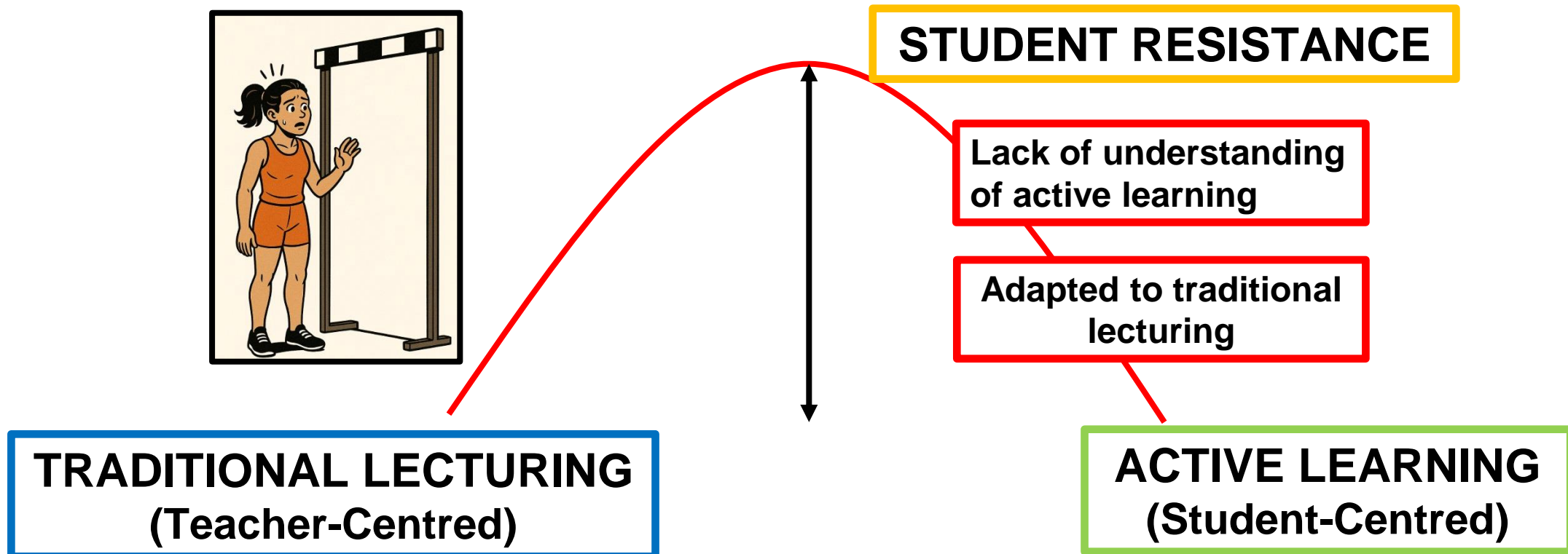


Match Point! Reducing International Students' Resistance to Active Learning with Sports Coaching Strategies

Dr David Palomas, Department of Chemistry at University College London
Teaching and Learning Conference 2025

Students' Resistance to Active Learning



Students' Resistance to Active Learning

These issues are more pronounced with international students!!!

CULTURE AND
LANGUAGE
BARRIERS

STUDENT RESISTANCE

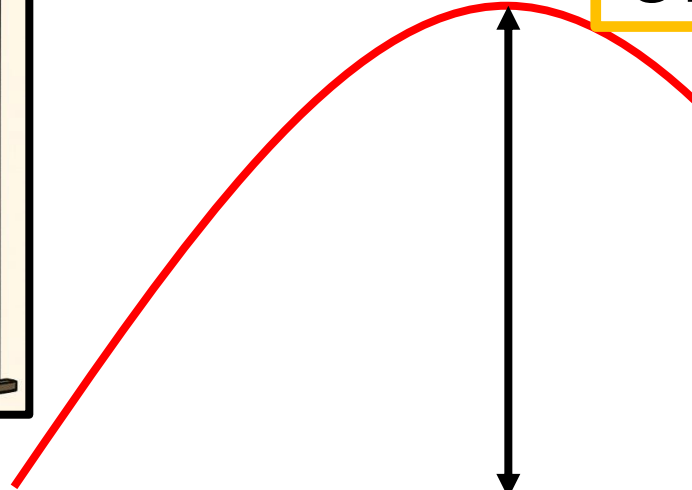
Lack of understanding
of active learning

