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This report documents the work and activities of the Faculty Liaison for Academic Technology over the Spring 2014 semester and is organized in five sections:

1. Student Technology Survey (Fall 2013)
2. Faculty and Librarian Technology Survey (Spring 2014)
3. 21st Century Computer Labs and Active Learning Spaces
4. Other Activities
5. Priorities for Fall 2014

Section 1 summarizes the results of the Fall 2013 student technology survey and provides links to the detailed report and data. The Spring 2014 faculty and librarian technology survey is briefly reviewed in Section 2. Section 3 discusses ideas and suggestions for how we design teaching and learning spaces in the 21st century and includes links to specific proposal and resources. Some of the other activities (e.g. Liquid Galaxy and website redesign) are summarized in Section 4 and Section 5 includes ideas and priorities for the upcoming semester.

rooms for a variety of reasons.

8. Tablet computers are still quite rare. Those who have them have iPads and use them for non-academic tasks.
9. 86 percent of our students own a smartphone (mainly iPhones) and use it for non-academic tasks.
10. Students still use email - both the official Westfield State email as well as their personal email.

Deliverables

- [Comprehensive Survey Analysis and Report](#)
- [Summary Infographic](#)
- [Summary Results from SurveyMonkey](#)
- [Survey Instrument](#)
- [Survey Website](#)

Follow-Up

This survey conducted can only be a first step - a broad baseline to be expanded with additional targeted surveys, focus groups, workshops, and more.

The survey identified a series of critical information technology improvements that are needed ASAP and I emphasized those at a [meeting with IT leadership and staff](#) on 19 April 2014. This will require a considerable and immediate investment in information technology and infrastructure - an appropriate use of the [\\$800 per semester Technology Fee](#) collected from each student.

There are also broader questions for deliberation, including BYOD, the future of computer labs (see Section 3), and the increasing 'creep' of technology into our academic courses as the traditional distinctions between online, hybrid, and f2f courses slowly erode. These conversations are best facilitated through the [Special Committee on Academic Technology \(SCAT\)](#) and I encourage campus leadership to proactively engage with SCAT around these issues.

Finally, the question of sample vs. population should be addressed, as in: do the 751 responses accurately represent the overall student population at Westfield State University? The answer is most likely no and I am awaiting the formal analysis by Dr. Lisa Plantefaber (Associate Dean of Research and Assessment).

There is also the possibility for more detailed and stratified data analysis, for example for majors with high numbers of respondents such as Education (n = 163), Psychology (n =

82), Criminal Justice (n = 75), and Business Management (n = 70), class level, or connections between the responses to related questions (e.g. Questions 5, 12, and 33).

2) Faculty and Librarian Technology Survey (Spring 2014)

Academic Information Services conducted a [Faculty and Librarian Technology Survey](#) that I designed in the Spring 2014 semester. We only received 78 responses - a quite disappointing number - for a variety of reasons:

1. The survey was too broad and too long as more and more functions and offices around campus wanted their specific questions to be included. A more narrowly-focused survey with fewer questions would have been better.
2. The survey lacked any direct incentives for participation (the student survey, for example, included a raffle for an iPad mini).



[Source](#)

Nevertheless, 78 responses (of about 250 faculty) should provide a reasonable baseline to be supplemented in the upcoming academic year with additional targeted surveys and focus groups. Analysis of the survey responses is currently in-progress to be completed Fall 2014.

[Summary Results from SurveyMonkey](#)

One issue to consider with respect to these survey is context = how do Westfield State students, faculty, administrators, and staff compare when taking a broader national or

global view. Reports such as [Digital Faculty: Professor and Technology \(2012\)](#), [Conflicted: Faculty and Online Education \(2012\)](#), or [Social Media for Teaching and Learning \(2013\)](#) (see as infographic) are quite useful, but we should strongly consider participating in established large-scale annual surveys for consistency and reproducibility. The annual [ECAR/Educause](#) surveys are perhaps the most-obvious options here, but there are other large-scale / commercial alternatives as I summarized [here](#).

Finally it is also important to consider 'the other side' = the realities of campus technology administrators as represented, for example, by the [Annual Campus Computing Surveys](#) conducted by [The Campus Computing Project](#) as summarized [here](#) by the Chronicle of Higher Education.

