



IMS GLOBALTM
Learning Consortium

Article Series on Learning Impact

The Business Case for Academic Enterprise Interoperability

Regardless of the size, Carnegie classification, or strategic objectives of your institution, technology is the glue that binds your campus together. We are living in a world full of exciting developments in terms of digital content, sophisticated gaming, iPads, social networking, massive online courses, open educational resources and open source software. The hopes for educational technology are high as educational materials transition from primarily print to digital and educational experiences, from primarily face-to-face interaction to primarily online.

Venture capital investing in educational technology has ramped up to historic levels, growing at a 57 percent CAGR since 2005. Private investors are expecting technology to play a much greater, if not disruptive, role in education by the year 2020.

While the promise of technology is attractive, the reality of integrating and using it is much less so. It requires more work by faculty than traditional approaches. Add in the desire to integrate with applications on mobile platforms and/or the desire to integrate with emerging educational content or social networks outside the academy, and the situation becomes very daunting to get to a state where use of technology actually makes life better for faculty or students. And integrating those tools into the academic enterprise by which content and data from different suppliers can be distributed quickly and efficiently strains the resources of most IT departments. Unfortunately, as digital technology evolves, the demand on those limited resources increases exponentially.

“It’s a problem that everyone on the academic side is struggling with,” said Bob Crabb, director of the [University of Minnesota Bookstores](#). “It used to be there was a flavor of the month. Now, there’s a flavor of the hour. You can sense that by looking at all the list serves and blogs.”

Think how frustrating life would be if your computer didn't have that Universal Serial Bus (USB) port? All those devices and applications you plug in and use each day might not work, at least not without a considerable amount of configuring. Now extrapolate that thought and consider the growing nightmare colleges and universities face trying to figure out ways to deliver content by a variety of learning management systems to their students who use a variety of devices as their learning tools.

Fortunately, there is a collaboration of colleges and universities that are working to make educational content and software easier and more efficient to use in various combinations for the teaching and learning process. In this paper, we will attempt to address some of the technological challenges facing institutions today and suggest simple actions the business office can pursue to get more from existing and future technology investments.

The Cost of Going Digital

Henry David Thoreau perhaps captured it best when he observed that "men have become the tools of their tools." Institutions today are continually struggling to keep up with the latest technological advancements. Demand for the latest available technology is increasingly driven by the expectations of students and faculty. And continually evolving applications require more sophisticated platforms to support them. Investment in technology today must be viewed as an ongoing expense and not as a special expenditure.

"One of the things CFOs are looking at is efficiency," said Crabb. "All areas of the university are looking at that closely. Trying to find efficiencies while, at the same time, trying to maintain a high level of student outcomes."

The use of white boards, lecture capture and other technology in the classroom is continuing to improve the learning process. And since the first online university was accredited some two decades ago, online learning has continued to increase annually at double digit rates, far outpacing traditional enrollment.

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The 2012 Survey of Online Learning, conducted by the Sloan Consortium and the Babson Survey Research Group, determined that more than 6.7 million students (32 percent) were enrolled in at least one online course. And more than two-thirds of chief academic officers say online learning is critical to their long-term strategy.

The success of these evolving technologies to improve teaching and learning relies on the ability to seamlessly integrate disparate systems and applications into the academic enterprise without the need for costly or time-consuming custom integrations. Underlying this vision is the requirement for institutional leaders to require system interoperability when making new technology purchases or upgrading existing systems.

“So many vendors have boasted: ‘sure, we integrate with your system,’ but what that really translates to is: ‘we integrate with your system as long as your IT guys spend six months in a cave, banging out code.’ We have a total staff of 3.5 FTE; we just don’t have time for that,” says Steve Kessinger, Director of IST, [Bluefield College](#).

Embracing Interoperability

How can higher education bridge the gap from the reality of today to realizing the potential of technology to transform education? The missing link is the broad adoption of interoperability standards to advance the innovative use of technology to make “going digital” a matter of “plug and play” as a means for driving efficiency and effectiveness while reducing costs. Just as the Web was enabled by a set of open standards published and maintained by the World Wide Web Consortium (W3C), open standards can enable greater innovation in education. Bridging this gap to innovation doesn’t require purchasing additional technology. It does require a unified commitment of all institutional stakeholders to embrace interoperability as part of an overall strategic plan.