Adapted to traditional
lecturing

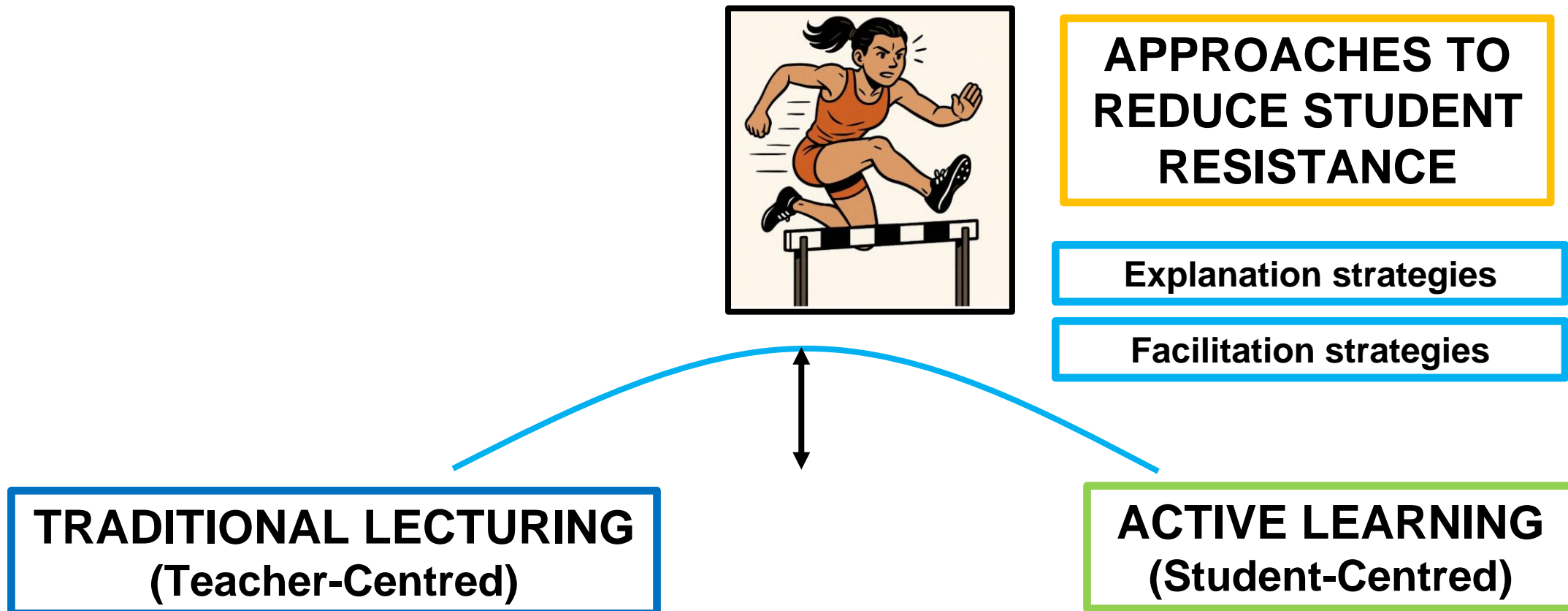


TRADITIONAL LECTURING
(Teacher-Centred)

ACTIVE LEARNING
(Student-Centred)



Students' Resistance to Active Learning



Students' Resistance to Active Learning

... but, How can we make active learning relatable?



