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Aalto-yliopisto



Study skills

CHEM-E0100 Academic Learning Community

*7.11. 2021 at 8.30-10.00, Ke2
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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

Two main references:

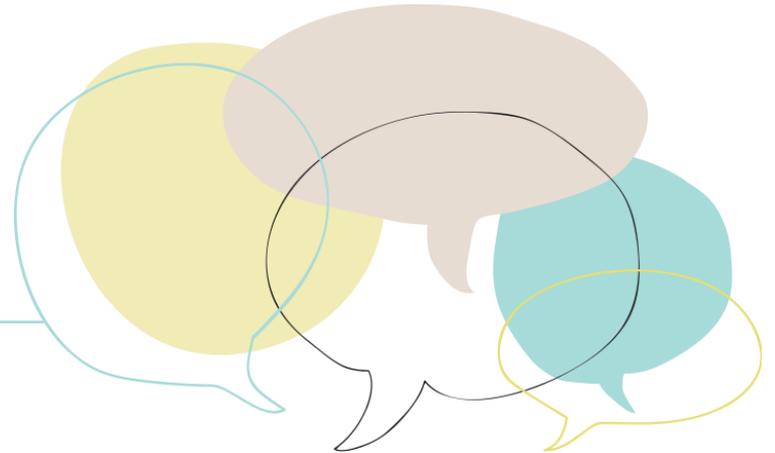
Dunlosky et al. (2013) Improving Students' Learning With Effective Learning Techniques

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

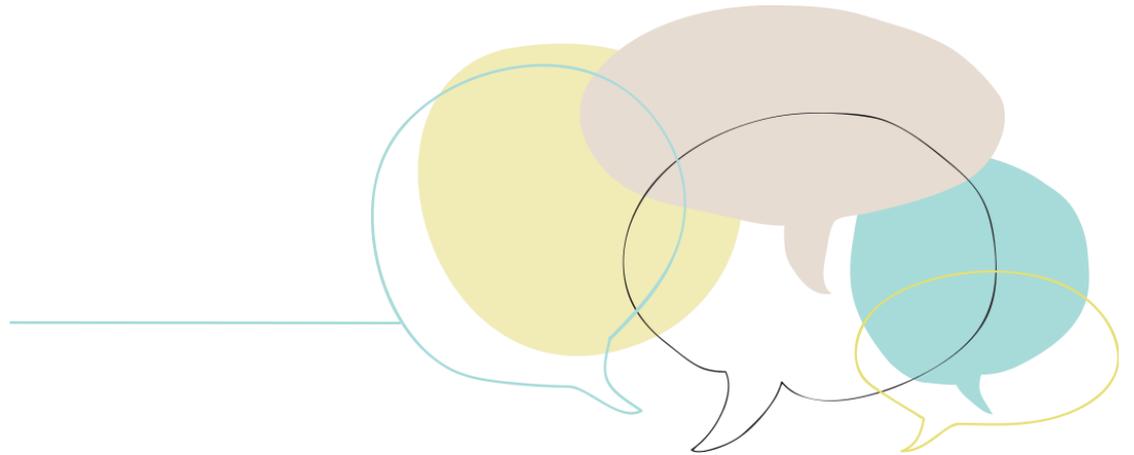
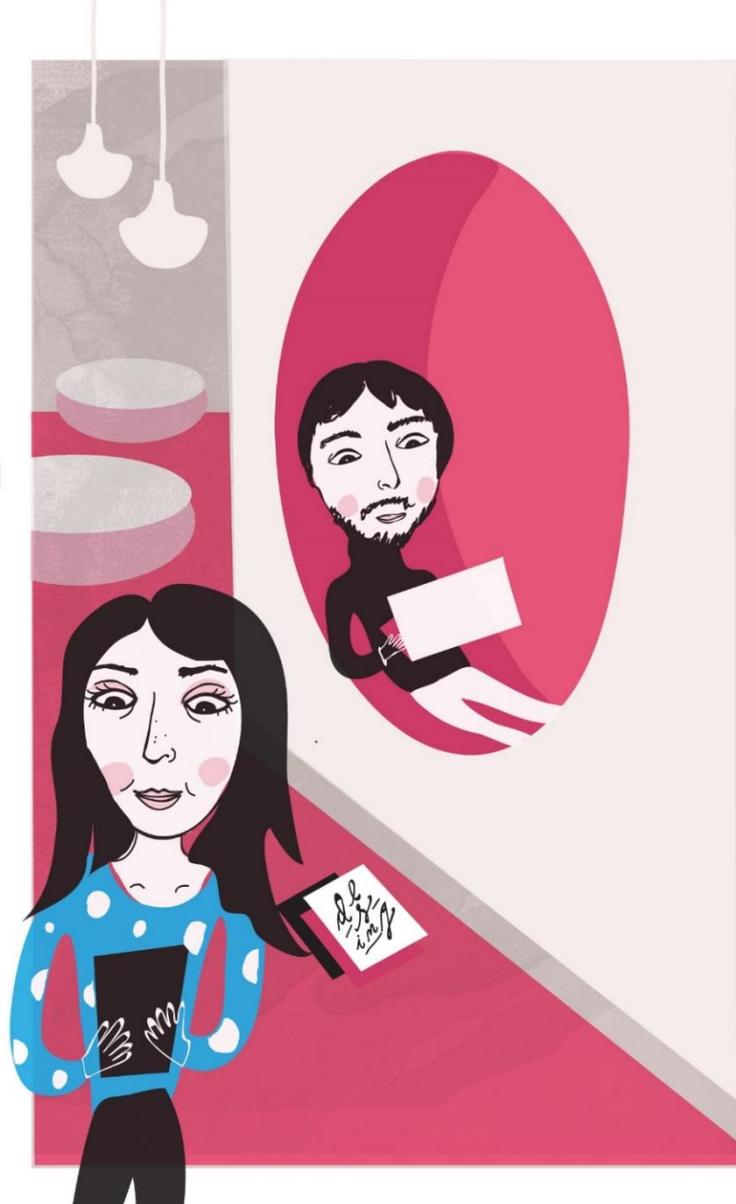


