


Does moving oral presentations online affect students' performance?

Stephen E. Potts, Mike Kelly and Jadranka Butorac

ViCEPHEC 2021

✉ s.potts@ucl.ac.uk

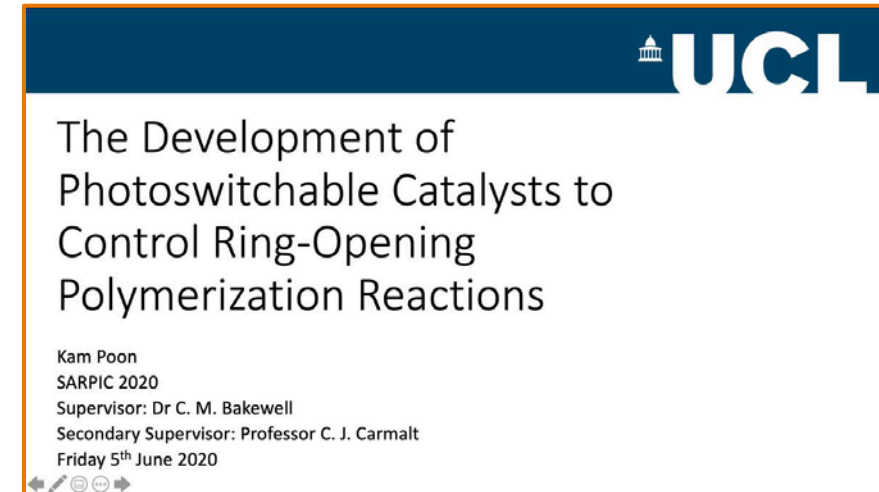
 [@StephenEPotts](https://twitter.com/StephenEPotts)

Symposium for Advanced Chemistry Research Projects (SARPIC)

- Each fourth-year M.Sci. student presents their work (15 min).
- Run as a full conference with parallel sessions.

Then came COVID-19!

- Presentations are a key skill and are fulfilling for students, even distance learners (McDougall & Holden, 2017).
- Move online using Blackboard Collaborate Ultra.
- Challenges:
 - Not a genuine “experience”? Presenters miss audience cues online (York & Hayes, 2015).
 - General confidence with the technology (staff and students).
 - Inevitable technical problems.



Example of a year 4 SARPIC presentation
(acknowledgement: Kam Poon)

Approaches

Ac. Year(s)	2015/16 – 2018/19	2019/20	2020/21
Students	292	67	52
Delivery	Live delivery in person in a lecture theatre.	Pre-recorded PowerPoint presentations (720 p). Played during online seminar, live optional.	Live delivery online . Pre-recorded presentations used as backup only.
Rationale	This is (was?) the norm.	Minimised risk of multiple technical problems, reduces stress/anxiety (Nelling, 2013).	Technical problems less prominent than expected. A more genuine experience?

- Marks from each delivery method above were analysed using t-tests and one-way ANOVA (SPSS).
- Qualitative feedback from students taken.

Challenge: Confidence with Blackboard Collaborate

All staff and students were given full training and practice on Blackboard Collaborate.

Each session included **two** chairs.

Subject Chair

- Introduced talks.
- Led the questions.



Technical Chair

- Lined up the videos on their computer (Google Chrome) and played them.
- Managed the “roles” of students and speakers.

