



Shared IT Services for Higher Education & Research

Conference 2018

Welcome!

A Balance Principle of Educational Technology Adoption

Troy Welch, Thompson Rivers University

The background image is a photograph of a muddy, rutted road in a rural, hilly area. The road is filled with deep, dark brown mud and has several large, rectangular ruts. The surrounding area is hilly and covered with green vegetation and trees. The sky is overcast.

Troy's underdeveloped principle of the educational technology adoption balance ETUG Fall 2017

Thai Noipho (Photographer). Muddy roads in underdeveloped countries
The Northern Thailand. Retrieved March 28, 2018 from
[https://www.123rf.com/photo_30779896_muddy-roads-in-
underdeveloped-countries-the-northern-thailand.html](https://www.123rf.com/photo_30779896_muddy-roads-in-underdeveloped-countries-the-northern-thailand.html)

How to draw an owl

1.



1. Draw some circles

2.



2. Draw the rest of the f [REDACTED] g owl

Question: Why/how does technology adoption seem problematic?

THE
SIMPLE ANSWERS
TO THE QUESTIONS THAT GET ASKED
ABOUT EVERY NEW TECHNOLOGY:

WILL <input type="checkbox"/> MAKE US ALL GENIUSES?	NO
WILL <input type="checkbox"/> MAKE US ALL MORONS?	NO
WILL <input type="checkbox"/> DESTROY WHOLE INDUSTRIES?	YES
WILL <input type="checkbox"/> MAKE US MORE EMPATHETIC?	NO
WILL <input type="checkbox"/> MAKE US LESS CARING?	NO
WILL TEENS USE <input type="checkbox"/> FOR SEX?	YES
WERE THEY GOING TO HAVE SEX ANYWAY?	YES
WILL <input type="checkbox"/> DESTROY MUSIC?	NO
WILL <input type="checkbox"/> DESTROY ART?	NO
BUT CAN'T WE GO BACK TO A TIME WHEN—	NO
WILL <input type="checkbox"/> BRING ABOUT WORLD PEACE?	NO
WILL <input type="checkbox"/> CAUSE WIDESPREAD ALIENATION BY CREATING A WORLD OF EMPTY EXPERIENCES?	WE WERE ALREADY ALIENATED

Simple Answers, xkcd: A webcomic of romance, sarcasm, math, and language.
Retrieved March 28, from: https://imgs.xkcd.com/comics/simple_answers.png



Great Minds in Development: Steve Krug,
DevSource Sponsored by Microsoft, circa 2006

Experience

Approximately 15 years classroom instruction:
Digital Art & Design program at TRU

