One More Student

Session 3: Is there such a thing as an exciting lecture?

Workshop series by First Year Experience and Center for Excellence in Teaching & Learning

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Dan Ryan
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PARKLAND COLLEGE

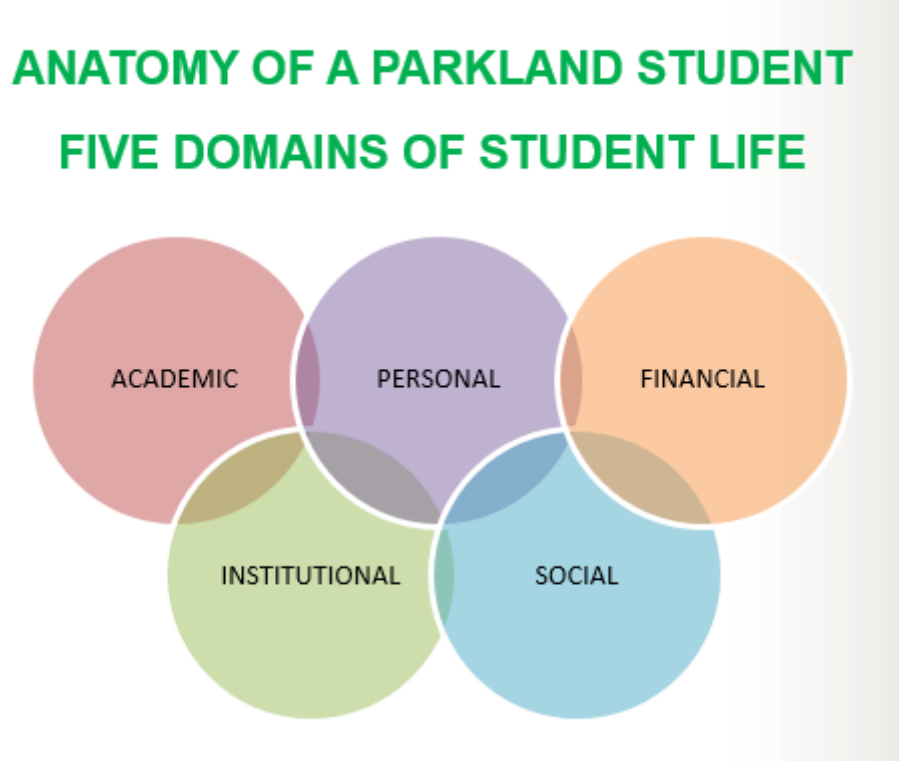
Our goal is to discuss how we can keep one more student by:

- Discussing the academic challenges our students face
- Understanding what learning techniques research suggests to be effective
- Coming away with practical tools to help engage students in effective learning strategies

Now we want to know who you are and what your goals are!

PARKLAND COLLEGE

We know academic support is just one of our students varied needs



- 15% come to class often/very often without completing assignments
- 40% care for dependents living with them
- 25% work more than 30 hours per week
- 31% are self-financing their education
- 75% do not participate in college activities
- 70% said Parkland does not help them with non-academic issues

Click here to access the PPT slideshow on the Anatomy of a Parkland Student.
And click here for the handout on the challenges Parkland students face.

But do students know how best to learn?

What do you think that students say is the most effective way to learn by reading a textbook?

A. Highlighting information

B. Summarizing key points

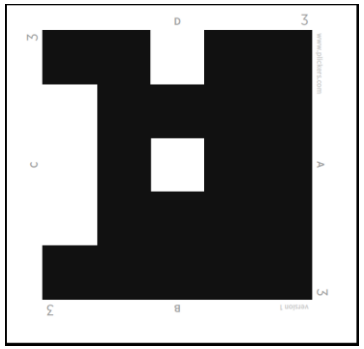
C. Memorizing keywords

D. Re-reading material

study

(verb)

The act of texting, eating and watching TV with an open textbook nearby.



Turn your plicker card to the direction that reflects the answer you want.
Click here to learn about using plickers to engage students in class.

But do students know how best to learn?

