

Learn to Learn: Facts About Learning

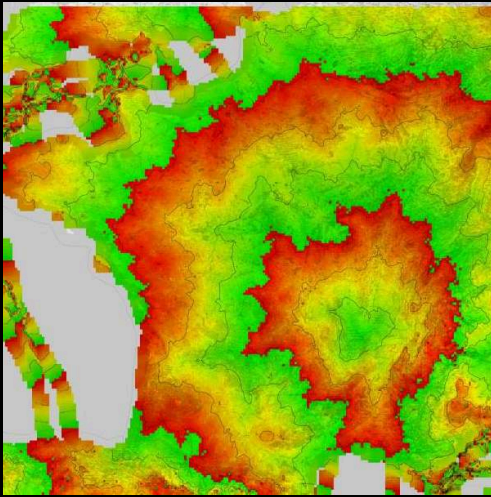
Rémi Emonet (@remiemonet)

2016-05-25

Web En Vert

Tonight

- Personal Learning
- Facilitating Learning
- Resources

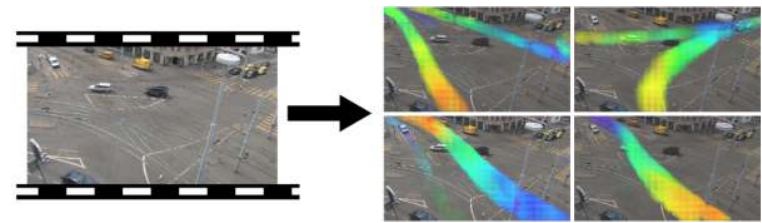



software carpentry

? ! :)
learn teach help enjoy

FOSS

\$ whoami

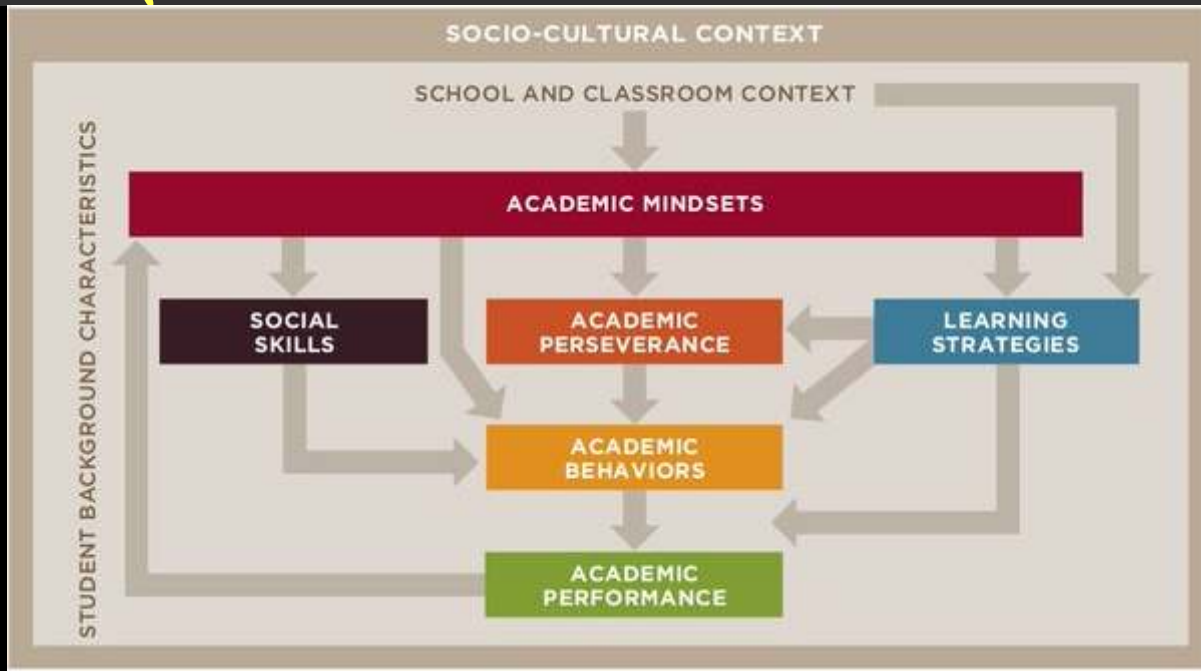


\$ whoami

- Software Engineer
- Researcher: machine learning, computer vision
- Teacher: web technologies, computing literacy, ...
- Geek: deck.js slides, isochrones, ...

