

A!

Aalto-yliopisto

Study skills

CHEM-E0100 Academic Learning community

*21.9. 2020 at 8.30-10.00, Zoom
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Program for today

- Elements of successful learning
- Learning technique that works
- How to use the most effective study technique
- Wellbeing and success in studies and distant studying

Two main references:

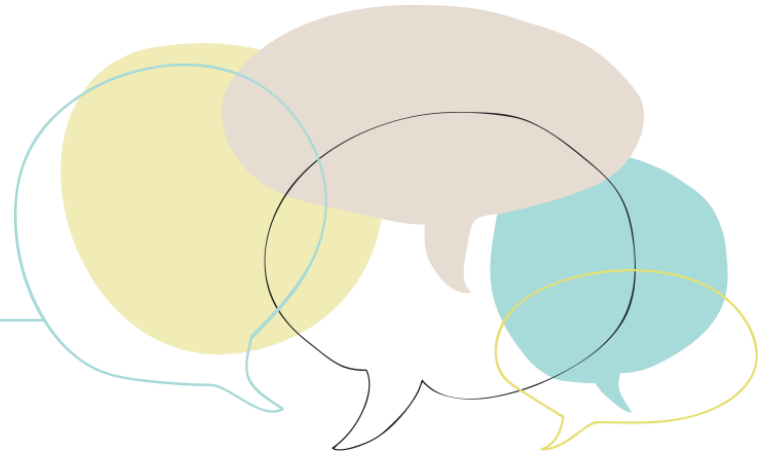
Dunlosky et al. (2013) Improving Students' Learning With Effective Learning Techniques

Richardson et al. (2012) Psychological Correlates of University Students' Academic Performance.

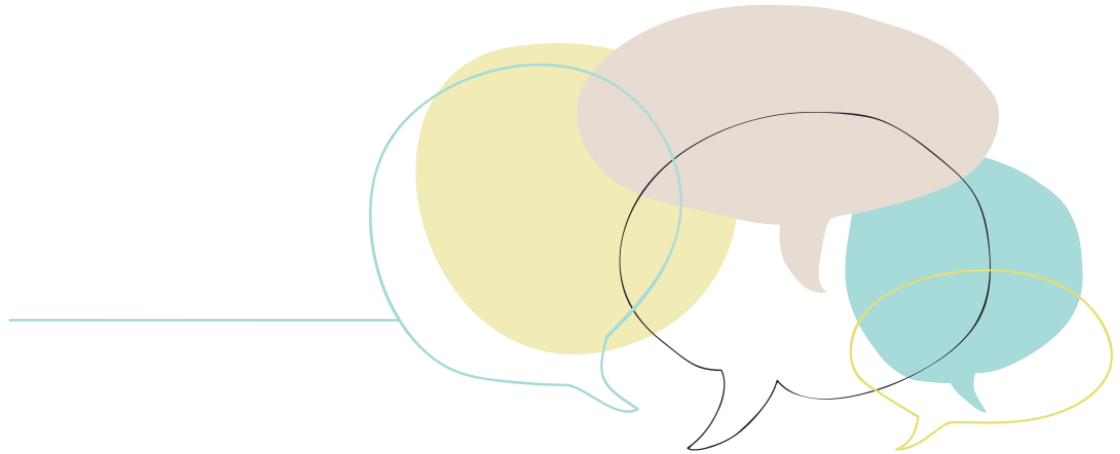
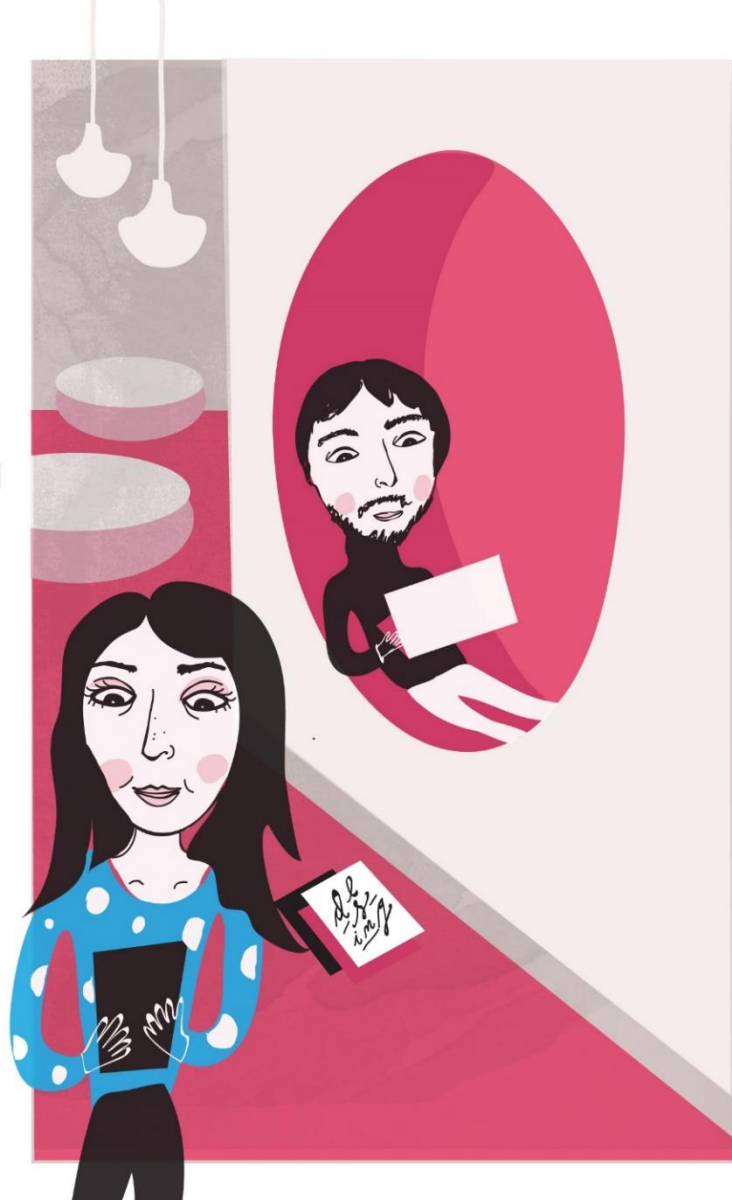


