
This essay is copyright under the creative commons Attribution - Noncommercial - Share Alike 3.0 Unported licence. You are encouraged to share and copy this essay free of charge. See for details: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Adult first language acquisition

Last updated 30 April 2009

The problem

When I googled “Adult first language acquisition” there were few books near the top of the list of hits. The first was a book about a man who only learned language as an adult by Susan Schaller (1995). I found by searching the broader string “first language acquisition” that google gave me about 18700 hits. There were two near the top. The first was Ingram 1989, in a book entitled “First language acquisition” which appears not to have a chapter on adult learning of a first language. The second was Perdue 1996 - a book entitled Adult language acquisition, which says on the cover:

This work presents the methodology and results of an international research project on second language acquisition by adult immigrants.

Therefore, and paradoxically, “adult L1 acquisition” equals “adult L2 acquisition”.

The pattern seems to repeat itself. I confess I did not look at all the hits on google, but what I saw confirmed previous suspicions. A few years ago I spent several hours in the huge University Library of Cambridge trying to find references to this subject either in books or articles and found nothing. A rare exception came in that while writing this article. I received an article alert to Momoa Sakaic and Sakai (2008). In the abstract I read:

However, the present results demonstrated that even for native speakers there exists a grammatical feature, i.e., honorification, which is difficult to acquire and exhibit individual differences in performance.

In addition, the Common European Framework of reference can easily be applied to native speakers. Only educated people can function at C2. Therefore you would expect some discussion about how to progress to the highest level in the first language.

It seems that whenever “first language acquisition” is considered, there are two groups of people:

- ** The acquisition of the first language by monolinguals up to teenage years
- ** The acquisition of another language by adults such as immigrants

What I am looking for, and what is missing, is material on what it means for a teenager and an adult to grow in their first language ability. Some of the material is there, but it is scattered over several areas.

This provocation is a call to study seriously the field of adult first language acquisition.

Definition and delimitation of the field of “Adult First Language Acquisition” (Adult L1A)

- ** Adult monolinguals
- ** Adult bilinguals improving their first language
- ** Plurilinguals moving to level C1 or C2 in any language and in any skill. This definition acknowledges the reality that many people do not have one first language in which they can do everything, and as such would find it hard to specify which language was their “first”. [1]
- ** A study of the variations within the population “adult monolingual users of language”.
- ** A discussion of the link between language and knowledge. See www.scientificlanguage.com/eso/science-and-language.pdf

Related fields from which information on adult L1A could be drawn include:

- 1. Aging and language attrition**
- 2. Reading skills, and study skills**
- 3. Writing courses** - and I do not mean just college essay courses. There are other areas including journalism, writing reviews, technical reports, and business letters.
- 4. Speaking courses**, including rhetoric, how to throw one’s voice, how to hold an audience. For teachers this overlaps considerably with methods for teaching, and the ability to maintain discipline.
- 5. Logic and critical thinking**
- 6. New vocabulary**
- 7. The input from L2 into L1**
- 8. ESP**
- 9. Medical terminology**

Some of these fields are obvious and require little comment. I expand on some of them below.

Discussion: the CEFR

To take the Common European Framework of reference, a scale it will be recalled which was devised for foreign but has proved extremely useful for rating L1. It is reckoned that only the highly educated can achieve level C2. In writing this is quite clear. How many people can “write summaries and reviews of professional or literary works” - the official definition within the CEFR self assessment grid of writing at C2 level?

So in moving from C1 to C2, what has to happen? Do I have to spell it out? When I listen to a lecturer in my speciality I am functioning at C2. But when I listen to someone outside my areas of interest I can be lost. Similarly for reading and spoken interaction - when I am talking with a specialist in my speciality I can function at C2. In addition, the CEFR has the skill of spoken production, which includes not just content, but also mastery of public speaking. Many people think they can speak well in public, but only the best actors, journalists, politicians, teachers, and preachers can function at this high level.

Obviously adults can learn - and lose - their first language. To their credit, people who work on language loss, or “language attrition” will talk about the loss of the first language. But, once again, it is usually in the context of bilingualism. But what about monolingual adults losing or improving their language? I am constantly learning new language - especially in computing. Sometimes this language is new words for something I already know. Other times, new language is intimately linked with new content. Therefore, adult language acquisition needs to take a detailed look at the process of aging and the changes, good and bad, in this process.

So where are the studies on adult L1 acquisition? They are almost non-existent. This provocation is the first time the label has been used correctly. Amazing as it may seem in 2009, a whole and huge area of language learning has been almost totally ignored. Therefore, to start the subject off I have written one of the first ever case studies- an autobiography - which you will find here www.scientificlanguage.com/adultl1a/lifelong.pdf.

Without going into huge details, the field of adult L1 acquisition can draw on several areas of research - areas which at first sight may not be obviously related.

Discussion: teaching language to teenager native speakers

As a science teacher I was acutely aware of the high vocabulary load of some courses, particularly biology. I would actively teach vocabulary to my classes of native speakers. For instance, the initial lesson might be to introduce a new topic: the kidney. I would present 20 or so new words, usually related to a diagram. The next lesson I would test the vocabulary. Only when most of the new words were learned would I proceed to explain the functioning of the kidney.

Even as a teenager I knew the difference between popular and technical words, and as I advanced I tried to learn the more technical vocabulary in addition to the popular vocabulary.

Some science teachers are intensely interested in the words used in science. There is a who approach to learning called “social constructivism” which is concerned with the prescientific knowledge children bring to class and how this affects their learning of science which sometimes contradicts their current knowledge, and even their current world view. Sometimes a word can have totally different meanings in the pre-scientific and the scientific use, and if teachers are not aware of the current understandings (or misunderstandings) of the key ideas and terms, then, to put it mildly, learning will be slowed down.

