ETH zürich

Inspiring teaching for life

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EPT-hub

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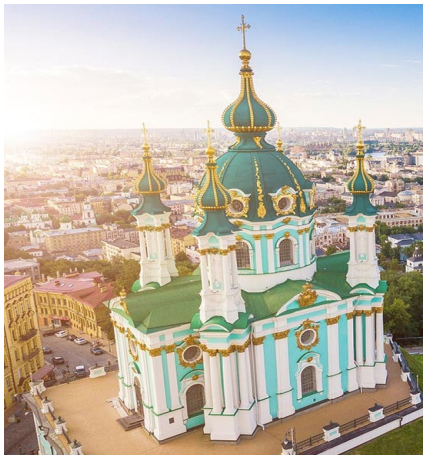
How did it start...



Ukraine

Population
46 000 000

Area
607 000 km^2

Teaching = Challenge = Opportunity!

Way towards success

- You are inspired about what you do, you live it and transmit your passion to the others!
- You are effective and efficient, having your things under control
- You are reliable

Your main treasure is YOU!

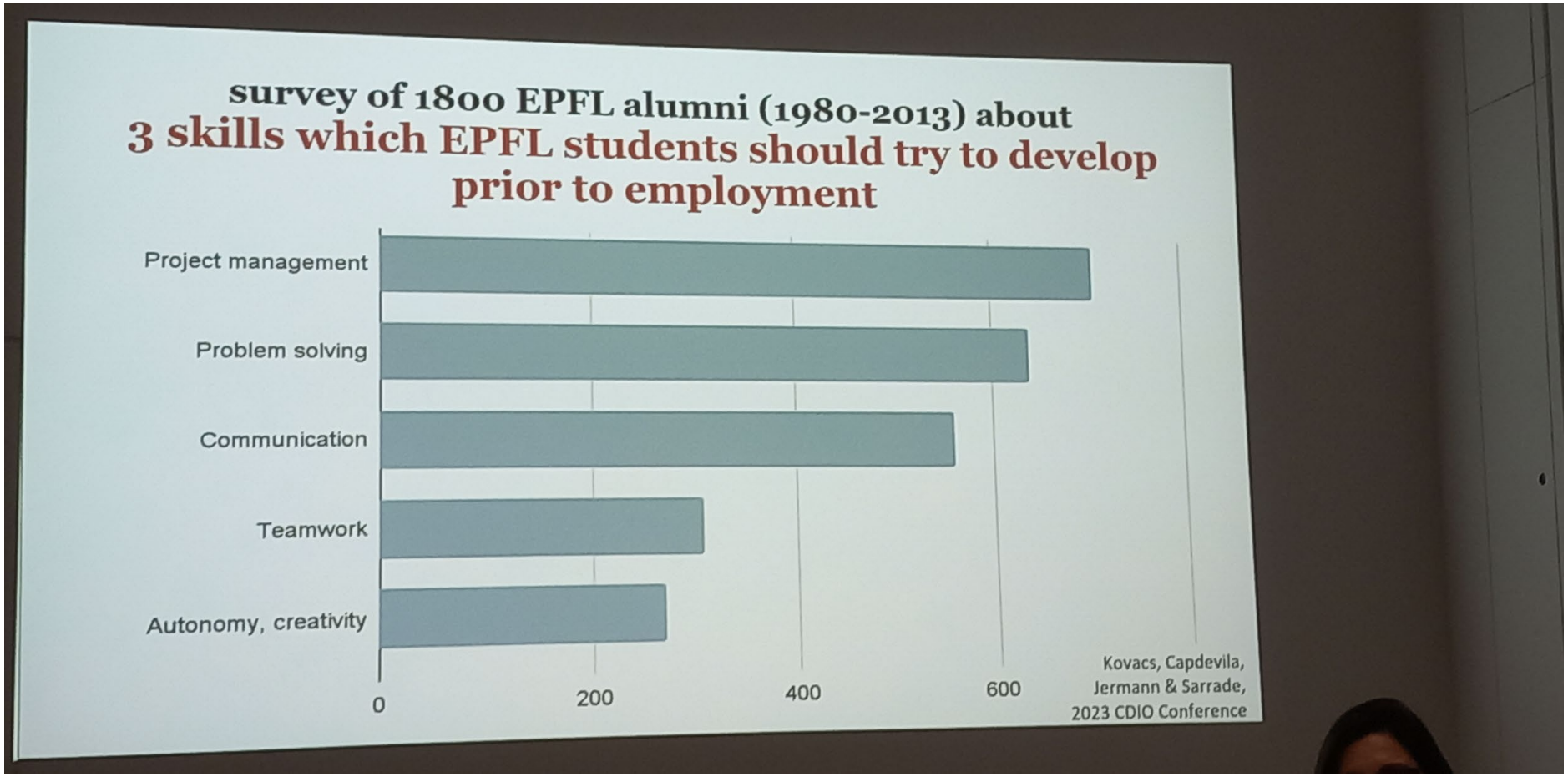
- Expertise knowledge and competences
- Transversal skills
- Human/Social capital
- Energy
- TIME