Personal Learning

The Importance of the Mindsets



- From Teaching Adolescents to Become Learners: The Role of Non-cognitive Factors in Shaping School Performance

Develop a Growth Mindset

- Fixed mindset

- intelligence is static
- think you are good in some area
- and bad in others
- and that it can't change

- Growth mindset

- intelligence can be developed
- believe you can learn anything
- if you put effort, work and practice

Take Care of Yourself

- Do sport
 - stimulates neural development
 - reduces stress
- Sleep well
 - consolidates learning
 - increase focus
- Meditate, concentrate on a side activity
 - reduces stress
 - improves concentration capabilities

Basics Techniques, Compared

Technique	Utility
Elaborative interrogation	Moderate
Self-explanation	Moderate
Summarization	Low
Highlighting	Low
The keyword mnemonic	Low
Imagery use for text learning	Low
Rereading	Low
Practice testing	High
Distributed practice	High
Interleaved practice	Moderate

- The scientific paper and a summary (from which the above table is taken)

Take Care of your Learning

- Plan your learning
 - spaced/distributed/interleaved learning
 - overview then details
 - practice chunking (grouping ideas)
- Switch between thinking modes: focused vs diffuse
- Protect your learning
 - cut distraction, avoid procrastination
 - maximize focused attention
 - ensure regular breaks
- Use handwriting

Tee tänään

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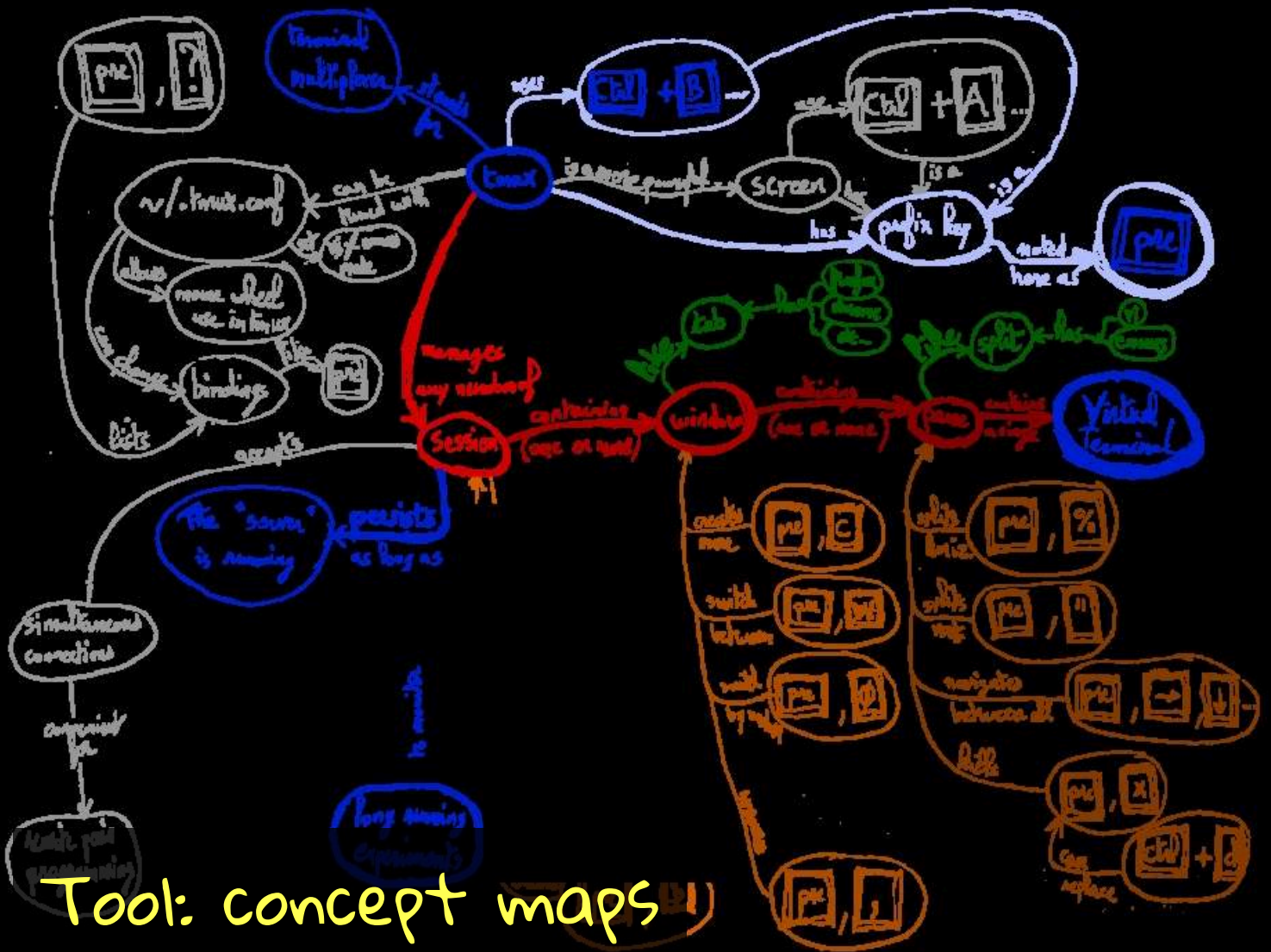
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Tool: the pomodoro technique

