

Newsletter

Winter/Spring 2020

Letter from the Editors

Dear Friends,

We are excited to share with you the Winter/Spring 2020 issue of our Center for Language Science and Bilingualism Matters at Penn State newsletter. The theme for this issue, *adult second language acquisition*, is one that interests many of our researchers, and we think the information we've compiled for this issue will resonate with many of you as well. People often think that kids are much better than adults at learning a second language, but a "boxing match" piece by Katherine Kerschen and Juliana Cruz Martínez shows how kids and adults have different strengths in acquiring languages. Check it out to learn about ways you may actually be better than a young child at picking up a new language! In a featured partner piece by Allison Link, you'll have the chance to meet researcher Holger Hopp, who studies second language acquisition in a European context where folks often interact with speakers of other languages. And don't miss our featured research piece by Katherine Kerschen on the role of vocabulary learning in second language acquisition—there's much more to it than just learning new words, and you'll see how research on this topic actually teaches us a lot about how language works! We hope you enjoy this issue, and we look forward to your questions and comments—please do share them, and let us learn from you too!

Sincerely,

Frances Blanchette, Katherine Kerschen, Allison Link,
Holly Zaharchuk, Estilita Cassiani Obeso, Juliana Cruz Martínez



**BILINGUALISM
MATTERS** at PENN STATE

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CLS graduate students Estilita Cassiani Obeso, Allison Link, and Juliana Cruz Martínez (l-r) at the State College Area School District annual English as a Second Language potluck on October 8, 2019

Children vs. Adults: Who Wins the Second Language Acquisition Match?

By Katherine Kerschen and Juliana Cruz Martínez



Children are often perceived to be the heavy hitters when it comes to second language acquisition. Many people think that if you want to learn a second language really well (linguists usually speak of developing “native-like proficiency”), you need to start as a child.¹ However, as we’ll see, adults are no lightweights. It is true that child learners are, in general, more likely to reach native-like proficiency than adult learners.² However, there are a lot of differences between child and adult learners besides just age. For example, many child learners are immersed in an environment where they hear and speak the second language all the time, while adult learners are in a language classroom only a few hours per week. This is a major difference: according to some estimates, you would have to stay in a typical language class for your entire life in order to get the same amount of input as 10 years of immersion experience!³ So what happens if we take a closer look at the learning processes? Who actually performs better? We’ll let the research determine who’s the winner in this match-up—get ready for the blow-by-blow!

Round 1

Speed of Acquisition. At first glance it may seem like children would be the clear winners of this round. We often think of children like linguistic sponges, absorbing everything they hear. However, research has shown that adults and older children learn more quickly during the beginning stages of acquisition, even if younger children often achieve higher proficiency in the long run.⁴ Considering that young children often learn via immersion, where they have much more input than adults who learn in classrooms, adults definitely are faster.³ **Looks like adults come out ahead in this speed round!**

Round 2

Phonology (Sound). When it comes to learning the sounds of a second language, children have biology in their corner. Research has consistently shown that there is a specific window of opportunity during childhood for developing native-like pronunciation.⁵ While it is not impossible for an adult learner to sound like a native speaker, it is much more likely if you start learning the second language before you hit puberty, or even better before age six.⁶ **Round 2 to the kids!**

Round 3

Grammar. Grammar refers to the sets of rules that tell us how to put words together in a sentence. Many studies have found an advantage for kids in this domain, just like for phonology. People who start learning a second language before puberty are more likely to achieve native-like grammatical proficiency.^{5,6} The adults seem to be on the ropes! However, they come back swinging when we focus on second language learning in the classroom instead of via immersion. In this context, adults learn grammar just as well as children, and they even learn faster.⁷ **Looks like Round 3 is a tie!**

Round 4

Vocabulary. Kids come out swinging in this round with one obvious advantage: the earlier you begin learning a second language, the more time you have to accumulate knowledge of words through reading and listening. However, research has shown that adult learners can also achieve vocabulary knowledge that is similar to native speakers, especially if they have a lot of contact with native speakers of their second language.⁸ Children seem to be better at implicitly learning subtle patterns about which words can be used together in certain contexts,⁵ but adults can recall more vocabulary words than children after a short amount of instruction in the second language.⁷ **Another tie!**

Round 5

Pragmatics (Meaning in Conversation). Pragmatics is about the use of language in social interaction. Pragmatic competence refers to the ability to use language to convey meanings in conversation, and to interpret another speaker's intentions. One crucial factor for pragmatic competence is "Theory of Mind," which is the ability to understand that desires, emotions and beliefs can impact behavior, and that another person's beliefs may not be the same as one's own.⁹ This ability doesn't fully develop until late childhood,¹⁰ which means that when children learn a second language they have to grapple with new pragmatic conventions in the second language when they haven't even mastered this ability in their native language yet.¹¹ Adults, on the other hand, can rely on their experience in their native language as they learn which aspects of pragmatics they need to pay the most attention to in their new language.¹² Adults definitely beat kids to the punch here! **Round 5 to the adults!**