Write down (few minutes)

Three questions, you think you can answer at the end of this lecture.

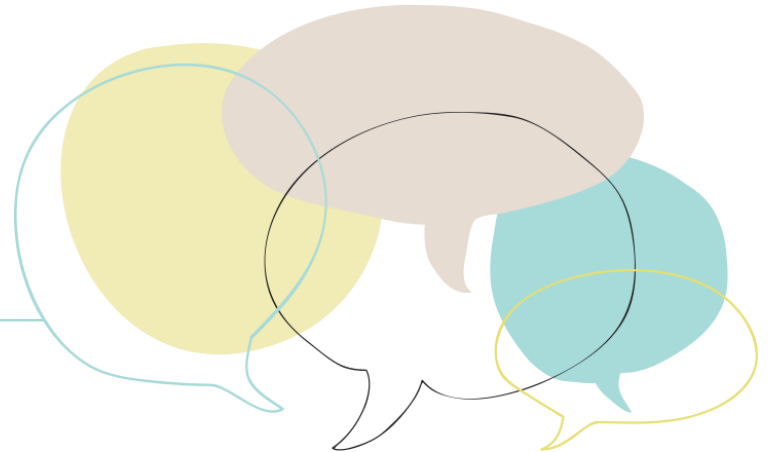


Elements of successful learning



Discuss in small groups on break out rooms (about 5 min)

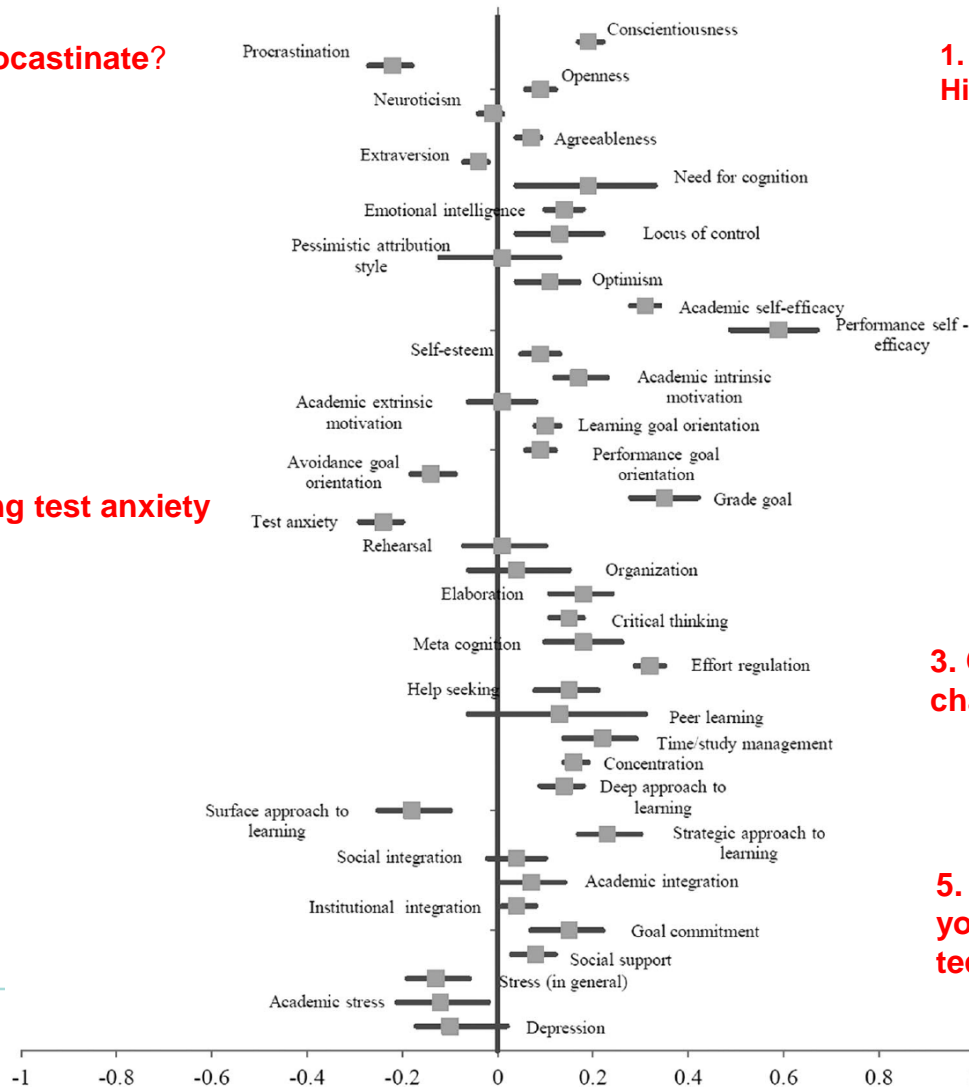
What do you think are the most important elements for successful learning?



