FROM CORPUS TO CLASSROOM: THE USE OF ALIGNED CORPORA IN ENGLISH LANGUAGE TEACHING

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Abstract: This paper introduces flexible computer-assisted approach to teaching and learning English in elementary schools. It is based on preparing, producing and dynamic exploitation of aligned bilingual corpus before, during and after lessons. The approach is grounded on recognizing the advantage of contextually rich paralleled input, containing English and Serbian texts, which enables non-linear learning, encourages pupils' independence, provides wide repertoire of methods and teaching techniques, and enhances multiple-object orientation on several different language aspects simultaneously. All relevant circumstances concerning existing technical support and hardware and software equipment affordable in elementary schools have been taken into account. The emphasis of the cognitive dynamism initiated by the paralleled input used in learning and acquisition of foreign language has been presented both from the point of view of pupils and of teachers. The circular flux of attention from one version of the text towards the other, and vice versa, has also been captured and analyzed from the point of view of cognitive linguistics, with description of pedagogical valence of such shifts of attention in the borders of aligned English-Serbian corpus. Following description of pre-processing, selection of texts, tagging and the alignment process, we give the overview of some of possible applications of aligned English-Serbian corpus in everyday teaching and learning activities, along with potential future ramifications and improvements of the method. Predicting and implementing of those improvements in future perspective are becoming more viable thanks to the notable tendency of gradual moving of computer-assisted training and learning from the periphery towards the center of modern education.

Keywords: Paralleled input, multilingual corpora, aligned texts, pre-processing, tagging, the alignment process, non-linear learning environment, multi-focal perception, acquisition-rich environment, cognitive dynamism, cognitively dynamical context, peripheral learning, computer-assisted learning, symmetrical bilingual environment, aligned-text based teaching and learning methods and techniques

1. Introduction

The last decade has brought out accelerated accumulation of innovative approaches in modern foreign languages teaching. Many of those approaches are based on different, sometimes clearly opposite postulates corroborating countervailing attitudes, opinions and hypotheses. But no matter how divergent and implacable they are, all those approaches share single view – that priorities in qualitative advance of foreign language teaching, notwithstanding the level of education, are noticing of interfering circumstances and suggestions for their surpassing, with support of resources available, gains of profession, achievements of linguistics, and inevitable aid of technology, which has visibly moved from the periphery of elementary education towards its center.

The aforementioned dynamism of modern foreign language learning has posed several questions in answer to which we have made an effort to respond adequately and realistically through this paper. All activities related to foreign language learning and teaching crystallize around two core priorities – *systemic knowledge*, primarily related to grammar and syntax of foreign language, and *schematic knowledge*, related to cultural, thematic and ideational aspects of teaching materials. With those core priorities in mind, the vast majority of current books for foreign language learning has been composed. But striving to encompass those two broad domains, and due to consequent atomization of contents and micro-themes they cover, such books often give a picture of fragmentary and incoherent concoction of various micro-contexts focused on isolated sets of elements of foreign language, followed by similarly narrow exercises derived from such materials. Those language inputs are prevalently presented unilaterally, in foreign language only, even in those cases when they are in the absolutely different cognitive, psychological, or grammatical key of interpretation compared to the mother tongue, and when the comparative analysis would be precious during the initial contact of pupils with the cognitive challenge of this kind.

Therefore we strived to find the answer to the question – is it possible, and if it is, to a what degree, through technologically supported set of activities, to establish and develop the teaching and learning environment inside of which simultaneous systemic and schematic learning and acquisition of foreign language is provided, in macro-thematic, coherent bilingual domain of teaching materials? Could such environment, in spite of immensely complex nature it presupposes, be simple for use by learners and teacher of foreign language in elementary school, and opened to extensive adaptations according to changes in teaching surroundings?

Searching for the answer to the pedagogical challenge of this kind does not permit particular treatment of aforementioned aims, but the dynamism of the search reflects in unification of simultaneous activities in the same procedural plane. Leaning on some previous achievements has been unavailable, so we had to form a hybrid procedural plane, into which we have incorporated pedagogically valid achievements from different areas, which we have afterwards synthesized and harmonized according to requirements of foreign language teaching in elementary schools. In this hybrid plane short-termed and long-termed memory have been embedded, as well as fluctuation of pupils' memory during learning and acquisition of foreign language; context as unifying link among variety of heterogeneous language elements, fragments and structures which have their place in learning language input; translation, as process and product in the same time, which has to be weaved into teaching material, for the purpose of achieving symmetrical bilingual entering of teaching material into the classroom reality; text, as one of universal forms of presenting information.

