Volume 71
Number 1
2021

RLJ

Russian Language Journal

Special Issue

Digital Humanities and Russian Language Teaching

Special Issue Editors

Thomas Jesús Garza
Robert Reynolds

actr

A Journal of the American Council of Teachers of Russian

RLJ

Russian Language Journal

Russian Language Journal (ISSN 0036-0252) is a bilingual scholarly journal on the study and teaching of Russian language and culture, comparative and interdisciplinary research in Russian language, language policy, applied and theoretical linguistics, culture, and the acquisition of Russian as a second language.RLJ appears annually beginning with Volume 52 (2005) and is distributed to the members of the American Council of Teachers of Russian. It is available by subscription at a rate of $30.00 per year to individuals ($40 outside North America), $50 per year to institutions ($65 outside North America). RLJ is also available to all interested readers via https://www.actr.org/rlj-russian-language-journal.html; with abstracts of the current year's volume and full articles for past years available. Guidelines for contributors are listed on the inside back cover and on the RLJ website. Payments should be made to Russian Language Journal.

Address all correspondence to:
Russian Language Journal
American Councils for International Education: ACTR/ACCELS
1828 L Street, NW, Suite 1200, Washington, D.C. 20036
Tel: (202) 833-7522
Email: rlj@americancouncils.orgWeb: https://www.actr.org/rlj.html

RLJ
Russian Language Journal

Volume 71
Number 1
2021

CONTENTS

Introduction to Volume 71 1

ARTICLES

DH and Russian

Digital Humanities and the Teaching of Russian Language and Culture 5
IRENE KRASNER, THOMAS JESÚS GARZA

DH and Research

The Contested Works of the Bakhtin Circle: A Stylometric Investigation 27
BRITTANY PHEIFFER NOBLE

DH and Translation

Translation in the Russian Language Classroom: Coming in from the Cold 51
BRIAN JAMES BAER, TATYANA BYSTROVA-MCINTYRE, IRINA DZERO

Reading Russian for the Disciplines: Google Translate 73
RICHARD ROBIN

DH and the Word

Russian's Most Frequent Words and Vocabulary Instruction 115
WILLIAM J. COMER

Towards intelligent correction of collocational errors in Russian novice academic texts in the *CAT&kittens* writing support platform 139
ALEKSANDR KLIMOV, MIKHAIL KOPOTEV, OLESYA KISSELEV

Research and Pedagogy

To OPI or Not to OPI: Proficiency-Oriented Instruction and Assessment in U.S. University-Level Russian Programs 163
OLEKSANDRA WALLO, MOLLY GODWIN-JONES

Building Bridges with Language and Culture in Russia 189
ALLA KOUROVA, FLORIN M. MIHAI

REVIEWS

Kopotev, Mikhail, Olga Lyashevskaya, Arto Mustajoki, eds. 213
Quantitative Approaches to the Russian Language
OLESYA KISSELEV

Simes, Natasha, and Richard M. Robin. 216
Political Russian: An Intermediate Course in Russian Language for International Relations, National Security, and Socio-Economics
MARIA ALLEY

DiMattia, Kimberly. 219
Unlocking Russian Pronunciation: A Supplementary Multimedia Mini-Course in Phonetics Based on Famous Russian Songs
IRINA KOGEL

Curtis, J.A.E. 221
A Reader's Companion to Mikhail Bulgakov's The Master and Margarita
DANIEL BROOKS

Simms, Elena, and Tatiana Romanova. 224
Russian in a Contemporary World: A Textbook for Intermediate Russian
VALENTINA VINOKUROVA

Hayes, Natalia. 228
Acquiring the Major Speech Functionsin Russian: For Intermediate and Advanced-Level Students
OLHA TYTARENKO

Contributors

Maria Alley: University of Pennsylvania
Philadelphia, PA
e-mail:malley@sas.upenn.edu

Brian James Baer: Kent State University
Kent, OH
e-mail: bbaer@kent.edu

Daniel Brooks: Franklin & Marshall College
Lancaster, PA
e-mail: dbrooks1@fandm.edu

Tatyana Bystrova-McIntyre: Kent State University
Kent, OH
e-mail:tbystro2@kent.edu

William Comer: Portland State University
Portland, OR
e-mail: wcomer@pdx.edu

Irina Dzero: Kent State University
Kent, OH
e-mail:idzero@kent.edu

Thomas Jesús Garza: The University of Texas at Austin
Austin, TX
e-mail: tjgarza@austin.utexas.edu

Molly Godwin-Jones: University of Kansas
Lawrence, KS
e-mail:megojones@ku.edu

Olesya Kisselev: University of Texas at San Antonio
San Antonio, TX
e-mail: olesya.kisselev@utsa.edu

Aleksandr Klimov: The University of Helsinki
Helsinki, FINLAND
e-mail: aleksklimow@gmail.com

Mikhail Kopotev: HSE University
Saint-Petersburg, RF
e-mail: mkopotev@hse.ru

Irina Kogel: Davidson College
Davidson, NC
e-mail: irkogel@davidson.edu

Alla Kourova: University of Central Florida
Orlando, FL
e-mail: Alla.Kourova@ucf.edu

Irene Krasner: Defense Language Institute Foreign Language Center
Monterey, CA
e-mail: irene.krasner@dliflc.edu

Florin M. Mihai: University of Central Florida
Orlando, FL
e-mail: Florin.Mihai@ucf.edu

Brittany Pheiffer Noble: Columbia University
New York, NY
email: b.pheiffer@gmail.com

Robert Reynolds: Brigham Young University
Provo, UT
e-mail: robert_reynolds@byu.edu

Richard Robin: George Washington University
Washington, DC
e-mail: rrobin@gwu.edu

Jason Strudler: Defense Language Institute-Washington
Arlington, VA
e-mail: jason.strudler.civ@mail.mil

OlhaTytarenko: University of Nebraska–Lincoln
Lincoln, NE
e-mail: olha.tytarenko@unl.edu

Valentina Vinokurova: University of Arizona
Tucson, AZ
e-mail: vvinokurova@email.arizona.edu

OleksandraWallo: University of Kansas
Lawrence, KS
e-mail: owallo@ku.edu

Introduction

On behalf of the editorial team of *Russian Language Journal (RLJ)*, we are pleased to present this volume of *RLJ* dedicated to "Digital Humanities and Russian Language Teaching." As digital humanities (DH) programs and materials enter their third decade in the academy, it is fitting to present here a snapshot of the many and varied applications of digital technologies in the teaching and research of Russian language and culture. The articles in this volume represent the breadth of DH endeavors in our field and serve as exemplars of the aspirations and potential that the future of digital technologies in the Russian field holds.

