MAKE IT STICK:
Active Learning Techniques for Programming and Instruction
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1. WHAT IS YOUR EXPERIENCE?
MENTI.COM

Code:
56 14 76
2. WHAT IS ACTIVE LEARNING?
Active learning engages students in the process of learning through activities and/or discussion in class, as opposed to passively listening to an expert. It emphasizes higher-order thinking and often involves group work. (Freeman et al., 2014)
TECHNIQUES
3. WHY USE ACTIVE LEARNING TECHNIQUES?
DEVELOPS SOFT SKILLS

INCREASED RETENTION

ENGAGED LEARNERS

FUN & CREATIVE
### What is the Impact?

<table>
<thead>
<tr>
<th></th>
<th>Failure Rate</th>
<th>Passing Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Lecture</td>
<td>33%</td>
<td>56%</td>
</tr>
<tr>
<td>Active Learning</td>
<td>21%</td>
<td>81%</td>
</tr>
</tbody>
</table>

(Freeman et al., 2014)  (Montana State University, 2014)
SUCCESS

Students Engaged are Student Learning
1. WHAT ABOUT MY FAMILY?
WHAT ABOUT MY FAMILY?
2. GRAD STUDENTS
ORIENTATION GOTCHA
3. Find what resonates
WHY WOULD I EVER NEED TO USE THAT?

4. CDS Develops New Strategies to Meet Student Needs

Neuros | U.S. Federal | 623 Words | Oct 13, 2017 | Mike Mosley | University Wire

Senator and College fourth-year Call Kelley, who also serves as a dining ambassador, sees these updates to campus dining as long overdue. "[Students are]coming in to figure out what the future of campus dining can look like. It's a lot of buildings there...

in decades. The aesthetic issues are numerous, especially at Stevenson [Dining Hall]." Wood and others hope that fresh perspective will bring innovative solutions for dining.

5. Campus dining changes a check mark for student-led efforts

Neuros | U.S. Federal | Dist. of Columbia | 1355 Words | Mar 27, 2016 | Andrew Cushman | University Wire

Student leaders say last week’s changes to the dining program will solve a years-old problem. A new open dining system, to start next fall will lift spending mandates for on-campus dining options, such as J Street and Pelham Commons, and allow students to use their Dining Dollars at any location that accepts Cash. Student leaders said the changes make dining more affordable and that they are on average students

money. GW’s new dining system makes it an outlier among its peers and can save students

more. GW’s new dining system makes it an outlier among its peers and can save students

money. GW’s new dining system makes it an outlier among its peers and can save students

money.

6. Campus dining changes bring new options, partnerships

Neuros | U.S. Federal | Tennessee | 670 Words | Aug 21, 2017 | Sabrina Zarr, Campus Editor | University Wire

...J Street will close this summer to become a 'more modest dining option.' Officials will also renovate the basement dining area in Shankman Hall. Incoming SA President Erkka Ferrman and Executives...
4. Google Sheets
## Progress & Assessment

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
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<tbody>
<tr>
<td>1</td>
<td><strong>Company</strong></td>
<td>short business description</td>
<td>manufacturing or service company</td>
<td>name 3 products / services</td>
<td>2019 revenue or sales ($)</td>
</tr>
</tbody>
</table>
5. Digital Scavenger Hunt
MKTG 230: Digital Scavenger Hunt

Company Information

What is a ticker symbol? *
Your answer

Why is it important to have a company's ticker symbol when searching the databases? *
Your answer

What is Microsoft's ticker symbol? *
Your answer

Is Microsoft publicly traded on either the NYSE or NASDAQ? *
- Yes
- No

Searching: Business Source Complete | Choose Databases
WHAT ARE SOME OF YOUR SUCCESSES?
"I never thought it was humanly possible, but this both sucks and blows."

Bart Simpson
STRATEGIES FOR CURIOSITY
HELLO!

Use the technology they are using
TOPICS THAT RESONATE
CONSIDER
POLLING
PRIZE BOWL
<table>
<thead>
<tr>
<th>RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gamification</strong></td>
</tr>
<tr>
<td>× Kahoot!</td>
</tr>
<tr>
<td>× Mentimeter</td>
</tr>
<tr>
<td>× Poll Everywhere</td>
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</table>
REFERENCES


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THANKS!

any questions? you can find us at:

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Attendees' Engaged Learning Suggestions

Scavenger hunts using ipads + Evernote and taking pictures
Create centers
Breakout boxes – mini escape room concept
Chinese checkers for managing business interests
Group sharing
Database speed dating
Class decision of end product
Students as experts – then present to class
4 corners
Establish expectations at start of class
FYE – Lesson learning styles: incorporate using the game Taboo with our twist on the game
Socratic Seminars – role play / choose scenario game
News v scholarly – EDM students
ATTENDEES' ENGAGED LEARNING SUGGESTIONS

Padlet (visible responses) – pre assess / post assess (also as a collective resource that students evaluate themselves – both them and their classmates)
Credo Mind Map
Plickers
Jigsaw – cooperative learning strategy
Kahoot
Poll Everywhere
Hypothes.is – web annotation software
Jeopardy-style game to learn about the library
NCPedia vs Wikipedia
Use exitpass (exit ticket, exit slip) to see if there are additional questions. Send answers to professors to follow up on.
Project Cora for teaching/classroom ideas
Clue game
Google Forms
Mind / content mapping