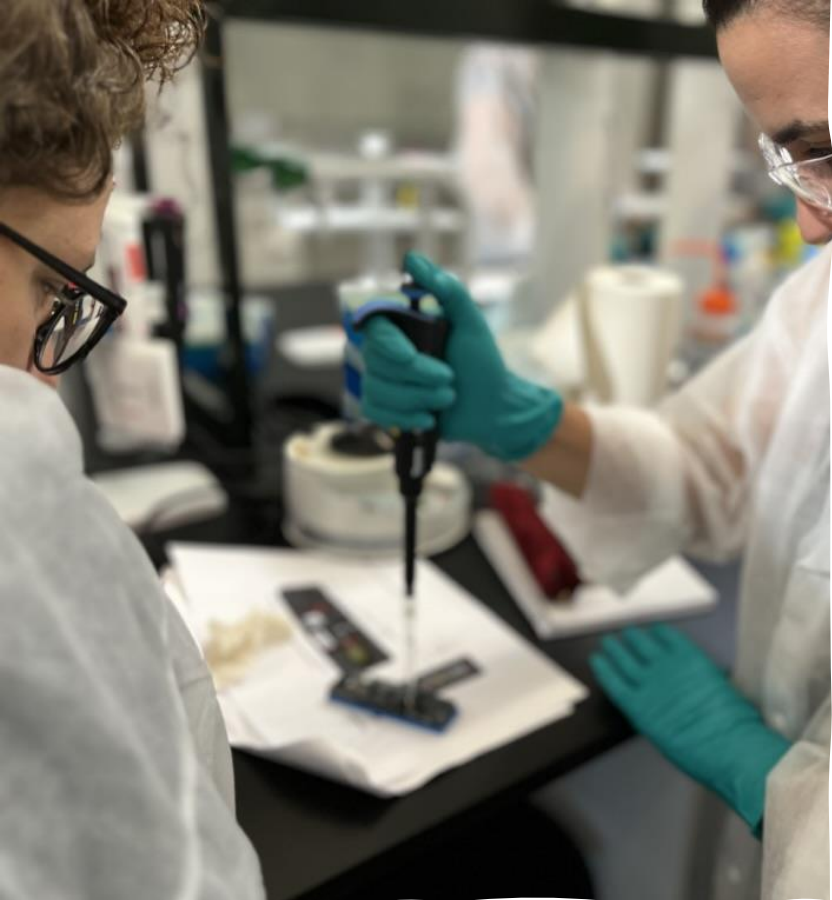


# Teaching Molecular Biology and Microbiology in Large Groups

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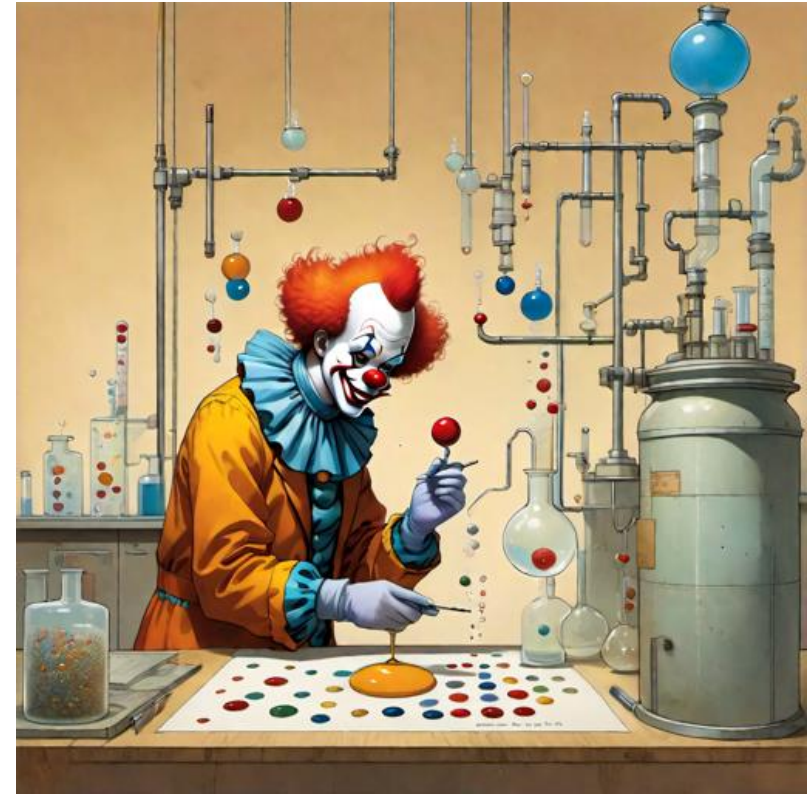
Why is it a challenge?