All mentioned spheres of pedagogical reality which characterize teaching circumstances related to teaching and acquisition of foreign language and complexity of classroom reality, will be imbued with and unified by the new dynamics provided by the process of *textual alignment*, along with other accompanied activities in relation to that process. Computer-conducted alignment will provide *symmetrical bilingual environment*, where all teaching materials in foreign language as well as in mother tongue will participate in strict ratio one to one. Serbian version of text presents authoritative translation which intensifies pedagogical validity of teaching material, enhancing latent presence of translator in everyday teaching process. Discourse organizational features of text will provide thematic and conceptual coherence inside of whose diffuse borders activities of pupils will spread.

Parallel framing of teaching materials will present to pupils the picture of clear-cut materials, enhancing safety and predictive learning, as well as additional motivational trigger, removing any potential inhibition, which is so prevalent constant during elementary level pupils' encounters with new teaching material. Besides, all language materials, words, phrases, sentences, and even larger episodic instances of text, will be simultaneously framed, forming *textual duals*. Those duals will enhance simultaneous perception of language phenomena in foreign and mother tongue version of text, caused by synchronized dual perception. In that way some natural limitations of attention, memory and data processing will be surmounted, while during fluctuation of their values in the process of pupils' activities on the foreign language lesson, contextually-driven implicit and explicit learning will constantly shift. Authenticity and thematic coherence of aligned texts will surpass the isolation and fragmentary organization of language samples, which will ease adoption of new lexemes and grammar elements. Such highly contextualized environment,

according to Dornyei (Dornyei 2009), offers to pupils strong mnemonic motivation and makes possible for learned intake to become adopted and in all future instances of use perceptible as almost totally natural. We shall briefly view the stand of Lyne Cameron (Larsen-Freeman, Cameron 2011), who emphasizes that in learning a foreign language pupils do not perceive and master smaller sub-systems in isolation, but tend to perceive them most successfully as bundles of similar or analogous elements which function in unison.

Textual amalgamation achieved by procedure of alignment of texts will be visible not only during immediate exploitation of texts, during foreign language lesson, but also in circumstances out of strict borders of school learning, on occasions when pupils access to aligned texts before and after classes, during the period of their working day called by Pete Sharma "self-study period of a day" (Sharma, Barret 2011). That corroborates our stand that successful pupil is very often an independent pupil, the fact which we shall further intensify by proposing adequate modules which enhance self-initiated queries and investigations of bilingual linguistic-methodical texts which present basis of aligned corpus viewed as a resource in foreign language teaching and learning.

Pupils' independence will be reflected in various ways of adaptive control which they will exert during exploitation of aligned texts, which will further "controlled processing" (Ellis 2010), and multi-object orientation ("MOO – multi-object orientation"), described by Barret (Sharma, Barret 2011). But with this happening, the role of teacher will not lose its importance, it will only redirect its course, from prevalently teaching one, towards cooperative one.

Evaluation of pupils' work aided by aligned corpora will be easily adaptable to existing standard system of grading, it will be objective and controlled, because it will be constantly updated

electronically by registering material traces of pupils' activities in domain of aligned text, and stored in separate folders.

It is planned for bilingual aligned teaching materials to be equipped by adequate repertoire of methods which, thanks to parallel framing of teaching material, enhance nonlinear, adaptive moving through grammatically and lexically rich environment of aligned text.

Nonlinear gain of knowledge, as a general tendency in modern foreign language teaching, presents base of exploitation of aligned texts to pedagogical purposes, and has strong support of leading propagators of modernization of foreign language learning, such as Diane Larsen-Freeman, Claire Kramsch, Jeanette DeCarrico, Lynne Cameron, Gary Barkhuizen and others.

Discovering meanings and communicative intentions of texts, forming of categories, detecting of syntactic branching inside of larger discourse organizations, contextually enhanced acquisition of lexemes with simultaneous comparing to the same phenomena in mother tongue, are only some of possibilities during the aforementioned moving through and inside of diffuse borders of aligned corpus.

Methods and procedures in application which we propose for efficient exploitation of aligned corpora as a pedagogical resource are alternative from the point of view of conventional instructions and methods in foreign language learning. However, their basic intent is neither to suppress nor to marginalize conventional methods in English language teaching, but to be their corrective complementary aid, and to enhance creative, cognitively challenging and pedagogically valid foreign language lessons in elementary school. These methods do not present finalized and closed set, but are susceptible to creative adaptations to new teaching circumstances. Those adaptations are both desirable and inevitable, due to ever faster development of computer-assisted language learning, whose noticeable presence

at elementary education level becomes standard part of teaching environment, as a part of wider picture of electronic literacy, which is indeed precondition for substantial, efficient and independent learning.