6. Do you procrastinate?

4. Are you having test anxiety

8. Are you smart enough?
(Test intelligence:
 $r=0,20$)



1. Do you have enough prior knowledge?
High school GPA: $r=0,40$ and see Hallikari 2009

1. Do you trust yourself as a learner?

2. Are good grades import for you?

3. Can you regulate your effort when you face challenges?

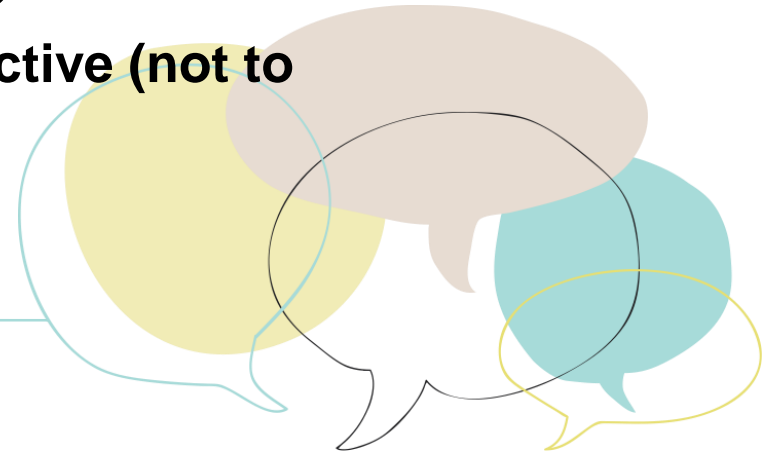
7. Can you manage your time

5. Can you regulate your learning technique?

Figure 1. Results of the primary meta-analyses for the non-intellective correlates of GPA: r^+ and 95% confidence intervals.

Which factors are most important?

- 1. Students prior / grounding knowledge and self-efficacy**
- 2. Motivation to be or become successful**
- 3. Emotion regulation skills**
- 4. Skills to regulate learning technique**
- 5. Time management and being productive (not to procrastinate) skills**



What is your approach to learning?

Deep approach

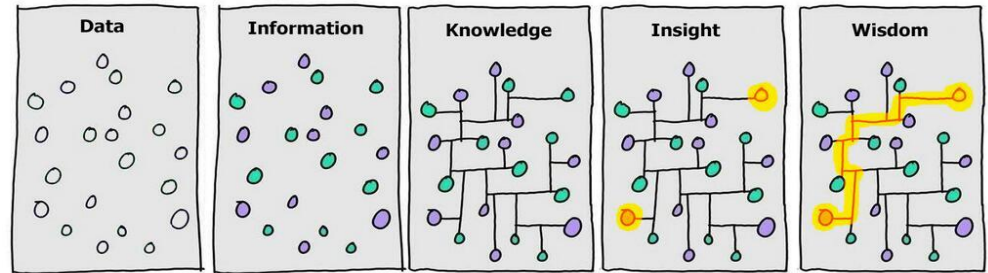
- Looking for deeper understanding
- Relating new ideas to previous knowledge

