



Shift from Students as Consumers to Students as Creators

Mid-Range Trend: Driving changes in higher education within three to five years

A shift is taking place in the focus of pedagogical practice on university campuses all over the world as students across a wide variety of disciplines are learning by making and creating rather than from the simple consumption of content. Creativity, as illustrated by the growth of user-generated videos, maker communities, and crowdfunding projects in the past couple years, is increasingly the means for active, hands-on learning. University departments in areas that have not traditionally had lab or hands-on components are shifting to incorporate hands-on learning experiences as an integral part of the curriculum. Courses and degree plans across all disciplines at institutions are in the process of changing to reflect the importance of media creation, design, and entrepreneurship.

Overview

There is a growing trend on university campuses in which students are doing more content creation and design, across the spectrum of disciplines. More colleges, universities, and libraries are developing environments and facilitating opportunities to harness this creativity and building physical spaces where students can learn and create together, integrating content- and product-centered activities as part of their instruction. This trend is gaining strength and should reach its full impact in about three to five years.

Makerspaces (also known as hackerspaces) began to appear around 2005 in communities as locations where individuals could experiment using a range of metal-working, wood, plastics, and electronics tools that were purchased by and shared amongst the group via a number of strategies including memberships, time-sharing and fee structures, or collective ownership. In the past few years, academic makerspaces and fabrication labs have popped up on university campuses in a variety of places, including libraries. These dedicated spaces are equipped not only with traditional craft tools, but also digital equipment such as laser cutters, microcontrollers, and 3D printers. The availability of these expensive resources has turned maker labs into communal spaces where students can work on class and self-directed projects, in addition to participating in managing and maintaining the facilities. University

makerspaces are beginning to demonstrate the value of these sites for teaching and learning in interesting new ways. The Maker Lab in the Humanities at the University of Victoria, for example, is currently conducting research into humanities physical computing, which brings digital and analog materials into dialogue through the construction of interactive systems. This maker-centered research is helping to foster the growth of the field of digital humanities.

A continuous stream of new ways for creative ideas to be funded and brought to reality has put university students more in control of the development of their research than ever before. Through the crowdfunding websites like Kickstarter or Indiegogo, student-led projects that might have stalled at the concept or model stage can now be brought to fruition. A student at Cornell University, for example, is using Kickstarter to develop KickSat, a project intended to launch a small spacecraft into low earth orbit. Greater access to media production tools and outlets has also allowed students to move from consumers of video to producers.

Campus libraries increasingly host not only makerspaces, but also other services that support creativity and production, such as video equipment loans and studios, digitizing facilities, and publication services. At Dartmouth College, researchers are exploring how student-generated video can be used to further learning and evaluate a student's academic performance through the collection of various assignments housed on the Media Projects page of the college's website. For example, one architecture assignment involves students capturing video of the built environment from their personal perspective to reveal the history and character of a specific site.

Implications for Policy, Leadership, or Practice

The National Science Foundation's new initiative, *Cyberlearning: Transforming Education*, is providing grant money to study the educational benefits of makerspaces and the transferability of that type of learning to math and science skill improvement. The results of these research projects will help to establish a Cyberlearning Resource Center that will benefit educators, curriculum

specialists, and others interested in learning the impact of making activities. Indiana University's Make-to-Learn Initiative is a higher education example that brings together makers, educators, and researchers to understand how DIY culture can advance learning outcomes, be effectively integrated into educational institutions, and engage different learning styles.

Vanderbilt University is actively shifting the emphasis of teaching on their campuses to include more opportunities for creative exploration and applied learning. Their *Student as Producer* initiative creates semester-long opportunities for students across multiple disciplines and courses to engage in production activities. At the core of this initiative, students work on problems or questions that have not

Campus libraries increasingly host services that support creativity and production.

been fully answered, sharing their work with others outside of the classroom, seeking feedback and insights from experts, and working on projects in a largely self-directed manner. Student-centered activities include biology students designing their own experiments, engineering students creating podcasts about their projects, and English students expressing their ideas through multimedia entries on course blogs. The approach demonstrates how students can actively collaborate with their teachers in the production of knowledge and meaning-making.