EVERY DAY, with small steps, invest in your personal and professional development, the entire “package”!

(read, write, meet, practice, listen,
attend courses, events, videos, exercise…)

Act!

What do Alumni say?



What do employers say?

from the ETH LAUNCH 2025 Autumn event (ETH Alumni / Entrepreneur Club)

Alumni are brilliant in expertise knowledge,
but they fail at efficient work in teams

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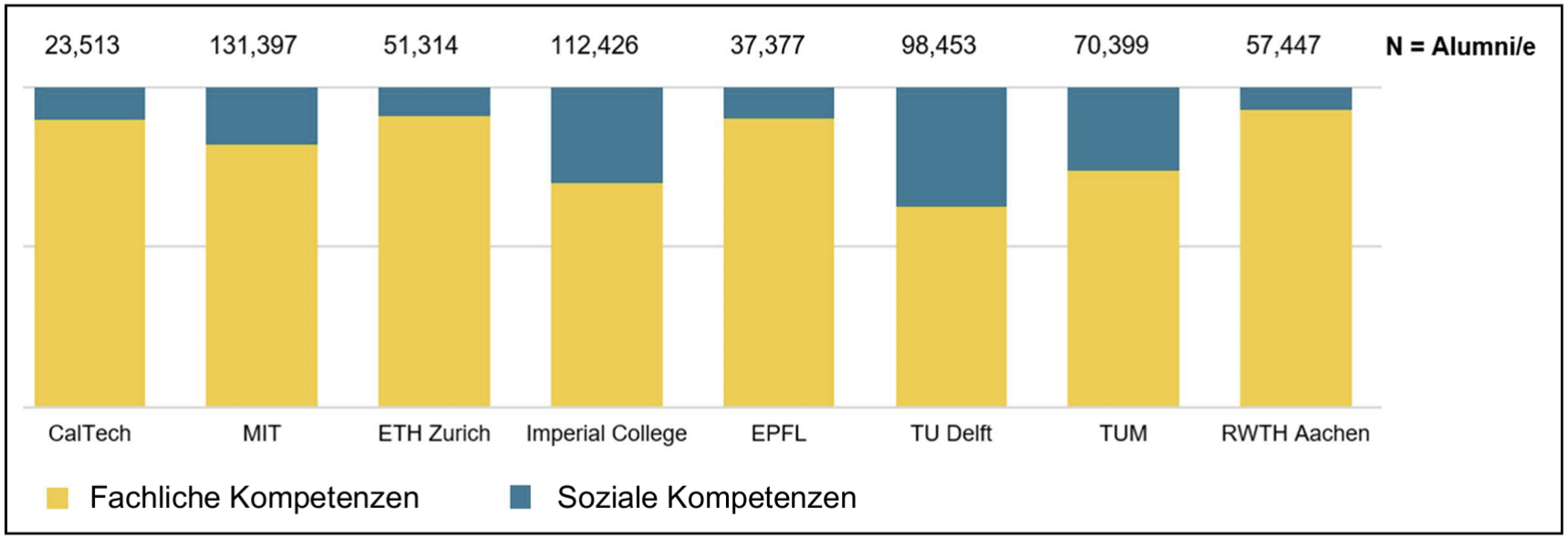
“Successful project is not about the idea,
its about functioning people”

What does LinkedIn say?

Wie stellen sich unsere Studierenden auf LinkedIn dar?



Unsere Studierenden stellen überwiegend ihre fachlichen Fähigkeiten in der Vordergrund, erwähnen sehr wenige soziale Kompetenzen und **keine persönlichen Kompetenzen (Selbstmanagment-Kompetenzen im Kontext der eigenen Arbeit)**.

