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Implications of the Age Factor on the Process of Acquisition of an L 2

From Henry Sweet, who almost a hundred years ago intuitively knew that there were differences between children and adults in the process of acquisition of a foreign language,¹ to E. Lenneberg, who in our own time attributed them to the cortical lateralization which takes place at puberty when language functions become localized in the left cerebral cortex,² the problem of age of the student has been present in the methodology of teaching an L 2.

Yet, apart from selecting a different type of vocabulary and content in the textbooks for different age groups of learners, this problem has not been paid much attention by educationalists.

Investigations by a number of linguists and psychologists into the process of the first language acquisition³ shed some light, however marginal, on the acquisition of an L 2.

Thus Lenneberg maintains that children before puberty are much better learners of a foreign language than adults. He claims that "most individuals of average intelligence are able to learn a second language after the beginning of their second decade, although the incidence of 'language learning blocks' rapidly increases after puberty. Also, automatic acquisition from mere exposure to a given language seems to disappear after this age and foreign languages have to be taught and

¹ H. Sweet, *Practical Study of Languages*, OUP, 1964, p. 75.

² E. Lenneberg, *Biological Foundations of Language*, J. Wiley, 1967.

³ E. Lenneberg, *ib.*

W. Penfield & L. Roberts, *Speech & Brain Mechanisms*, Princeton Univ. Press, 1959.

learned through a conscious and labored effort. Foreign accents cannot be overcome easily after puberty".⁴

W. Penfield⁵ came to almost identical conclusions about cortical lateralization at puberty and its impact on language acquisition. According to some recent studies,⁶ however, cortical lateralization is completed much earlier — at the age of 5 and so cannot account for difficulties in foreign language acquisition after puberty.

Even if biological discoveries of this kind — for the lack of appropriate methods of investigation available at present cannot be taken for granted — puberty seems to be a point in human life when difficulties in acquisition of an L 2 begin. Larsen and Smalley attribute them to psychological and social maturation: "It apparently becomes more difficult for the individual to submit to the new norms which a second language requires".⁷ Curran claims that children acquire second languages better than adults because they are less threatened by the sounds of the new language and because they are willing to depend on others for support in learning.⁸

It seems that several questions in connection with the age of the students should be answered before further efforts are undertaken to find out more about the complex processes present in the course of acquisition of an L 2.

Speculations based on empiricism and intuition sometimes work but very often do not — as we all know from bitter experience — and there is little they can do to help obtain the answers in our time in which efficiency, speed and facilitation of the acquisition process are prerequisites put forward by the growing demand for communication between peoples speaking different tongues.

On the other hand, borrowing more "scientific" techniques of investigation from other sciences, however much we expect from it, can be very dangerous, as the complexity of human factors both on the side of the emitter as of the receiver of messages (teacher — learner) can hardly be accounted for by existing methods of objective measurements.

Joining the efforts of a number of people who try to discover more about the way an L 2 is acquired, we set out

⁴ E. Lenneberg, *ib.*, p. 176.

⁵ W. Penfield & L. Roberts, *ib.*

⁶ S. D. Krashen, "Lateralization, language learning and the critical period, Some new evidence", *Language Learning*, 1973, 23. 63—74.

⁷ D. Larsen & W. Smalley, *Becoming Bilingual*, A Guide to Language Learning, 1972, New Canaan, CT, Practical Anthropology

⁸ C. A. Curran, *Counselling-Learning: A Whole-Person Model For Education* New York, 1972, Grune & Straton.

a couple of so called "natural experiments"⁹ which may hopefully, even if on a small scale, contribute to answering the following questions:

- Are there essential differences between pre- and post-puberty acquisition of an L 2?
- Is there an optimal age for starting an L 2?
- If there is one, what factors are vitally important for the successful accomplishment of the task?

Investigation No 1

In the 1973/74 school year an experiment was undertaken at the English Department, Zagreb University, to investigate to what degree, if any, children before the age of puberty acquire English with more ease than learners who have passed the "critical period" of "maturation of the brain" — to use Lenneberg's terms.

60 beginners age 9 and 60 beginners age 17—19 were exposed to the same language material, delivered by the same method and approximately the same techniques of work, for the same period of time.

It was impossible to find in Zagreb groups of learners who were not exposed to any English at all, as all young people have contacts with English through the mass media, such as television, films, pop-music, etc. Moreover, most of the young people are very strongly motivated to study English. We had to content with those learners who so far did not have any systematic contact with English.

