Invigorating Student Learning: How Should Students Study?

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The Google Gap: College Kids Aren’t Good At Searching [STUDY]

9 days ago by Sarah Kessler

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Ads by Google


www.google.com/ads/engage

Students in a two-year ethnographic study referred to Google more than any database when discussing their research habits. But ironically, say the study’s authors, they weren’t very good at using it.

The series of studies, known as the “Ethnographic Research in Illinois Academic Libraries Project (ERIAL)” is a collaborative effort by five Illinois universities that aims to better understand students’ research habits. Its findings are set to be published by the American Library Association this fall.

One hundred and fifty-six students who were interviewed at the five schools about their research habits mentioned Google more than any database. The 60 students who participated in a “research process interview” — with researchers following them around the library as they searched for information — frequently used the search engine poorly. And when they used other databases, they expected them to work the same way that Google does.
Think You Know How To Study? Think Again

Listen to the Story
Talk of the Nation

Find a quiet location. Keep a routine. Focus on one subject at a time. It all seems like sound advice for students who need to hit the books, but recent studies indicate the conventional wisdom is all wrong.

New York Times reporter Benedict Carey has written about the research. He tells NPR's Neal Conan that though a lot of ideas about learning make intuitive sense, they're actually way off.
The Issue

YOU & Your Assignments/Class Design

Encoding  Studying  Testing

LEARNING
Agenda
APATHY

It takes 43 muscles to frown and 17 to smile
but it doesn’t take any to just sit there
with a stupid look on your face
Amalgamated Model of Motivation  
(Svinicki, 2004)  
Motivation is influenced by:

• **Value of the Goal**
  – Perceived need
  – Intrinsic quality
  – Utility

• **Expectation that goal can be achieved:**
  – Difficulty, Prior experience
  – Beliefs/attitudes about learning
How do we **Increase Motivation** for Learning?

1. Align Objectives, Assessment, Instruction
2. Challenge (At Appropriate Level)
3. Allow Flexibility & Control
4. Be Clear, Firm, Fair
5. Make Lectures Interesting

- Real-Life Examples
- Be Enthusiastic
- Allow Student Input

“No student wants to be in a class where the teacher wants to be there LESS than the students do.” ~
6. Show Your Concern For Students

• Be Respectful
• Reward
• Connect Material
Percentage of Learning Variance

- Teacher
- Home
- Peers
- Others

(Hattie, 2009)
Studying: Key Definitions

• SKILLS: knowledge of appropriate study strategies and methods, time management

• HABITS: engagement in acts of studying

• ATTITUDES: acceptance of goals of college and attitude towards act of studying
The Story So Far

**Study-Habits Inventory**  
(Wren, 1933)

**Student Skills Inventory**  
(Locke, 1940)

**Survey of Study Habits & Attitudes**  
(Brown & Holtzman, 1955)

**Learning and Study Strategies Inventory**  
(LASSI; Weinstein & Palmer, 2002)

**Study Behaviors Checklist**  
(Gurung 2005; Gurung, Weidert & Jeske, 2010)
Think You're An Auditory Or Visual Learner? Scientists Say It's Unlikely

by PATTI NEIGHMOND

Listen to the Story
Morning Edition

[4 min 16 sec]

We've all heard the theory that some students are visual learners, while others are auditory learners. And still other kids learn best when lessons involve movement.

But should teachers target instruction based on perceptions of students’ strengths? Several psychologists say education could use some "evidence-based" teaching techniques, not unlike the way doctors try to use "evidence-based medicine."

Psychologist Dan Willingham at the University of Virginia, who studies how our brains learn, says teachers should not tailor instruction to different kinds of learners. He says we're on more equal footing than we may think when it comes to how our brains learn. And it's a mistake to assume students will respond and remember information better depending on how it's presented.

For example, if a teacher believes a student to be a visual learner, he or she might introduce the concept of addition using pictures or groups of objects, assuming that child will learn better with the pictures than by simply "listening" to a lesson about addition.
A measure of Learning Styles?

Learning Styles
Concepts and Evidence

Harold Pashler, Mark McDaniel, Doug Rohrer, Randall Richardson

1 University of California, San Diego, 2 Washington University in St. Louis, 3 University of California, Los Angeles

SUMMARY—The term “learning styles” refers to the concept that individuals differ in regard to what mode of instruction or study is most effective for them. Proponents of learning-style assessment contend that optimal instruction requires diagnosing individuals’ learning style and tailoring instruction accordingly. Learning-style orientation typically ask people to evaluate the same for all students. Finally, instructional methods that achieve the best educational outcomes must reveal a specific type of relationship between learning style and instructional method. Although assessment instruments are extremely effective for students with one learning style, the instructional method that proves most effective for students with one learning style is not the most

Richardson, 2011
Why Should We Care?

- GPA/Ability
- Teacher
- Student Characteristics
- Study Behavior

Learning
How do Students Study?
Use of Pedagogical Aids

(Gurung, 2003; 2004)
Does using Pedagogical Aids Help?

(Gurung, 2004)
## How do Students Study?