Round 6

Effects on the Brain. For decades, many researchers argued that children were better than adults at learning languages because the brain is more adaptable pre-puberty. During this "critical period" different areas of the brain are becoming specialized for different tasks, including language.¹³ This means that if you learn a second language as a child, your brain can change and adapt, which helps you become a native-like speaker of the second language. Previously, researchers assumed that adult brains didn't have this adaptability, but recent research has shown that adult second language learning can actually lead to changes in the function and structure of the brain. In fact, these changes can occur even after only a few months of learning a second language!¹⁴ The amount of change seems to be somewhat greater in children, but **we're still going to call this slugfest a tie.**

It's a tie!!

Learning a second language as an adult is certainly different than learning one as a child, and the outcomes may not be identical for all aspects of language, but overall, adults can be just as good of second language learners as children.

Events

Recent

10/8/19: SCASD ESL Potluck
11/1/19: SCASD Teacher Workshop
11/12/19: Exploration-U @ Bellefonte High School
12/5/19: Exploration-U @ Bald Eagle High School

Upcoming

2/29/20: ENVISION Stem Career Day
3/24/20: Exploration-U @ State College
4/15/20: Language & Linguistics Day

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Center for Language Science graduate assistant Estilita Cassiani Obesos at the Exploration-U: Community Science Event at Bald Eagle High School on December 5, 2019

Featured Partner

Holger Hopp, PhD

Dr. Holger Hopp is a professor of English Linguistics at the University of Braunschweig and came to the Penn State CLS as a visiting scholar in fall 2019. His research interests include bilingual language comprehension and production. He

*also studies cognitive factors and individual differences in bilingual language processing. He currently serves as one of the executive editors of the journal *Linguistic Approaches to Bilingualism*. For more information, please visit his faculty page: <https://www.tu-braunschweig.de/anglistik/seminar/linguistik/mitarbeiter/hopp/>*

How did you get involved with the Center for Language Science at Penn State?

I first came to Penn State as a visiting postdoc in 2013 and got to know the CLS. I was (and still am) thoroughly impressed and inspired by the diversity and quality of research on bilingualism in the CLS community, which is why I was really honoured when I was asked to become an international research partner in 2013. Since then I have been collaborating with several people in CLS and we have hosted many Penn State students in Germany.

Could you tell us more about the language science outreach work you've done in your home country of Germany?

Together with my colleagues Dieter Thoma and Rosemarie Tracy, we started a non-profit company in 2011 (www.mazem.de) to promote the dissemination of research findings on early bilingualism to educational practice. Our company provides consulting services to educators and school boards, workshops for pre-school and school teachers, and we develop and implement language support programmes at kindergartens and schools. I find this work very inspiring because it connects me as a researcher with the ground level of language learning in the classroom.

Interview by Allison Link

You have conducted research in the US and in Europe. Have you noticed any similarities or differences between learners in these regions?

It is hard to generalize across such diverse regions, but, in terms of nation states, Europe is a much more multilingual place than North America, so that more people recognize the need for speaking more than one language and they often have more opportunities to speak them in real-life contexts.

Do you have any suggestions for adults who are just starting to learn a second language?

There are many ways to learn a second language successfully. It really depends on the learner type and preferences. Arguably the best strategy is to find a partner who only speaks the language you want to learn. Then, motivation, opportunity and meaningful input come together and you can't better that. Of course, this strategy might get you into some trouble if you want to learn more than one foreign language!

What would you say is the most interesting or surprising finding from your work?

Well, the big question is why adults are such poor foreign language learners compared to children given that they are cleverer than kids and already speak one language. After decades of research, we know that there do not seem to be any hardwired differences between children and adults that could explain why learning a language later in life is so hard. After all, humans are geared to being bilingual or multilingual – at any age. I think this is probably the most surprising finding.

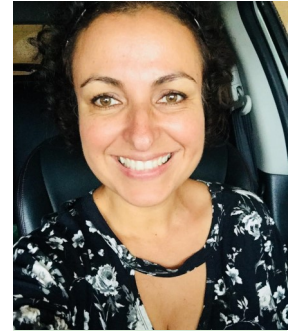
Is there anything else that you would like to share about adult second language acquisition?

Many people think we study second language acquisition to find ways to improve foreign language teaching. Yet, from a linguist's perspective, what's really interesting is that it gives us insights into how language works and how the mind/brain deals with more than language. So next time you struggle speaking a foreign language and you cannot find the right words, rather than getting frustrated or giving up, you should observe yourself closely and marvel at the ways you can still get the message across through gestures, code-mixing or translanguaging. This is your brain in action, making the most of all the linguistic and cognitive resources you have.

