

## Mathematics Instruction Online: Finding the Right Level of Challenge in Emergency Remote Teaching

Anita Green

*Monash University*

anita.green1@monash.edu

Differentiation can be hard to define, however it involves maximising the learning opportunities for each student (Tomlinson, 2005). For example, teachers could enact differentiation by adapting teaching approaches, instruction, resources, or classroom activities. Effective differentiation can be difficult to achieve for many teachers (Eysink et al., 2017). During the Covid-19 pandemic teachers and students moved to teaching and learning online for a period of time known as ‘emergency remote teaching’ or ERT (Hodges et al., 2020). Teachers were required to adapt their teaching and learning practices to suit the online learning environment. As part of a larger study investigating what teachers are cued into noticing in the primary mathematics classroom, two semi-structured interviews were conducted with eight teacher participants late in 2020. One interview was conducted during ERT and the second interview was conducted a few weeks after returning to the face-to-face classroom. Teachers in this study found differentiating more challenging in the online environment. In this short communication I will share the participants’ experiences of adapting their teaching practices for ERT and the difficulties they faced differentiating effectively. All teachers in this study reported using levelled groups in the online environment in order to ensure the right level of challenge was provided for each student. This presentation will discuss why participants chose this approach in the online environment and how this differed from their regular teaching practice in the face-to-face classroom which involved the use of more open-ended, rich tasks.

### References

- Eysink, T. H., Hulsbeek, M., & Gijlers, H. (2017). Supporting primary school teachers in differentiating in the regular classroom. *Teaching and Teacher Education*, *66*, 107–116.
- Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The difference between emergency remote teaching and online learning. Educause. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Tomlinson, C. A. (2005). Grading and differentiation: Paradox or good practice? *Theory into Practice*, *44*(3), 262–269.

(2023). In B. Reid-O’Connor, E. Prieto-Rodriguez, K. Holmes, & A. Hughes (Eds.), *Weaving mathematics education research from all perspectives. Proceedings of the 45th annual conference of the Mathematics Education Research Group of Australasia* (p. 582). Newcastle: MERGA.