Achieving Faculty Buy-in of New Technologies

A discussion and presentation of experiences, practices and findings by
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Let’s go back a couple of years …

‘Fear of Looking Stupid’

Anthropologist offers explanation for why faculty members hesitate to adopt innovative teaching methods.

By David Matthews for Times Higher Education  // July 6, 2017  76 COMMENTS

An anthropologist who had the unenviable task of sitting through academics’ meetings and reading their email chains to find out why they fail to change their teaching styles has come to a surprising conclusion: they are simply too afraid of looking stupid in front of their students to try something new.

Lauren Herckis was brought in to Carnegie Mellon University to understand why, despite producing leading research into how students learn best, the institution had largely failed to adopt its own findings.
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... and scroll to the comments section
"I’m here because I need to know which buttons to push for the new online courses I’ve been told to teach. The last thing I want is to be ill-equipped to use the technology and have my students feeling like guinea pigs."
"I’m not very technical. You cannot just require all instructors to “flip a class” or incorporate new technology simply because it is the new “hot” technology item, because that is not necessarily going to lead to a better teaching experience, or to a better learning experience. All I want is for the students to love what they are learning!"
"Teaching is an art—and should be. You’re either a natural, or you’re not."
"Please don’t waste my time with that new joke of a class required for faculty to teach. What stands in the way of innovative teaching is made-up administrative procedures and timelines of 18 months for major course changes. Stick to whatever it is you do, and I will do the same and continue winning awards and getting top teaching evaluations. It’s academic freedom that allows for transformative, life-changing moments in higher-education, not best practices."
We looked at these comments and realized there was a serious disconnect: between the work we do and who we’re doing it for.

We realized we had a choice: we could dismiss the comments or we could unpack what they mean and look at them through a lens of empathy.
Faculty Concerns

Intrinsic Factors: Motivations and values

Extrinsic factors: Institutional culture and structures
Faculty Concerns, continued

• Desire to be an excellent instructor
• Concern for student experience and inclusion
• Concern about negative consequences of poor teaching
• Perception that educational innovation or technology use is trendy
• Fear of trying something new with students
Faculty Concerns, wait—there’s more

- Fear of judgment by colleagues
- Concern about the intended use of data collection
- Concern about risk to future resources
- Variability in readiness and awareness
- Variability in experience with scholarship of teaching and learning
So, we all have a choice:

We can dismiss faculty nay-saying or

We can look at the comments through a lens of empathy
Research study: Understanding the use or non-use of Brightspace LMS by Langara teaching faculty

- Brightspace by D2L learning management system selected as it is a low entry/low risk widely available & supported technology tool
- Survey Monkey survey emailed to 628 teaching faculty. Goal was to reach and engage 20% or higher. Total responses received = 155 or 24.7% of instructors.
- Of total responses 144 were using the Brightspace LMS and 11 were not using the LMS
- Wanted to understand who was using the LMS and why, and if not using, why not?
- What areas were most used in the LMS? What did this data indicate?
- How did respondents prefer to learn new things, like technology?
- Would the results of analysis provide meaningful information?

- Increase in college wide tool licensing: BS-LMS, Office 365, Turnitin, Kaltura Mediaspace, Zoom...
- Department and individual level technology use varies widely across college
- Teaching customs & practices prevail
Reviewing the Literature & Technology Integration Models

- Technology is hard, risky, may alter enjoyment of teaching
- Technology is transforming education
- Students need technology/digital literacy
- Presumption needs of students influence tech use & adoption
- Little importance given to how to adapt and evolve with technology
- Focus on student tech needs ignores teacher needs to learn tools

The Technology Integration Matrix (TiM) combined parts of the 3 models to develop a comprehensive system for tech learning and adoption.
The **Technology Acceptance Model** designed by Fred Davis determines technology acceptance & probable use if the user perceives the technology as useful to their context. It did not consider how a user might learn the technology in order to use it.

The **Substitution Augmentation Modification and Redefinition (SAMR) model** by Dr. Ruben Puenteedura, depicts the stages of technology adoption from simple to complex adaptations. Lacking was the ‘How to’ of learning to use technology.
The TPACK model, developed in 2006 by Punya Mishra and Matthew J. Koehler, acknowledges the relationships among subject matter expertise, teaching methods & technology knowledge and argues that all 3 areas work best when fully integrated into one’s context.
The Florida Centre for Instructional Technology at USF developed the Technology Integration Model to demonstrate how to incorporate the use of technology into teaching. It combines TPACK, SAMR and the TAM across all contexts, subjects and uses video examples of actual integrations.
What the data showed

