

# Online Pedagogy for an Effective Distance Education: Tactics and Tools

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## Announcements

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### Access to edX Courses

Within the scope of the cooperation agreement between edX, which is the joint service of MIT and Harvard Universities, and our University, 150 courses are open to METU members free of charge...

13/04/2021

### Blackboard Collaborate Software License

Dear Faculty Members, Synchronous tools used in distance education activities of our university are available at <https://odtuzem.metu.edu.tr/en/academic>. Frequency of use for...

09/02/2021

Welcome to METU Distance Education Application and Research Center.

On our website, you will find educational information and tools to facilitate the use of technology. Useful information about Distance Education and Effective Course Preparation are available on our pages.

As the Distance Education Application and Research Center, we will give seminars to increase the use of technology in the courses opened at METU and to support our professors in this regard. You can follow these seminars from the Announcements link on our website.

You can get the information you will need while using the

27-9-21-0-72-90-12

# «Emergency Remote Teaching» During Covid 19 (~~Distance Education~~)

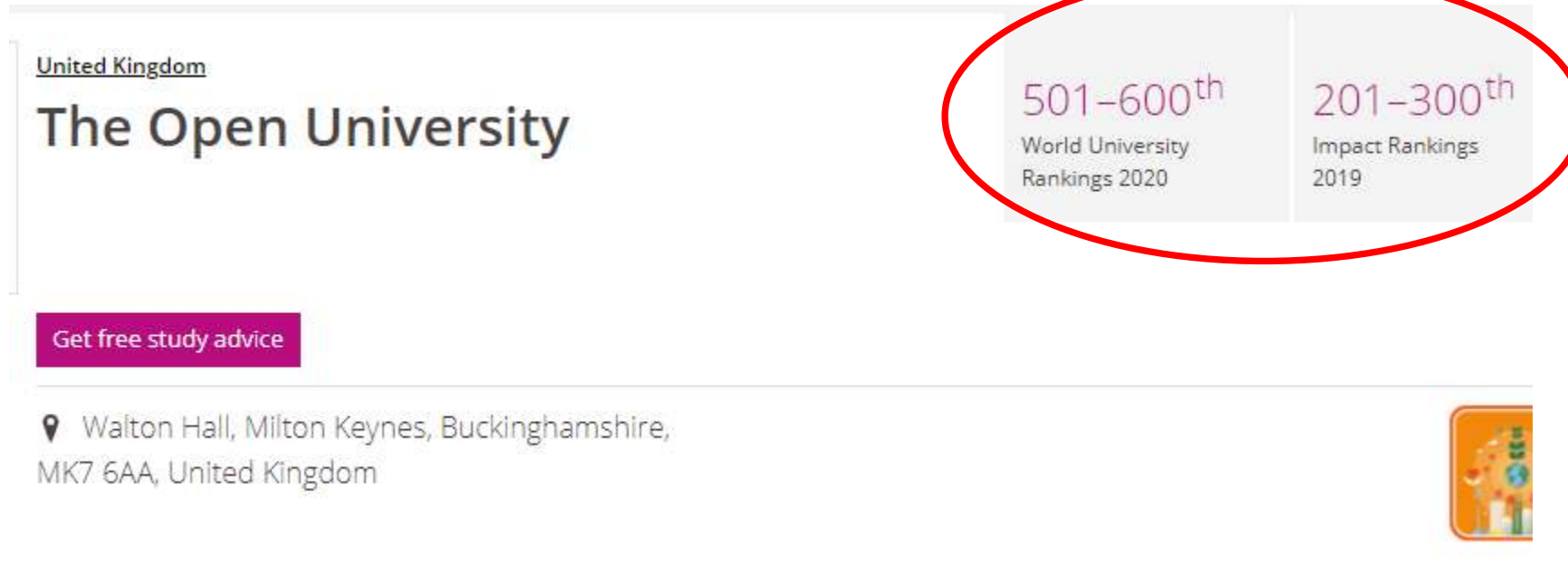


Try not to drown or style swimming

# 3 Major Components of Teaching (F2F or Online)

- Content – What to Teach
  - *Course materials / Curriculum*
- Pedagogy – **How to teach**
  - *Teacher - Facilitator*
  - *Interaction – synch, asynch, F2F*
  - *Flexible Time and location*
  - *Student support*
- Assessment – **How to measure**
  - *Formative / Summative*

# Quality Online Higher Ed is Possible

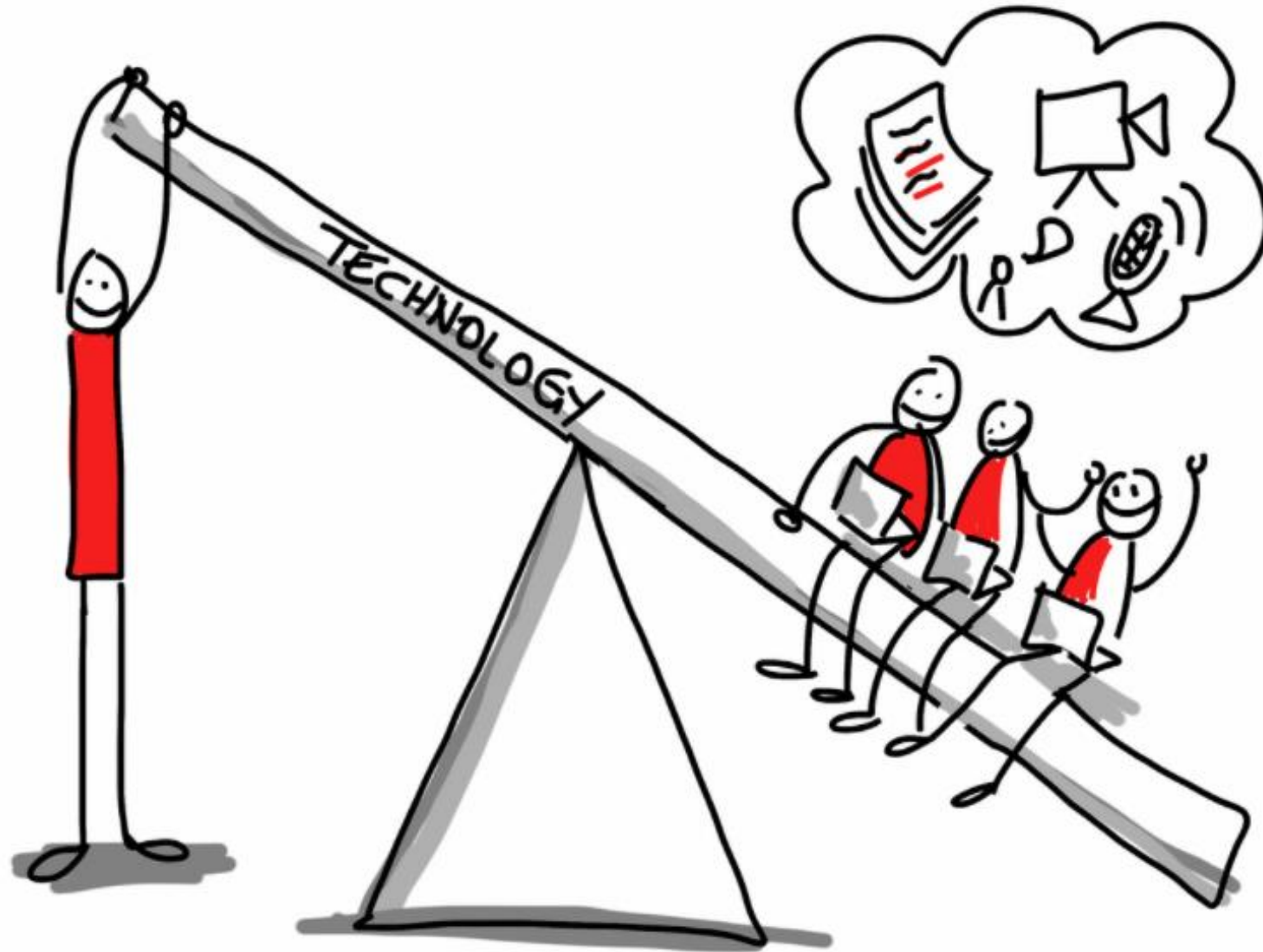


The screenshot shows the Open University website. On the left, it says "United Kingdom" and "The Open University". Below that is a purple button that says "Get free study advice". At the bottom left, it lists the address: "Walton Hall, Milton Keynes, Buckinghamshire, MK7 6AA, United Kingdom". On the right, there are two ranking boxes: "501-600<sup>th</sup> World University Rankings 2020" and "201-300<sup>th</sup> Impact Rankings 2019". These two boxes are circled in red. At the bottom right, there is a small icon of a tree with a globe.

