Linguodidactic bases of intensifying the process of teaching foreign languages to students at nonlinguistic higher education institutions

Fundamentos lingüidácticos para la intensificación del proceso de enseñanza de lenguas extranjeras a estudiantes de instituciones de educación superior no linguística

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ABSTRACT:
The aim of the article is to present the innovative method of cognitive-systematizing methodical compression used for presenting and activating students’ professionally-related vocabulary in the lessons of foreign language at nonlinguistic universities. The article outlines its basic techniques: lexico-grammatical mapping, algorithmization and didactic supports. The authors conclude that the advanced principles of clichéization, clustering, typologization (typing), differentiation, individualization, and purposefulness of influence allow the students, studying other languages, to rapidly assimilate professional foreign language vocabulary and avoid traditional learning difficulties.

Keywords: education, foreign language teaching, methodical compression, lexico-grammatical mapping

RESUMEN:
El objetivo del artículo es presentar un innovador método de compresión metodológica cognitivo-sistematizante utilizado para presentar y activar el vocabulario profesional de los estudiantes en las clases de lengua extranjera de las universidades no lingüísticas. Se describen sus técnicas básicas: cartografía gramatical, algoritmos y soportes didácticos. Los autores concluyen que los principios avanzados de clichéización, agrupamiento, tipologización (tipificación), diferenciación, individualización, y propósito de influencia permiten a los estudiantes, estudiando otras lenguas, asimilar rápidamente el vocabulario profesional de lengua extranjera y evitar las dificultades de aprendizaje tradicionales.

Palabras clave: educación, enseñanza de lenguas extranjeras, métdico de compresión, lexico-gramatical de asignación
1. Introduction
The urgent tasks in the system of contemporary foreign language education comprise the
development of students' readiness for real life communication in a foreign language and the
improvement of professional and personal potential. Both skills, based on the evolving
communicative abilities, will allow the future professionals to come into contact in the target
foreign language to achieve professional goals and implement interpersonal and business
relationships (Batsenko, 2003; Bobykina, 2012; Galskova, 2003; Khomiakova, 2011; Krylov,
2016; Nechaev & Reznitskaia, 2002; Passov, 2001). The achievement of this objective is
possible only when students, including those of nonlinguistic universities, attain a sufficient
level of foreign language proficiency. Creative approach to training of a foreign language is
no less important than students’ diligence as it provides mastering the basics of speaking,
audition, the letter, main types of speech activities and increase in motivated interest in
learning a foreign language. It becomes possible due to self-improvement of the teacher,
development of own creativity, so as creativity is a vital condition of formation of the
teacher, his or her own knowledge, development and disclosure of personality (Sagdullaev et
al., 2018, p. 20).

The above-stated provisions actualize the problem of the development of methodological
frameworks for intensification of the process of teaching foreign languages to students of
nonlinguistic universities (Ibatova, 2017, p. 31; Molchanova et al., 2017, p. 12).

Some authors focus on methodology of integrated language learning projects (a combination
of presentation, community, writing and technology projects) as the most perspective areas
of such intensification (Pakharukova et al., 2019, p. 1).

Other authors consider the use of innovative technologies and methods of presentation of
educational material in order to improve the efficiency of mastering foreign language
knowledge and the development of communication skills and abilities within a limited period
of time allotted by the curriculum for the academic discipline "Foreign language", with the
maximum activation of cognitive abilities of the students (Almazova, 2003; Choporova,
2013; Karabutova, 2012; Shamov, 2006; Sukhanov, 2011; Vinogradova, 2000).

To accomplish the goal, it is necessary to introduce and methodologically justify a new
method and concept, potentially allowing to intensify the professionally-oriented
communicative language education of the students — the method of methodical
compression.

2. Methods
We believe that the implementation of methodical compression within the framework of
cognitive-systematizing concept is based on both general didactic and special (specific)
principles. These principles take into account the specificity of teaching a foreign language in
different (nonlinguistic) universities, neutralize the difficulties, caused by this specificity, and
improve the efficiency of the educational process.

We have formulated the following special principles of application of the proposed innovative
method:

1. The principle of clichéd phrases. Commitment to represent active professionally-oriented
lexical and grammatical material in certain structures, allowing the students to use them in
everyday and professional spheres. In conditions of low initial level of foreign language
knowledge, clichéization makes it possible not only to develop a sufficient amount of clichés
in students vocabulary, but also to handle information, acquired by means of these clichés.

