USING THE USA2 FRAMEWORK TO MAKE WISE EDUCATIONAL TECHNOLOGY DECISIONS

Suzanne David and Maria Fernandez
Evaluate Sessions and Win!

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SO, WHO ARE WE?

Tseng College Distance Learning
California State University Northridge
PURPOSE OF THIS PRESENTATION

- Provide a framework for evaluation and adoption of instructional technology
- Discuss important criteria and questions for evaluation, with the goal of increasing use and reducing abandonment
WHY DO WE EXPLORE NEW INSTRUCTIONAL TECHNOLOGY?

- Increase student engagement in the learning process
- Help faculty to more effectively carry out their teaching responsibilities
  - Creating content
  - Interacting with students
  - Assessing student mastery
REASONS FOR ADOPTION OF NEW TOOLS AND TECHNOLOGIES

- Meet a new initiative
- Address a desire for innovation
- Dissatisfied with currently used product
- Prior product no longer available
  - Cost increased too much
  - Vendor no longer in business
- Desire to be in the technology forefront
  - Technology is “cool”
  - “Everyone’s doing it”
Top IT priorities related to instructional technology:
• Ability to successfully assist faculty with integration of technology into their teaching
• Data security
• Provision of adequate user support

Level of success in meeting these goals has not been high
• 23% of faculty rated available training as excellent
• 10% of students rated support as excellent
• Only 25% of institutions indicated that they assessed the impact of instructional technology on quality of instruction
STAKEHOLDERS

- IT
- Finance Department
- Administration
- Faculty
- Students
- Instructional Designers and Technologists
- Outside partners
OUTCOMES OF TECHNOLOGY ADOPTION

- Many products that are initially adopted do not achieve high levels of dissemination
- Others are adopted, but quickly abandoned
- "While 87% of the projects’ leaders noted 'improved quality of learning' to be an intended outcome of the project, only 30% reported this as an actual outcome." (Kirschner, Hendriks, Paas, Wopereis, and Cordewener, 2004)
PATTERNS OF TECHNOLOGY ADOPTION 1 - ROGERS

Figure 1. Rogers’ cumulative model of adoption of an innovation.
Figure 2. The Gartner Hype Cycle (after Fenn & Linden 2005).
WHAT CAUSES FAILURE OF DISSEMINATION?

- Many reasons why instructional technology is not adopted or is abandoned
- We believe that many failures of dissemination and subsequent technology abandonments are due to a failure to consider the proper criteria when making adoption decisions
- It is through analysis of these failures that the USA2 framework was developed
THE USA2 CRITERIA

Maybe make a word cloud from the words in the descriptions of the six criteria?

- Utility
- Security
- Accessibility
- Usability
- Sustainability
- Affordability
Utility

- Utility is related to whether the product provides features that you need.
- A “cool” set of features isn’t worth anything if it doesn’t help you do things that you want/need to do.
- The most elegant, easy-to-use tool isn’t worth much if you don’t have any need for it.
UTILITY QUESTIONS

- What tasks can the tool or technology help instructors and/or students to accomplish?
- How often are these users likely to perform these tasks? Do these tasks help with meeting teaching/learning objectives?
  - Data from actual users, not vendors!
- Do you already have a tool that successfully supports these tasks?
SECURITY

- Three essential components to IT security
  - Confidentiality
  - Integrity
  - Access for authorized users

- Security and privacy concerns for:
  - Software
  - Mobile apps
  - Web-based tools
FERPA may apply to the data transmitted and stored by online educational services:
- Services that require student log-in
- Plug-ins (LTI) that have access to LMS data

Even when FERPA doesn’t apply, privacy can be a concern.

When social media and cloud-based tools are used in instruction/assessment, privacy concerns may arise.
SECURITY QUESTIONS

- Is FERPA-protected data being shared with third parties?
  - If so, what precautions are being taken?

- Will access be given through an LTI, and if so, is the access at an appropriate level?

- Are students required to share private information in public arenas, such as Facebook, blogging, Instagram?

- Is there an institutional policy regarding use of social media?

