Name: Slima

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Time allocated to each session.

Which strategies can help in the long term? Think proactive

LOAFS → clear and precise structuring of the lesson

→ Restructuring the class to get learning objectives more focused.

→ Inverse classroom

Who can help you? Think specific people or roles

Discussion with peers that have more experience.

Section (for number of credits)

Pedagological advisor

TAs

Which tools could be useful? Think physical/virtual

A timer

The professor.

Which strategies can help in the moment? Think reactive

Look regularly at the timer and train before giving the clair. Separate and do each section one by one.

Name: Alexander

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Limited time for large content that needs to be teached

Which strategies can help in the long term? Think proactive

Look at the program and analyse the key point to organise the course effectively

Inverse classrooms, clear and accesible learning objectives

Who can help you? Think specific people or roles

Direction of institute + study council of your section

Pedagogical advisors, other professors.

TAs

Which tools could be useful? Think physical/virtual

Books, video

Which strategies can help in the moment? Think reactive

Focus on important point and create content that supplement the class that are accessible (video on moodle, extra exercice, etc...)

Name: Serhat

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Ensuring equal effort from all students

Which strategies can help in the long term? Think proactive

Think-pair-share activities

Groups that vary every time.

In project, make them keep track on how they want to split and structure their work.

Who can help you? Think specific people or roles

Student services.

Student representatives.

Which tools could be useful? Think physical/virtual

Jigsaw with hand-out that can be collected sometimes (not necessarily all the time)

Intermediate meetings with TAs.

Which strategies can help in the moment? Think reactive

Design a map to ask questions not always to same people. Look around in the class

Name: LOUIS

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Size of the classroom.

Which strategies can help in the long term? Think proactive

- [redacted] Adapt your class the size + involve TAs to help you assist students during the class
- Strategies to divide large auditoriums into sections?

Who can help you? Think specific people or roles

- In EPFL I guess CAPE
- Dean to ask for more money, rooms, double the classroom eventually... (lol)

Which tools could be useful? Think physical/virtual

- You can think of using clickers as a tool for active learning in big classrooms
- Maybe a software to pair / group students connected with their device and allow them to submit common answers (virtual jigsaw)

Which strategies can help in the moment? Think reactive

- If possible ask help from TAs or give the students ways to reach out to you
- For common sessions where you want students to discuss, ask them to whisper only (to manage noise level)

Name: Alexander

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Lecture halls not designed for group work

Which strategies can help in the long term? Think proactive

- Focus on group work in exercise session on clickers instead of group work

Who can help you? Think specific people or roles

- In EPFL I guess CAPE
- An app / software designer if does not exist. (Carl Louis 😊)

Which tools could be useful? Think physical/virtual

- Clickers
- Softwares to do virtual think-pair-share or Jigsaw without having to move around.

Which strategies can help in the moment? Think reactive

- Help the students form groups or ask help from TAs
- Ask them to whisper during discussions in large auditoriums to keep noise level low.

Name: shima

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

The lesson plan to be covered is too much for the whole course.
(too many things to be delivered)

Which strategies can help in the long term? Think proactive

- Refine and focus on what's essential when designing your class
- Ask students for more preparation (readings, ...) before classroom
  - Reversed classrooms

Who can help you? Think specific people or roles

- In EPFL I guess CAPE?
  - Simone Deparis @ EPFL
- Colleagues who might have tried out

Which tools could be useful? Think physical/virtual

- For certain aspects that do not need to be discussed in class
  - Videos, handouts, podcasts Yes!

Which strategies can help in the moment? Think reactive

- Skip a few slides go to the essential
- Delay the content taught, cancel a chapter / topic (or give it as a "bonus")

Name: Serhat

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Having them implemented in more theoretical classes.