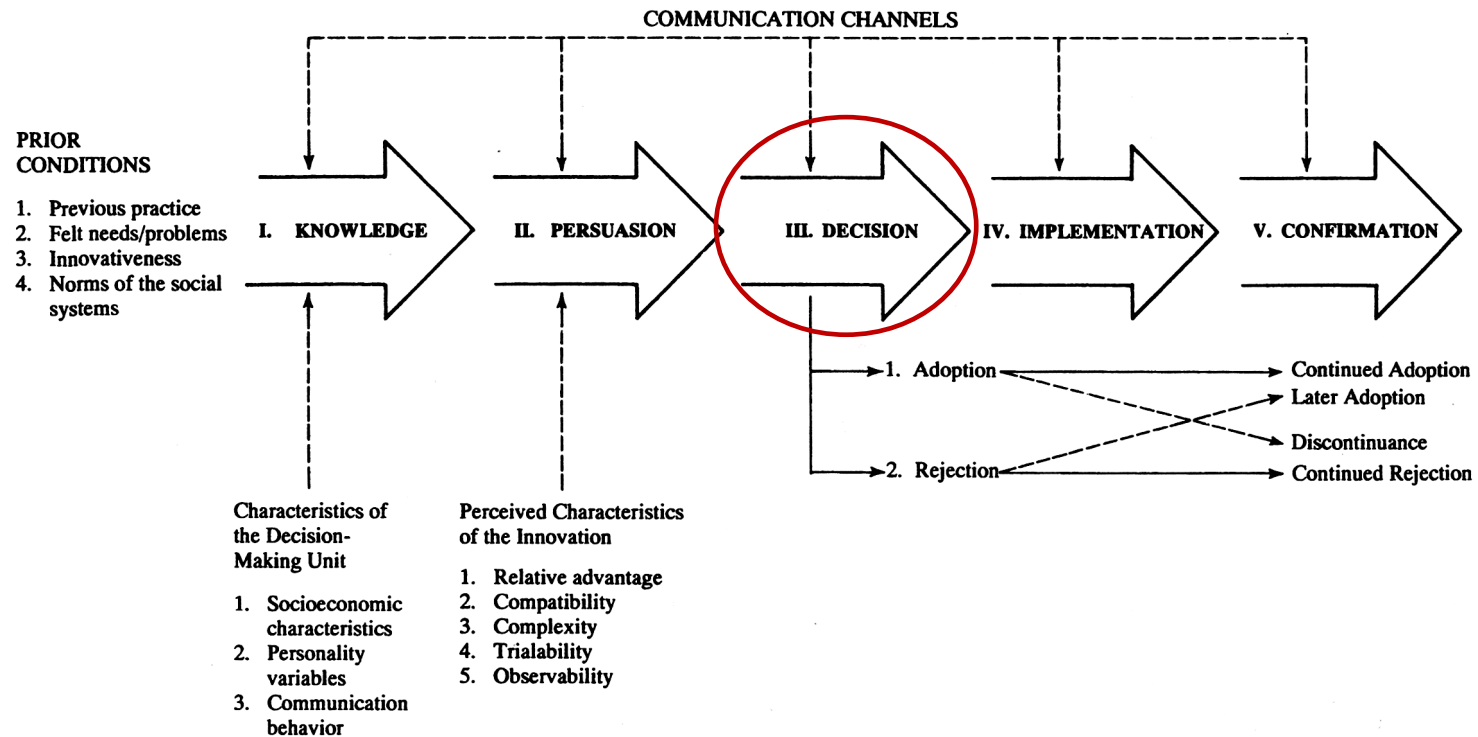
coupled with

3 years (so far) innovations development/ed. tech.
support

Informal observations of user “satisficing”

In the literature

Figure 5-1. A Model of Five Stages in the Innovation-Decision Process



The *innovation-decision process* is the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed). New York: Free Press.



For adoption Educative Value must outweigh Adoption Overhead

Educative
Value

Adoption
Overhead

Really it is a type of Time, Cost, Benefit Analysis



It happens at an individual faculty member level



Training Design: The Essence Of Creating A Learning Experience
Retrieved March 28, from: <https://elearningindustry.com/training-design-learning-experience>

Design and assembling learning experiences is complex. (I'll resist a bad “a lot of moving parts” pun.)



Training Design: The Essence Of Creating A Learning Experience
Retrieved March 28, from: <https://elearningindustry.com/training-design-learning-experience>

If instruction was computer programming

Typical computer programming steps/phases	Instruction
Problem definition	Learners need to become proficient and knowledgeable about a subject or topic. As "teaching" and "learning" are two separate, independent and often disconnected activities, the problem is how to get other people to learning something.
Planning the solution	Identify and articulate learning outcomes of the course and devise a set of learning activities and assessments to support these outcomes.
Coding the program	Plot a set of learning and assessment activities that neatly fit into 3 - 45 minute classes in each of 13 weeks.
Testing/Debugging the program	This phase occurs in real-time throughout deployment. Deployment environments (students) are ill-defined, unique and responding differently and unpredictably to the program.
Documenting the program	In instruction, this step occurs after "coding the program" but before "testing/debugging". Common forms are course outlines, lesson plans and course readings.

Implementation Overhead-Unique to Instructor/Class



Docter, P., Del, C. R., LeFauve, M., Cooley, J., Rivera, J., Poehler, A., Smith, P., ... Walt Disney Studios Motion Pictures,. (2015). *Inside Out*.