3
x 7

Tool: flash cards



Tool: concept maps

Facilitating Learning

Key Points

- Be enthusiastic
- Know your "audience"
 - levels: novice → competent → expert
 - zone of proximal development, scaffolding
- Favor a sense of belonging
 - fight the impostor syndrome
 - watch Amy Cuddy
 - don't use "just"
- Ensure the proper mindset

Growth Mindset

- Do

- Emphasize learning goals
- Praise people for effort
- Attribute success to working hard
- Embrace mistakes
- Model learning from mistakes

- Don't

- Focus only on performance goals
- Praise people for getting the right answer without trying
- Describe certain youth as "smart"
- Reinforce self-criticism
- Maintain a fixed mindset about your own expertise

Tool: sticky notes

- display completion
- ask for help
- answer MCQ
- provide feedback

Peer Instruction: just in time teaching

- Have people discuss and "teach" each others
- Use to
 - debunk misconceptions
 - anticipate pain points

Resources

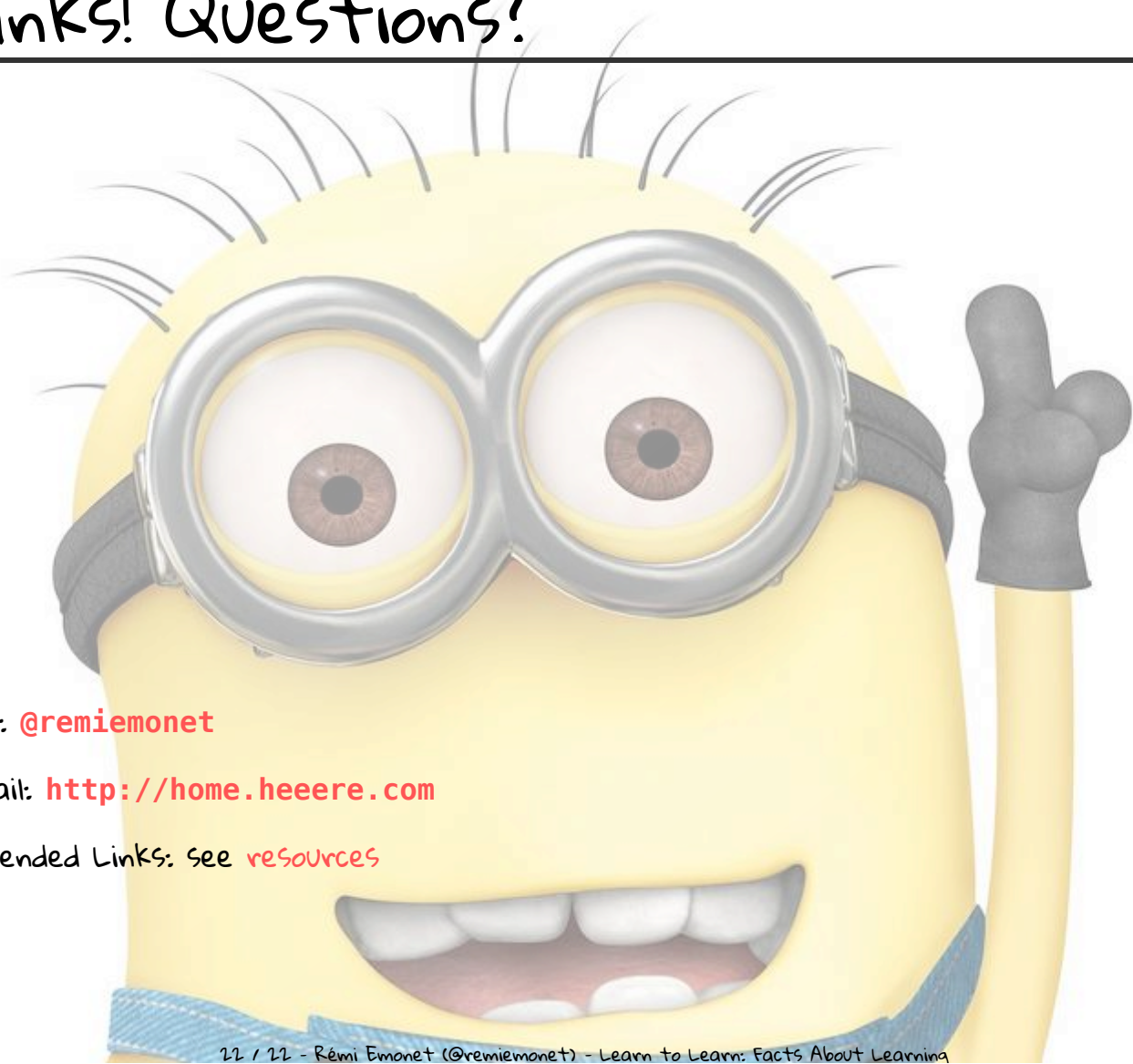
Resources

