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TECHNOLOGY OF WORK WITH THE E-TEXTBOOK "ELEMENTA LINGUAE LATINAE"

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Abstract

The article describes the technology of work with the e-textbook on Latin "Elementa Linguae Latinae". The results of measuring the speed of performing test tasks for translating veterinary terms by students of the control and experimental groups, carried out during a pedagogical experiment to evaluate the effectiveness of using electronic textbooks in learning Latin, are presented.

Keywords: *electronic textbook, technology, electronic dictionary, translation, Latin.*

The efficient use of electronic textbooks in the teaching Latin has already been the subject of scientific research [1]. In particular, a long-term pedagogical experiment to assess the effectiveness of the using electronic educational resources in teaching Latin to veterinarian students was conducted at the National University of Life and Environmental Sciences of Ukraine [2]. According to the conditions of the experiment, the students of the control group were taught in the traditional way, and experimental one − with a new technique, providing for the complex use of traditional learning tools and the electronic textbook «Elementa Linguae Latinae» (Figure 1).

Figure 1. Title screen of electronic textbook «Elementa Linguae Latinae»
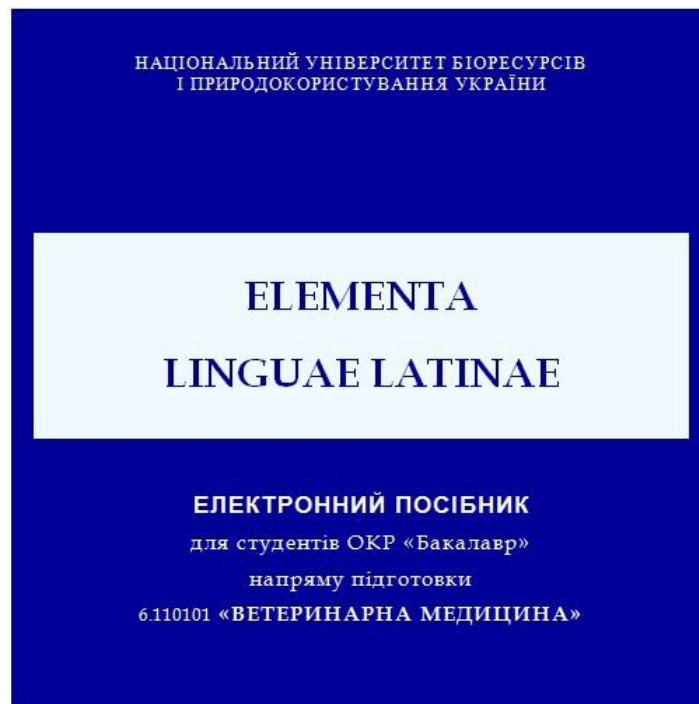
This e-learning tool is designed taking into account objective factors (students' provision of learning materials, academic performance and motivation, normatively defined goals with defined priorities in developing competencies) and subjective factors (student preferences) and is a combined e-textbook with a dominant Dictionary module designed to assist in the translation of

veterinary and medical terms and the formation of relevant skills in students (the preloader of the vocabulary module is presented on Figure 2).