Surface approach

- Memorizing and repeating information
- Often motivated by fear of failure

Systematic approach

- Awareness of criteria
- Planning, time management

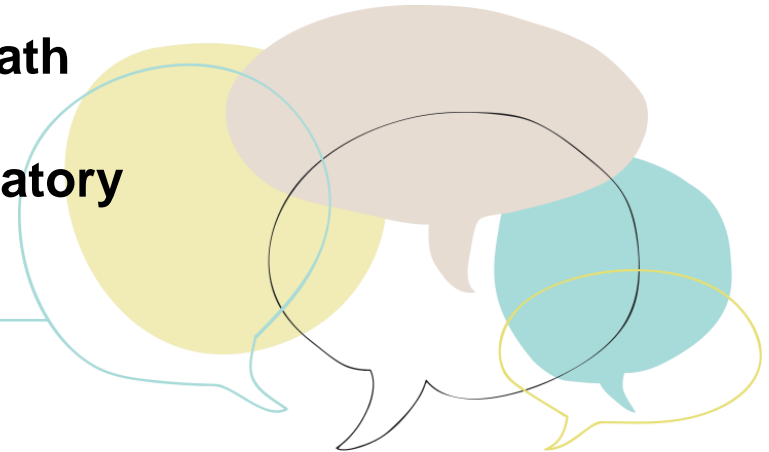


Learning technique that works

Learning technique refers here means to acquire knowlegde and skills

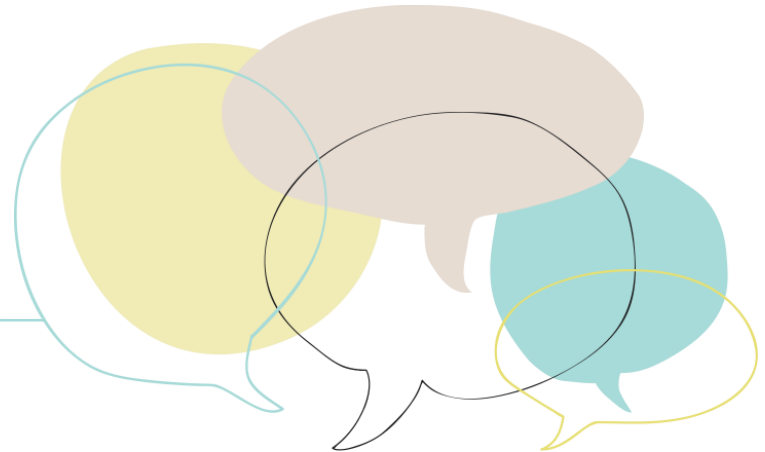
For example:

- **How to read textbook so that you understand and remember the content?**
- **How to act on lectures to acquire new knowlegde?**
- **What should you do to learn to solve math problems?**
- **How should you act to learn to do laboratory assingment or design project?**



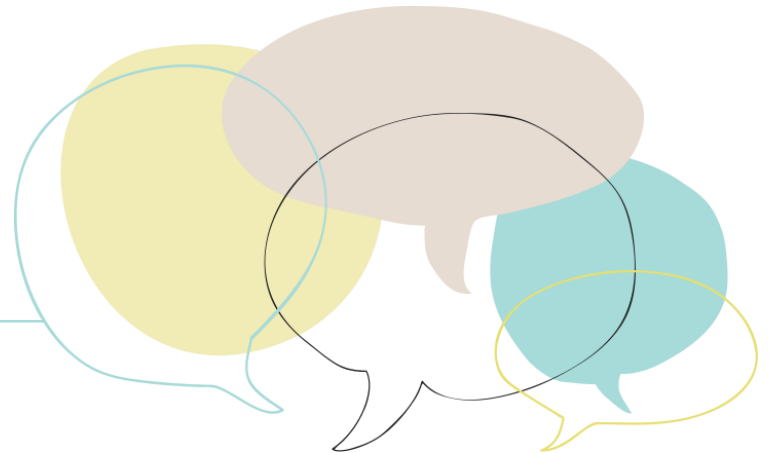
Write down (few minutes)

On your experience: What kind of study technique works?



Share your ideas in chat

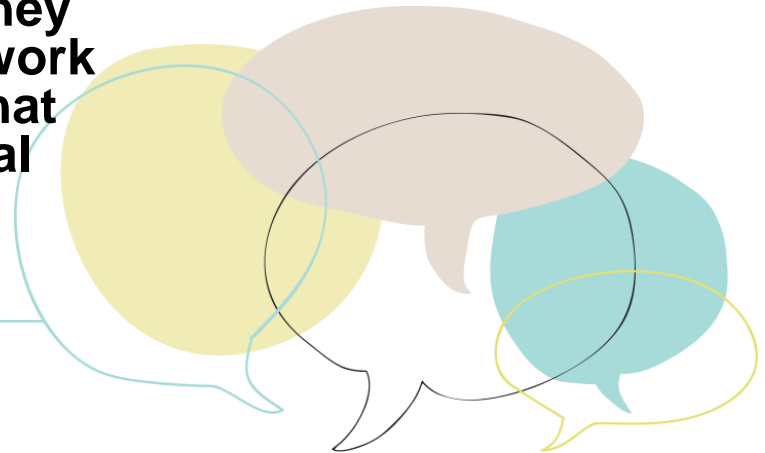
What kind of study technique works?



