Colorado Regional Learning Symposium

Provosts, Pedagogy, and Digital Learning: The Role of the ACAO Digital Fellows

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January 30, 2019
Mission is to provide resources and assets to chief academic officers to help them increase the quality of learning in institutions of higher Education.
Digital Fellows:  2017-2019 at ASU Convening
Higher Education in the 21st Century

“The Fifth Wave [of universities] will be marked by universities that deliberately aspire to effect a shift in social outcomes through the seamless integration of cutting-edge technological innovation and scalability with institutional cultures dedicated to the advancement of academic enterprise and public value.”

*Michael Crow, President, Arizona State University*
What is the Public Value that Higher Education Should Address?

Higher education has both a social justice and a practical reason for focusing on having all students who graduate from high school not only access postsecondary education but also graduate with a credential. According to research conducted by the Bill & Melinda Gates Foundation, there will be over 11 million high school graduates between now and 2025 who will need postsecondary education to access a career with a living wage.

As former Gates Program Officer Jim Ptaszynski has pointed out, these students will need to succeed in:

1. Domain Knowledge
2. Critical Thinking
3. Written Communication
4. Oral Communication
What is the Public Value that Higher Education Should Address?

5. Quantitative Thinking
6. Qualitative Thinking
7. Social Skills

Many of these skills, especially in the community college sector, are offered in the first 60 hours of courses, sometimes known as “Gateway” courses, as they are the entryway to the higher level courses and graduation. They are the most likely places for students to falter and drop out or stop out.
How Does Digital Pedagogy Help?

Early experiments at selected, large public universities and community colleges working with the Foundation have shown promise for the role that digital learning can play, in addition to the other roles played by financial aid, advising, and cultural and social issues.

Blended and online learning, combined with high quality courseware, can improve progression through the first 60 hours of coursework by adapting to students’ needs.
How Does Digital Pedagogy Help?

High quality courseware can trigger a number of improvements to the learning experience, including:

- Improved feedback from the instructor
- Personalization of learning
- Incorporation of active learning strategies
- Improved instruction by providing real time access to analytics
- Creating capacity so that students have more options to take the courses needed for graduation
Digital Learning as Gateway for Improved Student Success

What is Adaptive Learning?

A more innovative use of digital learning is provided by digital courseware. This refers to instructional content that is designed and sequenced to offer an entire course packet in lieu of a physical textbook or sometimes in addition to a textbook. Students access this course software and receive personalized assessment and digital “coaching” as the program directs them to additional work that helps them understand content. They cannot proceed from one section to another without mastering content.

It is sometimes called “adaptive hinting.”
Bill & Melinda Gates Foundation
Project with Chief Academic Officers

I have been working with Bill & Melinda Gates Program Officer Jim Ptaszynski and others in the Post-Secondary Success Division since 2015 on a $1.2 Million project to develop the engagement of Chief Academic Officers with digital learning. The Digital Fellows program was created for 32 Chief Academic Officers and their faculty members in universities across the country.
Vision of the Digital Fellows Project

Research sponsored by the Gates Foundation indicates that, despite the maturity of digital learning, and especially of adaptive learning technology, in its ability to help students succeed in developmental mathematics and other gateway courses, few faculty members are using this technology. Research also indicates that the greatest influence on how faculty members teach could be exerted by the Chief Academic Officers, assuming that digital learning was one of their top 3-4 priorities for fostering faculty development on their campuses.
Digital Fellows Program

There are:

16 men and 16 women
9 community colleges and 23 4-year institutions
2 state systems
6 HSIs and 2 HBCUs
5 private non-profits
2 private for-profits

They come from a diversity of states, from Florida to Alaska, from Texans to California, and Maine to Washington, but also from Georgia, North Dakota, Minnesota, Ohio and West Virginia, North Carolina and Massachusetts.
Experiment

Each of these institutions, in addition to providing the CAOs with professional development about digital learning, was asked to choose a faculty champion and to help chose courseware. They would then run a pilot program on their campuses for one year. They were asked to write their findings in a final report, due at the end of April 2019, in which they assess the progress made by their students. The most frequent way of doing this is to demonstrate that the number of DFWs decreases in the section(s) in which adaptive courseware was deployed.

Initial findings indicate that the DFW number decreased in courses in which adaptive courseware is used.
Campus Teams and Grants: Operational Goals

All of the grantees were asked to do 5 operational things on their own campuses:

1. Identify assets (resources) that will be helpful to their institution in increasing learning in gateway and introductory courses.

2. Conduct a pilot on their campuses that will integrate digital courseware into the curriculum.

3. Make the adoption of digital courseware a strategic enterprise decision by institutional leaders.

4. Assess the success of the pilot on their campuses and present their projects as case studies.

5. Report on gains in retention and increased learning on their campuses.
Summary of Courseware Uses

Digital Courseware has opportunities for higher education in the areas of:

1. Developmental Mathematics, Pre-Calculus, and Calculus
2. Introductory courses in many Gateway disciplines
3. Courses in Chemistry and Physics, as well as in some areas of the liberal arts such as History and English
4. Writing and composition courses
5. Specialty courses such as fisheries and the visual arts
For their penultimate reports (final to be submitted April 30, 2019), the CAOs were asked to identify the top 5 findings about their projects and their experiences in these pilots.

By far the most frequent finding was the importance of faculty buy-in and engagement for the process and the pilots to be successful. Twenty-two of the 31 institutions responding identified this as the top finding.

As the CAO of Athens States University, Dr. Joe Delap states, “Once people learned to use the technology, they immediately implemented it with success.”
The second most frequent finding was the importance of leadership in embedding digital learning into the campus community. Thirteen institutions identified the importance of leadership as one of their top 5 findings.

Other findings included the need for clarity, the need to assess institutional context, the importance of student engagement, the cost, vendor relations, the learning curve and collaboration.

The early results point to the fact that our identification of high level leadership as essential to scale digital learning has been reinforced by the experiences of the Digital Fellows.
Conclusion and Thanks!

The use of digital courseware at an institution of higher education can be accelerated and even embedded in these institutions through an initial engagement of the leadership at the highest levels of CAOs and even Presidents who champion it as part of their strategic plan for social justice and student success. Once it is embedded in the culture as an effective practice that promotes deeper learning, the scaling will take place through the faculty themselves.