Write down (few minutes)

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



Elements of successful learning



Discuss with your pair (about 3 min)

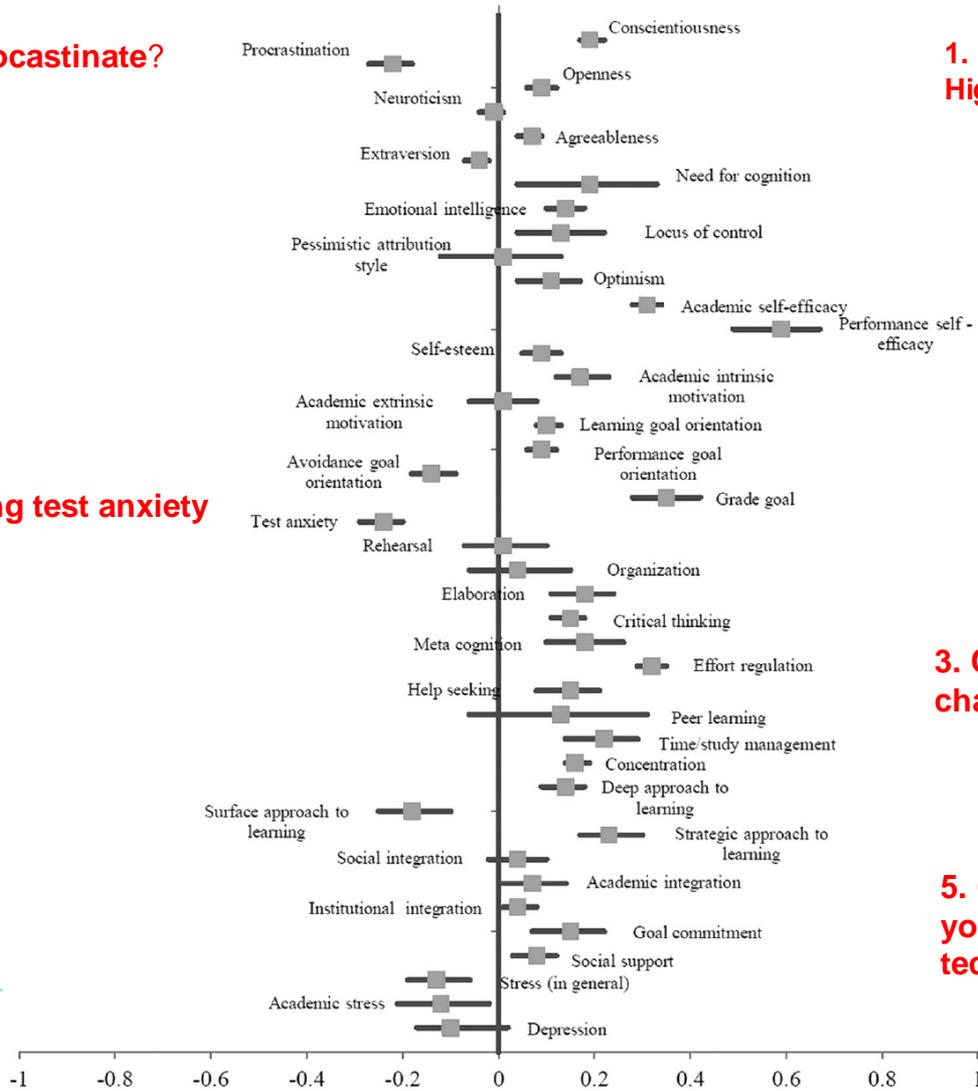
What do you think are the most important elements for successful learning? Which factors have the strongest connection with students' GPA?