Learning technique that works

- **One size does not fit all!**
- **Proper learning technique might depend on:**
 - **Person and his/her characteristics**
 - **Material we are learning**
 - **Tests or exams that evaluate learning**

Common to good techniques is that they put students to personally think and work hard. Common to bad techniques is that they give possibility to avoid intellectual effort.



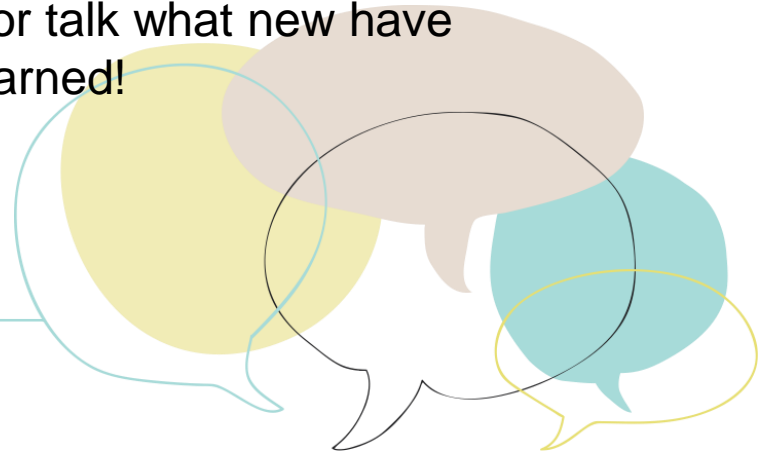
The most effective study techniques

Technique

1. Practice testing
2. Distributed practice
3. Elaborative interrogation
4. Self-explanation

How to use it?

1. Make short exams for yourself and answer them!
2. Study less in many days, not long period in one!
3. Ask why / how questions and make explanations!
4. Write or talk what new have you learned!

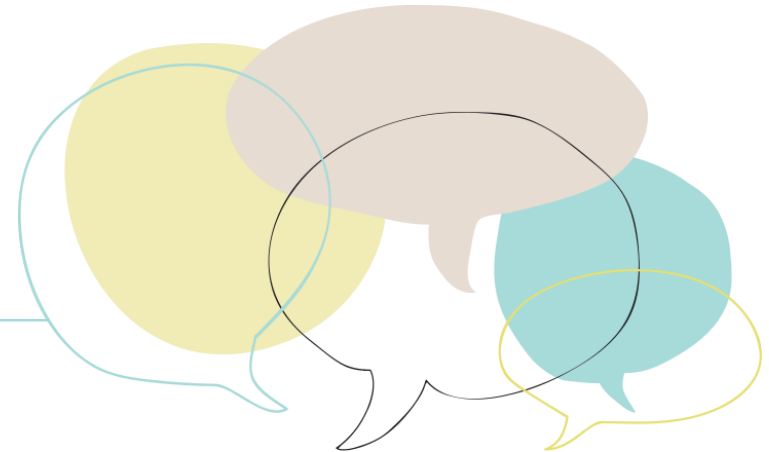


How can you use these techniques in practice in your studies?

Discuss in small groups and write down to Flinga (10 min): <https://flinga.fi/s/FPKHTEP>

Technique:

1. Practice testing
2. Distributed practice
3. Elaborative interrogation
4. Self-explanation



Having a good try
at the course
exercises and then
understanding
from the examples
what maybe went
wrong

Answer the
questions in
lecture
slides

Do
question
cards for
yourself

Solving
quizzes

Active
Recall -
method

Learning
vocabulary
in
languages

Solving
problems
with
partner

1. Practice testing

old exams,
unless new
material

Solve old
exams

Exercises
you can
find from
textbooks

Modify
available
exercises



Do tests with
limited time

Search
different
approaches
to sama
problems

Go to the
exercise sessions
and participate,
not just try to get
the answers or
skip them

Attend
lectures

Reading the
lecture
slides before
and after the
lecture

Not being
deadline
oriented

reading
material
each
week

Start studying
as soon as
possible when
the course
starts

2. Distributed practice

Using time
accordingly

create
proper
schedule

Read
lecture
slides
before
lecture

course is for
practice,
studying for
exam is for
reminding

Do
exercises

Read the book
before the
lecture ->
lecture notes ->
prep for lab ->
prep for exam

Applications
for different
exercises

Ask others
how they solve
problems and
explain your
solutions to
them

Group
explanation
sessions for
big
concepts



Ask your teacher

questioning
your own
knowledge is
necessary, but
not during
tests

3. Elaborative interrogation

self testing

index
cards

tests with
freinds

Having
talks with
your
classmates



Explaining
concepts in your
own words

Take
notes,
write stuff
down

Study with
friends,
help each
other

Explain the
subject to
yourself as if you
were teaching it
to someone who
has no knowledge
of the field