As an introduction to the field of digital humanities and their connection to the teaching of Russian language and culture, in the first section of this issue, "DH and Russian," Krasner and Garza offer an overview of DH in philosophical and disciplinary frames, tracing the history of DH in academia and its rise in the sphere of humanistic inquiry. They then outline the ways that DH has brought teaching and research in Russian to ever-broadening audiences, increasing access to the language and culture. The subjects of equity and critical pedagogy are examined as potential strengths of DH programs, especially for students for whom access to materials, programs, and native speakers is limited or absent.

In the second section, "DH and Research," the focus is on the use of digital technology in the service research. Pheiffer takes on the use of digital resources to engage with the debate surrounding the authorship of members of the "Bakhtin Circle" in the 1920s. The article outlines the debate over Bakhtinian authorship and stylometric methods in authorial attribution and proposes tentative conclusions based on frequency word analyses of fourteen selected texts from 1920–1930.

The third section of this issue, "DH and Translation," considers the applications of digital technologies in the service of translation. Baer, Bystrova-McIntyre, and Dzero revisit the use of translation and interpreting activities in the Russian language classroom based on recent developments in the language industry, most notably in the creation of text corpora and digital applications, and research in second language acquisition. Their article then examines some concepts from the field of translation studies that would be useful in designing activities that align with the principle

of the communicative approach. In the following article, Robin examines the use of the popular online machine translation app Google Translate to extract information from Russian-language texts. His essay goes on to engage with the question of whether those with little or no reading proficiency in Russian should be taught to make use of Google Translate to extract information from Russian-language texts.

"DH and the Written Word," the fourth section of this volume, focuses on development of lexical breadth and writing skills with the aid of digital technologies. Comer discusses the creation of a lexical database to examine the phenomenon of the "5000 most frequent words in Russian" and suggests possible activities for different levels of instruction that can increase students' abilities to use word formation information in comprehending new words. The study analyzes these words from the perspective of learning burden and Russian word formation and suggests possible activities for different levels of instruction that can increase students' abilities to use word formation information in comprehending new words. Klimov, Kopotev, and Kisselev report on the development of the Corpus of Russian Academic Texts and the writing support platform based on the corpus. The platform is designed to evaluate texts created by novice writers of academic Russian against a large corpus of academic texts. They describe the development of an algorithm to detect collocational errors and find standard academic substitutions for unattested collocations to ensure the standardness of the substitution.

Also included in this special issue are two additional articles submitted through our regular review process. Though not directly related to digital humanities, these two articles are relevant to *RLJ*'s core audience, as they both address issues of curriculum and assessment in Russian language programs.

Wallo and Godwin-Jones investigate proficiency-oriented instruction in U.S. university-level Russian programs. Their paper provides a useful overview of the arguments for and against the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines. Also of interest to readers are the results of a survey investigating the extent to which post-secondary Russian language programs have implemented a proficiency-based approach to instruction and assessment. Their results suggest that proficiency-oriented practices are taking hold in a number of U.S. Russian language programs and that ACTFL OPIs or assessments based on the OPI are gaining popularity. The article also scrutinizes the authors' own experiences of teaching and supervising intensive language

programs aimed at "government learners." They describe their flipped model of language instruction, including methods for holding students accountable under such a system. Their small-scale study demonstrates that the OPI can be a very useful tool even in intensive elementary courses.

Kourova and Mihai describe a Fulbright-Hayes study abroad program aimed at increasing the intercultural sensitivity of educators at various levels. The program gave educators the opportunity to understand the roles and realities of Russian in a global society by studying Russian culture, language, history, and politics. As part of the program, the educators also developed workshops, courses, or digital repositories focused on Russian culture, language, history, or politics. Kourova and Mihai also present the results of their research, examining changes in the participants' intercultural sensitivity as a result of the short-term program.

Finally, the guest editors of this volume express their thanks to Jennifer Bown, Sofia Kasmeridi, the *RLJ* staff, and all who submitted and reviewed contributions for this special issue of *RLJ*. These contributions and our reviewers' careful reading make the publication both possible and rewarding. The *RLJ* continues to be the primary venue for disseminating pedagogical practices and empirical research on the teaching and learning of Russian. And so, we commend to you the work of our colleagues as collected here in volume 71 of the *RLJ*.

Thomas Jesús Garza
University of Texas at Austin
Robert Reynolds
Brigham Young University

Russian Language Journal
Vol. 71, No. 1, 2021

Digital Humanities, Access, and the Teaching of Russian Language and Culture[1]

IRENE KRASNER, THOMAS JESÚS GARZA

1. Introduction

In their introduction to the January 2020 issue of the *PMLA* dedicated to varieties of Digital Humanities (DH), Booth and Posner (2020) describe the "interdisciplinary collaboration," "technical experimentation," and the promotion of "public engagement and humanistic knowledge and understanding" that DH offers scholars and practitioners (10). They go on to reflect on the past two decades of research and practice in the expansion of DH through information studies, libraries, and departments of English. In a related manner, it is our intention to provide both an overview of the history of DH in academia generally, and also its applications to the teaching of Russian language and culture, in particular, examining several past and current DH projects in Russian-related areas. In so doing, we strive to create a portrait of DH within the historic context of academic inquiry with the aim of demonstrating its robust applicability to Russian language and cultural studies. Finally, any contemporary portrait of DH–or any other frame for scholarship and teaching–must necessarily address issues of intersectionality and equity in terms of race, ethnicity, gender, and socio-economic access. Thus, we also discuss models of DH applications that serve in the amelioration of constraints on student access to certain types of programs of study, such as education abroad and contact with native speakers of Russian.

[1] The DLIFLC disclaimer: the part of the article written by Irene Krasner has been approved for public release by the Defense Language Institute Foreign Language Center's Public Affairs Office. For verification please e-mail: mpao@dliflc.edu

Contents of this article are not necessarily the official views of the Defense Language Institute Foreign Language Center, nor are they endorsed by the Department of the Army, the Department of Defense, or the U.S. Government. All third party products / materials featured in the presentation remain the intellectual property of their respective authors / originators. Use of outside materials is done under the fair use copyright principle, for educational purposes only. The content of this article is the sole responsibility of the author(s).

The rapid growth of DH over the past two decades has forced scholars to reconsider and reconfigure the very nature of academic research across a wide range of scholarly disciplines that include not only the traditional humanities subject areas, but also the arts, social sciences, and pedagogy, as well. As Berry (2011) contends: "It is becoming more and more evident that research [in the academy] is increasingly being mediated through digital technology. Many argue that this mediation is slowly beginning to change what it means to undertake research, affecting both the epistemologies and ontologies that underlie a research program" (1). Thus, any prospective research agenda, whether in linguistics, teaching and learning, literary and cultural studies, text mining, or cognition studies, can be pursued under the umbrella of DH.

