REL Pacific Ask A REL Response

English Learners
June 2015

Question:

At what age or grade should a second language be introduced in indigenous language environments?

Response:

The following document is a response to an Ask-a-REL inquiry from an alliance member at the Kosrae Department of Education. The alliance member expressed interest in research about best practices for when to introduce and transition into a second language. In particular, the alliance member inquired about the effects of introducing a second language at particular points during students' academic careers.

REL Pacific conducted an initial search of the QuestionPoint database and found research regarding instructional models for English language learners; however, the vast majority of these studies were conducted in locations where English is the primary language. REL Pacific reviewed this literature and then conducted a web-based search for additional studies relevant to heritage language environments.

The search found a large number of studies regarding the Critical Period Hypothesis (CPH), which proposes a biological link between age and the ability to acquire language. However, many of these studies were not included because they were conducted in environments where the learners' second language (referred to as L2) is the primary language spoken outside the family. Other studies were not included because they compared the language acquisition of children with adults, rather than distinguishing at which age a child should receive instruction on a new language. Search terms and selection criteria for the resources are included in Methods.

Descriptions of the resources are quoted verbatim from the publication abstract (Abstract) or the publication itself (Introduction or Excerpt). An abstract is always used when available. However, if additional text in the resource provides relevant information not contained in the author's abstract, an additional excerpt is provided.

Research References

DeKeyser, R. M. (2013, March). Age effects in second language learning: Stepping stones toward better understanding. *Language Learning, 63*, 52–67. Retrieved from http://eric.ed.gov/?q=Age+effects+in+second+language+learning%3a+Stepping+&id=EJ1009044

Abstract: The effect of age of acquisition on ultimate attainment in second language learning has been a controversial topic for years. After providing a very brief overview of the ideas that are at the core of the controversy, I discuss the two main reasons why these issues are so controversial: conceptual misunderstandings and methodological difficulties. The main part of the article then makes suggestions for improvement in subject selection, data collection, and instrumentation, in the hope that both sides of the debate will be able to agree on them. More sophisticated research in this area is of the utmost importance given how crucial understanding age effects is for educational policy and curriculum design. Where foreign language learning rather than second language learning is concerned, directly relevant research, carried out with classroom foreign language learners, is even more sorely needed.

Djigunovic, J. M. (2010). Starting age and L1 and L2 interaction. *The International Journal of Bilingualism*, *14*(3), 303–314, 374. Retrieved from http://search.proquest.com/docview/756343413?accountid=144346

Abstract: The study looks into the multi-competence of early and late beginners by studying the interaction of achievement in their L1 and L2. In the context of this study L1 was Croatian and L2 English. Early beginners are defined as learners who started learning English before age 10 and late beginners as learners who started at 10 or later. The findings of this study show that the multi-competence of early and later beginners differs in terms of interaction between their L1 and L2. It is suggested that early beginners, through their longer exposure to L2, reach the necessary competence levels in their two languages sooner to allow transfer in both directions. Before these levels are reached, L1-L2 interactions are either non-existent or weak.

Excerpt (p. 308): On the basis of the presented results we can conclude that learners whose exposure to L2 started earlier show evidence of interaction of L1 and L2 competence. This contrasts with the absence of significant interactions between overall competence in L1 and L2 in later beginners. It is possible to suppose that longer L2 learning enables higher transfer of cognitive/academic language knowledge (Cummins, 1981, 1983) between L1 and L2. As we cannot conclude about causal relationships on the basis of correlations, we cannot be sure if this transfer of knowledge goes from L1 to L2 or the other way round. It is usually assumed that L1 language knowledge is transferred to L2. However, it would be reasonable to assume that the direction can be the opposite too, and that this can also be a bi-directional process. Since early beginners have learned the two languages longer, it is possible that they have already developed a CUCB [Common Underlying Conceptual Base], which makes the influence of L2 on L1 possible (Kecskes & Papp, 2003). They have reached a high enough level in each language to be able to make use of their knowledge of both languages (de Bot, 2004). As Ringbom (2007)

points out, L2 learning contributes to the development of metalinguistic awareness. This awareness certainly helps learners to be more aware of their L1 too. Our findings suggest to us that longer exposure to an L2 and longer experience in L2 use may lead to language use behaviors (at the levels of language reception and production) that can be easily transferable from one language to another.

REL Pacific was unable to locate a free link to the full-text version of this resource. Although REL Pacific tries to provide publicly available resources whenever possible, this resource may be of sufficient interest to the reader to warrant finding it through university or public library systems.