The younger group of learners was recruited from a primary school in Zagreb. They were 9 years old and they had not studied any foreign language until then.

The older group consisted of learners from a secondary school in Zagreb, age 17—19. At that time they had been studying German for 5—6 years.

We were allowed not more than nine hours of teaching time for our experiment. This short time was divided into three units, each consisting of three periods. The staff conducting the experiment was made up of a teacher and a group of ten students from the English Department. In the first period of each unit, the teacher worked with the class of thirty learners. (There were two classes of younger, and two classes of older pupils.) The English students were present as

⁹ Soviet psychologist S. L. Rubinstein defines a natural experiment as a process in which conditions of experiment are under investigation, while the examinees performance is left to its natural development, S. L. Rubinstein, *Psihologija mišljenja i govora*, PKZ, Zagreb, 1950.

observers. During the following period, the class was split into groups of three. Each group of three received an English student as a leader. He approached his three learners almost individually, practicing the elements of the phonetic system, structures and vocabulary taken up in the previous lesson by the teacher. The third period was devoted to revision by the teacher and to testing. The test examined the learners' perception on the levels of pronunciation, structures and vocabulary, by means of minimal pairs of sentences given by a model on the tape-recorder. The same layout was applied in each of three units.

At the end of this short course there was an oral test embracing the language material practised in the course of 9 periods. Each learner had to answer ten questions. The answers were recorded and analysed from the point of view of the learners' performance on the level of pronunciation, structures and vocabulary.

The choice of the teaching material was a problem, as it had to suit learners of 9 and 17 years. It was an impossible demand on any teaching material, and almost a sacrilege from a pedagogical and psychological point of view. But if we wanted to compare the learners, we had to keep the material equal. After consulting all sorts of beginner's courses, we decided on the AV English course by Filipović-Webster-Filipović¹⁰ which had been for years successfully used in Yugoslavia as well as in some other countries, especially in France and Hungary. It had been designed for adults, but as the first three units deal with subjects close to the children's interests — the visit of a friend, the lay-out of an English house, the garden, it suited our purpose very well.

The method used was a sort of modified AV method. Material was presented through pictures on the film-strip and sound on the tape-recorder, simultaneously. When needed to clarify the structures or the cultural content, explanations in the mother tongue were given. e. g. the English habit of tea-drinking as opposed to our habit of coffee-drinking, characteristics of a traditional English family house, etc. The first period of each unit followed the scheme of an AV lesson:

1. watching the film and listening to the tape-recorder, (normal and slow-speed version)
2. repetition of utterances after the tape-recorder
4. discussion of the individual sentences with the help of pictures.

¹⁰ Filipović-Webster-Filipović, *Engleski, Audiovizuelna metoda*, I. dio Jugoton, Zagreb, 1964.

5. acting out the dialogue

During the second period of each unit the learners worked in the small groups, getting all the help they needed from the leader of the group. They practised the language material from the text, but were not bound to the cliches and phrases in the text. Additional drawings were provided to practise the vocabulary and structures.

Results

Results of the experiment were analysed in three ways:

1. analysing the tests of perception,
2. analysing the tests of production,
3. observing the pupils' reactions in the course of the teaching process.

Test of perception

The younger and the older group were compared on the basis of the positive answers in the tests of perception. The results were processed by a computer. Although they are not statistically significant they are interesting as an indicator of what has been found. The percentage obtained is presented in the table. When the younger and the older group are compared, we can see that the scores of the older group are higher, especially in the first and the second test. In the third test the results of the younger and the older group are almost identical. When the three tests are summed up, we see that the older group shows better results. The percentage of the positive answers is higher in the older group 82 : 71 on the

younger group (9 years)	1st test	Pronunciation 79%	Structures 81%	Vocabulary 54%
	2nd test	77%	78%	75%
	3rd test	64%	69%	75%
	all three tests	71%	78%	66%
older group (17—19 years)	1st test	91%	91%	76%
	2nd test	91%	81%	91%
	3rd test	64%	70%	78%
	all three tests	82%	81%	81%

level of phonetics, 81 : 78 on the level of structures, and 81 : 66 on the level of vocabulary). An off-hand response to this fact would be that the adults acquire English with better results and with less difficulty than the children. (see the table).

They by all means have certain advantages, such as more insight into the functioning of language, the experience of studying their mother tongue and some other language, and last not least, they have reached a higher stage of intellectual development.