2. Reflections on DH and schools of thought

Simply combining the terms "digital" and "humanities" generates a vast array of DH categories. Within the range of definitions of DH currently available, as suggested by Kirsch (2014), one can distinguish both a minimalist and a maximalist understanding of the term. In the narrower minimalist sense, DH is defined as the "application of computer technology to traditional scholarly functions, such as the editing of texts" (Kirsch 2014, 1), or the compilation of an archive of related humanistic artifacts. An example of such a compilation would be Jerome J. McGann's (2008) Rossetti's Archive, an on-line repository of texts and images related to the career of the poet and artist Dante Gabriel Rossetti. While a useful bibliographic and visual repository, this type of resource makes relatively minimal usage of the capabilities of digital presentation and intervention of the individual documents represented in the project.

Proponents of the maximalist approach to DH, however, postulate that a paradigm shift in the humanities has occurred, and the very substance, not just the medium, of humanistic work has changed. Such a position is taken by Schnapp and Presner (2015), who provide the following definition, as well as a new moniker, for a new generation of DH products: DH 2.0. In their DH "manifesto," they posit:

> Digital Humanities is not a unified field but an array of convergent practices that explore a universe in which: a) print is no longer the exclusive or the normative medium in which knowledge is produced and/or disseminated; instead, print finds itself absorbed into new, multimedia configurations; and b) digital tools, techniques, and media have altered the production and dissemination of knowledge in the arts, human and social science (182).

Such a maximalist approach to DH confronts systems of knowledge production and dissemination within the humanities, social science, and their intersection. DH currently incorporates both digitized and born-digital materials. The field covers a variety of topics, from curating online collections to data mining large cultural data sets. DH also intersects with information science as well as media theory and game studies, specifically in areas related to DH project design and production.

The multitude of existing definitions of DH reflects the tension within the philosophical underpinnings of DH, which basically combine the seemingly disparate fields of humanities and technology. Within the natural sciences, social sciences, and humanities, technology is usually considered the domain of the natural sciences. The "intrusion" of technology and its applications into the social sciences -- and especially into the humanities – creates a serious paradigm shift in the conceptual tissue of this field.

The inspiration of the DH research methods is usually drawn from two major epistemological schools: the interpretivist and the postpositivist. Both schools are reactions against the positivist philosophical approach to knowledge. "As a philosophy, positivism is in accordance with the empiricist view that knowledge stems from human experience." (Collins 2018, 38). In other words, the key approach to positivist research methods is the experiment, one which employs a large set of data, highly structured protocols, and quantitative tools. Historically, the positivist research methodology has been used in natural sciences such as physics, chemistry, and biology. The epistemological foundation of the positivist philosophy is that the knowledge is objective and resides in the world outside of human consciousness.

Interpretivism, however, is "associated with the philosophical position of idealism, and is used to group together diverse approaches, including social constructivism, phenomenology and hermeneutics; approaches that reject the objectivist view that meaning resides within the world independently of consciousness" (Collins 2018, 38). Development of interpretivist philosophy is based on the critique of positivism in social sciences. Accordingly, interpretivist philosophy emphasizes qualitative analysis over quantitative analysis. *Interpretivist methodology* is an umbrella term for qualitative methods historically employed in humanities research, such as case studies, grounded theory, critical discourse analysis, ethnographic research, and focus groups research.

The postpositivistic paradigm that emerged as a reaction to the positivist methodology promotes a mixed methodology approach that employs both qualitative and quantitative methods and explores the

diversity of facts through various investigative lenses. In other words, postpositivist philosophy and research methodology combine both positivist and interpretivist approaches into one unified interdisciplinary practice. The ontological position of interpretivism is relativism. "Relativism is the view that reality is subjective and differs from person to person" (Guba and Lincoln 1994, 110).

Thus, postpositivist and relativist epistemological foundations are combined in DH inquiry systems, and qualitative and quantitative methods are synthetized, as well. More precisely, quantitative methods are now used to solve humanistic problems that are relativist at their core. This approach is a revolt against the limitations of positivism in which positivism solely associates itself with empiricism and rejects the existence of an individual or subjective perspective of facts. The research questions and practices with which DH engages are complex and interdependent. They require interdisciplinary collaboration among researchers, fields, and, in many cases, institutions. DH provides unprecedented technological tools for such collaborations that can potentially bring together knowledge and expertise from around the world. The beauty of DH is in the decentralization and "democratization" of knowledge and the access to it, a point discussed further below. How DH emerged in the middle of the 20th century to become an integral part of academic inquiry and teaching in the 2020s helps to understand more fully current contributions of DH to the field of Russian and Russian studies.

3. A brief history of DH

The use of computers in humanities started more than seventy years ago and, according to Hockey (2004), "unlike many other interdisciplinary experiments, humanities computing has a very well-known beginning" (3). In 1949, an Italian Jesuit priest, Father Roberto Busa, began indexing all the words in the works of St. Thomas Aquinas, which total about eleven million words of medieval Latin. He thought that computers might help him in this monumental task and went to meet Thomas J. Watson, the founder of IBM, in the United States. With IBM's assistance, all of Aquinas's works were transferred to punched cards and a concordance program was written to perform text searches within the massive corpus of works. The project was completed thirty years later and eventually comprised fifty-six printed volumes of the *Index Thomisticus*. "A CD-ROM of the Aquinas material appeared in 1992 that incorporated some hyper-textual features ('*cum hypertextibus*') and was accompanied by a user guide in Latin, English,

and Italian" (Hockey 2004, 4). Thus, Father Roberto Busa was a pioneer in the use of computers for linguistic textual indexing, and his work is now considered one of the formative underpinnings of informatics and an early exemplar of DH.

In 1998, decades after the publication of the *Index Thomisticus*, Father Busa was awarded a prize by the Alliance of Digital Humanities Organizations (ADHO) to honor the epic achievement and the commencement of the field of computing in the humanities. The award later became known as the Roberto Busa Prize and is given every three years to outstanding DH scholars in recognition of their lifetime achievements. The 1960s also saw the first conference on humanities computing organized by IBM in 1964, as well as the founding of the journal *Computers and the Humanities* in 1996 under the editorship of Joseph Raben, which signaled further development of the emerging field (Hockey 2004, 7).

