Experience in developing electronic glossary in a higher education institution

Опыт разработки электронного глоссария в высшем учебном заведении

Experiencia en el desarrollo de glosarios electrónicos en una institución de educación superior

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Abstract

Students' professional competencies development in modern higher educational institutions depends on a number of factors including used pedagogical technologies. In the work, the authors demonstrate experience of compiling electronic glossaries using wiki technology in the course "English language". The authors emphasize that while studying a foreign language, the question of selecting lexical minimum that students must master is coming to the fore. For more effective content assimilation students, observing the stages described in the article, independently (with the advisory help of a teacher) develop an electronic dictionary that facilitates mastery of lexical minimum and allows future graduates professional competencies development. The work reveals main features of wiki glossaries, their essence and role in future graduates of higher educational institutions training. The authors also indicate teacher's role in this process, note criteria for evaluating the glossary developed by students and principles on which development is based.

Keywords: Information and communication technologies; wiki- glossary, competencies, higher education institution, students.

Аннотация

Формирование профессиональных компетенций студентов в современном высшем учебном заведении зависит от ряда факторов, в том числе от используемых педагогических технологий. В работе авторы демонстрируют опыт составления электронных глоссариев с помощью вики-технологии по дисциплине «Английский язык», раскрывают основные возможности вики-глоссариев, их сущность и роль в подготовке будущих выпускников высших образовательных учреждений. Авторы подчеркивают, что в изучении иностранного языка на первый план выходит вопрос об отборе лексического минимума, которым должны овладеть обучающиеся. Авторы обозначают позицию преподавателя в данном процессе, отмечают критерии оценки разрабатываемого студентами глоссария и принципы, на которых строится разработка. Для более результативного усвоения материала студенты, соблюдая приведенную в статье этапность, самостоятельно (при консультативной помощи преподавателя) разрабатывают электронный словарь, который способствует более легкому и освоению лексического минимума и позволяют сформировать профессиональные компетенции будущих выпускников.

Ключевые слова: информационно-коммуникационные технологии; вики-технологии, электронный глоссарий, компетенции, высшее учебное заведение, студенты

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Resumen

El desarrollo de las competencias profesionales de los estudiantes en las instituciones modernas de educación superior depende de varios factores, incluidas las tecnologías pedagógicas utilizadas. En el trabajo, los autores demuestran experiencia en la compilación de glosarios electrónicos utilizando tecnología wiki en el curso "idioma inglés". Los autores enfatizan que mientras estudian un idioma extranjero, la cuestión de seleccionar el mínimo léxico que los estudiantes deben dominar está surgiendo. Para estudiantes de asimilación de contenido más efectivos, observando las etapas descritas en el artículo, independientemente (con la ayuda de un maestro) desarrolle un diccionario electrónico que facilite el dominio del mínimo léxico y permita el desarrollo de competencias profesionales para futuros graduados. El trabajo revela las principales características de los glosarios wiki, su esencia y papel en la formación de futuros graduados de instituciones de educación superior. Los autores también indican el papel del maestro en este proceso, señalan los criterios para evaluar el glosario desarrollado por los estudiantes y los principios en los que se basa el desarrollo.

Palabras clave: Tecnologías de la información y la comunicación; wiki- glosario, competencias, institución de educación superior, estudiantes