**APPROACHES TO
REDUCE STUDENT
RESISTANCE**

Explanation strategies

Facilitation strategies

**TRADITIONAL LECTURING
(Teacher-Centred)**

**ACTIVE LEARNING
(Student-Centred)**

Can We Make Active Learning Relatable?

Are sports a universal and relatable reference?

- ❑ **The numbers behind Paris 2024**
 - **10,500 athletes from 206 territories**
 - **32 sports and 329 medal events**



Can We Make Active Learning Relatable?

SpOrts Coaching In Active Learning (SOCIAL)

- ❑ ACTIVE LEARNING IN A CONTEXT THE STUDENTS CAN UNDERSTAND
- ❑ USE OF COMMON 'SPORTS LANGUAGE' THAT PARALELS ACTIVE LEARNING

Educator = Coach

Learner = Sports Player

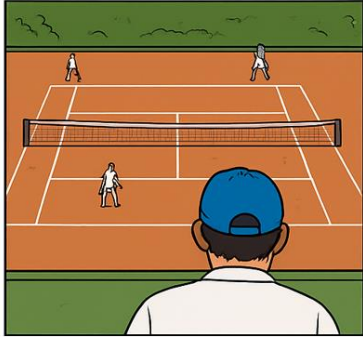
Active Learning Session (e.g. workshop) = Training Session

Assessment = Tournament

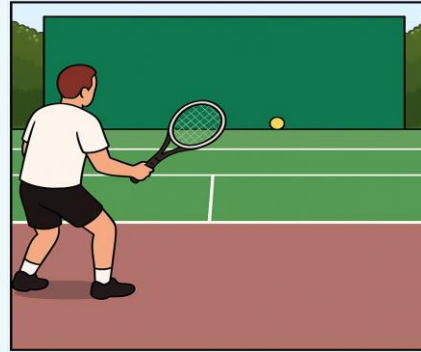
- ❑ WORK ON INDIVIDUAL AND/OR TEAM SKILLS (E.G. TENNIS VS FOOTBALL)

Tennis Coaching in Flipped Classroom

TRADITIONAL



LIVE LECTURE



SELF-PRACTICE



ASSESSMENT

FLIPPED



**EDUCATIONAL
MATERIALS**



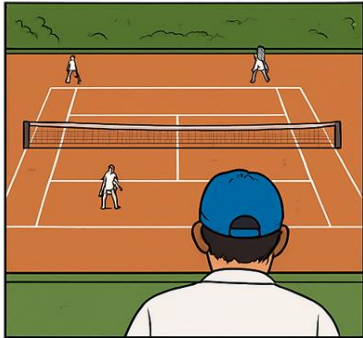
**IN-CLASS WORKSHOP
(COACHING SESSION)**



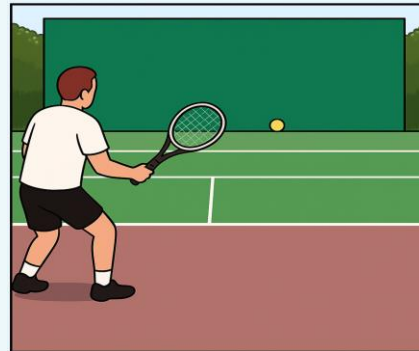
ASSESSMENT

Tennis Coaching in Flipped Classroom

TRADITIONAL



LIVE LECTURE



SELF-PRACTICE



ASSESSMENT



IT IS MORE DIFFICULT TO WIN WIMBLEDON IF YOU DON'T TRAIN WITH YOUR COACH

FLIPPED



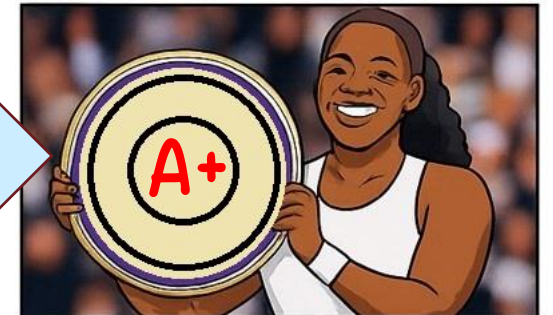
EDUCATIONAL MATERIALS



IN-CLASS WORKSHOP
(COACHING SESSION)

