Teaching Reading Skills to Foreign Non-Philology Students Using Internet Resources during Pre-University Training

Enseñanza de habilidades de lectura a estudiantes extranjeros no filólogos que utilizan recursos de Internet durante el entrenamiento preuniversitario

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ABSTRACT:
The search for innovative solutions in teaching Russian as a Foreign Language (RFL) is more imperative and important in the 21st century, the Information Age, than ever. Students’ needs are what defines the goals and objectives of RFL teaching. The main aim pursued by non-philology students is to obtain professional knowledge in a foreign language. This is why RFL teachers have to respond to a number of new challenges, one of them being the early introduction of new technologies into the learning process and the creation of new teaching approaches and methods enabling teachers to beat off fierce competition while maintaining Russian education at an appropriate level. This study aims to provide a scientific foundation for and to test a pattern of using Internet resources when teaching Russian reading skills to foreign non-philology students during pre-university training. The theoretical, empirical, sociological and pedagogical methods were used to address the need for computer-assisted instruction of non-philology students. Using Internet resources
1. Introduction

Today most Russian language learners in Russia are enrolled in non-philology programs. In connection with the above, the introduction of a new methodology for teaching Russian reading skills to non-philology students is a relevant research task, since reading is one of the major language skills (Bovtenko 2005).

Current research shows that the use of the Internet makes it possible to set up an appropriate foreign language environment, to set and fulfill tasks in developing students’ need to study a foreign language by actively communicating in it with native speakers and by working with all kinds of authentic reference materials (Dubovikova 2006). Given the importance of efficient, quick and easily accessible communication, the Internet can be used as a means to obtain information, to communicate and to learn. Unfortunately, most of the information on the Internet is presented in a disorganized manner, thus reducing its effectiveness when used. More research is required to make full use of languages teaching resources on the Internet taking into consideration students’ needs and teaching objectives in the RFL classroom (Vladimirova 2002).

The relevance of this study lies in modern requirements for RFL programs, which are based on information and communication technologies, and in the need to develop new language acquisition systems using modern computer technologies directed at making foreign students fluent in the Russian language as quickly as possible, while paying close attention to their interests and needs.

The specific objectives of this study are as follows: 1) to analyze Internet resources for language teaching; 2) to establish the criteria for assessing information on language teaching that is available on the Net; and 3) to describe techniques used in teaching foreign non-philology students to read specialized texts.

The aforementioned research objectives have identified the need to use Internet resources to deal with the following research tasks:
- to determine methodological principles underlying the use of Internet resources in reading skills acquisition in a RFL classroom;
- to identify and propose a set of assignments and exercises to teach students to read specialized texts from the Internet;
- to verify the effectiveness of the developed computer-based techniques through experiential learning.

The following hypothesis is put forward in line with the goals of our study: foreign students’ communicative competence will improve if they learn to read specialized texts based on Internet resources, which foster students’ interest in learning the language and develop relevant communication strategies and tactics in RFL classes.

The reviewed research works on teaching RFL to non-philology students are complementary rather than contradictory, which allowed us to bring together the key ideas exposed in these studies (Pinevich 2005). The following general points are common to all approaches to teaching RFL to foreign non-philology students:
- foreign learners get proficient in both general and specialized Russian during their pre-
The main educational objective of any non-philology higher education institution is to train future specialists with a broad scientific outlook and good knowledge and perception of the surrounding world.

RFL training is based mostly on texts from specialized textbooks and study materials selected in accordance with students’ major and minor courses; texts are the central focus of specialized language classes; the main practical purpose of teaching RFL to non-philology students is to develop their ability to carry out major cognitive processes responsible for the functioning of various language skills.

Of great interest are computer-assisted language classes offered to non-philology students. A multifactor description of everything the computer as a new educational tool has to offer, the development of a framework for the e-textbook, the use of hypertext technology in language teaching, the linguistic analysis of various RFL computer courses prove the point that modern technology plays a significant role in the teaching process (Bazvanova 2005).

