SUPPORTING TEACHERS WITH FORMATIVE ASSESSMENT IN PRIMARY SCIENCE

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THEME:

Teacher education and professional learning in STEM

BACKGROUND AND AIMS

The formative use of assessment information to support children's learning in primary science can be difficult to enact in the classroom, with limited lesson time, accountability pressures and for many, a lack of confidence in teaching and assessing science. The difficulties encountered with implementation of formative assessment indicates a need for further professional learning and exemplification of manageable ways to embed formative assessment in teaching. Utilizing training and resources from the Teacher Assessment in Primary Science (TAPS) project, with its Design-Based Research approach (Davies et al., 2017), this study seeks to explore how such professional learning can impact formative assessment practices.

METHOD

In the preliminary study, 142 teachers in 9 regions of England completed a paper questionnaire at a follow up training day (Earle, 2021). The qualitative data pertinent to the study was extracted and thematic content analysis carried out to determine the kinds of actions and changes to practice that were described. Online and blended versions of the training course are currently taking place, which will provide additional data for discussion at STEM 2022.

RESULTS AND CONCLUSIONS

Primary teachers who used a TAPS Focused Assessment activity were asked to describe what action they took as a result of the classroom interactions stimulated by the activity. It was found that the 'next step' described by teachers varied in timing; some made changes within the lesson, others provided follow up activities or made longer-term adaptation to teaching practices. Being responsive to the assessment information provided by the children took many forms, for example, supporting pupils to reflect on investigations during the lesson, discussing vocabulary or concepts, providing time for further exploration, or explicit modelling of science skills.

Formative decisions were taken at a whole class level, rather than making individual adaptations. It is argued that enabling teachers to be more explicit about their tacit decision-making could support them to make more formative use of assessment information to support pupil learning.

REFERENCES

- Davies, D., Earle, S., McMahon, K. Howe, A. and Collier, C. (2017). Development and exemplification of a model for Teacher Assessment in Primary Science, *International Journal of Science Education*, 39:14, 1869-1890.
- Earle S (2021). Formative Decision-Making in Response to Primary Science Classroom Assessment: What to do Next? *Frontier Education*, 5:584200.
- 2022. J. Bobis & C. Preston (Eds.), Proceedings of the 7th International STEM in Education Conference (STEM 2022), University of Sydney, Sydney, Australia, November 23-26. University of Sydney.