Source: Likdelkn Career Insights / Barbara La Cara / ETH Zurich

Good news!

- You already have a lot of skills that sometimes you are not aware of!☺
- At this event you have a great chance to reflect on your skills and learn about further opportunities

Few practical insights on example of teaching and related

Mind-state of a students during the class

Good teaching

What else is important besides disciplinary content and expertise?

- Motivation and passion
- Safe encouraging environment
- Clear learning objectives & instructions
- Communication & feedback
- Engaging techniques
- Work in team
- Good planning
- Habits

We have to prepare students for real-world complexity

Your first contact with students is **very important**!

Opportunity to setup the stage for entire semester:

- establish good atmosphere & culture of cooperation
- clarify roles and responsibilities
- introduce teaching methods used during the semester

Portal

Possible formats of intro-activity

- Individual introduction
- Introduction in small groups, with short report in plenum

Possible topics:

- Fun fact about yourself
- What you can do well..
- story from teaching /studies

Important: appreciate everything what students say

Listening and Thanking
are golden

Clear communication: what will happen during your lessons?

Tell the students immediately what you really will do, give a feeling of approach and safety

- Theoretical summarizes / organizers
- Recipes to solves the exercises
- Calculation workouts
- MC questions and group works
- Discussion of homework issues

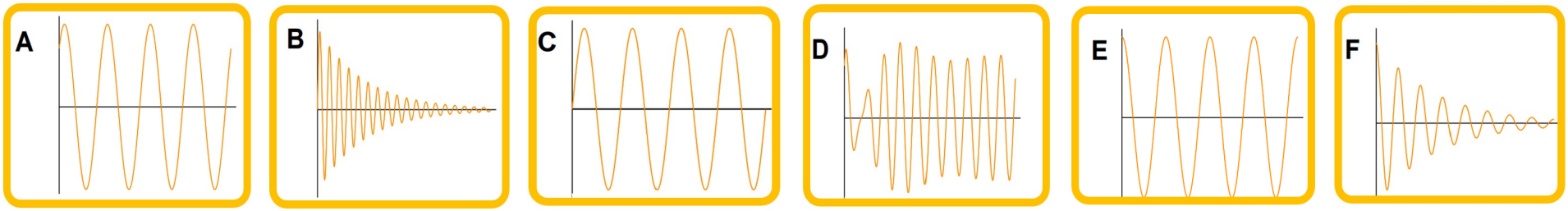
Just do it!

The best way to show what will happen – is just to do it

Activities of the first contact
have to reflect your teaching approach

Group work is superpower!

Puzzle activity



1. $x(t) = A\cos\left(\omega t - \frac{\pi}{2}\right)$

2. $x(t) = \frac{A}{\sqrt{2}}(\cos\omega t + \sin\omega t)$

3. $x(t) = A\,e^{-\gamma t}\cos\left(\sqrt{\omega_0^2 - \gamma^2}\,t\right)$

4. $x(t) = A\,e^{-\gamma t}\cos\left(\sqrt{\omega_0^2 - \gamma^2}\,t\right) + f(\omega_0, \gamma, \Omega)\sin\Omega t$

5. $x(t) = A\,e^{-\gamma t}\sin\left(\sqrt{\omega_0^2 - \gamma^2}\,t\right)$

6. $x(t) = A\cos(\omega t)$

$\ddot{x} + \omega_0^2 x = 0$

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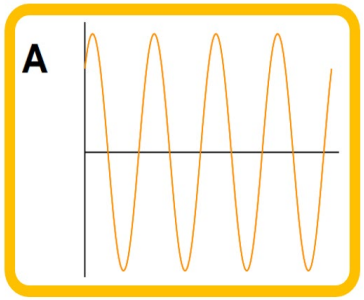
A



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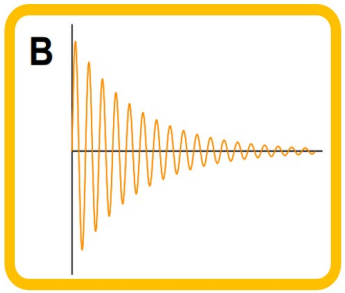

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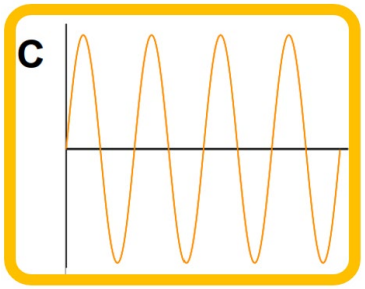