The main aim of this study is to provide a theoretical and scientific foundation for and to develop and test a pattern of using Internet resources when teaching Russian reading skills to foreign non-philology students during pre-university training. The study suggests some guidelines about how to prepare and teach RFL lessons using Internet resources and some reading materials that can be used in RFL classes attended by foreign students, in particular:

1. Formal requirements have been established to evaluate online Russian learning resources that may be used by non-philology students in a RFL class;
2. Computer-based reading comprehension exercises have been suggested and substantiated;
3. Main areas of study have been determined, aiming to improve the computer-based RFL learning.

2. Methods
This study applies the following research methods:

1. Combined empirical and theoretical research methods:
   - the study of foreign students’ reading of academic texts, such as research articles, textbooks and study materials on their area of specialization;
   - analysis and synthesis;
   - induction and deduction.
2. Sociological and pedagogical methods:
   - surveys conducted among students enrolled in pre-university training programs aiming to detect their communication needs when learning RFL;
   - questionnaires aimed at determining why and for what purposes foreign students learn the Russian language;
   - experimental training.
3. Descriptive and analytical method used to study and analyze specialized literature on the research topic, linguistics, RFL teaching, computer-assisted language education.
4. Statistical approach used to determine the frequency of grammatical forms and other language units.

We drew on the following sources for the purposes of our study:

- results obtained from observations of foreign students’ communication skills during lessons using online resources;
- descriptions of methods and results obtained from computer-based language acquisition activities;
- online Russian information materials.
3. Results

3.1. Online resources in RFL teaching

Research literature has various approaches to classifying online resources. For our purposes, Internet websites can be divided into groups, considering that websites are often of combined nature in reality. In our viewpoint, however, the layout of any website is always determined by its objectives and tasks. Therefore, websites can be generally divided into the following groups:

1. Promotional websites (promo sites, corporate sites and online stores);
2. Information resources (themed websites, online portals, blogs, website catalogues);
3. Web services (search engines, mail systems, online forums, photo/video/audio hosting services, bulletin boards and social networks).

As far as educational activities are concerned, information resources and web services are of special interest to us (Ismailova and Matukhin 2016). There one can find e-textbooks, interactive learning resources (training exercises), virtual environments (virtual labs and projection space), computer demos, universal learning spaces, online databases, reference materials (online translators and dictionaries), online libraries, online periodicals, archives and collections (audio, photo and video files). A major web resource is a portal combining a variety of services, including forums, voting, chats, news, online consulting, databases and online libraries (Kedrova 2001).

Another characteristic of online educational resources is access to educational technologies and sources of information, as well as the possibility of distance learning. Three main types of learning activities are available to learners who are active Internet users:

1. Search of information by working with search engines, databases, reference systems, etc.
2. Communication (e-mails, chats, mailing lists, forums and videoconferences);
3. Online publications (creation of web pages, websites, blogs; publications of articles, theses and course papers.

The use of online resources may be considered important and useful in improving the following language skills of foreign students enrolled in RFL courses: developing reading skills; mastering listening skills by using authentic online audio texts; improving monologue and dialogue skills by discussing information found on the Internet by the student himself or by the professor; broadening writing skills by participating in penpalling, in written discussions of issues or in online projects; enriching one’s vocabulary with words/expressions from authentic online texts; getting familiarized with socio-cultural aspects of language, specificities of speech behavior, including speech etiquette during computer interactions; sustaining motivation based on the systematic study of authentic materials and discussion of relevant cultural issues (Azimov 2003).

A strong emphasis should be placed on specialized educational web resources related to specific areas of specialization (medicine, law, economics, physics, biology, etc.). Such resources include educational portals, official websites of educational institutions and of the state bodies of the Russian Federation, online libraries and specialized databases (Bogomolov 2008).