The University of Michigan's Center for Entrepreneurship and several student-led organizations sponsored a number of content creation activities in Spring 2013. MHacks was a 36-hour nonstop hackathon. OptiMize was a competition where students created social innovation projects centered around the topics of health, poverty, environment, or education. As part of this, student business developers set up a storefront in the Student Union to sell their products directly to other students. 1000 Pitches was a contest where students created short video business pitches to solicit their ideas. The involvement of student leadership was key to the success of these events.

For Further Reading

The following resources are recommended for those who wish to learn more about the shift from students as consumers to students as creators:

The Case for a Campus Makerspace

go.nmc.org/mspa

(Audrey Watters, *Hack Education*, 6 February 2013.) The author explains why the maker culture has the potential to reinvigorate higher education institutions by inciting more collaboration, participatory, project-based, and peer-to-peer learning.

Commandeering the Decks: Baltimore's Digital Harbor Tech Center

go.nmc.org/timc

(Tim Conneally, *Forbes*, 18 January 2013.) After not being used for decades, the South Baltimore Rec Center reopened as the Digital Harbor Tech Center, a community makerspace where students can access tools to help them design and then create objects using 3D printers and circuit boards. This article discusses how this is an example of the growing maker movement recognizing the value of experiential learning.

Creativist Manifesto: Consumer vs. Creator

go.nmc.org/creama

(Olivia Sprinkel, *Rebelle Society*, 9 January 2013.) Being a creator rather than a consumer requires a shift in attitude in terms of how a person engages with the world around them; the creativist trend is more active and informs the choices made on a daily basis.

Is Making Learning? Considerations as Education Embraces the Maker Movement

go.nmc.org/makelea

(Rafi Santo, *Empathetics: Integral Life*, 12 February 2013.) The potential to impact learning through the maker culture has rejuvenated educators. According to this article, the most important aspect of this approach is not in the product but rather the process behind making.

Stanford FabLearn Fellows Program

go.nmc.org/fabl

(Stanford University, accessed 31 October 2013.) The Transformative Learning Technologies Lab at Stanford University is leading an initiative to generate an open-source curriculum for makerspaces and Fab Labs all over the world.

What Is the Maker Movement and Why Should You Care?

go.nmc.org/mamove

(Brit Morin, *The Huffington Post*, 2 May 2013.) The essence behind the do-it-yourself movement, traditionally related to how-to instructional books, has shifted into a movement where people in all industries are creating new goods, crafts, foods, and technology.

Using Social Media in the Classroom: A Community College Perspective

Chad M. Gesser, Owensboro Community and Technical College

In addition to being an Associate Professor of Sociology at Owensboro Community and Technical College, I am an academic, a teacher, and a mentor. Often faculty members at community colleges assume a wider range of academic roles compared with that of faculty at baccalaureate and post graduate programs. Our work is just different. There generally are a wider set of student needs and opportunities at a community college.

While the college readiness of our student population varies, there are some recent commonalities: (1) faculty, staff, and students are in the midst of an information revolution tied to collaborative tools and services; and (2) mobile technology is ubiquitous.

For many students using open and free web 2.0 tools and services there is an ease of access and the opportunity for increased engagement of faculty and staff with students. Students not only know how to use these services, but they also take them along in their academic career and personal lives. I prefer the coordination sometimes required with these tools over the use of any content management system (CMS), particularly a CMS that students will never use once they complete their higher education.

In this age of web 2.0 and beyond, Google services have been my go-to toolbox for developing and sharing my work. I coordinate much of my professional work through Google Sites (sites.google.com/). I have a website for each course I teach and other websites I use to aggregate and present sociology resources to the general public. Google Sites makes it is easy to create pages, upload files, share with the public, or establish privacy for your class. I use Google Sites in conjunction with using Google Drive.

I store the entirety of my personal and professional work in Google Drive (drive.google.com/#my-drive), which can house my files.



I sync my files from my computer to My Drive. With a cellular or Internet connection I am able to both create (word processing, presentation, and other files), access, and share (whether publicly or privately) my material anytime from a number of different devices (smartphone, iPad, laptop, and desktop). More importantly, I am able to post, email, or text message

any outline, presentation, syllabus, assignment, and other course material to anyone, anytime, from almost anywhere.

I also use Blogger (www.blogger.com), a free blog publishing service for private or multi-user sharing of text, photos, and video, with each class I teach. My students complete and post most of their assigned work through Blogger. I encourage students to read and learn from each other's work. Over the course of a semester I work with students as they become aware of expectations for their coursework, and I teach them how to write for the Internet. I encourage students to use different media to both understand and communicate their ideas. Beyond demonstrating learning via written text, students elaborate and illustrate their depth of understanding as captured through an embedded photo or video. These experiences help students to develop digital literacy.