Separation of concerns between instructors and institutional information technology services areas



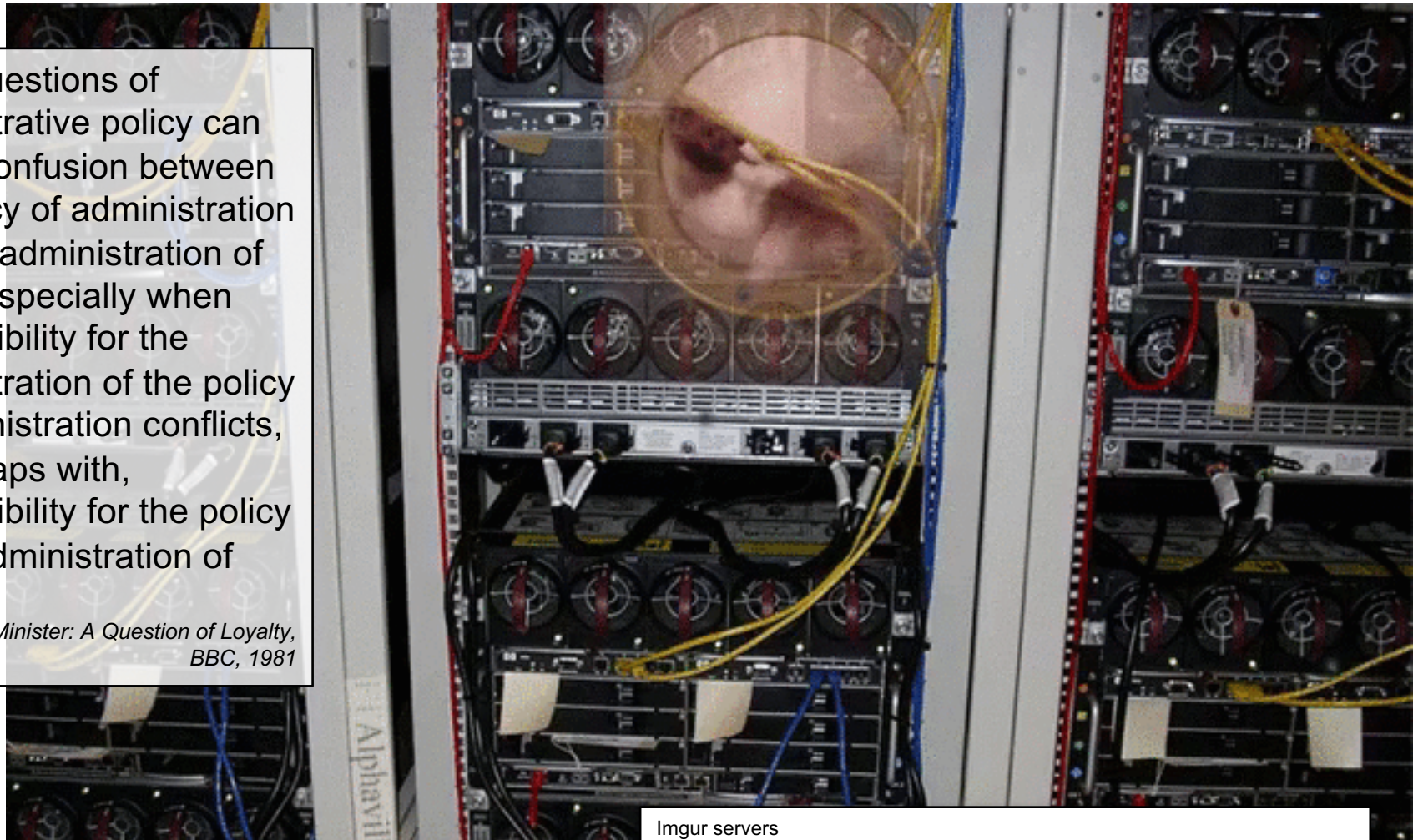
From separation-thinking to integration-thinking: it's easy!

Retrieved March 28, from: <https://louisdietvorst.wordpress.com/tag/separation/>

Policies, cost, approvals, installation, etc.

...the questions of administrative policy can cause confusion between the policy of administration and the administration of policy, especially when responsibility for the administration of the policy of administration conflicts, or overlaps with, responsibility for the policy of the administration of policy.

