

How Do Primary Pre-Service Teachers Plan and Document Rich Mathematics Learning Experiences using a Zoo?

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Rich learning in the primary mathematics classroom is not a new concept and is an area that has been championed by many education researchers over the years (Grootenboer, 2009; West, 2018). One way in which we can explore how to inspire authentic learning and rich mathematics tasks in primary pre-service teachers planning, is to use field trips or situated learning opportunities as part of their initial teacher education. “Situated learning places a student in a setting that is often outside of the classroom such as a ... zoo, museum, laboratory or natural area” (McCormas, 2014, p.98).

Field trips to the zoo can be used to enrich the curriculum, make connections between the real world and the school classroom, and provide students with a meaningful learning experience (Scott & Matthews, 2011). However, not all teachers are confident with teaching ... knowledge and skills, or with teaching with technology, ... when visiting a zoo (Kisiel, 2013). This study is formed as an action research (AR) study to examine how primary pre-service teachers (PST) learn and think when documenting their experience in science, technologies, and mathematics (STEM) topics using multimodal documentation techniques (Salehi et al., 2012) at a zoo. This focus of this round table is the mathematics aspect of STEM.

In September-October 2022, the first stage of the project was conducted by taking PST to the Adelaide Zoo. A range of activities were conducted which focused on how the environment can be used to enhance teacher planning of mathematics for primary years. The student’s learning was documented through a digital tool during three sessions include a pre-zoo workshop, the experience at the zoo and a post-zoo workshop. Later the PSTs used their learning to plan rich mathematical tasks and critically reflect on the experience as part of a final assessment.

At this round table, we will present one example of how pre-service teachers planned and documented rich mathematics learning experiences using a zoo. Participants will be invited to share their experiences of planning and documenting rich learning experiences with primary pre-service teachers and their experiences of using zoos or other field trips in mathematics education.

References

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(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. 565). Newcastle: MERGA.