Advancements in the field of DH can be seen in the Brown University Intermedia project on hypertext in the 1980s. Hypertext allows the organization of a text in a fundamentally new way and employs a multi-layered approach to text representation.[2]

Hypertext can develop very complex and dynamic systems of linking and cross-referencing elements of a text not constrained to be linear. The idea of hypertext became foundational for the creation of the World Wide Web (WWW), which is the most extensive and the most well-known example of hypertext implementation. The WWW and first web browser were written in 1990 and released on the Internet in 1991. That event signified a totally new approach to humanities scholarship and a starting point of the first iteration of DH (Schnapp, Presner, and Lunenfield 2009). From that point on, texts, static images, documents, and video and audio media that were previously available only in print, on linear tape media, floppy discs, or "live" presentations could now be posted and accessed online, which presented new opportunities for research and in humanities.

However, in the 1990s and early 2000s, "computing" was still often seen as technical support for humanistic studies that focused on large-scale digitization projects and on the establishment of a related technological infrastructure. Berry (2011) contends, "The first wave of digital humanities

[2] The history of hypertext itself is complicated and intriguing. The word hypertext was coined in the 1960s by Ted Nelson, who later started the Xanadu project, which tried to store all of human knowledge in a massive database of information. The project did not succeed, but the underlying idea was very powerful. Nelson saw computers as a tool that could reorganize human knowledge and inquiry in an interconnected nonlinear way.

work was quantitative, mobilizing the search and retrieval powers of the database, automating corpus linguistics, and stacking hypercards into critical arrays" (3). Such an approach corresponds closely to the minimalist definition of DH discussed above.

The terminological change from «Humanities Computing» to «Digital Humanities» has been attributed to Susan Schriebman, Ray Siemens, and John Unsworth who, as the original editors for the Blackwell *Companion to Digital Humanities* (2004), tried to represent a much more complex and productive field that involved more than simply digitizing documents and providing tools to conduct research in the humanities. Changing to the term DH signified that the field "had emerged … into a genuinely intellectual endeavor with its own professional practices, rigorous standards, and exciting theoretical explorations" (Hayles 2011, 24). DH quickly became the accepted moniker for both the humanistic research and scholarship conducted using digital technology, as well as for the emerging methodologies for undertaking these studies. Equivalent terms quickly were adopted in most European languages: "*Las Humanidades digitales*" in Spanish, "*Les digital humanities*" in French, "*die digitalen Geisteswissenschaften*" in German, and "*Цифровые гуманитарные науки*" in Russian. In her overview of DH in Russia, Garshkova (2014) emphasized the need to merge new technologies with new methodologies if the DH movement was to be successful, stating "Information support of humanities research in the digital age cannot be limited to just providing an IT infrastructure; it has to offer methodological, technological, software, computational and educational components that users can interact with online" (5-6).

In the last twenty-five years, DH has undergone a transition from the pre- to the postparadigm period in the development of a scientific field, in the broader sense of the Kuhnian term *paradigm*. Before a paradigm shift can occur, a number of schools compete for the domination of a given field. Afterward, in the wake of some notable scientific achievement, the number of schools is greatly reduced, ordinarily to one, and a more efficient mode of scientific practice begins (Kuhn 1970, 178). Such was the case for DH in the 2010s; DH in the 2020s continues to undergo a paradigm shift that informs the forms and functions of "DH 2.0."

4. DH 2.0: The current state of DH

In 2006, the National Endowment for the Humanities (NEH) launched the Digital Humanities Initiative, which made the use of the term *digital humanities* widespread in the United States. According to Schnapp and

Presner (2015), "the second wave [of DH] is qualitative, interpretive, experiential, emotive, generative in character" (116). During the initial period of the development of DH, the "humanities" component was "weighted" more in terms of research methodology, and humanities scholars were driving the studies. However, DH 2.0 introduces entirely new hybrid methodologies that are not often derived from the humanities per se. As Berry (2011) argues, "The question of quite how the digital humanities undertake their research, and whether the notions of first and second wave digital humanities capture the current state of different working practices and methods in the digital humanities, remains contested" (4).

The DH practices and methods Berry (2011) refers to include, among others, text analysis, creation of searchable corpora, online publication, production of multimedia sets of images, text, and sound, and even more recent innovations such as crowdsourcing, the collection of data by requesting the input of a large number of online users. Other practices used in DH include programs to search for and identify patterns in texts, for annotating texts, images, and sounds, and for creating and managing online content for analysis. Such practices facilitate inquiry and study of material that would be difficult, if not impossible, without the tools of digital technology As Volodin (2014) comments: «По сути, современные цифровые гуманитарные науки предполагают широкую исследовательскую программу, которая включает вопросы, интересующие любого гуманитария, так как цифровые исследовательские практики – это реальность любого ученого.» ["In fact, modern digital humanities involve a broad research agenda that includes questions of interest to any humanities researcher, since digital research practices are the reality of any scholar"] (10).

Thus, with the second wave of DH in the mid-2000s, the "digital" component started to weigh more than the humanistic one. That development produced some epistemic changes to the inquiry systems in the field. For instance, the digital tools revealed inconsistencies and allowed the interrogation of some assumptions that are implicit to humanistic research, e.g., authorship, canon formation, periodization, and others. A recent digital analysis of Syriac scripts revealed some significant inconsistencies in previous scripts classifications. "This digital paleography project uses ancient manuscripts written in the Aramaic dialect of Syriac as a case study for exploring how recent advances in the digital analysis of handwriting can help scholars better ascertain a manuscript's provenance … and trace out the chronological development of ancient scripts" (Stanford 2018, 6). The Automated Scribal Identification Project began in 2010 and was a

collaborative research project of Stanford University, Smith College, Duke University, and other institutions. The initial project results were revealed in 2018 and showed that the methodology for "how scholars have classified Syriac script for the last thousand years is simply dead wrong" and "that the chronological estimates in library catalogues upon which most modern scholarship depends are often in error" (Stanford 2018, 6).

