

Age in Learning and Teaching Grammar

Robert M. DeKeyser

University of Maryland, College Park

Framing the issue

Anecdotal experience tells us that children are ‘better at language learning’ than adults, but exactly how and why they are different from adults in this respect has proved harder to pin down than one may expect. Roughly speaking, children learning a second language under the age of 6 are almost certain to end up like native speakers in all domains of language, while those who learn that same language after age 12 are likely to have non-native features, and those who learn it after age 16 are almost certain not to be able to pass for native speakers (e.g. Abrahamsson & Hyltenstam, 2009). Averaged over many individuals, one typically sees, again roughly between the ages of 6 and 16, a gradual decline of ultimate attainment (the furthest a learner ever gets in the language, after many years of daily use) as a function of age of onset (the age at which acquisition of the language started). The latter is sometimes also called age of arrival, because for many people, children as well as adults, their first significant exposure to a new language is when they arrive as immigrants in a new country.

The reasons for this phenomenon of decline with age have been hotly debated. Some researchers argue that it is not due to age itself, but to amount of experience with the first language or to social and educational variables that tend to correlate strongly with age, such as amount of education in the second language. Many, however, adhere to a maturational interpretation, i.e. that language learning becomes harder as the learner matures (ages), regardless of the social context. This interpretation has been known in the literature as the critical period hypothesis since Lenneberg (1967) introduced this essentially biological concept into the field of linguistics.

While a large amount of research on age effects in the learning of second language grammar and pronunciation has accumulated in the last few decades, very little of it has directly addressed the role of age in classroom language learning (as opposed to

learning by immigrants). This relative scarcity of research directly relevant to teaching, combined with misunderstandings about the nature and cause(s) of the age effects observed in immigrants, has led to premature recommendations for second language teaching. The next section explains why the age effects seen in immigrants do not simply imply that second language learning should start earlier, and the last section discusses practical implications for second language teaching.

Making the case

Even though Lenneberg has been quoted again and again in the literature on age effects, a crucial aspect of what he understood by ‘critical period’ is almost always ignored. He stated that “automatic acquisition from mere exposure to a given language seems to disappear after this age, and foreign languages have to be taught and learned through a conscious and labored effort ” (1967, p. 176). What Lenneberg is arguing, then, is that what declines with age is not simply the capacity to learn (a large part of) a language, but the capacity to acquire it implicitly, the way young children do in their native or second language. The child knows how to conjugate verbs before knowing there are verbs, let alone that they are conjugated. The adult often knows a lot about verbs and their conjugation, but still stumbles in using them, making mistakes or taking too long to produce the correct form. In more contemporary terminology, children have a large amount of implicit knowledge of a language (knowledge they are not consciously aware of) before they acquire a very modest amount of explicit knowledge about it, while adults often have a large amount of explicit knowledge before they develop any knowledge that can be used with the same speed, accuracy, and spontaneity with which children use their implicit knowledge. The main distinction between children and adults, then, is not about how much and certainly not about how quickly they learn, but about how.

There is evidence both from research with immigrants (e.g. DeKeyser, 2000; DeKeyser, Alfi-Shabtay, and Ravid, 2010; Granena and Long, 2013; Verhagen, Leseman, and Messer, 2015) and from research with classroom learners (e.g. French and O’Brien, 2008; Harley and Hart, 1997, 2002; Service, Yli-Kaitala, Maury, and Kim, 2014) that adolescents and adults draw more on language-analytic aptitude (aptitude for explicit learning) and working memory, while children draw more on phonological short-term

memory and aptitude for implicit learning. This shows that the learning processes are qualitatively different, not just leading to quantitatively different ultimate attainment. If the critical period hypothesis only applies to implicit learning processes, and if empirical research indeed shows that children rely more on implicit processes (and of course the younger they are the more that is the case), then children are only at an advantage in a context when implicit learning processes can be fully functional. Such processes, when it comes to learning a language, are strongly dependent on large amounts of input. This, of course, is an insurmountable problem in most forms of early foreign language teaching: with only a few hours of teaching per week (even assuming all classroom interaction is in the L2 and that the teacher provides native-like input), the amount of exposure to the language is by no means comparable to the input an immigrant child receives (and the amount of output for an individual child, of course, is almost negligible). Moreover, even when there is much more input, and it is provided by native speakers, as is typically the case in Canadian-style true immersion programs, the salience of grammatical morphemes in the input is so low (Collins, Trofimovich, White, Cardoso, & Horst, 2009) and the incentive to produce native-like output is so small that after many years of immersion education the learners, while fluent, may appear far from native (Swain, 1985). Classroom teaching to young children, then, in particular in contexts where L2 classes are limited to a few hours a week, presents a painful paradox: the implicit learning they are good at cannot take place in such a context, and the explicit learning that is supported by the context cannot take place in young children. Not much research has systematically compared the efficiency of traditional spoon-fed instruction focused on forms depending on the age of the learner, controlling for methodology and hours of instruction, but the research that has done so (see esp. García Mayo & García Lecumberri, 2003; Muñoz, 2006; Myles and Mitchell, 2012) has demonstrated the opposite of what one would expect by naively applying the critical period research to the classroom: the older the learners, the *more* they benefit from form-focused instruction with limited input. After many years that positive correlation between starting age and proficiency may disappear, but to date there is no evidence of a negative correlation between starting age and ultimate attainment, not even when the outcome measures are of a more “implicit”