The classification of educational resources presents the following challenges:

1. Many online resources are presented in a non-systematic manner and, consequently, are hard to find and describe;
2. Online resources differ in significance, completeness, depth of description, presentation of information and access to it;
3. Ways of presenting information in these online resources are highly disparate;
4. There is a lack of genre uniformity in texts posted on the above-mentioned online resources.

The preceding analysis shows that, though the use of online resources helps address major issues in language education, they need to be arranged in a systematic way to be effectively used in RFL classes.
3.2. Teaching Reading to non-philology students (based on online texts)

Both Russian and foreign university students are now much more actively engaged into research and professional activities than in the past century, and students participate in research projects and develop their professional skills at earlier stages than before. In this regard, the concept of self-managed, or autonomous, learning has emerged and is developing in Russia and beyond. This concept is based on the learner’s sense of responsibility for choosing ways in which he or she learns and creating the necessary conditions for access to educational resources. Given that the establishment of flexible training patterns varies according to the student body, teaching content and methods, language training is centered round a vast set of study materials allowing teachers to meet students’ individual learning strategies (Klobukova 1995).

Textbooks and various study materials are an integral part of teaching Russian to foreigners (Vasilyeva 2003). Most of them, however, are not suitable for them at the pre-university training stage, because these textbooks are intended for use in full-time university language training programs through complete immersion in the language. Foreign students enrolled in short-time courses in Russian universities consider the content of such textbooks excessive. Surveys and observations show that they find it more important to develop their reading comprehension skills, which enables them to read and understand scholarly literature and official documents in their area of specialization (Averin, 2001).

Consequently, the structure and content of textbooks intended for use in long-term, comprehensive language training programs makes it difficult to meet foreign students’ communication needs (Azimov 2003). It is this circumstance that necessitated the selection of texts and the search for effective teaching methods that would enable foreign students to read specialized texts, provided that they were not immersed in the Russian language and that the number of hours given to Russian language classes in the curriculum was not sufficient.

We consider reading as one of the major language skills in teaching RFL for several reasons:

1. Reading provides learners with a real opportunity to use the studied language in other language environments.
2. Students can acquire good Russian reading skills in short- or long-term language training;
3. Reading is an activity of great general educational and socio-cultural significance that advances the learners’ intellectual development, broadens their horizons and promotes intercultural communication;
4. Reading is characterized by more sustainable skills as compared to other language activities;
5. Students can actively develop their reading skills on their own, outside the classroom and with no need to be immersed in the language.

Various types of texts are used in teaching reading to foreign students. These include training texts, tailored to the students’ level of understanding and their vocabulary and grammar level, and authentic texts, presented to students as they become more fluent in the foreign language (Azimov 2015). When selecting texts and creating exercises, educators base proposed communication tasks on their analysis of the communication needs of non-philology students in the Humanities. Below is a table showing the types of communication needs of beginner-level foreign students enrolled in higher education programs.

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**Figure 1**

Types of foreign students’ communicative needs during pre-university training.
Reading comprehension texts are to be selected according to the following criteria:

1. Compliance with modern foreign language requirements;
2. Target audience (age, type of higher education institution, etc.).

The authors examined various modern methodological concepts based on psychological mechanisms underlying the generation and understanding of speech. What is common to all of them is the fact that the language training system is centered round the learner’s personality, which provides an argument for the emergence and development of the personality-oriented foreign language teaching methodology coexisting with cognitive and communication methodologies.

### 3.3. Methodological practices in using online resources to teach reading skills

We suggest that an educational webpage should be created to improve the methods of teaching reading to foreign students enrolled in the RFL program. This will enable the teacher to set up learning and test program while taking into consideration learning objectives and challenges. Creating a set of exercises and assignments includes several stages:

1. Selection of the type of exercise/assignment;
2. Data entry by the teacher (explanation of assignment and new language material; provision of correct answers to sample questions; different assessments of the learner’s answers).

Students would be able to use materials posted on this educational website, do exercises and assignments and communicate with their teacher by e-mail (Geikhman 2007).