Ranking	Category
501-600 <sup>th</sup>	World University Rankings 2020
201-300 <sup>th</sup>	Impact Rankings 2019

- <http://www.open.ac.uk/>
- Science, Technology, Engineering and Mathematics
- Arts & Social Sciences
- Business School
- Wellbeing, Education and Language Studies

# Technology Isn't the Goal, It's a Leverage for Better Learning



# Motto

- *Online education is not «Equal Experience» of f2f but «Equivalent Experience»*



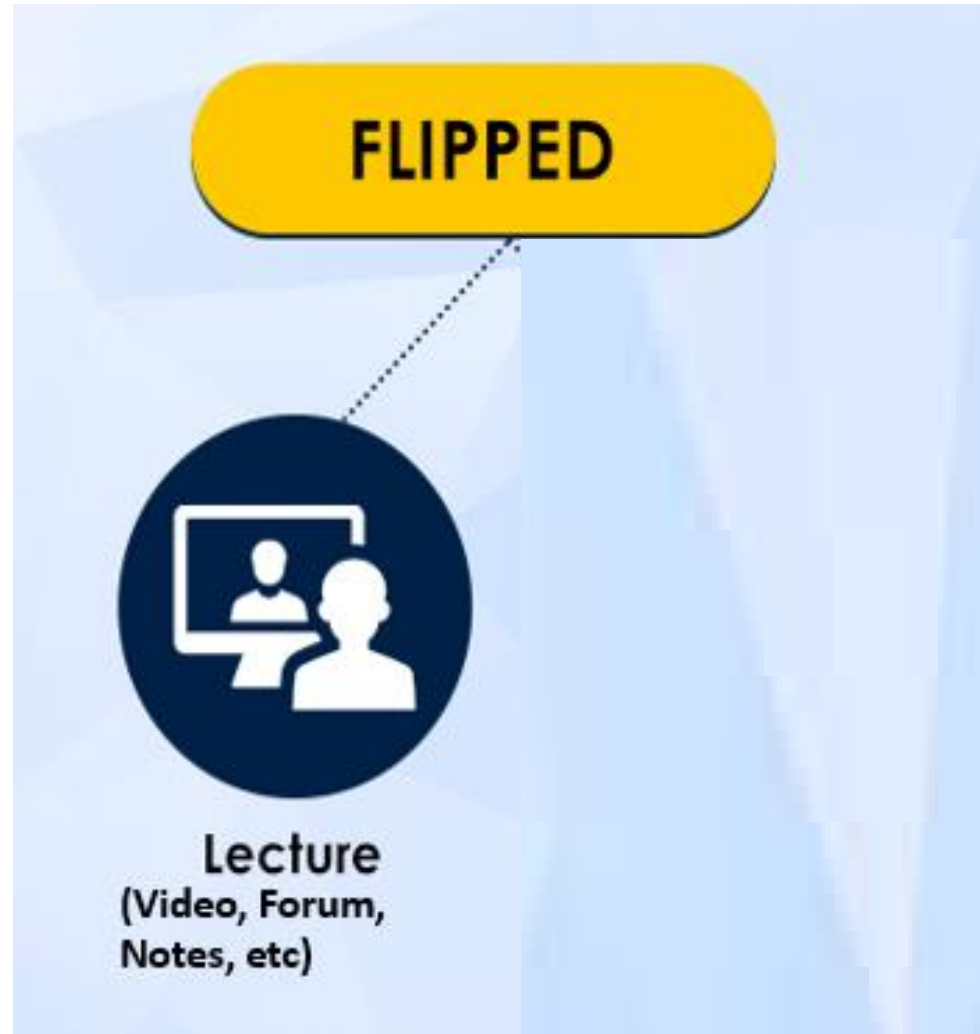
# Suggestion: Flipped Classroom



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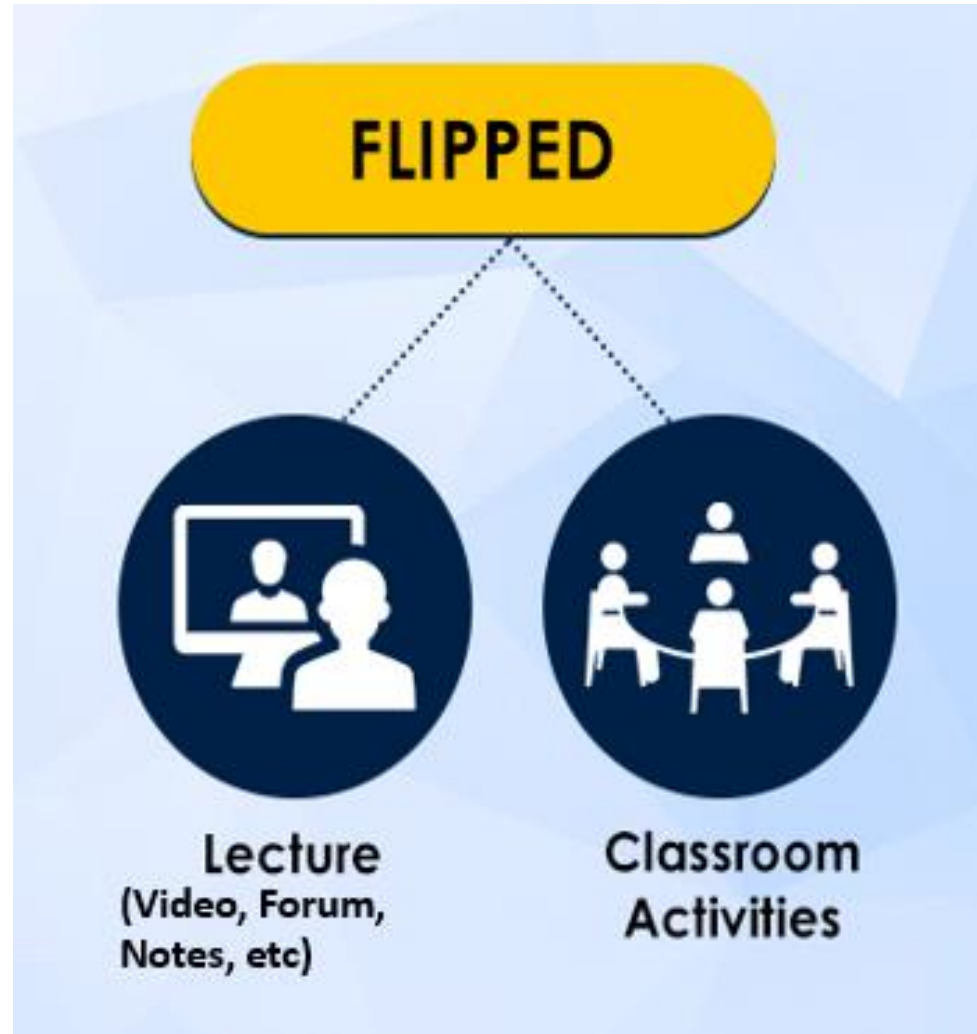