Larson-Hall, J. (2008). Weighing the benefits of studying a foreign language at a younger starting age in a minimal input situation. *Second Language Research*, *24*, 35–63. Retrieved from https://journals.sagepub.com/doi/10.1177/0267658307082981

Abstract: This study examined whether a younger starting age is advantageous in a situation of minimal exposure to an instructed foreign language (4 hours classroom contact per week). Previous theoretical and empirical studies indicated there should be no advantage for an earlier start. Japanese college students who started studying English between ages three and twelve (n = 61) were examined on a phonemic discrimination (ɹ/l/w) and grammaticality judgement (sic) task (GJT). After controlling for language aptitude and amount of input, statistical correlations were found between starting age and scores on the GJT (r = --.38) but not the phonemic task (r = .03). These earlier starters were also compared to peers who began study in junior high at age twelve or thirteen (n = 139) on the same measures. The earlier starters were found to score statistically higher on the phonemic but not morphosyntactic measure, and this remained true in an ANCOVA analysis where total amount of hours of study input were controlled for. A robust ANCOVA testing for differences at different levels of input found interesting interactions between group affiliation and amount of input. Language attitudes were also tested.
The evidence shows there can be perceivable age effects for linguistic measures even in a situation of minimal exposure to a foreign language, but these may not emerge until a substantial amount of input has been gained.

Muñoz, C. (2011). Input and long-term effects of starting age in foreign language learning. *International Review of Applied Linguistics in Language Teaching, 49*(2), 113–133. DOI: 10.1515/iral.2011.006. Retrieved from http://eric.ed.gov/?id=EJ936551

Abstract: This study explores the long-term effects of starting age and the effects of input in an instructed language learning setting. First, with respect to the effects of starting age, the findings suggest that in the long term and after similar amounts of input, starting age is not a predictor of language outcomes. Second, the study examines the effects of input using multiple measures derived from responses to an extended questionnaire. The analysis reveals modest but significant effects of input on participants' proficiency, confirming that input never ceases to play a role in an instructed language learning setting, in contrast with opposite claims from studies of naturalistic language learning.

Excerpt (pp. 127–128): The first and main research question of this study is concerned with the long-term effects of starting age of learning in foreign language learners. A great number of studies in naturalistic language learning settings show that in the long term early-starters surpass late-starters, suggesting that age is an important factor that modulates the ultimate level of attainment in L2 proficiency in naturalistic language learning (e.g., Snow and Hoefnagel-Höhle 1978; see Krashen et al. 1979). On the basis of this evidence, expectations have sometimes been formed that in instructed language learning settings early-starting learners will also have a long-term advantage (e.g., Singleton 1995). The present study has examined whether starting age is a predictor of long-term attainment in instructed learners with an average length of exposure of almost 14 years, or 2,440 hours (minimum 10 years). No significant relationship has been found between starting age and scores on three tests that explored global proficiency, and lexical and phonetic skills. Nor were significant relationships found when amount of input and age at testing were controlled for.

REL Pacific was unable to locate a free link to the full-text version of this resource. Although REL Pacific tries to provide publicly available resources whenever possible, this resource may be of sufficient interest to the reader to warrant finding it through university or public library systems.

Muñoz, C. (2010). On how age affects foreign language learning. *Advances in research on language acquisition and teaching.* Selected papers of the 14th International Conference of the Greek Applied Linguistics Association. Thessaloniki, Greece: GALA. Paper retrieved from http://www.enl.auth.gr/gala/14th/Papers/Invited%20Speakers/Munoz.pdf

Abstract: The effects of age on second language acquisition constitute one of the most frequently investigated and debated topics in the field of Second Language Acquisition. Two different orientations may be distinguished in age-related research: an orientation aiming to elucidate the existence and characteristics of maturational constraints on the human capacity for learning second languages and an orientation purporting to identify age-related differences in foreign language learning often with the aim of informing educational policy decisions. Because of the dominant role of theoretically-oriented studies that aim at explaining age-related outcome differences between children and adults, it may be argued that research findings from naturalistic learning contexts have been somehow hastily generalized to formal learning contexts and the results of classroom research have been interpreted in the light of the assumptions and priorities of the former. In this talk I will present an analysis of symmetries and asymmetries that exist between a naturalistic learning setting and a foreign language learning setting with respect to those variables that are crucial in the discussion of age effects in second language acquisition, among them ultimate attainment, length of exposure, initial age of learning, age of first exposure, significant exposure, aging effects and maturation effects. On the basis of the differences observed, I will argue that the amount and quality of the input bear a significant influence on the effects that age of initial learning has on second language learning. This influence explains the older learners' persistent advantage in rate of learning as well as the difficulty that younger learners have to show any long-term benefits due to an early start in a school setting.

Excerpt (p. 46–47): The previous section has argued that there exist important differences between a naturalistic language learning setting and a foreign language learning setting that prevent the generalization of findings from one to the other context. In particular, it has been seen first of all that the long-term advantage of younger starters is not found in a foreign language learning setting. It has also been claimed that instructed language learners do not have access to the amount and type of input that immersion in the L2 community entails and that, as a consequence, the lack of enough (massive) exposure prevents children from benefiting from their alleged superiority at implicit language learning. At the same time, the explicit instruction provided by the classroom favours explicit language learning, at which older learners are superior because of their greater cognitive maturity.