What follows are five substantiated methodological techniques and assignments, as well as recommendations on how to use various online resources.

1. A list of study materials drawn from online sites on specific topics. Such a list is a kind of reference tool allowing the teacher to quickly find all necessary online materials on this or that topic being studied.
2. A collection of texts, photographs, audio and video files, animated resources and virtual tours based on the available online resources. All of the above-mentioned materials can be used as study materials and posted on a Web page for use by students as illustrative or information material when studying a specific topic.
3. Links to online resources that include text-based assignments and questions. These questions and assignments help the teacher to organize the students’ educational and cognitive activities. After studying the content of a website, students will have to do assignments aiming to verify...
4. Discussion

During pre-university training, reading – one of the major language skills - is perceived as an indivisible process that consists of reading techniques and reading comprehensions, and anticipation is one of the teaching methods aimed at facilitating the acquisition of reading skills by students (Gasanova 1978).

Russian reading texts offered to non-philology students during pre-university training can be described as follows (Yakunina 2009):

1. They are authentic academic texts (or selections) drawn from specific branches of science, such as chemistry, physics, mathematics, information technology, biology, economics, etc.;

2. These texts can be descriptive, narrative, expository or argumentative.

3. The following are the most frequent constructions found in the analyzed texts representative of four economic disciplines: что называется (smth is called smth), что определяется (smth is determined by smth), что имеет (smth has smth), что рассматривается как (smth is considered as smth), что представляет собой (smth represents smth), что равно (smth is equal to smth), что используется где (smth is used somewhere), что считают (smth is perceived as), что характеризуется как (smth is characterized by), что зависит от чего (smth depends on smth), что применяется где (smth is used somewhere), что образует (smth constitutes smth), что изменяется (smth modified smth), что получается (smth is obtained from somewhere), что составляет (smth forms smth), что приводит к (smth results in smth);

4. The construction with the verb “называться” (“to be called” or “to be named”) is part of the “notion of something” semantic group and has the following specific features (the construction что называется чем - smth is called smth – includes all the possible variations, such as что называется, что называют, что называется and что называются):

- что называется (smth is called smth) + subordinate determinative with the word "который" (that, which, what): Ex. Совокупность, из которой проводится отбор, называется генеральной (A population chosen to represent a set of similar items or event, is called statistical);

- что называется (smth is called smth) + participle construction: Ex. Модой называют величину признака, наиболее часто повторяющуюся в изучаемой совокупности (Mode refers to the dominant feature in the population under investigation);

- что называется (smth is called smth) + participle construction + participle construction: Ex. Переписью называют специально организованное статистическое
наблюдение, повторяющееся через равные промежутки времени, проводящее с целью получения данных по ряду признаков (Census is an organized statistical procedure that is taken at regular intervals and aimed at obtaining data on a number of grounds);

- что называется (smth is called smth) + subordinate determinative with the word "который" (that, which, what) + participle construction: Ex. Агрегатным индексом называют сложный относительный показатель, который характеризует среднее изменение социально-экономического явления, состоящего из несопоставимых элементов (Aggregate index is a complex relative measure that is indicative of the mean change of a socio-economic event consisting of incommensurable elements);

- что называется (smth is called smth) + participle construction + subordinate determinative with the word "который" (that, which, what): Ex. Индексом постоянного состава называют индекс, исчисленный с весами, зафиксированными на уровне одного какого-либо периода, который показывает изменение только индексируемой величины (Continuous abstinence rate refers to the rate calculated with scales set at a fixed period that shows changes taking place only in the indexed value);

- что называется (smth is called smth) + participle construction + subordinate determinative with the word "который" (that, which, what) + verbal adverb phrase: Ex. Экономико-статистическим анализом называется методика, которая, контролируя адекватное отражение исследуемых явлений, основывается на широком применении традиционных статистических и математико-статистических методов (Economic and statistical analysis is a method based on the widespread application of statistical and mathematically-statistical methods while verifying that phenomena under investigation are interpreted in a plausible manner).