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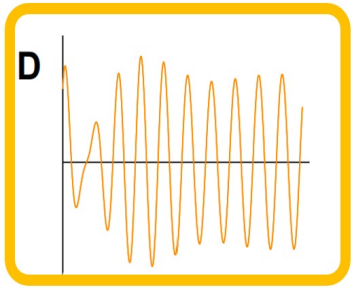
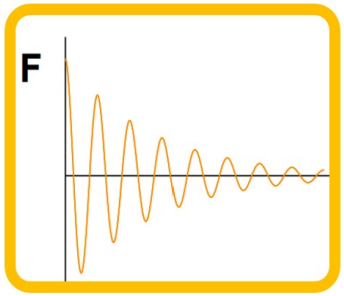


E

F



$$\ddot{x} + \omega_0^2 x = 0$$

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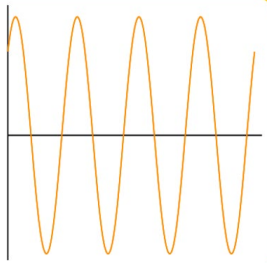

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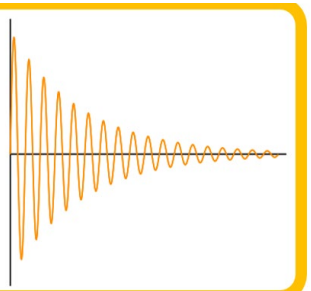

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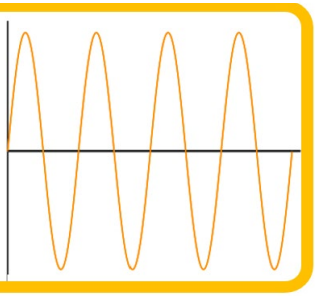

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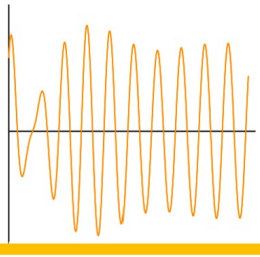

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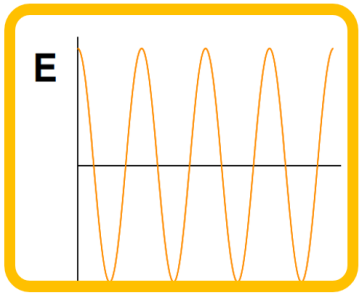
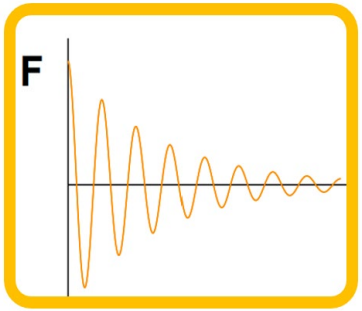


6. $x(t) = A \cos\left(\omega t\right)$

$$\ddot{x} + 2\gamma \dot{x} + \omega_0^2 x = 0$$

F



3. $x(t) = A\, e^{-\gamma t} \cos\left(\sqrt{\omega_0^2 - \gamma^2}\, t\right)$

What did you like about this activity?

