

FORMATION OF THE RESEARCH SKILLS OF STUDENTS DURING STUDYING THE FOREIGN LANGUAGE (ENGLISH) AT THE UNIVERSITY

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Abstract

The purpose of the article is to research the influence of English lessons and students' scientific conferences on the formation of the research skills of university students.

Materials and methods: The second-year students of the Institute of Psychology and Education, Kazan Federal University took part in the study. In the process of study, the following research methods were used: theoretical analysis and synthesis of scientific literature; the study and synthesis of advanced educational experience; pedagogical observations of the process of foreign language education at the university, interviews, and questionnaires.

Results of the research: There were identified the key research skills for university students. The initial and final level of the formation of the research skills during the academic year was measured. The results show that the lessons of the foreign language (English) along with the participation in student's conference influence effectively on the research skills formation.

Applications: This research can be used for the universities, teachers, and students.

Novelty/Originality: In this research, the model of Formation of the research skills of students during studying the foreign language (English) at the university is presented in a comprehensive and complete manner.

Keywords: *methods of education, foreign language, university students, research skills, English lessons.*

INTRODUCTION

This article describes the influence of English classes at the university, the preparation, and participation of students in scientific conferences held in foreign languages on development of research skills.

The problem is that the students, coming to the university, do not have formed research skills at a sufficient level to effectively master the educational programs. Moreover, the undergraduate program does not imply a separate course on academic writing within the chosen specialty. Students are accustomed to getting ready-made knowledge in school from textbooks. In this regard, foreign language lessons have a task not only to teach students to understand, speak and express their point of view in English but also to be prepared from different sides to consider the topics for specific purposes, to be able to formulate questions and answer opponents.

The educational program of the university suggests that students comprehend the skill of writing scientific reports and participate more actively in conferences only in the magistracy. In the framework of studying a foreign language in the magistracy, the basics of academic writing are described as more detailed, in particular, writing a scientific thesis.

However, research skills are necessary for bachelor students as well since studying at the university implies daily search for information, its analysis, and synthesis, the ability to present information, ask and answer the teacher's and classmates' questions at seminars and practical classes.

Thus, in this article, we have made an attempt to solve this problem with the help of systematic formation of research skills of bachelor students in English classes, which include certain tasks. Students, performing assignments throughout the academic year, become able to prepare a scientific report and speak at a scientific-practical conference in English, providing their report with a presentation.

LITERATURE REVIEW

A number of studies have been conducted to showcase how research skills among students could improve their job opportunities ([Badke, 2012](#); [Moore & Teter, 2014](#); [Murtonen, et al. 2008](#)), while some studies have been conducted that show that teaching improves research skills of students ([Lopatto, 2010](#)). Another study indicated that undergraduate students were aware of the benefits of research experience and felt that a better understanding of the research process might improve their skills ([Mariani, et al. 2013](#); [Moore & Teter, 2014](#); [Nikkar-Esfahani, et al. 2012](#)).

Many universities in the United States and the United Kingdom emphasise the publication of student research and development of student research journals ([Aghion & Howitt, 1992](#); [Boyer Commission on Educating Undergraduates in the Research University, 1998](#); [Daly & Scott, 2011](#); [Easterby-Smith, et al. 2002](#); [Gilmore & Feldon, 2010](#); [Khuziakhmetov, et al. 2018](#)).

Some works of the authors ([Nikkar-Esfahani, et al. 2012](#)) are devoted to the study of various aspects of the research abilities demanded of students at present and in the future. These issues have been studied by universities, cooperation and scientists ([Ashland University, 2018](#); [Barro, et al. 2000](#)).

Several authors have provided different strategies to develop research skills ([Feldon et al., 2015](#)).

The researches of APEC write about an ideal researcher and distinguish such key competencies expected now and in the future by research organizations (in France, Germany, Finland, Netherlands, the United Kingdom, Switzerland, Japan and the United States) as scientific knowledge, ability to learn and adapt, ability to formulate a research issue, capacity for analysis and grasp of sophisticated IT tools, ability to work in an interdisciplinary environment, ability to incorporate existing knowledge existent.

MATERIALS AND METHODS

The aim of our study is to research/measure the influence of English lessons and students' scientific conferences on the formation of the research skills of university students.

The basis of research: Kazan Federal University, Institute of Psychology and Education.

Stages of research: The study was conducted in three stages [Ferri, M. M., & Wilches, J. U. \(2005\)](#)

At the first stage of the study, domestic and foreign sources on the problem under study were analyzed, the methodological apparatus of the study was formulated.

At the second stage of the study the process of the English language education in the Institute of Psychology and Education, Kazan Federal University was monitored, interviews with teachers of English, Psychology, and Methodology and questioning of students were conducted. The key research skills of students were distinguished and measured.

In the third stage, the results of implementation of English lessons and the scientific student's conference and their influence on the formation of the research skills of university students.

Research methods: theoretical analysis and synthesis of scientific literature; the study and synthesis of advanced educational experience; interviews and questionnaires. [Pascarella, E. T., & Terenzini, P. T. \(1991\)](#)

RESEARCH RESULTS

53 second-year students of the Institute of Psychology and Education, Kazan Federal University took part in the research. According to the analysis of foreign scientific literature on the research skills issue, based on the Federal State Educational Standard of Higher Vocational Education and the data obtained at the initial stages of our research, the key research skills necessary for a student to further effective study at the university were identified. We have identified five basic skills: information seeking, information analysis; writing a scientific thesis, presentation (the ability to prepare an English presentation), communication (to make a report and to participate in discussions on the subject. Research skills were assessed on three levels of formation: low, medium, high, see Table 1.