**Use of Study Technique** (1= Never  5= All the Time)

<table>
<thead>
<tr>
<th>Technique</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read your notes</td>
<td>4.01</td>
</tr>
<tr>
<td>Read the text</td>
<td>3.37</td>
</tr>
<tr>
<td>Think of mnemonic devices</td>
<td>3.33</td>
</tr>
<tr>
<td>Re-write notes</td>
<td>3.25</td>
</tr>
<tr>
<td>Review highlighted info.</td>
<td>3.15</td>
</tr>
<tr>
<td>Memorize through repetition</td>
<td>3.11</td>
</tr>
<tr>
<td>Review figures and tables in text</td>
<td>2.96</td>
</tr>
<tr>
<td>Make up examples/apply</td>
<td>2.89</td>
</tr>
<tr>
<td>Test your knowledge</td>
<td>2.62</td>
</tr>
<tr>
<td>Take notes from the book</td>
<td>2.18</td>
</tr>
<tr>
<td>Study with a friend</td>
<td>2.07</td>
</tr>
</tbody>
</table>

*(Gurung, 2005)*
What Works? Study techniques and Exam Score

NOTE:
Metacognitive/ Cognitive Skills Significant BUT
Less Used (8th and 9th ranked)

(Gurung, 2005)
Successful Study Techniques (N = 125)

(Gurung, Weidert, & Jeske, 2010)
Does studying ‘more’ Help?

• **Yes** (Gurung, 2004; Strage et al., 2002)

• **No** (Dickinson & O’Connell, 2001; Gurung, 2005; Gurung, Weidert, & Jeske, 2010)

• **Somewhat** (Crede & Kuncel, 2008)
  – More for 1st year than 4th year than individual class

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Example</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing &amp; transforming</td>
<td><em>Making an outline before writing a paper</em></td>
<td>.85</td>
</tr>
<tr>
<td>Self-consequences</td>
<td><em>Putting off pleasurable events until work is completed</em></td>
<td>.70</td>
</tr>
<tr>
<td>Self-instruction</td>
<td><em>Self-verbalizing the steps to complete a given task</em></td>
<td>.62</td>
</tr>
<tr>
<td>Self-evaluation</td>
<td><em>Checking work before handing in to teacher</em></td>
<td>.62</td>
</tr>
<tr>
<td>Help-seeking</td>
<td><em>Using a study partner</em></td>
<td>.60</td>
</tr>
<tr>
<td>Rehearsing and memorizing</td>
<td><em>Writing a mathematics formula down until it is remembered</em></td>
<td>.57</td>
</tr>
<tr>
<td>Goal-setting/planning</td>
<td><em>Making lists to accomplish during studying</em></td>
<td>.49</td>
</tr>
<tr>
<td>Reviewing records</td>
<td><em>Reviewing class textbook before going to lecture</em></td>
<td>.49</td>
</tr>
<tr>
<td>Self-monitoring</td>
<td><em>Observing and tracking one’s own performance and outcomes</em></td>
<td>.45</td>
</tr>
<tr>
<td>Task strategies</td>
<td><em>Creating mnemonics to remember facts</em></td>
<td>.45</td>
</tr>
<tr>
<td>Imagery</td>
<td><em>Creating or recalling vivid mental images to assist learning</em></td>
<td>.44</td>
</tr>
<tr>
<td>Time management</td>
<td><em>Scheduling daily studying and homework time</em></td>
<td>.44</td>
</tr>
</tbody>
</table>

*ES = Effect Size*
What Works? Cog Psych says...

- Spaced/Distributed practice
- Repeated Testing/Retrieval
- Metacognitive-based skills

On average, when taking the quiz did you:

- Guess
- Open Book
- Read First
- Copy

(Gurung, 2003)
BEWARE THE CURSE

- Curse of (perceived) knowledge:
- The Feeling of knowing when material is in front of you
  (Koriat & Bjork, 2005)
Does it Matter?

Exam Scores

Guess/Open   Read First

65
70
75
80
Self-Assessment is Key

• Get a sense of what students are not doing:

• Approaches and Study Skills Inventory for Students (ASSIST, Entwistle, 2009)
• LASSI (Weinstein & Palmer, 2002)
• Study Behavior Checklist (Gurung, et al. 2010)

Exam Wrappers (Ambrose et al., 2010)
Focus on Process of Understanding
Define classical conditioning

✓ The form of associative learning in which a neutral stimulus is associated with a stimulus to which the subject has an automatic, inborn response.

The process of learning what to expect by watching what happens to others when they engage in specific behaviors.

× The process of modifying behavior by manipulating the consequences of that behavior.

This describes operant, not classical, conditioning.
TIME-OUT!

It appears you may benefit from a short time-out at this point as you are struggling with the following learning objective:

Clarify social cognitive approach as another name for observational learning

This subject is covered in

Understanding Psychology
9th Edition by Feldman

OK, I've read it  Not right now!
What Limits Use?

(1-Not at all to 7-Extremely)
Does Online Study Matter?

Correlations to Exam Score

- Connect
- MyPsychLab
- Psychportal

Online: 0.21
MyPsychLab: 0.18
Psychportal: 0.28

Online(GPAcontr.): 0.18
MyPsychLab: 0.15
Psychportal: 0.19
In Conclusion

Motivate

YOU & Your Students

Encoding

Studying

Testing

LEARNING