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Crabb said that, at the request of the provost, a committee of about 15 people has been formed at the University of Minnesota to look at all things e-learning and to recommend policies and procedures going forward to optimize the digital landscape. Establishing policies for adhering to standards, he said, will be one of the things they will be reviewing.

“Students want to be sure that whatever is needed for a course is available across platforms because they don’t want to be wasting a lot of time figuring out how to get access to the content,” said Crabb. “The e-book platform providers like [VitalSource](#), [CourseSmart](#), and [CourseLoad](#) have all evolved and adopted cross-platform standards.”

For nearly two decades, the [IMS Global Learning Consortium](#) (IMS) has worked to advance technology and establish interoperability standards that enable educational applications and content to easily “plug” into an institution’s technology enterprise, providing an integrated user experience and integrated data environment that most institutions desire today and eventually all institutions will require. Under its leadership, a collaboration of colleges and universities has launched the Technology in Higher Education in Support of Innovation for Student Success initiative, or THESIS for short, to help education leaders transition to an open enterprise and to pursue the competitive and educational advantages that academic interoperability enables. The goal of THESIS is to help institutions of all kinds to:

- Break the status quo of closed, proprietary systems that make the use of digital technology in various combinations difficult to use for teaching and learning.
- Reduce the time and cost of integration by a factor of 10-100x while improving the teaching and learning experience.
- Become more agile in integrating new technologies to support evolving new learning environments.
- Enable the seamless flow of learning analytics and data across multiple systems to improve outcomes and operational efficiencies.
- Facilitate information sharing about innovative and sustainable uses of technology that can help improve access, affordability, and quality of personalized educational experiences.

Participation in THESIS is open to all institutions and it is important to understand that the support IMS provides is designed to make procurements and upgrades that involve advancing the adoption of open standards relatively easy and at no additional cost. Most institutions are making decisions on interoperability and integration requirements today with either no support from a neutral third party or potentially very expensive support from one of several consulting firms (who are often not current on the standards activities).

As digital content becomes more feature-laden, adherence to standards becomes even more critical, said Crabb. And the expectation for standardization among institutions is increasingly taken for granted. “I don’t understand all of the intricacies of standardization, and I’m not sure I want to know, but if a student

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comes to me and says ‘I’m on this iPhone 5 and I can’t get this content,’ I’m going to be all over that publisher.”

There are four ways IMS provides higher education institutions with support that is designed to further the stated goals for THESIS:

1. Serves as the authoritative source on the development, adoption, and impact of interoperability to enable and transform digital learning environments.
2. Provides the appropriate wording that specifies requirements for relevant procurements.
3. Hosts support forums, including informational webinars, that provide the community support and training required for IT and academic technology staff to understand where opportunities exist today and how to incorporate the adoption of open standards including what to look for when engaged in a procurement or upgrade that might help advance the stated goals of THESIS.
4. Engages experts in the rare case that an individual higher education institution or system encounters an interoperability issue with an IMS certified product.

Typically, this is not needed for products that have already been certified. But this form of troubleshooting with community involvement is an essential feedback mechanism and insurance policy.

Qualification for the above support from IMS requires an official executive commitment to THESIS to encourage IMS Global Learning Consortium certification as part of procurements (on a voluntary basis). The executive endorsement is essential because THESIS is a serious commitment and transformational program that will mature over several years as the industry and each institution's IT evolves. IMS will be making an investment in supporting your institution and needs some assurance of commitment at the institutional level. In addition, the executive endorsements aid IMS in its work to encourage suppliers to fully adopt THESIS open interoperability and achieve certification.

This is the time, place, and opportunity for the education community to enable greater efficiency, effectiveness and innovation in teaching and learning technology. It's a digital revolution by higher education leaders to drive the market towards an open platform to enable greater efficiency, effectiveness and innovation in teaching and learning. Achieving academic Interoperability will help advance this digital revolution faster. Those institutions that take a wait and see approach will be left behind.

About IMS Global Learning Consortium

IMS Global is a nonprofit organization that advances technology that can affordably scale and improve educational participation and attainment. IMS members are leading suppliers, institutions and government organizations that are enabling the future of education by collaborating on interoperability and adoption initiatives. IMS sponsors Learning Impact: A global awards program and conference to recognize the impact of innovative technology on educational access, affordability, and quality. For more information visit www.imsglobal.org or contact info@imsglobal.org.

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