DH tools can also help explain centuries-old questions and offer new insights into their solutions. Such an example would be the recent discovery of a two-thousand-year-old literary papyrus which has been housed in Basel, Switzerland since the sixteenth century and "was regarded until now as unique in the world of papyrology" (Kantrowitz 2018). The Basel Digital Humanities Lab used ultraviolet and infrared images to determine that this two-thousand-year-old document comprised several layers of papyrus glued together. One of the sheets was a literary papyrus which was a "sensational discovery, … as the majority of papyri are documents such as letters, contracts and receipts" (Kantrowitz 2018). Huebner hopes to further the papyrus research through sharing the digitalized Basel papyrus collection with international databases as "people mentioned in a Basel papyrus text may appear again in other papyri, housed for example in Strasbourg, London, Berlin or other locations" (Kantrowitz 2018). As we can see from the previous examples, the medium of delivery and dissemination of information in the digital format has changed the landscape of DH. New software products are increasingly shaping the field as they create new ways of undertaking tasks, transforms social and economic relations, and offers new modes of inquiry. The question arises as to whether "software studies" represent a legitimate area of research in the humanities. Fuller (2008) succinctly expresses this lack of a suitable theoretical framework for integrating new software into the work of DH: "The very material of software has often been left invisible … . The growing importance of software requires a new kind of cultural theory that can understand the politics of pixels or the poetry of a loop and engage in the microanalysis of everyday digital objects" (3).

While some scholars decry the loss of the skills and techniques of older research traditions, others have embraced the new way of conducting research in the humanities. Clearly at this point DH is experiencing a Kuhnian revolutionary period which is reflected even in the titles of current articles and books dedicated to the field, e.g., *Transformative Digital Humanities: Challenges and Opportunities* (Balkun and Deyrup 2020),

Digital Humanities and New Ways of Teaching (Wing-bo Tso 2019), *Debates in Digital Humanities* (Gold and Klein 2019), *Digital Humanities Manifesto 2.0* (Presner 2009), and others. As Presner (2009) contends, "We are in … the midst of a transformation of the institutional and conceptual conditions of possibility for the generation, transmission, accessibility, and preservation of knowledge" (114).

One of the main goals of DH is the democratization of knowledge through commitment to open standards, open sources, and collaboration that transcend established disciplinary and institutional boundaries, including commons-based peer collaboration, as well as the collaboration of trained scholars and general public.[3] As Schapp and Presner (2015) succinctly state: "Digital Humanities = Co-creation. Because of the complexity of Big Humanities projects, teamwork, specialized roles within teams, and 'production' standards that imply specialization become defining features of the digital turn in the human sciences" (186).

Such transformation requires a serious change in the mindset of the scientific community which consists of the practitioners of specific specialty who know "what the world is like" (Kuhn 1970, 5). Those beliefs and assumptions represent the core of a scientific field, and any disruptions or abnormalities threaten the belief system established in that particular field of science. "Normal science[4] … often suppresses fundamental novelties because they are necessarily subversive of its basic commitments" (Kuhn 1970, 5). We can trace a similar trend with the emergence of DH in the academy as a new discipline in its own right.

Jaschik (2012) states, "faculty members in humanities disciplines have been pioneers in many forms of digital scholarship and teaching" (1); however, there is a great deal of resistance to new methods of inquiry and "some senior scholars are downright hostile to it" (1). That hostility has had a serious impact on DH scholarship, since its products initially were

[3] One Internet "folk hero" who advocated to make many web-based digital files free and open to the public was Aaron Swartz. A self-made millionaire by the age of 19, he co-organized Reddit (a social news site), Creative Commons, and web.py, among others. Swartz also tried to give free access to scholars to scientific and literary journals by downloading 4.8 million articles and documents, nearly the entire library, from JSTOR, a subscription-only service. Although JSTOR did not press charges, he was indicted on federal charges of wire fraud and computer fraud. Swartz committed suicide in 2013 at the age of 26. He was posthumously inducted to the Internet Hall of Fame that same year.

[4] Normal science is "the activity in which most scientists inevitably spend almost all their time, is predicated on the assumption that the scientific community knows what the world is like" (Kuhn, 1970.5).

not taken into consideration for tenure promotions in U.S. universities. The resistance to recognizing DH research methods and their findings as "legitimate" in the academy might be partially attributed to their novel departure from accepted research norms. Indeed, some DH methods, such as digital ethnographies, are adapted from the traditional methods in humanities and social science research, while others, "such as the translation of literary sources into digital games, are 'native' to Digital Humanities and digital technologies" (Levenberg, et al., 2018, 1). The latter methods might be especially misunderstood by the academicians used to the interpretivist and introspective research approach in humanities.

In a 2011 talk entitled "Who's In and Who's Out" at the Modern Language Association (MLA) annual convention, Steven Ramsay, a specialist in programming languages, controversially argued that DH involves moving from reading and critiquing to building and making, invoking the rise of media studies, game studies, critical code studies (Ramsey 2013). The question then arises whether, for example, creating a game based on a literary work[5] or developing a ground-breaking software program that results in a fundamental discovery in humanities might be considered as academic work toward promotion with tenure? Endres (2017) succinctly summarizes this quandary: "Building faces the challenge of not being writing," but then goes on to argue, "However, the commonalities between writing and building far exceed their differences" (44).

The acceptance of DH in the academia in general and philology in particular took a large step forward during the 2009 MLA convention, at which DH was hailed as "the first 'next big thing' in a long time" (Pannapacker 2009, 1), and guidelines for evaluating digital scholarship in the humanities were articulated. These guidelines, originally drafted in 2000, were revised and approved by the MLA Committee on Information Technology in January 2012 and tried to address the newly articulated concerns of both parties involved: "traditional" and DH scholars. In particular, the guidelines appeal to those working in digital media to explain "the results, theoretical underpinnings, and intellectual rigor of their work" (MLA 2012). They also stipulate that DH scholars should be "prepared to be held accountable to the same extent that faculty members

[5] Elizabeth B. Hunter's (2017) "Building Videogame Adaptations of Dramatic and Literary Texts," traces the author's creation of an original video game, "Something Wicked," based on Shakespeare's *Macbeth*. See Research Methods for the Digital Humanities (Levenberg, et al. 2017, 173-194).

in other fields are for showing the relevance of their work in terms of the traditional areas of teaching, research, and service" (MLA 2012).

The MLA Guidelines also stress the importance of the engagement of "qualified reviewers" in the assessment of DH projects; that is, researchers who produce digital work "should be evaluated by persons … who are knowledgeable about the use and creation of digital media in a given faculty member's field" (MLA 2012). Given the transdisciplinary nature of DH, "at times this may be possible only by engaging qualified reviewers from other departments, divisions, or institutions" (MLA 2012). Another important principle for evaluating DH research is the "respect to medium specificity"; that is "born-digital and Web-based projects … should be viewed in electronic form, not in print" (MLA 2012).