Activating tools/strategies

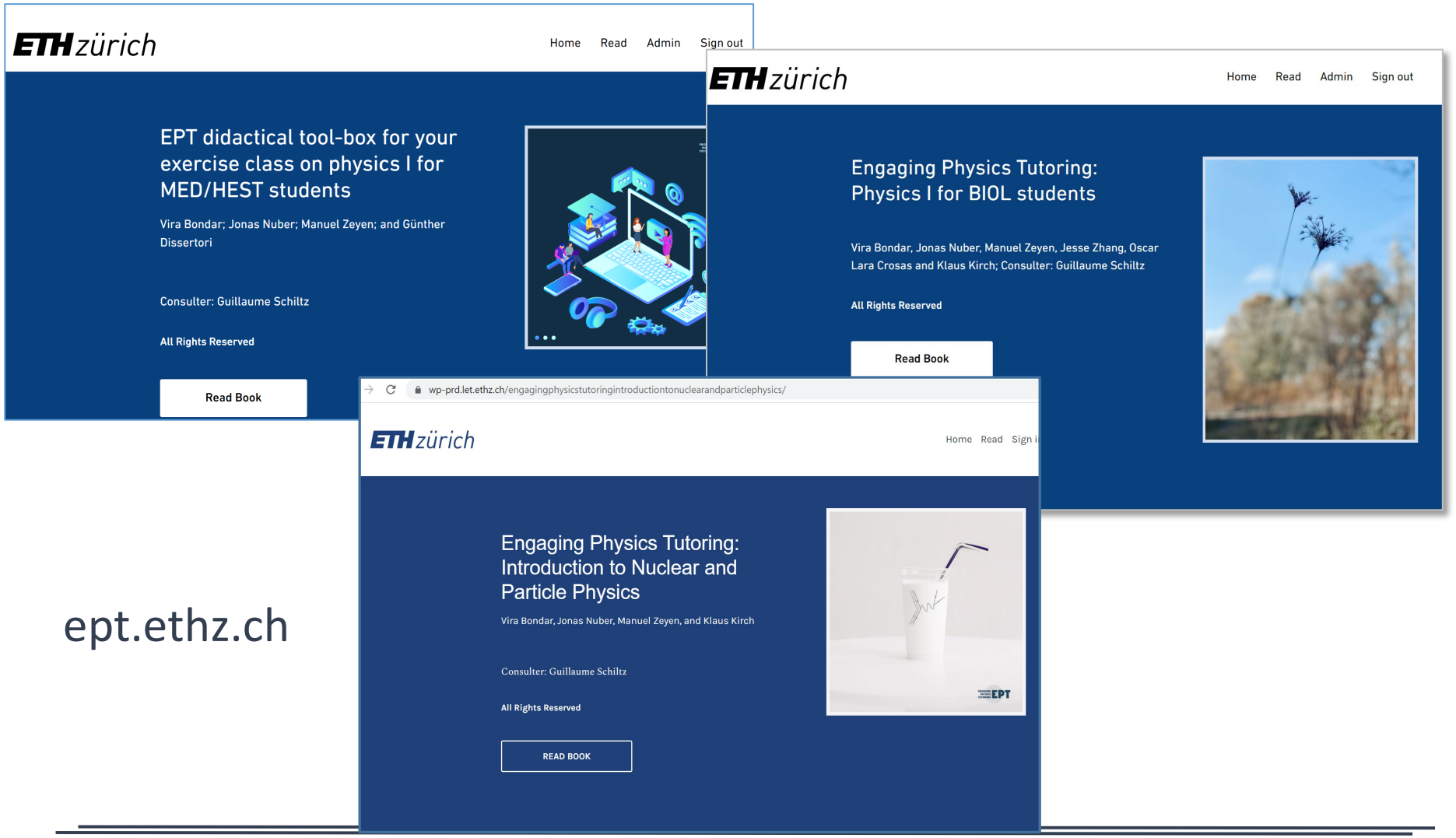
- Low-threshold starters
- MC questions
- Think-pair-share / Group works
- Little hands-on experiment
- Puzzles
- Collaborative mind maps
- Guided calculation steps
- “True-false” ping-pong