This work is old, but I remember using it in my research. Cassels & Johnson (1984, 1985) showed how it was easier for 14-16 year old science students to learn new words than it was for them to learn new meanings for old, usually ‘popular’ words. Henderson & Wellington (1998) report on the work by Gardner (1972) show how the understanding of semitechnical words by teenagers goes up and down.

Contrary to popular thinking then, the high load of technical vocabulary is easier than expanding the meanings of a known word (thus making them ‘semi-technical’).
www.scientificlanguage.com/esp/terminology.pdf

Dawe (1983) showed that in immigrant children who were strong in English, the main difference between bilinguals strong in English and monolingual English children was in the area of linkers. In all other areas Dawe could not find significant differences between the two groups.

Discussion: The input from L2 into L1

That is right: learning a second language can help the first language. I present several examples of this.

- a. In the case of my two years of Latin, I learned a tremendous amount of English - in terms of vocabulary expansion, the structure of words (morphology) and a certain metalanguage - language for describing language. I cannot remember learning much Latin. I was obliged to learn Latin because it was commonly believed and asserted in those days that Science and Medicine were based on Latin therefore I needed to know this language. Actually, science uses a lot of words from Greek, but no one forced me to learn Greek (except the Greek alphabet - in science lessons, so either they should have taught me Greek as well, or both Greek and Latin are not really needed). Learning Latin can help the language of science, but the same help could probably be achieved in only a few hours explanation of word formation (morphology) in English. The point here is though that through studying Latin my English vocabulary increased, as did my ability to recognise roots and derivations and make a good guess at the meaning of new words because I had a deeper grasp of prefixes and suffixes.
- b. In a similar way, my French helped my English in terms of understanding grammar, and to some extent in vocabulary expansion.
- c. In my own children, one of them learned the Arabic script and reading in Arabic at least a year before they learned to read in English, and this was despite my attempts to

teach the reading and writing of English before they faced another language. The Arabic script has a consistent link between shape and sound, and this is known to help the general reading ability, though it is more difficult in that each letter can have up to four different forms depending on whether it is the initial, middle, or final letter, or is isolated (not joined to the others).

Discussion: ESP

A study of how adults learn specialist L1 language is surely required if we are to compare like with like. Learning specialist English surely has more in common with Adult L1 acquisition than it does to child acquisition. But the whole question has been totally ignored. If we know more about how adults learn specialist L1 language, we will better be able to teach adult L2 specialist language.

Medicine is the subject *par excellence* with a high degree of both language and concepts. Within medicine, anatomy is the easiest for the non-medical person to understand. I can remember physiology was by far the hardest subject to learn - partly related to its simultaneously high quantity of vocabulary and high level of concepts. ESP should be learning from medical educators who are working on how best and efficiently train doctors. As early as 1984 for instance Bordage & Zacks could argue that “the key to expert performance is not only the acquisition of a large amount of knowledge but also a superior organization of that knowledge in the long-term memory which quickly guides the expert ‘to the relevant parts of the knowledge store’ (Larkin et al 1980)” (p415). They go on to say that categories are best learned through good examples, or prototypes.

Discussion: Medical terminology

Perhaps it is not widely known, but medicine has a whole field called ‘Medical terminology’ with textbooks, training courses (on and off line) etc.

Within the field of medical education there has been a limited attempt to discuss the vocabulary overload of medical students. Anderson & Graham (1980) for instance estimate that in the two years basic pre-clinical course, excluding pathology, students who work for 40 weeks, studying 40 hours per week, must assimilate about 24 new facts/concepts per hour (p6). The learning rate goes down to 9 per hour in clinical years but has other demands. Someone studying modern languages only has to learn 6 per hour. They also raise the interesting question I have raised here, that of language loss, and how much is actually retained 6-12 months after the examinations.

Notes and references

Of course, 'bilingualism' is often taken to mean two or more languages, because the 'multilingualism' means three or more, and 'plurilingualism', the official word in the Common European Framework of Reference has just not caught on.

Anderson J & Graham A 1980. A problem in medical education: is there an information overload? *Medical Education* 14,4-7

Bordage G & Zacks R 1984. The structure of medical knowledge in the memories of students and general practitioners: categories and prototypes. *Medical Education* 18,406-416

Cassels JRT & Johnstone AH 1984. The effect of language on student performance in multiple choice tests in chemistry. *J Chem Educ* 61,7:613-615

Cassels JRT & Johnstone AH 1985. *Words that matter in science*. The Royal Society of Chemistry, UK.

Dawe L 1983. Bilingualism and mathematical reasoning in English as a second language. *Educational Studies in Mathematics* 14, 325-353

Gardner PL 1972. *Words in science*. Melbourne: Australian Science Education Project.

Henderson J & Wellington J 1998. Lowering the language barrier in learning and teaching science. *School Science Review* 79(288) p 35-46

Ingram D 1989. *First Language Acquisition: Method, Description, and Explanation*. Cambridge University Press.

Larkin J et al 1980. Expert and novice performance in solving physics problems. *Science* 208 p1335

Momoa KB, Sakaic H and Sakai L 2008. Syntax in a native language still continues to develop in adults: Honorification judgment in Japanese. *Brain and Language* Vol 107/1:81-89

Perdue C 1996 (ed) *Adult Language Acquisition: Cross-Linguistic Perspectives - Field Methods*, Volume 1. CUP.

Schaller S 1995. *A man without words*. University of California Press.