*Yes Minister: A Question of Loyalty,
BBC, 1981*



Imgur servers

Retrieved March 28, from: <https://imgur.com/gallery/mlrYnrE>

Instructor learning, strategy & setup



Tired women sitting with computer
Dreamstime, royalty-free stock images

Student Learning: time for this is limited

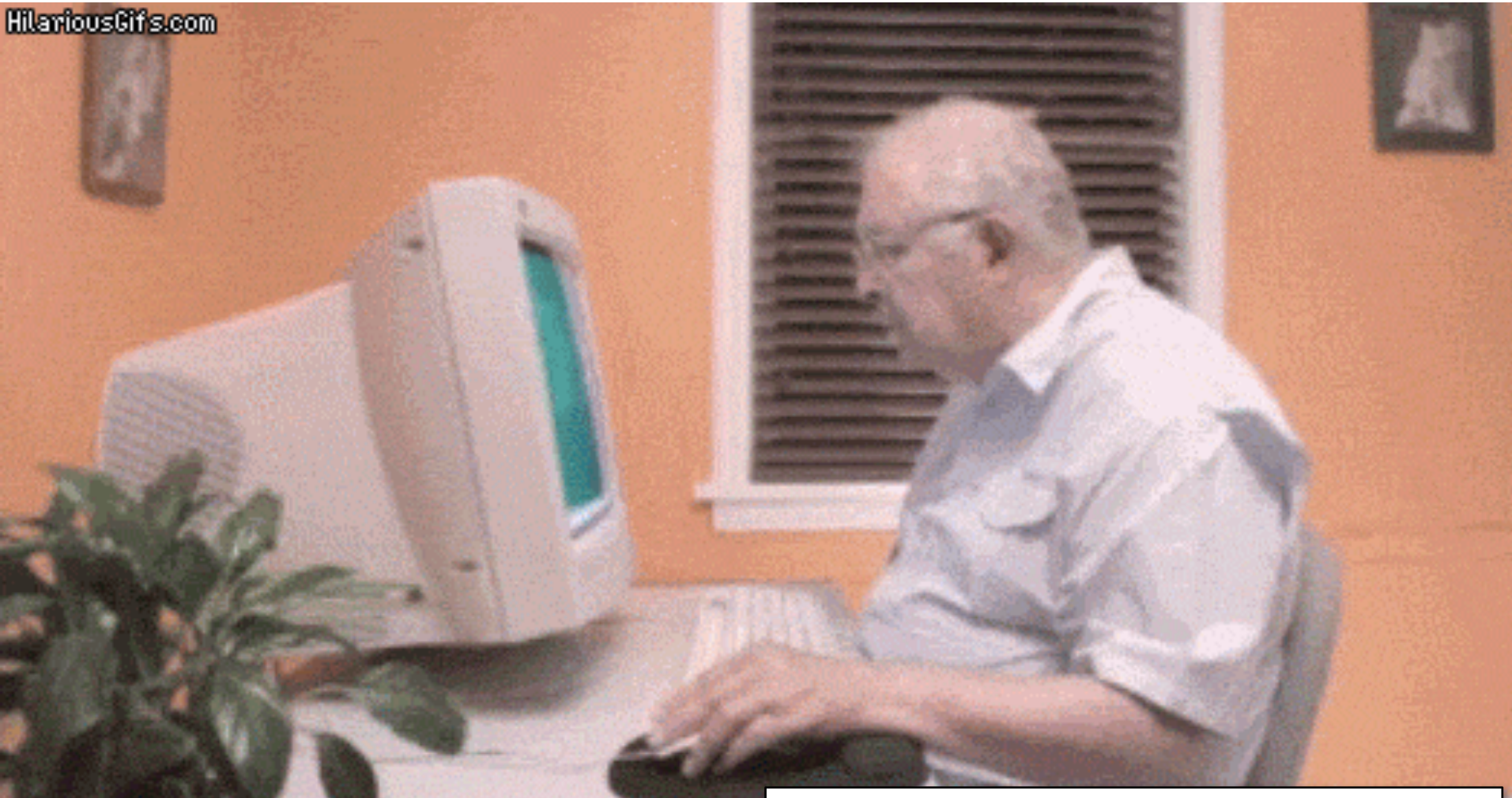


Collecting digital user data without invading privacy

Retrieved March 28 from <https://phys.org/news/2014-03-digital-user-invading-privacy.html>

