

# Book sharing to support inference-making

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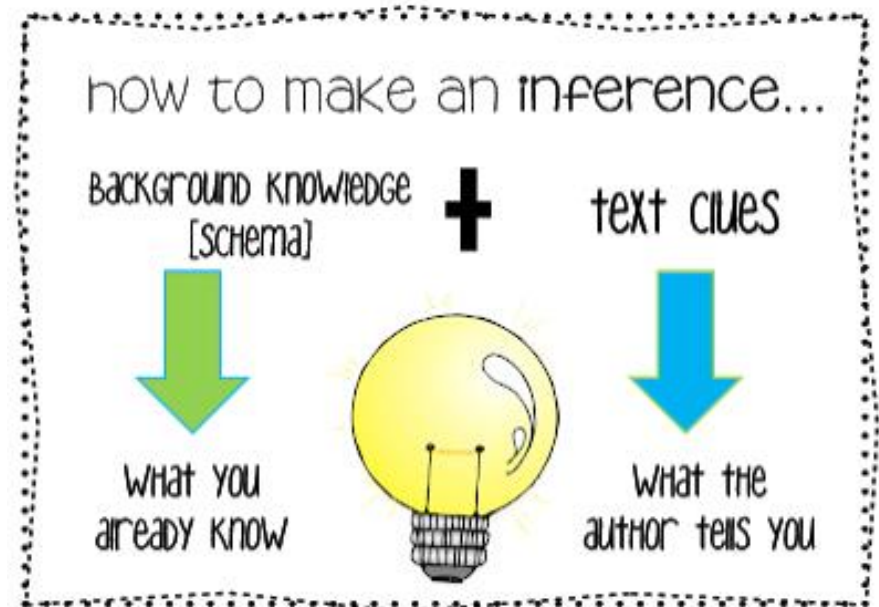
## Inference

readers can understand more about the story when they when they look for clues in what the characters say and do.

they are wearing coats

so it must be cold

so they must REALLY like football!



# This session will

1. Review the role of inferencing in language comprehension;
2. Summarise research on the development of inferencing, including preliminary results from our randomised controlled trial inferencing intervention;
3. Discuss inferencing skills in relation to your practice.

# The role of inferencing in language development



*Percy began to push the heavy wheelbarrow over a little bridge - SPLASH!*

*Percy fell into the water*



*They began by unloading all Percy's **tools** and the planks of wood from the wheelbarrow.*

*Percy showed the badger how to use a **saw** and he showed the squirrel how to **knock in** nails.*

*Tools = saw and hammer*



# Inferencing benefits comprehension

- Inference training improves reading comprehension (McGee & Johnson, 2003; Yuill & Oakhill, 1988).
  - Inferencing skill predicts (later) reading comprehension skill (Cain & Oakhill, 1999; Silva & Cain, 2015)
  - Inference training improves oral comprehension (Bianco et al., 2010).
  - Inferencing skill predicts comprehension of implicit and explicit oral information (Florit et al., 2011)
- > **Skilled comprehenders strive for coherence** (Cain & Oakhill, 1999)

## Other skills benefit inferencing

- Vocabulary (Currie & Cain, 2015)
- Oral language skills , i.e. vocabulary and verbal working memory (Lucas & Norbury, 2015; Cain et al., 2001)

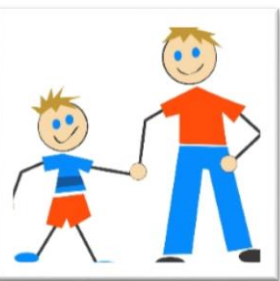
# Our study



In this pre-registered randomised control trial, we tested the effect of **increasing exposure to inferential questions** during shared book reading on 4-year-olds' inferencing abilities.



We used parent-child book reading as a means of scaffolding the development of inferencing skills since some parents naturally ask their children inferential questions about shared stories.



