# Is ‘queen bee’ in ‘Jane is the queen bee' hard to understand, explain, or use?: evidence from children’s processing of metaphoric polysemy

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Many English words have more than one meaning, a phenomenon known as polysemy. Understanding the relationship between multiple word meanings contributes to children’s vocabulary depth and reading comprehension [1, 2]. Our systematic review showed that children’s ability to understand and use polysemy emerges early in life but varies by polysemy type and language background (e.g., English monolinguals (EL1) and English as an additional language (EAL)) [3]. Metaphoric polysemy emerged as particularly challenging for younger and EAL learners (e.g., *time flies by*). Yet, little is known about effective approaches to support children’s learning of polysemy.

To fill this gap, our in-progress intervention investigates EL1 and EAL children’s (aged 6-7, target N=100 (current N=50); informed by our child pilot study (N=16; [4])) understanding and use nominal metaphoric polysemy (e.g., Jane is the *queen-bee*). in the 4-session intervention (10-15 minutes each), children in the experimental condition assume the role of ‘word detectives’ and learn lexical inference skills through short stories by (1) identifying metaphors, (2) asking questions about them, (3) using similes to clarify their meanings, and (4) finding contextual clues to solve the "mystery" of word meanings. Children in the control took the pre- and post-tests but continued normal classroom lessons.

Pre- and post-tests (normed items adapted from [2, 6]) assess successful comprehension and constrained production of both trained and untrained items. In the 2AFC comprehension task, children listen to a short story and choose between two images that correspond to either the literal or figurative meaning of the metaphor. They then provide verbal justification of their choices. In the constrained production task, children select the correct word from a choice of three, to complete the last sentence of a story with a metaphor (this assesses contextual use rather than free production, which may be too demanding for this age group). Our adult pilot study (N= 162) validated these tasks.

Data collection is underway, and the findings will be presented at the conference. We predict that, at pre-test, children will perform the best in the comprehension task [5], followed by the production task and the verbal justification task. We further expect that the lexical inference training will lead to greater gains in all three measures compared to the control group, thus informing what successful polysemy acquisition means and the role of explicit training in learning abstract polysemous meanings.

**References**

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