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## **The Creation of Methodology of Technical Universities Students' Intellectual Skills Formation and Development in the Foreign Language Course**

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**Abstract:**

*The aim of the article is to justify the need to consider the problem of students' speech-and-thinking skills development in the process of foreign language learning.*

*Taking into account the peculiarities of cognitive processes provides awareness of information perception and reliable memorization of educational material. This provides using cognitive and informational methods of exploration scientific material.*

*The authors come to the conclusion that to form skills of information understanding students must be able to recognize a problem, memorize essential speech phenomena, and realize their phonetic, acoustic, morphological and syntactic content.*

*So to solve this problem we should offer students some tasks, which include the stage of conversion the text into the structures of inner speech.*

**Keywords:** *Speech activity, cognitive processes, information, supporting scheme.*

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## **1. Introduction**

Students' speech activity in the process of mastering a foreign language is a complex cognitive process of foreign language information processing, which includes several stages. Speech activity nature and stages are studied extensively in the framework of modern linguistics, psycholinguistics, methodic of teaching native and foreign languages (L.S. Vygotsky, A.N. Leontiev, N.I. Zhinkin and others).

Speech activity is the active process of receiving and transmitting information through the language with the consideration a speech situation (Kagan, 1997; Zimnyaya, 1989) the processes of speaking and listening (generation and perception of information) and the results of those processes (text, discourse), thought implementation to word, the system of speech acts included in the more general activity context.

## **2. Materials and Methods**

According to Kagan (1997) text construction operation includes such stages as the motive of speech activity emergence, the motive execution in a clear communicative intention; the intention expression by speech means and receiving a response in the form of required information. It should be noted that the researchers don't quite specifically indicate the stage of the intention expression in speech, methods and tools to execute an inner semantics, and indicate the request for information as the only purpose of the communicant.

Leontiev (1985) believes that every act of activity stems from the motive and plan, and ends with the achievement of the goal through the system of specific actions and operations at the initial stage. This dynamic system description of specific actions and operations will provide the methodology invaluable assistance in effective methods of speech development working out and realization. Undoubtedly, speech implements a procedural way of thinking, it is a way of forming and formulating thoughts and speech activity, according has, respectively, three levels, that are motivation, formation and implementation (Zimnyaya, 1989).

As you can see, the models mentioned are based on Vygotsky (1982) and his scientific school theory. Speech production, according to the scientist, is a sequential interrelated phases of activity: the occurrence of the motive and the overall inner semantics of the external speech, the future utterance planning in inner speech (planning is in the semantic deployment thoughts, choosing and focusing the topic, selecting the way of logical thought presentation), the structuring of speech (also in inner speech) and the inner semantics implementation in the external speech using linguistic units.

Speech production mechanisms was described in detail by Zhinkin (1958) the registration stage consists of the internal (structural, grammatical) and external

(pronouncing, intonating) speech execution, the operation stage provides the speech act implementation. The speech act appearance is accompanied by the work of thinking in the areas of analysis and synthesis, operational and long-term memory, prediction (anticipation) mechanisms, which link the two elements of any speech segment.

The consideration of speech production models implies a methodological conclusion: for mastering the foreign language speech activity, a student must have a clear understanding about the stages of speech production in the native language, the ability to plan it in accordance with the motive and intention, to orientate in concrete and simulated speech situations, to consider the need to provide feedback (to ensure the understanding of the utterances by interlocutor, to have the possibility to vary the idea expression in order to maximize the adequacy of the messages perception). Speech act, in summary, may be seen as follows: motive (what do I need?) – intention (what should I do to get what I want?) – speech execution (how to express the subject according to the speech situation and the interlocutor's characteristics) – the ultimate goal (the conclusion from the received information, which is already private knowledge).

There are two types of cognitive processes in the speech act simulation and realization: the actual mental processes (such as memory, imagination, attention) and the modeling processes (mental operations, the variability of inner semantics presentation in a text).