The MLA guidelines helped raise the legitimacy of DH and increased its visibility, which in turn helped to secure funding for new DH projects. The Andrew W. Mellon Foundation, for example, as part of its General Archives Digital Collections initiative, has funded several DH projects in the past several years, including a two-million-dollar award both to the University of Pennsylvania "to continue to support digital humanities training and research for students, faculty, and surrounding institutional partners," and to the University of Maryland at College Park "to continue to support an integrated research and training model at the intersection of digital humanities and African American studies" (Mellon Foundation, n.d.). In 2020, the Foundation awarded another two-million-dollar grant to the Instituto de Cultura Puertorriqueña, in San Juan, Puerto Rico, "to support the development and implementation of the General Archives Digital Collections initiative" (Mellon Foundation, n.d.).

DH is unquestionably moving from being an "emerging" research field towards becoming an "established" research field in the academy. A number of U.S. universities, including Loyola University Chicago, Stanford University, New York University, UCLA, Brigham Young University, and others offer courses and degree programs in DH.[6] The field is supported by a number of organizations under the umbrella of the Alliance of Digital Humanities Organizations (ADHO), which "promotes and supports digital research and teaching across all arts and humanities disciplines, acting as a community-based advisory force, and supporting excellence in research, publication, collaboration and training" (ADHO, n.d.). The alliance funds various projects, such as the Text Encoding Initiative, an extensive

[6] A comprehensive list of world universities, including programs in the U.S., can be found in Sula, et al. (2017), "A Survey of Digital Humanities Programs."

consortium that develops and sets standards for the representation of texts in digital form, as well as producing the most prominent journal in the field, *Digital Humanities Quarterly*. The ADHO also sponsors an international Digital Humanities conference which is held annually. An international network of DH institutions, centerNet, was founded in 2007 and has over 200 members from nearly 100 centers in nineteen countries. The goal of this organization is to promote global collaboration in the field of DH by connecting centers around the world for sharing expertise and joining forces for project development. Another goal of centerNet is to nurture a new generation of "hybrid scholars" or "alternative academics" who work in staff positions that combine service and research components. The new centerNet publication, DHCommons, has recently merged with Arts-Humanities.net in order "to create one large-scale discovery and review publication for digital humanities projects" (centerNet, n.d.), which aids in the dissemination, review, and recognition of DH projects.

5. DH and Russian studies

DH projects in Russian studies, since 2010, have emerged prominently both in the U.S. and internationally. Conferences, symposia, and individual web-based projects featured research and development DH projects that supported the teaching/learning of Russian language, literature, and cultural studies. A public Facebook group, "Digital Humanities for the Slavic Field," was created in October 2012. The social media site provides an international virtual forum for scholars and practitioners in the Slavic field to present and discuss digital projects and research and, at the time of this writing, has over 1,300 active members. One of the first global conferences on DH, entitled "Cultural Research in the Context of Digital Humanities," took place October 3-5, 2013 at the Russian State Herzen University in St. Petersburg. The conference call for papers both offered an extensive definition of DH and proposed topics, such as on archival, museum, and library projects as well as literary and cultural studies. Most striking, though, was the following statement, which underscored the novel quality of DH and the inherent uneasiness of some scholars to embrace DH: "Digital humanities do not reject or replace traditional landscape of humanities, but become a superstructure over it. The border between scholars, who do not take the world of digital culture into consideration and those, who are already used to it, becomes clearer" ("International Conference"). This relatively early attempt in Russia to reach scholars less familiar with DH media and methods and to create a forum for collegial discourse with those already working in digital media provided an important base for

legitimizing DH in the Russian academy.

The year 2015 was particularly significant for DH projects specifically focused on Russian language, literature, and culture in the U.S. Two major university-based conferences, both held in April of that year, focused on the growing research in and the development of Russian studies and DH. The first, "Russian Formalism and the Digital Humanities," was held at Stanford University. The conference featured presentations both by DH pioneers—such as Franco Moretti and Glen Worthey, who, respectively, opened and closed the Stanford conference—as well as by US philologists and literary scholars of Russian Formalism. While some participants "questioned whether it would be possible for these two subfields or modes of analysis to come together" (Bozovic 2015), the conference initiated an important conversation concerning the place of philology in DH endeavors.

During the same month, at the University of Wisconsin–Madison, a talk by Igor Pilshchikov from Moscow State University's Institute for World Culture, entitled "Classical Russian Literature and Digital Humanities (University of Wisconsin–Madison 2015)," brought attention to the innovations of digital libraries and collections of texts of classical Russian literature and folklore. Pilshchikov demonstrated the functional capabilities of these digital collections (information search and retrieval) and modes of text presentation (text, image, text + image), as well as via other recently available digital reference tools. The talk introduced students and faculty of Russian to the utility and efficiency of digital tools and research methods in Russian philology, demonstrating applications of new technology to the organization and study of literary texts.

Other DH projects at US universities began to demonstrate the efficacy of digital resources and programs in the study of Russian language and culture. One such project was developed at UCLA in 2014, an undergraduate course called "Big Data and Big Novels: Text Mining the Prose of the Russian Revolution," under the auspices of their Center for Digital Humanities. According to website for the project, "The course aims to teach undergraduate students not only traditional literacy (critical thinking, argumentation, writing) but technological literacy as well (programming, text mining—or the gleaning of information by finding patterns in a text, data visualization)" (UCLA Center for Digital Humanities 2014). Students in the course examined Pasternak's *Doctor Zhivago*, Bulgakov's *Master and Margarita*, and Zamyatin's *We* as the primary texts for the course; in addition to traditional literary analysis of these novels, student also developed

relevant technological skills and learned to apply data sets to humanistic studies and beyond.

A second project, merging course development and an academic conference, is an ambitious initiative at Yale University called "Avant-Gardes and Émigrés." This research- and teaching-based project that "explores the close relationship between avant-garde aesthetics and Formalist theory, and the dissemination and evolution of interpretive practices through emigration, including the formation of many departments of Slavic Languages and Literatures in the United States" ("Avant-Gardes"). The project team comprises both faculty and graduate students in Slavic Studies and attempts to engage this collaborative in examining texts, documents, and data using tools of the digital age. As Marieta Bozovic (2015) states:

> Done well, DH demands self-awareness about method, data, sources, and bias. In many literary and media disciplines, the boundary between truth claims (author X wrote a letter to Y in 1957) and interpretation fluctuates with theoretical fashion and goes unremarked: in a room of ten literary scholars, we are likely to find as many working definitions of "evidence." It is invaluable to learn to actively negotiate a position for one's own research within that room, above all at the graduate level. (8)

Both of these projects unquestionably exemplify the power and potential of DH initiatives to engage scholars and students with Russian-language materials, but they also demonstrate the increased access to these materials – whether they are rare, archived, distant, or all of these – to an ever-wider audience. This audience can potentially include more students with diverse intersectional identities, including race, ethnicity, and gender, because of the inherently inclusive nature of DH's technological base.