Introduction

Information and communication technologies are technologies whose main task is to ensure information aquaring, its processing, transmission, dissemination and disclosure (Abramova, et al 2018). Information and communication technologies are usually presented in the form of methods, software and hardware tools to improve effectiveness of information application (Ajeenkya, et al 2014). It is worth noting possibility of building an individual program for the development of educational content for each student among the most important advantages of information technology, turning it into a subject of educational activity and an active participant of educational process (Arkhipova, et al 2018). According to modern global trends the state takes education to a new level and provides conditions for widespread use of the technologies under consideration by educational institutions in their activities (Aygul, et al 2018). The state, has been striving to improve education quality in the country for several years, using various measures to ensure that educational institutions actively introduce them into educational process (Barber, et al 2013). Today, we have a developed education system in which information technology is an integral part (Bicheva, et al 2017). Information and communication technology has firmly entered students' lives in professional educational institutions (Braine, et al 2013). As pedagogical practice shows, these technologies bring positive results in modern graduates' development (Chirva, et al 2018). There are many aspects of their application. With the advent of new computer programs, opportunities have become even broader and now the most narrowly focused educational areas can be placed in the framework of information and communication technologies (Prokhorova, et al 2018). Thanks to information technology, students can become engaged into their own development (Tsyplakova, et al 2016). The creation of such an element as a dictionary is an important aspect for the future graduate development as a qualified professional (Bulaeva, et al 2018). Traditional dictionaries give way to electronic glossaries as electronic form expands cognitive capabilities. Thanks to independent development of electronic dictionaries, a student quickly and better masters terminological apparatus, acquires more advanced and in-depth knowledge in the process of searching for information. The conditions for constant transformation of information space make it possible to improve students' professional competencies development much faster. Educational institution increases its competitiveness at a global level as a whole (Ilyashenko, et al 2018a). As we have already stated, the use of information and communication technologies is constantly reaching a new level, and there are varieties of technologies that are their components and contribute to students' maximum inclusion in educational process (Markova, et al 2018). We will talk about wiki technologies that allow students to build an individual learning path with their joint interaction. With the rapid development of electronic products, including those meant for educational purposes, the original meaning of the word "dictionary" has expanded and its usual definition as a book providing word meaning and its definitions has begun to erode (Kutepov, et al 2018). This is due to changing societal needs (Myalkina, et al 2018). To date, users turning to a dictionary want answers to a wide range of questions, so the amount of information has

increased significantly (Smirnova, et al 2017). In order to make it easier for a student to master a lot of information, wiki technologies allow them to compile dictionaries on their own (Smirnova, et al 2018).

Glossary is a specialized glossary of terms related to a specific branch of knowledge, consists of autonomous articles that should be arranged alphabetically (Kutepov, et al 2017). A set of terms enclosed in a dictionary is called a vocabulary (Oros, 2017). Each term should be disclosed in a separate article. The description of the term should include not only brief definition, but also comments, examples explaining citations and references to literature, as well as hyperlinks (hyperlinks are links that provide instant access to the expanded material) (Ilyashenko, et al 2018b). The main difference between a glossary and a regular dictionary is its formation as a single complex of information in accordance with research or practical task (Vaganova, et al 2017a).

Analyzing each term and penetrating into it, learners better learn the content (Ilyashenko, et al 2018c). In this article, we reveal electronic dictionaries abilities as productive information and communication product by examining experience of developing an electronic glossary in a higher educational institution.

Theoretical basis

Since the development of electronic products has been going on for a long period, a large number of studies in this topic have appeared. In our work, we relied on the research of D.S. Lotte, V.P. Danilenko, A.S. Gerd, I.S. Kudasheva, V.M. Leichika, T. S. Serova which identified the main parameters that terminological dictionary should correspond to: subject orientation (a layer of special vocabulary to be described in the dictionary); purpose of a special dictionary (educational, reference, informational); address orientation (circle of users who can use the dictionary); functions and volume of the dictionary. We also relied on the research of P.N. Denisova, V.V. Morkovkina and L.A. Novikov. They identified the main functions of the dictionary: reference (acts as a source of information and a means of access to accumulated knowledge in a specific subject area); inventory (collection and description of the terms of a certain field of knowledge; normative (establishment of standards for term use).

Methodology

The development of electronic glossary made it possible for students to become active in educational process, to be fully included in work, and to deeply master conceptual apparatus by carefully selecting relevant information from large content volume. In addition, students developed their information competencies, improved their skills in working with information and communication technologies in the process of a dictionary compilation.

Analysis

Electronic products that appeared at the end of the 20th century (Oxford Advanced Learner`s Dictionary, Cambridge Advanced Learner`s Dictionary, Macmillan English Dictionary for Advanced Learner`s) are very different from modern ones (ABBYY Lingvo, Multilex Delux 7, Poliglossum, Longman Dictionary of Contemporary English). Information technologies are developing so dynamically that updates that have appeared relatively recently tend to become obsolete, so research in this area should be carried out in parallel with technologies' development (Natalie, et al 2019). In modern education, it is important not only for students to use dictionaries, but also provide their direct participation in modern glossaries compilation (Vaganova, et al 2018).