Figure 2. The preloader of the Dictionary module
of the e-textbook «Elementa Linguae Latinae»
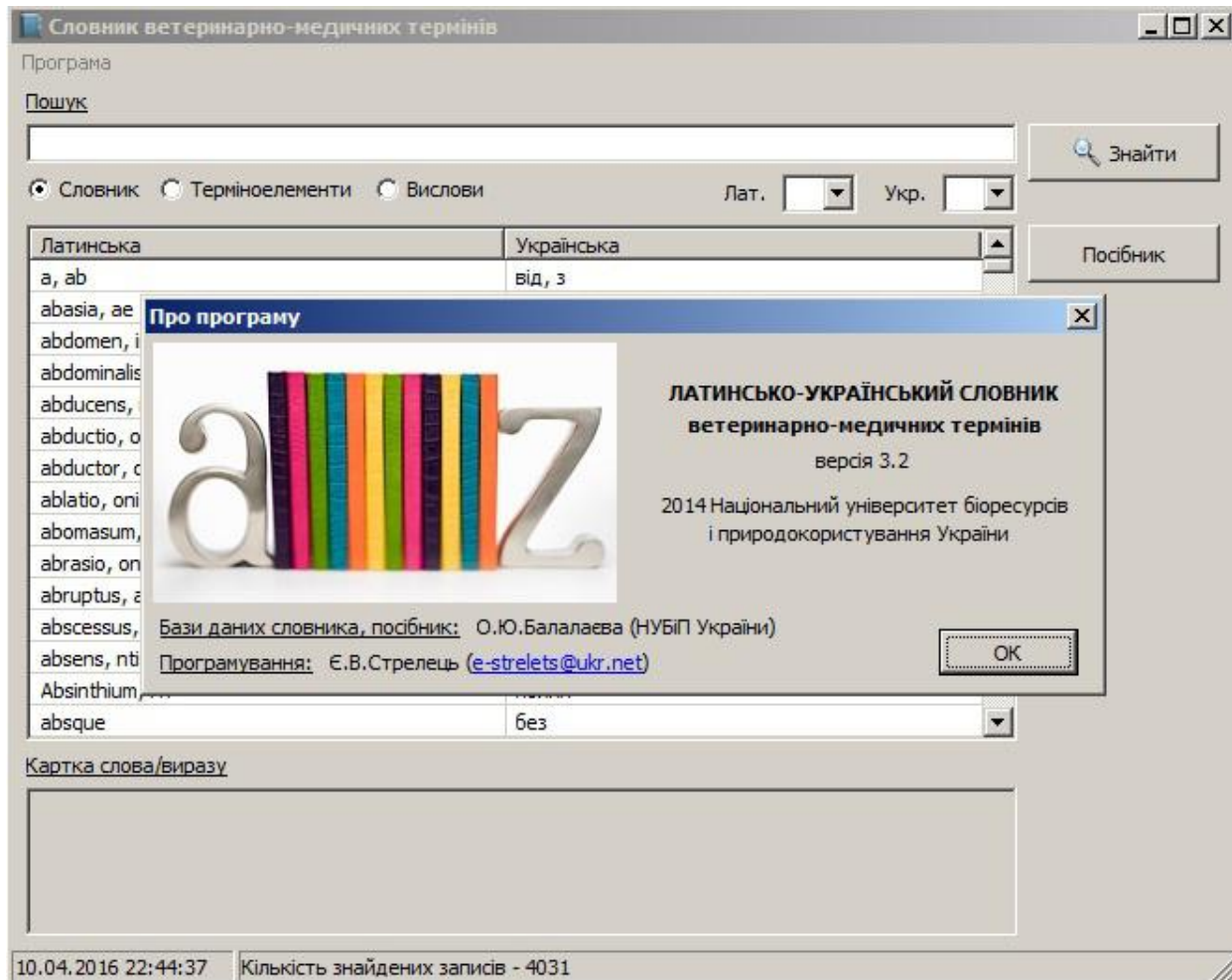
Partially, the results of the study, as well as structural features of the e-textbook, interface elements are covered in the author's articles [1-4]. The aim of this paper is to describe the technology of work with the e-textbook "Elementa Linguae Latinae".

According to the principle of functional determinism, electronic textbooks, depending on the purpose, can provide not the whole didactic cycle, but its separate fragments and can be aimed at presenting material and (or) developing skills, monitoring the level of achievements etc. Determination of the dominant function of the electronic textbook (or their ranking) allows us to determine its specific and typological characteristics. This e-textbook is designed to support such fragment of the didactic cycle as the communication of information, the presentation of theoretical content and as an auxiliary can be used at the stage of application and systematization of knowledge, the formation of skills, which also determined the specifics of the technology for working with the e-textbook (Figure 3).