Ease of use: instructor/student classroom perspective

HilariousGifs.com



Grandpa deletes my computer

Retrieved March 28, from: <https://media.giphy.com/media/ZmrLi7eC703u/giphy.gif>

Q. What else would constitute adoption overhead/barriers?



Tasks, xkcd: A webcomic of romance, sarcasm, math, and language.
Retrieved March 28, from: <https://imgs.xkcd.com/comics/tasks.png>

Educative value

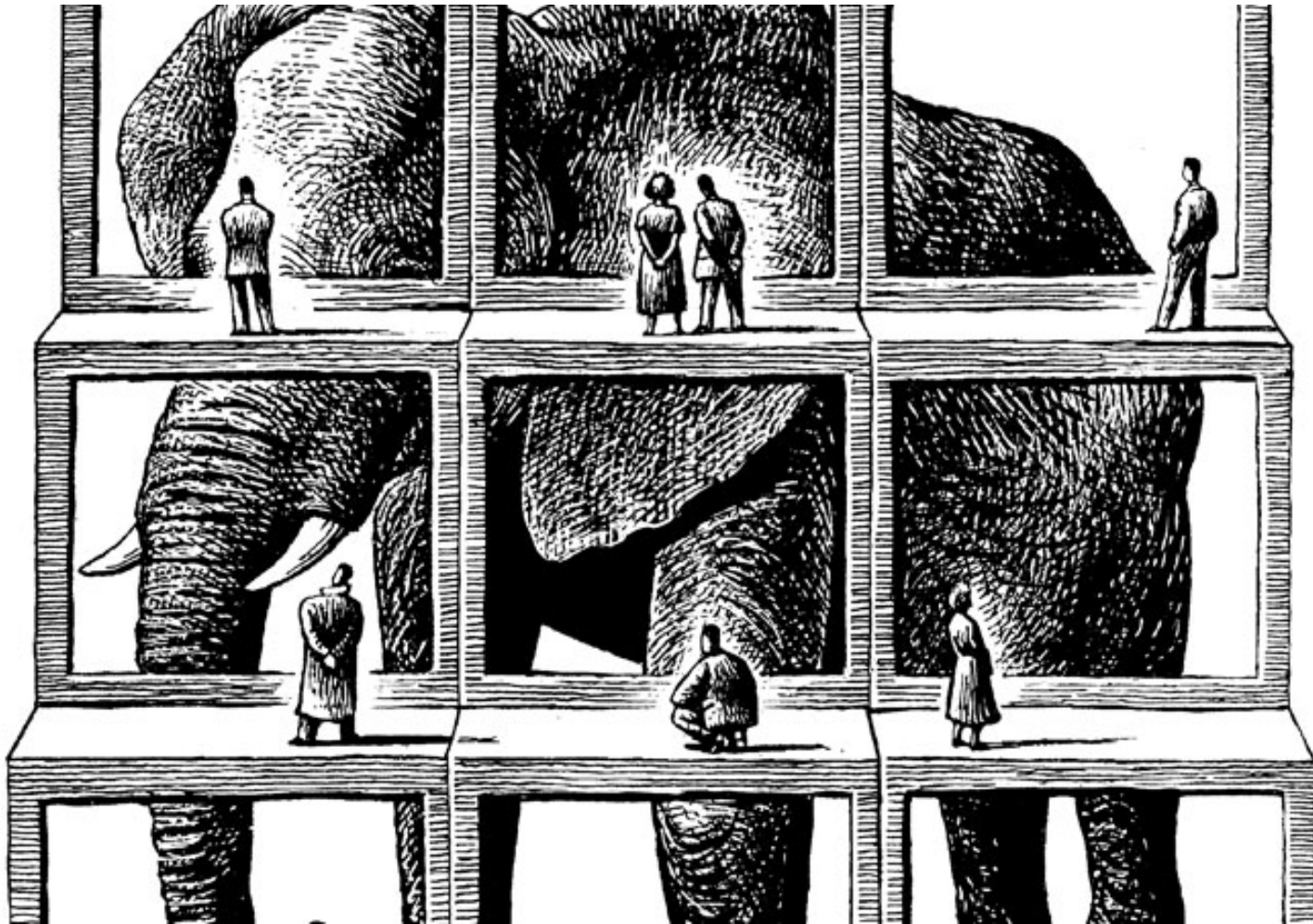


Determined by individual faculty members



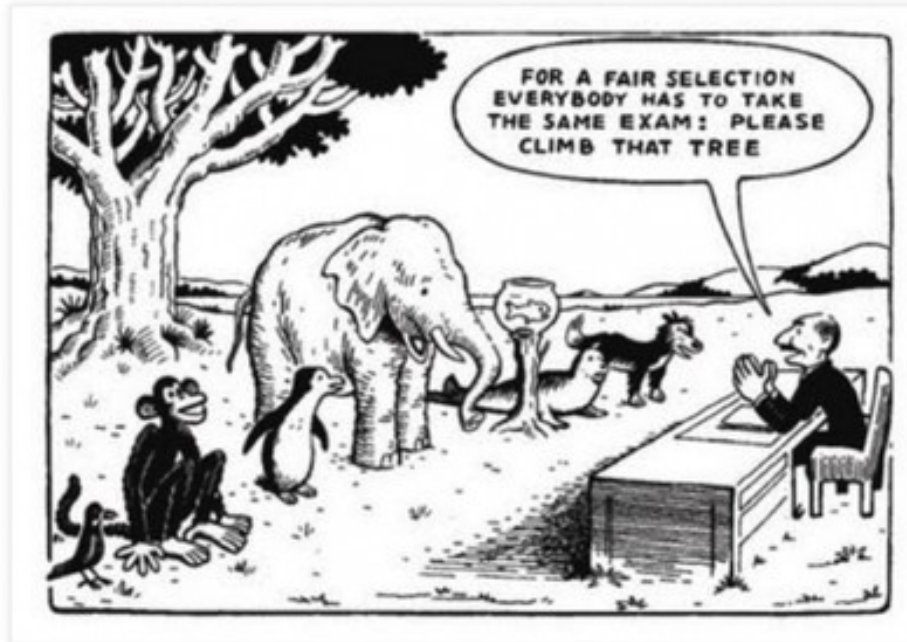
A professor gives a lecture to his students
Shutterstock

Highly contextual



Designing Assignments and Rubrics, Paige's Education Blog
Retrieved March 28, from: <http://pemducation.blogspot.ca/2015/02/designing-assignments-and-rubrics.html>

Based on the value to supporting learning outcomes & efficacy



"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid."

-Albert Einstein

Also based on available time



Loop computer gif

Retrieved March 28, from: <https://giphy.com/gifs/loop-computer-OEfhreilPQAoM>

