— WHEN IS SIMPLIFIED —
TOO . . . SIMPLE?

Emerging research sheds light on the benefits of using simple—but still grammatically correct—sentences when supporting language development of children with delays.
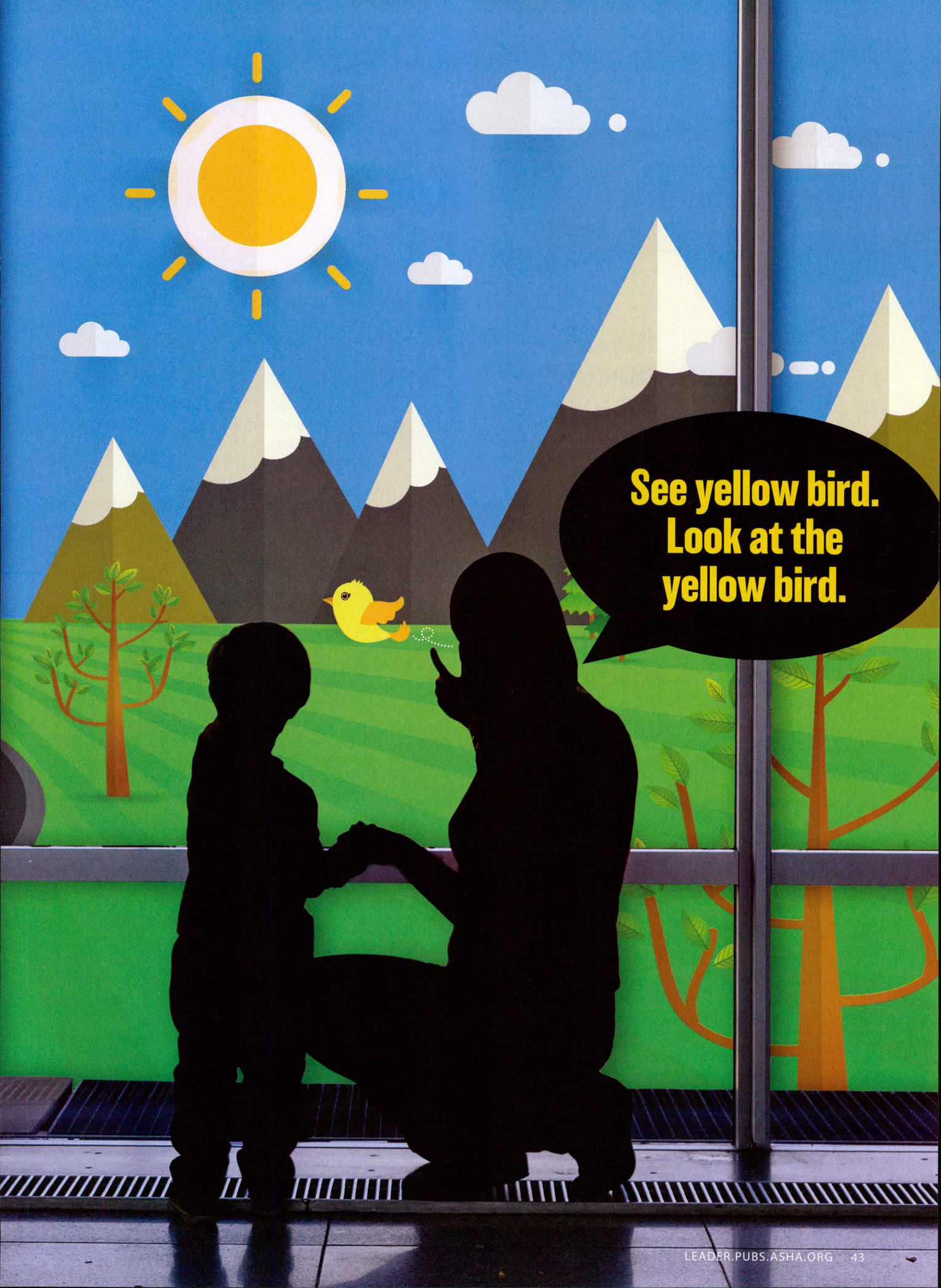
BY COURTNEY E. VENKER AND SHERI T. STRONACH

FAST READ:

Some clinicians intervening with toddlers favor using a "telegraphic input" style of simplified speech that includes content words but omits function words. Others prefer using "grammatical simplified input": utterances that are shortened but consistent with grammar rules. There's been little research done on either style, but some recent studies point to potential benefits of using the grammatical approach.

TAGS > EARLY INTERVENTION, TELEGRAPHIC INPUT

Rather than placing a burden on children's processing, grammatical features of language may facilitate language processing by helping children anticipate upcoming words.

"See car."
"More toy?"
"Put in box."
"My turn bubbles."
"Doggie run!"