Figure 3. Flowchart of technology of work
with the e-textbook «Elementa Linguae Latinae»
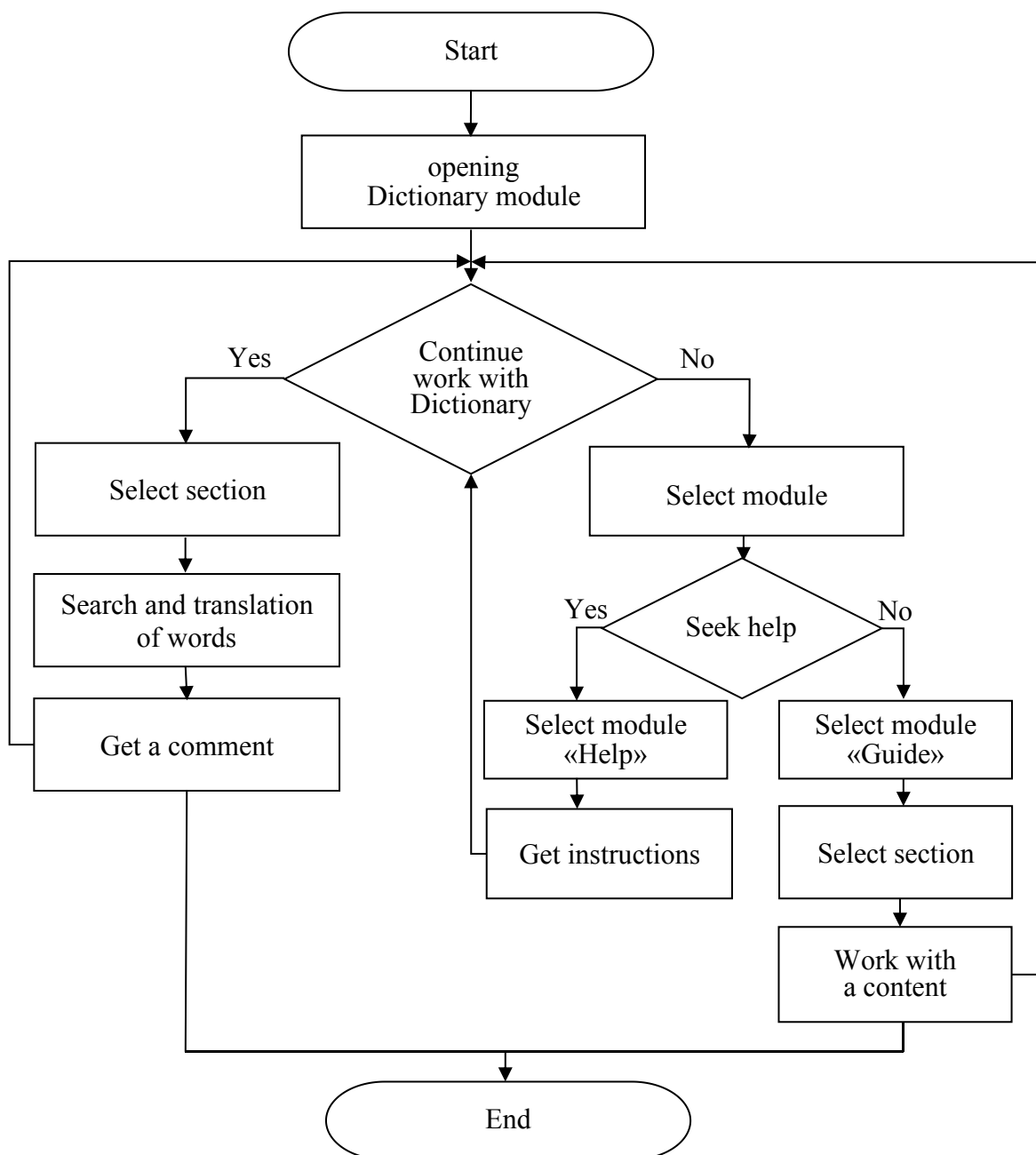
An important feature of this electronic textbook is the consistent use of cognitive visualization tools in the delivery of the training material, such as cognitive-graphic models, schemes etc. The use of cognitive visualization techniques is relevant specifically for electronic guides designed to help master the discipline and provide solutions to local pedagogical problems: supplementing the material of the basic textbook, repeating and systematizing the acquired knowledge, providing additional or reference information on a specific topic, etc.

Grammar material is given in a limited amount necessary to strengthen skills in analyzing and translating veterinary and medical terms. Since the main purpose of teaching Latin at the veterinary faculties is to teach the skills necessary for the nomination, the most attention is paid to such topics as "Noun" and "Adjective". The paradigms of Latin nouns and adjectives are presented in five cases since Vocativus is almost never used in veterinary terminology. Information on the topic "Verb" is limited to the presentation of basic information about grammatical categories, the formation of the

imperative mood, verbs conjugation in the present tense in the active and passive voice. Content on the topics "Numeral", "Pronoun", "Adverb" and "Preposition" is also presented according to its applicability in medical terminology and prescription [5].

Considerable attention is paid to professional topics provided by the curriculum, especially the topic "Structure of anatomical terms", which is one of the keys for the Latin course and the system-building for this e-learning tool, ensuring the implementation of the logical connection between the modules "Dictionary" and "Guide" and substantially different in the way the presentation from printed educational editions.

