TOPPS - What We Learned

TOPPS stands for Transforming Online Pedagogy and Practice Symposium. Please plan to join us Friday, August 10th from 2-4pm for a follow-up to the TOPPS event. Consider signing up for a fall 2018 faculty literary circle. One of the circles is focusing on Minds Online.

This summary will focus on the morning sessions. The TOPPS website will cover details from the sessions - morning and afternoon.

Monday - Online Faculty and Student Panel Discussions

Amy highlights
“Good teachers are great thieves.”

- There was a keen interest in synchronous online courses at UNCG. The UTLC plans to provide faculty members and departments more information about how to create and facilitate synchronous online courses.

- There was a lot of talk about having a strong faculty presence in your online course. The online students shared how they want to see participation in discussion forums. They are not expecting replies to everyone, but posts that provide feedback if students are going in the right direction and suggestions on how to get the conversation back on track.

- Online students suggested that online faculty members need to connect students to one another during the first week of class. Online students don’t seek each other out. Instead, they need faculty assistance in making those initial connections.

- Online students talked about how they use grading rubrics as a checklist, but when an assignment is graded, comments need to go past the standards on the rubric. The standards mean something different to the students than the faculty members.

- The faculty panel discussed the time spent designing an online course is “Pay upfront or pay later, and paying later is a lot most costly.”

- Course syllabi is too long. Create a welcome video that addresses the key aspects of the syllabus. One student shared a frustration of “chasing documents” in the online classroom. Faculty members who post numerous documents that they reference throughout the course make the student chase around the course for documents.

- Don’t try to do what you do in a face-to-face course online. Target the students differently. Don’t miss out on what online learning can give you.

- Keep media resources that you create as generic as possible so that you can use them for multiple semesters.
Jane highlights
Faculty Panel
● Kathryn Aldridge - to build community online among students, start with activities that foster and build on student commonalities. Example: Kathryn selects a group of books. Students sign up for a book, which puts them in a group (book club) They read and the book according to specified guidelines.
● Kay Lovelace - sets up every unit the very same way. Minimizes students’ cognitive load and clarifies expectations.
● Kerri Richardson - synchronous online can really help professional students efficiently share and comment upon each other’s work and experiences.
● Wade Maki - Tell students that you will reply to an initial email inquiry within 48 hours.
Student Panel
● Feedback from instructors is key - “students need to know if they are doing it right”
  ○ Want further, deeper feedback.
  ○ Instructors need to participate in the discussion board.
● Making sure that instructors make contact with each student individually
● Students can feel that they are teaching themselves.
● When working in small groups, give time for them to get to know one another.
  ○ Do need to work in groups to learn from one another.
  ○ Do small projects together - like solving math problems.
  ○ Large group projects are hard to do online.
  ○ Do group work using a tool where the instructor can see which student is doing what.
● Workload
  ○ Give full week to complete an assignment.
  ○ Open things a bit at a time - keeps students coming back to the course.
  ○ Students may not understand what you mean by a rubric and may not access it to get the detailed comments - need to be taught how to do this

April Wright highlights
Faculty Panel
● Wayne -
  ○ Be very specific when giving directions.
  ○ Be sure you aren’t forgetting things in your head and use real words.
● Kerri -
  ○ consider your audience and their needs;
  ○ give the students an opportunity to speak - literally verbally speak
  ○ Use Collaboration to work in break-out groups - then bring back together like we do in the f2f classroom - circulate from group to group
● Kathryn -
  ○ ensure the pedagogy is driving the teaching, not the reverse;
  ○ align content along all methods of delivery and expectation
Give students key points to help them narrow

- **Wade** -
  - use idiot proof design;
  - cut out what you can;
  - keep due dates the same;
  - underpromise/overdeliver
  - Break the mold - don’t think something can’t be done just because it hasn’t - ask how can I.....
  - Ask yourself what can be done new/better online

- Not sure where these ideas came from but they are worth mentioning
  - Use videos of yourself to connect
  - Do multiple group assignment and change groups
  - Use WebEx and record so students can review
  - Set Canvas to make students post before they can see replies to avoid the “me too” style of post
  - Have students take screenshots of fault screens and email them when problems arise
  - Ask students what they learned from other students in discussion posts
  - Reach out when students don’t turn things in. Don’t just assume they are blowing assignments off.