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(verb)

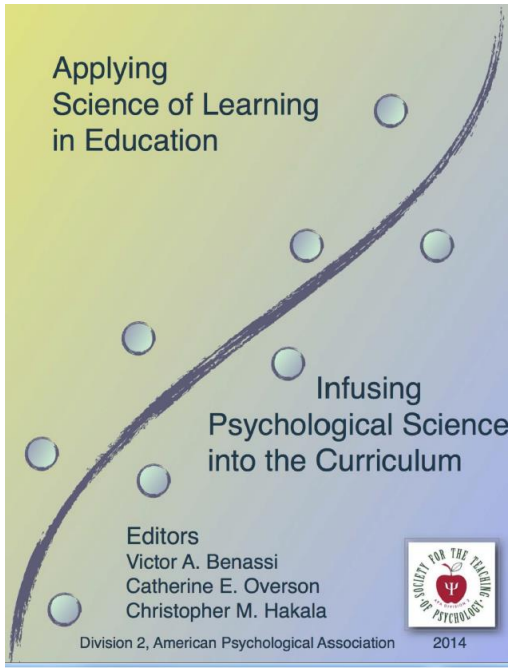
The act of texting, eating and watching TV with an open textbook nearby.

Do you agree with them? Why or why not?
Let's see if it's true...

Let's explore some techniques that might help students learn best!

This publication does an excellent job of reviewing what research suggests about what learning techniques are likely to be most successful.

Click here to access a pdf of the publication.



Let's work in groups to look at a few articles.

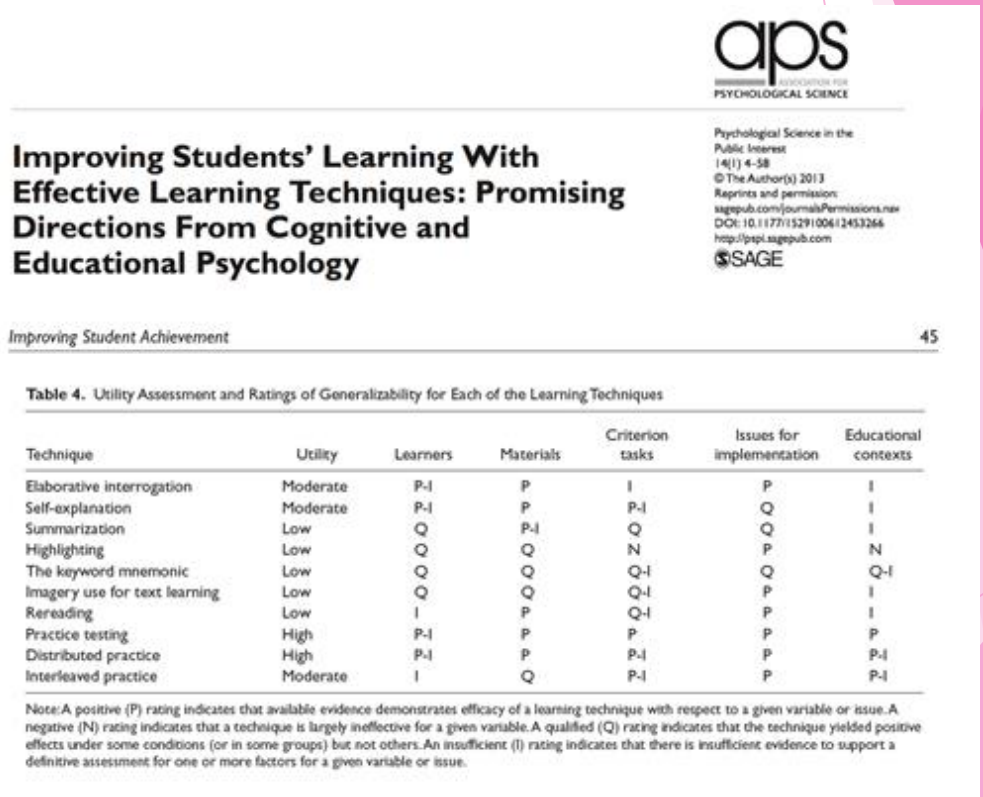
Each group has the task of summarizing the learning technique described!

Now let's talk together as a larger group to delve into these techniques further

- What do these learning techniques have in common?
- And how do these learning techniques differ?

What these learning techniques have in common...