And in spite of all these advantages, the differences were most pronounced in the first test. It leads one to the conclusion that when the young group overcame the anxiety caused by testing and the older group exhausted their inventory of the elements of English they had already been familiar with, the results became almost identical.

Scores in both groups show a similar decline. The results were best in the first test, except for the first test of vocabulary, which scored unusually low. This is due to the difficulty of the test; it was above the level of the other tests and this naturally had to be reflected in the results. The decline should surely be attributed to a certain exhaustion of the learners who had to grasp a significant amount of material in a relatively short time.

It is surprising that the results of the tests on phonetics in the younger group show lower scores than the results in structures or vocabulary, even though the children are claimed to be best in the acquisition of the phonetic system. But this can be explained. The tests required discrimination between pairs of phonemes e. g. i/i: ou/au, iə/eə, and this of course involves an abstract process of analysis, above the intellectual standard of this age group. The analyses of the tests of production will show a completely different picture on the level of phonetics. On the level of structures the scores in the younger group are very high. Since in these tests the learners had to discriminate between a sentence in a correct word order and one in an incorrect order, we can assume that the high scores are due to the ability of learners at this age to acquire structures globally. They probably "felt" by a change of rhythm, or different intonation, when the sentence was not identical to the one practised before.

The high percentage of positive answers in both groups may seem unrealistic. But considering the fact that the learners had the opportunity to practise the language material in small groups almost individually with a qualified leader, and that their individual needs were brought into focus, such results should be expected.

The results of any average language class could be much better, were there not limitation in school systems which force the teaching of foreign languages on a Procrustian bed of other school subjects. If the teachers had the opportunity to work in groups of three instead in a class of thirty, at least for one part of the teaching time for the first two years, when individual attention is mostly needed, success in teaching would probably rise considerably.

Tests of production

The learners' performance was tested at the end of the experiment, which was completed within two weeks. Each group had been working for 9 periods. The test of performance was conducted in the following way:

Each examinee was asked 10 questions covering the language material practised, but not the clichés from the text. The questions were prompted by visual stimuli on a flannel-board. As the testees were examined in groups of two — to diminish the feeling of insecurity always present at any formal examining, two identical sets of questions were provided. The answers were recorded and then analysed from the aspect of pronunciation, command of structures and command of vocabulary. 20 different sentences were uttered 60 times each, 30 times by younger, and 30 by the older group.

The following have been observed: the most striking differences have been noticed between groups of different ages on the level of pronunciation. The older group as a rule have been using mother-tongue approximations of English phonemes. The deviations from the norm were such that they sometimes blurred meaning.

The younger group had reached a considerably high standard of pronunciation, using authentic English phonemes and intonation patterns in most cases. Especially noticeable were centralized (i) and dark (l) in the word (milk) and alveolar (t), and (d) in the words (tri:) and (bedrum), which were by the older group pronounced the way they usually are by Croatian speakers of English: with front (i) and light (l), and dental (t), and (d), respectively. The younger group was very successful in producing the English phonetic system, which they acquired by imitating the models of the native speakers.

An interesting phenomenon was observed when their command of structures was analysed: adults tended to give full answers to the questions, whereas children were in most cases satisfied with the shortest answer possible. (e. g. Is the dining

room upstairs?No.) It points to the fact that children understand the basic relations and basic meaning of the sentence, but refuse to bother with details. It is very much in keeping with their development of speech in their first language, where they pass from one word utterances to more complex ones. It also shows that the mechanical approach, based on the imitation of utterances that used to be so popular in teaching children foreign languages, should by no means be the only approach used for this age group. They are capable of using the language creatively, within the limits of their age.

The use of the definite article presented equal difficulty to both groups. In most cases the article was not used at all during testing, in spite of the fact that much attention had been paid to it throughout the practising period. This of course can be explained by the interference of their mother tongue. Since in our language we lack this category, the absence of the frame of reference makes it (as Libuša Duškova has already found out among Czech speakers) one of the heaviest forms of negative transfer.¹¹

The adult group were better in mastering certain morphological relations, such as the singular and plural of demonstratives. The difference between the two did not mean a thing to the young learners, as it was obviously too abstract for their age. So e. g. the answer to the question "What're those?" (apples were placed at the far end of the flannel-board) in the younger group varied between: "This is apples", "That is apples", "That are apple", "That're apples", "That is apple", but in 23 out of 30 answers the initial vowel had an exact English quality. On the other hand, the older group was more proficient in handling the structure of the sentence, but the quality of the initial or any other phoneme had no resemblance to the English phonemes. The example of the sentence "These're flowers" was interesting. There were no difficulties with singular and plural, as this noun appeared only in the plural (and such was the model on the picture). But while the younger group pronounced it almost elegantly, the older group offered combinations such as (f l a i e s), (f l a u s), (f l o i e s).

