USING THE MICROCOMPUTER TO BRIDGE THE LANGUAGE GAP

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ABSTRACT

English mother tongue speakers begin second language learning with a built-in disadvantage, namely their mother tongue. It contains no concept of gender in the grammatical sense; its verb system uses multiple instead of single forms; grammatical inflection is reduced to who/whom/whose.

This paper will address firstly the problem of language distance and the implied necessity to create new cognitive processes; secondly it will analyze some simple, yet seemingly effective, computer programs available on the UK market for FLL; thirdly it will suggest that the micro computer can help students develop necessary process of thought and analysis that are absent in their own language but which are needed for a “natural” mastery of a second language.

INTRODUCTION

In its first edition in May 1990 The European newspaper published the results of language survey conducted in all 12 EC countries. People aged between 15-24 who were chosen at random, were asked to conduct a simple conversation in a language other than their mother tongue. Also in the survey a random selection of businesses were asked about their language skills.
The results should surprise no one. Britain was shown to produce the worst linguists in Europe. 70% of the young people interviewed were unable to conduct a simple conversation in a foreign language. Six out of ten UK companies admitted being unable to negotiate contracts in any language other than their own.

Had other English mother tongue speakers been included in the survey — Americans, Canadians, Australians, New Zealanders — I wonder whether the UK would still have been bottom of the list?

Are the English mother tongue speakers of this world really the poor linguists they are reputed to be? The Modern Language National Curriculum Working Party made a bold statement when they said:

The study of a modern foreign language...is an activity which can be shared by people of all nations and speakers of all languages for there is no such thing as a national inability to learn languages (Modern Foreign Languages National Curriculum Initial Advice Document 1989).

Brave words. Unfortunately facts do not necessarily bear this statement out; we do of course produce a small number of linguists but mainly native English speakers are monolingual; and certainly in the UK five years of foreign language learning seems to make little impression on this state.

Referring back to the results of the survey, I believe this kind of comparison is unfair and is no evidence at all of our lack of linguistic skill; I would like to wager that the language spoken as “foreign” by most of the Europeans was, in fact, English. And that most of the people questioned in the UK tried to communicate in half remembered French with a small percentage attempting German and an even smaller percentage attempting Spanish or Italian. I doubt if anyone asked attempted Dutch or Danish or Swedish or Greek. I would have been more interested in the results, had the Europeans been asked to communicate in a language other than their mother tongue and English, as English to many of the working population of Europe is not no longer a foreign tongue, rather a second language.

I would prefer to read the survey results as proof of a different theory; that speakers of other languages with comparatively little linguistic aptitude can easily become communicatively competent in English at a fairly basic everyday level, whereas English mother tongue speakers, with the same amount of language learning, are still experiencing difficulties even at a basic level of communicative competence.
The reason for this is again quite simple; they (the others) have less to contend with — cognitively speaking — when learning English than we (the English mother tongue speakers) have when learning theirs. (I am addressing here only the initial language learning stages.) My reasons for putting forward this suggestion are as follows:

English is a creole language; that is, it began life as a pidgin between conquered and conquerors AD 65, AD 410, AD 793, AD 1066 to mention but a few of the major dates.

Technically a pidgin is an auxiliary language, one that has no native speakers. In other words it is a speech system that has been formed to provide a means of communication between two people who have no common language.

When a pidgin...becomes the principle language of a speech community it evolves into a creole (The Story of English. McCrum, Cran & MacNeil. Faber & Faber, 1986.

What were originally inflected languages of Germanic & Romance origins — themselves descendants of the highly inflected Indo European, became in the aftermath of conquest a hotch potch of grammatical patterns, some of which have weathered the tide of usage over the years — e.g. he/him, she/her, who/whose and whom; others were borrowed wholesale from one or other of the language parents; sometimes even both were adopted as in the two forms of the comparative which parallel both Germanic “big, bigger, biggest” and Romance “beautiful, more beautiful, most beautiful.”