- Meta-analysis examined effectiveness of 10 learning techniques (Table 4)
- Five most effective techniques were ones that required more ACTIVE processing:
  - Distributed practice
  - Practice testing
  - Elaborative interrogation
  - Self-explanation
  - Interleaved practice



aps
ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

Improving Students' Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology

Psychological Science in the Public Interest
14(1) 4–58
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Table 4. Utility Assessment and Ratings of Generalizability for Each of the Learning Techniques

Technique	Utility	Learners	Materials	Criterion tasks	Issues for implementation	Educational contexts
Elaborative interrogation	Moderate	P-I	P	I	P	I
Self-explanation	Moderate	P-I	P	P-I	Q	I
Summarization	Low	Q	P-I	Q	Q	I
Highlighting	Low	Q	Q	N	P	N
The keyword mnemonic	Low	Q	Q	Q-I	Q	Q-I
Imagery use for text learning	Low	Q	Q	Q-I	P	I
Rereading	Low	I	P	Q-I	P	I
Practice testing	High	P-I	P	P	P	P
Distributed practice	High	P-I	P	P-I	P	P-I
Interleaved practice	Moderate	I	Q	P-I	P	P-I

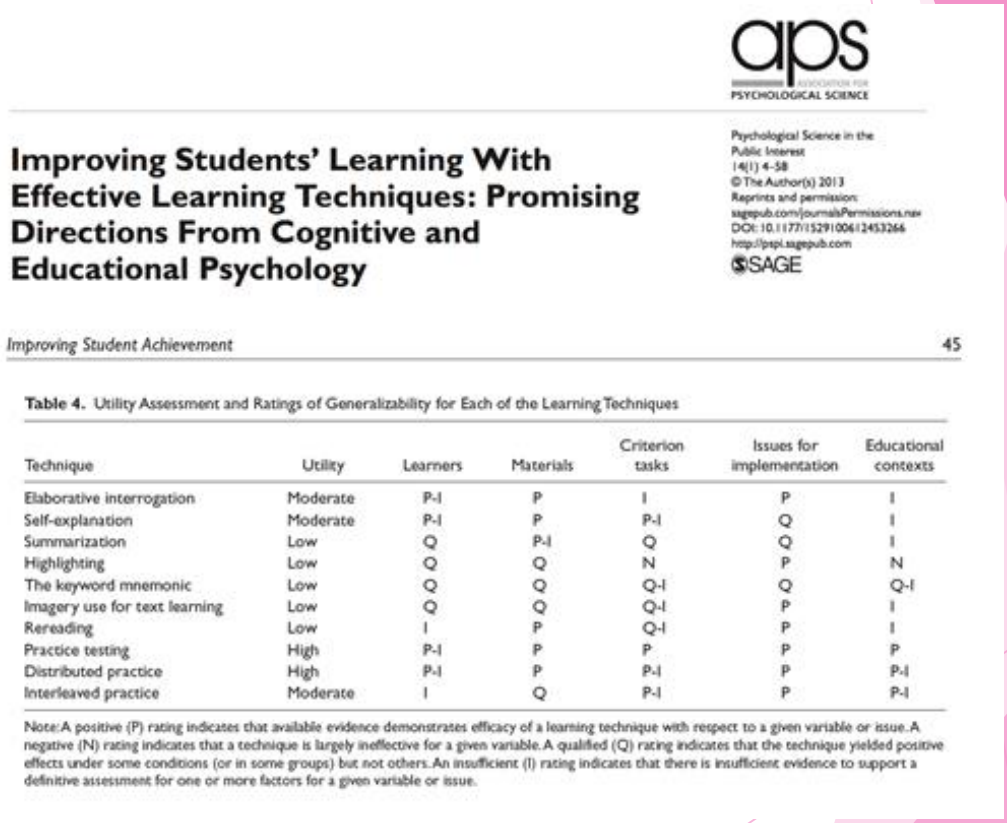
Note: A positive (P) rating indicates that available evidence demonstrates efficacy of a learning technique with respect to a given variable or issue. A negative (N) rating indicates that a technique is largely ineffective for a given variable. A qualified (Q) rating indicates that the technique yielded positive effects under some conditions (or in some groups) but not others. An insufficient (I) rating indicates that there is insufficient evidence to support a definitive assessment for one or more factors for a given variable or issue.

Click here to access Dunlosky et al., 2013

So, were the students' correct or not in their view of how to best read?

- None of the 4 PASSIVE reading techniques were effective!
  - NOT highlighting
  - NOT summarizing
  - NOT memorizing keywords
  - NOT re-reading material

So, our students typically are wrong in thinking of how to best study!



