The role of the mother tongue in second language learning

One of the advantages of modern language education is that learners’ errors based on transfer of mother tongue (L1) properties into second language (L2) production are much less frequent than before, when language teaching took place in the grammar-translation tradition. It is a well-known fact that adult learners do not often come to ultimate attainment and are more inclined to rely on their first language than young learners. Some researchers have even claimed that children acquire L2 without reference to their L1 (Dulay & Burt, 1974a, b). Recently however, we came across studies that reported on young learners who clearly showed the influence of their L1: 11-12-year-old francophone students learning English in communicative L2 classes in Quebec (Spada & Lightbown 1999; Lightbown & Spada 2000). These intriguing contrasts have led us to review the short history of second language acquisition research, to examine the views on transfer and second language learning and how they changed over time.

Back to the 1970s

The three models of second language learning most discussed in the early 1970s were:

- the Contrastive Analysis Hypothesis,
- the Interlanguage Hypothesis,
- the Creative Construction Hypothesis.

I will consecutively deal with each of them.

The Contrastive Analysis Hypothesis (under influence of behaviourist views) explained second language learning as the development of a new set of habits that could be learned through the stimulus-response method (cf. Lado 1957). It was predicted that virtually all errors could be explained as interference (or negative transfer) from L1. Linguists provided a list of linguistic differences and similarities with respect to a particular L1 and a particular L2. Objectives of such a comparison were the explanation and prediction of problems in second language learning. Ease of learning was guaranteed where first language habits led to correct L2 performance. However, the greater the differences between the language systems, the greater the learning problem predicted (cf. Weinreich 1953).

According to Lado the best and most efficient teaching materials arise out of a comparison of the L1 and L2. Lado (1957, p.2) even claims that ‘it will be considered quite out of date’ to begin to write a textbook without having previously compared L1 and L2. As a consequence of these ideas, textbooks (English for Turks and the like) and pedagogical grammars appeared for a specific group of language users. Those were based on the contrastive analysis between the two languages at issue. The behaviourist views of learning became manifest in the way the new languages were taught. Learners were exposed to oral L2 input in language laboratories where they had to do pattern drills and similar exercises in which the right answer was stressed because ‘foreign language habits are formed most effectively by giving the right response, not by making mistakes’ (Rivers 1964). This teaching method was called ‘audiolingual’ and was quite a success in the USA.

The Interlanguage Hypothesis
(Selinker 1972) saw learners operating with their own set of rules, some of them reflecting L1 rules. Notice that it is not a system half way between the L1 and L2 systems. It is rather a learner variety characterized by features resulting from language-learning mechanisms. The learner proceeds through a series of interlanguages on his way to complete mastery of the target language, although most L2 learners get stuck at one of the intermediate stages.

In the 1970s, the Contrastive Analysis Hypothesis was heavily attacked for several reasons. First, the predictions did not work out, and secondly, objections were raised against the behaviourist learning theory in which imitation plays a crucial role whereas it is known that both L1 and L2 learners make errors they cannot have heard previously because adult speakers do not make those errors (this argument was put forward by Chomsky). Proponents of mentalist theories of language opposed the view that, apart from accent, L2 learners showed very few transfer errors in their spontaneous speech. An alternative hypothesis was proposed: the Identity Hypothesis (also: L1=L2 Hypothesis) or Creative Construction Hypothesis because it was claimed that L2 learners actively organise the system of the new language in the same way as children learn their first language. In this view, the acquisition process is determined by the structural properties of the target language and by the learning system, not by the differences or similarities between L1 and L2. Accordingly, the errors of L2 learners are largely identical to those made by children learning the same language as their mother tongue and those errors are not due to differences between the source and the target languages (cf. Dulay & Burt 1974c).

It goes without saying that the latter view on L2 acquisition is very attractive to those who teach a heterogeneous class of language learners from, let’s say, ten different language backgrounds as when a L2 is taught to immigrants. Since the times of the Creative Construction Hypothesis it is common not to pay attention to L1-L2 differences in the classroom but to focus on comprehensible L2-input and to rely on the language-learning mechanism. It is up to the learners to distil grammar rules from the language they are confronted with and the task of the teacher and course material (L2 input) is to stimulate the L2 acquisition process (see Krashen 1982). Since acquisition proceeds via comprehension of the L2, and not by any conscious analysis but by analysis at a subconscious level, the emphasis is on reception. An (often long) introduction period is claimed where a learner is not supposed to produce any L2 utterances. Production is postponed to a later moment, because one was scared of creating fossilised learners by forcing them to speak at too early a moment.