As survey results showed [2], not learning theoretical material, but specific examples of the using terms are the greatest difficulties for students.

An important indicator of the activity criterion is not only effectiveness but also the speed of task performance, in particular, the translation of veterinary terms.

As V. Bespalko notes [6, p. 70-71], to assess the content of a textbook and the quality of its assimilation by students, in addition to the characteristics of the level of assimilation and the degree of abstraction, an important parameter is the degree of automation in mastering the basic techniques and operations, that is, the availability of skills. In this case, the indicative actions determine the correctness of the activity, as well as the speed of inclusion in the work, executive actions determine accuracy and purity of activity and control actions – its awareness. Automation depends mainly on the pace of the implementation of indicative actions. The researcher proposes to evaluate the quality of assimilation of activity either by theoretically pre-established exposure to performing the test or by fixing the time spent using timekeeping.

The measurement of the speed of task performance was conducted based on the actual time on performing one test by a student. For the lower level, a limit was taken that indicates the time allotted for one classroom session (2 academic hours). Therefore, to determine the levels of test execution speed (V_t), these limits have been taken:

low ($V_t \geq 80$ min.);
medium (60 min. $< V_t < 80$ min.);
high ($V_t < 60$ min.).

The results of measuring speed of task performance are given in Table 1.

Table 1. Data on the levels of speeds of test performance
in the control and experimental groups (%)

Level	Test 1		Test 2		Test 3		In total	
	Control group	Experimental group	Control group	Experimental group	Control group	Experimental group	Control group	Experimental group
low	80,0	70,0	88,1	65,0	81,0	67,2	83,0	67,4
medium	20,0	25,0	11,9	27,5	19,0	26,1	17,0	26,2
high	0	5,0	0	7,5	0	6,7	0	6,4

Thus, most students in the control and experimental groups demonstrated a low rate of test performance. However, in the experimental group, the percentage of students who completed the tasks in 60-80 minutes increased by 9.2%, moreover, 6.4% of students took less than 60 minutes to complete the tasks (Figure 4).
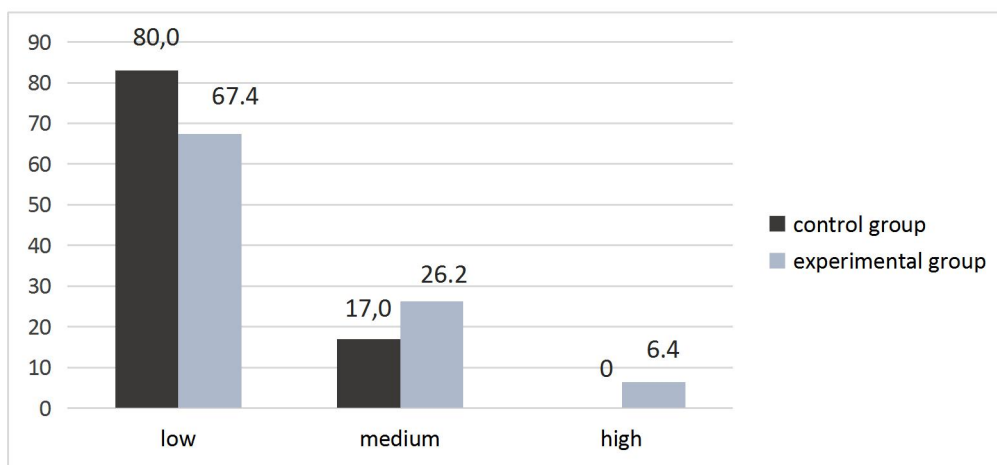
Figure 4. Levels of speeds of test performance
in the control and experimental groups (%)

It should be noted that in the control group, the high level of speed of completing tasks is not fixed at all. The largest difference was fixed in the speed of the Test 2 (topic "Structure of anatomical terms"), where 7.5% of students in the experimental group completed tasks with high speed (in the control group – no one) and 27.5% – with medium one, by 15.6% more than in the control. In general, the speed of completing the test in the experimental group is 7.8% higher than in the control group.

Thus, the achievement of the goal of improving the effectiveness of learning Latin is determined by the properties of e-learning tools, the use of which creates preconditions for saving time in the information search, increases the speed of translation, provides new opportunities for self-control of knowledge of grammar and term formation, encourage the student to master the difficult terminological material.

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