2. The principle of clustering. Integrating similar word-formation models, functionally typical
grammatical structures into speech patterns, grouping the terms in semantic blocks in order
to systematize, standardize verbal elements, understand the existing language laws, and
assimilate more lexical units and grammatical-syntactic structures.

3. The principle of typologization (typology). Categorization of the related types of activities,
situations of communication, etc., similar in certain parameters in the process of
development of foreign language communicative competence. Splitting the mixture of everyday and professional aspects of the language into systematic groups with certain properties.

4. The principle of differential use of teaching methods, tools, topical vocabulary in accordance with:
- psychotypological features of the students;
- the aim of the lesson;
- educational directions of the tasks;
- the main objectives of education stage;
- focusing on the development of a certain category of functional properties;
- the specifics of the predominant activity (for example, a sport);
- the level of language proficiency of the students.

5. The principle of individualization. Selection of educational material, teaching methods, approaches and strategies, depending on the individual characteristics of the students: age, specificity of language perception, peculiarities of cognitive processes, etc.

6. The principle of focused education. To accelerate mastering the universal methods of language operation, general knowledge system formation, concentration on the system-structural properties in a foreign language.

3. Results

We believe that the development of communicative competence in nonlinguistic university students will be carried out most efficiently if certain methods and means (tools) are integrated into the structure and content of the foreign language learning process (Bgrantseva, 2018, p.155).

Constructs are considered to be the main instruments for the implementation of methodical compression. They are:
- vocabulary and grammar maps - a way to visualize foreign language material to be actively memorized;
- algorithms - clearly structured visual schemes of sequential operations in order to solve a communicative task from a certain set of similar tasks;
- a set of blocks of illustrative-schematic supports for the effective learning and using lexical units and grammatical structures in practical communication.

In the example below we provide an application of lexico-grammatical maps as one of the tools of methodical compression.

The development of the communicative competence in nonlinguistic students based on the method of mapping lexico-grammatical material is implemented according to the following stages:

1. Selection and fixation of communicatively significant lexical units and the most frequently used grammatical structures. At this stage, the grouping of lexemes and grammatical structures is carried out according to the aspects of a specific subject following the principles of their reference to terminological vocabulary and frequency of usage. Filling the blocks takes place on the basis of the text connected with the students’ specialty or their existing experience and knowledge (using a dictionary is allowed).

2. Activation of communicatively significant lexical units and the most frequently used grammatical structures. Activation of professionally significant vocabulary and grammatical constructions in the oral activity of student-athletes is carried out with the help of imitation exercises, substitution exercises and definitional exercises.

3. Independent cognitive use of communicatively significant lexical units and the most frequently used grammatical structures in speech. At this stage of using the mapping method, the students consolidate and improve lexical skills aimed at a conscious
designations, i.e. independent naming of objects associated with each other. This kind of education also involves evoking the memories connected with the word, ability to combine meanings and the formation of a network of word connections and their combinations. Thus, the map is a scheme / speech pattern / visual support for students and contains a thematic development that includes the lexemes and grammatical constructions necessary for active learning and usage in speech (Mashlykina, 2014, p.717).

It is important to systematically monitor the level of development of all communicative competence components.

The use of the above mentioned methods and means of implementing methodical compression in practice allows students to self-monitor and self-correct their achievements in foreign language learning. Such a process of mutual control is achieved through reflection.

The concept of reflection in a general sense is used to designate the acts of self-awareness, self-knowledge, self-analysis, that is, a people's ability to be aware of themselves, internal processes and states, cause-and-effect relations of the activity produced, its results and ways (Makovec Radovan & Radovan, 2015; Vasić, 2017). Since reflection is considered both as a special process and as a general principle of action, we can conclude that this category has a bi-directional characteristic that needs to be used in studying practice to improve the efficiency of foreign language training in order to focus on teaching students to develop autonomous, active and cognitive attitude to learning activities through familiarity with theoretical knowledge about the object, algorithms and general schemes of working with it.

4. Discussion

To the present day compression influence is considered to be a specific linguistic phenomenon, that can be observed when a particular part of the text is shortened without the loss of its content and thus it is indicated as language compression. It is noted that the process of training and the usage of text compression contribute to mastering reading skills in a foreign language and foreign-language writing (Bgantseva et al., 2019, p.650; Choporova, 2013; Litvin, 2003; Sorokina & Tsvetkova, 2010; Umerova, 2011).

