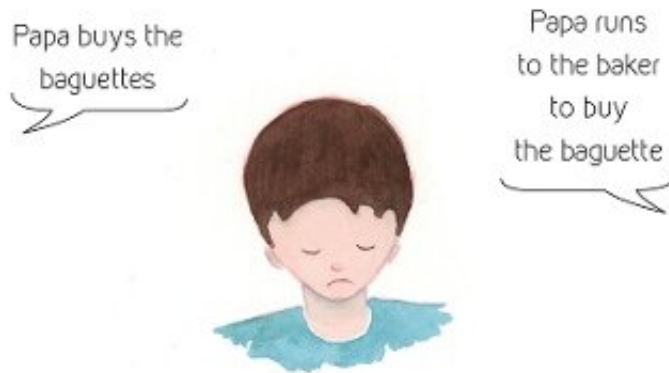


# Visual method helps with learning language rules

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Credit: evelienjagtman.com

One of two children per class finds it difficult to recognize patterns in spoken language. Imme Lammertink (University of Amsterdam) has demonstrated that these children with a developmental language disorder (DLD) do, however, recognize similar patterns in pictures.

As a child, you learn that it is "he walks" and not "he walk." You learn that because on countless occasions you hear the combination "he" and the verb stem + s (he works, he cycles, he dances). Children with a DLD recognize such patterns less well. A good 5 to 10% of [children](#), therefore one or two per class has a DLD. This [number](#) is roughly the same as the

number of children with dyslexia. Children with DLD have a problem with [spoken language](#), whereas children with dyslexia have a problem with written [language](#). Half of the children with a DLD also have dyslexia; autism also occurs relatively often in this group. There is nothing wrong with their hearing and cognition.

### **Seeing patterns in pictures, not in speech**

Learning by encountering something very often, such as certain patterns in language, is called statistical learning. Imme Lammertink investigated whether children with a DLD find statistical learning difficult. She did this by comparing statistical learning in both the linguistic and non-linguistic domains. She had children aged between eight and twelve years with and without DLD play three games: in two they had to discover a fixed order in pictures (non-linguistic) and in one they had to discover a fixed order in spoken words in a fictional language. The children without DLD learned all combinations, whereas the children with DLD only learned the non-linguistic, visual combinations. They learned the linguistic combinations less well.

### **Visual language lessons are not the solution**

Does this outcome mean that language teachers "only" need to ensure that they use a visual learning method which captures language patterns in pictures? Unfortunately, that is not the case. Lammertink: "Speech therapists are very interested in such a visual learning method, but devising one is far from easy. Language patterns are very difficult to capture in fixed rules that you can subsequently visualize. Besides, my research revealed that the difference in learning achievements between children with and without DLD is not particularly large. Furthermore, we know from other research that children with a DLD can also experience problems with other [cognitive processes](#), such as the processing of sounds in their brain. A visual learning method will therefore not

suddenly help them with their DLD."

Nevertheless, visual possibilities do exist.

One interesting option is to try to visually support children with DLD in certain aspects of language. For example, at her new employer Kentalis, Lammertink is working on research into picture books that visualize the prepositions. Together with Evelien Jagtman, she made a visual summary of her Ph.D. thesis that she will defend online on Thursday 11 June at the University of Amsterdam.

The Ph.D. research of Imme Lammertink is part of the Vidi project "Regels zijn (taal)regels! Maar hoe leer je ze?" [Translation: "Rules are (language) rules! But how exactly do you learn these?"] of Judith Rispens, Professor of Dutch Linguistics at the University of Amsterdam. Young children are able to learn the rules of their mother tongue without receiving an explicit explanation for these rules. Rispens is investigating which neurocognitive process contributes to learning language rules in the mother tongue without having had them explained.

**More information:** Visualization: [progracy.com/wp-content/upload ... k-samenvatting-1.pdf](https://progracy.com/wp-content/uploads/2020/06/k-samenvatting-1.pdf)

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