Mindmap



marks important
points and
repeat everyday

Explain the
topic to a
complete
outsider

make sure you
understand,
or you dont
understand at
all

4. Self-explanation

Drawing
pictures
instead of
writing
words

Khan
academy

Explaining
a topic to
a friend

explaining
the topic to
someone
else



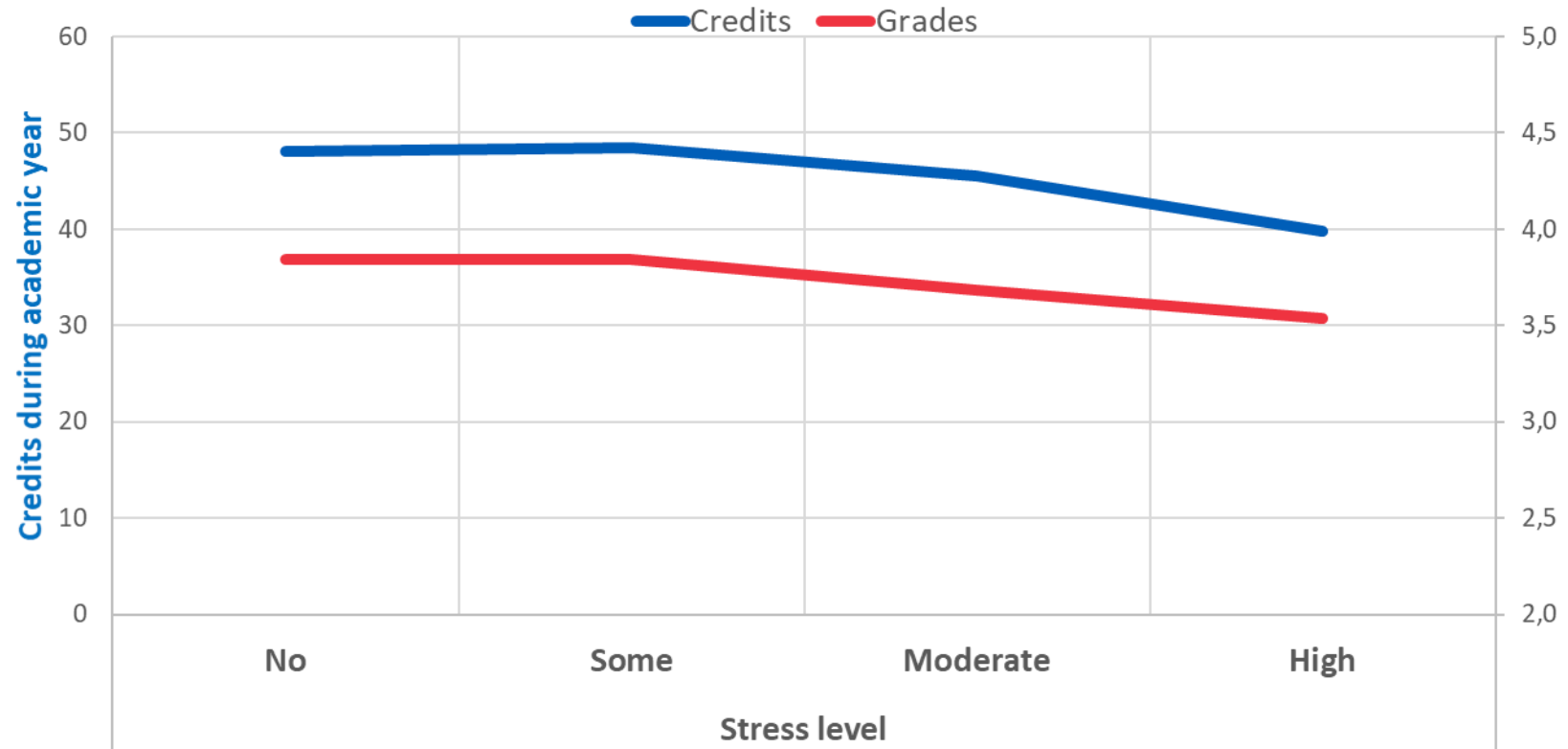
Talk/explain out
loud for yourself

Try
understand
the meaning
of different
equations

Wellbeing and success in studies



AllWell?2018 : Stress Level and Performance

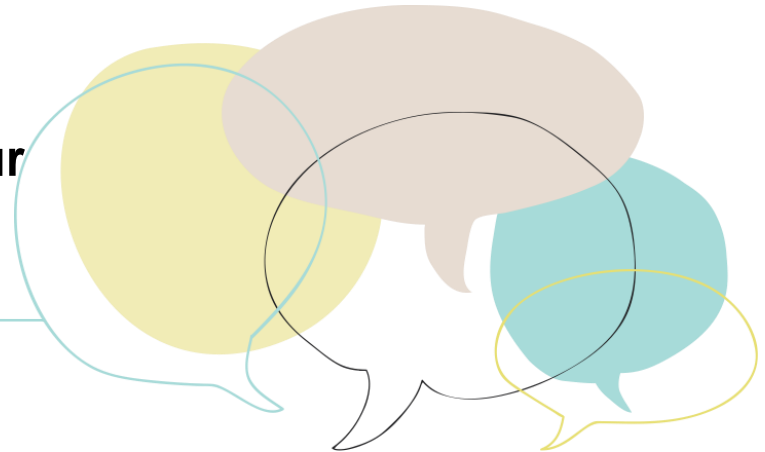


How to recover from stress?

Four elements of psychological recovery:

- 1. Psychological detachment from studies/work**
- 2. Relaxation**
- 3. Mastery of a skill, learning new things**
- 4. Control during off-studies time**

How do you recover? What elements of psychological recovery are present in your free time?



Wellbeing in distant learning

1. Joy and wellbeing

- Focus on things that are meaningful to you and bring you joy
- Take the time to exercise the way that suits you best – remember both, your body and mind