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Rereading	Low	I	P	Q-I	P	I
Practice testing	High	P-I	P	P	P	P
Distributed practice	High	P-I	P	P-I	P	P-I
Interleaved practice	Moderate	I	Q	P-I	P	P-I

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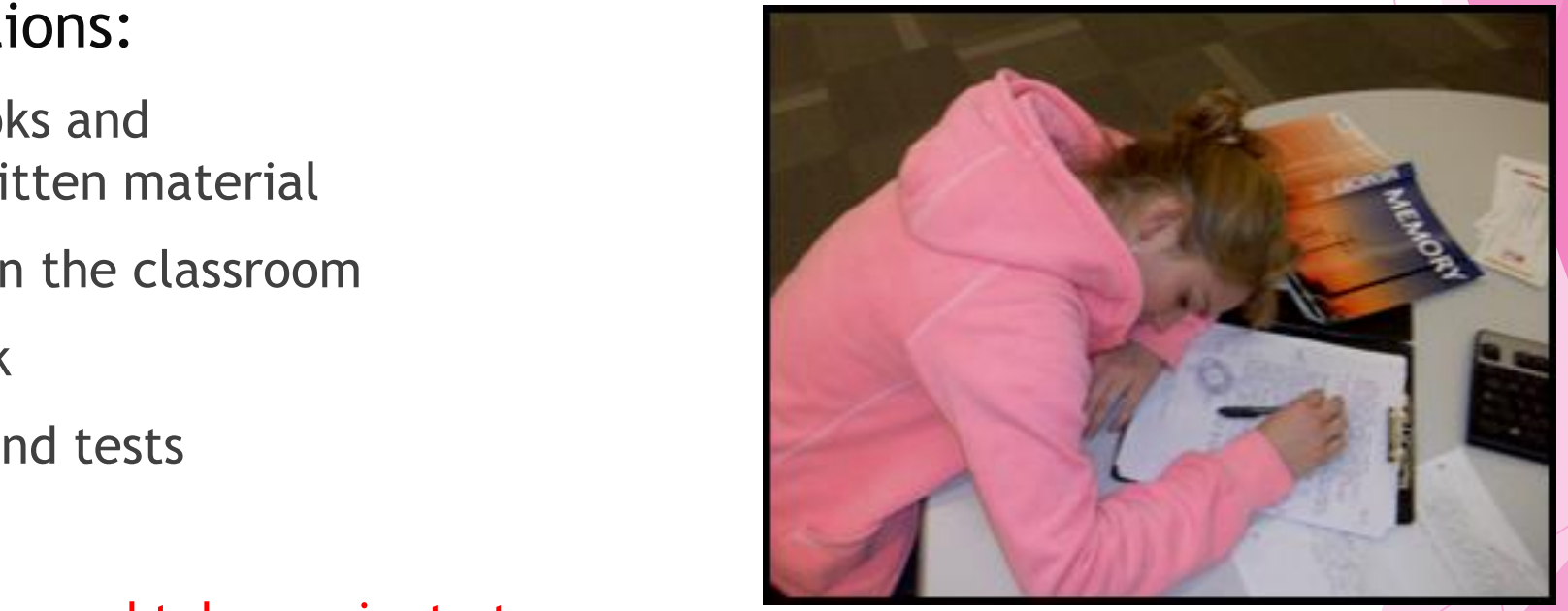
How these learning techniques differ...

They can be applied to learning in different situations:

1. Reading textbooks and comprehending written material
2. Learning while in the classroom
3. Doing homework
4. Taking quizzes and tests

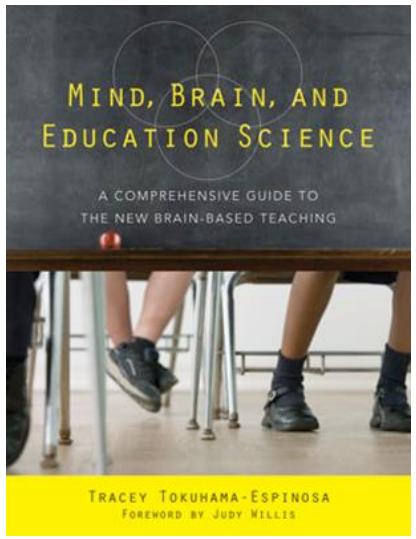


Let's partner up and take a minute to think of how we can apply the 5 active learning techniques to these situations!

