Results from School of Tech: Educating Experts in Cultural Heritage Multimedia

This document summarizes the School of Tech professional forum at Museums and the Web in San Francisco on Friday, April 13, 2007. Approximately 40 students, educators, and museum professionals attended the session. Thanks to everyone for your valuable contributions. This summary was compiled from notes taken by Shelley Mannion (mannions@lu.unisi.ch) and Claudia Schallert (c.schallert@waysofwondering.com). Our sincere apologies if we have missed or misunderstood any of your comments. If we have omitted your remark or misquoted you, please contact us. We are most happy to correct any errors. Special thanks to Amalia Sabiescu for use of her photographs.

Tension between overview and specialization

Richard Urban, a doctoral student at the University of Illinois at Urbana-Champaign, kicked off the forum.[1] His concern about students' ability to specialize adequately within our programs sparked a lively discussion about the balance between general and specialist knowledge. Susan Chun of the Metropolitan Museum of Art cautioned that students may form unrealistic expectations about the types of roles they will find when they graduate. Since museum employees typically start at entry level and gradually work their way up through the ranks, students trained to an "executive level" will have difficulty. If not adequately prepared, they may become frustrated in entry level jobs requiring specialization such as content production (scanning, image processing, writing) and development (programming, testing). Erin Hersher of the The Art Institute of Chicago noted that many museum technologists—including herself— first worked as volunteers and had to "champion their roles to get in." She underlined the importance of supporting technology-related roles in museums and keeping expectations

Susan Chun of the Metropolitan Museum of Art comments on student expectations of the museum world
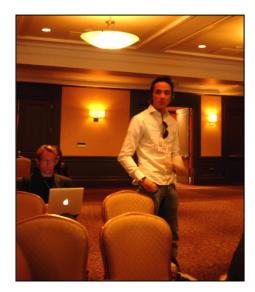
of new graduates in check. Peter Samis of the San Francisco Museum of Modern Art agreed that students must be highly technically competent in order to compete with others who have trained for specialist roles: 'Our students' scanning skills better be just as good as those graduating from purely technical programs.' While not contradicting the need for specialization, Scott Sayre of Sandbox Studios stressed the benefits of familiarizing students with all aspects of the work. In his view, this overview is essential to producing well-rounded graduates who have a thorough understanding of the cultural field. This includes subjects such as collections management, archiving and database

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[1] Richard and his colleagues maintain Musematic (http://www.musematic.net), an excellent blog about museums and information technology.

design, which are perceived as unglamorous. He believes we should not overlook the big picture in pursuit of specialization since generalist knowledge is important over the long term.

Media arts collaborations with small, local museums

Miriam Langer, Mark Jacome-Salazar and Nellie Price from New Mexico Highlands University (http://www.nmhu.edu) described their program in Media Arts, which offers BA, BFA and MA degrees. The school has formed an innovative partnership with the state government's department of cultural affairs, which allows their students to gain practical experience in small museums in their local communities. Grant funding enables the university to offer financial support to students working in these institutions. This arrangement has numerous advantages. It keeps knowledge and expertise in the community as students do not need to go abroad to find internships. (Some students do travel to other states or countries to gain additional experience, but these trips are short to keep costs down.) It also brings important competencies into small museums that otherwise do not have the resources to hire technically skilled interns. Mimi Roberts, Director for Media Projects for the New Mexico Department of Cultural Affairs, said that she frequently gets requests for help from small museums who do not have the in-house skills required to create media products. The unique grant-funded internships also promote cooperation among students who can continue to live near the university, making use of its resources and their network of fellow students. In Lugano, we have found that community tends to disintegrate when students depart for their internships after the first year of coursework. Especially since museum professionals generally rely heavily on a network of personal contacts, it is important to encourage exchange and collaboration between students who will become each others' future colleagues. To connect this with the previous discussion point, it is interesting that interns in small museums need both generalist *and* specialist skills to carry out their work effectively, since often they will be the only person in the organization with knowledge of new media. The importance of being both skilled interpreter and technician was supported by the internship

Student Marco Moncalvo describes his internship experiences in San Francisco and Rome

experiences of Lugano student Marco Moncalvo, who described his work with Peter Samis' team in San Francisco and virtual archaeologist Maurizio Forte in Rome. The success of Marco's Italian internship depended on his diplomatic skills in navigating organizational obstacles of the type described by Susan Chun. In contrast to North American museums, few European institutions have education departments and interns are likely to find themselves in highly political environments with little support or guidance.