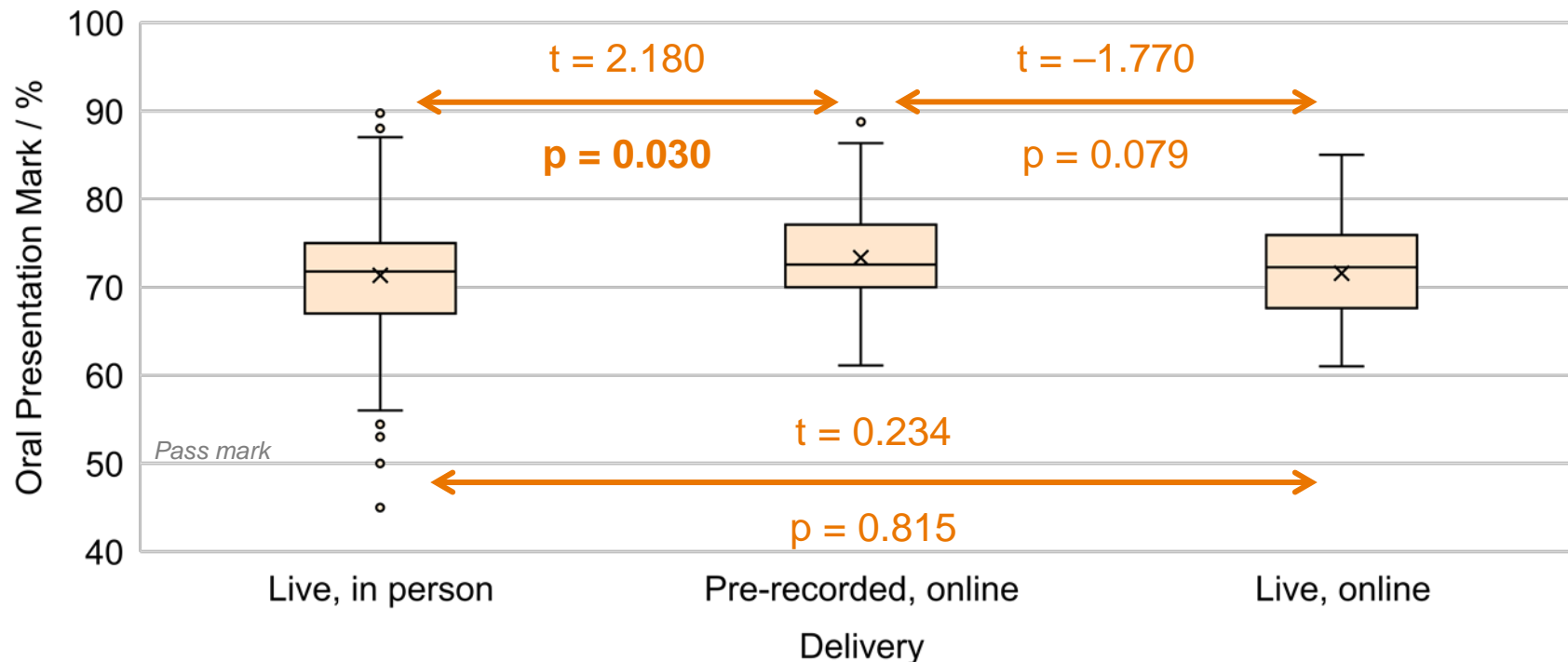


Benefits

- A backup chair if technical issues arose.
- Reduced cognitive load for chairs.

Student Marks

Delivery	Live, in person	Pre-recorded, online	Live, online
Academic Years	2015/16 – 2018/19	2019/20	2020/21
Students	292	67	52
Mean Mark / %	71.34	73.34	71.58
Std. Dev.	7.06	5.31	5.48



One-Way ANOVA

- $F = 2.493$.
- $p = 0.084$.

T-tests were performed to check pairs of data.

Students' Views

Initially when I heard that SARPIC was going to be online last year **I was a little disappointed** because I had been so looking forward to **getting together** with everyone to see and discuss the research in person. In the end **the fact it was online didn't make any difference**, it was the perfect way to end the masters and 4 years of undergraduate study by being able to proudly share and enjoy what I and my peers had accomplished during this time. It was **obvious how much time and thought had gone into the planning and arrangements**.

Prerecording the talk was **much less stressful** than giving it live!



Giving an online talk was a **unique challenge** and quite different to the in person talk I was expecting. It was probably **easier than giving the talk to a live audience** as I could sit in my bedroom and deliver it in a very comfortable environment. The **SARPIC sessions were all very well run** and gave me confidence to give subsequent online presentations as the pandemic has continued.

Conclusions

- Moving online was **not detrimental** to students' performance.
 - Marks not significantly different for live presentations.
 - Training in software necessary for students and staff.
 - Minimal technical issues and two chairs made the process smoother.
- Pre-recording produced a higher average mark than presenting in person.
 - **Reduced anxiety** about presenting.
 - Ability to correct mistakes and **make it “perfect”** in advance.
 - Are we assessing the same skills?

Acknowledgements

SARPIC Organisers

- Prof. Sally Price
- Prof. Paul McMillan
- Prof. Matt Powner

All the year 4 students

ViCEPHEC 2021 Organisers

- Dr Linnea Soler
- Dr Smita Odedra

Technical Chairs

- Dr Jamie Baker
- Dr Matt Blunt
- Prof. Katherine Holt
- Dr Dewi Lewis
- Prof. Mike Porter
- Dr Anna Roffey