### **3. Results and Discussion**

#### **3.1 Formulation of the problem**

Knowledge of a foreign language is nowadays a urgent need for many people. Language is necessary for growing relationships and communication with foreigners, for travelling abroad, for operational information received timely interpretation, reading newspapers and magazines, and finally, for reading foreign literature in the original. It is not surprising that many people would like to know one, and possibly several foreign languages. However, most of these people do not even begin to study a language, because that they are afraid of the difficulty of such an enterprise. Students must know how to overcome the difficulties and get the knowledge easily and simply. The first and the main obstacle in the process of mastering the foreign language is a "barrier of cultivated inability". Many people think that only some certain gifted people available to study a foreign language and for this they have a special ability. Self-doubt is one of the main obstacles in the process of studying, and it is a widespread false belief. It arose after years of studying language at school and university without any appreciable result. This practice makes students have concluded that studying a foreign language is very tedious and difficult.

So, everyone who knows the native language may master any foreign language and use it for communication. We need find the difficulties in the process of mastering a foreign language to identify ways of overcoming them.

Researchers unanimously declare the information processing (interiorization and exteriorization) as the essence of language activity. In addition, each direction of information processing – perception and text construction – has some successive stages, determined by the regularities of the cognitive processes in the communicant's thinking.

### **3.2 Attention and imagination in speech production processes**

Attention in the process of speech production has a control function (the principle of the final match in I.A. Zimnyaya's model): the control in this case concerns the adequacy of the analysis of the speech situation, the correct choice of lexical and grammatical phenomena, and a choice of the text construction logic. In this case, of course, we are talking about a voluntary attention, which is formed in the learning process with the involvement of students' will and conscious desire. Voluntary attention is characterized by the concentration, depth, distribution, switching, stability, and volume, and the degree of manifestation of these qualities determines the effectiveness of the speech activity. Qualitative characteristics of voluntary attention in the learning process can be improved by means of dosing presentation of the training material, the forming of a stable motivation to study and reliable mechanisms of self-control.

A work of imagination in the process of speech production can be described as productive and reproductive processes. Productive imagination involved in organization of students' thinking process, it analyses the past experience, plans the future activities, and provides focus and appropriateness of communicant's speech behavior. It starts to work in the process of generating utterances. Reproductive imagination operates with already known information but slightly modified and arranged. It starts to work when you perform simulation tasks (work according to a sample). Imagination as a whole provides a forecast of possible variants of thoughts deployment, and strategy and tactics of verbal behavior.

### **3.3 Restructuring transactions of inner semantics to text. The inner speech**

First, we need to mention the concept of inner speech and its role in the organization of the language semantics in human thinking.

A basic assumption is that all higher psychological functions are originally shared between two people. The starting point is the mutual interpsychological process that is social at the beginning. Interiorization is a kind of generic term for all processes, which get "inside" the individual. It is to be pointed out that interiorization is not an internal copy of the external world; it is a dynamic process, which leads to a quasi-

social inner level of consciousness. In regard to inner speech the general consensus is that inner speech is interiorized speech; central is the transition of interpsychological and intrapsychological functions.