Q: What other things could contribute to the educative value assessment?



Priorities, xkcd: A webcomic of romance, sarcasm, math, and language.
Retrieved March 28, from: <https://imgs.xkcd.com/comics/priorities.png>

So what? How does this help us?

When engaging instructors on new tools, provide enough help to enable them to individually determine/balance educative value and implementation overhead in their own contexts



bibelotmania

Retrieved March 28, from: <http://bibelotmania.blogspot.ca/2016/04/endogenesis.html>

Low overhead, medium to high potential value



Medium overhead, medium to high potential value



Sandstorm.io



High overhead, medium to high value

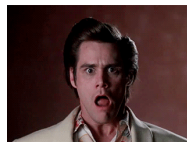
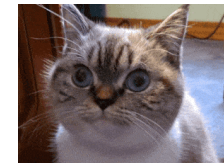
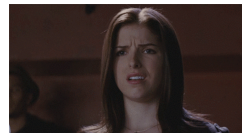
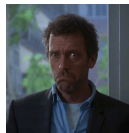
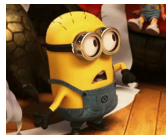
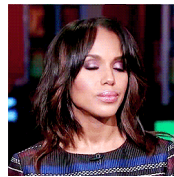
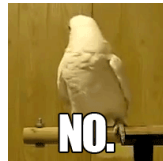


Blackboard



Adobe® Creative Cloud™

Reactions/Discussion?





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