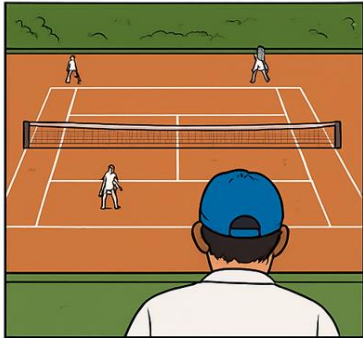


ASSESSMENT

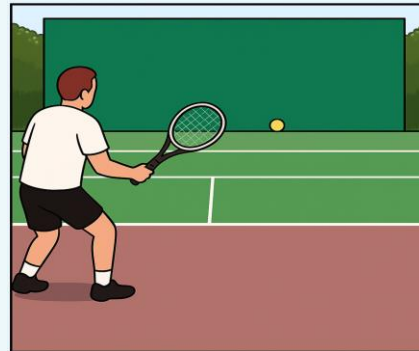


Tennis Coaching in Flipped Classroom

TRADITIONAL



LIVE LECTURE



SELF-PRACTICE



ASSESSMENT



FLIPPED



EDUCATIONAL
MATERIALS

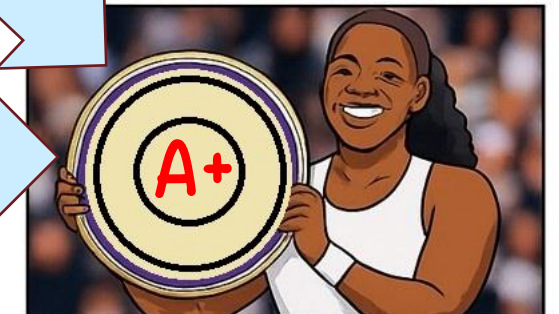


IN-CLASS WORKSHOP
(COACHING SESSION)



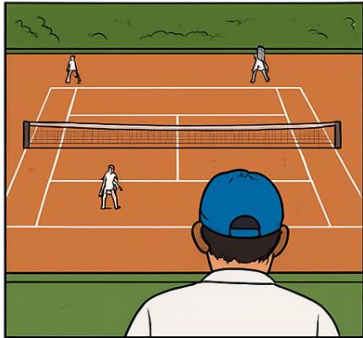
ASSESSMENT

..SOME STUDENTS WILL
SUCCEED IN BOTH
SCENARIOS

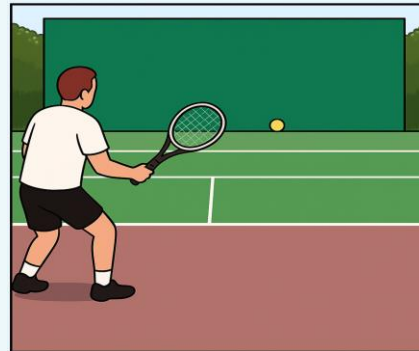


Tennis Coaching in Flipped Classroom

TRADITIONAL



LIVE LECTURE



SELF-PRACTICE



ASSESSMENT



...BUT WE WANT
EVERYBODY TO ENJOY
THE BENEFITS OF
ACTIVE LEARNING

FLIPPED



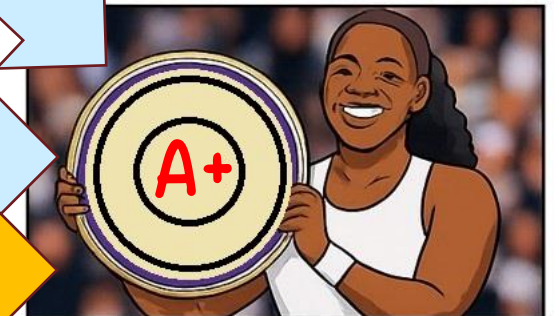
EDUCATIONAL
MATERIALS



IN-CLASS WORKSHOP
(COACHING SESSION)



