposium for faculty, Teaching with New Media.[19] The event featured four new media technologies: video, poster design, PennTags (a locally-developed social bookmarking tool) and comic books. Faculty discussed how they integrated a particular medium into their classes and attendees had an opportunity for hands-on exploration. The program provided an opportunity for the early adopters among the faculty to share their experiences with more hesitant colleagues. The symposium's success can be measured in a number of ways—including by the generally positive survey responses we received—but one result of our efforts was particularly gratifying: of the eight faculty who participated in a ComicLife hands-on session, four used ComicLife with their students within weeks of the symposium.

Evaluating Success: In May 2008 the 22 faculty who had assigned class video projects that semester were surveyed about their experiences and 11 responses were received. Faculty were asked to rank their experience working with students on the assigned project on five criteria: faculty satisfaction with course outcomes, achievement of educational objectives, use of "bells and whistles" in the projects, student comfort with software and student creativity.

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[16] Available on the web at http://wic.library.upenn.edu/mashup/facvideo.html.

[17] http://www.sparkyawards.org/educators. SPARC, the Scholarly Publishing and Academic Resources Coalition, this year sponsored the 2nd annual Sparky Award for which entrants were asked to create a short video to illustrate the value of information sharing. The Penn Libraries serves as a co-sponsor of the awards and Anu Vedantham, Director of the Weigle Information Commons, and Peter Decherney, Assistant Professor of English and Cinema Studies at Penn and facilitator of the Thinking Creatively about Video Assignments conversation, were among this year's judges.

[18] http://elixr.merlot.org/

[19] http://wic.library.upenn.edu/workshops/newmedia92608.html

Criteria	Poor	Fair	Good	Excellent
Achievement of Education Objectives	0%	0%	33%	67%
Faculty Satisfaction with Course Outcomes	0%	0%	44%	56%
Student use of "Bells & Whistles" in Projects	0%	25%	75%	0%
Student Creativity	0%	11%	67%	22%
Student Comfort Level with Software	11%	11%	44%	33%

The survey results reinforced the observations of the Commons staff who work closely with students: while undergraduates are typically expert at navigating such online resources as YouTube, many are still not comfortable with the process of creating and manipulating new media. The sense that such skills are ubiquitous may be due to students' familiarity with the jargon and general agility when exploring a new software program.

Overall, the surveys that were returned were positive. The projects that had been undertaken were considered highly successful and we were gratified to learn that 100% of the faculty who responded to the survey planned to continue exploring new media projects in future semesters. One faculty member commented, "My students now know the technology and resources fairly well, and that will serve them well during the rest of their time at Penn." Another wrote, "I was really impressed with the final products as well as how much my students got into it and how hard they were willing to work once they did get into it, particularly since they all tended to be skeptical at the beginning."

Conclusions

Over the past three years the number of students choosing new media projects to fulfill class assignments has increased from just a handful to several hundred each semester and our support of these projects—particularly those utilizing video—now comprises a major component of the Commons' activities. Many of the projects currently assigned could not have been executed before the space opened due to a combination of factors, including use restrictions at other campus facilities and the unavailability of staff with the expertise necessary to support new media technology. The Commons' facilities and services have made it possible for faculty to both incorporate a variety of technologies into their teaching and to think more broadly about class assignments and student engagement. Our outreach efforts continue, with a goal of reaching faculty for whom

new media is still unfamiliar territory. And, with use of the facility at capacity we look toward the future to an expansion of the Commons' footprint, which will make it possible to provide additional resources to students and faculty so that we are prepared to support the post-YouTube generation.

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