Which strategies can help in the long term? Think proactive

→ ~~Figuring out new teaching methods~~

→ Alternate between theoretical and application / examples / case studies section in your lectures

~~[illegible]~~

→ Give them the opportunity to work on the potential applications in exercise session. Use concrete examples

+ Inversed classrooms (they teach)

Who can help you? Think specific people or roles

→

. CAPE, to find the best tools suited to your specific field

Contact:

- Eric Mazur!

Which tools could be useful? Think physical/virtual

→

. Experiments (if applicable)
analysis of wrong students answers in past exams (anonymous)

- Simulations of applications

- Forum de Réponses aux questions.

Which strategies can help in the moment? Think reactive

→

Explicitely stating that your class is theoretical and giving some strategies on how to effectively learn in this context.

+ Design exercise session focusing on applications

Name: LOUIS

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Fear of trying something new?

Which strategies can help in the long term? Think proactive

- Good planning (lesson plan) => less fear
- Maybe try first with a small group or survey

Who can help you? Think specific people or roles

- CAPE, colleagues, even students (ask them what activity they would enjoy doing!)
- Same as above

Which tools could be useful? Think physical/virtual

- Maybe someday you could first test on a virtual classroom?

Which strategies can help in the moment? Think reactive

- Asking students for feedback
- Explicitely stating that you are trying things
- Same as above. Maybe prepare a feedback sheet to make sure you don't only get subjective feedback such as « I liked/didn't like »

Name: Alexander

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Large classes (too many students)

Which strategies can help in the long term? Think proactive

- Planning how you could divide your classroom (sections of auditorium? activities to do during exercise sessions in smaller groups ?)
- Same as above + Maybe also use TAs during the class + clickers

Who can help you? Think specific people or roles

- Dean : ask for smaller classes or double your classroom bf (needs more money...)
- + Maybe CAPE

Which tools could be useful? Think physical/virtual

- More rooms to divide the class even during the lecture, and then ask students to come back ?
- Virtual software to enable pairs / small groups of students to send most common answers ?

Which strategies can help in the moment? Think reactive

- Try to ask students to whisper during discussions
- Yes, Think pair share with their neighbors + be available (forum, office hours, questions during break etc...)

Name: Serhat

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Large number of students

Which strategies can help in the long term? Think proactive

Practicing active learning with more students every time.

Create groups to divide the number of student and make gigsaw so that student can share with other instead of doing all alon.

Who can help you? Think specific people or roles

TAs for spreading the load between multiple people

student representative

+

TA

Which tools could be useful? Think physical/virtual

Clickers or online quizzes to make the activity more accessible for large room.

Moodle platform

+

anonymous questionnai

Which strategies can help in the moment? Think reactive

Multiple choice quizzes and discussions

Clickers OR forums

Name: Shima

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

The level of the class regarding the background and different personalities.

Which strategies can help in the long term? Think proactive

Introductionary exercises/notes for the students.

Anonymous quizzes before the class.

Group of competence to mix people.

Who can help you? Think specific people or roles

Student services.

High-school teacher and student inclusion center (respect EPFL)

Which tools could be useful? Think physical/virtual

Online forums for questions (EDStem)

Online servey

TAs!

Which strategies can help in the moment? Think reactive

Interactive activities, such as the think-pair-share or the jigsaw

Videos or actuality related introduction

peer-feedback.

Name: LOUIS

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Theatrical classroom.

Which strategies can help in the long term? Think proactive

Inverse classrooms.

Introduce active learning at the beginning and set how the class is going to go from the beginning

Who can help you? Think specific people or roles

CAPE pedalogical advisors.

CAPE, student representative, TAs

Which tools could be useful? Think physical/virtual

Online videos.

Case study, Jigsaw, online videos,

Which strategies can help in the moment? Think reactive

Alternating passive and active activities.

Find correct ratio between active and passive learning

+

Using development of meta-cognition.

Name: Enguenan

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Connecting to previous knowledge

Which strategies can help in the long term? Think proactive

Asking some related question based on general information at the beginning of the class.

at the start of lecture, recap last lecture.