ASSESSMENT



Timeline and Structure of SOCIAL

WEEK	ACTIVITY	COMMENTS
0	On-line educational materials available	Materials available at least 1 week before the kick-off lecture
1	Kick-off Lecture	<ul style="list-style-type: none"> ➤ Introduction of Flipped Classroom in the context of sports coaching. E.g. Tennis Model ➤ Introduction of terminology. <ul style="list-style-type: none"> • Educator → Coach • Learner → Sports Player • Active Learning → Training Session • Assessment → Tournament
2 to N	Active Learning Activities	<ul style="list-style-type: none"> • Problem-Based Learning • Team-Based Learning • Or a combination of both <p>Work on individual or group skills depending on your interests.</p>
N+1	Assessment	Individual or Team tasks in alignment with the Active Learning Activities

Timeline and Structure of SOCIAL

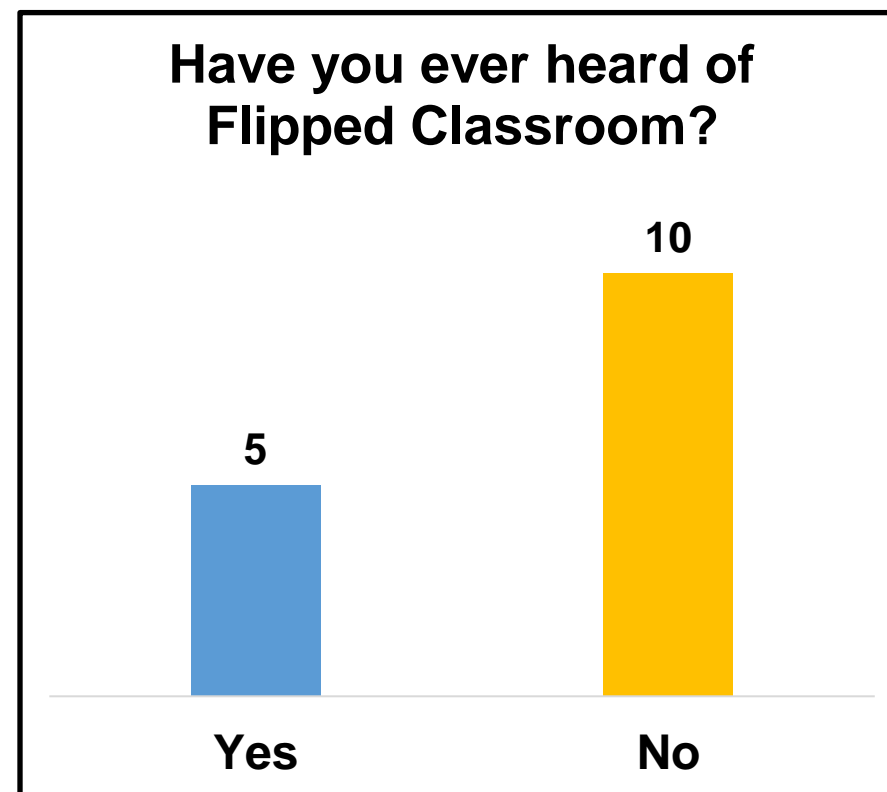
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**STICK TO THE
SPORTS
TERMINOLOGY**