2. The alignment procedure as a guarantee of bilingual balance of teaching material

Selection of texts, computer-aided preparation and processing, thinking the levels and degrees of exploitation out, and a range of other activities of technical nature accompany building of an aligned corpus. Multilingual aligned corpora are by themselves a special kind of corpora which encompass more than one language. A guiding principle is to align semantically equivalent texts to a certain recognizable level, which could be a paragraph, a sentence, a phrase or a word. Full alignment of texts is achieved when all units of text in one language are completely aligned with units of text in another language. It is the moment when a dual identity emerges, which is always more than a sum of separate identities, due to the synergy of coupled texts. Basic applications of such corpora are natural language processing, forming of memory units and bases for the purpose of translation, specific target terminology extraction, statistical machine translation. Various modes of automatic structure analysis of multilingual corpora have been used in applied linguistics, pedagogical linguistics and psycholinguistics.

Our approach presents the first attempt to use aligned corpora in a teaching process at the elementary level of education, thus turning aligned corpus into **dynamic linguistic-methodical text**, where language analysis and comparative observations present only one of many aspects of exploitation of such text. Non-linear inter-textual moving inside of a corpus is one of advantages when a foreign language teaching and learning is concerned, but it is also one of the inherent features of such corpora, as Krstev and Vitas put it

(Krstev, Vitas 2009): "However, the whole effort invested in producing an aligned text would be excessive if the text is eventually read in a linear order" (pp.10).

After the process of alignment of selected pedagogically valid texts is finished, computer becomes, in a sense of technical and memory aspects, an ideal bilingual at pupils' and teachers' disposal, for the purpose of teaching, learning and acquisition of a foreign language. When the question of the number of languages arises, concerning the purpose and the nature of our investigation, we have opted for bilingual corpus, although there are some impressive examples of corpora in the world which contain ten, and sometimes even more languages, comprising texts of public importance, art, law and litigations, scientific texts. Such bases are constantly being updated and built-up, because they present long-term projects in which very often there are more participants involved, at the level of scientific bodies and institutions from different countries. In case of our bilingual corpus, which comprises 28.000 words in this initial stage, the predicted increase is about 2.000 words per year, concerning all relevant pedagogical circumstances and the fact that there is only one person in charge of corpus building-up, which is the author of this paper.

While preparing a text for the alignment process, structural tagging is necessary. The structure of tag set determines expressive variety of corpus. Tag sets sometimes can be very complex and cardinal. These features depend on what is to be achieved by tagging. For instance, Serbian is more demanding than English if case relations are to be marked. We have adapted the tag set for our corpus to the primary purpose and pedagogical character of present and future exploitation of aligned corpora in foreign language teaching and learning in elementary schools. That tag set comprises tags : <body>, <div>, <p>, <seg>. These tags are used for marking beginning and

ending of a chapter - <div>, sentence - <seg>, paragraph - <p> and the entire text - <body>. In case of Hemingway's short stories which are core components of the corpus the length of a chapter has been treated as the length of the entire story, and thus the tag <div> has been used. All tags are coupled, which means that each opened tag has its closed counterpart. It means that contents of a chapter or a story are between coupled tags <div></div>, contents of the entire text between <body></body>, beginning and ending of a paragraph are bordered by <p></p>, and sentences by <seg>, </seg>. These or similar HML tags reflect basic branching logical structure of most types of text.

For achieving symmetrical aligned relations of two texts, after the preparatory activities and appropriate tagging, texts were processed by specialized program ACIDE (Aligned Corpora Integrated Development Environment), which had been developed by Natural Language Processing Group affiliated with the Faculty of Mathematics of the University of Belgrade. The alignment of texts presents a guarantee of symmetry, balance and textual equivalence of coupled bilingual resources for exploitation in teaching process.

3. Methods derived by aligned corpora exploitation – application in foreign language teaching and learning

Further in this paper we shall present numerous ways of application of aligned corpora in English language teaching in elementary school. While moving through the text, line by line or from one text to another, or during instantaneous leaps from one location in one text to some other location in separate document related to that text, which will be enhanced by the use of hyper-links, as will be fully described later, main orientation milestones will be **in-built focuses**, realized as one-word islands, phrases, sentences, or even larger episodic instances of text, highlighted by color or font. The number of such focuses is arbitrary, and they can

(Nisam mogao da savijem u kolenu – od kolena do članka beše ukrućena, a lista nije bilo.)

My knee did not bend and the leg dropped straight from the knee to the ankle without a calf.

Moje koleno nije se savilo i noga mi <u>pade</u> ispravljena *od kolena do gležnja* <u>bez teleta.</u>

My knee did not bend and my leg <u>fell</u> right *from knee to joint* <u>without a calf.</u>

Moje koleno nije se savilo, i noga mi <u>je pala</u> pravo *od kolena do zgoba* <u>bez teleta.</u>

My knee did not bend and my leg <u>fell</u> straight from my knee to my ankle <u>without calf.</u>

Moje koleno nije se savilo i noga mi <u>je pala</u> u pravcu *od kolena do gležnja* <u>bez teleta.</u>

Figure 1. Illustration of tracking the chain of deformation

exemplify grammar, semantics, lexis, semantics, or can be the starting point of analysis, drills, or more widely elaborated language learning activities. There can exist several versions of the same text with different sets of in-built focuses, which can be activated in the teaching process in different grades. Even in the domain of foreign language learning in the same class there can be more variants of the same text which is focused in different ways, because of possibility of marking in isolation only grammatical, only lexical, semantic, or **combined focuses**.