But more importantly English has acted like any true creole:

It is a misconception to imagine that a pidgin is a debased form of speech without rules. A pidgin will always have its own way of constructing a sentence. What is different about a pidgin is that it usually dispenses with the difficult or unusual parts of a language, the parts that speakers from a great variety of language backgrounds would find hard or strange to learn (ibid.).

Where patterns clashed, when inflection became secondary to the root idea, English moved towards the invariable form or to no pattern at all and in doing so lost gender markers for nouns, agreement of adjective and grammatical inflection for articles except in a few instances already given as examples. To a large extent English adopted an invariable form for articles, adjectives and prepositions etc.
By contrast it increased forms in other areas; whereas both parent languages are content with a single form of any verb in any tense for each person, English, in parallel with other Creoles round the world, has developed a multiple range of forms for any one tense.

In these two areas the structure of English now varies considerably from those of its parents; where they have multiple forms — articles, prepositions, agreements — English has an invariable form; where they have a single form Ich gehe/Je vais, English presents its learners with multiple forms I go, I am going, I do go, I have been going — even the wonderfully illogical — Aren’t I going!

So what does this mean for the English mother tongue (EMT) learner of foreign languages? Three things:

1) When wishing to understand or produce articles, prepositions, adjectives in agreement in a foreign European language etc. EMTs have to come to terms with a, for them, novel concept; that there can be different forms, that these forms have relevance and meaning and without them even a sympathetic native listener — the touchstone of all UK speaking/writing tests — winces. Furthermore they must develop for themselves a process of thought and analysis in order to make a correct choice — even to say the word “the”! It is small wonder that so many despair at the initial stages.

2) It also demands of them grammatical analysis; so that they know and understand that bigger/more beautiful though having two distinct patterns perform the same function; or that it is the intention of the verb that gives it its tense not the words used or the look of the words used.

As if these were not enough, a third and perhaps even more important feature poses yet more demands.

3) English has also lopped off the inflections that marked the difference of grammatical function, so that an infinitive and adjective, a direct and indirect pronoun, a noun and an adjective, and adjective and an adverb can all look exactly alike. To be able to choose the correct word either from their knowledge or from a dictionary pupils must be able to tell which function the word is to serve — again a need for grammatical analysis which is something they singularly lack.
This latter fact has been recognized:

...many people feel that with the rejection of grammar teaching (in UK schools) much value of was lost. We would agree that a certain analytic competence has been lost (English National Curriculum proposals 1990).

Measures are being set up to remedy the matter; however unfortunately many teachers of English themselves have little training and expertise in grammatical analysis, let alone feel convinced about the need for explicit understanding of it among their pupils.

And yet the point must be addressed; when pupils come to learn a second language, how are they to distinguish between “me” & “me” & “...me” in the following cases: It’s me! He sees me. He gives me the book?

Or choose the right word for those offered in a dictionary for the word “light” or “match” or “like” or “put down”?

There is little point here in producing more from the endless other possible examples. Instead let us look sideways in search of supporting evidence.

Wherever we (that is, English mother tongue speakers) go in the world, we find some knowledge of our language.

This fact leads us to suppose that either English is the universal language or even worse that English is the language. And this attitude leads us to make even fewer efforts to master another.

Monolingual persons take language so much for granted that they often forget its arbitrary nature and cannot distinguish words from things (Languages and Symbolic Systems. Yuen Ren Chao; Cambridge University Press 1968).

The (study of) modern language...helps liberate (students) from the handicap of the monolingual. The monolingual person is unaware of the arbitrariness of the language symbol he uses. Because he knows no other, he takes for granted that there are no others. He confuses the word with the concept (Eric Hawkins. Modern Languages in the Curriculum. Cambridge: Cambridge University Press 1974).

This confusion of word with concept is precisely what we see when a pupil writes — Ich wie zu spielen — I like to play.
Transliteration is an initial learner error that is observed by us all. Underlying it is the mother tongue speakers’ error of believing that other languages behave in the same way as their own. And so if “like” equals “wie” then that is an end to it. There is no need to think further. Nothing in their own language has ever suggested or prepared them to think that they should — until they begin to learn a second language.