nature, and not even when early starting age is confounded with more hours of instruction (Muñoz, 2014a).

Pedagogical implications

The main practical implication for L2 instruction, then, is very clear: what is needed to improve L2 learning is not simply starting earlier with traditional instruction focused on forms. Instead, what matters more is that instruction be adapted to age. IF it can be provided early, it should ensure the activities, input, and atmosphere to maximize implicit learning; if it can only be provided once the learner is an adolescent or adult, the efficiency of instruction can be improved by judicious use of grammar explanation and systematic communicative practice adapted to the aptitudes and interests of the learners; these aptitudes and interests, of course, don't change overnight at a certain age, but evolve gradually in the same timeframe as the decline in implicit learning capacities takes place.

With children even more than with learners in general, good quantity and quality of input is what determines the outcomes (Muñoz, 2014a). Unfortunately, in many countries, while native speakers are often hired to teach college-age learners, foreign languages in primary school are mostly taught by non-native speakers with limited proficiency (and often with a strong accent). This constitutes another painful paradox: children for whom the determining factors are quantity and quality of input often get little of either, while older learners who are more able to benefit from explanation and reflection are sometimes taught by native speakers who do not have the training or the linguistic background to provide such explicit instruction.

Still, even non-native speakers can do many things to maximize the linguistic benefits of second language instruction for young children by taking the importance of quality and quantity of input seriously. They can provide occasional contacts with native speakers, and they can make use of audio-visual materials produced by native speakers, including internet sources. Above all, while they may not be able to do much about their accents, they can do much to improve implicit learning of vocabulary and grammar in the youngest learners by adapting to linguistic, cognitive, and social characteristics of these children: providing support for both comprehension in production by letting them engage

in tasks with a physical component and in familiar contexts, even with a considerable amount of repetition to encourage fluent use of collocations and formulaic utterances (Gatbonton and Segalowitz, 1988); providing intrinsic motivation through playful activities; and providing large amounts of exposure through listening activities (Muñoz, 2007), drills, and chants (Cameron, 2001).

Older children are increasingly aware of the limits of classroom language learning (Muñoz, 2014b) and may benefit from cloze activities to increase metalinguistic awareness (Cameron, 2001); pre-adolescents may benefit from a dictogloss (an activity consistent of listening and note-taking followed by learners' joint reconstruction of the text; cf. Kowal and Swain, 1994). A teacher who is sensitive to the learners' stage of development will see the patterns that reoccur in popular activities and make use of them to make learners notice patterns.

Ultimately, of course, the ideal way to teach a second language to young children is complete immersion or two-way bilingual education. The latter even has an advantage that immersion teachers cannot provide: native input from and opportunities for negotiated interaction with peers. As adolescents are strongly peer-oriented, such interaction becomes even more important for them. Meanwhile, however, all teachers can capitalize on young children's capacities for perceptive receptiveness and implicit learning by providing clear, repeated, contextualized input. Likewise, they can take advantage of adolescents' increasing capacity for explicit learning and increasing interest in peer interaction by providing ample opportunities for noticing form, both by pointing out patterns using a minimum of metalanguage, and by encouraging negotiated interaction with peers on topics of their choosing. The use of real-world tasks is strongly recommended for all learners; for children this will mean school-related tasks and for adolescents and adults tasks related to leisure-time activities, travel, or professional interaction (Van den Branden, 2006).

In all cases, the key to successful second language learning in school is age-appropriate input, interaction, and focus on form, not simply starting early. As many countries are drastically lowering the starting age for second language learning, and not always with concomitant changes in curriculum design and teacher training, nothing could be more important for instructional policy and teaching practice.