Who can help you? Think specific people or roles

The students themselves

Background data in the institution.

check curriculum.

ask general question at start of lecture to students.

profs from previous years.

Which tools could be useful? Think physical/virtual

Finding common history and stories -

Related it to daily happenings.

Which strategies can help in the moment? Think reactive

Doing some survey to determine their levels.

Name: Hanel

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Encourage participation in large classrooms

Which strategies can help in the long term? Think proactive

Pair them in groups and then report the discussion result based on the group output not person.

occasional quizzes after/from during lectures

Who can help you? Think specific people or roles

The students involving in the discussions and myself to create a safe environment.

Which tools could be useful? Think physical/virtual

Some side-activities as a ice-breaker.

online polls during lectures.

Which strategies can help in the moment? Think reactive

Create some feedback sheets with short answer questions.

Name: Gaëtan

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Willingness of students to invest time into preparing the class.

Which strategies can help in the long term? Think proactive

Create some pre-quiz or homworks to do some pre-study before class and prepare their minds.

prepare inclusive teaching strategies so that students feel included and participate
↳ learn names, etc...

Who can help you? Think specific people or roles

Library or previous teachers to provide you some mostly-mistaken questions.

students and lincurn workload.

Which tools could be useful? Think physical/virtual

Online platforms like quizlet, moodle, ...

Which strategies can help in the moment? Think reactive

Do some part of this preparation in the morning before class.
By doing an activity.

→ small quizzes not month much from time to time.

Name: Enguerran

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Metacognition?

Which strategies can help in the long term? Think proactive

→ Take notes of current program / what is lapsing to promote reflection.

→ Interactive discussions with colleagues about of the course.

Trying different approaches to one of them make sure ~~V~~ at least works.

Who can help you? Think specific people or roles

→ Colleagues

→ CAPE (for technical advice on one own research)

The students by giving feedbacks honestly and spend time on surveys.

Which tools could be useful? Think physical/virtual

→ note taking app.

Backgrounds from institute

Online survey - feedback.

Which strategies can help in the moment? Think reactive

→ day reflections after class

→ occasional discussion with student (representatives) for validation / invalidation.

teacher - student interactions during and after class.

Name: Hanef

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

[redacted] Timing: active learning vs finish the program

Which strategies can help in the long term? Think proactive

→ Plan content of lectures well ahead of time.

→ Define line partition between active learning/ content explanation.

Write a lesson plan for the whole course and then get in detail

Who can help you? Think specific people or roles

→ Look at what was done in past course iteration. (previous prof)

→ Previous TAs ~~may~~ last year's students may know better in reasonable to achieve.

The students by giving them the overview of the whole course and each session objectives.

Which tools could be useful? Think physical/virtual

Trello

Task tracking apps.

(online)

Getting feedback so that you can adjust your speed.

Which strategies can help in the moment? Think reactive

→ Monitor progress according to time/timing.

→ feedback quiz ⇒ do people follow well? Can it go faster? Or should it go slower?

Apply much more of the strategies for the main concepts.

Name: Antoine

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Changing the habits of students without making them run away of my classroom.

Which strategies can help in the long term? Think proactive

→ Inducing reasoning at the start of lectures. (quiz before, etc...)

→ Anything that can make student feel included:

↳ Learn names

↳ feedback giving, etc...

You can give them multiple choices.

Who can help you? Think specific people or roles

→ Student expectations for more direct communication rules.

→ previous groups which may have experience in the type of students and goals.

Students giving you feedback on the learning goals to choose best approach.

Which tools could be useful? Think physical/virtual

→ Online satisfaction quizzes.

→

online surveys and feedbacks.

Which strategies can help in the moment? Think reactive

→ Positive learning attitude.

→ Welcome layer of humor with explicit behaviors.

Use different methods and then assess the result.

Name: Gaëtan

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Technical class with a lot of equations to use.

Which strategies can help in the long term? Think proactive

→ Use representations for conveying the information, like graphs, plots, etc. But I agree with you.