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 Hailikari 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?

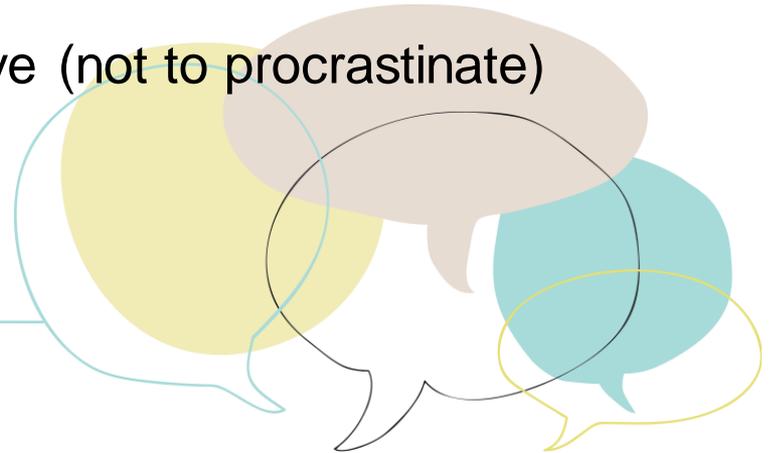
7. Can you manage your time

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

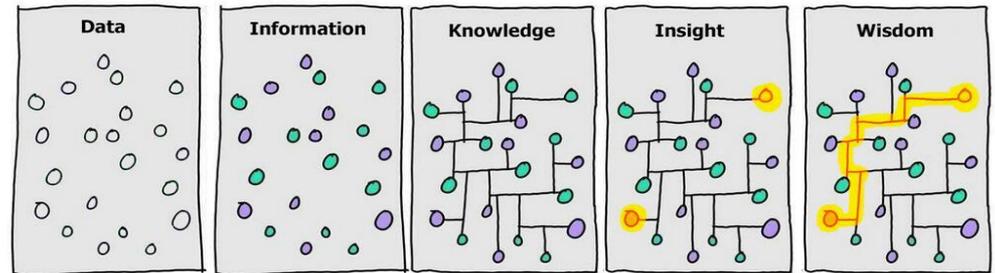
- Looking for deeper understanding
- Relating new ideas to previous knowledge