Without the revelation that languages are different and that English requires grammatical understanding and analysis (whether conscious or not) before thoughts and words can be translated into another, our pupils will continue to flounder. Their mother tongue has ingrained on them the single thought process i.e. the single choice of an invariable form; the lack of grammar teaching in school has left them ignorant of the fact that there is qualitative similarity between the two forms of the comparative and a qualitative difference between the use of single forms such as me, or like, or light, or chip, etc.

I would like at this stage to quote from an article by Hakon Ringbom of Finland “Crosslinguistic Influence and the Foreign Language Learning Process” (in Kellerman & Sharwood Smith, Crosslinguistic Influence in Second Language Acquisition. Pergamon 1986).

• The learner tries to facilitate his learning task wherever possible and he tries to make use of whatever relevant prior knowledge he has for this task.

• (The main difference between the L1 learner and the L2 learner) is that the L2 learner already has an internalized and automatized language system on which he can draw, namely his L1.

• How relevant a learner’s prior linguistic knowledge is to the learning of another language is largely determined by the perceived distance between the L1 & the L2. The smaller the distance, the more relevant this prior knowledge is to the learner, specially at the initial stages of language learning. The native learner beginning his first foreign language lesson starts out from the hypothesis that the foreign language basically functions in the same ways as his L1, with only the lexical items being different.

This is precisely the tendency towards transliteration that I and many others have observed too.

• The learner of a related language also notices quickly numerous examples of formal and semantic identity or near-identity between lexical items in the two related languages.
• The more similarities the learner perceives between L1 & L2, the more he will profit from his mother tongue in learning to understand the new language.

If these statements are true, and I have no evidence to contradict them, do we know what assumptions about the target language our pupils bring to lessons with them?

And, more importantly, what assumptions do we create in their minds by not pointing out differences. Instead we often concentrate on similarities. Exactly those methodologies that some teachers use to make things easier i.e. using cognates, using comparatively similar syntax where possible, may in fact create and foster the “transliteration” mother tongue influence attitude that so many of our pupils seem to retain for too long.

Ringbom’s research continues with a comparison of the differences in language learning between Finnish speaking and Swedish speaking Finns. His conclusions are that:

• the role played by perceived language distance is very important. Even the linguistically naive learner quickly realized that for some languages that he learns, his knowledge of L1 (and of other languages) will be of greater use than for others.

• the learner’s knowledge of L1 (and other languages) forms a basic resource to which the learner, especially in the initial stages of learning, can turn in his making use of general language learning principles.

I believe what Ringbom has highlighted here is important; what he is drawing our attention to are the linguistic strategies which our pupils employ, whether consciously or not, in the initial stages of language learning. They automatically go for the transliteration stage; mother tongue syntax — foreign language lexis.

And returning to our previous examples, here is in part the reason for rapid advance in English language learning noted in European students; If the L2 language lexis is an invariable, then it is produced by one cognitive process once learned; if the L2 language lexis is multiple, then the student has to discover, create and develop a means of choosing between possibilities; how much easier must it be for a French or German pupil to substitute for their 4 or 16 forms respectively the single word “the”; whereas how difficult it is for their English mother tongue speaking counterparts to choose between the 4 or 16 variations offered?
To recapitulate

English is a creole; as such it has no one single clearly definable source for its grammar; rather it reveals structures borrowed from one or other of the main parent languages Germanic & Romance; occasionally even both; it has also in a large majority of cases dispensed with both and developed the invariable form. On the other hand it has also increased the variety of forms available for other grammatical elements.

English language analysis is no longer taught in schools; pupils are left with a competency that is all performance; their knowledge of the language is minimal if existent; they have a “feel for language” that is entirely experiential.

They are not made aware of the qualitative differences between invariable forms; they are not made aware of the qualitative similarity between different forms.

In the former case they have thought processes which automatically reach out for the single word; in the latter case they lack the analysis to discern common grammatical usage.

