Enhancement of technology within the classroom for laboratory teaching and learning in Engineering

N.M. Wride (Project Lead) and **N. Lavenstein** (First Year Student)

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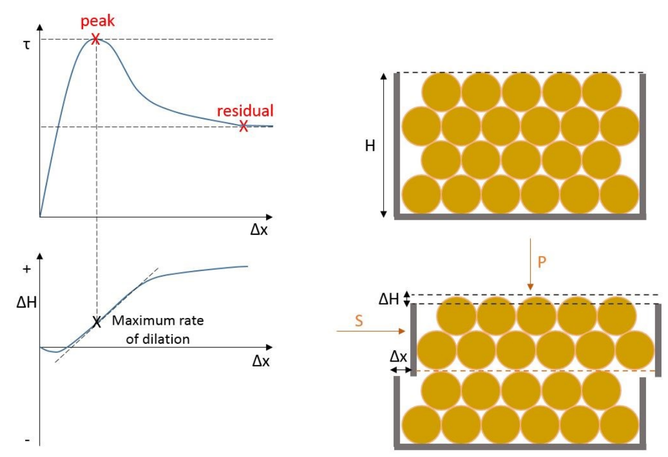
Create an online video resource to improve students understanding of laboratory testing in Civil Engineering.

To enhance student engagement with the topic of the laboratory and **enable students to focus on the behaviour under examination,** providing students with laboratory skills and more importantly confidence to undertake their work.

To **expose and familiarise students with testing methods** in conjunction with the background theory and practical applications..

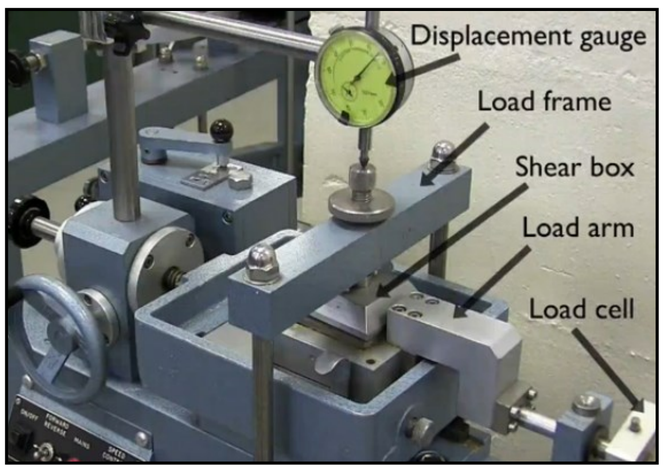
Reinforce theory

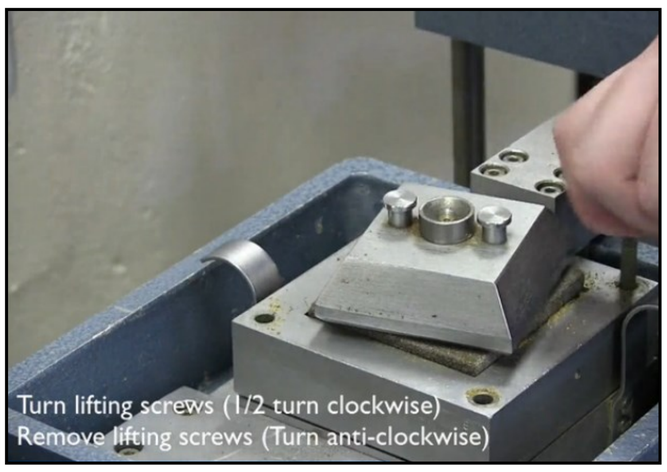
- Reintroduce lecture concepts from earlier lectures in the year
- Pair the laboratory test to the theory to understand the link between the two



Enhance skills

- Familiarisation with laboratory equipment
- Understanding of laboratory test method





Improve engagement

- Integrate online resource on Moodle with online quiz undertaken prior to the laboratory session
- Generate conversation and interaction during the laboratory session

Over the coming year the online moodle quiz will be monitored to **gauge effectiveness and usage of the page.**

Student laboratory surveys will be completed during the laboratory to determine if the tool has **contributed to the learning outcomes of the laboratory**

Future project aims

Extend the laboratory video resource online briefing to further laboratories in the School of Engineering

Engage more students in the future development of resources, using existing projects as examples to build on

Engage the industrial panel to **ensure laboratory sessions are fulfilling employer needs for future graduates**

It is hoped the video resource tool will enhance the student experience in the laboratory and demonstrate the learning outcomes of the laboratory session can be enhanced by the flipped classroom approach.

Project Team

Natalie Wride

Civil Engineering PhD Student

Undertook demonstration and briefing of the laboratory to the student

- Assisted with the filming of the material and supervised the laboratory
- Undertook the video editing, voice over and theory for the project

Nathan Lavenstein

Civil Engineering First Year Student

- Conducted the laboratory session to be filmed
- Determined the different segments of the film
- Decided on the filming angles and 'close up' parts for the videos

Use of equipment and resources provided by **Warwick Digichamps**