…

https://commons.ucsd.edu/_files/228-Active-Learning-Strategies.pdf

We engaging materials for you! / ready-to-use lesson designs

Mostly introductory physics courses



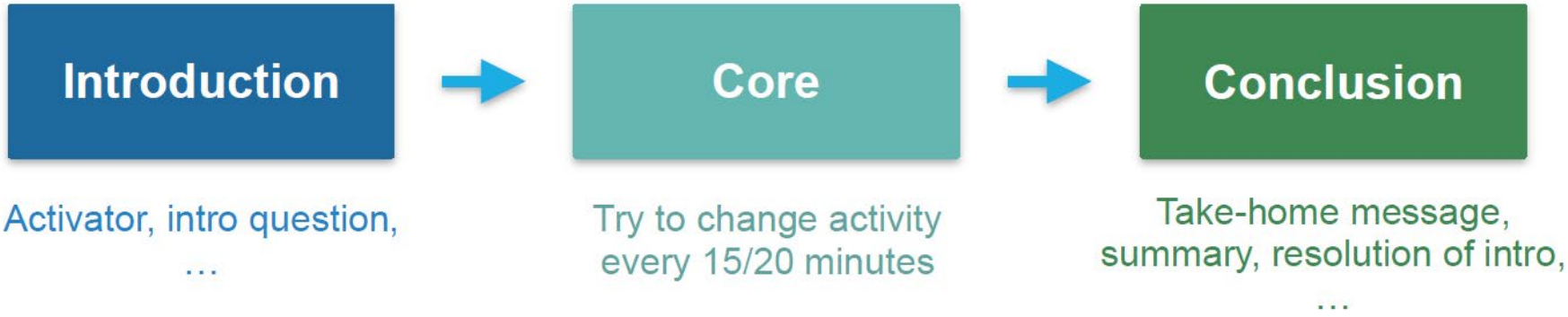
ept.ethz.ch

V. Bondar et al, HEAD, DOI: http://dx.doi.org/10.4995/HEAd21.2021.12949

…so how to use this all to design your lesson?

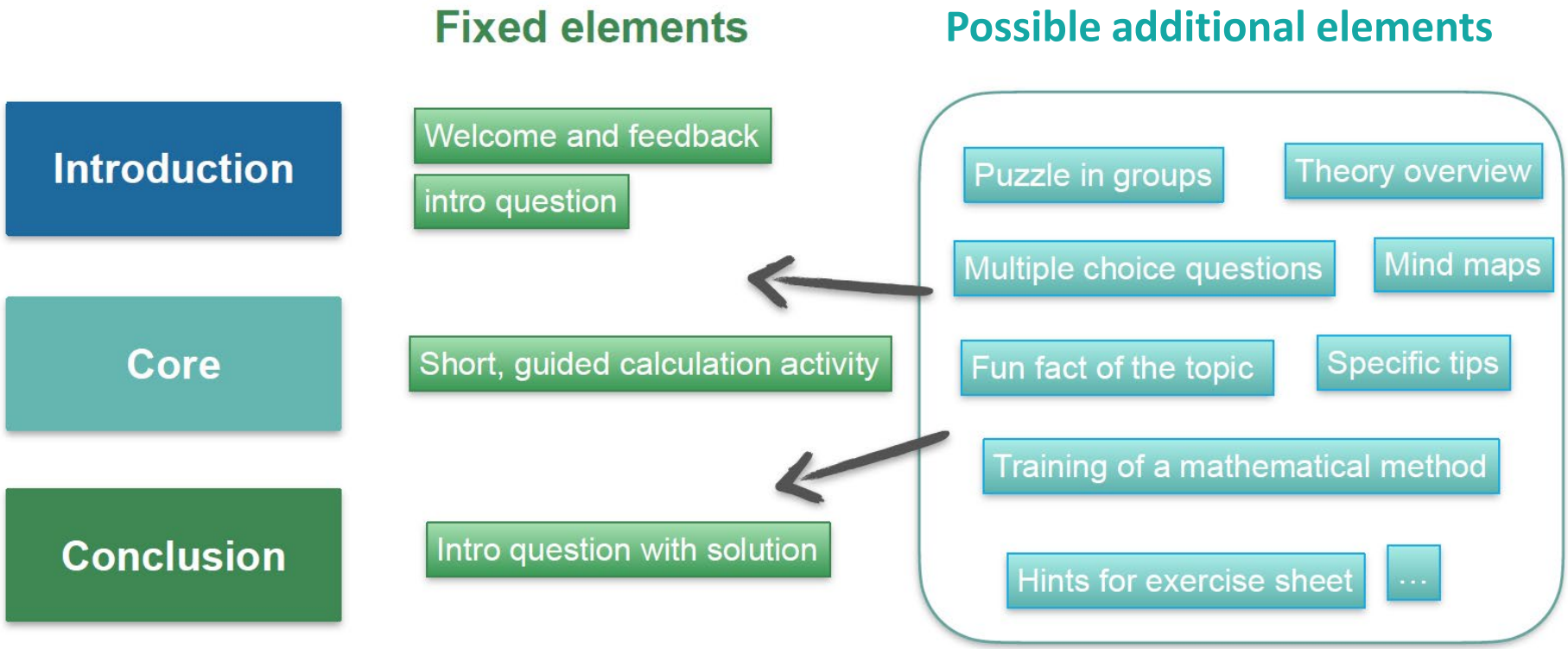
- **Define learning objectives of your lesson**
- **Plan it well (do not improvise!)**

How to plan a lesson: Structure helps!