What is Your Second Language Learning Experience?

Hello, I am Sandra Lilia Gonzalez De Del Pilar from Mexico. I learned English in my country when I was a 16-year-old, for a length of time of three years. At that time, I felt confident in my English skills, but when I came to the US when I was 21 years old it was hard for me to understand English native speakers because of their use of idioms. I am currently 47 years old and the hardest thing for me has been working on my pronunciation. It has improved a lot over the years but still there are some difficult words, like "focus," that people sometimes think sounds like a bad word when I pronounce it. Haha! However, I've never let these challenges prevent me from learning a second language.

My name is Holly Zaharchuk. I started teaching myself Spanish as a 20-year-old. My boyfriend (now husband!) was studying abroad in Santiago, Chile, and I went to visit him. The hardest thing for me as an adult learner was turn-taking in conversation. I wanted to be attentive and listen to my conversation partner, but was also planning what I wanted to say next. Having frequently-used phrases memorized really helped me acquire a wider vocabulary and more conversational style. I knew that I had set phrases that I wouldn't have to think about before speaking, which reduced the pressure on me as a



Sandra



Holly

Hi, I'm Yushuang Liu! I started studying English seriously in middle school before coming to the U.S. at 22 years old. At the beginning, it felt like everyone spoke very quickly, and it was difficult to understand accents or idiomatic phrases that I hadn't heard before. I found that vocabulary was easy for me to pick up, but I still have some trouble with accents. I think that the teacher who taught you first really matters, since it sets up your boundaries for different sounds that aren't easy to change.

Hi, my name is **Matheus Amorim**. The first time I was introduced to English I was only four years old. Since then, English has only become more and more present in my life. In Brazil, I attended an English school during my afternoons, and later I decided that I wanted to finish my high school studies in Canada. Living in Canada helped me improve my English and, ironically, also my Spanish! I had a lot of friends who were Mexican or Spanish, and I pushed myself to speak Spanish with them. It was important to me to improve my Spanish fluency because half of my family comes from a Spanish heritage; my mom's side of the family lives in Peru and Spain. Ultimately, learning new languages is more than just a useful skill, it is a way to understand other people and their points of view better. One of my life goals is to be able to speak at least 5 languages!



Matheus



Yushuang

Ich verstehe nur Bahnhof: Learning Vocabulary in a Second Language as an Adult

By Katherine Kerschen

Ich verstehe nur Bahnhof : "I only understand train station." You might hear somebody in Germany say this to express a feeling of confusion or inability to follow a conversation. It comes from the idea that if you're in a foreign country where you don't speak the language, you might only know a basic tourist phrase like "train station", and that won't get you very far! If you've ever tried learning a second language as an adult, you know there is a lot to learn, and you may also have realized that vocabulary knowledge plays a crucial role. According to best estimates, adult learners of a second language need to know at least 3000 word families (i.e., groups of words related to a core meaning, like "run" and "runner") for everyday spoken communication, and a whopping 8000-9000 word families to easily understand written texts.¹

But how can adult second language learners acquire so many words? When children are learning their first language, they are typically surrounded by lots of people speaking that language. But often in adult learning situations, the second language is not part of their daily environment. Examples of this include teenagers in high school foreign language classes (yes, teenagers are considered adults in the eyes of second language acquisition researchers!), or businesspeople taking evening language classes for professional development. With only a few hours a week devoted to the second language, there doesn't seem to be enough time to learn all of the necessary vocabulary.

Adult second language learners face other challenges as well. Research has shown that words that refer to abstract concepts such as "knowledge" are harder to learn than words with more concrete meanings like "book."² A further complicating issue is that sometimes a word in a person's first language has multiple meanings, and each of those meanings corresponds to a different word in the second language. For example, English speakers learning German have to learn that "goal" is translated as *Ziel* when referring to an aim or objective, and *Tor* when referring to sports. Research has shown that words

with multiple translations are more difficult to acquire.³

Given these challenges, learning vocabulary in a second language as an adult may seem difficult, but don't despair: There are ways in which it actually helps to be an adult! Unlike children learning language for the first time, adult learners already have a lot of world knowledge, which can serve as a stepping stone.⁴ Knowledge of their first language can also help. Many languages have cognates, or words that are similar in form and meaning across two languages (e.g., English "apple" and German *Apfel*), and adult learners tend to acquire these words easily.² In addition, they are better at quickly memorizing and recalling larger sets of verbal information.⁵



Several researchers from Penn State's interdisciplinary Center for Language Science (CLS) know just how important vocabulary is for adult second language learners. A recent study led by CLS faculty members Chaleece Sandberg and Carrie Jackson took up the challenge of helping learners build abstract word knowledge.⁶ Participants were prompted to think about the meaning of an abstract word (e.g., "grades") by selecting appropriate descriptive phrases such as "can cause anxiety." They did this activity with multiple abstract words all from the same category (e.g., "University"). The researchers tested the participants' knowledge of these words by asking them to recall all of the words they know in the category "University." Not only did

continued on next page

(Ich verstehe nur Bahnhof cont.)

the training help the participants to recall more of the abstract words, but it even helped them to produce concrete words in the category (e.g., “blackboard” in the category “University”) that were not part of the training, a phenomenon called generalization.