- Is data in the application or site locked down to prevent unauthorized access or modification?
ACCESSIBILITY

- Sections 504 and 508, ADA and IDEA may apply to the technology
- Instructional technology must be accessible to individuals (instructors and students), regardless of disability
- Equally Effective Alternate Access Plan (EEAAP)
- Technology must be compatible with the range of assistive technologies
ACCESSIBILITY QUESTIONS

- Is there a Voluntary Product Accessibility Template (VPAT) available?
- Has the product been tested for accessibility?
  - In-house only or by a third-party? Are reports available?
- If the tool or service is for the purpose of content creation, does it support and encourage accessibility of created content?
- Can the tool be accessed and navigated using common screen readers?
- Is all audio content transcribed and/or closed captioned? Are there audio descriptions for visual content?
- Are all images provided with alt-text?
- Can all controls be accessed using a keyboard (not requiring a mouse or direct selection)
- If there is a web interface, are WCAG 2.1 guidelines followed?
USABILITY

- Usability relates to how easy and pleasant a product is to use
  - **Learnability:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
  - **Efficiency:** Once users have learned the design, how quickly can they perform tasks?
  - **Memorability:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?
  - **Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
  - **Satisfaction:** How pleasant is it to use the design?
USABILITY QUESTIONS

- Are common standards/conventions used in the design of the product?
- Is navigation and language consistent?
- Are commonly used objects or controls easy to find?
- Is it easy to tell what can be done with the product and how?
- Are user errors minimized, and are the consequences for error mitigated?
SUSTAINABILITY

- Sustainability is the ongoing capability of the technology to be available and to meet the ongoing needs of the institution
  - The level of support needed over time will not overtax resources
  - The product will continue to be available, updated and improved over time, as needs change

- Also included in this concern is Scalability
  - Technologies that are effective initially may not work as well when demand is higher
  - Hardware, storage, or bandwidth
  - System architecture
SUSTAINABILITY QUESTIONS

- Is the tool likely to remain available over the long-term?
- Is the level of support needed by users sustainable over time? With increased use?
- Does the technology scale well, in order to accommodate increased usage levels in the future?
AFFORDABILITY

- Direct and indirect costs of instructional technology are important factors to consider.
- Direct costs include licensing, data storage, training.
- Indirect costs include instructional technologist or instructional designer time needed to assist with the tool.
- Potential for costs to change over time should be evaluated.
AFFORDABILITY QUESTIONS

- How much does the technology cost?
  - Per actual user or by FTE?
  - Are there additional costs, such as training for staff, data storage?
- What are the institutional costs associated with supporting the tool?
- How long is the current price “locked in”? How much is it likely to increase in the future?
- If the tool is free, is it anticipated that this might change in the future?
USING THE USA2 FRAMEWORK FOR DECISION-MAKING

- Start by identifying the relative importance of the six criteria
- Identify any critical characteristics that the new tool must have
- Identify stakeholders and, if possible, have them involved in assessment of needs and evaluation of options
- Framework can be used for more structured or more holistic evaluation process
## DECISION MATRIX—EVALUATING A SINGLE OPTION

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USA 2 Evaluation of Prezi Presentation Software

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<td>Affordability</td>
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- Decision was made to not recommend this product
## WEIGHTED DECISION MATRIX – EVALUATING SEVERAL OPTIONS

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Needed a Virtual Classroom solution that:
- Cloud recording
- LTI integration preferred
- Able to support 4-hour recordings
- Accessible

Candidates were Zoom (w Cloud Recording), Adobe Connect with LTI, Blackboard Collaborate
Zoom with Cloud Recording
- Evaluated well for Accessibility, Usability, Sustainability and Security
- Utility lower because recordings not controlled with LTI
- Affordability was lower than Connect for the amount of data stored

Adobe Connect with LTI
- Evaluated better for Utility, Affordability
- Scored well for Security, less well for Accessibility (Flash) and Sustainability (specifically scalability)
SUCCESSFUL ADOPTION DOESN’T STOP WITH SELECTION

• Once an instructional technology has been selected, acceptance and ongoing use rely upon:
  • Communication
  • Support for users
WE’VE EDUCATED…NOW YOU GET TO REFLECT!

- Think about whether and how this framework may help to inform your future instructional technology decisions
- Think of any questions or comments you might have
QUESTIONS?
CONTACT US

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