Surface approach

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

Systematic approach

- Awareness of criteria
- Planning, time management

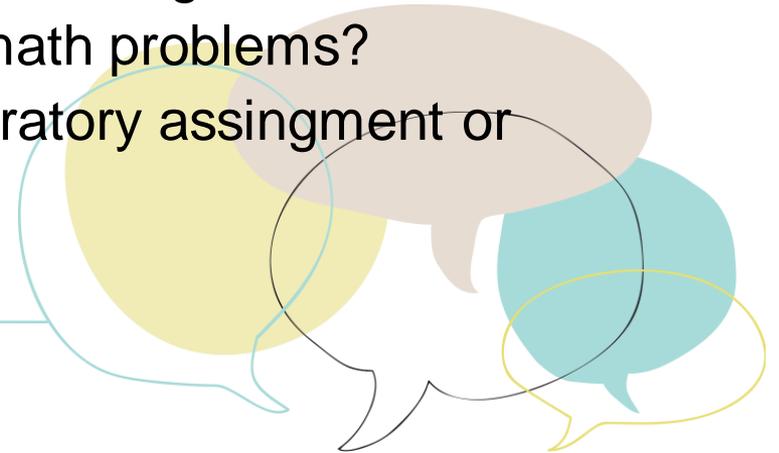


Learning technique that works

Learning technique refers here **means to acquire knowlegde and skills**

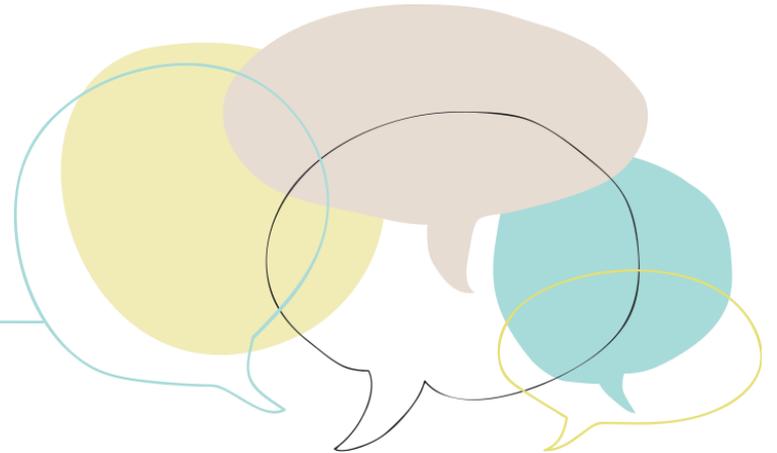
For example:

- 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 a small group of 3-4 students

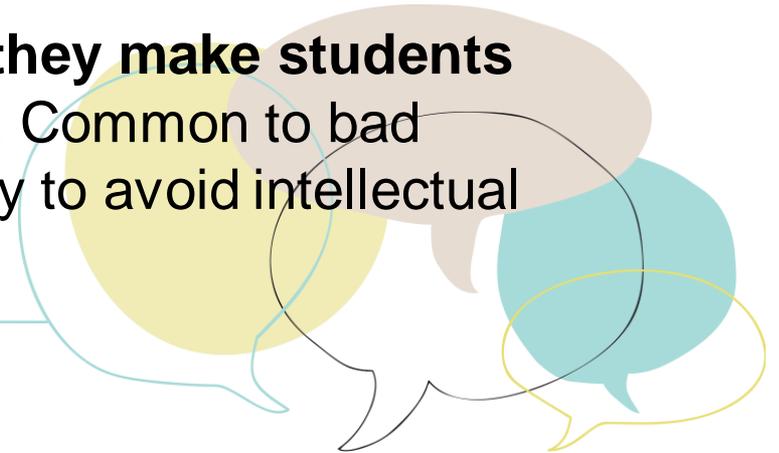
What kind of learning technique works in your studies?



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

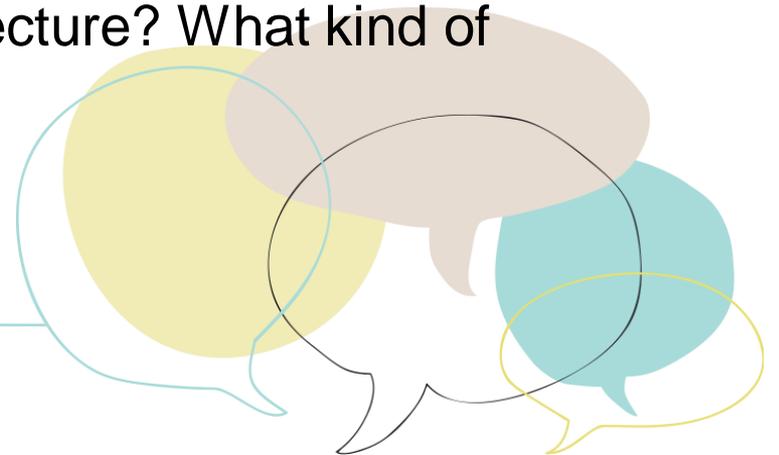
Common to good techniques is that **they make students to personally think and work hard**. Common to bad techniques is that they give possibility to avoid intellectual effort.



Reflection is a key to become an effective learner

Ask yourself:

- Where do I study best? Does it differ depending on the task?
- What is my prime time for focusing? Can I use it for the hardest tasks?
- Does it help me to make notes on a lecture? What kind of notes?