1. We need to show and explain many things in details (zoom in)



Why is it a challenge?

2. Reagents and equipment is high tech = expensive
3. We need more than 20 students to share costs

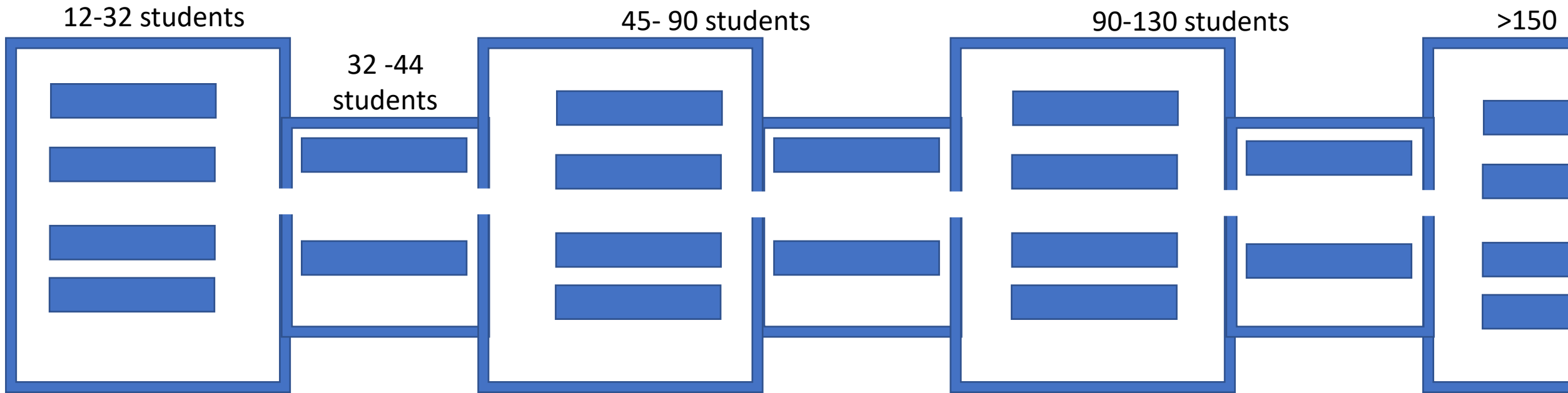


Why is it a challenge?

4. There are many incubations (waiting time) that break the flow of teaching

We need to fill those gaps with lectures and keep students entertained

Our setup:





Microbiology Analysis Course 2023

GROUP 3

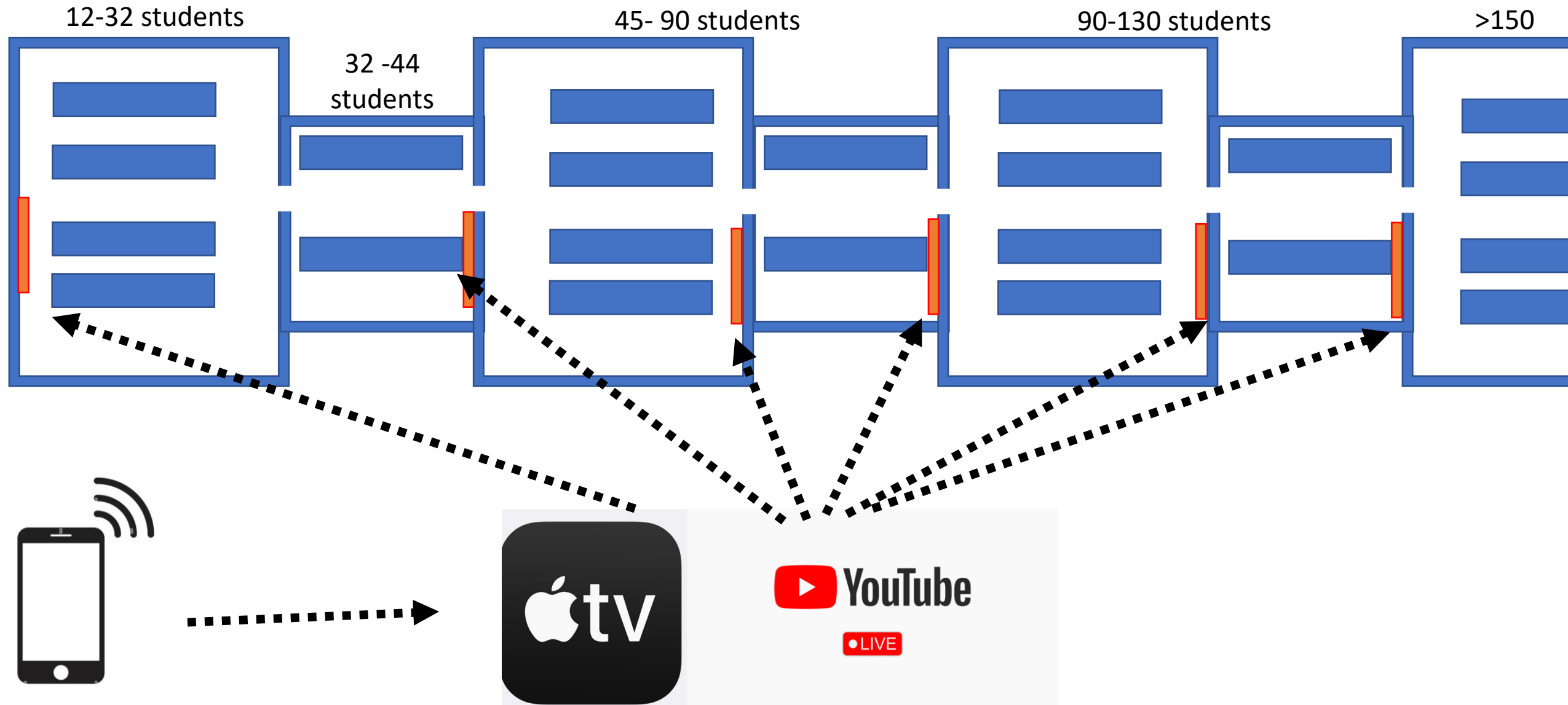
Microbiology Analysis Course 2023

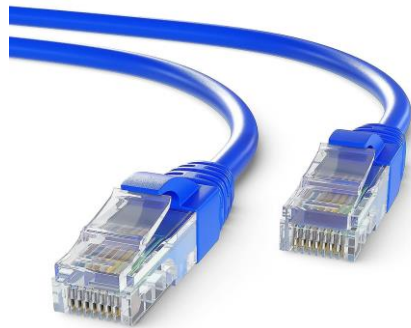
GROUP 4

Illumina SBS technology

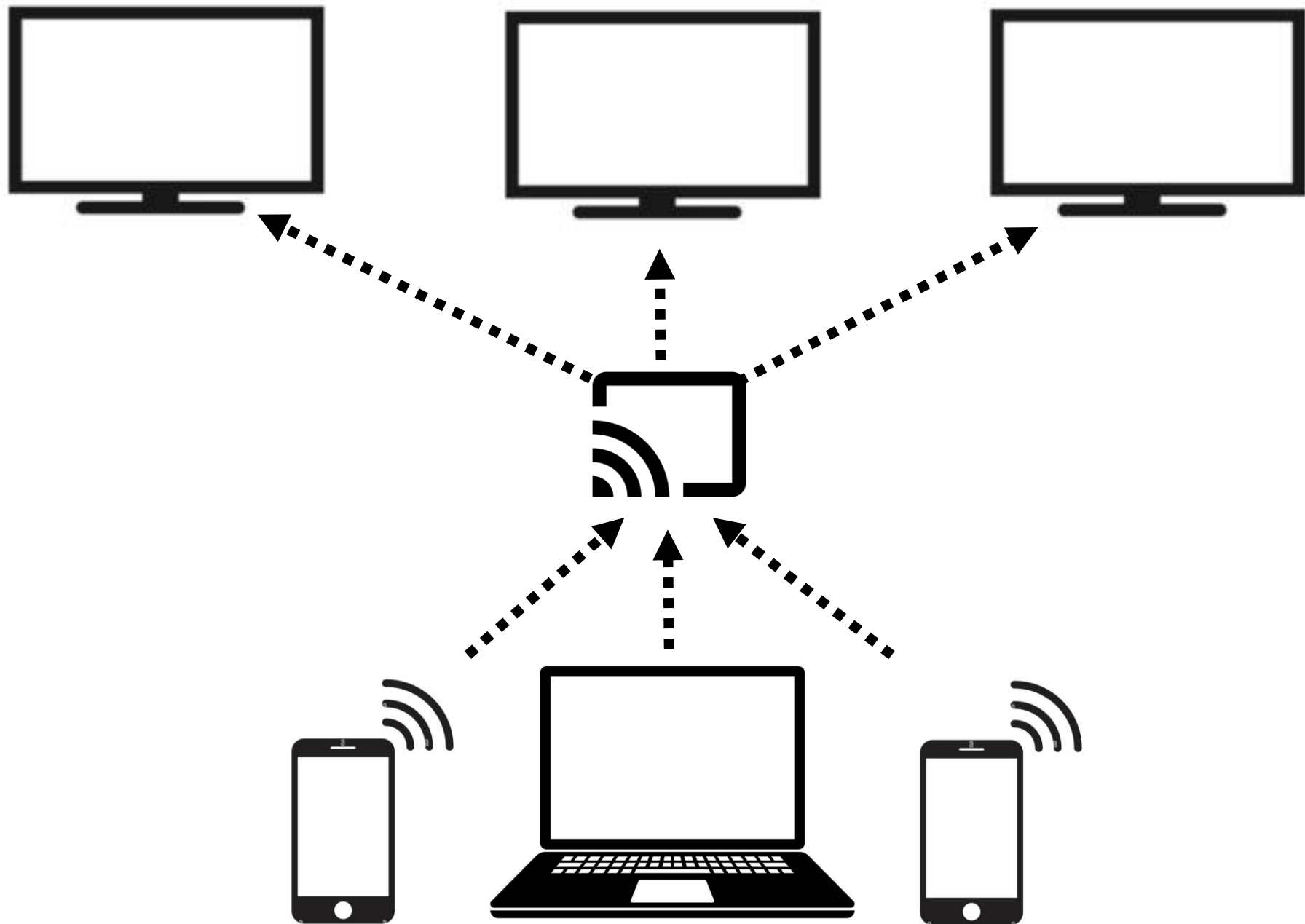


# Life stream via Apple TV or youtube channel

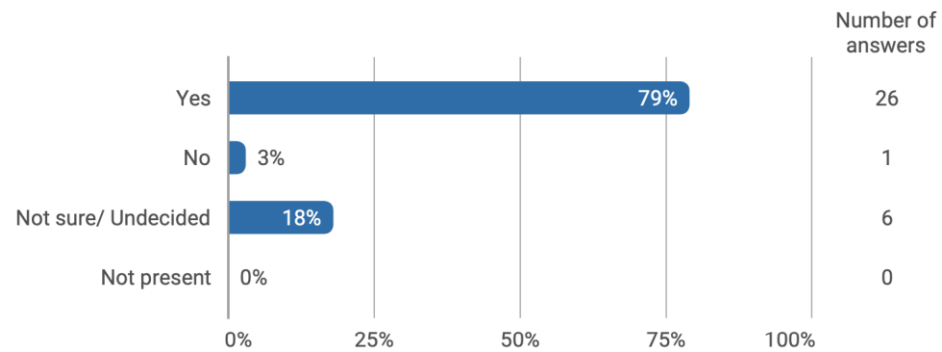




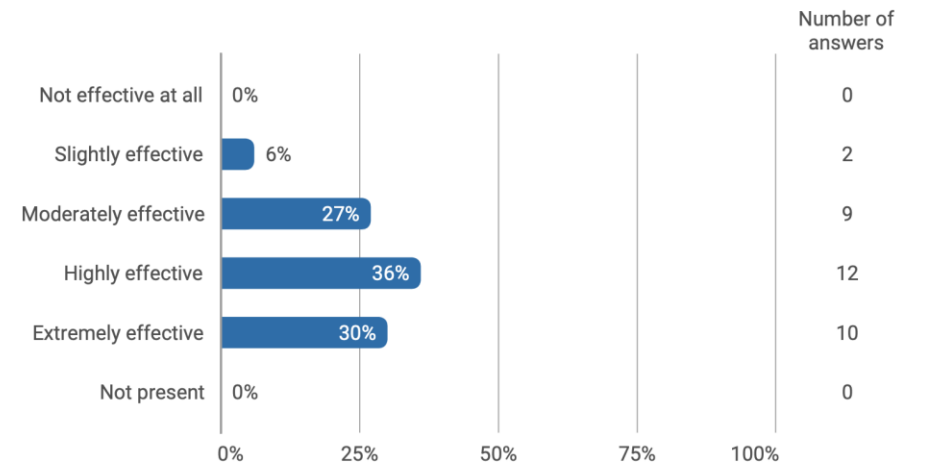




Did the integration of big screens and cameras positively impact your engagement and learning in the wet laboratory session? (please elaborate at the end of this questionnaire if you have comments)



How effective do you believe the integration of big screens and cameras was in facilitating real-time observation of the experimental steps in the wet laboratory session?



**What did you like or dislike about the integration of big screens and cameras into the wet laboratory session?**

really useful