Preliminary Results

- 18 international students from our MSc in Chemical Sustainability

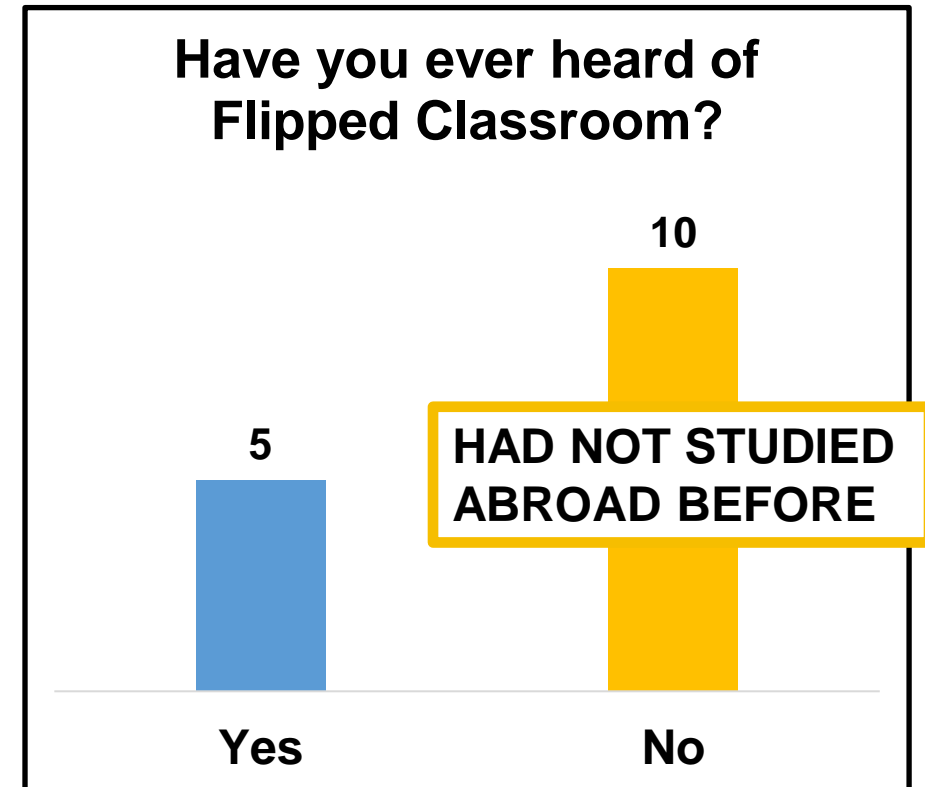
Initial Survey Introductory Lecture:
15 answers out of 18 students