Courtesy Jonas Nuber

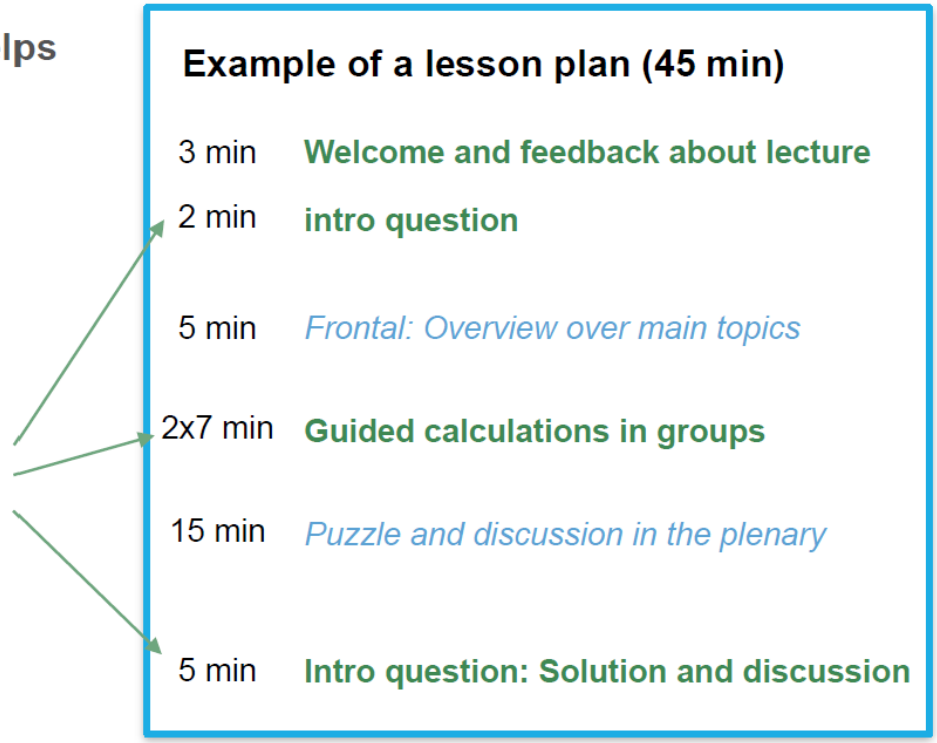
Example: The lesson with fixed elements



Fill your shelf with activities: The lesson plan

Building your lesson up of individual modules helps to prepare efficiently and maintain structure.

Fixed blocks which appear (nearly) every week



Comment on time-management:

- Highest-quality preparation is everything!
- First class(es): plan time margins for your activities
- In class/event: never go overtime