Following illustration of seven branches of application of aligned corpora in foreign language teaching, with their numerous variants, is the way of immediately available modes of exploitation. Such immediate availability is characteristic for everyday teaching, on the basis of occasional or frequent use, while learning, re-capitulation, checking or testing of many kinds, and accompanies strengthening of the general language competence of pupils.

3.1 Tracking the chain of deformation

The method of tracking the chain of deformation is a mode of application based on team, textual-reconstructive activities of closed type. One group of pupils has a task of translating certain amount of text, which is minimally one sentence, and maximally several sentences, from English into Serbian. After that, their translation is given to another group of pupils, which is to translate that text back into English. Then the new English version goes to the third group of pupils, that have to translate it back into Serbian. After several cycles of such translating procedure, using the English original and Serbian equivalent from the corpus, the degree of deformation is diagnosed, along with the extension

Nouns, pronouns	Adjectives	Verbs	Adverbs	Prepositions
ležaj - **bunk** Indijanka – **Indian woman** dani – **days** starice – **old women** logor - **camp** muškarci - **men** put - **road** mrak - **dark** domašaj – **reach**	drveni – **wooden** mlada - **young** sve – **all** njenog - **her**	ležala – **lay** pokušavala – **had been trying** pomagale- **had been helping** (se) izmakli – **had moved off** da sede i puše- **to sit and smoke**	unutra – **inside** već – **already** out - **van**	na –**on** in - **u**

Unutra je na drvenom ležaju ležala mlada Indijanka. Već je dva dana pokušavala da se porodi. Sve starice u logoru su joj pomagale. Muškarci su se izmakli do puta da sede u mraku i puše van domašaja njenog jaukanja.

Inside on a wooden bunk lay a young Indian woman. She had been trying to have her baby for two days. All the old women in the camp had been helping her. The man had moved off up the road to sit in the dark and smoke out of range of the noise she made.

Figure 2a). Illustration of making of paralleled grammaticogram
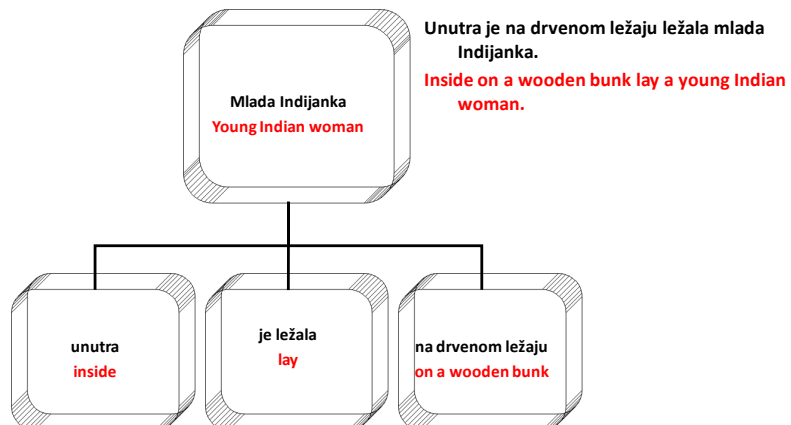

Figure 2b). Illustration of making of paralleled grammaticogram-variant with binary system for monolingual separate sentences

of that deformation, which means how much, in what degree, and in which segments occurred deviation from the original meaning and language solutions which had been chosen for transferring of that meaning into another language. This way of aligned corpus use has a predictive role for a teacher, who is able to think out teaching contents and to conceptualize new, more adequate approaches inspired by the perceived problems which pupils had faced with during translation from mother tongue into foreign language and vice versa.

3.2 Making of paralleled grammaticograms

Making of paralleled grammaticograms can be done by an individual, in pair, or in a team of several pupils. In tables, fields or graphs, that had been formed in advance, which can be segmented, titled according the class of words, constructions, relevant grammar aspects or in some other convenient way by the teacher, pupils have to drag, copy or type in textual duals which exemplify those target language elements, after the thorough search through aligned corpus. This manner of exploitation means that pupils have to exert target multi-object search through texts, and to express knowledge of categorical differentiation of classes of words, recognition of different tenses, noticing typical and less typical constructions, and relevant lexis. In this way, aligned texts can be used for recapitulation and consolidation of existing knowledge and as a pre-testing warm-up activity.

