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Center for
Teaching and
Learning

How to Keep My Head from Exploding (or How to Succeed in Graduate School)



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Today's Learning Objectives

- Understanding how learning works
- How to keep your edge
- Handling reading
- Exam preparation
- Facilitating Group Study



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Learning Styles: VAK/VARK

Neil Fleming has written about learning styles and preferences:

- Visual, Auditory, Kinesthetic
- Visual, Auditory, Read/Write, Kinesthetic



See this short article:

<http://www.vark-learn.com/documents/educationa%20developments.pdf>



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Are there really different learning styles?

Studies have not been able to show that evaluating learning styles and using teaching materials to target those styles is significantly effective.

➤ *However, self assessing* may be of considerable value.

Can you think why this might be so?

Learning Styles

➤ Try these survey instruments yourself:

<http://www.engr.ncsu.edu/learningstyles/ilsweb.html>

<http://ttc.coe.uga.edu/surveys/LearningStyleInv.html>



Kolb described learning....

- 1) We have a concrete experience,
- 2) We make reflective observations and make connections,
- 3) We generate an abstract hypothesis,
- 4) We then do testing of the new hypothesis.

The result is what is learned. So you can see the importance of experiential learning (learning by doing), scaffolding (creating a framework upon which knowledge is built), reflection and abstraction in the learning process.

D. Kolb, Experiential Learning: Experience as the source of learning and development (1984).



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D. Kolb

So experiential learning (learning by doing) is one of the most effective forms of learning.

- Create a short lesson you might use to teach the topic you are studying and think how you might incorporate experiential learning into it..

D. Kolb, *Experiential Learning: Experience as the source of learning and development* (1984).

Piaget described stages of cognitive development

Sensor-motor stage: birth to acquisition of language

Pre-operational stage: age 2-7. manipulation of objects, asking questions

Operational stage: 8-teens, application of logic

Concrete operational stage: teens-adult, problem solving social thinking



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Alan Kay (based on Piaget/Papiert)

Ask a child how to make a circle....

- ✓ A young child will move, going and turning.
- ✓ An older child will draw equidistant dots around a single point.



- ✓ A young adult, battle scarred by high school geometry, usually can't do it.

Q. How do we free our minds to use knowledge instead of being trapped by it?



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Lessons from Neuroscience

- 1) We are wired to learn based on pre-existing knowledge and experience. So learning is most effective when you have a base to start from (scaffolding).
- 2) Teaching is most effective when it targets different areas of the brain (sensory, reflective, experience, etc.) since this is the way evolution has taught us to learn.
- 3) Emotion (desire and fear in particular) is important, also for evolutionary reasons. Slight stress and pleasure enhance learning; fear inhibits it. (Researchers are examining the roles of hormones: oxytocin/vasopressin.)



Lessons from Neuroscience

Important concepts: repetition, correct fundamentals, working in an authentic environment.

Any animal trainers out there with a story to share?



Don't let anxiety get in the way...

-



...and keep things in perspective.

Classroom Dynamics

- Sit near the front of the class when possible.
- Sit next to a new person each time and make conversation.
- You can get through an entire class without texting or checking email! ;-)

Selective attention video. (Fun! You'll enjoy this one!):

<http://www.youtube.com/watch?v=vJG698U2Mvo> (1.22)

All Work and No Play ...

Take the time for exercise, social events, and guest speakers/
conferences.



Handling all that reading



Use a reading guide

What is the author's thesis?

How does this reading contribute to the topic?

What are the strengths and/or flaws?

What are the sources for this reading?

Power Skimming

Read the abstract, first and last paragraphs.

Read the first and last sentence in each paragraph.

Take the time to study charts or diagrams.

Take notes on what you read!



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Exam Preparation



- We know that exam preparation actually changes the brain: <http://newscenter.berkeley.edu/2012/08/22/intense-prep-for-law-school-admissions-test-alters-brain-structure/>
- Make your own study guide.
- Make your own practice exam and write out hypothetical answers to questions.
- Doing a little every day is more effective than cramming.

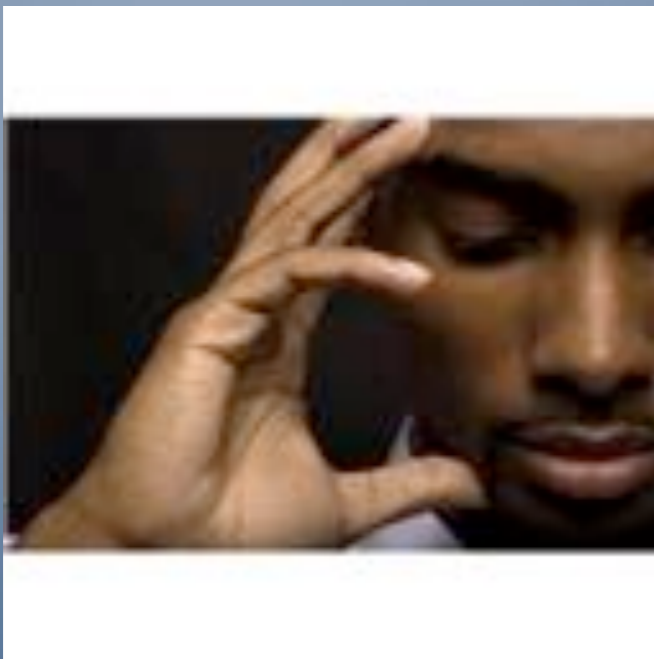
Intelligence and Personality Types

It is helpful to understand that there are differences in aptitudes and approaches to work when approaching group work.



Gardner's Intelligences

Gardner defined these domains of intelligence. Which areas are your own strengths or weaknesses?



- 1) Linguistic
- 2) Logical
- 3) Musical
- 4) Kinesthetic (e.g. dancing, sports)
- 5) Spatial (e.g. navigating with a map)
- 6) Naturalist
- 7) Intrapersonal
- 8) Interpersonal
- 9) Existential

Gardner, Howard. (1999) "Intelligence Reframed: Multiple Intelligences for the 21st Century." New York: [Basic Books](#).

Myers-Briggs/PILS

Survey instruments that evaluate personality type or temperament can help students understand differences between people.

Administering such a survey can be helpful prior to beginning collaborative/team projects to help manage expectations and prevent disputes.

Have a look at:

http://www.personalitypathways.com/type_inventory.html

<http://www.myersbriggs.org/>

<http://www.myersbriggs.org/my-mbti-personality-type/mbti-basics/>

Ideas for Facilitating Group Work

- Take time to do some team building.
- Set aside a regular meeting time and place when possible.
- Rotate the responsibility for creating the agenda.
- Use online chat or Collaborate when getting together face to face isn't practical.
- Functional study groups are supportive and productive. Dysfunctional groups are competitive, unproductive and no fun.



Ideas for Facilitating Group Work

Make it a game:

- Make flash cards and test each other.
- Take turns asking each other questions about the readings. Keep score and the winner wins a bag of candy.

Use Google Docs, Prezi, or other collaboration tool to work asynchronously.
(Quick Prezi demo)

Use Evernote, Pear Note, Zotero, or Diigo to share files and research. (Quick Diigo demo)

The Power of Reflection and Time Management

This is your education! Take charge!

Set your own goals now. Put placeholders in your calendar to reflect on your progress towards those goals periodically.

Set aside time in your calendar for study time for each class.



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I want more!

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- James Zull, From Brain to Mind. Stylus, 2011.
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- Harvey Silver, Richard Strong, Matthew Perini, So Each May Learn. ASCD, 2000.

Wrap-up and Assessment

- Questions? Comments? Suggestions?



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