In modern world, several types of dictionaries (glossaries) are used: linguistic, specialized, thematic, technical, scientific. The last three species are most widespread (Vaganova, et al 2017b). Technical glossary contains general terms and expressions definitions for a particular production or industry cycle. The necessity of its existence does not require evidence, since technology, labor morale and unity of concepts in creation are necessary just like the availability of project financing. Scientific glossary provides accurate measured values, scientific wording, and accurate statement of scientific principles (Vaganova, et al 2019). These are dictionaries of rather narrow focus, and are intended for specialists of a certain profile. In addition to defining the term, it should contain a detailed commentary on it, sometimes with examples. Language dictionaries are divided into multilingual, bilingual, monolingual. The first two options are translation dictionaries, when the meaning of one language is explained through comparison with the words of another language. In monolingual dictionaries, all words are explained using the same language. A specialized

dictionary is aimed at vocabulary expanding but covers a relatively small set of phenomena. Students in their activities can use different types of glossaries, however, in our opinion, it is scientific glossaries with detailed comments that are worth composing. A student, receiving such an assignment, studies in content in more details in a specific subject.

It is not enough to simply type of the text to fill in glossaries for students; there is a special technology for this, which is part of information and communication technologies. This is a wiki technology that allows you to create effective conditions for students' professional competence development due to special didactic properties and functions, such as non-linearity, the possibility of collective access to history of document and hypertext structure creation. Wiki also provides opportunity to download audio and video files that expand content overview.

Higher education wikis are used by many teachers. Students of linguistic majors of higher educational institutions are some of those who must master wide and quite complex terminological apparatus. Therefore, consideration of compiling an electronic glossary in this area is of particular interest.

In our work, we will demonstrate the experience of compiling electronic glossaries using wiki technology in the English language course.

In the study of a foreign language, the question of selecting lexical minimum that students must master is coming to the fore. Obviously, the entire vocabulary of the English language is impossible to master. This can be seen by taking the example of the corpus of English (language corpora), which includes approximately 200 million words, and in the most popular full dictionaries about 500 thousand words. Depending on the nature of speech activity, active and passive lexical minimum are distinguished. Active vocabulary contains words used in oral speech to express your own thoughts. Passive vocabulary contains words that students should understand when reading and listening to foreign language speech. For the correct use of the word in speaking or writing first of all, it must be learned to find in memory, reproduce and choose a grammatical form, combine with other words and put in a sentence. The compilation of an electronic dictionary helps students more actively absorb content than simply memorizing

words. As a result, as practice shows, it is easier for a student to find a word in his memory and reproduce it correctly, in accordance with the context. Students, compiling a dictionary, memorize a larger number of words than in traditional language learning and at the same time develop professional competencies that will help them in reproducing foreign speech in real professional conditions.

The format of Wiki Glossary assignment is based on the idea that the teacher selects material that students should describe in wiki dictionary and pass on the template to students according to which they should do further work. Students independently organize their activities, adjust and edit each other's work, give each other feedback and report on their contribution to joint activities in wiki portfolio. The teacher evaluates the work as a whole and individually. Wiki glossary is a multi-component task performed by groups of students based on wiki technology, the purpose of which is: development of professional competencies, expansion of professional terms vocabulary; increasing involvement in learning and creating students' motivation to master professional skills; development of skills and teamwork.

Implementation of training task of compiling a glossary includes several stages. The first stage is preparatory. Implementation of preparation involves several steps. The first is purpose of compiling joint glossary awareness. A teacher explains to students the significance of this goal and suggests possible topics for dictionary sections. At the same time, students can express their opinion on the topic and offer their own, which is directly related to their field of study. The quality of terms selection reflects the level of erudition and conceptual understanding of the glossary topic. The glossary should contain from 15 to 20 terms. The teacher offers students independently develop a list of terms, introduces a template for the design of a dictionary article and presents assessment criteria. The work on the wiki glossary is based on the principles of prognosticity, reliability, professional orientation taking into account individual trajectory of professional development. In Russia, higher education system has adopted a 100-point grading system; therefore, a grade is set for the assignment, determined by the teacher himself. Table 1 shows criteria for glossary evaluation.