Over the past several years, I have used YouTube to create playlists on a variety of topics in sociology. This allows me to quickly access videos to play in class or to send as a link in an email, text message, through Twitter, or other service. More recently I have engaged students with completing their homework in the form of capturing, editing, uploading, and sharing YouTube videos. This practice helps students to see their world with a unique perspective, with their sociological imagination.

My use of Twitter has largely been for professional development. Most of the early adopters of the now-mainstream social media/networking tools were the learned type. Being the sole full-time sociology faculty member at my college, I

found the resources and connections I could make through Twitter to be invaluable. It was remarkable to be able to interact and exchange with like-minded people from all over. Over time I have reciprocated that behavior, "tweeting" information relevant to sociology and related to my broader interests.

My Twitter interaction with students has been mostly for casual interaction and extra credit through live chats. I look forward to using Twitter more with students as they become more engaged with the service.

There certainly are other tools that can be used to connect and enhance learning with students. For example, I have used Facebook in the past. In the fall 2012 semester, I began academically engaging students via Instagram. It's safe to say that academics at all levels will continue to be exposed to tools and services that afford us opportunities to engage with the college community in innovative ways.

What I have communicated here has largely been pedagogy. There are a variety of sociology concepts that can be addressed using web 2.0 tools and services. These include social norming, digital identity, presentation of self, norms of reciprocity and interaction, and other micro- and

macro-level social phenomena. The introduction of new media tools and online services has profound sociological impacts for individuals and society.

The rubber truly meets the road, however, when we take into consideration the role of mobile technology. Current, future, and past students and colleagues can access my sociology content, my person, anytime from almost anywhere. I believe in "meeting students where they are." In 2013, more than 90 percent of my students are using mobile devices. Making sociology—as well as myself as an academic, a teacher, and a mentor—available to students and colleagues promotes collaboration, learning, and personal and professional development. As we are becoming all too aware, education and learning is not relegated to the four walls of the classroom or the one-semester experience through a proprietary CMS. Perhaps what we have yet to realize is how to use these tools and services in ways to professionally develop, to teach, and to promote in education and in other aspects of faculty, staff, and students' personal and professional lives. S

Chad Gesser can be reached by email at chad.gesser@gmail.com or on Twitter via @profgesser.

call for nominations

ASA Student Forum Advisory Board

The ASA Student Forum Advisory Board (SFAB) is seeking nominations for Graduate Student Board members and Undergraduate Student Board members. The term of commitment is two years beginning at the close of the 2013 ASA Annual Meeting in New York in August and continuing through the 2015 Annual Meeting. Nominees must be Student Members of the ASA at the time of nomination and during their two-year term. They should commit to attending the 2013, 2014, and 2015 Annual Meetings. Self-nominations are welcome. The nominations subcommittee of the Student Forum Advisory Board will review nominations and oversee selection of candidates for the 2013 ASA spring election. To be considered, send your curriculum vitae (including a current e-mail address), a brief statement of no more than 250 words, indicating why you want to serve on the SFAB, and including a brief biographical sketch. Should you be selected to be on the ballot, this statement will accompany your name to give voters an idea of who you are and why you want to be on the SFAB. Additionally, indicate any web skills you may have. Nominations will only accepted by email.

Send nominations to: Jesse Smith, jesse.m.smith@colorado.edu.
Deadline: March 1, 2013

detailed survey findings

BACKGROUND

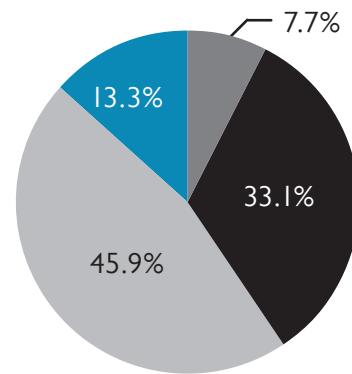
There has been explosive growth in the number and use of social media sites among the U.S. population. Faculty have not been immune to the attraction of social media, as has been chronicled in the previous reports in this series.¹ However, these reports have also noted that not all faculty share a positive opinion of social media, especially as it pertains to their teaching. This year's study continues the annual examination of the use of social media by higher education faculty for personal, professional, and instructional purposes. Using a representative sample of teaching faculty from across all of higher education, the study probes their use of social media, as well as what value they see in including social media sites as part of the instructional process.