3.3 Method of reconstruction of punctuation system

Method of reconstruction of punctuation system means application of aligned text by initiating of textually-reconstructive activities on some portion of aligned text, which can be one sentence, or larger segment of text.

Time frame for realization and age of pupils are important factor when opting for length of instance of text which pupils will reconstruct the punctuation system for, but it is natural to use some larger portion of text, because during doing an exercise pupils are not exposed to significant efforts of memorizing, translation, or grammatical analysis directly, but they primarily have to exert knowledge and skill of perceiving of textual organization of bilingual material, inter-relations of textual subunits, appositions, anaphors, and to recognize, according to the word order, interrogative, declarative and negative sentence patterns. In that manner they also develop feeling for successive accumulation of information inherent to English language. Teacher also has an option to remove all full stops, commas, question marks, exclamation marks, quotation marks, and other, and he can even make total morphological clustering, so that borders of paragraphs and separate words are not recognizable, and to turn all capital letters into lower case letters. Then pupils are exposed to the cognitive challenge of high intensity, because they have to process paralleled morphological masses oh high density (Figure 3). On such occasion pupils have to exert intensive perceiving of textual organization, logical sequence of events, recognizing of discourse element borders, and, using both versions of text, to reconstruct punctuation marks and borders among words. In this mode of application of aligned corpora in foreign language learning, the main focus of activity is syntax of English language, to which very little attention has been devoted in conventional repertoire of elementary school exercises related to foreign language.

HILLS LIKE WHITE ELEPHANTS	BREGOVI KAO BELI SLONOVI
They look like white elephants she said I've never seen one the man drank his beer No you wouldn't have I might have the man said Just because you say I wouldn't have doesn't prove anything The girl looked at the bead curtain They've painted something on it she said What does it say Anis del Toro It's a drink Could we try it The man called Listen through the curtain The woman came out from the bar.	Izgledaju kao beli slonovi reče ona Nikad nisam video belog slona Muškarac je ispijao pivo Ne biće da nisi Možda i jesam reče muškarac To što ti kažeš da nisam ne mora ništa da znači Devojka pogleda u zavesu od perli Oslikali su je reče Šta to piše Anis del Toro Vrsta pića Da ga probamo? Čujte pozva muškarac kroz zavesu Žena izađe iz bifea

Figure 3a). Paralleled morphological masses which present the set-up of an exercise

HILLS LIKE WHITE ELEPHANTS	BREGOVI KAO BELI SLONOVI
"They look like white elephants," she said. "I've never seen one," the man drank his beer. "No, you wouldn't have". "I might have," the man said." Just because you say I wouldn't have doesn't prove anything". The girl looked at the bead curtain. "They've painted something on it," she said." What does it say?" "Anis del Toro. It's a drink". "Could we try it?" The man called "Listen" through the curtain. The woman came out from the bar.	„Izgledaju kao beli slonovi", reče ona. „Nikad nisam video belog slona". Muškarac je ispijao pivo. „Ne, biće da nisi". „Možda i jesam", reče muškarac. „To što ti kažeš da nisam ne mora ništa da znači". „Devojka pogleda u zavesu od perli". „Oslikali su je", reče. „Šta to piše?" „Anis del Toro. Vrsta pića". „Da ga probamo?" „Čujte", pozva muškarac kroz zavesu. Žena izađe iz bifea.

Figure 3b). The result of pupils' activity on the paralleled sample

3.4 Testing of long-term and short-term memory

Testing of long-term and short-term memory, on a basis of available aligned texts, has been postulated as a way of exploitation of bilingual corpora presented in method developed by Juliane House (House 2009), one of the most prominent propagators of modern approach to foreign language learning driven by applied linguistics. During this type of activity, pupils are exposed to the version of text in foreign language, in which every fifth word had been deleted, or the first half of some words is missing. Pupils are asked to reconstruct the missing syllables or the whole words, using prefixes, suffixes, derivative elements, or certain entire lexemes. Pupils are allowed to take a brief look at the version in their mother tongue before beginning of the activity. After that, they are given the version of a text in foreign language that is to be reconstructed concerning lexis, syntax and grammar. This makes possible to increase the level of complexity of a task, i.e. to increase the density of fragmentary elements that should be completed, and to intensify the level of text regeneration. Such use of aligned texts requires that pupils engage both *short-term memory*, in a sense of recalling context of the mother tongue version of a text, and long-term memory, which encompasses categorical, lexical and syntactic aspects of knowledge of a foreign language, which are essential for a successful realization of this activity.