Preliminary Results

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Initial Survey Introductory Lecture:
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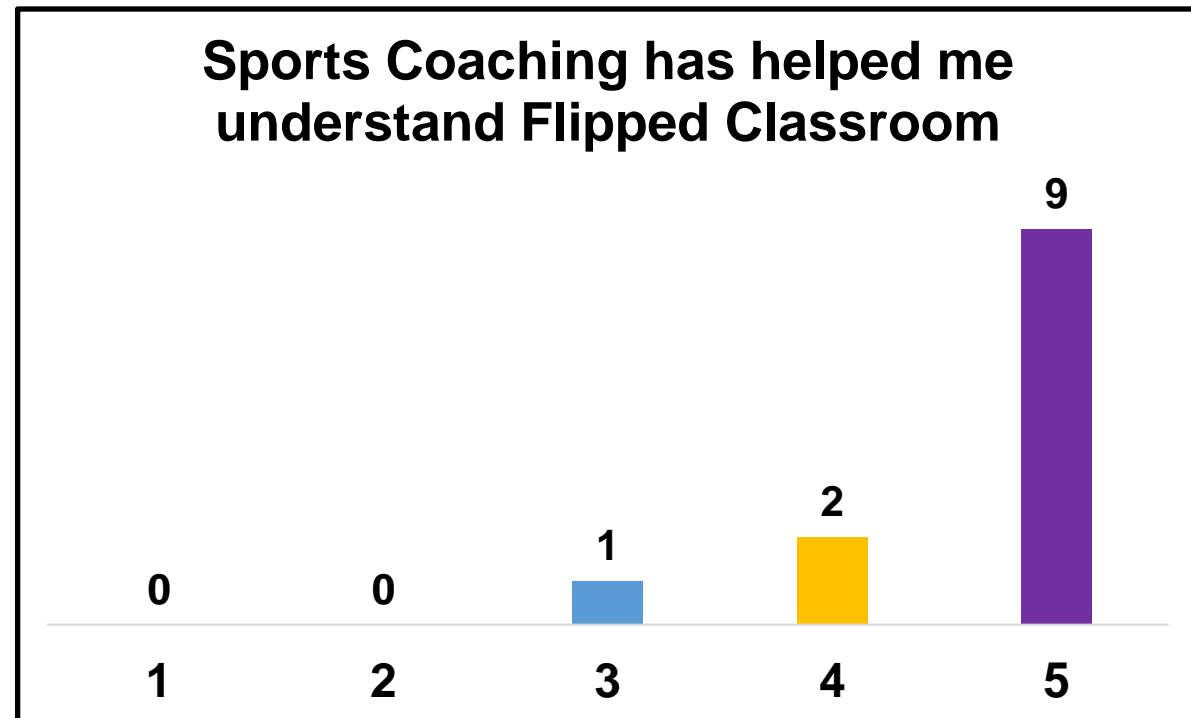
Preliminary Results

- 18 international students from our MSc in Chemical Sustainability

1 to 5 (where 1=not likely and 5=very likely)

End of Module Survey:

12 answers out of 18 students



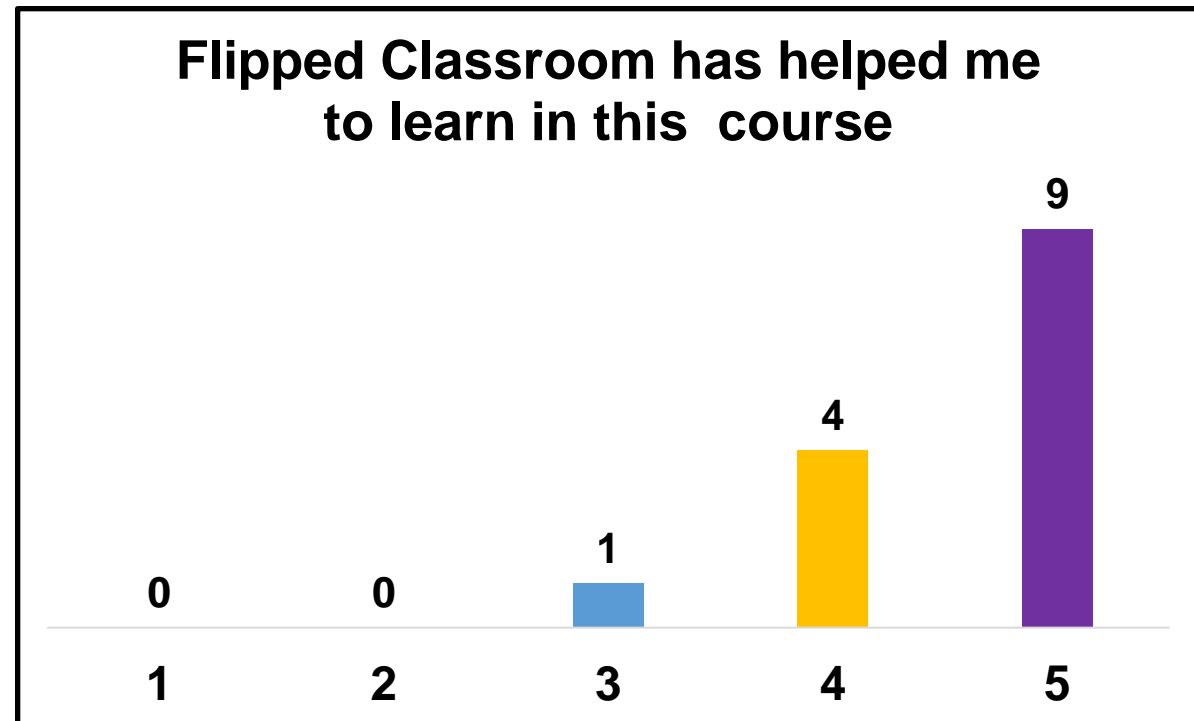
Preliminary Results

- 18 international students from our MSc in Chemical Sustainability

1 to 5 (where 1=not likely and 5=very likely)

End of Module Survey:

14 answers out of 18 students



Representative Students' Feedback

Flipped classroom was useful as we could review the lectures in the comfort of our home

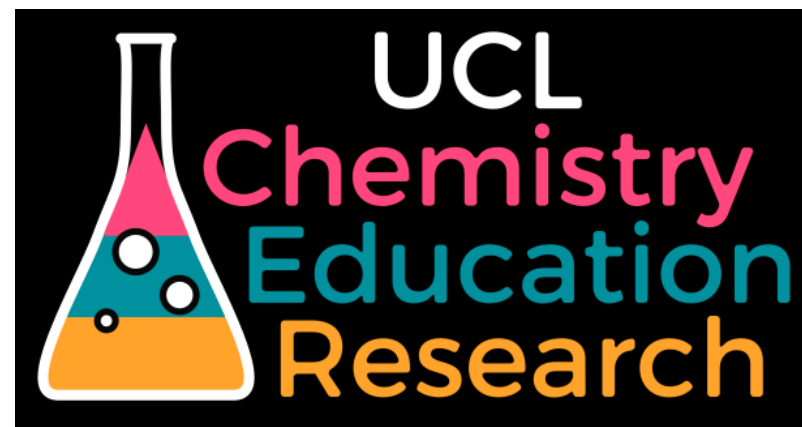
The course design is very user-friendly, it allows students to self-study at home at appropriate times

I like the idea of the flipped classroom. I can pause the videos and have time to digest the information

Take-Home Notes

- Preliminary data indicates that using a sports coaching approach improves international students' understanding and transition to flipped classroom
- The first session to establish the parallels between Flipped Classroom and Sports Coaching and the use of the “Sports Terminology” over the activity seem to play a key role in reducing students' resistance.
- How successful is the **SOCIAL** model? There are other factors to consider:
 - Quality of the educational materials
 - Maturity of the students. Postgrad vs Undergrad students
 - Size of the group
 - ...

Thanks for your kind attention!



Email: d.palomas@ucl.ac.uk

Recommended Readings

Gilboy, M. B., Heinerichs, S., Pazzaglia, G. (2015). *Enhancing student engagement using the flipped classroom*. Journal of Nutrition Education and Behavior, 47(1), 109-114

Helms, R. (2008). *Transnational education in China*. International Higher Education, (53).

Heffernan, T., Morrison, M., Basu, P., & Sweeney, A. (2010). *Cultural differences, learning styles and transnational education*. Journal of Higher Education Policy and Management, 32(1), 27-39.

Finelli, C. J., Nguyen, K., DeMonbrun, M., Borrego, M., Prince, M., Husman, J & Waters, C. K. (2018). *Reducing student resistance to active learning: Strategies for instructors*. Journal of College Science Teaching, 47(5).

Owens, D. C., Barlow, A. T., & Smith-Walters, C. (2020). *Student motivation and resistance in active learning classrooms*. In Active Learning in College Science (pp. 927-942). Springer, Cham

Arce, P. E., & Arce- Trigatti, P. (2000, June). *The Parallel Between Active Learning And Sports Coaching Techniques: Analysis And Selected Examples*. In 2000 Annual Conference (pp. 5-636).