So how can we begin to compensate? And can the micro-computer aid us in this endeavor?

We need systems, which, from the initial learning stages onwards, can gently dissuade our pupils from using incorrect mother tongue influenced responses, while encouraging them to use those that will work, should the target language be in anyway related to the mother tongue.

We need systems that will highlight the language differences, be they rooted in invariable English forms or multiple English forms; and these systems should develop in our pupils either consciously or unconsciously, explicitly or implicitly, deductive or inductive processes of thought with all the cognitive processes that those imply.

After five years experience with CALL, used regularly once a week with all initial learners, I would like to suggest that the microcomputer and certain programs can in fact provide such systems and can help in developing those cognitive functions, that would appear to be necessary for the effective acquisition of a L2.
I used three programs; a word tester, a phrase/sentence tester and a context tester. The first was used at the beginning of each topic when the task to hand was the learning/recognition of new vocabulary and phrases. The second was used when, the vocabulary having been absorbed, pupils were learning to incorporate it into known or new structures. The final program was used once the whole context of the topic was being dealt with. In other words at each stage in the pupils’ learning process, they were being given support at the same level as their general stage of acquisition.

The first program that I would like to describe is one of the oldest on the English market. Published in 1983 it is a vocabulary learning program — but with differences that make it worth deeper consideration.

*French Mistress or German Master; Spanish or Italian Tutor* by Kosmos, comes with ready made word files; I recommend to all my teachers that they concentrate on creating their own files containing the vocabulary that they know the pupils have experienced over the previous few lessons.

I further recommend that this program is used from the first week onwards, with all pupils in a computer network room so that all pupils of whatever ability can have success immediately at their own level.

Example: The pupils have been learning the French for various objects in the classroom. Despite its straightforward appearance, this vocabulary contains some startlingly radical new thoughts to a native English speaker. The word for “the” appears in four forms; la chaier, la table, l’ecole, les chaises; accents are used in spelling; la règle, la fenêtre; letters appear where there are no sounds; tables, cahier, porte.

Let us suppose this set of vocabulary is the content of the first week of learning. The fourth lesson of the week is spent on a 10-12 machine computer network with 3 pupils per computer.

One advantage of this program as a vocabulary test is that the pupils can see the answers in advance by choosing to RUN the program. Some pupils, especially the timid, have what I call the horror of the blank page. It takes confidence in your own ability to put down what you know you know on a blank page. If you are not confident, then you hesitate even to start.
Here we can run the test through; the pupils can see what the test looks like; they can be encouraged to call out the meaning of the words they can acquaint themselves with the “look” of the page/screen.

Having run through the program, they can now, as a group of three, begin to test themselves.

The only other instruction they are given is that if none of them know what letter comes next, they are not to waste time; they just press the COPY/DELETE key and the next letter will be provided. And that on the first time round the number of COPY/DELETE key presses won’t matter.

This program has one great advantage; it only allows single letter entry and correct single letter entry at that. In my five years observation, I have noticed that, faced with the English prompt — the book — pupils would confidently enter the “l” of “the” immediately, indicating that they were aware already that the definite article in French begins with “l.” Hesitation only began with the next letter. There were 7 possible responses.

1. the correct letter “e” was entered because it was known having been learned;
2. the correct letter was entered because the pupil/pupils supposed “le” was the word for “the”;
3. the correct letter was entered because they chose between “e” and “a” — a discussion that would be openly argued between the group;
4. the incorrect letter “a” was entered because the pupil/pupils supposed “la” was the word for “the”;
5. the incorrect letter “a” was entered after a discussion of whether it was “le” or “la”;
6. another incorrect letter was entered because they didn’t know what came next;
7. the COPY/DELETE key was pressed.
Only the latter two responses would indicate little or no awareness raising had been done in lessons; all the others especially 3 & 5 indicate a high level of awareness raising to the fact that the target language has more than one form for “the.”