- Try to get enough sleep
- Eat healthy food
- Most of all - be kind to yourself

3. Teaching and learning

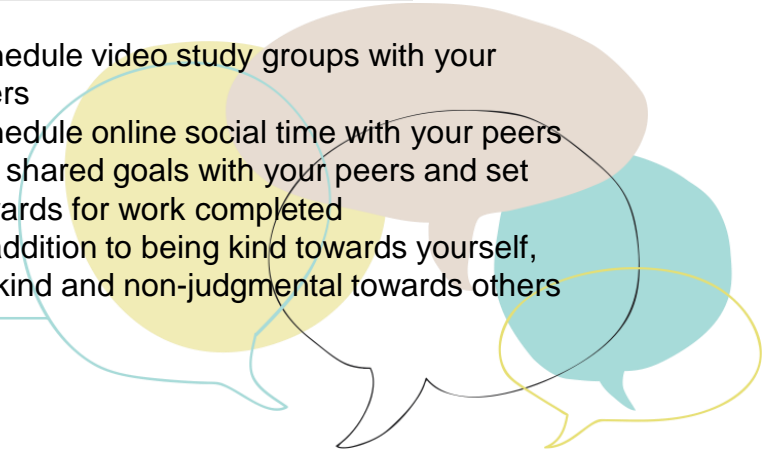
- Attend to remote study groups and tutoring online
- Remember that you can always reach out, ask for advice, feedback and guidance from your teacher, academic advisor and Learning services

2. Study habits and daily rhythm

- Create a daily study schedule with enough breaks
- Sometimes plans fail -try to accept it and try again
- Set small and clear goals that keep you motivated
- Focus on one thing at a time – be mindful and avoid interruptions. For example, try putting your phone in an airplane mode when you study
- Make your studying space as cozy as possible

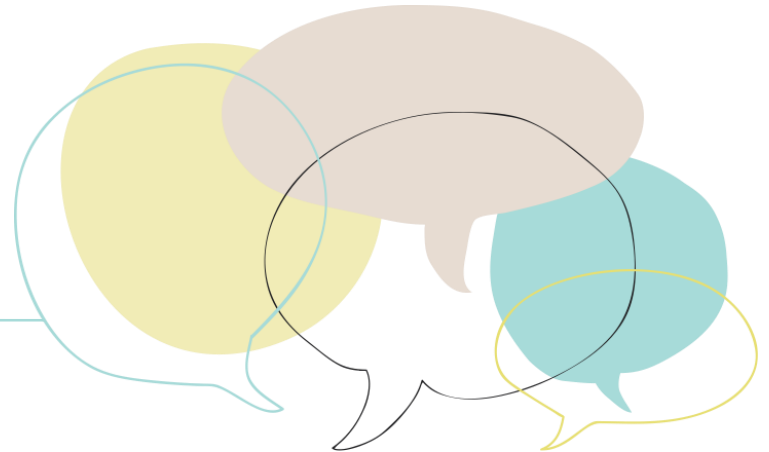
4. Aalto Community

- Schedule video study groups with your peers
- Schedule online social time with your peers
- Set shared goals with your peers and set rewards for work completed
- In addition to being kind towards yourself, be kind and non-judgmental towards others