Here's another research-based resource on the best learning techniques

This book does an excellent job of reviewing what research suggests about what learning techniques are likely to be most successful.

You can borrow it from the Hub in CETL.



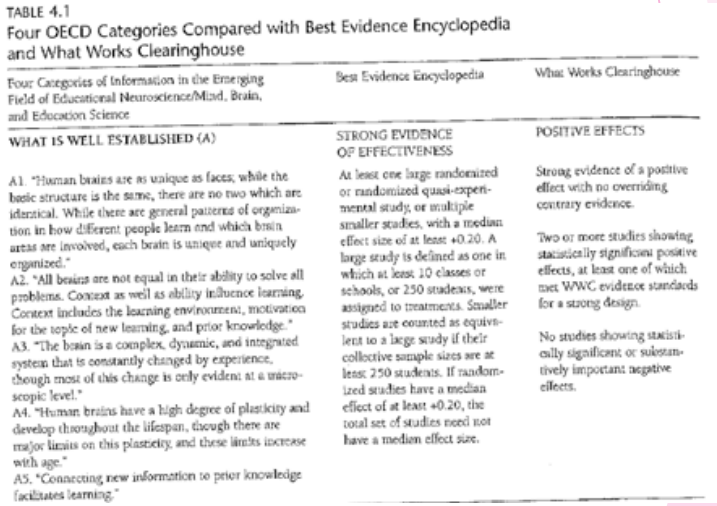
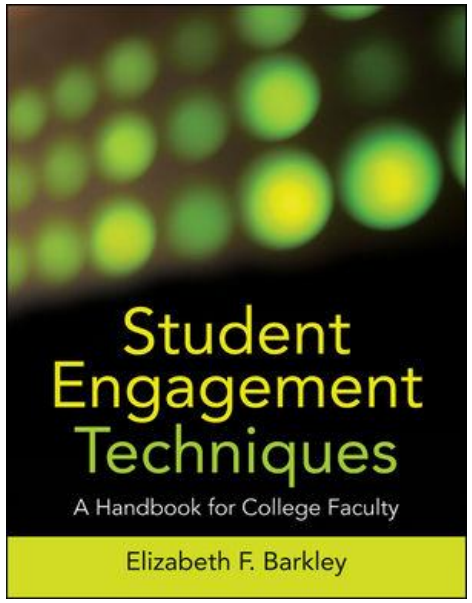


TABLE 4.1
Four OECD Categories Compared with Best Evidence Encyclopedia and What Works Clearinghouse

Four Categories of Information in the Emerging Field of Educational Neuroscience/Mind, Brain, and Education Science	Best Evidence Encyclopedia	What Works Clearinghouse
WHAT IS WELL ESTABLISHED (A)	STRONG EVIDENCE OF EFFECTIVENESS	POSITIVE EFFECTS
A1. "Human brains are as unique as faces; while the basic structure is the same, there are no two which are identical. While there are general patterns of organization in how different people learn and which brain areas are involved, each brain is unique and uniquely organized." A2. "All brains are not equal in their ability to solve all problems. Context as well as ability influence learning. Context includes the learning environment, motivation for the topic of new learning, and prior knowledge." A3. "The brain is a complex, dynamic, and integrated system that is constantly changed by experience, though most of this change is only evident at a microscopic level." A4. "Human brains have a high degree of plasticity and develop throughout the lifespan, though there are major limits on this plasticity and these limits increase with age." A5. "Connecting new information to prior knowledge facilitates learning."	At least one large randomized or randomized quasi-experimental study, or multiple smaller studies, with a median effect size of at least +0.20. A large study is defined as one in which at least 10 classes or schools, or 250 students, were assigned to treatments. Smaller studies are counted as equivalent to a large study if their collective sample sizes are at least 250 students. If randomized studies have a median effect of at least +0.20, the total set of studies need not have a median effect size.	Strong evidence of a positive effect with no overriding contrary evidence. Two or more studies showing statistically significant positive effects, at least one of which met WWC evidence standards for a strong design. No studies showing statistically significant or substantively important negative effects.

