

THE FACULTY PROGRESSION TO DIGITAL: ONE STEP AT A TIME

In order to better understand the ways instructors are using digital content in the college classroom, Blackboard hired O'Donnell Learn, an independent research firm, to conduct a broad research effort with faculty members in the spring of 2012. The study, based on 427 survey respondents and 60 focus group participants, showed a clear and consistent shift to digital content in college classrooms.

This report will focus on the drivers, uses, and challenges for instructors, as well as the ways their internal support teams, publishers, and education service providers can help facilitate digital content adoption.

Adoption Today: "Flashes of Brilliance"

How-and to what degree-are educators integrating digital content in the classroom? This study set out to answer this question by focusing on:

- The drivers behind the shift to digital
- The barriers that hold some instructors back
- How digital content is used across different course levels and disciplines
- The type of support instructors need to succeed

Results show that nearly all college faculty members have some level of comfort with digital tools and content. And at the same time, many could relate to an instructor who describes herself as "a luddite with flashes of brilliance." They have basic levels of proficiency, and occasionally find an application that is truly inspired. These instructors are using digital content, but episodically rather than systematically. Most have a long way to go before they will be as comfortable with technology as their students are.

But those flashes of brilliance are beginning to add up. Instructors are progressively moving towards greater adoption and more creative use of digital "I started using digital media as a way to help students who couldn't make it to class. I recorded my lectures and posted them so students could watch them later. It didn't take long for me to realize that digital content is also a much more dynamic way to demonstrate geometry than using a chalkboard."

- Focus group participant

content. Our study clearly demonstrates that most faculty members want to increase their use of these digital resources. In order to help instructors make this transition, it's important to first understand their current level of technology integration and the context in which they are using digital content in their subject areas.

The Primary Driver: Students

The shift from print to digital content has reached critical mass and continues to accelerate. Today's traditional college students are the first generation of socially networked digital natives, and they expect instant access to digital resources. Walk on any college campus and it is clear that nearly 100% of students are consuming digital content already. Laptops are widely seen as necessary college survival tools, and a majority of students across all socio-economic levels now have access to a smartphone or other mobile device.

But when students arrive on campus, will they find a classroom that matches their expectations? Are their instructors fully exploiting the potential of digital tools and content for learning? To address these questions, our researchers probed faculty on the pros and cons of moving to digital content:

PROS

- A better experience for students. Instructors universally believe that digital content provides a better course experience because it offers immediate feedback, increased engagement, and cost-effectiveness.
- A more effective way to manage courses.
 Course tools and resources simplify the process for monitoring student performance, keeping content up-to-date, and for easily scaling the number of courses and enrollments, year over year.
- Local control of content. Digital materials allow instructors to easily customize content to the unique needs of their student populations.

CONS

- Role of "technical support." Instructors often become the first line of support for students who are slow to get online or are experiencing technical issues.
- Lack of student discipline. Students tend to give up when they can't quickly figure out how to do something. Many students require intervention and prompting to engage with technology resources.
- Loss of control over "the conversation."
 Focus group participants also expressed concern about the potential for unruly online discourse with such an open forum.

Consequently—and not surprisingly—instructors' agility and confidence with using digital content and tools factor heavily into their adoption of it.

Personifying the Stages of Adoption

Our research indicates that there is a predictable progression to higher levels of digital content adoption among faculty members: Post, Curate, Interact, and Build. Instructors usually begin by simply posting course materials that they previously handed out in paper form. Many soon transition to curating materials found on the Web or those provided by publishers. Eventually, they will use digital content to interact with their students and monitor their progress. A few will eventually go on to author their own materials and create fully unique digital courses.

Behaviors and preferences vary with each stage of adoption. A closer look at "personae" within an illustrative university science department shows us that there is a broad range of behaviors even within a single campus and discipline:

PERSONA

"The Poster"

A majority of research participants were at this stage of adoption and tend to:

- Engage with technology less frequently than peers in other stages
- Post syllabi, course announcements, presentations, links and other materials in the course LMS (nearly all of participants use technology in this manner)

THE STORY OF A DEPARTMENT

Dr. Miller has been teaching introductory physics for twenty-five years. He posts his syllabus and course "handouts" in the online learning management system (LMS), but prefers to stick with traditional teaching methods, primarily lectures. He worries that technology will make it harder to interact with students and control course content.

"The Curator"



As comfort levels grow, instructors progress to the next level of adoption where they curate content to enhance their courses. They begin to:

- Gather digital resources to illustrate a point, engage students, or support the lecture
- Create custom course packs using a mix of free and commercial digital content

Miriam Nazari, on the other hand, is a digital enthusiast. A young part-time chemistry instructor, Nazari relies heavily on the materials provided by the publisher, particularly the prepared presentation materials, videos, and online assessments. In addition, she regularly compiles a collection of articles and Web links into course packs that enable her to drill more deeply in some content areas that the textbook covers only very briefly.