3) 21st Century Computer Labs and Active Learning Spaces

This is an issue that is being ignored on-campus: what do we need in terms of (new) classrooms and computer labs? We have an usual 'window of opportunity' at this time with the construction of new science addition to Wilson Hall and the associated 'backfill' of Wilson and Bates Hall.

1. Do we need more classrooms? If so: what should they look like? One thing we do know: [tables need power](#) to run mobile devices.
2. [Do we need more computer labs?](#) If so: [what should they look like?](#)
3. Or do we need [\(informal\) learning spaces](#) with tables, power, Wifi, and printers where students can work on their own time using their own devices (or [use a renting machine](#) from [Laptops Anytime](#))? That's essentially what the library provides.
4. What should an 'Innovation Center' that is truly innovative for students and faculty across campus look like?

21st Century Computer Labs

The Fall 2013 student technology survey was clear [on this issue](#): students want more computer labs with better computers and printers that are not constantly booked by regular classes and accessible anytime. This reflects a cycle of inefficiency we have on-campus:

1. There are more and more online and hybrid courses. Plus, there is more and more online work in 'regular' classes.
2. ResNet and the campus Wifi network is terrible and often unusable.
3. Students cannot access the computer labs either because a) there is a scheduled class or b) the room and/or building are locked. Plus, the printers are often broken.

4. Students funnel to the library to find insufficient computers and inconvenient printing.

Some of the problems and issues causing this cycle are easily fixed and [I communicated simple solutions](#) to IT staff and leadership on 19 April 2014.

But this raises a broader question: What constitutes a ‘computer lab’ as opposed to a ‘regular’ classroom? We currently use five different ‘types’ of computer labs for teaching and learning at Westfield State: ‘normal’ computer labs (treated and scheduled as regular classrooms), specialized computer labs, no-room computer labs (using laptop/tablet carts), rogue computer labs, and virtual computer labs (BYOD and campus Wifi).

Should we perhaps abandon this idea of separate computer labs and classrooms and instead provide flexible teaching and learning spaces with carts full of mobile and cloud-connected technology (e.g. Parenzo 205)? These issues are particularly relevant in the context of a BYOD policy that is being pushed on-campus.



[Source](#) *Is this is a classroom? A computer lab? Or a student study space?*

I created a [proposal](#) exploring these issues around two key elements: 1) hire an experienced instructional space designer to facilitate a campus-wide conversation around these issues and 2) use one of the outdated classrooms in Wilson Hall, one of the three new classrooms in Wilson Hall, or the so-called Innovation Center in the new science addition to Wilson Hall as our [Test Kitchen](#) for modern teaching and learning spaces.

This proposal was endorsed by SCAT on 27 March 2014 and forwarded to AUC for consideration.

Active Learning Spaces

The question here is similar as the one before for 21st century computer labs: how can space and technology best support the active pedagogy of teaching and learning? The current situation at Westfield State University offers several complementary opportunities for improvement:

1. The new science addition to Wilson Hall is an opportunity for designing new general-use classrooms.
2. The backfill and renovation of Wilson and Bates creates opportunities for 'deep' redesigns of existing classrooms and computer labs.
3. Many of the general-use classrooms in Wilson, Bates, and Parenzo have not been updated for a long time, yet could be improved with relatively minor and phased-in modifications.
4. The current BYOD conversation, computer lab issues, and campus Wifi crisis can all the part of a broader solution (and vice-versa).



Example of a UMass Team-Based Learning classroom under construction May 2014.

It is important to emphasize that this is about general-use teaching and learning spaces for the benefit of the entire campus community and not about specialized spaces dedicated to individual departments or courses.

UMass Amherst, for example, is following the [Scale-Up approach](#) (Student-Centered Active Learning Environment with Upside-down Pedagogies) for their [Team-Based Learning](#) classrooms in their new [Integrative Learning Center](#). [UC Berkeley](#), on the other hand, chose a more 'local' approach by converting an outdated classroom into their [experimental Test Kitchen](#) for active learning technology and pedagogy. Additional examples of flexible room layouts, pedagogical approaches, assessment, and best practices are listed below.