Lekar je prišao aparatu za kojim sam sedeo i rekao:„Šta vam je pre rata bilo najdraže? Jeste li se bavili nekim sportom?"	The doc__came up to the mac___ where I was ___ing and said:"What did you like best to do b__re the war? Did you _____ a sport?"
„Da, fudbalom",rekoh.	I said:"Yes, foot__."
„Dobro", „reče on.„Opet ćete vi igrati fudbal, i to bolje no ikada."	"Good", he said. "You will be ___ to play football again ___er than ever."
Nogu nisam mogao da savijem u kolenu – od kolena do članka beše ukrućena, a lista nije bilo; aparat je trebalo da natera koleno da se savije i pravi pokrete kao da vozim bicikl.	My ___ did not bend and the leg drop__ straight from the knee to the ankle without a ___ , and the machine was to ___the knee and make it ___as in riding a tricycle.

Figure 4a). Bilateral testing of long-term and short-term memory - the set-up of an activity

Structural build-up of borrowed fragments comprises independent pupils' continuation of textual material onto the chosen word or phrase, or even onto the entire sentence, with free choice of either potential creative thematic alternation of an original story, or holding on to thematic motifs of the story.

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„Da, fudbalom",rekoh.

„Dobro", „reče on.„Opet ćete vi igrati fudbal, i to bolje no ikada."

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The doctor came up to the machine where I was sitting and said:"What did you like best to do before the war? Did you practise a sport?"

I said:"Yes, football."

"Good", he said. "You will be able to play football again better than ever."

My knee did not bend and the leg dropped straight from the knee to the ankle without a calf, and the machine was to bend the knee and make it move as in riding a tricycle.

Figure 4b). Bilateral testing of long-term and short-term memory - key to the exercise

3.5 Creative digressions

Words or phrases can be chosen absolutely arbitrarily, or prepared by teacher in advance, respecting the guiding principle of validity in domain of the teaching process, age of pupils engaged in activity, class, and compatibility with expected targets and aims of the teaching process. Quantity of material which is to be susceptible to structural build-up may vary from one or two sentences, in the fifth year of learning a foreign language, to five or six sentences in the eighth year, respectively, while the level of creative variation may vary according to the general level of language competence of pupils, their affinities, period of time for realization of the activity, and other factors of an immediate teaching environment.

Independent build-up described as above can encompass the starting part of a sentence, from left to right, or to the end part, from right to left, or in both directions, by choosing certain syntactic island, around which a bidirectional parenthetical material is established as a basis of an entirely new sentence. Build-up traces are loaded into both versions of aligned texts, either by inter-linear insertion, or by erasing some original parts of a text and writing in new ones, with additional highlighting using font or color in order to achieve higher level of visibility. This method presents the scaffolding activity which should, in the long run, encourage pupils' advancement along the continuum non-independent language production – independent language production. In this sense, the activity described should be viewed as textual-reconstructive, guided language production.

„Dobri lav"
Bio jednom jedan *naivni* lav koji je živeo u Africi sa svim drugim lavovima.

"The fable of the good lion"
Once upon a time there was a *naive* lion that lived in Africa with all the other lions.

„Čisto, dobro osvetljeno mesto"
„Uhvatiće ga *ljuta* straža", reče jedan konobar *vragolasto.*

"A clean, well lighted place"
"The *angry* guard will pick him up", one waiter said *puckishly.*

Starac je voleo da ostaje do kasno jer jer je bio gluv, *pošto je u mladosti previše slušao rok muziku,* a noću je bilo tiho i primećivao je razliku.

The old man liked to sit late because he was deaf, *since he had listened too much rock music in his youth* , and now at night it was quiet and he felt the difference.

Figure 5a). Creative digressions – inter-textual dual insertion

„Indijanski logor"

"The Indian camp"

Dva čamca se otisnuše u tminu. *Gusta magla se valjala po vodi.* Indijanci su veslali brzim i nemirnim *zamasima. Tela su im se grčila od napora.* Nik je ležao u očevom naručju. *Drhtao je.* Na vodi je bilo hladno. Indijanac koji ih je vozio vredno je veslao, ali im je drugi čamac sve vreme izmicao u magli. *Sa svakim dahom napetost je rasla.*

The two boats started off in the dark. *The dense fog rolled over the water.* The Indians rowed with quick choppy strokes. *Their bodies contracted in effort.* Nick lay back with his father's arm around him. *He was trembling.* It was cold on the water. The Indian who was rowing them was working very hard, but the other boat moved further ahead in the mist all the time. *With every breath tension grew higher.*

Figure 5b). Creative digressions – inter-linear dual insertion

3.6 Fast narrative with code-switching

While working at this level of exploitation of aligned corpus in English language teaching, within a time frame of several minutes pupils produce narrative portion as a result of their binary search and excerpting material from an entire corpus. The only condition during this arbitrary code-switching of fragments being concatenated into a sequence is to establish and maintain general coherence of an original, i.e. to add to the air of authentic and organic connection of all fragments being incorporated into the new version of a story.

