12 - Cultural, Social and Gender Issues in Science and Technology Education | Empirical

SP - (15724) - THE ROLE OF LANGUAGE IN THE DEVELOPING UNDERSTANDING OF "ANIMAL": INSIGHT FROM SINGAPOREAN CHILDREN

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Short Abstract

The formation of explicitly expressible conceptions begins early in the developmental trajectory such that by the age of 3 years children exhibit ideas that are incommensurate with accepted scientific views. Because of their early emergence, they tend to be highly resistant to change through instruction. An important factor in the development of these conceptions is language, both in terms of the use of language to express ideas and in terms of the formative linguistic environment through which knowledge is abstracted. One concept central to scientific learning is the animal, specifically about understanding what is an animal and what is not. Various studies have demonstrated that children's understanding of this concept emerges very early in development and is subject to changes over time through formal and informal instruction. However, they also demonstrate that this understanding also varies across linguistic contexts - children express different archaic definitions of "animal" depending on the language they speak. Yet, there is a lack of understanding what impact multilinguistic exposure may have on the formation of such understanding, especially where the language of instruction differs from the language primarily spoken in the home environment – as is the case for a substantial number of children in Singapore. The multilingual exposure might strengthen their understanding, providing an advantage over monolingual children, but might equally lead to greater difficulty in overcoming misconceptions. This presentation will report on findings of a cross-sectional study conducted with children aged 4, 7 and 10, towards the aim of expanding our current understanding of scientific knowledge construction across early and middle childhood, and to subsequently contribute to further development of pedagogy across a range of relevant contexts.