If you heard a young child saying these things, you probably wouldn't think there was anything unusual about it. After all, producing primarily content words, like nouns and verbs, is a typical stage of early language development.

But what would you think if you heard an adult saying these things? Or more specifically, what would you think if an adult said these things to a young child with delayed language development? On one hand, you might react positively, thinking perhaps that person is simplifying her language input to make sure the child understands what is being said. On the other hand, you might react negatively, wondering why that person is using such truncated sentences when speaking to that child.

The language examples above represent a type of simplified speech known as telegraphic input: a style that includes content words (like nouns and verbs) but omits function words (including articles and morphological endings). In contrast, grammatical simplified input refers to utterances that are shortened but do not violate grammatical rules (see box on page 47 for examples).

Some clinicians promote use of telegraphic input—particularly for children at the one- to two-word stages of spoken language production—whereas others advocate use of the simple, yet grammatical, approach.

So what does the research say? As it turns out, there has been almost no research conducted on the benefits of telegraphic versus grammatical simplified input in clinical populations. However, some emerging research we and others have conducted points to the benefits of using grammatical simplified input. Research done to date has not revealed such benefits for use of telegraphic input. Let's delve deeper into these approaches to using simplified language with young children.

Why use telegraphic input?
Advocates of telegraphic input argue that it is beneficial for several reasons. First, telegraphic input may be easier for young children with language delays to process. Intuitively, it makes sense that a telegraphic phrase such as "car down" would be easier to understand than a complex phrase like "the car is driving down the hill."

Second, telegraphic input may focus children's attention on semantic relationships (for example, noun to verb). For example, "baby eat" includes only two semantic components—baby (agent) and eat (action)—which may help a speech-language pathologist target these components in an intervention session.

Finally, telegraphic verbal models may be easier for children to imitate, especially if they are producing only single words. In this way, telegraphic input may help to bridge the one-word and two-word stages of spoken language development for young children with language delays.

Why use grammatical simplified input?
Although these points in support of telegraphic input are reasonable, the

research base offers more support for grammatical simplified input. First, rather than placing a burden on children's processing, grammatical features of language may *facilitate* language processing by helping children anticipate upcoming words. Indeed, typically developing children process spoken language more quickly when it is grammatically correct than when it is telegraphic (see sources).

Second, grammatical features of language (like present progressive -ing, third-person singular -s and plural -s) provide clues that help children learn new words. For example, -ing is often added to the end of verbs to describe an ongoing action (for example, eating). When children encounter a new word with the same ending (skating, for example), their understanding of grammar helps them figure out that the new word is likely an ongoing action.

In this sense, omitting grammatical features takes away helpful clues for learning language, further penalizing children who have already fallen behind their peers.

Last—while there is no research to specifically indicate this, but our clinical observations suggest this is true—if we omit grammatical features from the language that children hear, these grammatical features may not be learned. Our short-term goal may be to expand a child's spoken language from one- to two-word phrases. But eventually we want this child to progress to using complex, multi-word grammatical utterances.

A related concern of ours is that children may continue speaking ungrammatically if this is practiced and reinforced by their communication partners. We believe this could be problematic for children with autism spectrum disorder (ASD) who regularly use echolalic language.

What does the research say?

As a next step in understanding the use of telegraphic versus grammatical simplified input, let's take a closer look at the research literature.

As with many of the treatments we provide, simplified input is understudied.

In fact, in a 2010 meta-analysis (**on.asha. org/simplified-input**), Anne van Kleeck of the University of Texas at Dallas and colleagues found there was almost no research on the benefits of telegraphic versus grammatical simplified input in clinical populations. What we knew at the time was based primarily on opinions of experts in the field—the lowest level of scientific evidence. However, several studies have been published on simplified input since 2010, so we now know more.

In a 2014 treatment study by Shelley Bredin-Oja and Mark Fey (on.asha.org/telegraph-input) of the University of Kansas Medical Center, children with language delays received telegraphic imitation prompts ("Say, 'duck walking'") and grammatical imitation prompts ("Say, 'the boy is jumping'")—similar to techniques that are commonly used in clinical practice. Although two of the five children in the study failed to imitate any function words, the other three children produced more grammatical morphemes when provided with grammatical prompts than with telegraphic prompts. Also, both types of prompts elicited similar numbers of imitations containing semantic relationships (for example, agent + action). The authors conclude that "providing a telegraphic prompt to imitate does not offer any advantage as an intervention technique."

We have also learned about simplified input from studies of how parents talk to their children. In one such study led by Courtney Venker, higher rates of telegraphic speech among parents of children with ASD were associated with less-developed language skills two years later. This relationship remained even when accounting for children's early language abilities. Although treatment studies are needed to confirm this finding, this investigation provides preliminary evidence that telegraphic input may have a negative impact on language learning.