OVERVIEW: FACULTY, TECHNOLOGY, AND TEACHING

Faculty are neither unquestioning advocates of adding technology into their teaching nor unthinking luddites who dismiss all technology out of hand. Most faculty are quick to acknowledge the potential for technology, digital communications, or social media, but they also see its limitations and problems. Faculty do believe that "the interactive nature of online and mobile technologies can create better learning environments," with 13 percent "strongly agree[ing]" and 46 percent "somewhat agree[ing]" that this is the case.

The Interactive Nature of Online and Mobile Technologies Create Better Learning Environments – 2013

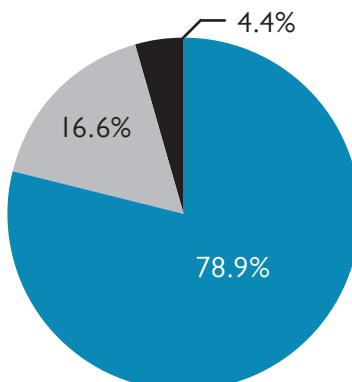
- Strongly Agree
- Somewhat Agree
- Somewhat Disagree
- Strongly Disagree



One area about which there is wide agreement among faculty is whether the introduction of digital communication into their professional lives has increased their levels of communication. Faculty report that digital communication has increased communication in multiple aspects of their professional lives, with communication with students at the forefront. Over three-quarters of all teaching faculty report that digital communication has "increased" their communication with students, while only 4 percent believe that it has "decreased" this communication.

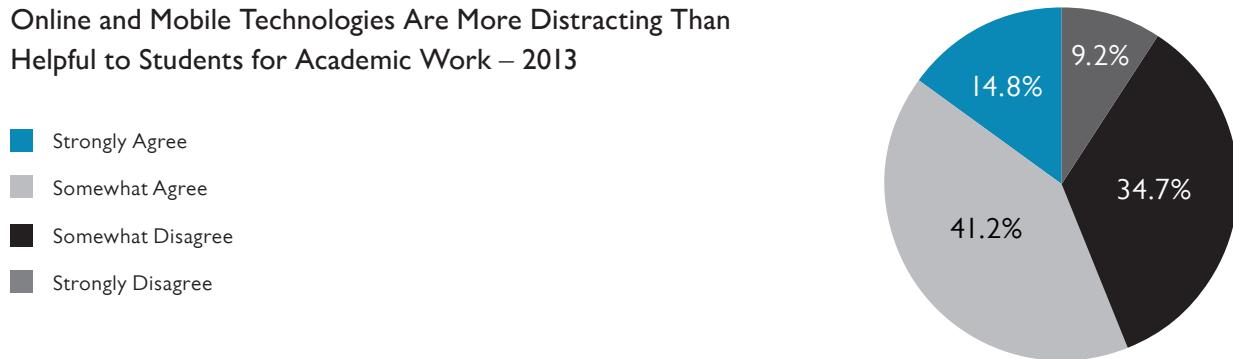
The Impact that Digital Communication Has Had on Your Communication with Students – Faculty 2013

- Increased
- No Impact
- Decreased



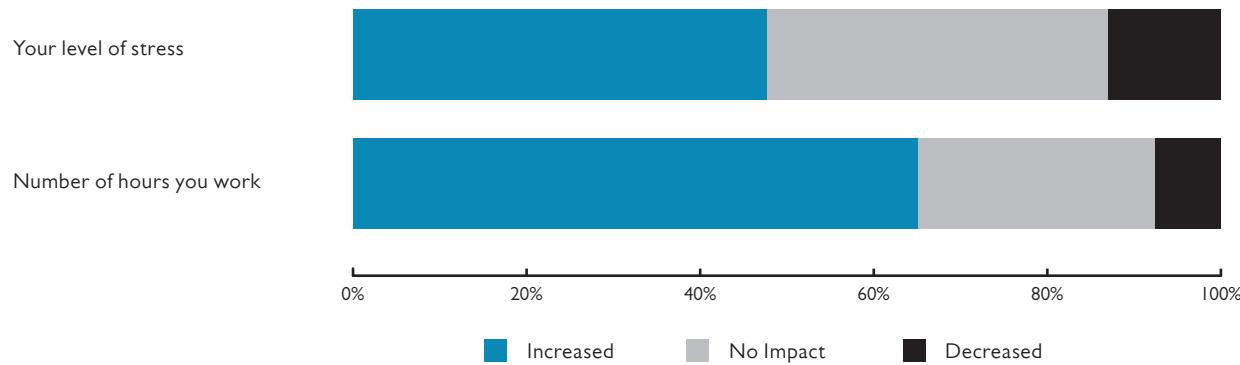
As much as faculty consistently report a positive impact on communication, they also believe that there is a large potential downside to the introduction of all of this technology. A majority of faculty members agree that online and mobile technologies are “more distracting than helpful to students.” The potential for technology to be a distraction, instead of an empowering component of teaching, has been a common concern for faculty throughout the reports in this series.