- [Active Learning classrooms](#) (document)
- [Active Learning classrooms](#) (slideshow)
- [Active Learning Classrooms](#) (6:22 minute video)
- [Inside Active Learning Classrooms](#) (3:28 minute video)
- [Scale-Up](#) (4:34 minute video)
- [University of Iowa TILE](#) (7 classroom videos)
- [Learning Spaces at Northern Arizona University](#) (offers many specific examples)
- [Flexible classroom layout](#) (1:10 minute video)
- Examples of increased student achievement: [University of Minnesota](#) and [North Carolina State University](#).
- DIY with the [Learning Space Toolkit](#).

Contrast the above with the [current plans](#) for Wilson 215, 221, and 420 and it becomes very obvious that we are currently missing a rare opportunity.

I created a [proposal](#) that I discussed with the Academic Affairs leadership on 29 May 2014 with specific suggestions, including:

1. Hire an experienced instructional designer/architect to draw-up plans for all general-use classroom in Wilson, Bates, and Parenzo as the basis for a longer-term and phased-in improvement effort.
2. Design the three 'new' general-use classrooms (Wilson 215, 221, and 420) as modern and flexible spaces that can accommodate a range of teaching and learning approaches.
3. Design the proposed 'Innovation Center' as an active learning general-use classroom using the Scale-Up approach.
4. Create a Test Kitchen in Wilson 317 (see below).
5. Create programming, professional development, and workshops around active learning spaces and technology following the examples created by UMass Amherst and Scale-Up.

6. Visit local, regional, and national examples to learn from faculty, students, and staff using active learning spaces about their experiences and suggestions for improvement.

Wilson 317

As is, Wilson 317 ranks as the worst classroom I have ever seen. But, it could be one of the best with a series of simple and phased-in improvements and serve as our Test Kitchen for active learning spaces and technology.

- Remove the 'one-arm bandits' and replace with proper tables (with power) and chairs to complement those already available in the back of the room.
- Provide several ['huddle boards'](#) for collaborative teaching and learning.
- Remove existing chalkboard and replace with a whiteboard wall (also to serve as projection screen for the wide-format projector recently installed).
- Remove the lab podium or turn the the projector to north or east wall of the room.
- Install proper room-darkening shades and dimmable lights.
- General room upgrades: paint, carpet, coat hooks, backpack storage, and removal of old junk.



[UC Berkeley Test Kitchen](#) - a simple layout for Wilson 317.

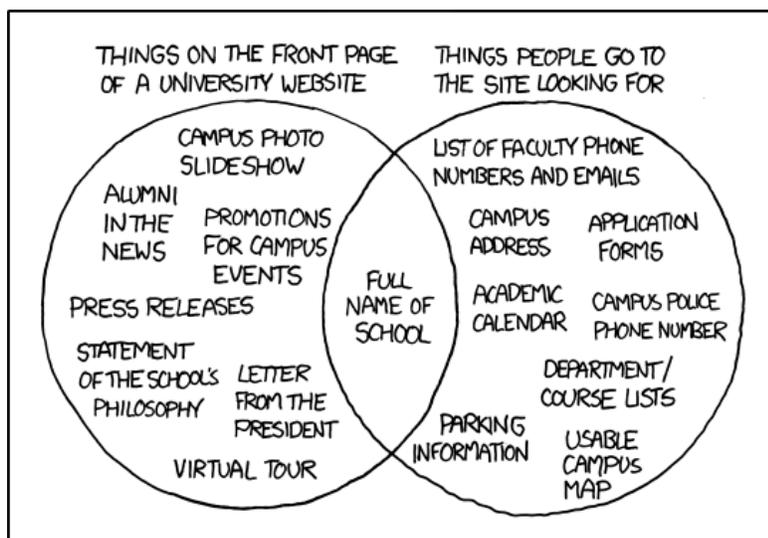
4) Other Activities

Other Spring 2014 activities included the redesign of the official Westfield State University website, the launch of Liquid Galaxy, the Innovations Technology Program, and the Westfield State Academic Technology blog.

Website Redesign

I attended a series of meetings (4 February, 6 February, 25 March 2014) related to the design of the 'new' Westfield State University website and I was quite impressed by how New City and our in-house staff are organizing the entire process. I have been through similar redesign efforts too many times at various institutions and this is the first time I have participated a big-picture 'visioning' process before getting carried-away in layout choices, fonts, colors, and other functionality details.