"The Interactor"



Next, instructors begin using LMS and publisher resources and tools to further engage students and deepen their connection with the content. Instructors at this stage might:

- Use digital content to interact and collaborate with students
- Facilitate a class blog or wiki
- Track student performance and remediate based on progress
- Share content across campuses

Down the hall, adjunct instructor Gina Foster goes a bit further. She actively searches the Web for articles, videos and outside Web sites for her biology classes. She recently asked her cell biology students to find online animations of DNA replication and post the links, with comments, on the class blog. She projected the videos during class so they could analyze and evaluate them together.

"The Builder"



While the builders are a small minority today, they play the vital and vocal role of digital content advocate. These instructors tend to:

- Design and build course modules from scratch
- Self-author custom content
- · Substitute the printed text with digital content
- Have strong relationships with the instructional technology team on a campus

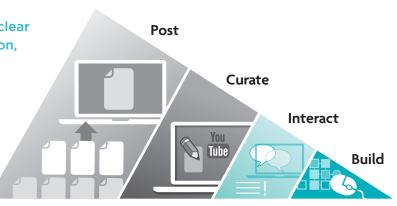
A veteran researcher, Dr. Hernandez teaches a majors course in brain neurochemistry. There are no textbooks that meet her needs, so she has created her own content using a mix of journal articles, free Web resources, and self-authored materials. She learned Flash so that she could create animations to illustrate complex reactions. Students collaborate on projects and interact with Dr. Hernandez and each other through the course LMS.

Technology Proficiency and Confidence Impact Integration

Instructors are more likely to use materials when they are confident in how to find and incorporate them. They also see themselves as the first line of support for students when integrating digital resources.

For instructors who are unsure of their own skills, this can become a barrier to full, effective use of digital content and LMS programs. When students lose passwords, forget instructions, or get frustrated with program navigation, they often turn first to their instructors for help. Faculty need adequate training to feel comfortable and confident with the technology they are using. They also need to know where to refer students for additional technical support.

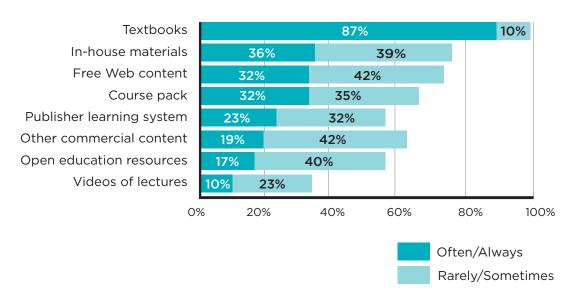
Instructors are moving through a clear progression of technology adoption, from simply posting materials to building entire courses. While this progression currently is heavily weighted towards the lowest level of technology adoption, eventually this graph may look more like a bell curve.



Technology Use is Often Episodic

A majority of educators (77%) are using a campus LMS, and just over half (54%) regularly bring digital content into their courses. The vast majority integrate at least some digital resources some of the time.

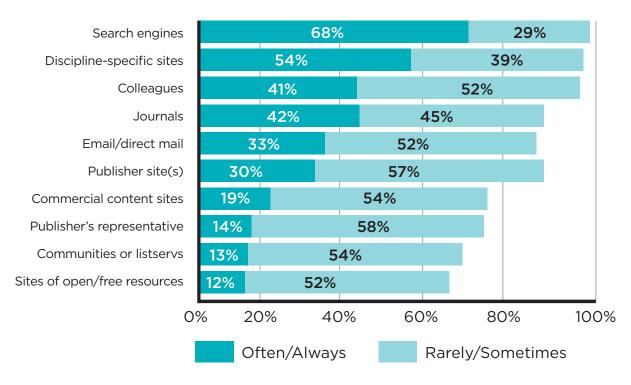
However, when you look at the materials that they actually require students to use, the textbook is still king, with 87% recommending or requiring a textbook "often" or "always." In contrast, only a third "often" or "always" require students to use a digital course pack, and only one in five rely on a publisher's learning system. For many instructors, digital content is seen as a complement to, not a substitute for, traditional printed texts.



Most instructors use digital content at least some of the time, but traditional textbooks are still the most likely resource to be required.

A Variety of Sources: The Most Popular Ways to Find Content

Just like the rest of the population, instructors turn to Google and other search engines more than any other source when they are seeking content for their courses. They also rely heavily on discipline-specific Web sites, journals, and recommendations from their colleagues to find quality materials. In contrast, only 30% "often" or "always" rely on publisher sites and 19% rely on other commercial sites:



Digital Adoption Varies by Course Level and Discipline

While most instructors are moving towards higher levels of technology engagement, there are clear trends when we look at the data by course level or discipline. Perhaps not surprisingly, instructors teaching freshman and sophomore level introductory classes are more likely to rely heavily on commercial materials, while instructors teaching advanced undergraduate or graduate courses are more likely to curate or self-author content.