# Suggestion: Flipped Classroom



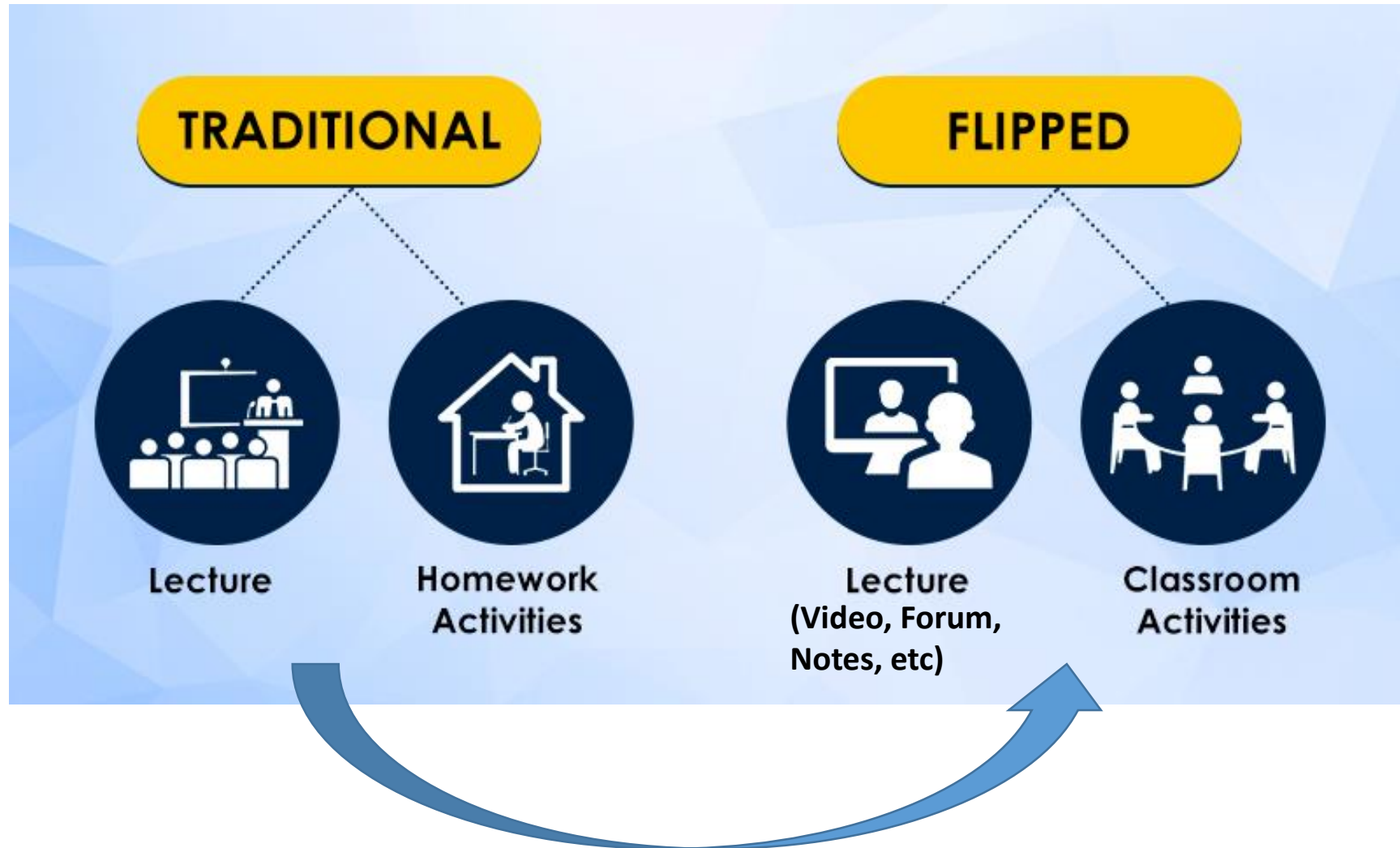
**Eric Mazur**, Professor of Physics and Applied Physics at Harvard University

# Suggestion: Flipped Classroom



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# Suggestion: Flipped Classroom



**Eric Mazur**, Professor of Physics and Applied Physics at Harvard University

# Asynchronous Lesson

- Asynchronous Lesson  $\neq$  Video recording of a lesson
  - Forum, discussion
  - Self-learning materials, readings, textbook, etc.
  - Simulated lab (<https://phet.colorado.edu/> )
  - Interactive Video
  - Keeping students active
- Asynchronous interaction is the strongest part of distance education
  - Asynchronous Lecture + Synchronous problem solving/discussion
  - Flipped classroom
  - Time independent
  - Interaction with Student-Teacher-Content
  - Easy Recording and follow-up (with suitable LMS)

# Student-Teacher Interaction

- Higher Interaction is necessary for student motivation and participation
  - Interaction  $\neq$  F2F Lecture
- In traditional F2F lectures interaction is only a couple minutes
  - Major In-class interaction: eye contact & body language
  - One way (teacher to student) communication
  - There are more opportunities in Online
- Moving from F2F to Online
  - not an equal experience but equivalent experience

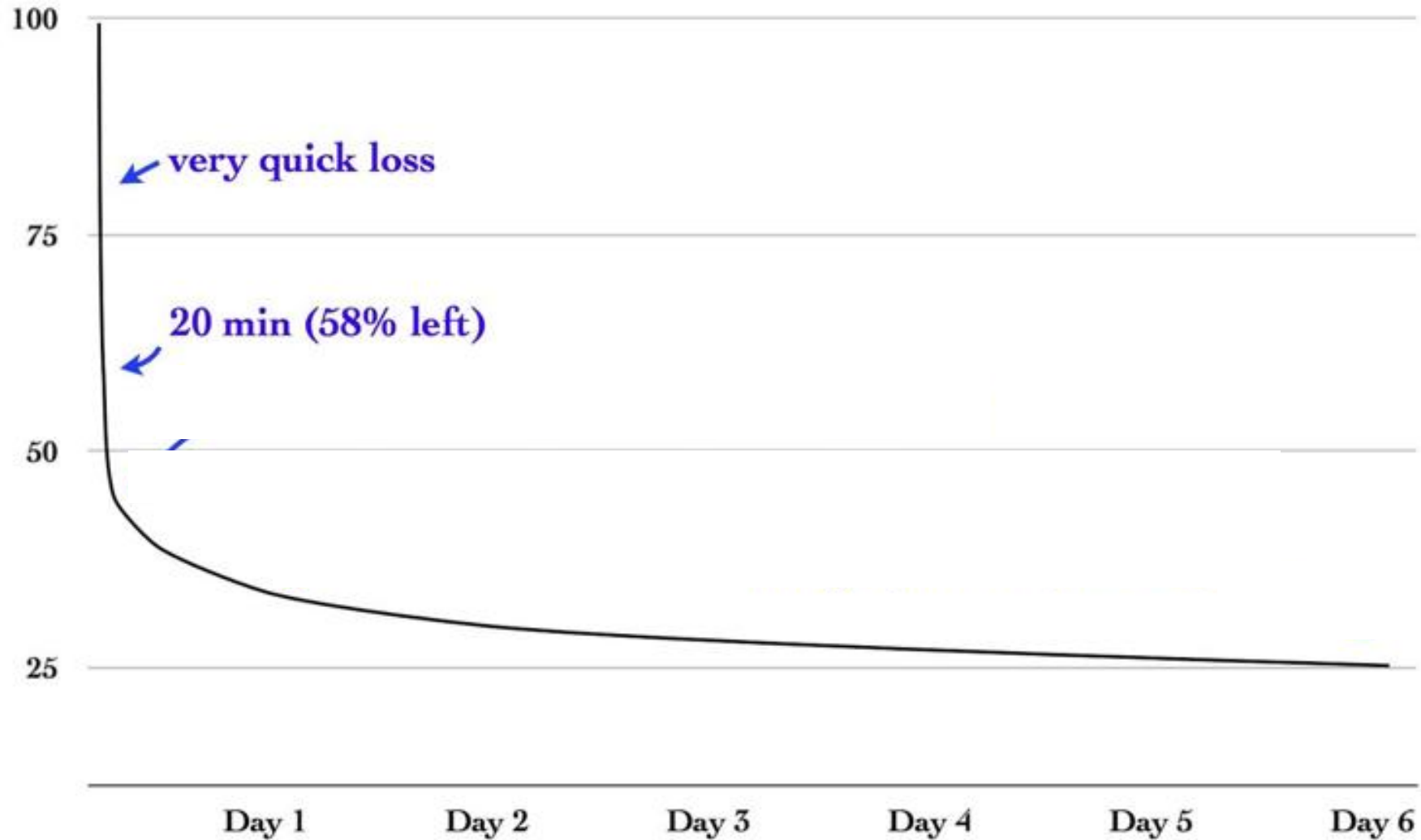
# What does research say for Lecture?

- Teachers speak 100-200 words per minute
- Students can process 50-100 words per minute
- It is very hard to concentrate everything in an hour, so we forget
- It is worse in synchronous online lesson
- Rehearsal strategies are necessary
- Keep students active before and after the lesson