However, I'm a bit concerned that our academics are being 'undervalued' in this new way we showcase ourselves to the world - which is somewhat consistent with the overall emphasis on image (vs. substance) on-campus over the last few years. It may be that guidance counselors, high school students, and their parents are attracted by flashy dorms, gyms, student clubs, and other campus life fun, but what sets universities or college apart from vacation resorts are their academics and those should be front and center on our website in my opinion.



[Source](#)

Here it is critical that the administration provides active, reliable, and efficient support to all academic departments so they can create, maintain, update, and enhance their web pages (and social media presence) - it is not enough to provide a one-time template filled

with generic content and then to ‘punt’ the responsibilities over to faculty and department chairs. This will not work because it has never worked. Instead I suggest that we emphasize department and academic websites as integral to our mission, image, and recruitment (e.g. [Estaville et al., 2006](#); [Yu et al., 2011](#)) and support them as such.

Liquid Galaxy

The [Liquid Galaxy](#) was [unveiled](#) to the campus and community on [23 April 2014](#) and it is fair to say that there is a palpable sense of excitement about this technology and its potential for teaching and learning (although I’m not sure that ‘[agog](#)’ is the appropriate word here).

So far I have conducted four short training sessions for faculty and staff (1, 5, 7, 12 May 2014) in collaboration with Laura Wilson (Systems and Digital Services Librarian) who also created the excellent [Liquid Galaxy Support Website](#). We will offer additional workshops and training sessions at the start of the fall semester. Other possibilities include:

- Outreach to local schools to make the Liquid Galaxy available to them for field trips and campus visits.
- Outreach to municipal planners, conservation commissions, planning boards, and others to take virtual field trips on the Liquid Galaxy around their city or town to aid in their decision making.
- Organize a ‘geo’-themed day or event combining various interactive geo-exploration and visualization tools such as [BSU Earth View](#), [CoolGlobes](#), and [15-Minute Story Maps](#).



[Source](#)

Innovative Technologies Program

This idea originated from former VP of Academic Affairs Liz Preston: how can we create a [‘skunk works’-like](#) program on-campus to support the exploration and testing of innovative technology for teaching and learning? I think this is an excellent idea that will stimulate ideas and creative thinking. Below are some broad parameters and suggestions to turn this idea into reality in the upcoming academic year.

- This program should be funded each year with meaningful amount (about \$10,000).
- A responsive and efficient process: proposal review and funding availability should occur in 6-weeks or less.
- The proposal review process should not depend on infrequent committee meetings but rather a 3-person panel: Dean of Academic Information Services, Faculty Liaison for Academic Technology, 1 student.
- Proposals are accepted on a rolling basis with awards generally up to \$2,000.
- No ‘timeout’ period for successful applicants.

The emphasis of this program should be on acquiring and using novel technologies (hardware and software) for teaching and learning as part of regularly-scheduled classes (not independent studies, internships, capstone seminars, study-abroad trips, civic engagement, outreach, faculty/student research, etc.).

A [WeTable](#) is a good example here: a clearly-defined technology already used successfully elsewhere, a clear use for teaching and learning applicable across many disciplines, and a scope and cost that is realistic for Westfield State University.



[Source](#) *A WeTable used for collaborative discussion and decision-making.*

Westfield State Academic Technology Blog

The [Westfield State Academic Technology blog](#) is a forum and repository for all things related to academic technology for teaching and learning at Westfield State University. Current blog posts include infographics, tablets and apps for field data collection, and the results of the Fall 2013 student technology survey. Planned for Fall 2014:

- [Esri Story Maps](#) and [Google Tour Builder](#) as simple and effective tools for bringing 'space' into the classroom as interactive multimedia maps.
- [Digital Scholarly Objects](#) or how can faculty store, manage, and showcase the digital content they create, especially for online classes?
- [Infographics](#) - a great way to learn about data analysis and visualization.
- Tablets in the classroom and lab. Several departments and faculty are already using tablets in the classroom - how? Should we adopt [iPads as the center of the academic experience](#) at Westfield State?
- [Using clickers in the classroom](#). Again, there are already plenty of clicker users on-campus who can share their experiences and best practices.
- Tablets and [apps](#) for administrators (guest post by Tom Raffensberger).
- [Using Twitter](#) (and other Social Media) in the classroom and beyond (guest post by Tim LeDoux).