We understand methodical compression as an innovative method of presenting and activating the profession-centered content aimed at its efficient transferring to communication level for students of nonlinguistic universities. This method allows to intensify the process of training by means of combination of particular methods, procedures, activity forms and perception ways on the basis of obligatory consideration of individual psycho-typological characteristics within the given didactic section (a lexico-grammatical unit, a topic, a module).

We consider it to be necessary to state that compression influence is used in nonlinguistic learning content both in its informative aspect (the use of lexico-grammatical mapping method, efficient algorithms and schemes) and in its operational one (the combination of methods, procedures, activity forms and perception ways).

It is necessary to stress out that methodical compression as a method of intensifying the educational process for students of nonlinguistic universities is used within the cognitive-systematizing framework that implies the consideration of cognitive, activity and communicative aspects of students’ speech who are able to understand foreign-language speech and formulate intentions in their professional field from the perspective of the use of systematizing technologies (Bgantseva et al., 2019, P. 652; Gusev, 2007; Shamov, 2006).

These technologies, in our opinion, will be rather efficient in the view of global changes in social and economic society development together with intensification of information and multimedia resources (especially, the Internet); the greatest significance is given to the search of opportunities, allowing to improve pedagogical influence and to provide students to cope with the increasing bulk of information without losing interest to it and at the same time allowing to acquire it efficiently on cognitive and personality-centered levels.

In addition, during the implementation of the proposed method it is necessary to take into
account the following principles:

1) conducting classes from the beginning to the end is carried out exclusively in a foreign language. The translation into mother tongue is not allowed.

2) creating a language environment in the classroom that encourages and stimulates communication activities close to real-life communication.

3) correction of mistakes, made by the students in the process of communicative activities at any stage of the implementation of the proposed method, is carried out only in exceptional cases.

4) organization of the "chance to succeed" at the lesson of foreign language, to assimilate the proposed material more effectively by means of praise and a friendly atmosphere.

5. Conclusion

Thus, the reflexive component of learning activity is one of the most important mechanisms, allowing to attain the cognitive acquisition of obtained knowledge, generalized by activity means, rules of acquired ways and working methods to act in particular situations. The process of reflection allows students to understand themselves better, to analyze their own process of thinking, being, on the one hand, a self-organization agent (independent statement of a problem, independent activity planning, aimed at understanding) and, on the other hand, being a medium of cognitive action achievement that contributes to the process of optimization in the field of foreign language teaching.

In this article the authors tried to reveal the content and justify the development and application of this new training method. It should be specially emphasized that a new training method is based on the realization of cognitive-systematizing methodical compression that can guarantee not only a high efficiency of all components of foreign-language professionally-centered communicative preparation for students (studying at nonlinguistic universities) individually, but also guarantee potentiation of these effects.

Bibliographic references


Annexes

Thus, the approximate lexical and grammatical map of the module “Körper und Stoff” (“Matter and substance”) can be presented in the form of three blocks: I – Eine wesentliche Aufgabe der Chemie. Was ist Körper? Was ist Stoff? (The objectives of chemistry. The notion of matter. The notion of substance); II – Stoffeigenschaften (substance and its properties); III – Stoffgruppen (Substance groups). Each block is a necessary for the active acquisition of lexical and grammatical structures, the successful mastery of which, implements the possibility of dialogic and monologic interaction in a foreign language.

Das Modul „Körper und Stoff“ (Module “Matter and substance“)

<table>
<thead>
<tr>
<th>I. Eine wesentliche Aufgabe der Chemie (The objectives of chemistry).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was ist Körper? (The notion of matter) Was ist Stoff? (The notion of substance)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Körper (Matter)</th>
<th>Stoff (Substance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alle Dinge, die uns umgeben</td>
<td>Das Material, aus dem die Dinge bestehen</td>
</tr>
<tr>
<td>(The objects around us)</td>
<td>(The material out of which objects are made)</td>
</tr>
<tr>
<td>Becher (cup)</td>
<td>Keramik/ Papier/ Kunststoff (ceramics/ paper/ plastic)</td>
</tr>
<tr>
<td>Fahrrad (bicycle)</td>
<td>Stahl/ Gummi/ Kunststoff (steel/ gum/ plastic)</td>
</tr>
<tr>
<td>Wasserkessel (kettle)</td>
<td>Stahl/ Kunststoff (steel/ plastic)</td>
</tr>
<tr>
<td>Tisch (table)</td>
<td>Holz/ Stahl/ Plexiglas (wood/ steel/ plexiglass)</td>
</tr>
</tbody>
</table>
- man unterscheidet zwischen (There are:)
- bestehen aus (consist of)
- die Stoffe untersuchen/ erkennen/ unterscheiden (Substances study/ define/ differ)
- die Eigenschaften ermitteln (define the properties)
- sich zurechtfinden (to know)
- als Körper bezeichnet man (as a matter we define)
- der Gegenstand (die Gegenstände) (an object/ objects)
- das Lebewesen (creature)
- täglich umgehen (used every day)
- umgeben (surround)
- man nennt (name)
- es gibt Tausende von Stoffen (thousands of substances)