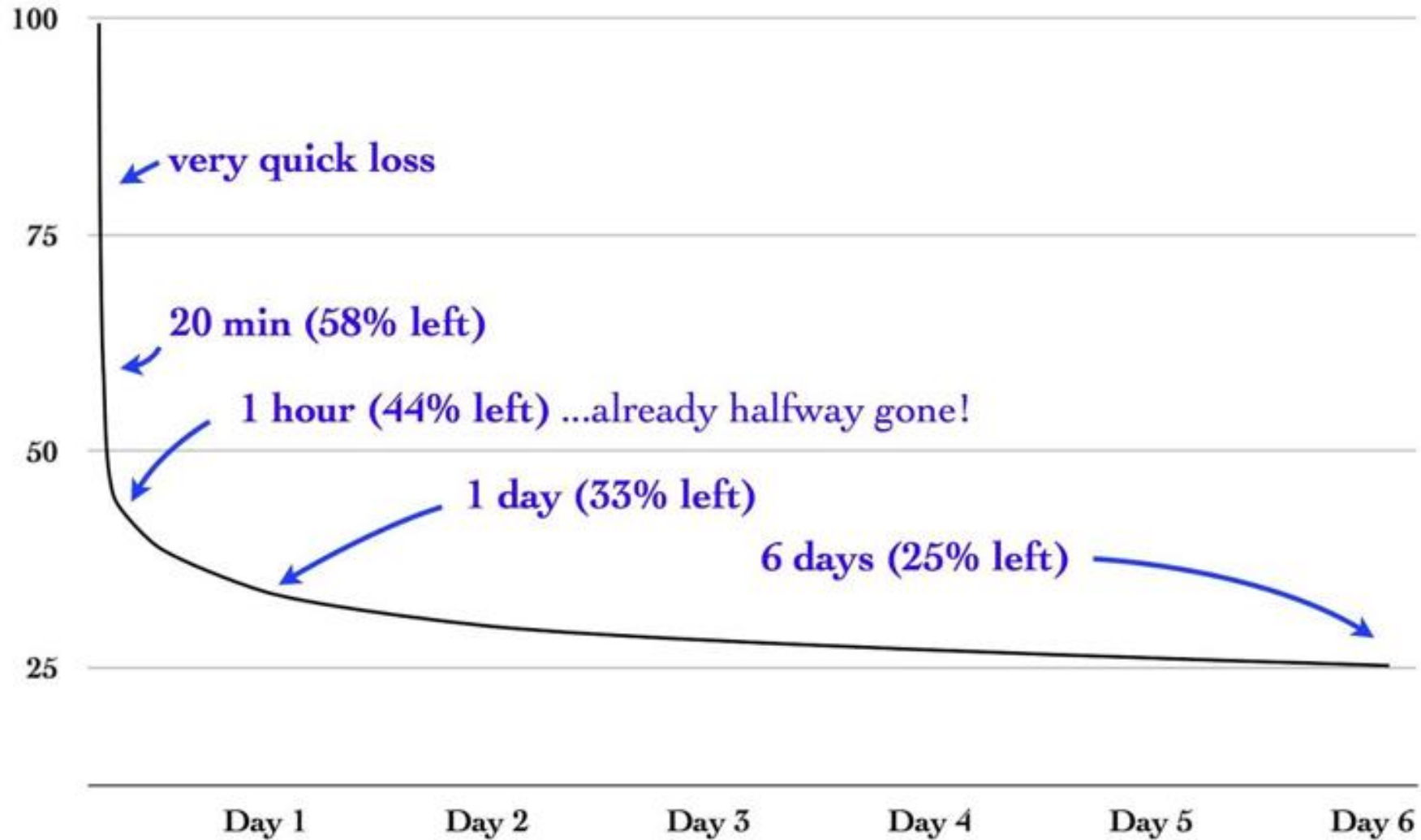
# Students' Forgetting Process

Ebbinghaus's Forgetting Curve

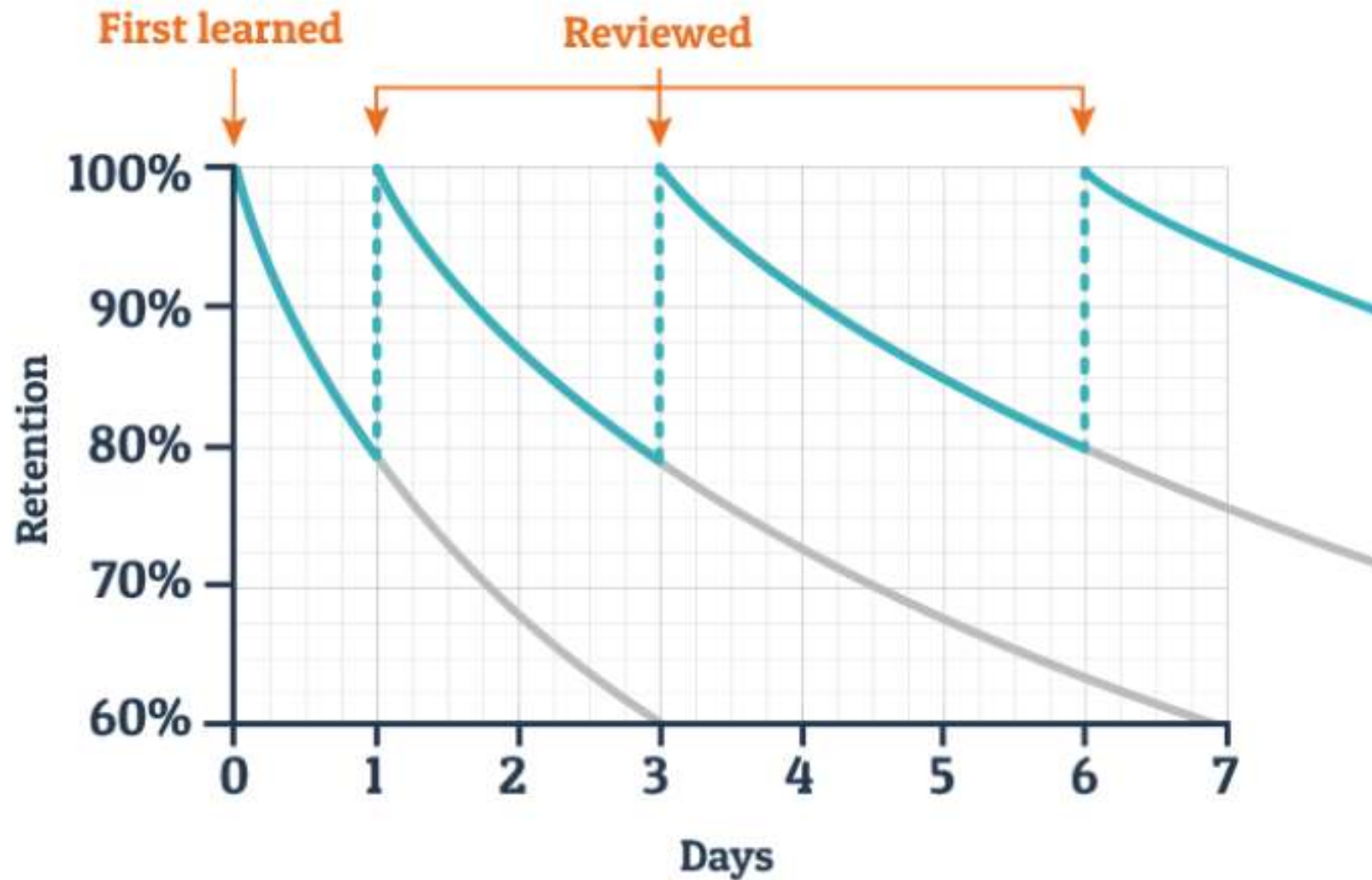


# Students' Forgetting Process

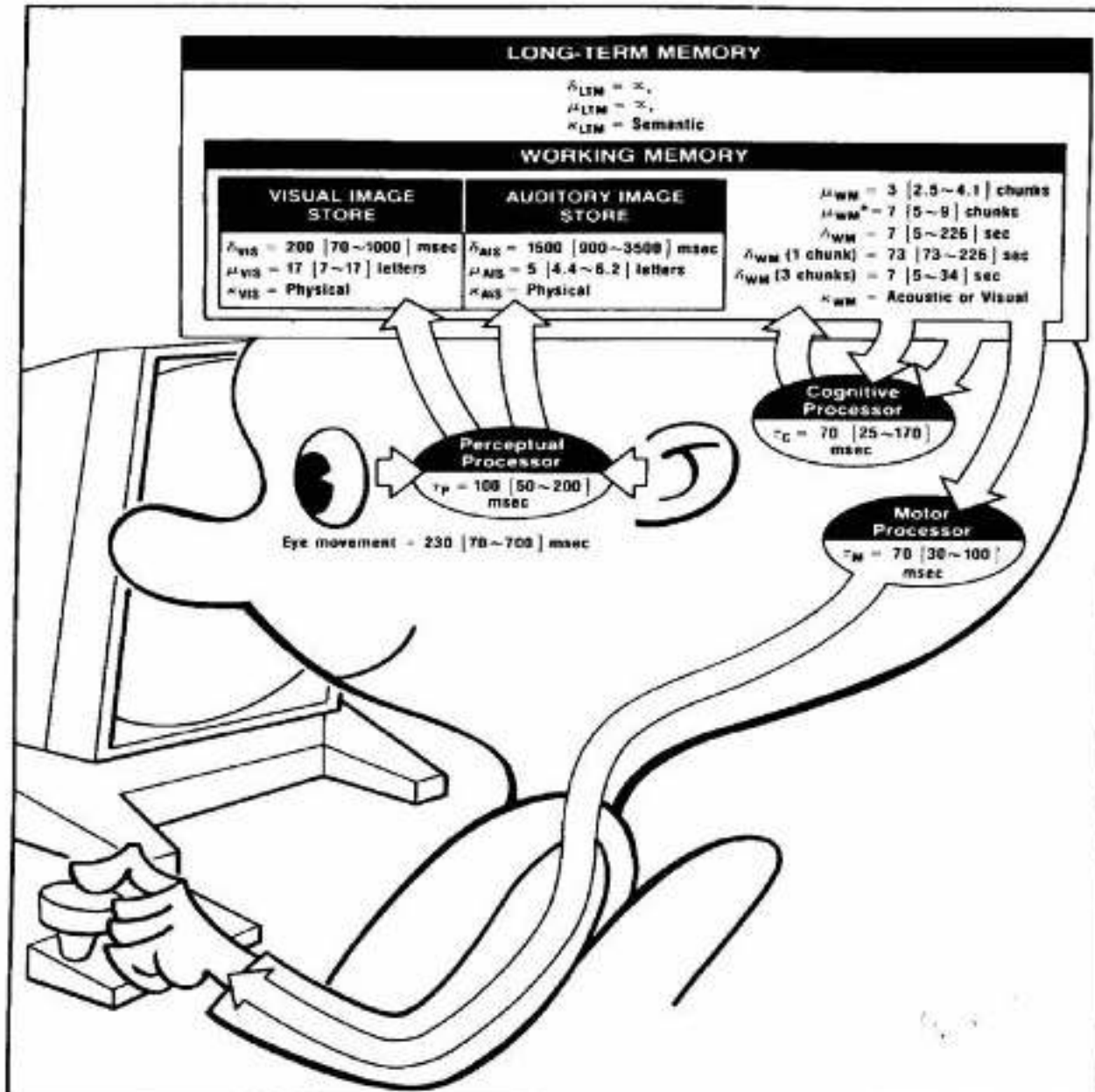