Responses 1-3 would allow the computer to enter the correct letter; responses 4-6 elicit a bleep from the computer and nothing is added to the screen; the pupils are now halted from proceeding further until they have rethought and come up with a new answer.

And it is this one element in this program that makes it so invaluable.

I call it the positive side to negative learning; the pupils are immediately made aware of an error; they cannot proceed without rectifying it; they are forced either to re-think (tactic 5 would give an immediate correct alternative indicating that the learning process has at least progressed to choosing between le or la) or they must “give up” so to speak and press the COPY/DELETE key for the answer.

What this does in effect is immediately reshape the automatic response. Most groups achieve a test of 10-15 words three times within the lesson of 35 minutes. During the second go such comments can be heard;

“No not ‘la’ for book; it’s ‘le’. Remember you put ‘a’ last time and it was wrong.”

Or

“I know its ‘l’ but is it an e or an a?”

“Le livre? La livre?”

I like the latter response and encourage it as much as I can, because it shows pupils making use of their own internal aural recall which checks sound with thought. I know of few classroom exercises that “force” this basic language learning skill. By the third go at least two thirds of the articles will be correctly entered without hesitation even by the weakest pupils, while the best pupils will be entering them correctly and with little or no hesitation or discussion.

I would like to emphasize also the importance of the use of the COPY/DELETE key. I said that on the first run-through I actually encourage pupils who don’t know, to make use of the COPY/DELETE key. At the end of the exercise, the number of these key presses will be displayed. Now the complete exercise or test reverse its aim; pupils no longer care about the correct key presses; all they are interested in is reducing the
number of COPY/DELETE key presses. This totally alters the attitude to vocabulary testing and unlike any other method I know; weaker pupils are pleased to end a lesson having progressed from thirty COPY/DELETE key presses to only eight; or from ten to two; to them this is progress — which of course it is.

But I know of no other testing system that encourages pupils to repeat a test over and over again just to gain the equivalent of fewer “red marks.” Certainly no paper and pen test would be responded to in this manner.

So from the very beginning of their language learning pupils can test what they have learned, be immediately made aware of wrong responses and be given the chance to rethink or to reinforce new strategies.

I also use this same program for reinforcing the fact that English has multiple alternatives for single foreign language forms e.g. verbs.

Each entry can consist of three lines; so I fill the French with je vais and the English with I go, I am going, I do go; thus implicitly pointing out that all three forms are translated by one French form.

I discovered very quickly after integrating this program into my lesson scheme that we no longer needed to set a vocabulary learning homework and test it in the traditional manner. Pupils used the words in class tasks because they knew them; they had learned them. Receptive use was most obvious initially and productive use followed more or less shortly depending on the pupil’s ability.

Once the vocabulary of the topic in hand was introduced and mastered, we would then proceed to put this vocabulary to use within structures and context. The new structures would be supported at the end of the week by a second program, Word Sequencing by A & R Creations.

Again the file would comprise sentences or phrases met during the previous three lessons. Once again we had the use of a computer network, with 3 pupils to a computer.
The first file might be a reinforcement file for gender, in which pairs of nouns with their articles would be juxtaposed e.g. Les chaises et la porte. La gomme et le cahier. It is essential that the first word has a capital letter. The computer picks up each entry and jumbles the words up on the screen.

Chaises la porte Les et

The pupil on the right has charge of two keys which move a small arrow back and forth along the line highlighting any word. The pupil on the left is in charge of two keys which move the word highlighted by the arrow back and forth along the line. The third pupil watches and gives instruction or correction and, when the phrase or sentence is thought correct, presses the full stop key.

In these first simple files, process is restricted:
  Where is the capital letter? Put it first.
  Locate the two nouns.
  Which one goes with the first article?

Once again either visual or aural recall within the mind will help. Weaker pupils will guess. But once again they will be instantly corrected and given the choice to rethink. As there is only one alternative, they get it right second time and the theory of the positive side of the negative learning come into play once again.

