# EXPLORING THE ROLE OF ONLINE INTERACTIVE TECHNOLOGY IN SUPPORTING DIALOGUE IN MATHEMATICS CLASSROOMS: LESSON STUDY IN A CHINESE PRIMARY SCHOOL

Qian Liu
Faculty of Education, University of Cambridge
Yuan Zhang, Manqi Yu, Xianzhong Chen, Pan Liu, Taifeng Shen, Huayan Sun, Yingying Zhang, Yanyu Zhang, Guijuan Wang
Hangzhou Yungu School

**Short description of the Workshop Groups: organizers, aims and underlying ideas**

The theory-informed and practice-based workshop is organised and presented by the mathematics research group in Hangzhou Yungu School directed by Yuan Zhang and the PhD candidate, Qian Liu. The knowledge, experience and teaching practice shared and discussed here were derived from the two-year lesson study program conducted in Hangzhou Yungu school. The lesson study inquiry was underpinned by the theoretical assumption that the pedagogically appropriate use of digital technologies could resource, expand and deepen classroom dialogue and in turn promote students' mathematical attainment, understanding and higher order thinking (e.g. Howe et al., 2019; Mercer & Sams, 2007). Based on this, ten primary mathematics teachers and the researcher explored and investigated what affordances of online interactive technology are potentially beneficial for primary mathematics dialogue and how the affordances can be effectively enacted with dialogic teaching to support productive classroom dialogue.

Our workshop, bridging dialogic theory and school-based classroom practices, aims to enrich participants' understanding about the role of online interactive technology in mathematics teaching and learning from the dialogic perspective. Secondly, we would like to share our developed teaching models respectively applied in the whole-class and student-led group sessions, the corresponding pedagogical approaches and strategies exemplified by real lesson cases. More importantly, the workshop designed and organised in a dialogic manner aims to draw participants into a diverse dialogue. We will invite participants to share their comments, suggestions and questions and design together the potential pedagogical use of online interactive technologies for productive dialogue based on one provided lesson episode.

**Planned structure:**

Insert the planned structure of the workshop in the table below. You can insert rows if needed.

| Planned timeline | Planned activity | Working format /Responsible person |
|---|---|---|
| 5 minutes | ● Opening and welcoming<br>● Clarifying main objectives and structure of the workshop<br>● Ice-breaking online interactive activity | Introduction and online interaction (Pan Liu) |

| | | |
|---|---|---|
| 15 minutes | ● Overview of the theoretical framework and the lesson study inquiry in Yungu school<br>● The potentially supportive role of online interactive technology in classroom dialogue | Presentation<br>(Qian Liu)<br><br>Discussion<br>(Qian Liu) |
| 25 minutes | ● Lesson cases | Presentation<br>(Xianzhong Chen)<br>(Manqi Yu) |
| 30 minutes | ● Instructional design employing digital technology | Group activity<br>Discussion<br>(Yuan Zhang) |
| 15 minutes | ● Comments and additional questions<br>● Conclusion | Q & A<br>(Yuan Zhang, Qian Liu) |

**Venue requirement:**

Physical classroom/meeting room

White poster paper, Markers,

Apple TV

USB-Type C-HDMI cable

## References

Howe, C., Hennessy, S., Mercer, N., Vrikki, M., & Wheatley, L. (2019). Teacher–Student Dialogue During Classroom Teaching: Does It Really Impact on Student Outcomes? *Journal of the Learning Sciences*, *28*(4–5), 462–512. https://doi.org/10.1080/10508406.2019.1573730.

Mercer, N., & Sams, C. (2006). Teaching children how to use language to solve maths problems. *Language and Education*, 20(6), 507–528.