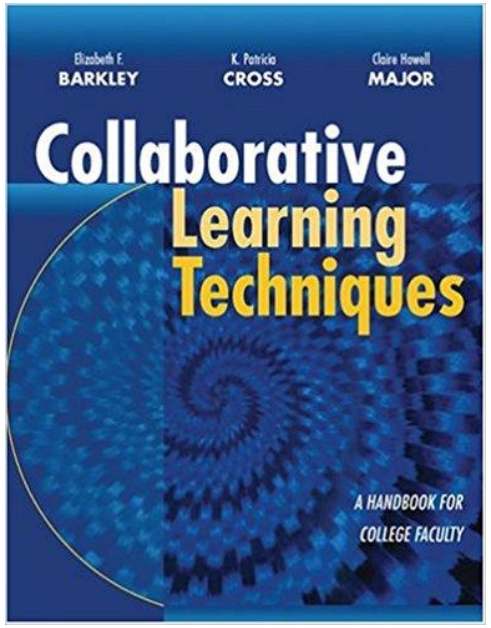
Click here to access Table 4.1 from *Mind, Brain, and Education Science*

Did you realize you were using active learning techniques in our session today?



Techniques for:
Improving motivation
Engaging active learning

We used a Background Knowledge Probe at the start.
Click here to access the chapter.
Click here to see Student Engagement Techniques or borrow it from the Hub in CETL



Techniques for:

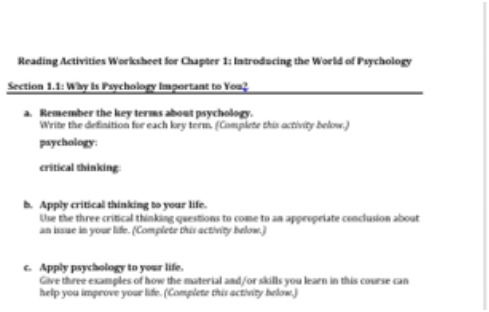
- Discussion
- Reciprocal Teaching
- Problem Solving
- Graphic Information Organizers
- Writing

We also used a Jigsaw technique to discuss the research articles and Think Pair Share to come up with learning activities for our students.
Click here to access the chapter on Jigsaw and here to access the one on Think Pair Share.
Click here to see *Collaborative Learning Techniques* or borrow it from the Hub in CETL.

What success have we had at Parkland using these active learning techniques?

In Psy101 we wanted to encourage active reading of the text

- Two faculty and six sections totaling 160 students took part
- Students were asked to write answers to reading activities while reading the textbook before class for a low-stakes grades
- All rated their attitudes towards the textbook and reading it at the end of the term



Reading Activities Worksheet for Chapter 1: Introducing the World of Psychology

Section 1.1: Why Is Psychology Important to You?

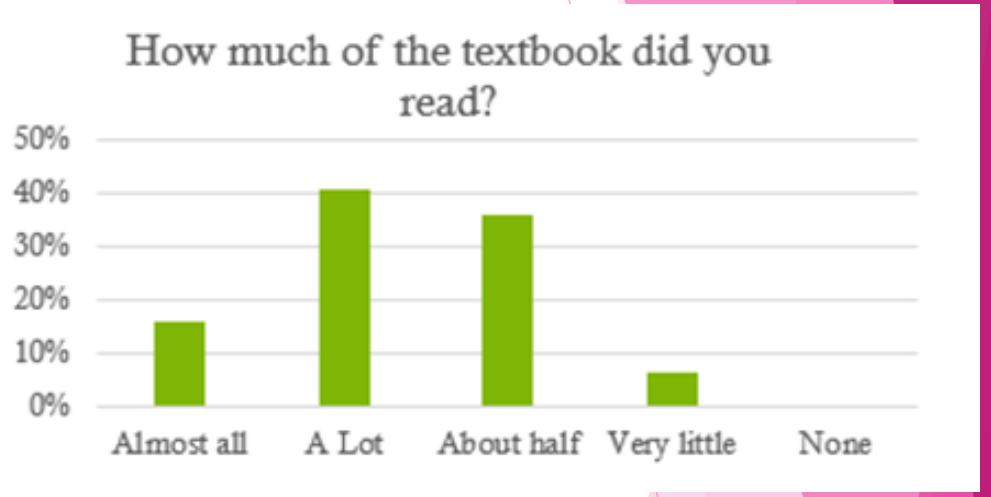
a. **Remember the key terms about psychology.**
Write the definition for each key term. *(Complete this activity below.)*