The degree of vocabulary mastery depended for the younger group very heavily on the context. If the relation between signifier and signified was clear to them, and the concept of the word existed in their mind, they could remember and

¹¹ L. Duškova, "On Source of Errors In Foreign Language Learning", IRAL, 7, 1969, p. 11-36.

pronounce the word with no difficulty. The difference between the word 'bedroom' on one hand and "dining room" and drawing room on the other was striking. They had no difficulties with "bedroom", one even noticed a certain pleasure in pronouncing the phonemes in the English way. "Dining room" and "drawing room" they could neither pronounce nor remember well. As they were children coming from smaller flats the concepts of the words "dining-room" and "drawing-room" were far from clear to them, in spite of the models on the pictures and flannelboard. Difficulties of this kind were not so pronounced in the older group. The noun "name" in one context presented no problem; they could all answer correctly the question "What's your name?" But when they were shown a card with a well-known name on it and were supposed to say "It's a name", they had difficulties in remembering the word, although the same card with the same name was shown and practised before. It indicates that in the question "Wat's your name?" they understood it to be the signal to say one's name, whereas the isolated noun "name" was conceptually too abstract to be internalized.

Although the findings of the investigation cannot be generalized before they are re-examined on a much larger sample of learners in the course of a longer period of teaching, a tentative answer to the 1. question could be provided.

There were differences between the pre- and postpuberty acquisition of English. They were not absolutely in favour of the younger group, since the post-puberty group, as it has been pointed out, had certain advantages (more insight into the functioning of language, the experience of studying their mother tongue and some other language, intellectual maturation) and so they were faster learners of structures and vocabulary.

Findings similar to these probably made Clare Burstall and her collaborators conclude¹² that older learners show better results in studying foreign languages and that, consequently, introduction of French at the age of 8 in the British primary schools should be discouraged and postponed to a much later age.

Our findings on the contrary led us to conclude, that no matter what the actual number of structures and amount of vocabulary that young children could master, and it could be quite considerable provided appropriate materials and appropriate techniques of work were used, they were superior to any other age group of learners in the acquisition of the pho-

¹² "Primary French in the Balance". A Report from British "National Foundation for Educational Research" written by Clare Burstall and her collaborators in 1974.

netic system. Our experiment was in keeping with Lenneberg's remark about the "language-learning blocks" which become frequent after puberty.

If we still believe that, in learning a foreign language accurate pronunciation is one of the goals, if only for one reason — the feeling of security and self-confidence of a person who pronounces a foreign language well — an early start in children's acquisition of an L 2 should be insisted upon. How early — our next investigation should offer some clues about.

If puberty is taken as a point in which difficulties in the acquisition of an L 2 begin — and there seems to be enough evidence that it is so, even if no risk is taken to attribute them to any specific cause, — an early start on an L 2 will give children enough time to acquire the phonetic system of an L 2 using a limited amount of structures and vocabulary. When they grow to the age of biological, social and psychological maturation they will be able to proceed to more subtle and abstract uses of the language, having in store already the phonetic system of the L 2, an asset hardly ever achieved to satisfaction at a later age.

Investigation 2.

The project started in 1975. Unlike the first, short-term investigation, this one has been planned to stretch through as much time as necessary to come to the optimal results. As in the first experiment, the setting was a formal classroom situation.

The first stage of the Project was completed in the school year 1975/6 and during this time a sufficient amount of data was gathered to direct the further work on the Project. The main technique of work has been longitudinal observation.

70 children aged 6 — 9 were observed during a year-long process of studying English at a language school in Zagreb.¹³ 4 teachers were running the pilot courses, two periods per week, in groups of 10 — 12 children.

The task of this stage of the Project was to test new teaching materials designed by D. Vucelić and V. Anić, to investigate which age between 6 and 9 would be optimal for starting an L 2, to observe the ratio between intelligence and success in learning, the impact of motivation on the success in learning, the origin of the mistakes children make in their L 2 performance, and the relation between cognitive and mechanical acquisition of L2.