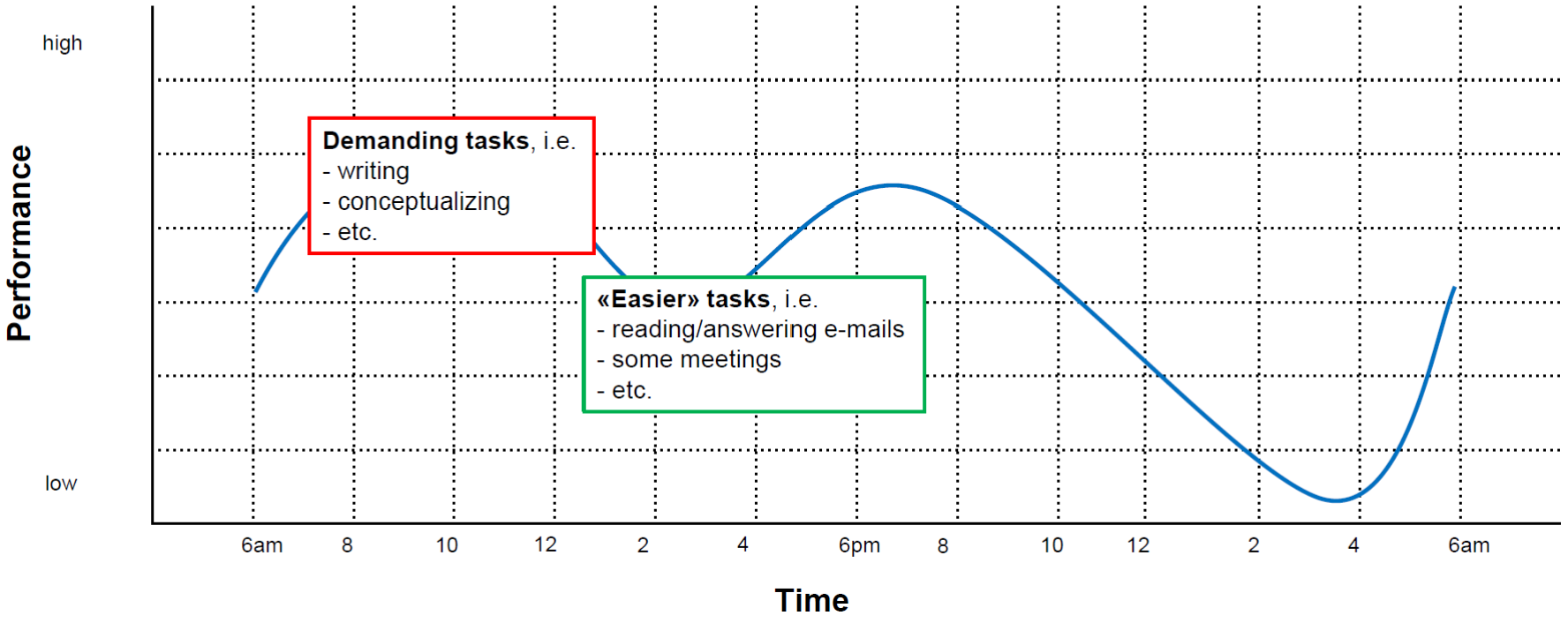
Practice = Quality

Homework: take this approach and plan precisely your next class/talk

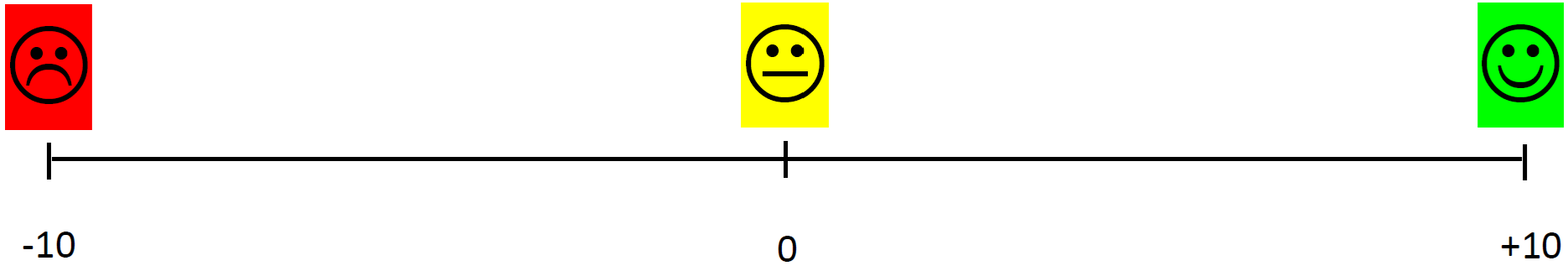
Goal->skeleton (intro-core-end)-> main activities->enriching elements->precise timing->practice

Your energy levels

Energy curve (J. Zulley, 2005)



Rate your State



Our life is defined by habits

James Clear «Atomic Habits»

Possible useful habits

- Start your day strong: first things first
- Mindful conversation: more listening, less talking
- 5min writing rule (at the end of each day – reflect and plan the next day, writing anything else – just write!)
- Every day make one person happy / help
- Every day invest a short moment in self-development (1page reading, short video, exercise)
- Every day do something uncomfortable / unusual
- Every day do something that makes you feel good, even if it is only something small…increase your energy!
- Every day THANK

Challenge 5-5-5!

Every day

- 5’: At the end of each day write down: 3 things you did well and 3 things you will do next day
- 5’: exercise (yoga, stretch, jumps, whatever you like!)
- 5’: Write email / message / say to one person: “THANK YOU”

Don’t break the chain!!!

Send it to…:

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8093 Zürich Switzerland

...and get a suprise!;)

Diary		Exercise		“Thank you”	
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
10		10		10	
11		11		11	
12		12		12	
13		13		13	
14		14		14	

https://ethz.ch/staffnet/en/news-and-events/internal-news/archive/2022/03/the-key-to-staying-in-control-of-your-workload-good-time-management.html


Take care of yourself and people around you…
…be happy!