

Investigating Teacher Practice in Early Childhood Science Education: An Australian Perspective

Research Context

The Early Years Learning Framework for Australia provides significant scope, yet little guidance for teaching science in preschool.

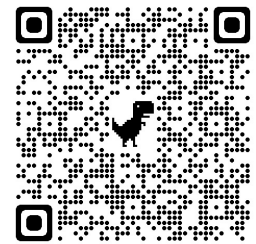
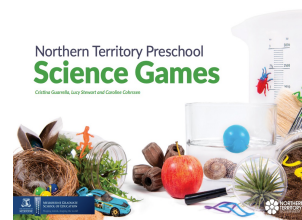
The literature demonstrates a significant lack of validated measures to assess children's science learning.

Teachers take a 'hands off' approach to teaching science in early childhood, limiting the opportunity for high quality teacher child interactions.

Research literature, however, suggests that science learning experiences provide context for high quality-teacher child interactions.

Northern Territory Preschool Science Games

A freely available teaching resource designed to prioritise the development of transferable scientific thinking skills for all children.



The Research Program

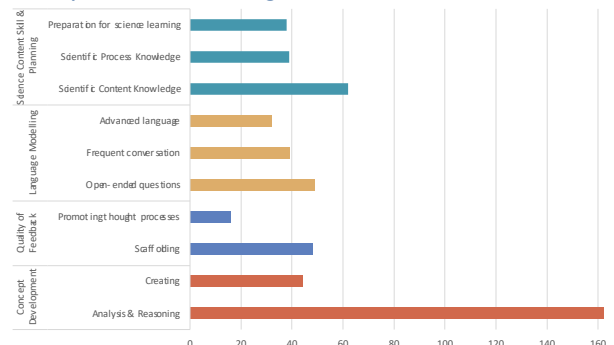
This research sought to understand the opportunities for instructional support interactions offered by the Northern Territory (NT) Preschool Science Games.

Further, we compared the effect of preschool teachers' enactment of one science game on the quality of instructional support observed across otherwise business-as-usual early childhood program.

The final area of investigation examined teachers' assessment practices during the implementation of the games.

Opportunities for Instructional Support

The games most frequently offer affordances for concept development interactions, in particular analysis and reasoning.



Instructional Support Quality

Classroom observations revealed that instructional support quality was higher during the observation cycle in which teachers enacted a NT Preschool Science Game compared with the broader early childhood education program.

In line with the purposeful design of the games, there was also a marked increase in concept development during these periods.



Findings & Future Research

These findings suggest that this science teaching resource provides a supportive structure for teachers to transform pedagogical prompts into teaching practice. Scan the QR code to access the full article.

Thematic analysis of interview data is in progress to understand teachers' science assessment

practices during implementation of the NT Preschool Science Games. Future research will examine the impact of Australian policy documents on teacher practice in science education.