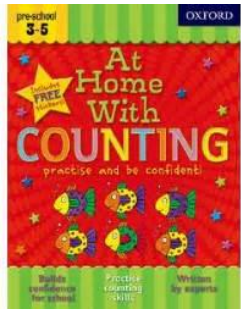
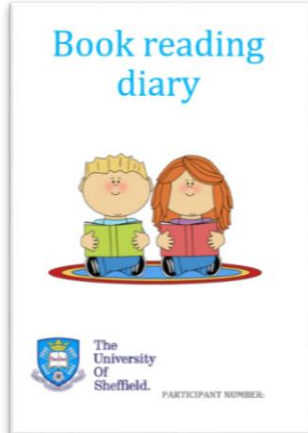
- 100 parent-child dyads were randomly allocated to an intervention or control condition according to CONSORT guidelines.
- One third of families in the sample live in the most deprived neighbourhoods nationwide (IMD deciles 1-3).



- First, parents in both conditions watched a [training video](#) that provided the background and instructions.



- Participants in the **training** condition were given 10 books with inference-making questions to support inference-eliciting dialogue during book reading.
- Participants in the **control** condition were given a maths workbook to work through together.
- Parents in both conditions were asked to use the materials with their child **daily** for a month.

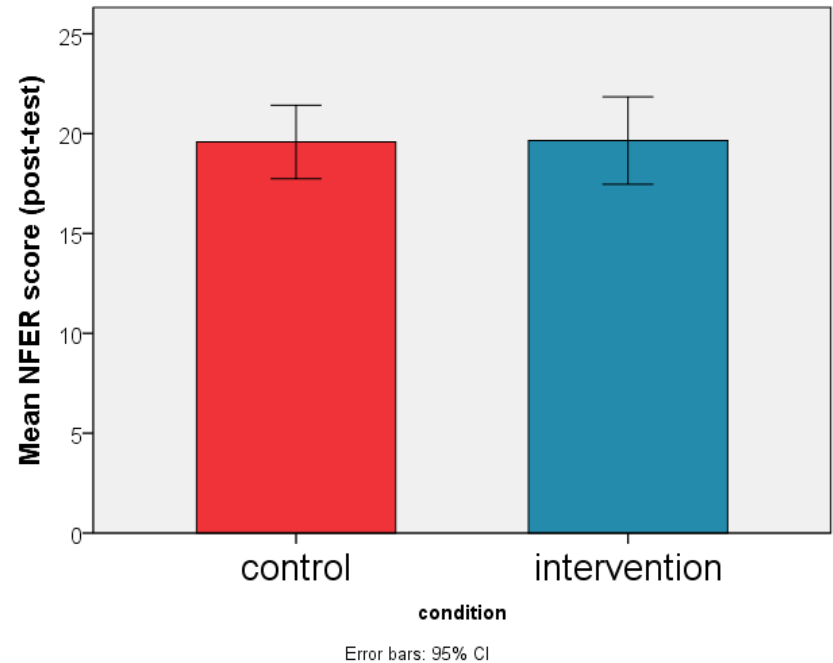
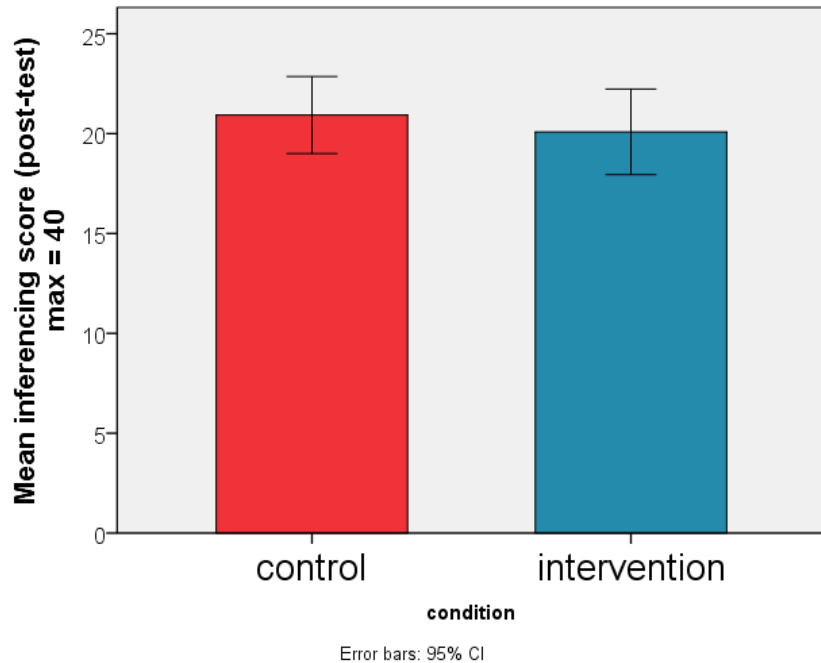