Transfer after 1980
In the early 80s, transfer from the L1 (also: interference or negative transfer) was recognised again as a major component of L2 acquisition, mainly because transfer was no longer linked to behaviourist views. Transfer was interpreted as a mental activity, similar to what was involved in the ‘creative construction’ process. A learner mentally organises the target language structures and develops hypotheses about these. A learner may think that the L2 is similar to the L1 with respect to a certain structure, resulting in negative transfer.

More detailed, longitudinal research showed that transfer occurs mainly in certain developmental stages, viz., when L2 learners have arrived at an interlanguage stage that resembles the corresponding structure in their L1. In a study by Wode (1981) German children learning English (without instruction in the classroom) passed first through stages in which they express sentential negation as in (1a), with a sentence-initial *no,* and in (1b) and (1c), with negation inside the clause.

(1) a no drink some milk (examples by Wode)
   ‘I don’t want to drink any milk’
   b it’s not raining
   c me no close the window
   ‘I am not going to close the door’

Similar examples are also reported in studies on the acquisition of English as a mother tongue. The next stage deviates for the German learners: They seem to apply the German word order in the examples in (2).

(2) a Heiko like not the school
   (German: Heiko mag die Schule nicht)
   ‘Heiko doesn’t like the school’
   b you go not fishing
   (German: du gehst nicht fischen)
   ‘you don’t go fishing’

It is evident that some resemblance between L1 and L2 is required before transfer can take place. This implies that an assumption from the Contrastive Analysis Hypothesis does not hold any more, viz., that greater differences lead to more transfer. It is more the case that smaller differences lead to more transfer.

It is also generally assumed that older learners show more transfer in their interlanguage or for a longer time than child learners. Turkish learners of Dutch and German often produce sentences with the verb at the end, which parallels the basic sentence pattern in Turkish, e.g., in (3)

(3) a jij huis gaan-naar
   (example from Dutch ESF corpus)
   you house go- to
   ‘you go home’
   b dann Kinder Frau alles hier
   kommt
   (example from Ditmar 1981)
   then children wife all here come
   ‘then my children and my wife, they all come here’
It is certainly not the case that child learners do not show transfer although Pfaff (1984) reports that she found this type of structure only occasionally in the German of Turkish children in Berlin. Transfer seems also to be dependent on the amount and nature of exposure to L2. Hence, it occurs more frequently in the beginning of the acquisition process, and when L2 is learned in an L1 environment (e.g., in schools and in situation where learners have little contact with L2 speakers as is the case for adult immigrant workers and their wives).

**Present day language education**

What is the situation in modern language classes? Children have lots of L2 input when we are dealing with English as a foreign/second language, and when L2 learners, both children and adults, are in frequent contact with the L2 in the canonical second language context when language learning occurs in the country where this language is spoken. Moreover, there is more direct L2 input in the classroom via multimedia and Internet, and teaching methods and course material have also changed. The times of long receptive introduction periods are over. L2 learners were so eager to speak and to practise the pronunciation of L2 expressions that language teachers could not persist in an extensive period of only comprehension activities. In the first place because it is quite unnatural not to speak a language that has to be acquired. These and other considerations (e.g., the experience that teaching grammar was not very successful and did not prevent learners from making many grammatical errors often based on their mother tongue) led to the communicative and content based approach. Communicative language learning contexts are found in all kind of language classes for adults learning an L2 and for children learning a foreign language as well. Nowadays, most course material both in L2 and foreign language classes can be defined as based on a communicative approach to language education. Not only the course material is geared to language use in communicative situations, it happens more and more that L2 (adult and adolescent) learners get ‘outside school assignments’ they have to carry out in real life. Such assignments are for instance:

- Call the information desk and try to find the telephone number of the nearest hospital;
- Find out what a five minutes’ telephone call to Brazil costs; or, may-be, an easier one inside the school (for which less daring is required because no talking by telephone is needed),
- You are asked how many students have registered in your school for the last term. Try to get this information at the administration desk. Similar assignments for adolescents in secondary schools are conceivable but they should be more geared to their way of life and their interests; a webquest on the internet is a good example. Through such assignments, L2 learners come more into contact with the real world, get natural L2 input (and not the somewhat artificial input from a language teacher or a voice on the tape). In such learning environment one does not expect to find L1 influence, especially not for young students.