Table 1. Evaluation criteria for glossary development

Criterion	Score
Student gives an example where a particular term (context) can be used.	2
Student provided a link to the source where this word is used	2
Lack of grammar and spelling errors in the article design	2
Presence of hyperlinks in the text	2
Student compliance with hyperlinking logic	2
Meeting deadlines	2

In order for the task to be counted, the student must score at least 6 points out of 12 possible.

Students' descriptions of each term should reflect its origin, semantic content, and, if necessary, various interpretations of semantic content. It is also important to characterize the role of the term in the disclosure of the main content of the topic to reflect its relationship with other terms. The author's text should be used mainly in term description, but possibility of using specialists' comments, examples explaining citations selected from literature cannot be ruled out. Literal quoting of finished samples of writing terms from other dictionaries is not allowed. Each vocabulary description should end with three or four titles of recommended literature, which is useful for more in-depth study. Each dictionary description should be about 0.5 pages long (size 12, Times New Roman, single spacing). Articles are arranged alphabetically (the term at the beginning of the article should be made in bold, after dash there is dictionary description). At the end of quotation there is a hyperlink or the author is indicated in brackets (it is preferable to put down hyperlinks). At the end of the article, the word "Literature" is shown in italics, and then the names of recommended sources, books, and articles are given through semicolons. All names must be issued in accordance with the requirements of GOST R 7.0.5-2008.

Teachers who interact with students in tasks framework are subject to special requirements associated with the use of information technology since their goal is to correctly advise students to build their competencies. Teachers, in order to use information and communication technologies in their activities, must have t appropriate training (Lubov, et al 2019). Teachers need high-level knowledge: pedagogical, psychological and methodological foundations of motivation development, organization and control of educational activities; knowledge of information competence, experience in electronic educational and information resources application, taking into account the specifics of educational programs and the requirements of the Federal state educational standards as well as age and individual students' traits. The second step is to register students in wiki site. The teacher should familiarize students with the rules for posting materials (introduces students to the structure of the site, teaches them how to make changes to already posted material, presents them with basic technical capabilities of the site). The second stage is procedural one. Step three is posting materials in the site. The teacher distributes the sequence of glossary sections in a given topic, gives a list of literature sources recommended for use by students. The teacher monitors students' independent activities at the end of each school week, and if necessary, provides advisory assistance. The third stage is assessment. The fourth step is assessment implementation. The teacher evaluates each student contribution to work in a given thematic section in accordance with previously identified criteria. At the fourth, presentation stage, students demonstrate group wiki glossary. There is group discussion on content placement in the Internet for general use or in institution closed resources. At the fifth stage, reflection is carried out, understanding of difficulties encountered in process of performing work. The development of electronic glossary made it possible for students to become active in educational process, to be fully included in work, and to deeply master conceptual apparatus by carefully selecting relevant information from large content volume. In addition, students developed their information competencies, improved their skills in working with information and communication technologies in the process of a dictionary compilation.

Conclusions

The development of information technologies allows us to discover fundamentally new opportunities for arranging educational process and take a fresh look at implementation of basic didactical principles (visualization of training, student activity, accessibility of training, taking into account age and individual characteristics, connection between theory and practice).

Electronic glossaries as part of information and communication technologies give students more opportunities to study content as online dictionaries contain more relevant information which is regularly updated. Equipped with a sufficient number of hyperlinks, electronic dictionary provides access to various materials that students can use. Students receive a variety of content in an accessible form. Electronic glossaries proved to be much more productive than traditional dictionaries in modern learning. The essence of the glossary has changed. Today, it is able to act as a separate element that develops students' professional competencies. Working with a dictionary is a separate type of activity. Wiki technologies allow students to create dictionaries on their own, immerse students in an in-depth study of terminology, and when selecting references to literature, students have the opportunity to master a large amount of content through its analysis and preparation of short but comprehensive and understandable definitions.

In our work, we demonstrated experience of compiling electronic glossaries using wiki technology in the English language course which showed that independent development of a glossary (with advisory role of a teacher) not only facilitates easier words memorizing, but also develops professional competencies that help develop speaking skills in real professional conditions.

In this process, students master the skill of working in a team, develop communicative competencies, work with a large amount of professional content, master conceptual apparatus, develop information and, at the same time, professional competencies.

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