Consistent with these results were those from a 2016 meta-analysis (**on.asha.org/complex-utter**) of 257 children across 12 previous studies. More grammatically complex parent utterances were associated with more positive language

In addition to research evidence, we must consider family/client preferences and our own clinical expertise. If for some reason we decide to provide telegraphic input, we must know why.

We need to find out whether the effects of telegraphic and grammatical input differ for children with different profiles of abilities, and at different points in development. This will help us individualize intervention strategies.

outcomes in children with developmental delay, particularly those with ASD. However, the authors did note that, "because this study was observational, it is important to acknowledge the possibility of a third variable explanation. For example, parents who use higher levels of telegraphic speech may also exhibit other behaviors that negatively affect children's language learning (e.g., frequently redirecting children's attention, not providing temporally contingent responses); future research is needed to explore this possibility."

Take-homes

Here are several pointers on providing intervention related to simplified language.

- **Understand the difference.** In addition to understanding the differences ourselves, we should share this information with our colleagues and the families we work with so that we can all make an informed decision.
- **Know the research.** Although research in this area was almost nonexistent only a few years ago, we now have a growing body of scientific evidence suggesting that grammatical input is more beneficial than telegraphic input for supporting language development.
- **Make an informed choice.** As SLPs, we have a responsibility to make an informed decision about how to simplify our speech. Given the increasing scientific evidence that grammatical input helps language learning, this means providing grammatical simplified input unless we have a strong reason not to. Although additional research is needed, we must adapt our practices based on current best external and internal evidence.

- **Use evidence-based practice.** In addition to research evidence, we must consider family/client preferences and our own clinical expertise. If for some reason we decide to provide telegraphic input, we must know why and explain this choice to colleagues and parents. SLPs are the experts in providing appropriate language input and families may model the strategies we use.
- **Use a variety of clinical techniques.** In addition to simplifying our utterances, we should remember that we have a variety of other techniques available to us for highlighting particular words or concepts. For example, we can stress certain words by increasing their length, pitch and volume, and de-emphasize others by making them shorter and softer.
- **Stay current.** Although it can be hard to find time in our busy schedules, we must do our best to stay up-to-date about new research findings that might inform our clinical practice and to share this information with colleagues. In this way, we can embrace dynamic evidence-based practice by reassessing our clinical practices as additional research evidence unfolds.
- **Watch for opportunities to collaborate.** Clinicians and researchers should look for opportunities to work together to learn more about the issue of simplified input. These collaborations will help us figure out what questions are most urgent to answer, as well as the best ways to answer these questions.

Looking ahead

So what's next in our quest to most effectively teach young children with language delays? We need to investigate current clinical practices and

decision-making. How common is it for clinicians to use each type of input, and what factors (like age, diagnosis or language level) do we consider when we make a decision about what type of input to provide?

We need to find out whether the effects of telegraphic and grammatical input differ for children with different profiles of abilities, and at different points in development. This will help us individualize intervention strategies when appropriate.

We need to know how each type of input affects moment-by-moment language processing in children with language delays. Does grammatical input facilitate language processing in these children, like it does in typically developing children? It's possible that research methods such as eye tracking may help to uncover subtle processing differences that are invisible when observing children in their everyday lives.

Finally, we need practicing clinicians and clinical researchers to collaborate on treatment studies to determine whether simplified grammatical input leads to larger language gains in children with language delays over the long term. Such studies should examine telegraphic versus grammatical input not only as a component of existing intervention packages, but also as a focused intervention strategy that merits attention in its own right.

More clinical research in this area is critical to providing the very best speech-language intervention to young children with language delays. ♻

Courtney E. Venker, PhD, CCC-SLP, is an assistant scientist at the University of Wisconsin-Madison. She is an affiliate of ASHA Special Interest Group 1, Language Learning and Education.
▪courtney.venker@wisc.edu

Sheri T. Stronach, PhD, CCC-SLP, is an assistant professor at the University of Minnesota-Twin Cities. She is an affiliate of Special Interest Group 14, Cultural and Linguistic Diversity.
▪sstronac@umn.edu

» **Find sources for this article at leader.pubs.asha.org**.

More clinical research in this area is critical to providing the very best speech-language intervention to young children with language delays.

TWO TYPES OF SIMPLIFIED INPUT

Telegraphic input	Grammatical simplified input	
	Shorter	Longer
See car.	Car.	See the car.
More toy?	Toys?	More toys?
Put in box.	In the box.	Put it in the box.
My turn bubbles.	My turn.	It's my turn for bubbles.
Doggie run.	Run.	The doggie's running.
Tractor in barn.	In the barn.	The tractor's in the barn.
Open door.	Open.	Open the door.
Give cup daddy.	Give it to Daddy.	Give the cup to Daddy.
Mommy feed baby.	Feed the baby.	Mommy's feeding the baby.