Ebbinghaus's Forgetting Curve



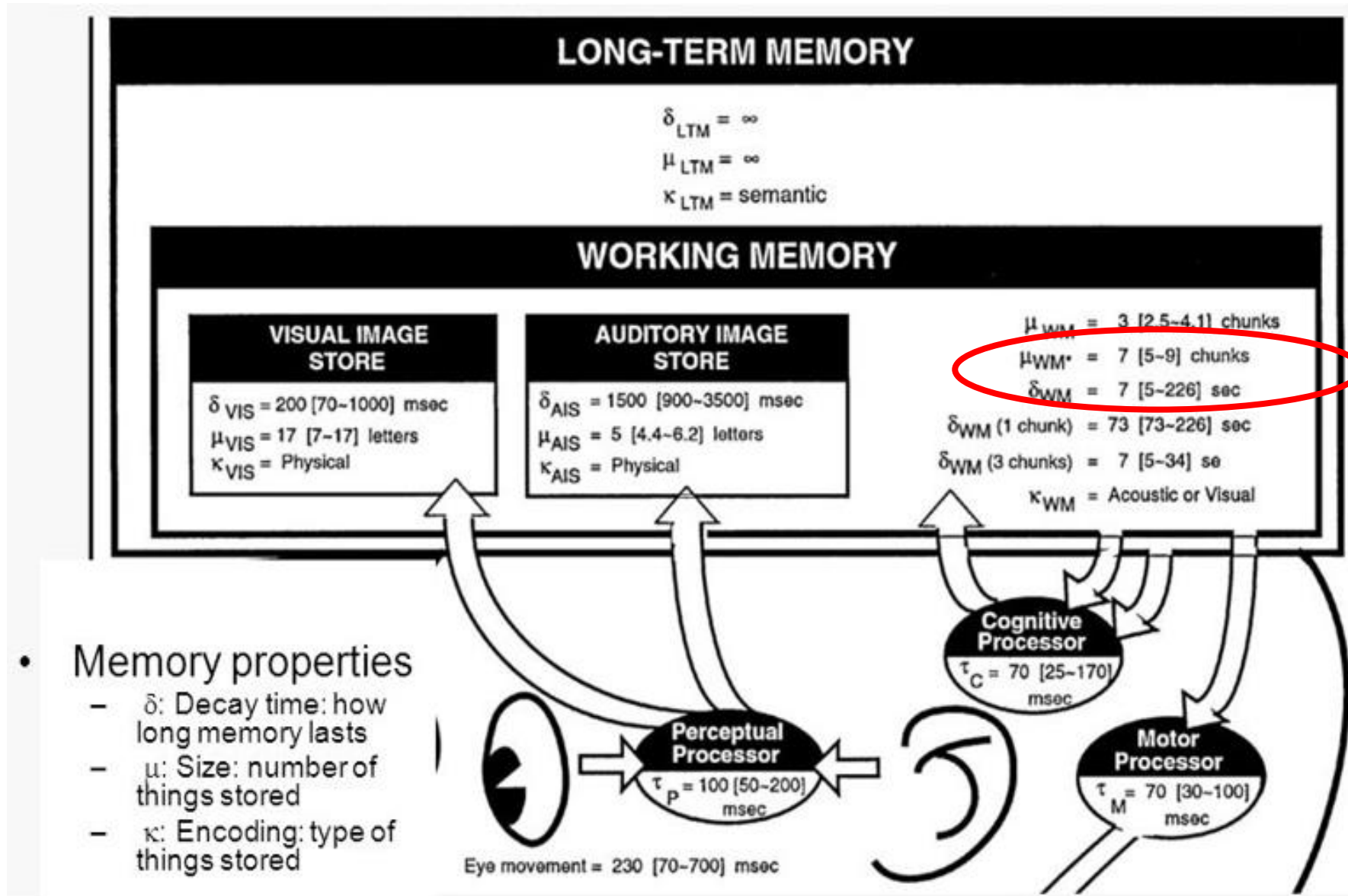
# Remembering: Review with Intervals



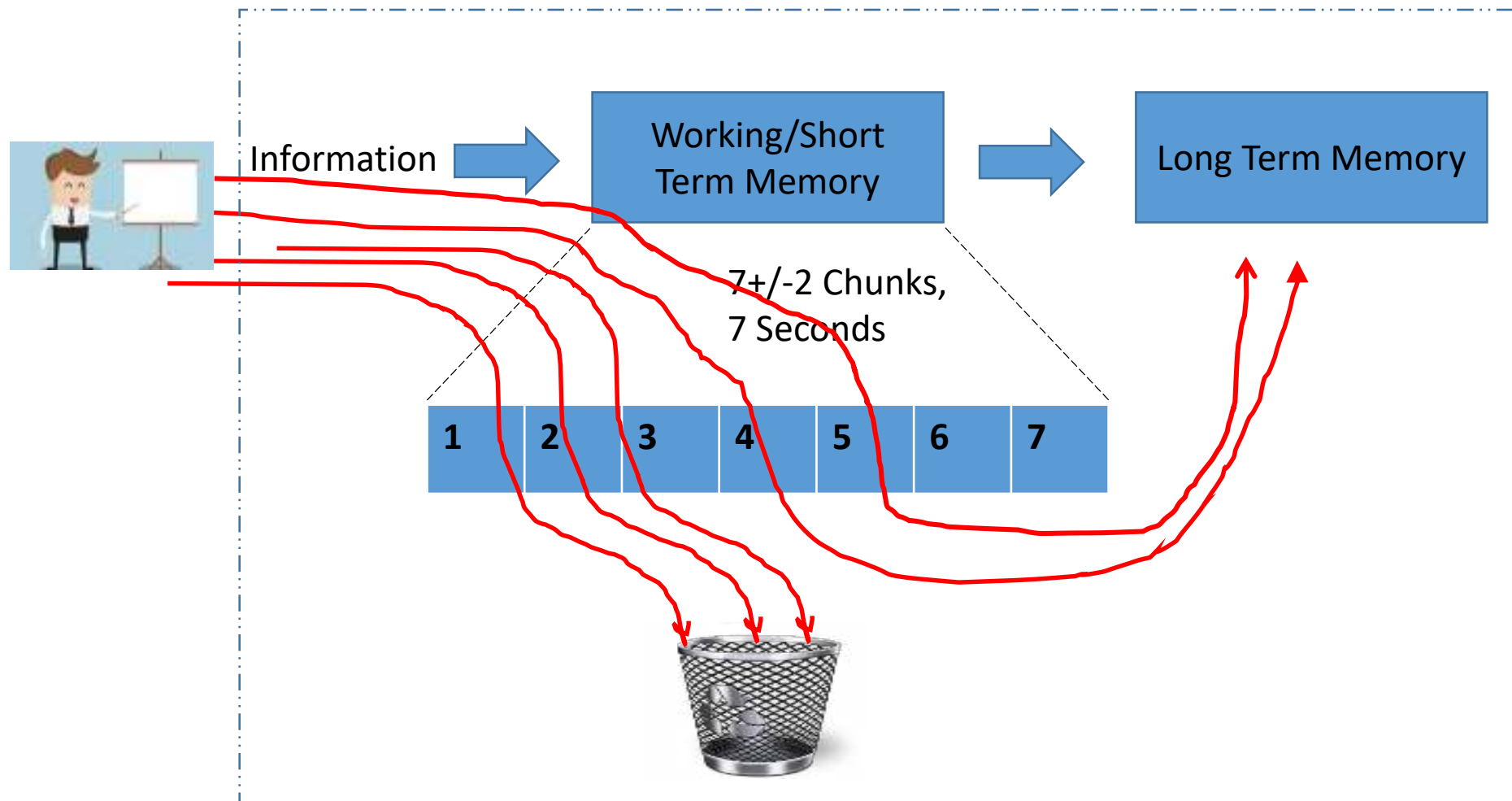
# How does our brain process information?