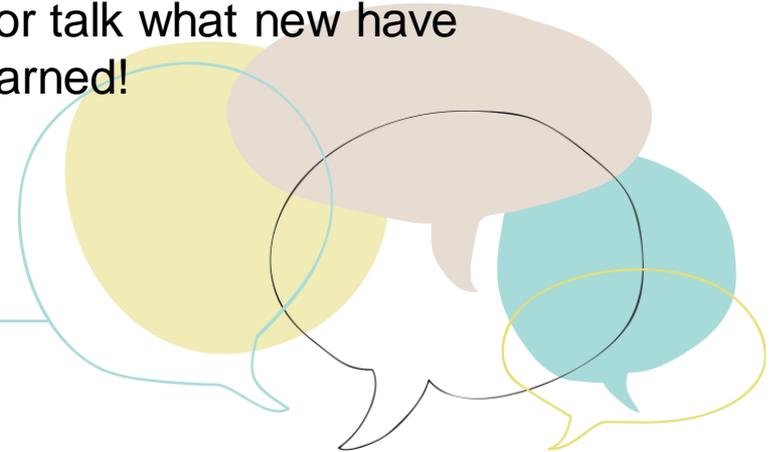
The most effective study techniques

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 session 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 (10 min):

Technique:

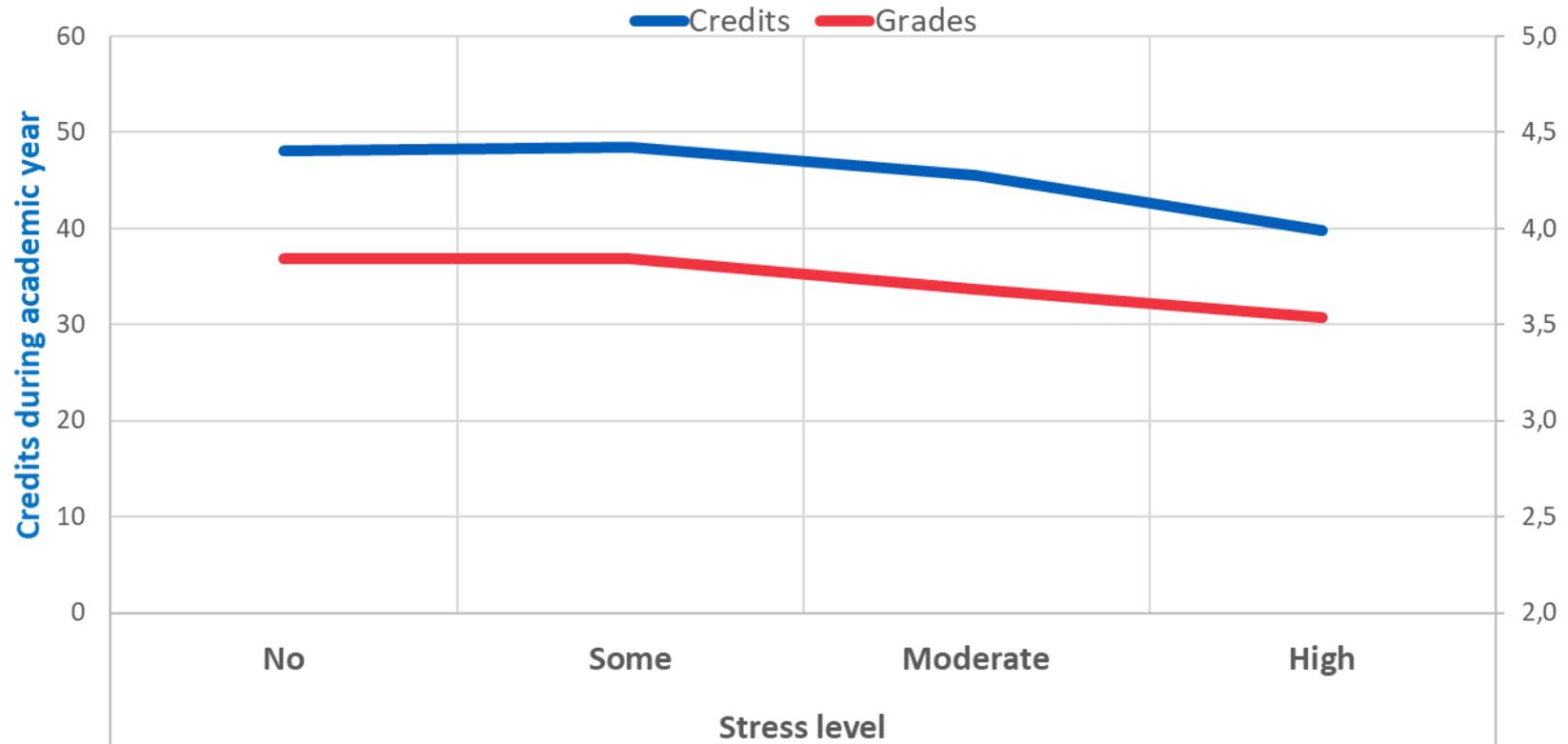
1. Practice testing
2. Distributed practice
3. Elaborative interrogation
4. Self-explanation



