Tema

HOW DOES SCREEN TIME AFFECT LANGUAGE DEVELOPMENT?

Between September and December 2023, Babylonia collected questions from parents regarding their children's language development. This article aims to answer the following questions:

– I am the mom of a 17 months old. My husband lets him watch some TV (mainly kids songs, in German, my husband's first language) but I don't because I heard that it is bad for his language development. I recently noticed that our son actually learns things from those videos (especially counting on his fingers, or clapping when instructed etc.) I don't know what to think anymore: is educational TV really that bad for language learning in toddlers?
– What are the effects of screen time on language development?
– Can the child learn the English language by watching English-speaking cartoons?

● **Ludovica Serratrice**
| University of Reading

Ludovica Serratrice is Full Professor at the University of Reading. Her research interests include monolingual and plurilingual acquisition and development. Among the many areas covered by her work, she has focused on the acquisition of referential expressions in young children, the syntactic processing of complex sentences in school-age children, and metalinguistic awareness. She has also worked on the processes underlying syntactic processing in bilingual adults.

In the media and digital landscape in which most of us live nowadays it is difficult to keep away even very young children from the lure of digital screens. While TV has now been with us for several generations, it is the ubiquity of smartphones and tablets that has made screen time an even bigger concern for parents and educationalists.

Games, songs, and videos are extremely tempting for children of all ages who are digital natives and who are more likely to hold a smartphone or a tablet than a book. Whether we like it or not, digital media is part of our children's lives, and it is here to stay. The question therefore is how to monitor children's access to suitable content, at the right age, and for the appropriate amount of time. In the case of preschool children who are in the early stages of language development, one of the questions that parents often have is whether screen time is detrimental or beneficial to their language skills. And in the case of parents of multilingual children another legitimate concern is whether digital media can be useful to support the learning of their heritage language.

One of the main findings that is emerging from decades of research on children's media consumption is that more screen time and the presence of background television are associated with lower language skills. In contrast, programs with an age-appropriate educational content and co-viewing with an adult are associated with better language outcomes (Madigal et al., 2020; Alroqi et al., 2023). When children and adults sit together for screen time, there are opportunities to talk about what is happening on their digital devices. Adults who ask open-ended questions (e.g. *What is happening there? Why did the penguin feel sad? What do you think he'll do next?*) create a conversational context where they can check on the child's understanding of what they are watching and they can ask children to expand on what they say. Adults can provide new information, e.g. new words, new content, and give the child a chance to ask questions and to make their own contribution.

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So, the answer as to whether screen time is good or bad is more nuanced than a straightforward yes or no, and it really depends on what children watch and with whom. That educational programs have an advantage when it comes to language learning is rather intuitive as the explicit intent of the designers is to use media to teach children something new. Educational programs are likely to introduce a new topic and use new words to talk about it, possibly using several repetitions in different contexts, and the characters in the program may question each other about what is happening, thus providing repeated exposures to new content and to new words. The character of Dora the Explorer in the eponymous cartoon, for example, switches between English and Spanish and gets her viewers to repeat words and phrases. This pedagogical focus structures children's learning in ways that passive viewing of a video or listening to a song cannot do, at least not to the same extent.

Nevertheless, the way in which children learn is in interaction with others,

typically a more experienced adult, although of course children can also learn from their peers (Tenenbaum et al., 2020). TV, YouTube videos, or an app – even those that have been designed with an educational purpose - cannot be interactional to the same extent that talking to a real person is. It is the backward and forward of conversation, on top of the sheer number of words that children hear, that predicts vocabulary acquisition (e.g. Donnelly & Kidd, 2021). And this is where the role of co-viewing with an adult becomes important during screen time. While watching a cartoon, a film, or even playing a video game together, depending on the age of the child and their interest, an adult can take advantage of many opportunities for scaffolding language learning by asking questions, providing recasts and expansions of what the child has said that enrich their knowledge and understanding. This is why learning a language purely by watching a screen is unlikely. Without any other source of rich interactional language exposure with speakers in real life, children will at most pick up a few

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words from a screen, but will not learn language in any meaningful way.

Questions from an adult about the unfolding plot of a story can probe the child's understanding and the extent to which they can make inferences. i.e., fill the gaps, about what is not explicitly stated (why is a character intentionally lying for example? To save face? To get away with something? To spare someone's feelings?). Inferencing skills are extremely important, not just to understand spoken language in everyday life, but they are a key predictor of reading comprehension; children who are better able to make inferences are more likely to become good readers (Cain & Oakhill, 1999). The ability to make inferences develops over time and different media – written text, picture book, video – could support different types of inferences. For example, in a video an inference about the emotional state of a character could be made more accessible by dialogue between characters (linguistic information), by facial expressions and other body language (visual information) and

it could be further emphasised by sound (e.g., sad music). Seeing information on a screen, through pictures, sounds, and words together, can help children understand certain ideas more easily than if they only listened to or read about the facts. Research on how different types of media help with understanding different ideas is still limited, but there are reasons to believe that screen time is not necessarily a bad thing for language development, and in fact that it can assist in decoding the complexity of a situation or state of affairs and in making those all-important inferences (Kendeou et al., 2020). As is often the case it is not so much about the medium itself, and more about how it is used.

References

Alroqi, H., Serratrice, L., & Cameron-Faulkner, T. (2023). The association between screen media quantity, content, and context and language development. Journal of Child Language, 50(5), 1155-1183.

Donnelly, S., & Kidd, E. (2021). The longitudinal relationship between conversational turn-taking and vocabulary growth in early language development. *Child Development*, *92*(2), 609-625.

Kendeou, P., McMaster, K. L., Butterfuss, R., Kim, J., Bresina, B., & Wagner, K. (2020). The inferential language comprehension (iLC) framework: Supporting children's comprehension of visual narratives. *Topics in Cognitive Science*, *12*(1), 256-273.

Kolak, J., Monaghan, P., & Taylor, G. (2023). Language in educational apps for pre-schoolers. A comparison of grammatical constructions and psycholinguistic features in apps, books and child directed speech. *Journal of Child Language*, *50*(4), 895-921.

Madigan, S., McArthur, B. A., Anhorn, C., Eirich, R., & Christakis, D. A. (2020). Associations between screen use and child language skills: a systematic review and meta-analysis. *JAMA Pediatrics*, *174*(7), 665-675.

Tenenbaum, H. R., Winstone, N. E., Leman, P. J., & Avery, R. E. (2020). How effective is peer interaction in facilitating learning? A meta-analysis. *Journal of Educational Psychology*, *112*(7), 1303.