# How does our brain process information?



# From working memory to long term memory?



# Erasmus Project: Eye Movement Analysis of Professors

## Teaching in Higher education Effectively via Eye-tracking

4 Participating countries:    

[VIEW PROJECT MAP](#)[DOWNLOAD AS PDF](#)

Start: 01-09-2019 - End: 31-08-2022

Project Reference: 2019-1-TR01-KA203-077213

EU Grant: 282618 EUR

Programme: Erasmus+

Key Action: Cooperation for innovation and the exchange of good practices

Action Type: Strategic Partnerships for higher education

New innovative curricula/educational methods/development of training courses

ICT - new technologies - digital competences

Research and innovation

 **MIDDLE EAST TECHNICAL UNIVERSITY**

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06800

ANKARA

<http://www.metu.edu.tr>

**Organisation type:** Higher education institution  
(tertiary level)

## Partners

 **UNIVERSITA DEGLI STUDI DI SALERNO**

 **RESEAU DES UNIVERSITES DES CAPITALES DE L'EUROPE**

 **ATATURK UNIVERSITY**

 **VILNIAUS UNIVERSITETAS**

 **Damasistem Yazilim, Bilisim, Egitim, Danismanlik Ar-Ge ve Tic. Ltd. Sti.**







# F2F Lecture: Auditorium

- How much interaction? With whom?

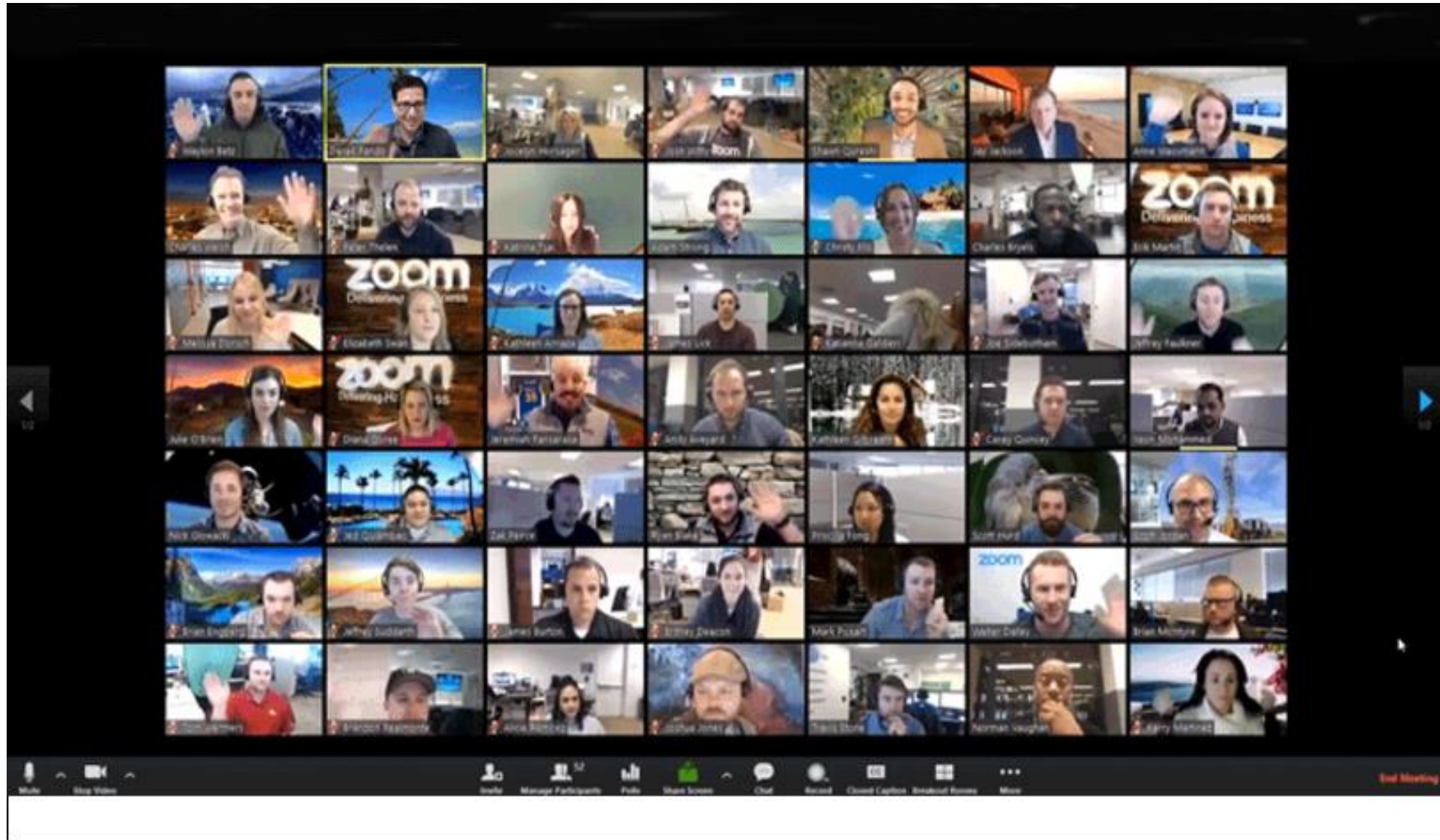


# F2F Lecture: Classroom

- How much interaction? With whom?