**Transfer is still there**

Yet, we see young learners like the 11-12-year-old francophone students in the study by Lightbown and Spada unconsciously relying on the structure of their mother tongue. They were at the end of the intensive English as a second language classes in Quebec, modern communicative course material was used and the students were exposed to much L2 input (Spada & Lightbown 1999; Lightbown & Spada 2000). Those classes were a strong version of communicative language teaching: the emphasis was on meaning rather than form, there was no explicit metalinguistic instruction and no comparison between English and French. These children, however, produced and accepted as grammatical English sentences that reflect the word order in French for adverb placement and question forms.

Let us first consider adverb placement. The francophone students in the studies by Lightbown and Spada and also by White (1991) produced and accepted sentences in which the placement of adverbs of manner and question forms.

(4) a *Mary reads carefully newspapers.

b Mary carefully reads newspapers.

Swiss students of a German, French or Italian background will have the
same problems as their colleagues in Quebec because it is a language-specific property of English that is new for all learners of English. Similarly, the 11-12-year-olds in the study produced, and accepted as correct English sentences like (5a), correct in French and English as well, and (5b), incorrect in English.

(5) a Where are you going?
   b *Why fish can live in water?
   *What the chef likes to cook?
   *Where the teacher is going?

This is consistent with the French constraint which allows subject-auxiliary inversion with pronouns (6a) and prohibits it with nouns (6b).

(6) a Peut-il venir chez moi?
   b *Peut-Jean venir chez moi?
   Can John come to my house?

The correct question form in French instead of (6b) is either (7a) or (7b) where the full noun precedes the verb in both cases.

(7) c Jean, peut-il venir chez moi?
   d Est-ce que Jean peut venir chez moi?

Similar patterns that differentiate between pronouns and full nouns can be expected for francophone Swiss students whereas Swiss students from a German or Italian language background may have problems with insertion of the verb to do, but they will not show the same patterns as the francophone students.

Conclusions

The Lightbown and Spada study shows that unlike simultaneous bilingual children who speak two (or more) languages without confusing them (Genesee et al. 1995), children whose exposure to the L2 is restricted to classroom interaction, base themselves on their L1 knowledge. This becomes manifest when the demands of the situation go beyond what they have learned in class. When the children in the study were asked to correct and/or to explain their errors, they could not. Nor did they recognise their errors either as L1 based constructions. The question remains how these learners can become aware of how their English sentences differ from those in their teacher’s speech. Some suggestions are given in the literature. First, it is suggested that noticing can be promoted by giving the students exposure to a variety of ways of hearing and seeing relevant language input that focuses on the grammatical items at issue. Students may have difficulty noticing them in oral interaction or even in reading when the focus is exclusively on meaning. Secondly, it is suggested to draw the learners’ attention to the problematic structure through explicit instruction, including information on the L1-L2 contrasts. Some studies have shown that young L2 learners can benefit from explicit metalinguistic information (White 1991), but there are no studies in which this instruction was based on L1-L2 contrasts. There is some evidence, however, that older schoolage learners and adults profit from contrastive information (Sheen 1996). So it seems that we have come full circle: An approach to L2 instruction which includes explicit contrastive information brings to mind behaviourist notions of learning! Lightbown and Spada add that ‘contrastive information need not to be presented in lengthy, teacher centred grammar lessons which are isolated from ongoing communicative activities. Explicit information contrasting the L1 and L2 can be presented briefly and visually, without the use of unfamiliar metalinguistic terminology’. We should not forget what second language research of the past 30 years has made clear: providing students with explicit information or feedback, including contrastive, metalinguistic information, does not lead to immediate long term changes in their interlanguage performance’.

References


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