¹³ Institut za strane jezike Narodnog sveučilišta grada Zagreba.

Work on Motivation

In the course of the year every child was interviewed two times. Questions were directed so as to investigate motivation. The first interview was held at the beginning of the course to investigate the students motivation which was taken as resulting mainly from their parent's attitude towards English, and the second, in the second half of the course when it was assumed that children's motivation would be mostly based on the work and attitude of the teacher.

In the first interview the attention was directed to the reasons that made children come to study English. According to the answers obtained, the most frequent reason was the desire for communication with people in different countries, English being one of the world's languages. Other reasons were: the desire to talk to the foreigners on holidays in Yugoslavia, the ability to follow films in which English is spoken and to get along and be understood when travelling to Britain or America.

It was obvious that the reasons were due to parents' attitudes towards English. All the children had a positive attitude towards English with the exception of a little girl who reported that she did not like English and was forced to come by her father, while mother and herself would prefer French. She remained disinterested in the activities going on in the class for the first half of the course. She stubbornly refused to participate; the situation changed only after the teacher organized a couple of interviews with the parents.

In the second interview the attention was focused on the children's attitude towards the classes themselves. All the children reported that they enjoyed coming to classes as there they had a lot of fun and felt relaxed. They all liked their teachers who were selected from among young, able persons who liked their job and children.

It has to be pointed out that children did not have to stick to very formal discipline and consequently, they felt at ease in most cases. They reported that they preferred English to school. (A boy who at school had a very strict teacher said he liked coming to English because there he had some piece and quiet, meaning probably that he was relaxed).

The feeling of relaxation which could be seen on children's behaviour varied from teacher to teacher.

The pupils of a teacher who treated them as equals behaved in the most open and relaxed way. There, also, the emotional link between the teacher and children was the

strongest. Two groups of children of this particular teacher were most active in talking English and using it as a means of communication to express some real content with it. Their English was of course quite abundant with mistakes as they were so keen on using it that they were creating their own systems of expression whenever their repertoire of acquired elements of English was lacking. So e. g. when they saw a picture of a pig-sty, they readily used the word Pig-house as they knew the words pig and house before.

Motivation depended so much on the individual teachers, that in one teacher's classes students were getting ready to go home in the middle of the class, whereas in the next teacher's class where they had been doing exactly the same thing they sometimes had to be told twice to leave when the class was over.

It is because of this complex human element and its impact upon teaching that we were reluctant to introduce much objective testing at this stage of the Project.

Our observations proved once again that motivation is one of the most important elements in the acquisition of an L2, and in this age group however important the parents' attitude towards the subject at the beginning, in the course of the process it becomes predominantly the responsibility of the teacher. It seems that the feeling of ease of the child and the positive emotional link to the teacher accounts for the grater part of success.

Some Observations in Connection with IQ.

It seems that young children — age 6 — 7 whose IQ was above 110 could follow the work without difficulty, and were strongly motivated, whereas those whose IQ was below 110 were rather slow and felt insecure and puzzled.

On the contrary, with children of 8 and 9, the difference in IQ did not matter so much. In one group the quickest progress was observed in a girl whose IQ was 110, although in the same group there were children whose IQ was above 120 and even 130.¹⁴ But the 110-IQ-girl was exceptionally motivated to study English and motivation, apparently, counted more than intelligence.

If these observations prove correct after they have been submitted to further investigation on a much larger sample of learners, they might be of some help to the educational

¹⁴ IQ measured by Raven's Progressive Matrix Test, modif. 1974.

authorities in deciding when to introduce foreign languages into schools.

At this stage of the research, our tentative answer is that the age of 8 — 9 would be optimal for a successful start on an L2 for most of the children, whereas the age of 6 or 7 would suit those whose intelligence is above average.

A Creative or a Mechanical Approach for Young Children?

The Teaching materials of D. Vucelić and V. Anić grew out of their reaction to years-long experience with habit-forming methods.

They wanted to offer their young students more than parrot-like behaviour, bound to visual stimuli and classroom situations.