**Student panel**

- **All**
  - Instructions should participate in discussion forums

- **Will** -
  - assignments should be well suited to group work online - not just transferred from classroom
  - Put yourself in student’s position - plan assignments with idea that students are remote, time-constraints, etc.
  - Fuel discussion forms, don’t try to drive them
  - Ask socratic questions to help keep things on track
  - Beware of “Empty A’s” - explain why they got an A
  - Mute others on discussion posts - levels the playing field

- **Arren**
  - Keep synchronous projects short
  - Try to keep workload in mind
    - *This is my comment - I read an article that pointed out that we are subject matter experts and that our students are not. Think about how long it would take you to do something and then multiply that by 3!*  
      ([http://cte.rice.edu/blogarchive/2016/07/11/workload](http://cte.rice.edu/blogarchive/2016/07/11/workload))
Tuesday - Leveraging Psychology - Attention and Memory

Michelle Miller’s Resources for Tuesday and Wednesday workshops.

Amy highlights

- We all have a limited amount of cognitive load. Focused attention dictates how we use our cognitive resources. When we ask our students to process multiple steps and processes to complete an assignment, we zap their cognitive load. Michelle suggested that a strong course design would help us to minimize the extraneous load and focuses mainly on our content and assignments.
- Michelle talked about the importance of the testing effect using many, constant assessments in a course to help students to help students use the information from the course to pull it into their memory. Testing helps to automate lower and higher level processes through practice since it requires students to retrieve it from their memory.
- The spacing effect or distributed practice refers to spacing out study over a period of time into smaller chunks. For instance, students could get more out of four one-hour sessions than one four-hour session.
- Context plays an important role in our memory. As you design your course, keep a consistent overall structure, but explore different contexts and approaches to introduce the content to help students learn the material.

Jane highlights

Opening:
Attention - almost nothing happens without it.

- Involves the brain’s mechanisms for prioritizing and allocating resources.
- Highly intertwined with memory
- Teaching memorably means capturing students’ focus first.
- Problems with attention: cognitive load; poor mastery of basic knowledge; dysfunctional multitasking.
- Solutions: ask students to respond; automatize basic knowledge; use assignments that require and reward practice and consider incentivising with speed; address myths (such as students are digital natives with outstanding digital abilities)

Memory - an important aim, but not the only aim.

- We know a lot about how to build better recall in less study time.
- Tips for building memory
  - Use visuals (the brain is better at visuals)
  - Testing effect (requires retrieval)
  - Spacing effect (distributed practice) - revisiting material over time.
  - Interleaving - relatively new in the research; applicable thus far under one of two conditions
Distinguishing among categories (what belongs in what category)
Learning to apply different kinds of problems

Attention Matters! - 1-2 hour module for students to explore their attention limits - used at Northern Arizona


3 Modules
- What do you know? (concepts)
- What happens with cognitive overload?
- Provides strategies
  (includes discussions that students really get into; also a counterproductive beliefs survey based on the great book The Invisible Gorilla (2010) by Chabris and Simons.)

Testing is a way to get everyone on the same page at the same time, a major issue in online discussions.
Weekly learning cycles are a way to break up the cramming syndrome.
On Monday, I thought Kay's information on timed exams was important. That applies to this conversation about memory learning because within reason it limits lookup times.

This is a major philosophical issue. What is the role of memory learning in a world where better information is available on your phone?

**April Wright highlights**

Michelle Miller
- Consider the use of multimedia as an interactive showing of concepts
- Tools to help
  - Quizzes that are
    - Interactive
    - Repeatable
    - Personalized
    - Games
  - Retrievalpractice.org
- Consider group testing in conjunction with individual testing
Wednesday - Leveraging Psychology - Motivation and Thinking

Amy highlights

- Information that we learn and remember tends to be context-specific and rarely transfers as well as we assume. We think in a particular way in a particular context. Focus on the underlying structure of problems aids in the transfer process. Repeated practice across contrasting examples.
- Reflect throughout the course on what students should be able to do. Align activities to skills. For online students, think about what they are doing with their time.
- Aim for transfer of information. Present as many problems as students need to develop mastery. Think about lots of quizzing.
- Use scenarios to simulate important skills, case studies, problem-based learning, role plays to keep students motivated.
- Self-determination theory (Deci/Ryan) There are three conditions needed to keep student motivated - 1) competence, 2) relatedness (social) and 3) autonomy (choice)
- Academic Self-Efficacy - If students feel like they can do it, they will try it. If they don’t feel like they can do it, students will not try it.
- Design solutions - Have a plan on how you can keep students motivated and engaged, use assessments early and often including low-stakes assignments with motivating feedback, build in routines such as consistent deadlines, habits put fewer demands on willpower

