

Illinois Wesleyan University
Information Technology Annual Report 2007

“People, Processes, Pedagogy and Projects”

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In their book, *The Division of Labor*,¹ Frank Levy and Richard Murnane look at the labor market from both an economic and historical perspective, and examine how information technology has changed the skills needed in the workplace. That labor market transformation intersects with our discussions of the University’s strategic plan. In particular the strategic plan’s questions regarding identity, human resources, strategic curricular review, and the role of information technology at a residential liberal arts college.

Levy and Murnane make the case that computers have made two broad tasks carried out by the labor force as particularly valuable. They define these tasks as:

- “Expert thinking: solving problems for which there are no rule-based solutions... By definition, these are not tasks that computers can be programmed to do. While computers cannot substitute for humans in these tasks, they can complement humans in performing them by making information more readily available.
- Complex communication: interacting with humans to acquire information, to explain it, or to persuade others of its implications for action. Examples include a manager motivating the people whose work she supervises, a biology teacher explaining how cells divide, an engineer describing why a new design for a DVD player is an advance over a previous design.”²

It struck me that, with our curriculum’s combination of major and general requirements, liberal arts institutions such as Illinois Wesleyan are particularly well suited for helping students master both of these important skills. The role of information technology is particularly evident, not only in assisting our students and faculty with expert thinking and complex communications, but also in providing the systems and processes that make our 21st century university a more effective and efficient setting for teaching and learning.

In considering how Information Technology can best respond to the challenges of the University’s strategic goals, I propose we consider factors affecting information technology services by examining these four dimensions: people, processes, pedagogy, and projects. The people dimension speaks directly to the human resources strategic goal. Reviews of processes are critical to our goals for financial resources, identity, human resources, and student development. Our ongoing relationship with the University’s most strategic technology partner, Sungard Higher Education, is also considered in our discussion of processes. Thinking about the role of technology and the University’s teaching and learning provides an opportunity to reflect on course pedagogy. Finally, we present a summary of projects we expect to pursue in the next year as tactics in support of these goals. With computers and information technology playing such an important role in shaping the work of everyone on campus, it is of critical importance that the University allocates appropriate technology resources in support of its people, processes, pedagogy and projects. The University needs to shift from seeing as IT as a cost, to seeing IT as an investment in its future.

People

In our 2006-2007 report discussing budget and tactics, we noted concerns about the staffing level of the office of Information Technology. At that time we noted that Illinois Wesleyan's office of Information Technology operates with only two thirds the professional staff of comparable institutions. Since that report, turnover within the office of Information Technology has actually had us operating with fewer professional staff than the previous year (15 rather than our normal 16 person staff.) We recently revised a position and shifted some internal IT positions to add outsourced support for database administration. We also use student workers more than most comparable institutions. However, this reliance on student workers is a concern. The University has chosen to respond to the state of Illinois' recent minimum wage increase by decreasing student worker hours. This means that there will be 9% less student hours available for technology support in the coming year.

Some suggest that our low staffing is an example of the efficiency, professionalism and dedication of the University's IT staff. However, the office of Information Technology is frequently asked to provide services that we have neither the time nor resources to deliver. This includes additional support for instructional technology, faster service response times, and upgrades and enhancements to administrative applications and network services.

In order to help better gauge the perceptions of our campus community regarding IT service quality, we have begun to work with the "Techqual+ Project" to develop a web survey instrument for use on campus. Modeled after the Libqual survey used by the Ames Library several years ago, "the Higher Education TechQual+ instrument is being developed by a group of higher education institutions to gather systematic feedback from its community of end users so as to provide objective data for strategic and project planning."³ We have an exemption from University IRB for a student Techqual+ survey to be administered this spring.

In addition to the Techqual+ project, the office of Information Technology has begun to look at how we can use information service management standards to ensure that we deliver high quality services. The Information Technology Infrastructure Library (ITIL) is a set of standards developed in the United Kingdom for improving information technology service management. We are using the ITIL "small scale" guidelines⁴ to inform our work on developing a catalog of campus information technology services. The service catalog assigns ownership for a particular technology service within IT, and provides a way for us to track promised and actual performance for various services. This service catalog will serve as the foundation for Service Level Agreements that we expect to have in place for the start of the fall semester.

The ITIL standards fit well with work we've already done to ensure appropriate information technology service levels. Our 3900 help desk system helps with incident management, and our recent work documenting our disaster recovery plans begin to address the ITIL "configuration management" guidelines. These three tasks: service management, incident management, and configuration management, provide a foundation for managing and measuring the quality of IT services on campus.

We need to ensure that the University provides the human resources needed to provide quality information technology services on campus. By providing core technology service levels, we can provide a strong base for our efforts to improve the University's processes through the appropriate use of information technology.