Looking across disciplines, we find evidence that instructors adapt their use of digital content to meet their specific needs. Problem-based disciplines like math and science show a greater reliance on publisher-created materials, while instructors in the humanities and social sciences make more use of free Web materials. Professional and vocational instructors report a heavier reliance on materials curated from the workplace and other non-academic resources. Because the use of digital content varies so much by discipline, peer-to-peer training with an emphasis on discipline-specific best practices is most effective.

"I use commercial digital content because it has everything I need. It's easier for me to use content created by a company with thousands of resources than to have to do it from scratch."

- Focus group participant

The progression to digital discussed above—from post to curate to interact and then build—is discipline-agnostic. Most instructors in all disciplines post regularly and curate episodically. The table below shows the differing behaviors of instructors in each discipline area:

BUSINESS & ECONOMICS

- More likely to use digital content than any other group, and to have used it for 2+ years
- Likely to use textbooks, publisher's digital systems, and commercial digital content
- About a quarter of these instructors, more than other groups, create videos of their own lectures

SCIENCE & MATH

- The most dichotomous discipline with nearly half embracing digital content while another large contingency considers themselves "least comfortable" with it
- Most likely to embrace traditional face-to-face teaching
- More likely in the lower-level quantitative courses to use publishers' digital systems
- Small but vocal minority in sciences are more likely than other groups to "build" self-authored content

HUMANITIES & SOCIAL SCIENCES

- Less reliant on commercial content, including textbooks, and more on open education resources
- More apt to "curate" free Web materials, particularly videos and primary sources
- Most likely to be dissatisfied with LMS

PROFESSIONAL/ VOCATIONAL

- Likely to teach hybrid courses
- Tend to rely on course packs which often include self-authored or nonacademic content
- More likely to be satisfied with LMS

Digital Progression is Discipline-Agnostic

In general, digital content adoption within an institution is fairly consistent across the various departments. In all disciplines, the vast majority of instructors "post" regularly and "curate" episodically; fewer "interact" and even fewer "build." However, there are marked differences in the ways that instructors in different disciplines behave around the digital content. For example:

- In humanities and social sciences, where many of the courses are discussion-based, instructors "interact" by creating discussions around "curated" content, such as election results in a political science course, or images in an art course.
- In science and business, the majority of courses are lecture-based. In these, instructors are more likely to "curate" content that supports the lecture, such as an animation of a process in science or a video case in business.
- In disciplines with quantitative homework, including business, math, and science, instructors tend to "interact" around the publishers' digital systems. So if a group of students are struggling with a topic, the instructor may provide additional homework problems or spend extra class time on that topic.

The Key to Adoption is Support

A majority of instructors want to integrate more digital resources into courses. They need appropriate support to move towards curating course materials, interacting with students using technology, or building their own content. What does this support look like?

Participants in this study had a clear idea of what they needed to be successful:

- Target training to their comfort level and discipline. Training and support is not "one-size-fits-all." To help instructors move from posting to curating to interacting, it's important to have an understanding of the stage instructors are currently in, and help them move incrementally to the next level. Similarly, faculty members need to be supported in the context of the disciplines that they teach. The needs of humanities instructors are very different from the needs of instructors teaching problem-based courses like statistics or physics.
- Help instructors support their students.

 Recognize that students consider instructors to be the first line of "tech support," and make sure faculty have the resources to be able to fill this role. Instructors need enough confidence in their own skills to be able to answer basic questions, and they need to know where to refer students for more technical problems.
- Provide best practices and mentoring.

 Instructors prefer training built around the sharing of best practices and formal mentoring, with 48% citing this as "very" or "extremely" important. Wherever possible, they want to see examples from their own disciplines. Because different disciplines use digital tools in different ways, it is more meaningful for instructors to see best practices that are specific to the courses that they teach.
- Give instructors support when and where they need it. Instructors show a clear preference for "just-in-time" training that is offered when they are actually planning their courses. They don't want to attend training in May if they don't build their courses until August. Many (37%) told us that they prefer to have "anywhere/anytime" training tools that they can access when and where they need to.

Conclusion: The Shift to Digital is NOW

The digital revolution is here. The digital generation has entered our campuses with smartphones in their pockets, and laptops and tablets in their backpacks. They expect to have content that is available whenever they want it, on any device they choose to use. Increasingly, they also expect to interact with faculty and peers through technology. Educational service providers (e.g., publishers and LMS providers) and internal support teams (including instructional designers and training departments) need to meet their demands, and be prepared for the continuing shifts that are sure to come as technology continues to evolve.

Instructors are all in various stages of transition to the new digital reality. For most faculty members, a campus LMS is part of the

"I like the flexibility of digital resources. If a student misses class, they don't have to track me down for a handout, I post it. Also, I can see the progress that they are making on their homework."

- Focus group participant

daily workflow. But in order to keep up with the demands of today's students, support teams—again, both external and internal—need to help instructors move beyond simply posting materials to curating and interacting with content. The call to action is clear: Meet educators where they are today, to help prepare them for the changes coming tomorrow.





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