Wellbeing and success in studies



AllWell?2018 : Stress Level and Performance



Avoidance behavior,
for example alcohol,
food, Netflix

Worrying about the
past or the future,
not living in the
present moment

Not knowing what is
truly important for you

Psychological inflexibility

Acting according to
impulses without a goal
or being very passive

Taking your thoughts as
facts and giving them a
lot of power to affect
behavior

Keeping up
negative self -
image



Accept your emotions
and thought and things
you can't change

Mindfulness- live in
the present
moment

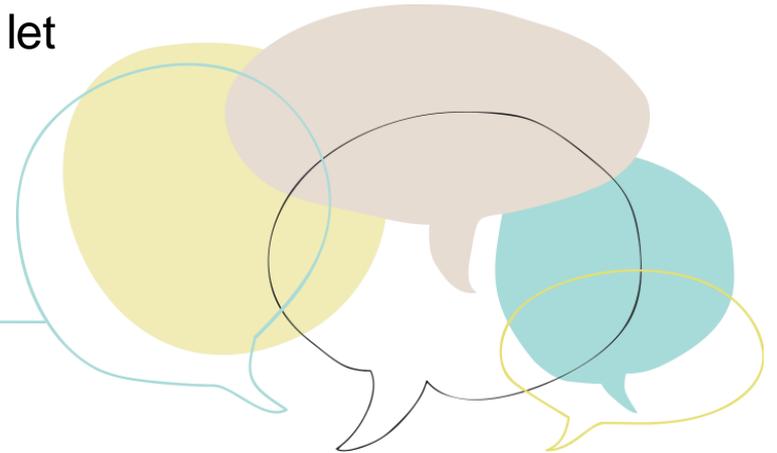
Values- find out what
is important for you

Psychological flexibility

Act according to
your values

You are not your
thoughts- free yourself
from the power of your
thoughts

Healthy self-image, let
go of negative self-
image



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.



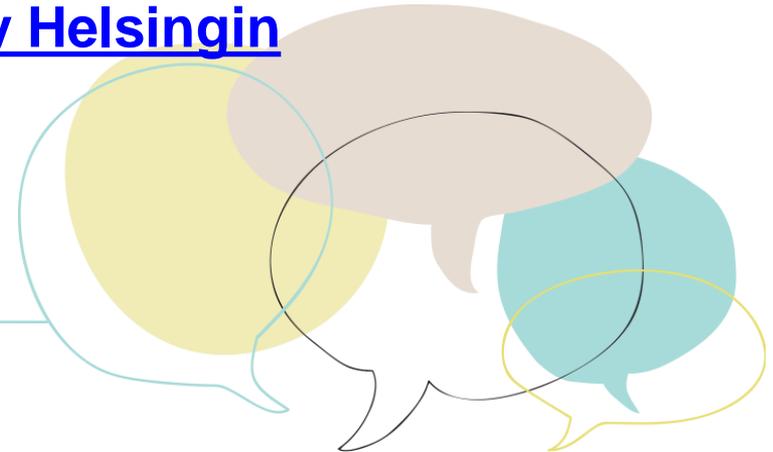
Study and career counselling psychologist services

- Starting Point of Wellbeing: [Starting Point of Wellbeing - Student life - Into \(aalto.fi\)](#)
- Individual appointment (remotely or face-to-face) with Aalto psychologist: [Study- and career planning psychologists - Student life - Into \(aalto.fi\)](#)
- Courses and self-study materials (e.g. time management, stress management): [Courses and workshops for students - Student life - Into \(aalto.fi\)](#)
- Information about study skills:
<https://into.aalto.fi/display/enopisk/Study+skills>
- A podcast series hosted by the psychologists at Aalto University:
[The Best Thing Today podcast series | Aalto University](#)



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.
- Ryti ja Uusitalo (2002) Antoisampaan opiskeluun.
[Antoisampaan opiskeluun -opas by Helsingin yliopiston ylioppilaskunta - Issuu](#)



Thank you!