On more complicated structures the possible responses are more numerous but can also be listed. Let us suppose the pupils are being introduced to adjectives; this time the new “thought” processes are a) that most adjectives follow the noun but that some precede it, b) that the form of the adjective will change to agree with the gender of the noun and & c) that the adjective form will change to agree with number i.e. plural.

Example: noir et grande souris chien Un noire une grand

As with the previous program, close observation can allow the listing of the possible processes used by the pupils to come to a correct solution.
1. Instantly recognize content; sort according to visual or aural recall; check using either or both.
   • The same but with spoken externalization of solution after recognition; perhaps in conjunction with pointing out words in sequence.
2. Gist read information words; discuss in group and decide content/recognize content; sort according to aural or visual recall; check using either or both.
   • The same plus spoken externalization of solution after decision regarding content.
3. Gist read information words; guess content; begin to move information words; externalization of possible solutions/movement of function words; correct solution.
   • The same but with incorrect movement of function words; experiment with the latter usually accompanied by the reading aloud of permutations as they are sorted; recognize correct solution either aurally or visually; correct order.
4. Failure to link information words; random movements; recognition of solution (English translation given); failure to sort out function words; help given.
5. Failure to recognize content at all (rare); help given.

In cases 4 & 5, the help consists of the teacher reading the correct solution aloud; the pupils repeat; the teacher repeats; the pupils are encouraged to point to the words as they are spoken; the group is left to sort out the sentence.

Other pupils benefit from this spoken repetition by teacher. Some hold “sound patterns” in memory; others more easily recognize visually the content, as and when that sentence appears.

Among other observations made during this exercise are the following:

**Most heard comments**
• “That sounds right.”
• “That looks right.”
The first of these is frequently heard; when pupils are asked, why it “sounds” right when neither they nor the computer have uttered a sound, they usually reply “It sounds right in here” tapping their heads. Again this is evidence that the pupils are making good use of their internal aural recall, a natural language learning device, all too neglected among classroom exercises.

**Most observed strategies**
- The picking out of key information words; pointing to words and reading the solution aloud, while the words are still jumbled. It is noticeable that the majority of students use this strategy initially.
- On subsequent exercises on the same file, they tend to drop the reading aloud and work silently in unison using the two set of keys to re-order the statement. The only comments during this stage are any necessary corrections, should either of the two key pressers over or undershoot the correct position; this may or may not be followed by a reading aloud of the correct solution.

This allows for the weaker pupil/s in any group to reinforce any persisting errors in both the look and sound of the solution.

**Most observed development**
- The externalization of the solution becomes internal; the solution is worked at in silence with the active participation of the two pupils in charge of movement keys; the third pupil watches silently and corrects verbally if necessary.
- By the time the same exercise is being run through for the third time in any one lesson, the majority of pupils will have reached this stage.

The need for the teacher to support by reading sentences aloud diminishes as the program is repeated; by the end of the lessons the weaker pupils will still be at the externalization of solution stage; the stronger pupils will be able to internalize procedure. The best will be working automatically.

A third program is used in subsequent weeks; FUN WITH TEXTS by CAMSOFT is a text authoring program, offering 7 different manipulation exercises for any one text. A text of 18 lines is created that incorporates the vocabulary and structures met by the pupils; such texts range from role plays to stories, descriptions to single sentences.
Not all of the manipulation exercises found favor with the pupils; they preferred to begin with COPYWRITE (hard) in which the text appears on screen for as long as the pupils wish to familiarize themselves with it. The text can then be removed by one key press and the letters of each word are replaced with a dash; the punctuation remains. Pupils then can type in any word they remember; these words do not have to be sequential, although most groups tend to begin at the beginning and are usually able to fill in two or three lines immediately.

Other strategies noticed include the filling in of important information words such as times, dates, numbers, names. If a word appears more than once, it is filled in throughout the text; as each correct entry gains the group 10 points, they often, as they become more adept at the program, develop the strategy of filling in immediately words they know to appear more than once.