Jane highlights

Thinking

- Often gets crowded out by content.
- Includes diverse skills and processes: formal reasoning, problem-solving, analogies, critical thinking.
- Thinking skills are context-specific and rarely transfer as well as we assume.
- Suggested strategies:
  - Focus on underlying structure of problem (this aids transfer).
  - Repeated practice across contrasting examples.
  - Vary the context while keeping the underlying structure the same.
- Critical thinking is particularly challenging to address
  - Varies across disciplines
  - 2-layer process - when to and how to

Simulations available online
• Sniffy the Rat - now owned by Cengage (there are funny videos on YouTube as well)
• CogLab - for the stroop effect
• PNET Interactive Simulations - Larry McPhee at NAU - to bring students up to speed on
  chemistry for their Bio 100 course.
• Low tech solutions
  ○ Brief writing assignments modeled on real-world scenarios
  ○ Role playing

Motivation
• What motivates students: grades, interest, understanding of applicability; instructor
  invites the student in.
• Research findings:
  ○ Role of incentives - extrinsic vs intrinsic - can have both
  ○ Self-determination theory (Deci & Ryan) - important that students have a sense
    of competence, relatedness, and autonomy/agency.
  ○ Academic self-efficacy - is students see that their efforts are impactful, they will
    persist.
  ○ Willpower (“ego depletion”) - making yourself do something in the short run but
    more difficult to do so after making too many decisions at once.
  ○ Mindset (Dweck) - which is changeable
• Borrow from Game Design - see Jane McDonigal - Reality is Broken - Principles
  ○ Flow in the Zone of Proximal Development - not too hard; not too easy.
  ○ Gamers love to fail because they can jump in and start again
  ○ Quick start and multiple attempts
  ○ Sense of mission
  ○ Narrative
  ○ Knowing where you stand (transparency)
• Referenced Dickey (see YouTube) article Engaging by Design: how engagement
  strategies in popular computer and video games can inform instructional design.
  Educational Technology, Research & Development 2005:
  https://link.springer.com/article/10.1007/BF02504866
### Engaged learning
- Focused goals
- Challenging tasks
- Clear & compelling standards
- Protection from adverse consequences for initial failures
- Affirmation of performance
- Affiliation with others
- Novelty & variety
- Choice

### Engaging Games
- Focused goals (narrative, character roles, interaction with non-playing characters and other players’ perspective)
- Challenging tasks (Setting, action hooks, resource hooks, tactical & strategic hooks, time hooks)
- Clear & compelling standards
- Protection from adverse consequences for initial failures
- Affirmation of performance
- Affiliation with others
- Novelty & variety (narrative arcs)
- Choice

### Design suggestions
- **Have a plan**
  - Map out how to keep students motivated through the course.
  - Materials can foreground *why* students are learning, not just *what* they are learning.
  - In part of semester when students get tired - put something compelling there.
- **Early and often**
  - Use frequent low-stakes assignments
  - Reward effort
  - Provide motivating feedback
  - Discourage procrastination
- **Build routines - aka habits**
  - Good habits put fewer demands on willpower.
  - Set consistent schedule - especially for when students are expected to login / turn in work.
- **Help students develop metacognitive skills** - cited Linda Nilson’s Self-Regulated Learning
- **Recommended the book Changeology - 5 steps to realizing your goals and resolutions by John Norcross (2013)** - good for students. [http://changeologybook.com](http://changeologybook.com)
- **Apps to help us focus** (particularly to turn off apps on our phones)
  - SelfControl (for Macs)
  - Pocket Points (institution has to participate in - students get points and businesses participate so students get free meals etc)
  - Cold Turkey
  - Freedom (expensive - you can set goals and things you can't access for the day)
- Moment (gives you info - tracks your behavior - how much time you spent on what apps and what you were doing.
- Flip Off (has some challenges)

Challenge mentioned by faculty in the session: student persistence to improve over multiple drafts.