SEE ALSO:

Adolescent Students and Teaching Reading
Assessing Young learners
Bilingual and Multilingual Immigrant Youth and Language Learning and Use
Comprehensible Input
Comprehensible Output
Consciousness-Raising Tasks
Divide Between Native English Speaker Teachers and Non-Native English Speaker Teachers:
Dichotomy or Continuum?
Diverse Age Levels
Explicit Versus Implicit Grammar Instruction
Explicit Versus Implicit Grammar Knowledge
Form-Focused Instruction
Immersion
Interaction and Learning Grammar
Listening Activities
Modified Input and Output
Planned Versus Incidental Focus on Form
Pushed Output
Tasks for teaching speaking to beginners
Two-way Immersion
Young learners

References

- Abrahamsson, N., & Hyltenstam, K. (2009). Age of onset and nativelikeness in a second language: Listener perception versus linguistic scrutiny. *Language Learning*, 59(2), 249-306.
- Cameron, L. (2001). *Teaching languages to young learners*. Cambridge, UK: Cambridge University Press.
- Collins, L., Trofimovich, P., White, J., Cardoso, W., & Horst, M. (2009). Some input on the easy/difficult grammar question: An empirical study. *The Modern Language Journal*, 93(3), 336-353.
- DeKeyser, R. M. (2000). The robustness of critical period effects in second language acquisition. *Studies in Second Language Acquisition*, 22(4), 499-533.
- DeKeyser, R. M., Alfi-Shabtay, I., & Ravid, D. (2010). Cross-linguistic evidence for the nature of age effects in second language acquisition. *Applied Psycholinguistics*, 31(3), 413-438.
- French, L., & O'Brien, I. (2008). Phonological memory and children's second language grammar learning. *Applied Psycholinguistics*, 29(3), 463-487.
- Gatbonton, E., & Segalowitz, N. (1988). Creative automatization: Principles for promoting fluency within a communicative framework. *TESOL Quarterly*, 22(3), 473-492.

- García Mayo, M. d. P., & García Lecumberri, M. L. (Eds.). (2003). *Age and the acquisition of English as a foreign language*. Clevedon, UK: Multilingual Matters.
- Granena, G., & Long, M. (2013). Age of onset, length of residence, language aptitude, and ultimate L2 attainment in three linguistic domains. *Second Language Research*, 29(3), 311-343.
- Harley, B., & Hart, D. (1997). Language aptitude and second language proficiency in classroom learners of different starting ages. *Studies in Second Language Acquisition*, 19(3), 379-400.
- Harley, B., & Hart, D. (2002). Age, aptitude, and second language learning on a bilingual exchange. In P. Robinson (Ed.), *Individual differences and instructed language learning* (pp. 301-330). Philadelphia: Benjamins.
- Kowal, M., & Swain, M. (1994). Using collaborative language production tasks to promote students' language awareness. *Language Awareness*, 3, 73-93.
- Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley.
- Muñoz, C. (Ed.). (2006). *Age and the rate of foreign language learning*. Clevedon, UK: Multilingual Matters.
- Muñoz, C. (2007). Age differences and their implications for practice. In R. M. DeKeyser (Ed.), *Practice in a second language: Perspectives from applied linguistics and cognitive psychology* (pp. 229-255). New York: Cambridge University Press.
- Muñoz, C. (2014a). Contrasting effects of starting age and input on the oral performance of foreign language learners. *Applied Linguistics*, 35(4), 463-482.
- Muñoz, C. (2014b). Exploring young learners' foreign language learning awareness. *Language Awareness*, 23(1-2), 24-40.
- Myles, F., & Mitchell, R. (2012). Learning French from ages 5, 7, and 11: An investigation into starting ages, rates and routes of learning amongst early foreign language learners. ESRC End of Award Report, RES-062-23-1545. Swindon, UK.
- Service, E., Yli-Kaitala, H., Maury, S., & Kim, J.-Y. (2014). Adults' and 8-year olds' learning in a foreign word repetition task: Similar and different. *Language Learning*, 64(2), 215-246.
- Swain, M. (1985). Communicative competence: some roles of comprehensible input and comprehensible output in its development. In S. M. Gass & C. G. Madden (Eds.), *Input in second language acquisition* (pp. 235-253). Rowley, MA: Newbury House.
- Van den Branden, K. (Ed.). (2006). *Task-based language education. From theory to practice*. Cambridge, UK: Cambridge University Press.
- Verhagen, J., Leseman, P., & Messer, M. (2015). Phonological memory and the acquisition of grammar in child L2 learners. *Language Learning*, 65(2), 417-448.

Further reading

- DeKeyser, R. M. (2012). Age effects in second language learning. In S. Gass & A. Mackey (Eds.), *Handbook of Second Language Acquisition* (pp. 442-460). London: Routledge.

Philp, J., Oliver, R., & Mackey, A. (Eds.). (2008). *Second language acquisition and the younger learner*. Philadelphia: Benjamins.

Proof / Not for Re-distribution
Wiley / TESOL / 2016