Processes

Information Technology staff help other offices and departments review how technology tools can improve their work processes. We expect to help with systems implementation and process reviews with a number of offices in the next year. These processes include: preparations for the upcoming capital campaign, changing to processing our payroll in-house, work with the office of Institutional Research and improvements for enrollment management. Much of our work to review the University's processes is based on tools provided by what has become the University's most strategic technology partner: Sungard Higher Education (Sungard). Given our limited IT resources we need to pay careful attention to Sungard when considering how best to plan for future process improvements.

Sungard provides the University with a number of key technology platforms we use to deliver technology services to the campus community. These include our Banner administrative systems, our portal software and e-mail system; the Advance and SmartCall fund-raising and development systems, and our web content management system. Sungard is the leader in providing systems for higher education, and since 1998, when the University entered into its first agreement with SCT (Sungard's predecessor), the University's reliance on Sungard's systems and services has continued to grow.

At this year's Sungard Summit Executive Conference, Sungard announced a number of new products, some core technology changes, and defined what they see as their strategic goals. Much like we have our main goals to our strategic plan, Sungard president Brian Maddox listed these as areas where Sungard will be focusing for the foreseeable future:

- Building brand
- Increasing share of the larger school market
- Developing new products and services
- International Business
- Increased use of managed services
- Increased adoption of their "Unified Digital Campus" vision
- Internal processes and infrastructure improvements

Of these seven goals, two are important to Illinois Wesleyan: new products and services, and the "Unified Digital Campus" vision. For new products, Sungard spent considerable time showing their new Enrollment Management system solution. This uses Web 2.0 technology and will replace a number of access databases we've built for recruiters to augment existing Banner functionality. They also noted that Banner 8 should be available in April 2008. Finally, the Luminis software we use for the my.iwu portal, and our web content management system is the heart of what Sungard calls their "Unified Digital Campus" vision. Luminis was shown as being equally strategic to Sungard as their Banner platform.

Also of interest is what was not stated as strategic to Sungard. They did not list Learning Management Systems as strategic. I did not hear mention of tighter integration of the Advance and SmartCall systems with Banner. There was not a lot of discussion of identity management solutions. And there was also no mention of integration with open source solutions. I found the lack of attention to open source solutions particularly interesting. The current Sungard portal solution is based on open source software called uPortal. In discussing their future technology direction Sungard stated they would be using Oracle Portal, a competitive,

commercial solution. They also stated that for authentication they would integrate with any “commercial” identity management solution. I can only speculate as to whether this is a reaction against open source solutions that could compete with existing Sungard products.

Since Illinois Wesleyan has begun to explore increasing our use of open source software as a way to help control costs, this apparent shift in Sungard’s strategy needs further examination. This will be of particular interest should we decide to expand and improve tools for faculty such as e-portfolios and our learning management system toolset (currently a basic offering that comes bundled with the Luminis portal.)

Pedagogy

Last fall, the Department of Education released what has come to be known as “the Spellings Report”. This report’s call for “dramatic reforms” in U.S. higher education has caused much debate on campuses around the country. The report presents high-level goals of access, cost and affordability, financial aid, learning, transparency and accountability. When looked at through the lens of the University’s strategic plan, and in particular our “teaching and learning” goal, the need for increased information technology support becomes even more compelling. The need for information technology both supporting and within the curriculum is mentioned throughout the Spellings report. Here are just a few examples:

- We recommend that America’s colleges and universities embrace a culture of continuous innovation and quality improvement. We urge these institutions to develop new pedagogies, curricula and technologies to improve learning...⁵
- ...postsecondary institutions have not embraced opportunities for innovation, from new methods of teaching and content delivery to technological advances to meeting the increasing demand for lifelong learning.⁶
- We urge states and institutions to establish course redesign programs using technology-based, learner-centered principles drawing upon the innovative work already being done by organizations such as the National Center for Academic Transformation.⁷
- ... promote the development of information technology-based collaborative tools and capabilities at universities and colleges across the United States, enabling access, interaction, and sharing of educational materials from a variety of institutions, disciplines, and educational perspectives. Both commercial development and new collaborative paradigms such as open source, open content, and open learning will be important in building the next generation learning environments for the knowledge economy.⁸

The report’s mention of the work of the National Center for Academic Transformation is particularly interesting. This group has attempted to address the question: “Is it possible to improve the quality of education, while at the same time reducing costs?” The National Center for Academic Transformation suggests, based on their experience with redesigning large courses with information technology, that it is possible. In her article “Improving Learning &

Reducing Costs: Redesigning Large Enrollment Classes”, Dr. Carol Twigg concludes that enhancing instruction with technology must include fundamental changes in course design:

“A wealth of experience shows that attempts to add on innovations with external support, and without internal structural change-especially the commitment of resources in the institution's core budget-have been almost totally unsuccessful. In order to be sustained, changes in instructional practice must be affordable by institutions and integrated into their base funding practices.”⁹

If the University is to engage in strategic curricular review, it should consider the possibility of using technology tools and techniques to redesign courses as a way to improve learning while at the same time reducing costs. Dr. Twigg suggests five course redesign models¹⁰ that have proven to effectively integrate technology tools and techniques. Two models in particular, the “supplemental model” and the “replacement model” may be of particular interest to Illinois Wesleyan. The Information Technology staff would welcome the opportunity to work with faculty to explore these course redesign models. Of course, finding the time to devote significant work to such a project may require some resource re-allocations.

Projects

In last year’s report we identified projects we planned to work on as well as key projects that would likely not happen due to resource constraints. Fortunately, two of those key projects, the Resource 25 scheduling project and Banner Payroll, did find funding thanks to Cabinet member intervention. We expect to finish the Resource 25 and Banner Payroll projects in the coming year, and make more progress on infrastructure initiatives. We also expect to complete a major upgrade to the University’s my.iwu portal (i.e. Sungard Higher Ed’s Luminis Platform IV.) However, it is again important to note projects that we do **not** expect to fund from the existing operating budgets. These projects we would like to fund, but cannot, include:

- Complete wireless network access for the campus
- Increased storage for student network file space
- Increased storage for student, faculty, staff, and alumni e-mail
- Simplified access for personal network file storage, backup and recovery
- New student housing system
- Web access to admissions status, financial aid info, and student bills
- Banner 8 upgrade
- Increased use of the card access system for campus buildings
- Tracking of campus printer use by individuals
- Enhanced systems for learning management
- A system for students to create and manage electronic portfolios
- Systems to digitize and manage optical images of campus records
- Systems to support centralized University purchasing

It is our hope that the Strategic Planning and Budget committee will recognize that many of these initiatives are important to the success of the University’s strategic initiatives. Additional financial and human resources allocations will be necessary to accomplish these initiatives within the near future.

Conclusion

The IT House provides a good metaphor for the state of information technology services at Illinois Wesleyan University. On the outside it appears to be a cute little house on the edge of campus. From the inside the IT House neither represents the University well, nor provides an adequate support facility for the technology needs of the campus. When the roof leaks, or the basement floods, the University attempts repairs; however, the structure is too small, it does not work well for its intended purpose, and needs attention.

This report addresses how the University can begin to address its information technology needs in terms of people, processes, pedagogy, and projects. The University faces pressures to maintain and upgrade its technology capabilities both internally from its campus community, and externally from vendors, government agencies, and competitors. This report presents plans to assess and review the University's information technology staffing and service needs. It reviews the plans of our most important technology supplier: Sungard Higher Education. It comments on the challenges presented to higher education by the Spelling Report. And finally, this report considers projects we can do with expected funding, as well as projects which cannot proceed. Unfortunately, many of these unfunded technology projects should not wait.

While the upcoming capital campaign offers some hope for additional resources, the University's Strategic Planning and Budgeting committee should consider ways to better address the University's technology needs now. Our current students, faculty and staff need and expect a level of technology services, and we must take steps to deliver these services efficiently and effectively. Just as computers have changed the importance of skills needed in our modern economy, so must the University recognize that it needs to adjust resource allocations to better address its information technology needs. If the University is to achieve the goals of its strategic plan and vision, it will need to increase its investment in information technology resources.

¹ Levy, F. & Murnane, R.J. *The New Division of Labor: How Computers are Creating the Next Job Market*, Princeton University Press, 2004.

² Ibid. pp. 47-48.

³ Chester, T. J. "Higher Education Techqual+", <http://www.techqual.org> <accessed 3/21/07>.

⁴ Taylor, S., McFarlane, I., *ITIL Small Scale-Implementation* Renouf Pub Co. 2006.

⁵ Spellings, M. et. al. "A Test of Leadership: Charting the Future of U.S. Higher Education", U.S. Department of Education, 2006, p. 5.

⁶ Ibid. p. 16.

⁷ Ibid. pp. 25-26.

⁸ Ibid. p. 26.

⁹ Twigg, C. A. "Improving Learning & Reducing Costs: Redesigning Large Enrollment Classes", The National Center for Academic Transformation, 1999, <http://www.thencat.org/Monographs/ImpLearn.html> <accessed 3/22/07>.

¹⁰ Twigg, C. A. "Improving Learning and Reducing Costs: New Models for Online Learning", *Educause Review*, September/October 2003, <http://www.educause.edu/LibraryDetailPage/666?ID=ERM0352> <accessed 3/22/07>.