Mixing and matching courses the norm for many students

Petra Nietzky from Hamburg described her own specialization in cultural informatics (Kulturinformatik) within a cultural studies (Kulturwissenschaften) program at Leuphana University in Lüneburg, Germany. Specialized programs like Petra's are unusual, however. At schools not yet offering programs in cultural media, many students employ a highly personalized "mix and match" strategy. During the Saturday demonstration sessions, Shelley learned that of the 15 students enrolled in Harvard University Extension's Museums Studies program, only three are pursuing technology related research. They augment their museum studies curriculum by sampling courses from other departments such as computer science and engineering. A disadvantage of this approach is that students are entirely on their own with respect to making connections between the technical material presented in computer science courses and the fields of heritage and culture. In addition, because they select technical courses based on individual research interests, there is no way for Museums Studies administrators to ensure that graduates possess broad, baseline technical expertise.

Organizational transformation in European universities

Petra went on to describe the major reorganization and re-branding effort currently taking place at her German university. The initiative may lead to the closure of the program she graduated from or, at the very least, eliminate the specialization in cultural technology. This is not an isolated case, since the European higher education system is undergoing a major transition at the moment. Prompted by the Bologna declaration signed in 1999, all European Union member states are moving from their own national degree system to the Bachelor/Master standard used in North America and Great Britain. This is very positive in that it creates openings for new programs such as TEC-CH in Lugano (http://www.tec-ch.unisi.ch) and EuroMACHS (http://www.euromachs.net) in Portugal and its partner countries. Unfortunately, however, it also generates organizational chaos that compounds the usual growing pains accompanying the development of any new degree program. There is also continuing confusion about the standard of teaching across universities that are at different stages in the transition process. It will likely be another five years before we know whether new programs launched during this period will be successful under the new system. Later in the forum, Paolo Paolini, director of the Lugano program, pointed out that the increasing interest of established museum studies departments in offering technical training will likely influence the future of these programs. As Susan Chun remarked: 'Time will tell what types of career paths will be open to cultural technology graduates and whether degrees granted by newly established, specialized programs will be valued by employers.'

Developments in Museum Studies

Susan Spero, Professor of Museum Studies at John F. Kennedy University in Berkeley, spoke briefly about her plans to introduce more technical courses into the traditional museum studies curriculum. JFK currently offers a single course in museum multimedia taught by Peter Samis. In response to the challenge of finding suitable internships, Susan proposes placing students in third party consulting firms that create software and media products for museums. These companies produce many of the applications nominated for the Best of the Web competition and participate as exhibitors in Museums and the Web. Working alongside professional programmers and designers, students would improve their technical skills and experience the deadline-driven reality that characterizes large-scale multimedia production. This approach is consistent with JFK's policy of ensuring that graduates are well-prepared for the realities of a museum career. For example, the school requires that applicants have previous experience in the cultural field even before entering the program. In this way, the program guarantees that students have already encountered—at least to some degree—the organizational bureaucracies they will later confront as museum professionals. Those who pursue museum work after this experience tend to be highly motivated, but at the same time realistic about what they can expect.