Words entered must be spelled correctly, otherwise the computer points to an error. For some pupils much of the story line would appear to be held in memory in translation, as they are prone to re-translating badly, so that “ils entrent” is understood as “they go in”; this is then re-entered as “they go” and “in”; as this will not be accepted by the computer, instant rethinking has to take place, accompanied by much discussion. The teacher who is free to observe and listen, can elicit much about the thought patterns, misconceptions and faulty learning of pupils by these discussions, as well as helping them to discover their error and help them to safer strategies.

Having completed the task of re-entering the text, they then liked to move to PREDICTION; in this exercise only the punctuation appears on the screen; at the bottom appear five numbered words and the group has to predict which word comes first, then which word next, and the next and the next and so on, with the selection of five words changing after each correct entry. It is advisable to insist from the start that the group do not identify the word chosen by its number, rather that they once again divide the task among themselves. The person in the middle calls out the word, the person on the left presses the correct number key and the person on the right presses the ENTER/RETURN key. This way they are gently forced into speaking; as a natural development it was noticed that the middle person tended not to just read the word chosen but to begin again at the beginning of the sentence or phrase, each time adding in the new word; this again develops good aural acuity, so that the correct word “sounds right” and just as importantly the wrong word doesn’t.
One further strategy was developed by a pupil, who would as a third exercise, select COPYWRITE (easy), in which the text is again blanked out but the initial letter of each word retained. Instead of setting about rewriting the text, the pupil used the screen as a prompt to orally recall the whole story.

It is here where we reach the current position of my research. I am fascinated by similarities in my observations to two things — more knowledge of which I am actively exploring:

1. The connection between externalized speech and the development of thought; vs. Vygotsky has a great deal to say that would support my next theory, namely that the benefit of these programs is their capacity to coax from students externalization of problem by speech, which then rapidly becomes internalized as the problem is conquered and at last develops into fully automatic thought.

2. Not being a computer technologue, I hesitate before others more versed in the finer and higher mathematics of computer lore to mention neural algorithms. Suffice it to say here, having watched a TV program where a machine was being left to develop for itself its own program to achieve a set task via neural algorithms and having understood immediately that this too, simply put, is “the positive side of negative learning,” I am convinced that the brain functions on this sophisticated trial and error system. “If my first thought doesn’t work, then adapt it until it does” is to state the case too simply; to it must be added the retention of knowledge of past failure of effort. The building of neural networks to accommodate new needs is absolutely fundamental to language learning — especially when, as stated at the beginning, the mother tongue is lacking in processes that are essential for the production of and the understanding of the target language.
FINAL CONCLUSIONS

1. The inconsistencies of English grammar, the frequent use of the invariable form and the lack of training in grammatical analysis leave English mother tongue speakers with few automatic procedures (cognitive processes) to call on to aid the learning of L2.

2. Yet it is axiomatic that beginners will be unable to suppress the automaticity of their mother tongue in the initial stages. Furthermore the recognition of similarity between lexical items in the two languages (L1 & L2) may well encourage them to believe that there is a similar syntactical parallel.

3. This leaves English mother tongue speakers at a disadvantage compared to their continental counterparts as the latter need to employ a strategy of reduction whereas EMTs must move from the single choice to multiple choice requiring analysis; this latter process is not present in mother tongue strategies nor from curriculum based training.

4. Certain computer programs can, if used ab initio, develop in pupils new cognitive strategies enabling them to proceed from externalization of “problem” to internalization to automaticity.

This can hold good for both the learning of vocabulary and structures. These programs enable pupils to develop a knowledge or feel for the L2 that can be either explicit or implicit, depending on the individual pupil’s own competency. They help suppress or correct mother tongue influenced errors at source; they encourage the rethinking of possible alternative strategies; they offer opportunity to reinforce new thought processes until such processes become at least internalized, if not automatic. And by the development of these cognitive processes the process of language learning can be accelerated towards language acquisition, where the pupil no longer consciously deliberates over lexis or syntax; instead the thought processes are becoming so automatic that the correct word and structure offer themselves immediately to the pupil.
SOFTWARE REFERENCES

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