In 2020, during the COVID-19 pandemic, one such example of the inclusive power of DH in Slavic studies emerged as a result of the lockdown through the fall academic term. A consortium of three minority-serving universities, Howard University, the University of Arizona, and the University of Puerto Rico, received funding from the U.S. Russia Foundation to connect students at these institutions with one another and working professionals in government, academic and nonprofit careers. The original proposal including participation in an annual Slavic conference and a capstone trip to Russia for the student participants. Once grounded, however, the program was reimagined as a DH project. Small teams of students worked virtually with faculty mentors at U.S. institutions on projects that were presented at the online American Association of Slavic, East European, and Eurasian Studies (ASEEES) conference. These projects were then reworked into digital presentations that are now housed on a

server at Howard University, and comprise the first installation of minority students' perspectives in Russian and Slavic studies. Projects such as this demonstrate that DH applications in Russian/Slavic studies can both energize and revitalize research efforts in language, literature, and culture, as well as engage a new and inclusive generation of scholars in collaborative projects using new technologies to conduct research in our field.

6. DH, Russian, and social responsibility

Advances in educational technology and increasing Internet access, both sine qua non for DH, are significant parts of what Kramsch (2019) argues is "the urge to embrace globalization and thus dismantle the traditionally national underpinnings of FL education" (53). She goes on to describe how computer-based digital instruction "serves to individualized learning according to learners' interests, learning styles, modality preferences, and schedule availability" (53). The student-centered, socially conscious, and access-aware qualities of tech-assisted instruction and digitized resources increase participation of ever-broader profiles of learners and researchers in world languages, including Russian, and move toward the acquisition of what Reagan and Osborn (2020) call "emancipatory knowledge" (190). Such a critical pedagogy should be at the core of all of DH projects, as their potential reach goes far beyond any individual classroom or institution at which they were developed.

As the recent collaborative DH project of minority-serving institutions mentioned above demonstrates, one benefit of DH in the sphere of Russian language and studies for students is the promotion of equity through the creation of more accessible digital ecologies that can provide greater, wider access to resources and materials that would otherwise only be available only to those with the financial means to travel abroad. While there is no question that an immersion experience abroad provides students of Russian with transformative experiences in the service of increased linguistic and cultural competence, inequities in access to these opportunities is too often encountered by students with limited financial resources, or those of nonwhite ethnicity or race.

As 2018-19 data from the Institute of International Education (IIE) indicate, the total number of US students studying abroad–including those in world language programs–increased by 1.6 percent over the preceding year; however, the total number studying abroad (347,099 students) still represents only 1.8 percent all students enrolled in U.S. postsecondary institutions (IIE 2020). Of that number, only 31% of participants identified as nonwhite and, as the Association of International Educators (NAFSA)

remarks, "Although the diversity of study abroad participation has increased in recent years, minority students are still greatly underrepresented in study abroad programs" (NAFSA, n.d.). Abraham (2018) echoes this contention, citing cost and family situations as the primary reasons for lack of participation and, consequently, lack of diversity in U.S. study abroad programs.

In spite of the inherent inequities in access to many programs abroad, this disparity among participating students should not preclude those who are eligible from enjoying many of the benefits of study abroad, nor should it deprive them of the spontaneous interaction and authentic contact with the language and culture that "culminates in a transformative learning experience" (Garza 2021, 91). While we must also guard against further isolating underrepresented populations with domestic alternatives to study abroad, judicious, thoughtful, and mediated programs and courses that utilize media-based technology as part of a broader curriculum of language and culture instruction can provide the opportunity for many more learners to engage with the native speakers and authentic in-country materials without the cost of conventional study abroad programs.

The increasing development of DH resources for the study of Russian language and culture provides diverse and intersectional student and scholar populations with domestic, accessible opportunities to experience the benefits of autonomous contact with the source language and culture context, thanks in large part to the development of advanced technologies in communication and information. The growing availability Internet access to populations nationally and globally[7] provides virtual alternatives to study and or/research abroad and affordable and efficacious means to benefit from contact and interaction with Russian in authentic, though virtual, environments. DH projects, constructed environments utilizing interactive media, provide users with access to virtual environments, materials, and interlocutors that once were only available through study abroad.

7. DH and virtual Russian-language resources

In order to engage with DH projects and take advantage of their resources, most digital natives of Generation Z are already fully familiar with the capacities and capabilities of Web 2.0; however, for DH projects that

[7] As of fall 2020, 62 percent of the world's population has Internet access. In the US, 89 percent of the population reported having access to the internet in 2020 (Accessed on October 15, 2020, https://www.internetworldstats.com/stats.htm).

navigate between US and source materials resident on Russian websites, researchers and students will benefit from some instruction in using Russian-language digital sources. Nemtchinova (2014) and Garza (2017) offer, respectively, two models that use existing web-based interfaces, such as the inquiry-oriented lesson format WebQuest, and created programs, such as Café Russia, to build on the existing internet abilities of learners of Russian and incorporate meaningful authentic content in Russian. These "meta DH" projects simultaneously address cultural literacy through the use of authentic social and literary materials while equipping their users to be better prepared to engage with other DH projects and portals.

The inherently collaborative and social environments of DH projects offer the student of Russian language and culture several pedagogical advantages: (1) by working collaboratively with instructors to learn first how to identify, access, and interact with these online sources, students are able to engage more confidently in authentic environments using Russian-language materials; (2) by creating much more accessible DH environments that create virtual communities that simulate the interactions with individuals and artifacts usually afforded by study abroad experiences, more students are able to reap the advantages of authentic contact in the target language and culture; and (3) by utilizing digital tools and media – even as basic as the simple screenshot, DH can transform the educational experience with "a little-'d' democratizing tool available to anyone" (Clark 2020, 206).

Russian language and culture materials—such as the open-source online textbook and curriculum for novice-level Russian, "Между нами" (Comer, deBenedette, and Smyslova 2017) and the Advanced- to Superior-level textbook, Mastering Russian through Global Debate (Brown, et al. 2014), which utilizes online topic research and virtual communication with in-country speaking partners—have made substantial progress in the field's movement toward fully digital projects in Russian language and culture instruction. Successful projects, such as those found in MIT's "Course 21G" project in DH and creative pedagogies (MIT Global Languages, n.d.), can serve as useful models for future approaches and articulations of digital world language and culture teaching materials.