Claudia Schallert and Susan Spero. Susan is in the process of developing new course material for JFK University's Museum Studies program

Preparing students for technology revolutions

Paolo Paolini responded to a number of points raised earlier in the discussion. He encouraged experimentation and iterative development in the field of cultural media education. He pointed out that the Lugano program was launched before many of the questions being discussed in the forum were defined. The program continues to evolve and improve in response to new insights and feedback. Paolo cautioned against using student satisfaction alone as a measure of success. After all, he points out, students may like "fun" courses but if they cannot get jobs after graduation then educators have failed. This remark echoed Scott Sayre's earlier comment that students should be encouraged to develop an appreciation for the range of competencies in museum informatics including those perceived as "tedious". Finally, Paolo identified a crucial challenge in the field of cultural media education: preparing students to cope with major technological changes over the course of their careers. Citing himself as an example of someone who has seen numerous platforms come and go, he urged the importance of training students to navigate the ebb and flow of emerging technologies. This touched off a brief discussion of the drastic differences in computer literacy

between students from different countries and how to overcome them. As a group, we seemed to agree that students need to acquire a "power user" attitude with respect to technology—a sense of confidence that they can teach themselves how to use a new software application or API. Students from North America have an advantage in this regard, as they often grow up surrounded by technology and electronic devices. They use them as part of their everyday life. Many students from Asia, Africa and numerous European countries are not raised in technology-rich environments, however, and need additional help to come up to speed.

The role of elearning

As Claudia mentioned in during the presentation, elearning platforms can play an important role in equalizing the level of technology competence among students from different countries. In the context of blended learning, where students receive both face-to-face and online instruction, they are required to make use of technology for everyday tasks, such as retrieval and submission of class assignments, discussions with colleagues and journaling. Paolo also noted the potential of web-based platforms as course delivery mechanisms for museum professionals who wish to pursue further study alongside their work commitments. One such distance learning course currently under development is CATCH (Communication Technologies for Cultural Heritage, http://www.catchproject.net) for the Swiss Virtual Campus.[2] In an email exchange following the conference, Petra Nietzky shared that she enrolled in a program in "e.culture" (http://www.isnm.de/content/exploring/eculture) at the International School of New Media in Lübeck, Germany. It is a face-to-face course that allows working professionals to study part-time over three months to earn a certificate in management and production of cultural technology.

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[2] Although not focused on cultural technology specifically, the Museum Studies Department (http://www.le.ac.uk/museumstudies) at the University of Leicester has well-established, part-time, distance learning programs in Museum Studies and Interpretive Studies.

A new way of thinking about users

While technologies are constantly changing, other competencies are more enduring. Research methodologies for understanding and defining user requirements, for example, are relatively well-established. Many of the methods used in other industries are not being employed in the cultural

Shelley Mannion and Darren Peacock. Darren's paper on new ways of thinking about end-users of museum websites could prove useful in teaching user-centered research methodologies

field, however. This issue was addressed in a paper presented by Darren Peacock earlier in the conference.[3] Darren briefly described the model he developed which integrates both qualitative and quantitative methods for gathering user data. The model implies a fundamental shift in the way museums perceive the end-users or consumers of their cultural products. As described in the paper for this forum, museum Web site developers in Michael and Kate Haley Goldmans' 2005 study identified better user research as *the* essential element in the future development of our profession. In this respect, Darren's model may be highly relevant for those institutions offering courses in user-focused research and design.

Conclusion: Looking ahead to Montreal

A warm thank you to all of those who attended and participated in School of Tech. The forum generated a dynamic and productive conversation about the questions facing the field of cultural multimedia education. We hope that this will be first of many such debates about both the form and content of these programs as they evolve. One concrete proposal for next year is a new Best of the Web category for student work. In his remarks during the closing panel, David Bearman said he would like to see more experimental and unfinished projects. A proposal-oriented category for students is certainly compatible with this goal. If you have ideas about how to move this forward, please let us know. Finally, for those who are interested, the presentation materials associated with this forum (PowerPoint, handout, list of third party developers, etc.) are all available for download from http://shelleym.net/schooloftech.

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[3] Peacock, D. and J. Brownbill, Audiences, Visitors, Users: Reconceptualising Users Of Museum On-line Content and Services. In J. Trant and D. Bearman (eds). Museums and the Web 2007: Proceedings. Toronto: Archives & Museum Informatics, published March 31, 2007 at http://www.archimuse.com/mw2007/papers/peacock/peacock.html