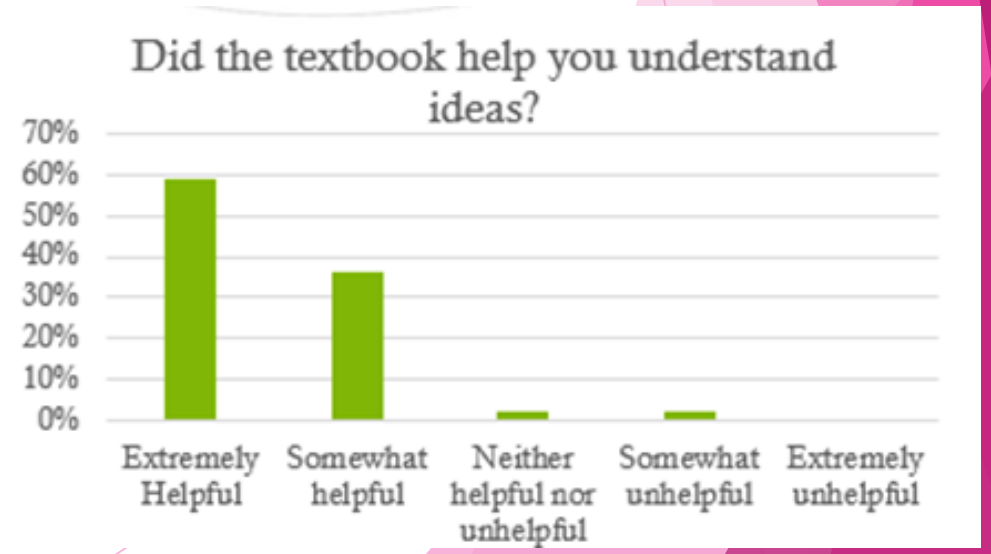
psychology:

critical thinking:

b. **Apply critical thinking to your life.**
Use the three critical thinking questions to come to an appropriate conclusion about an issue in your life. *(Complete this activity below.)*

c. **Apply psychology to your life.**
Give three examples of how the material and/or skills you learn in this course can help you improve your life. *(Complete this activity below.)*

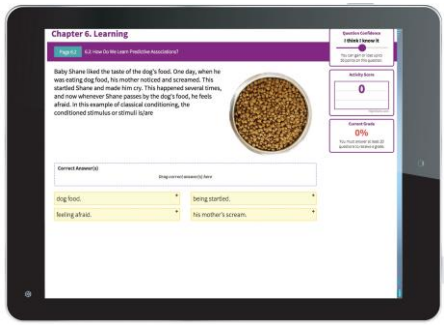


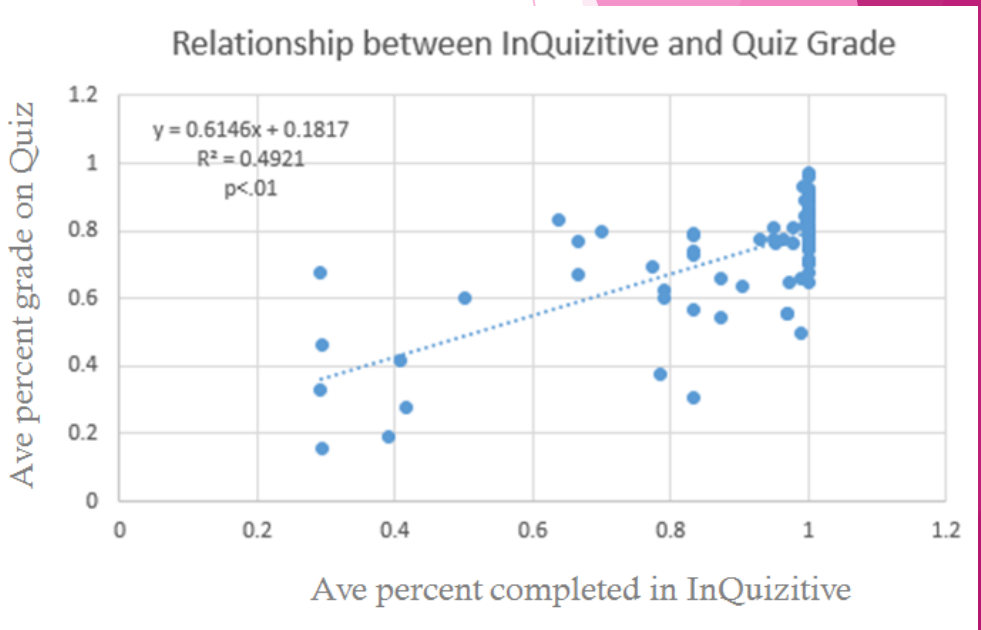


What success have we had at Parkland using these active learning techniques?