no more comment

everyone could follow the lab work and explanations despite the seat.

**What I Liked:**

1. Enhanced Visibility: The screens and cameras greatly improved visibility in the lab, benefiting group learning.
2. Better Accessibility: All students could access instructions and demos equally, promoting inclusivity.
3. Efficient Communication: Real-time communication with the instructor facilitated quicker guidance.
4. Support for Remote Learning: The technology also enableS remote participation if needed.

**What I Disliked:**

1. Support for Remote Learning: The technology should help enable remote participation when needed.
2. Lab Layout Issues: The need for screens and cameras exposed shortcomings in the lab's layout.
3. Technical Dependency: There sometimes occured disruption due to technical issues or equipment failures.

We we many people attending the course, so the implementation of big screens and cameras definitely helped with following the teaching, however, the pictures were sometimes mirrored or not probably set for a full view making it hard to follow.

They were useful as there were no way we could have seen the operations without the camera. The screens could have been bigger though.

The use of big screens and cameras offered a lot benefits and gave me a different level of experience in terms of wet laboratory class. It made the experiments more accessible, engaging, and informative.

**Like:**

Visibility and Detail. In a wet laboratory setting, it can be challenging for all students to have a clear view of experiments and demonstrations. Big screens allow everyone in the class to see details and processes even from a distance, ensuring that no student misses out on important learning moments.