<table>
<thead>
<tr>
<th>Lebenswichtige</th>
<th>nützliche (useful)</th>
<th>angenehme (pleasant)</th>
<th>giftige (poisonous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(crucial)</td>
<td>Kunststoffe, Metalle (plastic, metals)</td>
<td>Duftstoffe (odours)</td>
<td>Lösemittel (solvents)</td>
</tr>
<tr>
<td>Luft, Wasser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(air, water)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
II. Stoffeigenschaften (substance properties)

- Am __________ (Geruch, an der Farbe, an den Geschmacksempfindungen) lassen sich manche Stoffe gut erkennen (define the substances by smell, colour, taste).
- ausbilden (form)
- klingen (sound)
- feststellen (define)
- erfüllen (perform)
- der Geschmackssinn (taste)
- der Geruchssinn (smell)
- die Geruchs- und Geschmacksempfindungen hervorrufen (cause smell and taste)
- im Chemielabor einsetzbar (used only in chemical lab)
- Geruchsproben durchführen (make a smell test)
- gesundheitsschädlich (harmful for health)

Stoffeigenschaften

die Farbe (sehen) (colour (see))
- einen charakteristischen Glanz zeigen (demonstrate a luster)
  - glanzvoll/ glänzend (lustrous)
  - glanzlos (dull)
  - matt (matte)
  - farblos (colourless)
der Klang (hören) (sound (hear))
- klingend (sounding)
  - oval (oval)
  - dumpf (hollow)
  - geräuschlos (mute)
  - laut (loud)
der Geschmack (schmecken) (taste)
- giftig (poisonous)
- salzig (salty)
- bitter (bitter)
- laffen (tasteless)
- süß (sweet)
- der Zustand/ die Konsistenz (berühren) (state/ quality (feel))
  - fest (tough)
  - zerbrechlich (breakable)
  - flüssig (fluid)
  - gasförmig (gas)
die Schmelzbarkeit (schmelzen) (fusibility (melt))
  - leicht/ schwer schmelzbar (high/low fusibility)
die Wärmeleitfähigkeit (heat conductivity)
  - elektrischer Leiter/ Nichtleiter (electricity conductor/ non-conductor)
  - elektrisch leitend/ nicht leitend (electricity conductivity/ non-conductivity)
der Oberfläche (befühlen) (surface (feel))
  - rauh/ harsch (rough/harsh)
  - glatt (even)
  - warm/ kalt (warm/cold)
  - hart/ weich (hard/ soft)
die Form (sehen/ befühlen) (shape (see/ feel))
  - kreisförmig (circular)
  - eckig (angular)
  - quadratisch (square)
  - kristallförmig (crystal)
der Geruch (riechen) (smell)
  - stechend (sharp)
  - geruchlos (without smell)
die Löslichkeit (aufwässern) (solubility (dissolve))
  - in Wasser löslich/ nicht löslich (soluble/ insoluble)
  1)
die Brennbarkeit (brennen) (flammable/ (burn))
  - leicht/ schwer brennbar (high/ low flammability)
<table>
<thead>
<tr>
<th>Glas (glass)</th>
<th>Metalle (metals)</th>
<th>Kunststoffe (plastic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• zu Stoffgruppen zusammenfassen (group)</td>
<td>• der Sand (sand)</td>
<td></td>
</tr>
<tr>
<td>• erhitzten (heat)</td>
<td>• formbar (shape)</td>
<td></td>
</tr>
<tr>
<td>• unterscheiden sich (differ)</td>
<td>• die Hitze (high temperature)</td>
<td></td>
</tr>
</tbody>
</table>