<table>
<thead>
<tr>
<th>Tool use by individual selection</th>
<th>Brightspace Use Categories</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcements</td>
<td>Course materials stored in one place online</td>
<td>128</td>
</tr>
<tr>
<td></td>
<td>Gradebook set up and access for me and for students</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Easy to copy over parts of course each semester</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Can add links to external resources inside D2L-Brightspace</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>Grading student work within Brightspace</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>Students able to create and upload variety of assignment types</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Quiz function - question library, set-up, quiz marking</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Creativity to Design my Courses</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Access to Turnitin/Grademark</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>27</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Method: Learning a New Skill</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-taught Bb Help/iWeb, YouTube or other 'How To' videos</td>
<td>100</td>
</tr>
<tr>
<td>Group workshops</td>
<td>86</td>
</tr>
<tr>
<td>Internet searches for documentation/instructions</td>
<td>86</td>
</tr>
<tr>
<td>Colleagues show me</td>
<td>81</td>
</tr>
<tr>
<td>One-on-one training</td>
<td>76</td>
</tr>
<tr>
<td>Watching colleagues use it</td>
<td>33</td>
</tr>
<tr>
<td>Online forums</td>
<td>23</td>
</tr>
<tr>
<td>Department level training</td>
<td>20</td>
</tr>
<tr>
<td>Online user communities</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
<tr>
<td>New hire training</td>
<td>4</td>
</tr>
</tbody>
</table>
Findings, Conclusions, Implications

Findings
• Broad use of the LMS for materials access and storage
• Many complex areas of the LMS are unused
• This low usage may be perception of technology as functional tool & not pedagogical

Implications
• When people are instructed in technology use and provided training and support, use and acceptance of a tool increases. This is not to say there are still challenges. How the tool is introduced, ideally as simply as possible, helps with reluctance. Inviting peers who use technology to demonstrate its use in teaching & learning can also improve adoption of tech tools.
• Instructors as learners need real time access to a variety of training & information to meet their needs when, where and how the needs arise. Creating micro learning opportunities can reduce reluctance and fear of being overwhelmed.

Conclusion
• Technology use & incorporation needs to be scaffolded in stages:
  • 1st- Training on the technology
  • 2nd- Thinking about simple substitutions via the use of technology– content examples
  • 3rd- Integrating technology use over time to transform teaching & learning
  ...it takes time, practice and patience
Bottomline – it worked best if I …

- truly believe in their craft.
- stay expert in my own - paying attention to current trends in education and technology and pushing to get acquainted with new options.
- partner with them by listening actively to what they were saying about their teaching style, their teaching philosophy, etc.
It is personal

- We seldom do anything that we don't feel.
- Motivators often fall into these categories:
  - Ethical / emotional
  - Legal or standards-based
  - Business / logic

- [https://webaim.org/blog/motivating-accessibility-change/](https://webaim.org/blog/motivating-accessibility-change/)
Direct support

- We don’t want to encourage faculty to buy-in to new instructional technologies only to find that they aren’t accessible or don’t work with universal design principles.
- We also don’t want to dissuade them from considering new technologies.
- Approaches:
  - Demonstrate how they use “assistive technology”
  - Show benefits to them that come from using accessible educational technology
  - Provide true support partner - in the classroom or on the webinar
Incentives, recognition and elitism!

- Have the bookstore supply prize - dragon naturally speaking as an easily integrated desktop voice recognition option – or purchase one
- Sponsor a contest for universally accessible educational strategies and have education students gather ideas as “pump primers” from their research
- Web page highlighting progressive faculty
Show faculty members the benefits for them

- Using Word accessibility features such as heading styles (easy to do) create an outline, the ability to make a table of contents in 1 minute and easy ability to change from MLA to APA style.
- Students frequently want these options
- Provide engagement and unite face to face and online classes with twitter, blog with comments (open only to students) and polls. (Show faculty how to post to blogs by sending an email.)
- For online faculty using a webinar platform and recording means that students can review again, or that you can post the portion that you get repeatedly questioned on.
- The more your material is available / accessible to all students, the fewer entry level, individual questions you will get.
Make the process as easy as possible

- Reduce bureaucratic and other adoption barriers.
- Use available resources ([http://ncdae.org/resources/cheatsheets/](http://ncdae.org/resources/cheatsheets/))
- Provide local support – locating a mind mapping product that meets WCAG 2.1 guidelines; project management process (a blind student ended up using an excel spreadsheet for this – which removed the interactive element)
- Example: Record a faculty member as they present and create captions from that presentation for other semesters.
Make it personal

- create an awareness campaign.
- have students write up stories and share around campus in as many places and ways as possible.
- create a video.
- Highlight faculties’ efforts as much as possible.
Free outside resources

- https://www.youtube.com/watch?feature=player_detailpage&v=PQGFshzLPXE
- https://www.w3.org/WAI/people-use-web/
- https://webaim.org/articles/ (disability types)
- https://www.w3.org/WAI/WCAG21/Understanding/
Be a strong support "partner"

- This isn’t always simple or easy – so we need to know the technology well.
- Stories:
  - Flying words and sounds
  - Students wanted to learn techniques
  - Music before class
Link these efforts to:

- faculty goals
- campus issues (sustainability)
- higher education purposes (21st education)