→ Try to add active learning task to the class, such as deriving parts of the equations yourself instead of just presenting a lot of lines of equations.

Who can help you? Think specific people or roles

→ If you check the recent literature, maybe they found a way to represent the equations in a more engaging way.

→ Previous / current colleagues who gave the same lecture.

Which tools could be useful? Think physical/virtual

→ Representatives.

→ Handouts.

→ Small tasks for making all students think.

Which strategies can help in the moment? Think reactive

→ ?

→ Activity ask students for questions to understand if they are still following the class. or if they shut off due to too many equations.

Name: Antoine

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

The density of the program I have to cover regarding the time constraints of the schedule.

Which strategies can help in the long term? Think proactive

→ Maybe you can increase out-of-the-class work so that you'll have more time employing active learning strategies.

↳ Agree

Who can help you? Think specific people or roles

→ No idea

→ Maybe ask for more credits for the course to get more time?

Which tools could be useful? Think physical/virtual

→ Moodle!

↳ Yes, add additional material to moodle. But ensure ~~that~~ that students actually engage with the material by exercises or quizz

Which strategies can help in the moment? Think reactive

→ ?

→ Try to plan your lecture with a teaching plan using the LOAFS structure to make ~~the~~ best use out of the ~~limited~~ limited time.

Name: Manef

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

- Make sure everyone feels included.

Which strategies can help in the long term? Think proactive

→ Avoiding same students answering you all the time.

→ Welcoming all the interactions so that students won't be discouraged.

→ But I agree...

Who can help you? Think specific people or roles

→ Maybe EPFL teaching service can help?

→ If you identify a struggling student you can provide resources where the student can get external help.

Which tools could be useful? Think physical/virtual

→ Peer to peer discussions help/force all students to participate, even though they don't share it with the entire class, they'll be actively thinking about the course material.

→ Try to get feedback from every student through online questionaire.

Which strategies can help in the moment? Think reactive

→ Stu-stu active learning strategies.

→ Try to ensure that every student gets speaking time. eg. in pair session 50/50 speaking time

Name: Enguerran

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Inclusivity

Which strategies can help in the long term? Think proactive

- ~~Feedback~~ Include questionnaire before the start of the class to to understand your students background.
- Get feedback from students after ~~class~~ the class to understand their needs better.
- Avoid same students to answer you.
- Welcome each question/ answer in a positive way to encourage students.

Who can help you? Think specific people or roles

→ EPFL trust point.

Which tools could be useful? Think physical/virtual

→ Some surveys to make everyone participate.

Which strategies can help in the moment? Think reactive

Name: Antoine

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

The size of my class (number of students)!

Which strategies can help in the long term? Think proactive

- Try to find evidence-based active learning methods that scale with larger classes.
  e.g. Think-pair-share with the direct neighbors
- Peer to peer discussions

Who can help you? Think specific people or roles

→ Teaching assistants.

Which tools could be useful? Think physical/virtual

- Instead of printing out materials. Try to distribute the materials ~~out~~ digitally and make clear that they are necessary in class.

Which strategies can help in the moment? Think reactive

- ~~Active learning~~
- Student engagement by asking questions.

Name: Gaëtan

Lecturing and Presenting in Engineering - ENG-629

Overcoming Obstacles

What makes it hard to use the concepts, ideas from this class in your teaching?

Sceptical Colleagues/professor

Which strategies can help in the long term? Think proactive

- Try to implement some of the methods gradually and convince them with evidence.
  → For example, improved grades or improved engagement of students. Or better student feedback.

→ They're scientists, they should accept the quantitative superiority of the concepts.
→ Wait for them to retire.

Who can help you? Think specific people or roles

- EPFL Teaching section of the school (talk to them how to integrate the methods fearlessly in your class)

Which tools could be useful? Think physical/virtual

→ Evidences that ~~the~~ prove these concepts are useful, like active-learning studies.

Which strategies can help in the moment? Think reactive

→ Start with changing yourself.