Bio jednom jedan lav$_1$ with steel rimmed spectacles.$_2$ „A kuda ti ideš?" upita ga Tom.$_3$ "To Harry's bar", the good lion said."$_1$ "On maže ruke sokom od limuna",reče čovek.$_3$ "Don't kill me", the good lion said."$_1$To je tako teško. Ne mogu da se pomirim s tim".$_4$"He's a sister himself," the man in the stagged trousers said."$_3$"Slažete li se, gospodo?" upita Džonson ostale nosače.Jedan nosač klimnu glavom.$_5$

Figure 6a). Fast narrative with code-switching - search at a level of an entire corpus

One of post-methodical interventions on a text which pupils can avail themselves of is a code shift towards a foreign language, (presented at Figure 6 b)) and a code shift towards their mother tongue (Figure 6 c)).

Once upon a time there was a lion$_1$ with steel rimmed spectacles.$_2$"Where are you going yourself?" Tom asked him.$_3$ "To Harry's bar", the good lion said."$_1$ "He puts lemon juice on his hands", the man said.$_3$ "Don't kill me", the good lion said".$_1$ It is very difficult. I cannot resign myself.$_4$"He's a sister himself," the man in the stagged trousers said."$_3$"You agree, gentlemen?" Johnson asked the other porters. The one porter nodded.$_5$

Figure 6b). Fast narrative with code switching - a code shift towards a foreign language-

Bio jednom jedan lav$_1$ s naočarima metalnih okvira.$_2$ „A kuda ti ideš?" upita ga Tom.$_3$ "U Harijev bar", reče dobri lav."$_1$"On maže ruke sokom od limuna", reče čovek.$_3$ "Nemoj me ubiti", reče dobri lav."$_1$To je tako teško. Ne mogu da se pomirim s tim".$_4$"Sav je tetka", reče čovek u kožnim pantalonama."$_3$"Slažete li se, gospodo?" upita Džonson ostale nosače.Jedan nosač klimnu glavom.$_5$

Figure 6c). Fast narrative with a code switch - a code shift towards a mother tongue

After a code shift, newly generated paralleled portion of a text can be stored permanently as a trace of pupil's activity, later to be used as a set-up for other types of tasks and applications, for creative digressions, paralleled grammaticograms, dual cores with expansions, and other. Basic cognitive-mechanical platform of these activities based on aligned text is making possible progressive elaboration during independent textual production, which is reflected in surpassing of short independent sentences and promoting the long, dependant complex sentences.

3.7 Hyper-links with paralleled target location

A special kind of application of aligned corpus in foreign language teaching in elementary school is forming and activation of hyper-links, based on bilingual corpora, whose network may spread in all directions within diffuse borders of paralleled stories. As a difference to earlier mentioned applications and their variations, which encompassed different kinds of paraphrasing, textual reconstructions, singular or dual alternations, searches, and other activities of the similar type, hyper-links enable pupils to make large distance leaps from one textual surrounding to another. The another one may serve a pupil as a field of high informational intensity, covering

different domains of a foreign language, depending on whether pupil uses *grammar*, *syntactic*, or *combined hyper-links*.

In technical sense, hyper-links resemble remembering, recollecting, bringing into consciousness of some previously gained particles of knowledge or gaining some new knowledge in cognitive sense. However, while in a cognitive sense activity concerning recollection, bringing into consciousness or gaining some new knowledge may be of variable speed, in domain of hyper-links the speed is always optimal, which enables considerable time savings. These time savings mean avoiding manifold halts due to manual searching through dictionaries, or explanations of certain grammatical issues to each pupil separately. This platform also eases more systematic directing of explanations, because every pupil may seek for a specific kind of explanation which is optimal exclusively for him, and not to some other pupil, which reduces redundant meta-linguistic verbalization by teacher, an occasion

on which all pupils listen to what only a small number of pupils really need, for furthering their language competence.

Besides, by using available hyper-links by pupils broadened, unconscious comparative analysis of paralleled juxtaposed systems or for the sake of precision of their bilingual samples is initiated, which produces juxtaposed conclusions about those systems, and strengthens the basis of general language competence of pupils. By fast connecting of every textual segment with a bilingual contextual domain which contains syntactic, grammar and lexical exemplification related to the chosen element, from the pupil's point of view, main achievement is safe bordering and predictability of teaching and learning events, which relaxes and decreases the element of surprise and potential inhibition. As a consequence, safety amounts, as a stabilizing factor in learning and acquisition of foreign language.

