Study Smart: Study Strategically
Supporting Students’ Academic Transitions to College
Overview

Student transitions → Self-Regulated Learning → Research based Study Strategies
What Transitions?

COC Office of Institutional Effectiveness: https://www.cocc.edu/institutional-effectiveness/enrollment-reports/enrollment-by-year/
Guesses?

Entering College Student Trends, 1968/71 vs. 2002

N = 350k entering college students

Source: Cooperative Institutional Research Program (CIRP)
Entering College Students Trends, 1968/71 vs. 2002

- **A average in HS**: 18% in 1968/71 vs. 46% in 2002
- **C average or lower in HS**: 23% in 1968/71 vs. 5% in 2002
- **Believe there is a "very good" chance they will earn at least a B average in college**: 27% in 1968/71 vs. 60% in 2002
High School Seniors’ Self-Reported Behaviors & Attitudes

- **80%** Spend < or = 3 hrs/wk reading assigned materials
- **53%** Put forth a great deal of effort on schoolwork
- **47%** Schoolwork makes them curious to learn about other things
- **45%** Are challenged to do their best work at school
- **35%** Are excited about their classes

N = 170k HS seniors
Source: High School Survey of Student Engagement (HSSSE)
COMMON TRANSITION ISSUES

- No expectations
- Unrealistic expectations
- Overconfidence
- Different types of challenges
- Faster pace, deeper understanding
- Time less structured
- Lack of Confidence
- Choices/Balance
- Wellness
- Self-direction of learning

Hensley et al., 2014; Orbe, 2008; Pintrich, 1999; Terenzini, et al., 1994
What struggles do your students face?
Schlossberg’s Transitions Theory

• A transition is an event (or non-event) that results in change
• 4 things that determine the severity of a transition
  • Situation
  • Self
  • Supports
  • Strategy
Self-Regulated Learning: thinking, motivation & behavior during learning

Set goals

Self-monitor progress towards goals

Make changes as needed so goals can be achieved

Self Reflection:
“Am I reaching my goals through the strategies I created?” (Chen, 2011)

(Schloemer & Brenan, 2006)
Non self-regulating students say things like....

I just do what my teacher tells me

If I’m having trouble motivating myself to complete my homework, I just work harder
Self-Reflective Questions

• Is the amount of time you are spending on learning strategies enough?

• What learning strategies are working well?

• What learning strategies are not working well?

• What additional learning strategies, if any, are needed to stay on track toward your goal?

• Would seeking help assist you in achieving your goal? Who can help?
STUDY

The act of texting, eating and watching TV with an open textbook nearby
What ineffective study methods have your students used?

What effective study methods have your students used?
What we KNOW isn’t effective....... 

- Massed Learning (cramming)
- Highlighting
- Re-reading
- Direct repetition
Strategies

• Intelligent Practice
• Spaced Repetition/Distributed Practice
• Self-Testing/Practice testing
• Recall
• Elaborate Rehearsal

“The Brain that does the work is the Brain that learns”

― Donald Hebb

“Neurons that fire together, wire together.”
Intelligent Practice

- Effort:
  - Mindset
  - Time on task
- Effective Strategies
  - Study Strategies
- Help from others
Spaced Repetition: Ebbinghous’s Forgetting Curve

![Ebbinghaus Forgetting Curve](image-url)
Spaced Repetition/Distributed Practice
Optimal Interval Ranges

<table>
<thead>
<tr>
<th>Time to Test</th>
<th>First Study Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Week</td>
<td>1-2 Days</td>
</tr>
<tr>
<td>1 Month</td>
<td>1 Week</td>
</tr>
<tr>
<td>3 Months</td>
<td>2 Weeks</td>
</tr>
<tr>
<td>6 Months</td>
<td>3 Weeks</td>
</tr>
<tr>
<td>1 Year</td>
<td>1 Month</td>
</tr>
</tbody>
</table>

Pomodoro

- 25 minutes
- no interruptions
- focus
- reward!
Application

• Space out your reading studying
• Review notes and study materials multiple times at different study sessions
• Study regularly instead of waiting till the exam
• Before class, review notes and materials from last class; after class (or at home) review notes from that day
• Try apps such as Anki (or ankiweb), Quizlet, Tiny Cards
Testing Effect

