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

John Dunlosky¹, Katherine A. Rawson¹, Elizabeth J. Marsh², Mitchell J. Nathan³, and Daniel T. Willingham⁴
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Summary

Many students are being left behind by an educational system that some people believe is in crisis. Improving educational outcomes will require efforts on many fronts, but a central premise of this monograph is that one part of a solution involves helping students to better regulate their learning through the use of effective learning techniques. Fortunately, cognitive and educational psychologists have been developing and evaluating easy-to-use learning techniques that could help students achieve their learning goals. In this monograph, we discuss 10 learning techniques in detail and offer recommendations about their relative utility. We selected techniques that were expected to be relatively easy to use and hence could be adopted by many students. Also, some techniques (e.g., highlighting and rereading) were selected because students report relying heavily on them, which makes it especially important to examine how well they work. The techniques include elaborative interrogation, self-explanation, summarization, highlighting (or underlining), the keyword mnemonic, imagery use for text learning, rereading, practice testing, distributed practice, and interleaved practice.

To offer recommendations about the relative utility of these techniques, we evaluated whether their benefits generalize...
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What is effective revision?

Read  Revise  Create  Apply  Review
The Golden Rules

Planning
Making notes
Videos
Mind maps
Flashcards
Practise
Using your environment
Bits of advice

As a rule...
if you haven’t used a pen, its not effective revision!

It is the degree of thought process involved which determines how effective the revision is, so...

Effective revision is DOING!
The Golden Rules

Planning
Making notes
Videos
Mind maps
Flashcards
Practise
Using your environment

Bits of advice

DON’T
... Just read
... Just copy
... Just rewrite
... only use one method
... leave it to the last minute
... don’t focus on your strengths

DO
... activities / tasks / active revision
... use a variety of methods
... spread revision over time
... focus on your weaknesses
Create a Revision Plan

Planning

Making notes

Using your environment

Practise

Mind maps

Flashcards

Videos

THE GOLDEN RULES

Create a Revision Plan

Bits of advice

Planning

Making notes

Using your environment

Practise

Mind maps

Flashcards

Videos
Creating a revision plan

**Template / Calendar**

Plot your other commitments and know time hot spots
*Explicit breaks

**Ready your indicative content**

Draft content into template with an awareness of strengths and weaknesses as well as exam timetable

Be explicit about revision method and specific about content

<table>
<thead>
<tr>
<th>Times</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:30-5:15</td>
<td>RE- Unit 1- Hinduism (Flashcards)</td>
<td>Maths- Fractions (Complete past paper and mark)</td>
<td>BREAK (Go to the gym)</td>
<td>English Lit (Inspector Calls video cast watch and notes)</td>
<td>Maths- Shape (GCSE Bitesize activities)</td>
<td>BREAK</td>
<td>BREAK</td>
</tr>
<tr>
<td>7:00-8:30</td>
<td>Sociology- Unit 3- Conformity (Produce quiz)</td>
<td>Sociology- Unit 3- Conformity (Complete quiz)</td>
<td>GCSE PE- CV System (Concept map)</td>
<td>History-Medicine... (RAG spec and find questions on R areas)</td>
<td>BREAK (go and see...)</td>
<td>GCSE PE- Health (Mind map and questions)</td>
<td>Chemistry-C1 Turn notes into post it note questions (ask Dad to test me)</td>
</tr>
</tbody>
</table>
Making notes (vital starting point!)

- Make sure you cover everything on the specification
- Organise your notes so you can attack them in a logical order
- Revision guides could help fill any gaps in your notes
- Create a glossary of key words and definitions
- Make the notes short and snappy – bullet points would help
Videos as sources of information.

- Stop when it stops being effective
- Active revising – make notes. 10 bullet point per half hour.
- Watch the video in sections where possible
Examples from English – Mr Bruff

BAYONET CHARGE

- Structure:
- Begins mid-action ‘Suddenly’
- Enjambment between stanzas

https://www.youtube.com/watch?v=Q6ntmWFtfvQ

https://www.youtube.com/watch?v=6AMuwf9zzKM
Mindmaps – For Maximum Impact...

- 7 is the magic number
- Use colour to help visual memory
- Add pictures to help visual memory - Memory hooks
- Limit the information to make it manageable
Concept Maps – For Maximum Impact...

- Write any words of the topic down on a piece of paper and draw links you can find between them
- Easy and pain free way to test yourself
Make them ‘stranger’ friendly

Put them in piles of easy medium and hard and move them when you get them right 3 times

Bullet point them - bite size info

Take them with you in case you have a spare 20 mins
Effective Revision Cards in Action

1. Every day
2. Tuesday & Thursday
3. Friday

https://www.youtube.com/watch?v=C20EvKtdJwQ

Read  Revise  Create  Apply  Review
• Revise and then randomly select an exam question
• Find a hard exam question and plan the answer
• Bullet point answers to get loads of questions rehearsed
• Do some full length / timed questions
• Could these form some of the flashcards?
• Self assess before handing it in.. GET IT BACK
Place small notes around the house
What else can you do...

• Ensure you have breakfast – proven to stimulate the brain
• Create a study space for yourselves
• Minimise distractions like phone and internet.
• Be familiar with the study supports that are available
• Only use helpful study partners
• Be well equipped – A4 and A3 paper, coloured pens, pencils, highlighters.
• Don’t waste class time
• Reward yourself/have down time
• Sleep
• Exercise
• Don’t compare yourself to others
• Learning Habits/Mindset
• Ask for help!!!!
STUDENT SUPPORT

Mrs Laura Sweetman
“We know our parents want what's best for us; we just don’t always show it”

“All we need is to know that the decisions we make are supported”

“It's nice when they come to open days with us”

“I worry about other things but choosing what to do next is not that big a deal for me”

“I don’t think they believe that I work during my frees”

“I always need their support but don’t always want their advice”

“I just want to be looked after with good food but left to get on with it”
IN SCHOOL SUPPORT

- Form tutors
- SASMs
- Heads of Year
- College Leaders
- Year 11 Guidance Meetings
- Employability workshops
- Sixth Form Team
- Peers/Year above
- Mentors
- Counsellors
- IAPT
What can we do at home?

- Support their routine
- Timetables
- Transport
- Trust them
- Keep us informed
- Engage with their interests
- Use your networks
- Team Approach
- Encourage multiple routes
What do our children really need us to do?

The best teachers are those who show you where to look, but don't tell you what to see.

Alexandra K. Trenfor