Impressed by the research of R. Brown on the L1 acquisition¹⁵ as well as that of H. Dulay and M. Burt on the acquisition of an L2¹⁶ they tried to make use of some of their findings in the design of their teaching materials. Not accepting Dulay and Burt's suggestion "to leave the teaching of syntax to the children"¹⁷ as the amount of the teaching time of two periods per week they were given was inadequate for such a strategy, they constructed their teaching texts including 8 f u n c t o r s, indicated by Dulay and Burt as being first acquired by children all over the world if English is their L2.¹⁸

They have built up the texts that should be used in the first year of study, in which the following f u n c t o r s are used: No 4 — plural (—s)

No 6 — possession (NP's)

No 8 — article (a, the)

No 14 — contractible copula (be_{np}^{adj})

No 1 — present progressive (—ing)

These 5 out of 8 F u n c t o r s mentioned by Dulay and Burt belong to a group of 14 f u n c t o r s discovered by R. Brown in children's production of early utterances in their mother tongue.

¹⁵ R. Brown, *ib.*

¹⁶ H. Dulay & M. Burt, "Should We Teach Children Syntax?", *Language Learning*, 23./2 p. 245—258.

¹⁷ H. Dulay & M. Burt, *ib.*, p 245.

¹⁸ A *functor* is according to R. Brown and Dulay & Burt, a grammatical morpheme required in almost any verbal utterance consisting of more than one morpheme.

Tests given to the children at the end of the year showed that they could speak "the real language" expressing the relations in the utterances by means of the "functors" they had mastered within the limited vocabulary they had been practising throughout the year.¹⁹ In the course of the process of acquisition it was observed that they understood the relations expressed by the mentioned functors and given the examples they could generate their own simple rules. ("It must be girls as there are three of them").

There are indications that Dulay and Burt may be right in hypothesising that there is a fixed order of acquiring structural elements in an L2 which is common to all children regardless of the mother tongue. If this were true, this would bring us closer to the discovery of universals in human language.

Our findings do not contradict the hypothesis, except in one instance — in the case of functor No 8 — the article, which our students were unable to internalize. We shall deal with it when speaking about the origin of errors.

If the hypothesis of Dulay and Burt proves to correspond to reality it could have extremely beneficial implications for teaching strategies. The designers of the teaching materials would only have to follow the hierarchy stated in advance to insure the maximum of success in the teaching process. (The plural of demonstratives which, in our first experiment, children were unable to either understand or use, is NOT listed among Dulay and Burt's 8 functors which is a point in favour of their findings!)

The results of the first stage of Project offer elements by which to conclude that children acquire an L2 in a sort of creative way, activating their innate abilities to organize structures.

But whereas in an environment where an L2 is spoken natively or where different immersion programmes are organised, this process probably takes care of itself, as suggested by Dulay and Burt, in situations where children are exposed to an L2 for two periods per week in formal classroom environments, syntax has to be systematized and graded. Dulay and Burt seem to have pointed to the direction in which to systematize it.

¹⁹ Children were asked to describe a set of pictures they had never seen before. The technique of testing was the one adopted in "*Bilingual Syntax Measure*", Burt, Dulay & Hernandez, New York, 1973, Harcourt, Brace Jovanovich.

The creative was not the only way in which children acquire an L2. Observing the groups of children throughout a year's period of study has proved once again what excellent imitators of the phonetic system of an L2 they are. They must be given a fair chance to acquire the sounds of the language as well as the intonation patterns by imitation of the native speakers before they become "threatened by the foreign sounds"²⁰

Set phrases that are frequent in an L2 should be acquired by imitation and memorization, too.

As regards the vocabulary, the same phenomenon was observed as in the first experiment. When the concept was clear to them and they liked it, they could both pronounce and memorize the word, without difficulty. In remembering the names of the colours, "black" was the only difficult word, obviously because they did not like the concept it presented.

A different type of difficulty was observed with the words "Squirrel", "turtle" and "hedgehog". Although the animals presented by these words are children's favourites, they had difficulties in pronouncing these words. It may either be that these words are difficult also to children who acquire English as their mother tongue, or, else, that the lack of the same consonantal clusters in children's L1—SC, makes it an interference difficulty.

To solve this problem parallel observations of children acquiring English as their L1 and acquiring it as L2 — preferably with different mother tongue backgrounds—should be undertaken.

Origin of errors

A number of errors found could be classified as "developmental", which, according to Dulay and Burt's definition, means similar to those made by children acquiring English natively.

Such were mistakes of type "mens", "sheeps". According to one of their studies²¹ in which they analysed 388 error types, 85% of the errors were developmental and only 3% fell into the interference category.