Roediger & Karpicke, 2009
Research on Testing Effect

Einstein, Mullet, & Harrison, (2012)

Who? 52 college students taking an upper level course on Memory

<table>
<thead>
<tr>
<th>Study-Study</th>
<th>Study-Test</th>
<th>Self-Assessment</th>
<th>Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Read and Study passage 4 minutes</td>
<td>• Read and Study passage 4 minutes • Recall as much as possible for 4 minutes</td>
<td>• How well did you remember the content?</td>
<td>• 20 Minutes on Testing Effect</td>
</tr>
</tbody>
</table>

Harrington, 2014
The Results
Einstein, Mullet, & Harrison, (2012)

But... Students thought they did equally well

Harrington, 2014
The Results
Einstein, Mullet, & Harrison, (2012)

Students were MORE likely to USE TESTING as a study tool after this demonstration!

67% used testing during reading

82% used testing strategy when studying

Harrington, 2014
Application

• Testing **improves memory**
• Learning about research-based strategies **increases likelihood you will use effective study techniques**
• Self Quiz through flashcards, free recall, practice tests, study groups

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Research on Studying
Dickinson and O’Connell (1990)

Research Question:

Does how long you study or how you study matter more? What study approach works best?

Tom Peterson, Middlesex County College
The Study

Dickinson and O’Connell (1990)

113 Undergraduate Students

Recorded Study Time and Strategy WHILE studying

Reading
Reviewing
Organizing

Test Grade

Harrington, 2014
Defining Organizing
Dickinson and O’Connell (1990)

• Put information into your own words

• Create links between concepts via a hierarchical structure

• Create examples to help concepts come alive
The Results!
Dickinson and O’Connell (1990)

Harrington, 2014
The Results!
Dickinson and O’Connell (1990)

Harrington, 2014
Application

• Reading and reviewing, while important, are NOT enough!

• Increasing organizing techniques will maximize study time

• Use Elaborate Rehearsal – summaries, graphic organizers, teach others, alternate problem solving techniques
Exploring the Research
McDaniel, Howard, & Einstein (2009)

Research Question:
Which reading strategy works best?
• Re-reading
• Note-taking
• 3R

Harrington, 2014
The 3R Method

Read

Recite

Review
The Study
McDaniel, Howard, & Einstein (2009)

72 College Students were randomly assigned to groups

- Re-read (read the passage twice)
- Note-taking (take notes while reading, but no notes allowed during testing)
- 3R – Read-Recite-Review (read passage once, recite what you remember, read passage again)

Test Scores

Harrington, 2014
The Results!
McDaniel, Howard, & Einstein (2009)

Students who used the 3R method did better on fact based questions

The 3R and Note-taking methods worked best with problem-solving tasks

The 3R method was less time consuming than the note-taking method

Harrington, 2014
Application

• Using the 3R technique will not add significantly to study time, but will likely lead to more positive academic outcomes

• Consider both verbal and written methods for step 2- Recite
The Research Question
Dietz-Uhler & Lanter (2009)

Will students who complete a four question self-reflection activity before a quiz perform better than students who complete this activity after the quiz?

Harrington, 2014
The Study
Dietz-Uhler & Lanter (2009)

107 undergraduate students

Reflection First
- Self-enhancement topic
- Prisoner’s dilemma topic

Quiz First
- Self-enhancement topic
- Prisoner’s dilemma topic

The Reflection Exercise:
- Analyze
- Reflect
- Relate
- Question
The Results!

Dietz-Uhler & Lanter (2009)

Quiz Performance

Harrington, 2014
Application
Dietz-Uhler & Lanter (2009)

Ask yourself reflective questions such as:

• “What is the purpose of learning this information?”

• “What are the benefits of learning this information?”
What do we know?

• https://play.kahoot.it/#/k/a404e79a-4642-44d6-9e06-d779b448957c
On your card:

What’s one study strategy you can use or share in your class next week?
Questions????