In Psy101 we also wanted to encourage active engagement with homework

- 2 faculty & 6 sections with 160 students took part
- Students were placed in a group:
  - Group A: InQuizitive for odd chapters
  - Group B: InQuizitive for even chapters
- All took the post-quiz at the end of the chapter





Preliminary analyses show that higher online homework grades are associated with higher quiz grades.

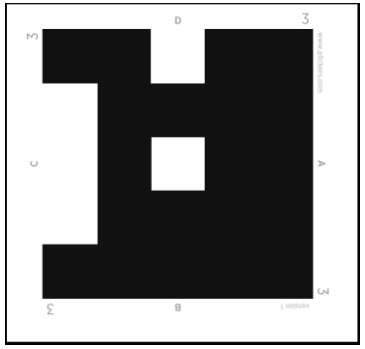
Might you use one or more of these four approaches to increase active learning?

A. Definitely

B. Probably

C. Probably not

D. Definitely not



Turn your plicker card to the direction that reflects the answer you want.
Click here to learn about using plickers to engage students in class.

What other approaches can improve student retention and success?

- Check out the rest of the One More Student workshop series
  - Attendance at 2+ workshops is needed to teach FYE101 for 2017-18
  - **Session Four:** How Do We Get Students to Come Back? (May 4, 12-1)
  - **ALTERNATE OPTION:** Four-Hour Workshop of all sessions (May 19, 9-2)

Are you considering attending another workshop?
Might you want to teach FYE?

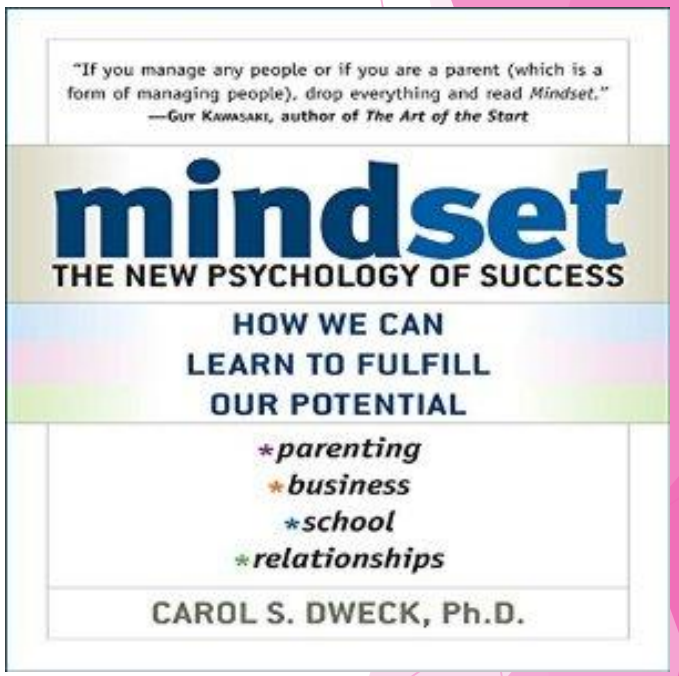
Our goal is to discuss how we can keep one more student by:

- Discussing the academic challenges our students face
- Understanding what learning techniques research suggests to be effective
- Coming away with practical tools to help engage students in effective learning strategies

What do you think?
Did we reach our goals for the day?
Please fill in the evaluation about the workshop!

Check out new programs in the fall!

- New PT Faculty Academy program!
- Health and wellness programming!
- Growth mindset workshops!
- Support for student response systems!
- Brain-based learning workshops!
- One-on-one consults!
- And more!



Thank you for your willingness to support our students!

- Click here to get access to this presentation!
- Any questions or thoughts?
- Please feel free to email us at:

  clarenas@parkland.edu

  dryan@parkland.edu

  sgrison@parkland.edu
- We look forward to continuing to work with you in the future!