Online and Mobile Technologies Are More Distracting Than Helpful to Students for Academic Work – 2013



Students’ ability to reach out to faculty outside of regular classroom and office hours, with the expectation of quick feedback, is expanding the faculty workday as well as placing additional stress on the teaching process. Faculty have been particularly vocal on the impact of technology on their work environment—fully 48 percent of faculty report that digital communication has increased their level of stress. Only 13 percent believe that their level of stress has decreased, with the remaining 39 percent reporting no change. In addition, nearly two-thirds of faculty report that digital communication has increased the number of hours that they work. An additional 27 percent see “no change” in the number of hours they work, and only 8 percent say that there has been a decrease in the number of hours that they work as a result of digital communication.

The Impact That Digital Communication Has Had On...



FACULTY AND SOCIAL MEDIA

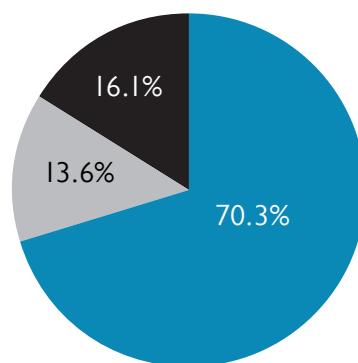
Like the general population, faculty might use social media for a number of purposes. This study asked faculty to distinguish between three different types of use: personal use only, with no relationship to professional and/or teaching responsibilities; professional (non-teaching) use; and finally, use in the classes they teach. Further details on what value, if any, they see in social media sites as well as how they use them in their classes are also explored.

Faculty personal use of social media sites is rather high; 70 percent of all faculty had visited a social media site within the past month for personal use, a rate that jumps to 84 percent when those who use social media sites less frequently than monthly are included. Using the same definitions as in last year’s report, faculty who say that they use social media less frequently than monthly (14 percent in the case of use for personal purposes, classified

as “rarely”) have been excluded from analyses. All results presented from this point forward refer only to those faculty who responded that they made use of social media monthly or more frequently.

Faculty Personal Use of Social Media – 2013

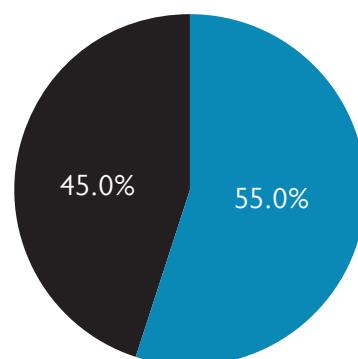
- █ Monthly +
- █ Rarely
- █ Do Not Use



In addition to purely personal use, faculty were asked about social media use in support of their professional careers (on the job but not while teaching) and about their use of social media in the classes they teach. Our survey shows that more than 55 percent of faculty make professional use of social media outside the classes they teach on at least a monthly basis. While a majority of faculty report that they make “at least monthly” use of social media for professional purposes, this rate remains lower than that of their personal use (70 percent). This difference implies that at least 15 percent of faculty who regularly use social media do so for exclusively personal reasons and do not use it in their professional lives. Roughly 30 percent of faculty do not engage in regular use of social media for any purpose.

Faculty Professional Use of Social Media – 2013

- █ Use
- █ Do Not Use



Faculty are well aware of social media, and many use the sites for both personal and professional reasons. Do faculty also believe that social media sites have a place in their courses? To address that issue, faculty were asked about their use of social media in the classes they teach. It appears that many faculty members do make use of social media in their teaching; 41 percent report doing so.

Faculty Teaching Use of Social Media – 2013

- █ Use
- █ Do Not Use