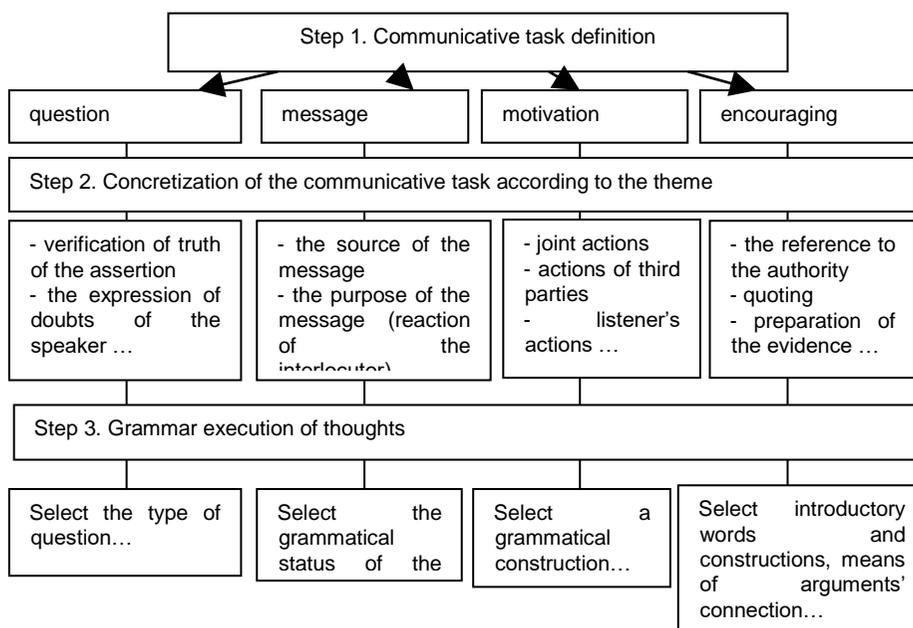
Concerning the structure of inner speech, Vygotsky (1982) assumes that inner speech has its own syntax, hence, inner speech is understood by Vygotsky as an independent form of language: the most important characteristic of the special syntax, according to Vygotsky, is fragmentation and abbreviation. Inner speech is mostly predicative, and used in a syntactically predicative manner. Inner speech is shorter than external speech, to such an extent that it could reach wordlessness. Vygotsky is interested also in word meaning both as a linguistic as well as an intellectual phenomenon. Word meaning, he wrote, establishes the unity of speaking and thinking.

In general, the functions of inner speech relate to two areas, speaking for others and speaking for oneself. In the first area speech is directed outwards, the communicative aspect is focused, and thus speech regulates social interaction as one main function. Inner speech is ascribed a decisive role in the production and reception of language. In the second area speech is directed to oneself in a recursive way; thus these functions of inner speech are connected with higher mental functions. Basic functions ascribed to inner speech are regulative and control functions.

Vygotsky (1982) stresses mental orientation (orientation is connected with perception and the direction of attention), the attainment of an awareness of facts to surmount difficulties and to get mental relief. Then, in soviet psychology, inner speech is described as being necessary for thinking, in that sense, as a means (instrument) of thought. Consequently it can be understood as a means of reflection, i.e. inner speech is the highest stage of self-regulation. Self-regulation by inner speech does not only serve to control external actions, but also internal actions. Furthermore, Ananiev extends the assumptions of inner speech claiming that inner speech is a form of verbal-logical memory, which is determined by special convictions, conceptions of the world and by moral awareness (Ananiev, 1980). Therefore, inner speech is seen close to our consciousness, which is connected with the development of volitional acts and of personality (Ananiev, 1980; Luria and Yudovich, 1956; Artemov, 1969). In general, Ananiev sees inner speech as an essential means of the development and construction of the personality.

Mental (cognitive) operations functioning in the process of speech production is concerned, primarily, of restructuring transactions of inner semantics to text: word choice, substitution, selection, repetition, transformation, combination, contraction and expansion (Beldiyan, 2007; Tsoupikova, 2011).

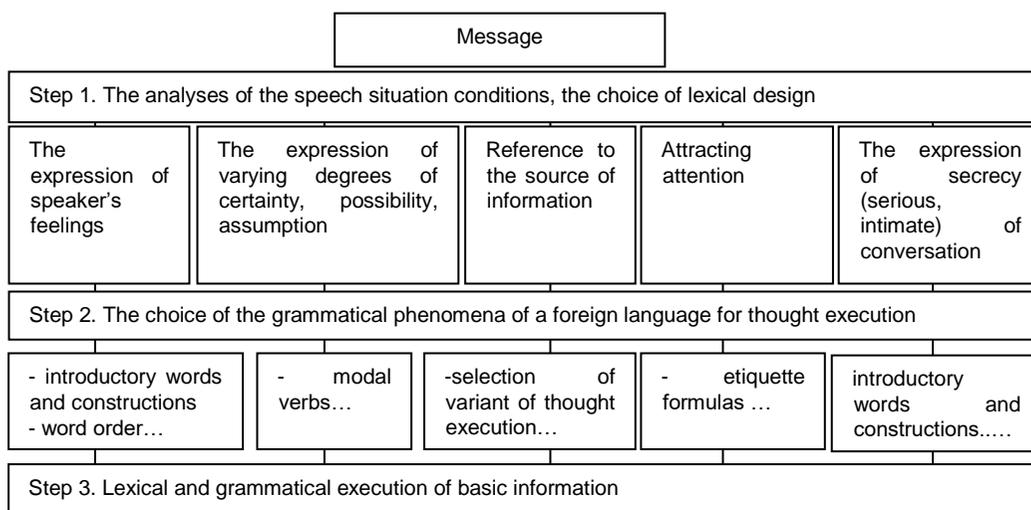
**Figure 1.** *Generalized model of situational response*