Dr. Sandberg and colleagues’ discovery that practice thinking about the meanings and descriptions of abstract words in a specific category leads to generalization to other words in that category provides more than just a useful tool for learning language. It also helps us to understand what it means to know a word. Researchers have hypothesized that people’s

mental representations of words involve more than just information about the individual words themselves, and that connections to other words form an important part of a word’s meaning.^{8,9} Just like people exist in networks, so do words. For adult second language learners who already know a lot of words and concepts in their first language, these networks are especially important. Research like Dr. Sandberg and colleagues’ can give us new insights into how language works and can be used to help people perform the difficult task of learning vocabulary in a new language.

References

1. Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329-363.
2. de Groot, A. M., & Keijzer, R. (2000). What is hard to learn is easy to forget: The roles of word concreteness, cognate status, and word frequency in foreign-language vocabulary learning and forgetting. *Language Learning*, 50(1), 1-56.
3. Bracken, J., Degani, T., Eddington, C., & Tokowicz, N. (2017). Translation semantic variability: How semantic relatedness affects learning of translation-ambiguous words. *Bilingualism: Language and Cognition*, 20(4), 783-794.
4. Jiang, N. (2000). Lexical representation and development in a second language. *Applied linguistics*, 21(1), 47-77.
5. Chi, M.T. (1976). Short-term memory limitations in children: Capacity or processing deficits? *Memory & Cognition*, 4(5) 559-572.
6. Sandberg, C. W., Carpenter, E., Kerschen, K., Paolieri, D., & Jackson, C. N. (2019). The benefits of abstract word training on productive vocabulary knowledge among second language learners. *Applied Psycholinguistics*, 40(6), 1331-1362.
7. Collins, A. M., and Quillian, M. R. (1970). Experiments on semantic memory and language comprehension. In Gregg, L. W. (ed.), *Cognition in Learning and Memory*. New York: Wiley.
8. Aitchison, J. (2012). *Words in the mind: An introduction to the mental lexicon* (4th ed.). Chichester, England: Wiley-Blackwell.



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References for "Children vs. Adults: Who wins the second language acquisition match?"

1. Lightbown, P. (2008). Easy as pie? Children learning languages. *Concordia Working Papers in Applied Linguistics*, 1, 5-29.
2. Abrahamsson, N., & Hyltenstam, K. (2008). The robustness of aptitude effects in near-native second language acquisition. *Studies in second language acquisition*, 30(4), 481-509.
3. Muñoz, C. (2008). Age-related differences in foreign language learning. Revisiting the empirical evidence. *IRAL-International Review of Applied Linguistics in Language Teaching*, 46(3), 197-220.
4. Krashen, S. D., Long, M. A., & Scarcella, R. C. (1979). Age, rate and eventual attainment in second language acquisition. *TESOL Quarterly* 13(4), 573-582.
5. Granena, G., & Long, M. H. (2012). Age of onset, length of residence, language aptitude, and ultimate L2 attainment in three linguistic domains. *Second Language Research*, 29(3), 311-343.
6. Long, M. H. (1990). Maturation constraints on language development. *Studies in Second Language Acquisition*, 12, 251-285.
7. Lichtman, K. (2016). Age and learning environment: Are children implicit second language learners?. *Journal of Child Language*, 43 (3), 707-730.
8. Hellman, A. B. (2011). Vocabulary size and depth of word knowledge in adult-onset second language acquisition. *International Journal of Applied Linguistics*, 21(2), 162-182.
9. Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind?. *Behavioral and brain sciences*, 1(4), 515-526.
10. Zufferey, S. (2010). *Lexical pragmatics and theory of mind: the acquisition of connectives*. Amsterdam: John Benjamins.
11. Kasper, G., & Schmidt, R. (1996). Developmental issues in interlanguage pragmatics. *Studies in second language acquisition*, 18(2), 149-169.
12. Bialystok, E. (1993) Symbolic representation and attentional control in pragmatic competence. In G. Kasper & S. Blum-Kulka (Eds.), *Interlanguage pragmatics* (pp. 43-59). New York: Oxford University Press.
13. Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley.
14. Li, P., Legault, J., & Litcofsky, K. A. (2014). Neuroplasticity as a function of second language learning: anatomical changes in the human brain. *Cortex*, 58, 301-324.

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