The study of this construction can be divided into two stages: 1) the study of the construction “as is”; 2) the study of the more complicated variation of this construction.

1. The participle is the most frequent Russian verbal form. It comes in the following versions: isolated participles; participles with dependent words or a participle construction; participle as a term; and short-form participles as predicates.

2. Adverbial participle is another frequent Russian verbal form. As a rule, most adverbial participles are often repeated, so the teacher can work with the most frequent constructions.

3. Among other frequent Russian grammatical elements are verbal nouns (расчет/calculation, подстановка/substitution, перегиб/fold, разветвление/ramification, перемещение/transfer) and compound words (фондоотдача/return on assets, трудоемкость/manpower input).

4. The most frequent short-form adjectives in academic Russian are the following: равен (equal), перпендикурен (perpendicular), одинаков (similar), пропорционален (proportional), отличен (different).

We suggest that the teacher considers the following sequence of actions when selecting reading texts for prospective non-philology students:

1. The teacher selects a whole cycle of study courses that echo the studied discipline.

2. Upon survey of subject teachers, the recommended textbooks and study materials are selected taking into consideration the curriculum.

3. Next, the teacher determines the text types dominating in the selected academic textbooks (descriptive, narrative, expository or argumentative), with the frequency principle in mind.

4. Finally, the teacher analyzes the texts to determine the most frequent constructions (smth is smth, smth consists of smth, etc.), grammar forms (past participle, transgressive) and other linguistic units (compound words, verbal nouns, etc.) that are typical of these texts.

Considering all of the above criteria, the teacher selects texts that are typical of the language used in the chosen subject areas.

Full and accurate comprehension of primary and secondary facts contained in a text is what interests the future specialist most, according to the survey conducted among students enrolled in the pre-university training program.

When teaching reading, teachers are recommended to focus on the following tasks:

- develop all types of reading giving preference to study reading (to this purpose, it is recommended to create some assignments benefiting from survey reading (Ex. Arrange
sentences in logical order), skimming (Ex. Find out what the text is about) and search reading (Ex. Find the definition of the work “vector” in the text), in addition to study reading;
- propose grammar-oriented exercises for students to learn a specific grammar rule (Ex. Restore past participles in the text);
- work with the text from several perspectives: eliminating the difficulties students may have with vocabulary and grammar; verifying comprehension of the content; proposing revision exercises;
- use test assignments to check how well students understand the content of texts, taking into consideration the fact that all state-regulated tests and exams check students’ reading comprehension skills by proposing them text-based questions, whether on paper or online).

An experimental learning case study consisting of several stages has been conducted to prove the hypothesis put forward in this research study. The first stage included collection and systematization of facts using the empirical method. The following stage drew upon the collected material to propose a hypothesis and prepare necessary materials for the experimental research study.

The aim of the experimental learning case study was to identify and classify difficulties that faced students working with scientific and professional texts written in academic Russian and using Russian information and communication tools; to formulate and substantiate characteristic features of the information environment to make foreign students’ class and out-of-class language learning activities as efficient and fruitful as possible; and to assess the effectiveness of the suggested method for organizing the educational process. (Pokrovskiy, and Bondareva 2017; Chuvayeva, 2015).

Survey results and work with students revealed that many learners had difficulty in defining a theme, a problem, the main idea of a text while expressing their own opinion about it; they could not find key words and notions illustrating the topic and the author’s views.

Basic learning conditions were the same for all groups of students studying professional Russian, except that control groups attended traditional classes, whereas lessons in experimental groups involved work with online resources and tools, as well as activities in the computer lab. The length of the experimental learning program was one month, eight hours per week. The aim of the experiment was to monitor the students’ development of communication skills. Self-assessment tests accompanied ongoing monitoring (every class) and final examinations (at the end of the semester). At the start of the program, all the students in the class were at the same RFL level (Intermediate). The set of learners, the content and the time allocated to master the course syllabus also were similar. What differed were the learning conditions (traditional classroom or computer lab) and learning tools.