Although at this stage of the Project we have not made any error counts, trying to register the types of mistakes only,

²⁰ C. A. Curran, *ib.*

²¹ Dulay & Burt, *ib.*

the impression was that more than 30% mistakes could have been defined as interference errors.

A number of different types of errors have been observed in the use of the articles — definite and indefinite. An absolute inability to establish any generative rules for the use of the articles was observed among our children. The same phenomenon was observed in the first investigation.²²

Such errors can be accounted for only by interference of the mother tongue. Duškova's optimistic suggestion that the learners should build up intuition for the use of categories that do not exist in their L1 does not seem to work in practice. Our learners either avoided the articles or used them at random "It is a my book", "It is a red an apple", "I can see a ten dolls", "two an orange sticks". (In a more advanced group, in which writing was introduced they asked for the meaning of *the*. The teacher said it had no specific meaning, and the children's spontaneous response was: "then, why use it!" Two sisters who were bilingual in Serbo-Croatian and German started to laugh at this remark, as to them it was natural for the article to be used! They did not have any difficulties in using the article, as they had it in their mother-tongue background.)

In the use of the present progressive *be* was often dropped. Although this has been classified as a developmental error by Dulay and Burt,²³ it would not be unrealistic to connect it in our particular case with negative transfer of the mother tongue, where the corresponding present tense is formed without an operator.

Using *he* instead of *she* was frequently observed, although they were aware of the difference ("It must be *she* for the girl"). L. Selinker observed this mistake as common among adult SC speakers of English and attributed it to strategies of second language communication.²⁴

Gender distinction has not been included in the list of Dulay and Burt's "functors" in the children's acquisition of English as L2, so, perhaps, the mistake can be attributed to the premature inclusion of this category into the children's repertoire of English.

Our assumption that the number of interference mistakes in children's acquisition of an L2 is higher than 30% does not necessarily contradict Dulay and Burt's statistics, as the experiments were conducted under different conditions. Dulay

²² See p. 94 of this paper.

²³ Dulay & Burt, *ib.*

²⁴ L. Selinker, "Interlanguage" *IRAL*, Vol X/3 1972, 209—231.

and Burt's experimental groups were exposed to much more English than our particular groups, so we could hypothesize that the more children are exposed to an L2, the less interference mistakes occur and the process resembles more that of the acquisition of L1. In our particular case of two weekly periods of English, the acquisition of L2 was dominated by the presence of L1, which was at the beginning of the course used even by the teacher as a means of communication with children — to avoid acting on false pretences of L2 being the only means of communication which has often in the past resulted in frustration and demotivation of learners.

It was noticed however that the more children's repertoire of English was widened, the more English became a natural means of communication with children and between them.

Interference problems were least pronounced in the acquisition of phonetic system which was picked up by the children without difficulties, whenever good native speakers' models were provided.

It is doubtful whether interference mistakes should be examined at all in the course of children's acquisition of an L2, as their "compromise systems" so rapidly change.²⁵ The primary area that lends itself to the analysis of interference mistakes is the speech of advanced, adult learners of an L 2, where the mistakes are so easy to identify, but difficult to eradicate. Study of this area can, however, have implications on the selection of strategies used in teaching children an L 2.²⁶

Summarizing briefly the results of observations in both investigations, the following tentative answers to the three questions set up, at the beginning of the paper could be offered:

1. There are essential differences between pre- and post-puberty acquisition of an L2, the pre-puberty period being a time when a foreign idiom, especially its phonetic system, is acquired with maximum ease.
2. If there is an optimal age to start an L2, it seems to be the age of about 8, for children of average intelligence.
3. The most important factors necessary for the successful start on an L2 are a positive attitude towards this L2 at the beginning of the process and a strong motivation to persevere in the course of the study, which is at the age of 8 mainly dependant on the teacher.

²⁵ R. Filipović, "A compromise System" in R. Filipović (editor) *Studies 5, YSCECP*, p. 19—29 Zagreb, 1972.

²⁶ See: Publications of YSCECP, Zagreb, editor R. Filipović.

In formal situations where children are exposed to an L2 for a minimal classroom time (2 periods weekly) language material should be graded and systematized. The research of Dulay and Burt seem to indicate how to grade syntax material, not violating the natural order of children's L2 acquisition. Such a hierarchy is bound to facilitate the teaching process. The results of our observations, however modest, have supplied us with clues about how to direct our future work and base it on more precise methods of investigation so that one day someone may penetrate the secrets of the L 2 Acquisition Device.