Advantage of this type of application of aligned textual materials is also reflected in minimizing
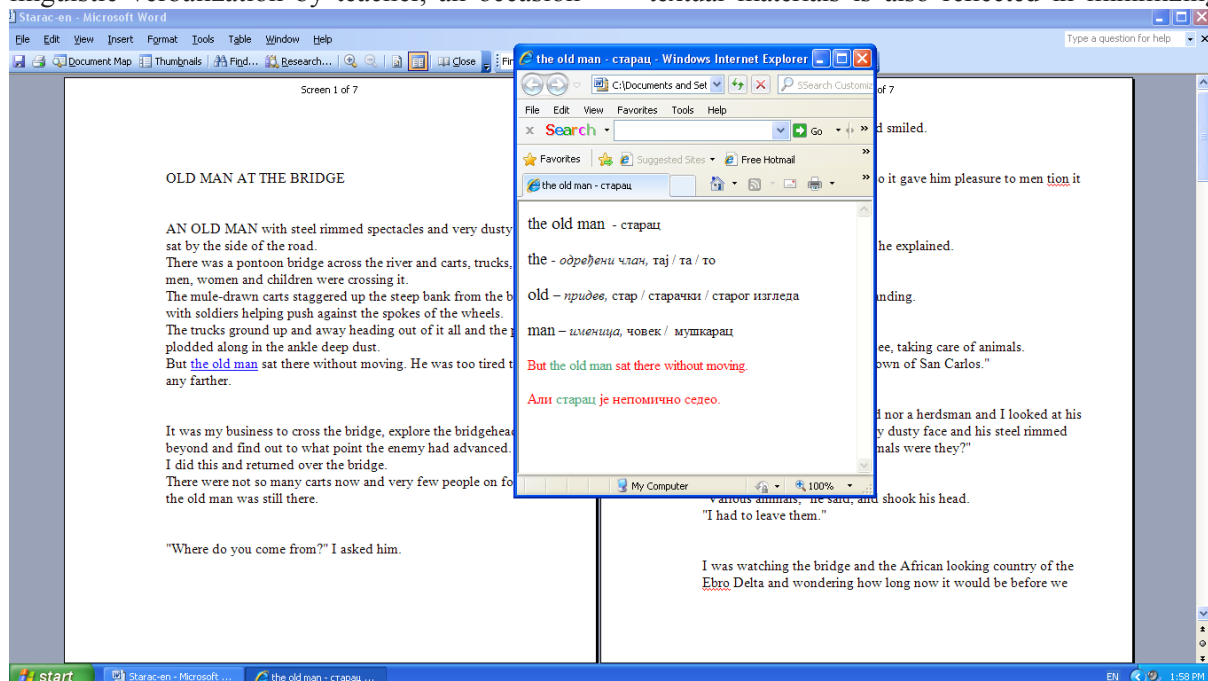

Figure 7. Appearance of textual environment within domain of which pupils' activities take place on a foreign language class during activation of combined hyper-link (English version of paralleled story)

of needs for verbalized instructions, and classic theory-based lecturing, corroborated by abstract, highly decontextualized examples.

In a sense of extension of language material marked in Serbian and English version of text, as a starting location of hyper-links there can appear a word, a phrase, or even an entire sentence. On that factor depends the kind of explanation which document joined to hyper-link will offer to pupils about the marked portion of a text. Concerning the primary aim of exploitation of texts, and users-receivers, pupils in elementary school, we suggest making of hyper-links that are qualitatively adequate, but quantitatively not too burdening, because the leading principle is that they are side commuter of pupil's text processing, and a lighthouse which *efficiently and laterally refresh and support grammar, syntactic, contextual and lexical advancing of pupils in a foreign language.*

4. Conclusion

Illustration of seven branches of application of aligned text in foreign language teaching and learning presented here, with their numerous variants, encompasses only immediately available ways of exploitation of bilingual corpora. Such an immediate availability is characteristic of everyday practice in teaching, on a basis of occasional or frequent application, during learning, systematization, recapitulation, and testing of all kinds, as well as in the process of strengthening of general linguistic competence of pupils.

Long-term cumulative effects of exploitation of aligned corpora in teaching and learning of foreign language are reflected, among other things, in the fact that adequate tools that are built into language teaching environment for the purpose of application of our method may result in constituting of the new language teaching model, based on the set of aggregated micro-resources within the global macro-resource which aligned bilingual corpus represents.

The new teaching model as described above may, during immediate application of aligned corpora in English language teaching as well as during long-term building-up and establishing of successive chain of adaptations and improvements, increase complexity and improve quality of teaching, learning, and acquisition of a foreign language, and establish new platforms worth exploiting within juxtaposed language systems that make the basis of paralleled text. Such model may also enhance ascertaining and deeper insight into curves of pupils' teaching, memory and perception, by longitudinal tracking, and to specify zones of pedagogical reality of teaching a foreign language which need improvements.

Thus we believe that application of paralleled texts in English language teaching in elementary schools may comfortably fit into the general mosaic of computer-assisted systems for gaining, intensifying, and organization of language skills and knowledge.

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