At the end of the program, students in both groups, the experimental and control ones, took a final examination according to the following criteria:

1. **Content**: ability to choose the right reading strategy with a view to find the necessary information (major, secondary or relevant) for the reader; the ability to detect factual information and feedback on it, allowing the reader to feel confident in social life; ability to describe the situation or explore the topic.
2. **Communication objectives**: full comprehension of a text; comprehension of the main content; comprehension of specific information; search for scholarly information using keywords and word combinations.
3. **Main types of text**: expository, argumentative, descriptive, and narrative.
4. **Types of tests**: reading comprehension tests including multiple choice and fill-in-the-blank questions, re-order paragraphs questions, multiple-choice questions to determine the main idea of a text, and matching questions.

The group that had used online study materials answered all of the above-mentioned final exam questions better than the control group. Students in the experimental group had also spent considerable time working with online resources independently. A comparative analysis of the learning outcomes showed that students in the experimental group better understood and mastered new vocabulary and grammar (for instance, terms, comprehension of the
main idea of a text) better than the control group by 12 to 15 percent. The term Achievement Ratio referred to the ratio between the number of one kind of questions (for instance, substitution of required terms and word combinations, choice of the right answer, search for equivalent words in Russian and English), to which the student provides right answers, and the total number of questions. Tests, surveys and self-assessment scales were used to evaluate the learning outcomes.

5. Conclusion

Teaching reading scientific Russian texts to foreign students enrolled in pre-university training programs using modern online technologies is an important step on the way to perfect the Teaching Russian as a Foreign Language program (Beloglazov, Beloglazova, Bondareva and Ismailova 2017).

Independent work of students in the computer lab using specialized study materials and the use of these materials as recommended by the author ensure more effective acquisition, perception and processing of information drawn from specialized texts as compared to traditional techniques for teaching reading comprehension. Listed below are the most important outcomes of this research study:

1. The study analyzed the main uses of computer technologies in RFL classes offered to foreign students enrolled in pre-university training programs.
2. The study substantiated the need to create study materials based on online resources and selected in view of developing the students’ professional competence.
3. The study identified the benchmarks for selecting typical texts that can be considered as vocabulary and grammar models illustrative of professional texts (identification of dominant types of texts, frequent constructions, grammar forms and language units).
4. The study gave methodological guidelines to help teachers use these texts in teaching reading.
5. The study described the possible uses of online resources in teaching reading, including those involving creative and challenging assignments based on the project work principles (web quests).
6. The experimental training program proved the efficiency of the proposed methodology during classes on reading specialized texts in Russian.

Our analysis of available research studies shows that the use of online resources brings a number of problems, which the RFL teacher should take into consideration (Bovtenko 2005; Bogomolov, and Molchanovsky, 2007):

- duration of computer sessions, structure of the lesson, place of computer-assisted classes on the schedule, terms and conditions of computer use;
- role of psychological factors, such as students’ dispositions, age-related specificities, etc.;
- differences between online and printed texts (lesser amount of reading, variations in text volumes on the screen, reduced speed in reading online texts, use of hyperlinks).

Printed and digital study materials, including texts and exercises, were developed and tested based on the above provisions.

The hypothesis put forward in this research study aimed at using assignments and exercises based on online resources in an attempt to improve teaching reading comprehension has been tested during experimental training. This hypothesis has been confirmed and can be considered efficient in using this methodology to form and develop students’ reading skills.

The proposed benchmarks for selecting texts and the techniques used to work with texts during class can be applied to texts on mathematics, chemistry, physics, etc. The research outcomes may be used to create study materials aimed at teaching reading and other language skills.

To conclude, this study has analyzed only some of the possible uses of study materials, but there are many more. This kind of study materials can be used in different learning conditions, among different target audiences and at different stages of training.

References


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