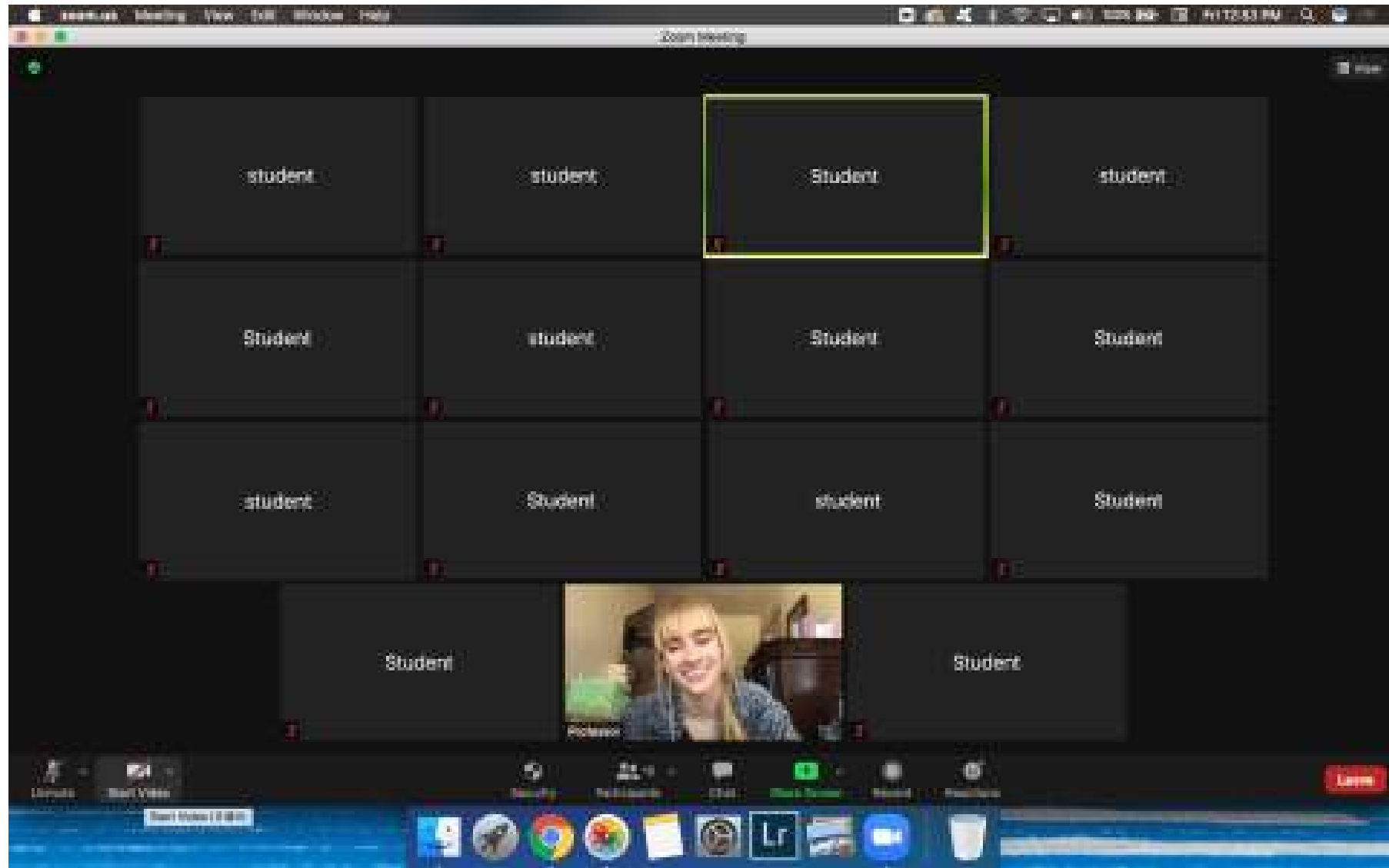


# Interaction?

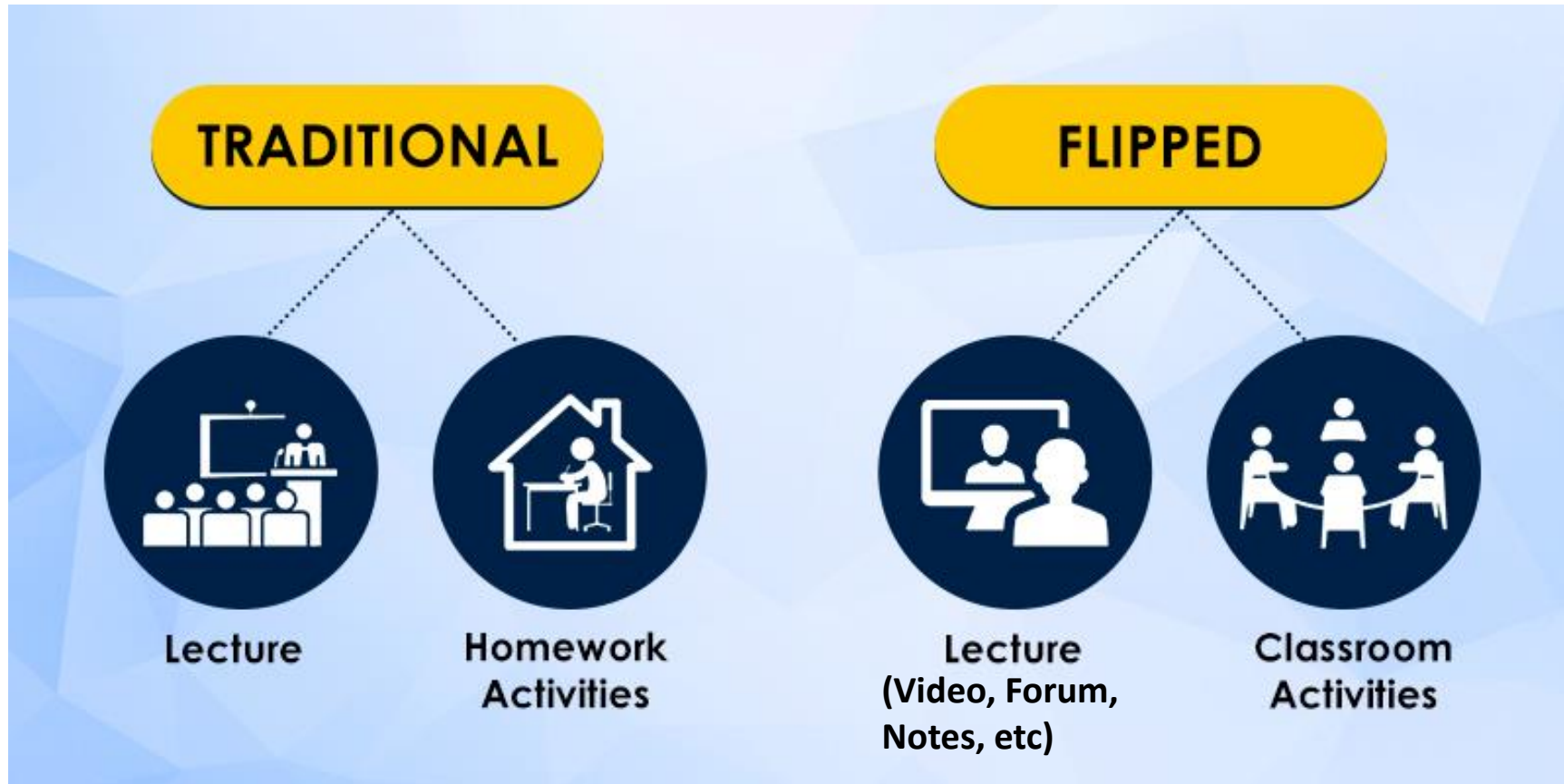




# Real Interaction

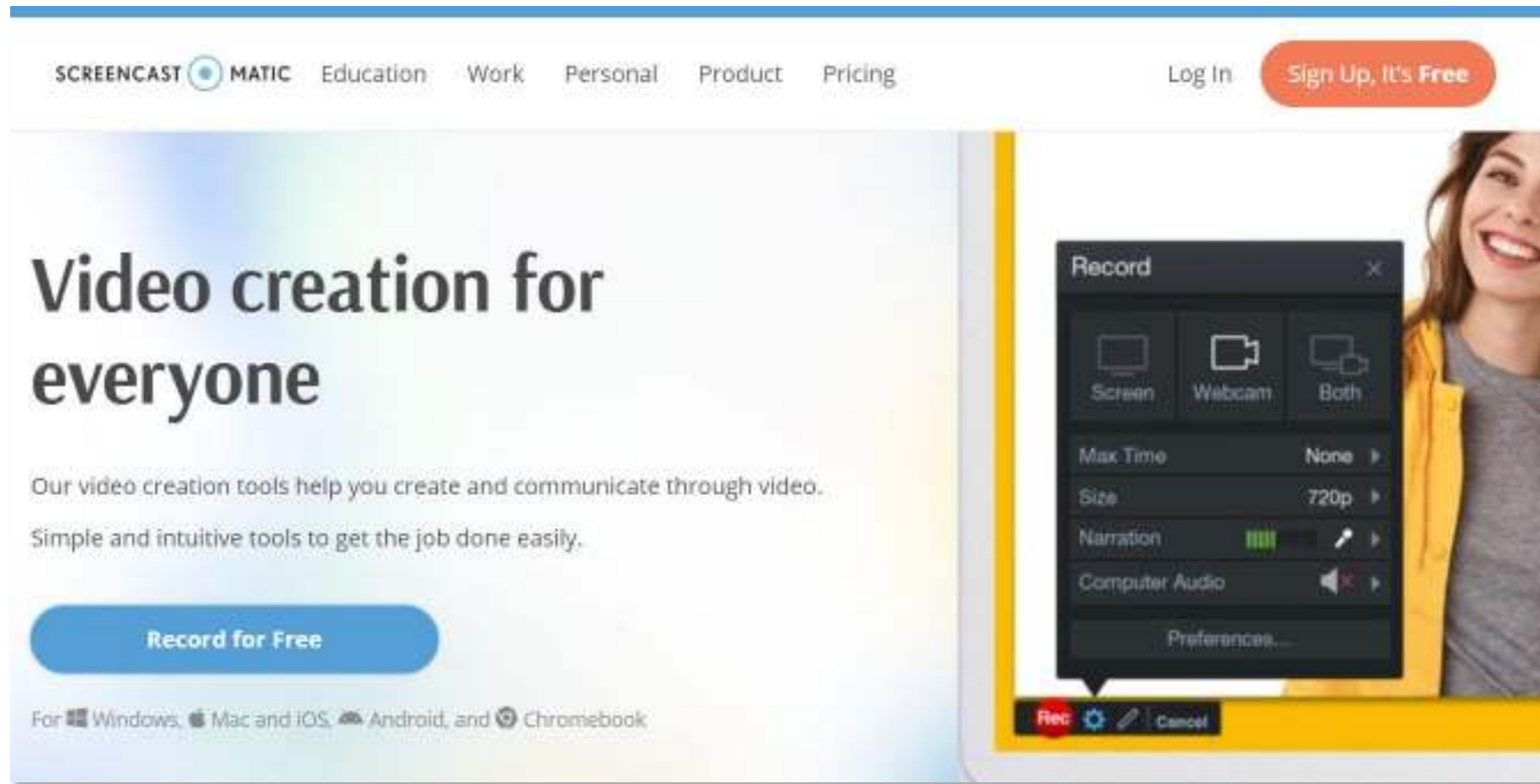


# Suggestion: Flipped Classroom



# Asynchronous Course Video Suggestions

- Max 10-15 minutes videos
- [screencast-o-matic.com](https://screencast-o-matic.com)



# Lecture Video Suggestions

- Make it required to watch
  - Interactive video with H5P ( h5p.org )
  - 2-3 questions in each video (graded questions)
  - Replay in wrong answer



# Lecture video tips

- Content related personal experience, jokes, anecdotes
- Beginning and end of the video
  - Objectives, organizer
  - summary, poll and mini-quiz
- Human touch is important – You



ADDIE

Analysis • Report Submitted

Design

Develop

Implement

Evaluate

RECORDED WITH SCREENCAST-O-MATIC

Navigation is disabled

1:57 / 15:02

15 minutes video  
4 questions-graded

Rewinding is not active



week8 strategy part 1



Watch later

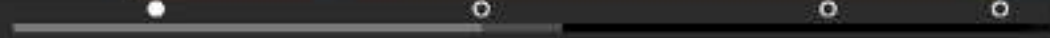
Share

Which of the following statements are correct?