Table 1: Levels of formation of second-year university students research skills at the beginning of the academic year

Research skills	Levels of formation of second-year university students research skills at the beginning of the academic year		
	low	medium	high
information seeking	59%	31%	10%
information analysis	57%	35%	8%
writing a scientific thesis	84%	6%	0%
presentation	62%	33%	5%
communication	35%	36%	29%

As can be seen from the table, the majority of respondents have a low level of formation of identified key research skills from 36% to 84% and a rather low number of students with high research skills from 0% to 29%. From the data obtained it is clear that the skill of writing a scientific thesis is poorly acquired by most students: low 84%, medium 6%, and high 0%.

During the training period and the participation in the scientific student's conference, there is a constant process of research skills formation among students.

The target group of the students was chosen not by chance since it was during the second year of study at the university when the English language study program involved the study of ESP texts.

Based on the research skills indicated above, which are necessary for a student to study effectively at a university, the topics conducive to their formation were analyzed gradually. Before starting to study the material on a topic of interest to the future researcher, you need to learn to find this information; therefore, students first got acquainted with sites, international databases that provide full-text publications in foreign languages, search engines, and guidebooks. Students were offered the following list:



- **Working papers, articles, chapters from books:**

ERIC: English-language database with articles and scientific publications on psychology from around the world.

CogPrints: Archive of materials on philosophy, psychology, artificial intelligence, computer science, mathematics. Search in thematic sections. In English.

EconPapers: Working papers, journal articles, book chapters. Part of the documents in the public domain. In English.

Elektronische Zeitschriftenbibliothek: The project of the university libraries of Regensburg and Munich. Scientific full-text journals in all branches of knowledge, about 1,500 titles in total. Access to part of the magazines is free. In English and German.

FIND ARTICLES: Library of the Center for Interactive Business Network CBS BNET.com. Journal articles by sections: business and finance, education, computer technology, society. In English.

Institute for Social & Economic Research. University of Essex (England). Institute of Social and Economic Research. About 200 working papers. In English.

International Data Base: Statistics on the population of the world since 1951 (demographic and socio-economic indicators). Vocabulary. In English.

Internet Public Library. The Internet Library of the University of Michigan (USA). Publications on various branches, including the economy. In English.

LogEc. Management Research Institute Erasmus (Holland): Collection of work papers on management and economics. In English.

Scientific Commons: Search for scientific information on various topics that are freely available. In German and English.

University of California eScholarship Repository: Database of the University of California (USA). Magazines, books, conference materials, working papers on various sciences in free access.

Global eJournal Library (GeJL) (gejlibrary.com/): The electronic platform for searching and uploading full-text articles published in foreign scientific journals in the public domain, adapted for mobile applications.

Göttingen University Press (www.univerlag.uni-goettingen.de/) Göttingen University Press open access publishing house.

JournalTOCs (www.journaltoCs.ac.uk/): An online resource for anyone looking for the most up-to-date materials published in international scientific journals. It contains metadata of more than 25 732 journal articles from more than 2,443 publishers.

Kamla-Raj Enterprises (www.krepublishers.com/): Portal of scientific journals in India, created by Kamla-Raj Enterprises.

Living Reviews (www.livingreviews.org/): A portal that provides open access to reviews of scientific journals and gives the authors of articles the opportunity to update them periodically.

MDPI (Molecular Diversity Preservation International) (www.mdpi.com/). The website of open access journals published by MDPI (open since 1996); included "Molecules", "International Journal of Molecular Sciences", "Sensors" and others.

- **Search engines:**

Google Books: Search system. Search monographs on all branches of knowledge in Russian and foreign languages.

Google Patents: Special search engine for patents. The database contains over 7 million full texts of documents.

SciNet - Science search: Scientific search engine and catalog of scientific resources.

JURN (www.jurn.org/) is a unique search engine for magazines (art, social sciences) that are publicly available.

- **guides:**

SciGuide: Project of the Siberian Branch of the Russian Academy of Sciences. Guide to foreign scientific resources open access.

Further, students learned to formulate and highlight keywords, on the basis of which the search for articles and the necessary scientific material on the topic under study was carried out. After that, students were offered various writing plans of scientific articles adopted in global practice. Gradually students learned to write scientific articles according to a plan. At the final lessons, the main characteristics of a good presentation were considered as well as examples were analyzed. Students also learned to ask and answer questions on the topic throughout the entire period of learning English. As a result, there was a rehearsal and a report accompanied by a presentation at the conference or the English class.

Table 2: Levels of research skills of second-year university students at the beginning and end of the academic year

Research skills	Levels of research skills of 2nd-year university students at the beginning of the academic year			Levels of research skills of 2nd-year university students at the end of the academic year		
	low	medium	high	low	medium	high
information seeking	48%	31%	21%	18%	52%	30%
information analysis	46%	35%	19%	26%	40%	34%
writing a scientific thesis	79%	21%	0%	42%	36%	22%
presentation	62%	33%	5%	38%	37%	25%
communication	60%	25%	15%	33%	30%	37%

At the third stage of our research, a comparative analysis of the results of the level of formation of research skills of students of the 2nd year of IPO, KFU showed a significant increase in the medium and high levels, the data are presented in Table 2.

DISCUSSION AND CONCLUSIONS

The results of our study showed a significant increase in the level of formation of the research skills of university students. Thus, we can conclude that classes of the English language in combination with the participation of students for scientific and practical conferences influence effectively the formation of university student's research skills.

In the process of the systematic study of the English language, working with ESP texts, preparing for the scientific and practical conference and participating in it, students acquire skills of information seeking, information analysis, writing abstracts, preparing a report in English and presenting it to the audience, responding to opponents. Thus, university students in the next courses will be able to prepare a scientific report and speak at a scientific-practical conference in English, accompanying their report with a presentation, independently and without any teacher's control.

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