- Families in both conditions were given an **intervention diary** and asked to record each time they read a particular book or completed a page in the maths workbook.
- Pre- and post-test of **inferencing ability**.

Book	Tick when read	Date	Notes
The Secret Path	<input type="checkbox"/>		
The Secret Path	<input type="checkbox"/>		
The Secret Path	<input type="checkbox"/>		
The Treasure Hunt	<input type="checkbox"/>		
The Treasure Hunt	<input type="checkbox"/>		
The Treasure Hunt	<input type="checkbox"/>		
The Rescue Party	<input type="checkbox"/>		
The Rescue Party	<input type="checkbox"/>		
The Rescue Party	<input type="checkbox"/>		

Book	Tick when read	Date	Notes
The Lighthouse Keeper's Lunch	<input type="checkbox"/>		
The Lighthouse Keeper's Lunch	<input type="checkbox"/>		
The Lighthouse Keeper's Lunch	<input type="checkbox"/>		
The Lighthouse Keeper's Cat	<input type="checkbox"/>		
The Lighthouse Keeper's Cat	<input type="checkbox"/>		
The Lighthouse Keeper's Cat	<input type="checkbox"/>		
The Lighthouse Keeper's Tea	<input type="checkbox"/>		
The Lighthouse Keeper's Tea	<input type="checkbox"/>		
The Lighthouse Keeper's Tea	<input type="checkbox"/>		