- ☒ Instructional design and automotive engineering are similar in terms of their methodologies.
- ☐ Blueprints are outcomes of analysis phase.
- ☒ A typical automotive production starts at the production line.
- ☐ Content sequence is **not** a major component of design phase.



Check



6:55 / 15:02





week8 strategy part 1



Which of the following statements are correct?

✓ Instructional design and automotive engineering are similar in terms of their methodologies. +1

Blueprints are outcomes of analysis phase.

✗ A typical automotive production starts at the production line. -1

The first step in automotive production is preparing blueprints.

Content sequence is **not** a major component of design phase.

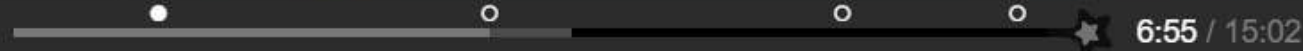


Show solution

Retry



More videos



6:55 / 15:02



K

week8 strategy part 1



Watch later



Share

Which of the following statements are correct?

Content sequence is **not** a major component of design phase.

✓ Blueprints are outcomes of analysis phase. **+1**

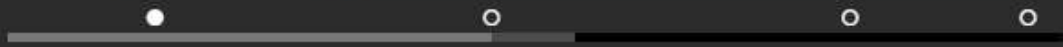
✓ Instructional design and automotive engineering are similar in terms of their methodologies. **+1**

A typical automotive production starts at the production line.

More video

  **2/2**

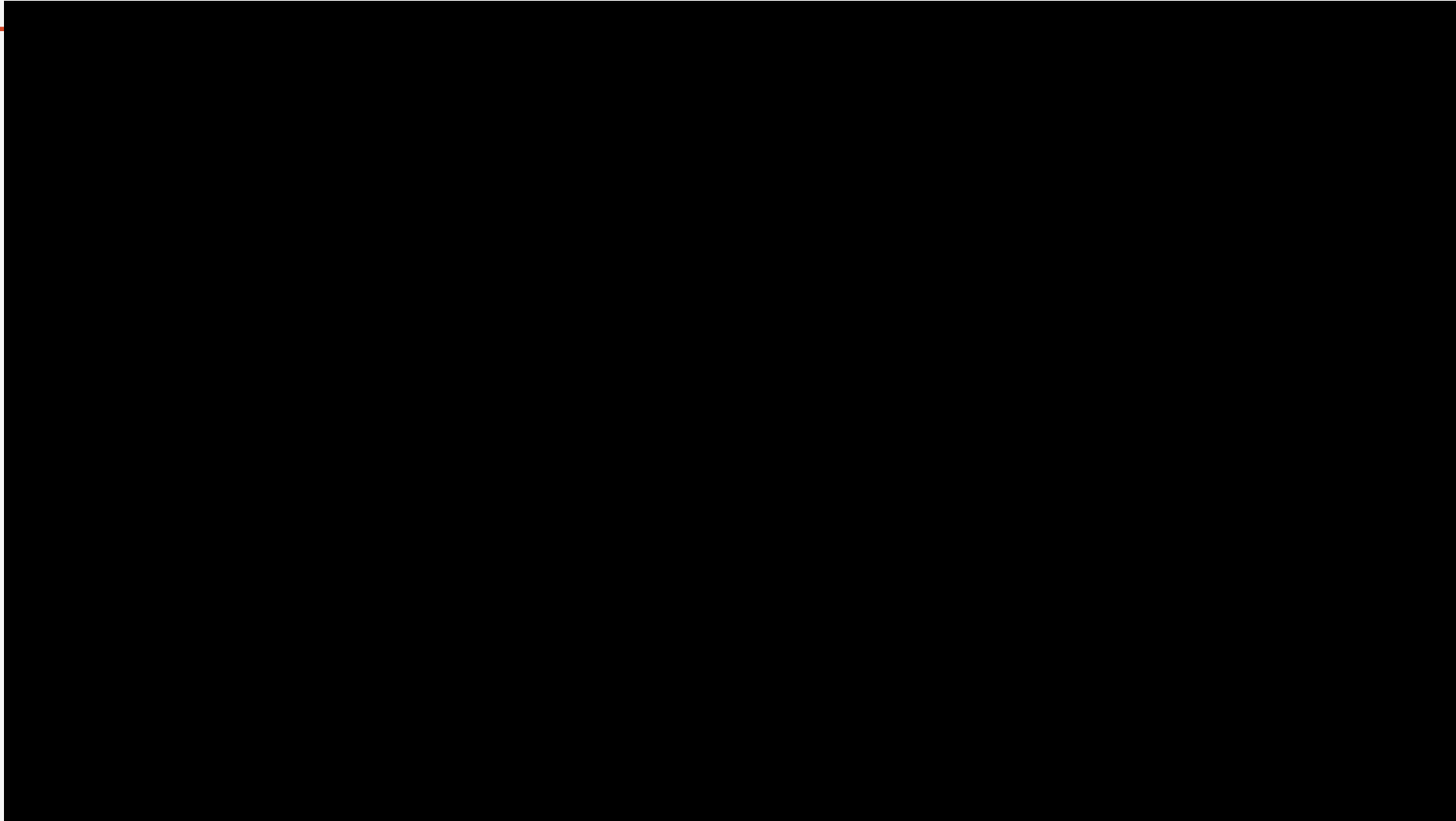
 Continue



6:55 / 15:02



## Effective lecture videos – Learning Glass



<https://youtu.be/j5VeoVkrkgQ>

# Synchronous/Live Lecture Tips-1

- Make regular meetings- Interaction!
- No lecture for large classes
- Apply active learning- Problem solving, discussion, collaboration
- Do:
  - Keep them active, let them work on problems/cases
  - Cold call: pick random students
  - Warm call: inform students in advance
  - mini pop quizzes
  - Therapy time

# Synchronous/Live Lecture Tips-2

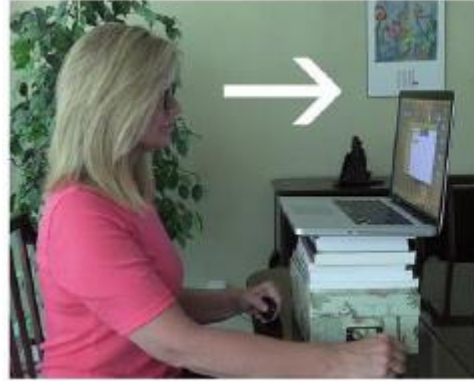
- Online Classroom rules
  - Camera on/off, Mic on/off
  - In case of technical problems – students? Teacher?
  - Dress code / Cell phones
  - Late policy? Waiting room?
  - Attendance? Connection problem?
  - Use official background image eg. Classroom (do not show your home environment)
  - Q/A policy (Asking through Chat, verbal answer)

# Synchronous/Live Lecture Tips-3

- Keep lectures short. Zoom fatigue!
  - 15-20 minutes, add breaks
- Open the meeting room early, 5-10 minutes
  - Social talk
- Eye contact— Look at webcam
- Check your posture, fill the screen
- Use your hands, gestures
- Clean desktop, close unnecessary windows
- Keep your cat outside 😊



# Camera Angle



Doğru kamera açısı:

Yanlış kamera açısı



# Light and Internet



- Internet connection
  - Prefer cable to wireless
  - Make speed test: <https://librespeed.org/>

# Presentation Slides Suggestions

- Avoid too much text
- Apply 6x6 rule: 6 rows x 6 words
- Prefer keywords than full sentences
- Do not read from slides
- Show them line by line
- Do not use unnecessary objects/pictures

# Presentation Slides Suggestions



# Thanks for Listening

(By the way, do you remember the seven numbers?)

For more info: [kursat@metu.edu.tr](mailto:kursat@metu.edu.tr)  
[odtuzem.metu.edu.tr](http://odtuzem.metu.edu.tr)

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