It was stated at the beginning of this paper that studies in natural contexts have consistently shown that "the earlier is the better" in language learning. In the absence of relevant empirical evidence, this finding has been traditionally generalized to any situation independently of learning conditions such as amount and quality of exposure, and pedagogical considerations. This paper has claimed that recent studies in instructed contexts, not only from the BAF Project but also in other contexts (e.g. Cenoz 2002, García Mayo and García Lecumberri 2003, Kalberer 2007), have provided empirical evidence that allows us to refine that finding: the earlier may be the better but provided that it is associated with enough significant exposure (other not least important conditions include that exposure to young learners should be intensively distributed, and that learners should be given opportunities to participate in a variety of L2 social contexts).

Nikolov, M., & Djigunovi, J.M. (2006). Recent research on age, second language acquisition, and early foreign language learning. *Annual Review of Applied Linguistics, 26*, 234–260. doi: 10.1017/S0267190506000122. Retrieved from https://www.researchgate.net/publication/231743390_Recent_research_on_age_second_language_acquisition_and_early_foreign_language_learning

Abstract: The aim of this paper is to provide a critical overview of the issues and research conducted since the most recent state-of-the-art article published in the Annual Review of Applied Linguistics by David Singleton (2001). First, we summarize what research has said about the Critical Period Hypothesis (CPH) in cognitive science and neurobiology, then we review recent findings of age-related studies since 2000 focusing on what late beginners and adults can achieve, and how early and later beginners compare in bilingual programs. The second part of the paper explores language policy and classroom implications of the CPH for foreign language teaching. As English has become the lingua franca, early programs have mushroomed all over the world. However, besides overwhelming enthusiasm, more recently critical voices can also be heard. On the one hand, early exposure is often seen as a key to success and a solution to all problems in language education; on the other hand, it may be perceived as a threat to first language development and identity. Finally, we explore areas for further research.

Excerpt (p. 9): What is known from research on the CP [Critical Period] and immersion students has important implications for young learners of FLs [foreign languages]: (1) young children are slow at developing in the target language, therefore they need a longer period to achieve levels adolescents and adults can achieve faster; (2) they benefit from meaning-focused activities; (3)

they rely very little on explicit rules, declarative knowledge, and inductive/deductive reasoning skills; (4) but rely on their memory and procedural knowledge; (5) because young learners tend to surpass adults in the host environment in the long run, classroom instruction providing children with opportunities similar to 'natural' SLA [Second language acquisition] are appropriate in FL contexts; (6) early language learning experiences may enhance children's cognitive control; (7) there is no reason to assume that the L2 will have a negative impact on L1 if it is also developed in parallel; (8) both early and late immersion programs contribute significantly to learners' development. Thus, it is impossible to decide whether early or later immersion program models should be favored. (9) It is possible that an early start contributes to young learners' attitudes and motivation, which later ensure good proficiency; in other words, most probably it is not the actual early language gain that matters in the long run. SLA is a life-long enterprise; both proficiency and willingness to maintain and develop it further are crucial. Finally (10) teachers need to be proficient users of both languages and able to apply age-appropriate methodology.

Methods

Keywords and search terms used in the search

- "critical period" NOT Dissertations & Theses"
- "age" and "language acquisition" NOT "Dissertations & Theses"
- "age" and "foreign language" NOT "Dissertations & Theses"
- "maturation" and "language acquisition" NOT "Dissertations & Theses"
- "maturation" and "foreign language" NOT "Dissertations & Theses"
- "age" and "language learning" NOT "Dissertations & Theses"
- "starting age" and "language acquisition" NOT "Dissertations & Theses"
- "foreign language instruction" and "critical period" or "age" NOT "Dissertations & Theses"
- "L2" and "age" NOT "Dissertations & Theses"
- "age" and "bilingual" NOT "Dissertations & Theses"
- "age" and "language" and "acquisition" NOT "Dissertations & Theses"

Databases and websites

Google/Google Scholar, ERIC, ProQuest Education Journals, EBSCOhost Online Research Database

Reference Search and Selection Criteria

The web search focused on research studies that were published in peer-reviewed research journals within the last 10 years. REL Pacific searched for documents that are freely available online; however, some articles are included that did not meet this criterion.[1] Resources included

also had to be in English. Resources included in this document were last accessed in June 2015. URLs, descriptions, and content included in this document were current at that time.

[1] This memorandum is one in a series of quick-turnaround responses to specific questions posed by educational stakeholders in the Pacific Region (American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, Hawai'i, the Republic of the Marshall Islands, and the Republic of Palau), which is served by the Regional Educational Laboratory (REL Pacific) at McREL International. This memorandum was prepared by REL Pacific under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-IES-17-C-0010, administered by McREL International. Its content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.