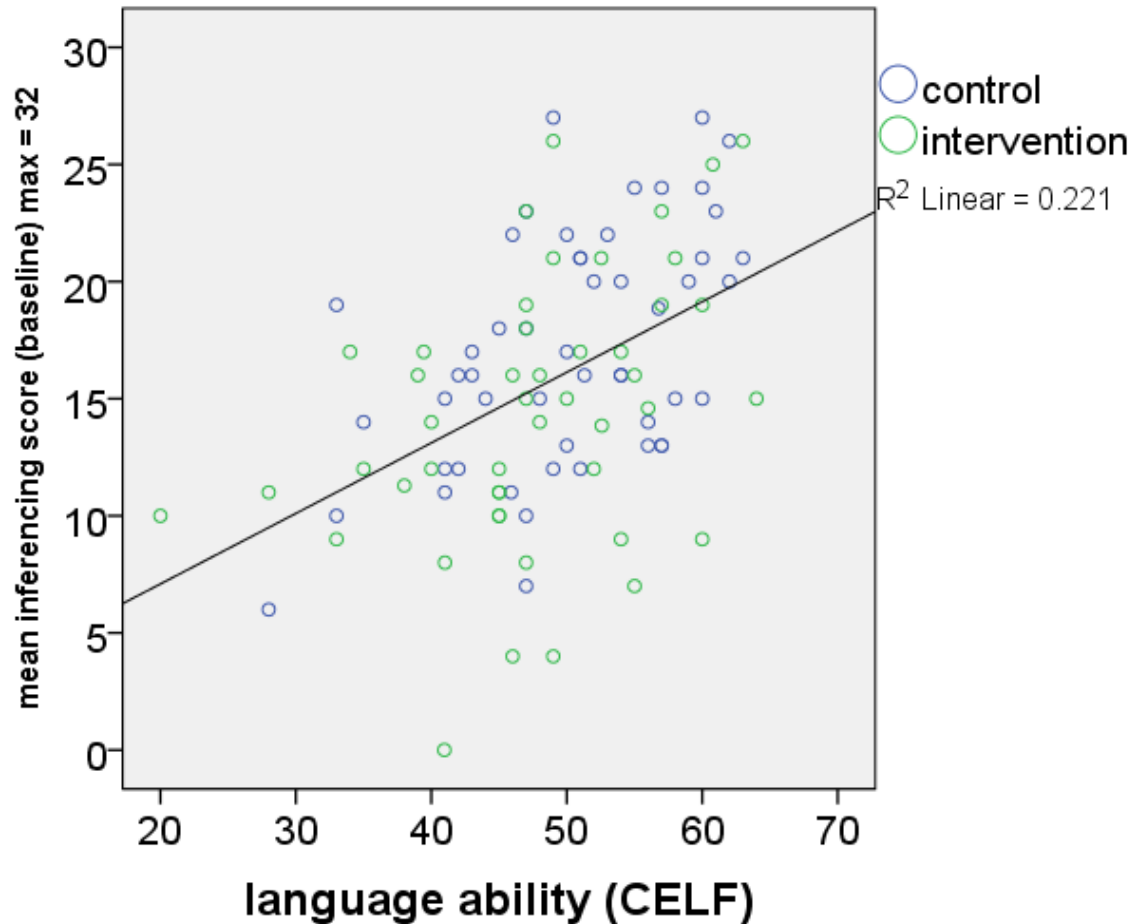
# Quantitative results



- The intervention did not change inferencing ability or language scores.
- SES background did not affect performance on the inferencing task or language tests.



# Quantitative results



Better language  
skills =  
better inferencing  
skills

# Emerging conclusions

- Exposure to complex language may help inferencing ability.
- Although **naturalistic questioning during shared book reading** highlights gaps in texts and encourages children to look for meaning, our data show that it is **not sufficient for improving inferencing skills.**
- Direct teaching may more effective for developing inferencing.

# Qualitative analysis of engagement

## Intervention diary comments

32 returns analysed;  
median intervention length = 37 days;  
mean number of reading sessions = 24

- Repetition of books and questions
  - *The questions only strengthened his understanding*
  - *Answered all questions first time. Refused to answer them again (Sorry, I tried!)*
- Some inferences are harder than others
  - *She found ones about feeling [...] most difficult.*
  - *He doesn't know what mustard is and its taste*
- Concentration and energy levels affect performance
  - *Wasn't really focused on the book. Enjoyed looking for Todd*
- Useful for parents to explicitly see how much their children understand
  - *[I] didn't think he would understand what Mrs Grinding was taking out of her basket but did. He surprised me here*

# Discussion

1. How does this information compare to inferencing training that practitioners receive?
2. How does our intervention compare to the way that inferencing is taught in your context? (e.g. format, age)
3. Why wasn't the intervention effective?
  - Were our children at a developmentally appropriate level for this type of training?
  - Is asking and answering questions during SBR sufficiently intense?
4. How might our study inform similar interventions or practices?
  - Consider age and form of training
  - Consider other cognitive skills required by the post-test measures.

# Thank you

- Participating families
- RAs: Kiera Solaiman, Lowri Thomas, Charlotte Rowley, Annalise Guild, Lauren Lofthouse, and Rachael Staunton
- Shared book reading project team



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University  
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Sheffield.

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## Further reading:

- DEPARTMENT FOR CHILDREN, SCHOOLS AND FAMILIES, 2008. *Effective Teaching of Inference Skills for Reading*. DCSF-RR031. London: DfCSF.