

Biology concepts and Pictorial Fiction Books.

Do early years children comprehend ?

Sue Dale Tunnicliffe* Catherine Bruguière**

* University College London, UK ; ** University of Lyon, France



Theoretical background

✓Realistic fictional storybooks offer epistemic and epistemological potentialities with young children (Bruguière et al, 2007)

✓Children can transfer fantastical characteristic to real animals (Ganea et al, 2004)

✓Picture books can develop some of understanding of conceptual categories (Gelman and Waxman, 2009).

✓Learning through reading pictorial fictional books is influenced by the type of interaction with the adults during the picture reading (Mol and Bus, 2011)

Corpus

- children's drawings (N = 14, 2 classes)
- Transcription of teacher-class dialogue as the story was read out loud

"Cows," said the frog. "Cows! They have four legs, horns, eat grass, and carry pink bags of milk."



Research question

Do children comprehend the possibilities of the situations depicted in reality and concise the actuality situations presented by realistic fictional storybook?

Anatomical characteristics/environment	Cow's drawings (French Class, Year 1: 6-7 yrs N=7)	Cow's drawings (English Class, Year 1: 5-6 yrs, N = 6)
4 legs	7	6
Horns	5	4
Bag of milk	0	3
Udder	6	4
Grass	6	4
Cow's shape	6	4
Ear	4	1
Hoof	3	1
Tail	6	5
Spot	5	4

Results

Children in both countries responded similarly and drew, using their existing mental model, their own interpretation of the text of observable features of the animal whose description they had heard.

Teacher	Book	Pupils
	One morning the tadpole discovered that during the night he had grown two little legs. Look, he said triumphantly, "Look, I am a..."	EC frog
	Nonsense", said the minnow... "In the week that followed the tadpole grew two front legs!/"	
so now he's got how many legs A he's got now		ES two
two in the back and two at the front		E that is that is his hands

Conclusion

Reading 'realistic fiction'

- generates 'explanation-seeking curiosity' but does not
- provide directly scientific explanations- needs adult intervention for the science
- allow the pupils to spot the issue of the problem but not to resolve it,
- not means to stand by its own, but intended to be integrated with other scientific learning

References

- Bruguiere et al. (2007) Mondes possibles et compréhension du réel, *Aster 44*, 69-106
- Ganea et al. (2004) Transfer between Picture Books and the Real World by Very Young Children, *Journal of Cognition and Development*, 9:1, 46-66
- Gelman and Waxman (2009) Early word-learning entails reference, not merely associations. *Trends Gagn. Sci.* 13 (1)6 258-263.
- Mol and Bus (2011) To read or not to read" :A metanalysis of print exposure from infancy to adulthood. *Psychological Bulletin* 137: 267 -296