In addition I envision weekly guest posts by IT staff around relevant technology issues (e.g. options for data backup, Email maintenance, online security, etc.). For reference here are academic technology blogs from other institutions: [Stanford](#), [University of Oklahoma](#), [William and Mary](#), [University of Illinois](#), and [Palomar College](#). It may be possible to convert or embed the blog into our new campus-wide website (cf. Section 5).

5) Priorities for Fall 2014

Below is compilation of six priorities for the Fall 2014 semester.

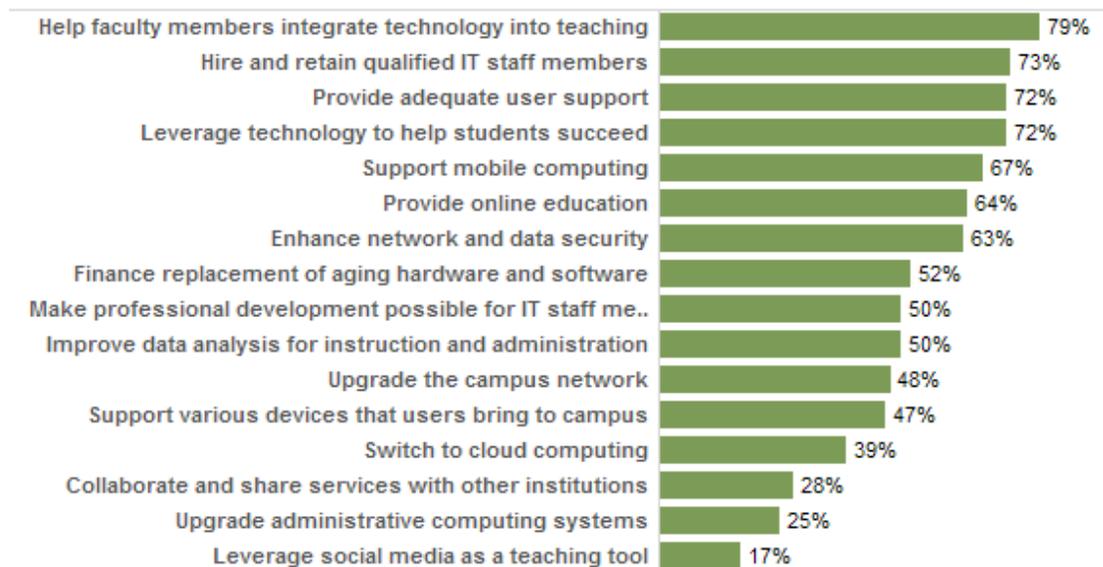
1. Spring 2014 Faculty and Librarian Technology Survey. Analysis of survey responses and preparation of comprehensive report.
2. Ed Tech Day for W-MA. Bridgewater State University hosts an [annual Ed-Tech Day](#) for faculty and teachers across Massachusetts. It would be interesting to organize a similar 1-day event in W-MA, perhaps in collaboration with the [Five Colleges](#) or the [Cooperating Colleges of Greater Springfield](#) (CCGS).
3. AIS and ITS Websites. Both AIS and ITS need user-friendly and attractive websites with updated, dynamic, and relevant content to showcase their competence and professionalism. Here, the overall campus website

redesign should provide a suitable framework to be supplemented and enhanced as needed.

4. Faculty Email and Data Backup. The Email quota for faculty is unacceptable at 150MB especially in contrast to the much-improved student Email system using Microsoft 365. In addition, faculty need an efficient way to backup their data files from their office computers or portable devices.
5. [WeTables](#), [ePosterBoards](#), [huddle boards](#), and more. These are only a few of technological ideas that can be realized at relatively low-cost for the benefit of many students and faculty across campus.
6. Campus IT Priorities. The chart below shows the information technology priorities of 451 colleges and universities participating in the [2013 Campus Computing Survey](#) as expressed by their top level administrators. The development of a 1, 3, 5-year plan and associated priorities should be priority for newly-created [Academic Information Services](#) (AIS) and [Information Technology Services](#) (ITS).

Colleges' Technology Priorities

For the 2013 Campus Computing Survey, senior technology administrators at 451 two- and four-year colleges and universities ranked their institutions' information-technology priorities. Here's the percentage of survey participants who listed the following goals as very important



Source: 2013 Campus Computing Survey

[Source](#) *What are our campus technology priorities?*