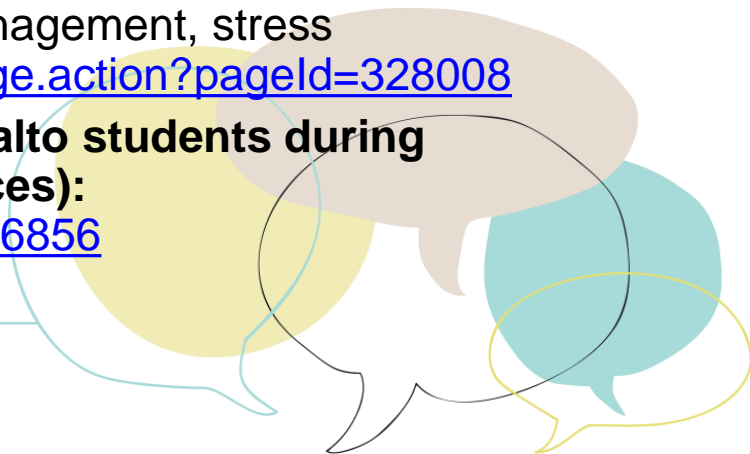
Can you answer your questions?

- **Go back to the questions you wrote down at the beginning of the lecture. Write down answers to the questions if you can.**



The Psychology Service at Aalto University

- Individual appointment (remotely or face-to-face) with Aalto psychologist, opintopsykologi@aalto.fi
- Career counselling psychologist supports students in matters related to career and life planning and transition to work. You can contact career counselling psychologist by e-mail **careercounselling@aalto.fi**.
- Advice line for psychologists: **+358 29 44 20080** (weekdays 9-15), contact information for other services: <https://into.aalto.fi/display/enopisk/Starting+Point+of+Wellbeing>
- Courses and self-study materials (e.g. time management, stress management) <https://into.aalto.fi/pages/viewpage.action?pageId=328008>
- MyCourses site: **Psychological support for Aalto students during corona-outbreak (Aalto psychologists services):** <https://mycourses.aalto.fi/course/view.php?id=26856>



Allwell? Study wellbeing questionnaire

<https://www.aalto.fi/en/services/allwell-questionnaire>



Study skills

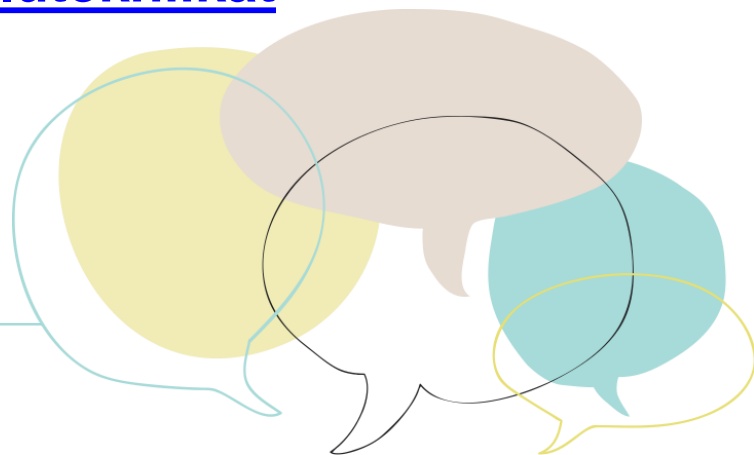
<https://into.aalto.fi/display/enopisk/Study+skills>

‘Time to Get Cracking’ – Self-study material on time management:

<https://mycourses.aalto.fi/course/view.php?id=23146>

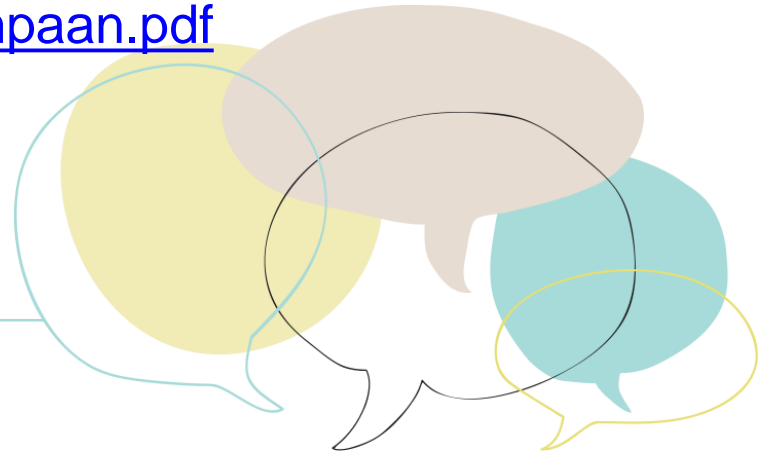
<https://www.learningscientists.org/>

<https://www oulu.fi/opiskelijalle/opiskelutekniikat>



References and suggested learning material

- Dunlosky et al. (2013) Improving Students' Learning With Effective Learning Techniques
- Hakkarainen, Lonka ja Lipponen (2008) Tutkiva oppiminen
- Richardson et al. (2012) Psychological Correlates of University Students' Academic Performance.
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<http://www.helsinki.fi/hyy/kopo/antoisampaan.pdf>



Thank you!