The translation of thoughts into the external plan involves a phase of abstracting with the processes of categorizing (the attributing of concepts to a certain category of objects or phenomena and the searching of its generic properties), conceptualizing (forming of notion on the basis of information fetched from memory) and classifying (the attributing of concepts to a particular class of objects or phenomena according to a particular parameter).

So, speech production connects a broad range of mental operations (analysis, synthesis, analogy, association, comparison, generalization, concretization, etc.), which involve the correlating, comparison of the native and the target language lexemes and constructions. The methodological conclusion to the foregoing is the statement that the learning process must consciously and deliberately form the students' skills of mental (cognitive) operations usage. This goal can be achieved, in particular, by the inclusion in the training process generalized and specified supporting schemes (Figures 1, 2), displaying a model of situational response, for example:

**Figure 2.** Concretized model of situational response



The expected result of this information structuring is the active mastering of speech formulas, skills response automation in a given situation, the formation of presuppositions regarding various types of situations, the activation of students' speech-and-thinking activity. The inclusion of the procedure described also provides a variety of the text as a result speech-and-thinking activity, which affects not only the choice of speech lexical content, but also the logic of its construction, the level of complexity of its presentation depending on the specific speech situation.

The types of study tasks described are effective learning, understanding and selecting of information for further use if:

- to create a model of understanding and selecting information for specific purposes, determined by the purpose of communication and use it as a support in organizing training information for use in a monologue utterances;
- to take into account in the educational process some specific semantic features of verbal comprehension, understanding and information extraction performed with a certain pragmatic purpose of creating a monologue utterance of a particular type.
  - to support this complex mental speech acts of letter acts of writing-fixing;
  - to use the results of writing-fixing acts in constructing a program (plan) of future utterances as the information basis of activity;
  - to select and didactically organize the learning authentic texts containing communicative meaningful information and adequate vocabulary;
  - to select and justify the groups of linguistic skills and exercises corresponding to it, and also communicative and cognitive tasks, and situations simulated for training purposes.

Any situation of communication, including monologue, necessarily involves the

operation of a recipient's perception and comprehension of information received. In this regard let us consider a generalized model of speech perception.

#### **4. Conclusion**

All of the above allows us to formulate an important methodological conclusion: to form skills of information understanding students must be able to recognize a problem, memorize essential speech phenomena, and realize their phonetic, acoustic, morphological and syntactic content. To solve this problem you can offer students the following tasks: the analytical ones such as explaining the use of the lexemes in a given situation, choosing a response replica in a given situation and explaining the choice, explaining the differences in the synonymous expressions meanings, comparing responses in certain speech situations with appropriate forms of native language and finding the similarities and differences. In addition, the described way of the educational material organizing has the following results:

- it serves to motivation of learners permanent increasing, develops their emotional sphere, and meets the value-orientation activity, which is a characteristic of the age period, creates the conditions for the autonomy of students;
- it helps in the self-control actions forming, leads to rapid assimilation and use of teaching material in educational and extracurricular activities;
- it provides the possibility of realization of communicative and informational approach in their interaction in all types of speech and thinking activities (leading acts are acts of writing speech construction);
- it provides the most favorable conditions for the effective mastering of the language;
- it is a mean of implementing the principle of awareness and experience, which ensures the formation of linguistic competence.

Thus, the student's speech activity is organized from the inner semantics to the utterance through a stage of inner speech and system restructuring operations of its semantics to the external plan, so that it acts as a mechanism for planning, execution and control of student's verbal behavior.

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