

# Do children with specific language impairment and autism spectrum disorders benefit from the presence of orthography when learning new spoken words?

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## Research question:

Does the presence of a written word (orthography) help children with specific language disorder (SLI) and autism spectrum disorder (ASD) to learn a new spoken word?



phonology  
(sound)

semantics  
(meaning)

“caracal”

mammal



type of wild cat

eats birds

orthographic form

## What was done:

- Children with ASD, SLI and typically developing children were taught made-up words that were described as “things an alien might use”
- During training, they were shown 12 pairings between new spoken words and unfamiliar pictures of 3D objects
- Half of these pairings were taught with the written form above the picture, half were not
- The presence of written words was incidental: attention was not directed to the written words
- Learning for the new spoken words, their meanings and their spellings was assessed



Picture Source: Nick Youngsen, <http://nyphotographic>

## What was found:

- On average, equivalent learning was observed across groups and all groups learned new words better when orthography was present



## What this could mean:

- Children with SLI, children with ASD, and typically developing children were more likely to learn new words when they were taught with orthography
- This is the first time that this has been shown in children with language impairments where orthographic and semantic knowledge is typically less well developed than in typically developing children
- Practically, this suggests that presenting the spelling of a word while it is being taught will promote learning for its spoken form and meaning
- This strategy can be readily incorporated into a range of instructional approaches (e.g., class teaching, individual interventions) with very little cost in terms of time and resources.
- In our own observations of these SLI and ASD participants in class, we noted that although words were frequently written on the board while being described, this practice was by no means universal, occurring in approximately half of the classes