- *How Learning Works: Seven Research-Based Principles for Smart Teaching* Book by Marie K. Norman, Marsha C. Lovett, Michael W. Bridges, Michele DiPietro, and Susan A. Ambrose
- *Learning How to Learn: Powerful mental tools to help you master tough subjects* MOOC by Barbara Oakley, Terrence Sejnowski
- *Software Carpentry Instructor Training* [live website](#) with the content that is used to train instructors involved in software carpentry
- Wikipedia
 - *zone of proximal development ...*
 - *peer instruction ...*

Keep On Learning

I am still learning
michelangelo

Thanks! Questions?



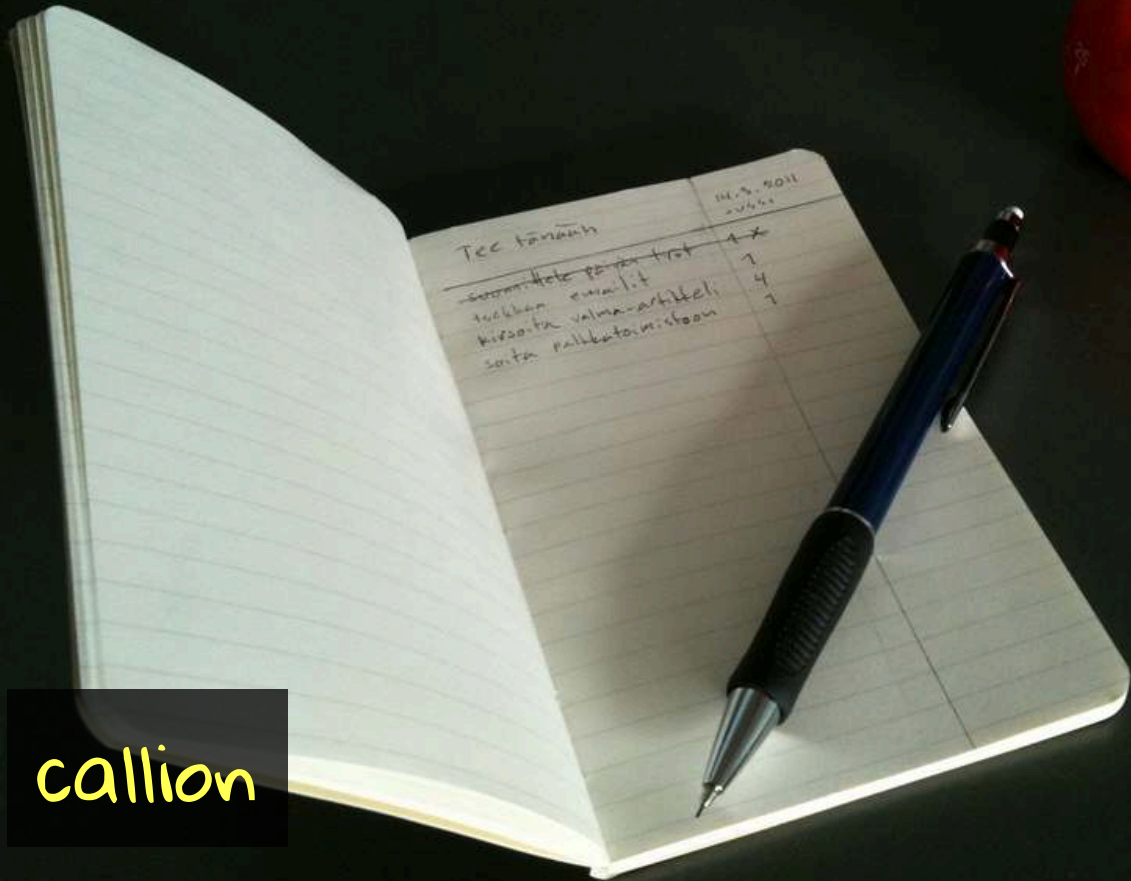
twitter: [@remiemonet](#)

web/email: <http://home.heeere.com>

Recommended Links: see [resources](#)

Attribution

callion



Tee tänään

- Suomalaislehti-pöytäkirjat 1
- Teollisuuden esiselitys 1
- Kirjoita valmiin-artikkeli 4
- Soita rakennusministeriöön 1

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silverfuture



geolawie

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Anne Davis 773



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tatadb

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