8. Russian studies and DH 3.0?

Although the field of DH is still in the process of defining itself in the greater realm of humanistic studies, it has gained considerable recognition both in the academy and in public life. It is fairly clear that humanities

research and teaching, including in Russian, will continue within the framework of digital inquiry and that the divide between the "two cultures," (i.e., quantitative and qualitative) has finally been bridged. We need to acknowledge that DH draws on both positivist and interpretivist epistemic traditions and that finding common ground is not always trivial. In the words of Burdick, et al. (2012): "Contemporary DH stands not in opposition to the past, but on its shoulders. It honors the pioneering labors carried out over the past seven decades, … as it seeks to move beyond repository building and editing to new synthetic practices" (122). In the coming years, as more innovative DH projects focus on Russian studies and the teaching and learning of Russian language and culture emerge, this move toward the creation of interdisciplinary and intersectional materials will unquestionably be evidenced.

For the more socially conscious classrooms of the 2020s, DH offers both scholars and students greater opportunities for applying critical pedagogies and creating more equitable virtual environments to encourage, if not ensure, greater equity and access to the opportunities that studying Russian language and culture provides. As we witness the shift in the demographic composition in the US academy and acknowledge the persistence of bias and lack of equity in these institutions, we can better understand the profound role that DH can play in ameliorating access to and facilitating the benefits from online digital projects. Whether in the area of teaching and learning, linguistic analysis, or cultural studies, DH projects are based on a delicate balance between computational methods and the humanistic nature of the subject matter. Booth and Posner (2020) presciently note in their remarks on the future of DH in humanistic academic endeavors: "In that hypothetical future in which this issue [of the *PMLA*] represents a kind of screenshot of DH before the changes to come, we may find that our robotic avatars are speaking a different language" (21). Whether that avatar's language is Russian or some other world language, DH will certainly play a substantial role in the linguistic and cultural preparation of the next generation of language and area specialists.

References

Abraham, Aliyah. "Lack of Diversity in Studying Abroad." *Diverse Issues in Higher Education*. 2018. Accessed November 6. 2020.https://diverseeducation.com/article/134254/.

ADHO (Alliance of Digital Humanities Organizations). n.d. "Our Mission." Accessed November 22, 2020. https://adho.org.

Balkun, Mary McAleer and Deyrup, and Marta Mestrovic. 2020.

Transformative Digital Humanities: Challenges and Opportunities. New York: Routledge.

Berry, David M. 2011. "The Computational Turn: Thinking about Digital Humanities." *The Digital Humanities: Beyond Computing* 12: 1-22.

Booth, Alison and Posner, Miriam. "Introduction: The Materials at Hand." 2020. PMLA 135, no. 1: 9-22.

Bozovic, Marieta. 2015. "Avant-Gardes and Émigrés: Digital Humanities and Slavic Studies." *News of the Association for Slavic, East European, & European Studies*, August 2015. https://www.aseees.org/sites/default/files/downloads/august-2015_1.pdf.

Brown, Tony, Tatiana M. Balykhina, Ekaterina Talakina, Jennifer Bown, and Viktoria Kurilenko. 2014. *Mastering Russian through Global Debate*. Washington, DC: Georgetown University Press.

Burdick, Anne, Johanna Drucker, Peter Lunenfeld, Todd Presner, and Jeffrey Schnap. 2012. *Digital Humanities*. The MIT Press.

centerNet: An International Network of Digital Humanities. n.d. "Initiatives." Accessed July 20, 2020. https://dhcenternet.org.

Clark, Meredith B. 2020. "Picture This: The Screenshot's Use in Digital Humanities Scholarship." PMLA 135, no. 1: 203–206.

Collins, Hilary. 2018. *Creative Research: The Theory and Practice of Research for the Creative Industries*. London: Bloomsbury Publications.

Comer, William, Lynne deBenedette, and Alla Smyslova. 2017. "Между нами". Accessed November 25, 2020. https://mezhdunami.org.

Endres, Bill. 2017. "A Literacy of Building: Making in the Digital Humanities." *In Making Things and Drawing Boundaries: Experiments in the Digital Humanities*, 44–54. Minneapolis: University of Minnesota Press.

Fuller, Matthew, ed. 2008. *Software Studies: A Lexicon*. Cambridge, MA: MIT Press.

Garshkova, Irina. 2014. "The Past and Present of Digital Humanities: A View from Russia." *H-Soz-Kult* 11, no. 3: 1–21. Accessed August 21, 2020. http://www.hsozkult.de/debate/id/diskussionen-2409.

Garza, Thomas Jesús. 2017. "Raise the Flag(ship)! Creating Hybrid Language Programs on the Flagship Model." *In Exploring the US Language Flagship Program: Professional Competence in a Second Language by Graduation*, edited by D. Murphy and K. Evans-Romaine, 224–243. Bristol: Multilingual Matters.

———. 2021. "Cultural Transformation: Virtual Communities, Autonomous Contact, and Intercultural Competence." *In Transformative Language Learning and Teaching*, edited by Betty Lou Leaver, Dan E. Davidson,

and Christine Campbell, 89–97. Cambridge: Cambridge University Press.

Gold, Matthew K., and Lauren F. Klein, eds. 2019. *Debates in the Digital Humanities*. Minneapolis: University of Minnesota Press.

Guba, Egon G., and Yvonna S. Lincoln. 1994. "Competing Paradigms in Qualitative Research." *In The SAGE Handbook of Qualitative Research*, edited by Norman K. Denzin and Yvonna S. Lincoln, 163–94. Sage Publications, Inc.

Hayles, N. Katherine. 2012. *How We Think: Digital Media and Contemporary Technogenesis*. University of Chicago Press.

Hockey, Susan. 2004. "The History of Humanities Computing." *In A Companion to Digital Humanities*, edited by Susan Schreibman, Ray Siemens, and John Unsworth, 3-19. Blackwell Publishers.

IIE (Institute of International Education). 2020. 'Open Doors: Report on International Educational Exchange." Accessed December 2, 2020. https://opendoorsdata.org.

International Conference: Cultural Research in the Context of the 'Digital Humanities. Call for Papers. Accessed November 13, 2020. http://www.bshs.org.uk/cfp-cultural-research-in-the-context-of-digital-humanities-saint-petersburg-3-5-october-2013.

Jaschik, Scott. 2012. "Getting (Digital) Respect." *Inside Higher Ed*, April 30, 2012. Accessed October 12, 2020. https://www.insidehighered.com/news/2012/04/30/mla-issues-guidelines-evaluation-digital-scholarship.

Kantrowitz, Jonathan. "Mystery of the Basel Papyrus Solved." *Archaeology News Report*, July 12, 2018. Accessed July 26, 2020. http://archaeologynewsreport.blogspot.com/2018/07/mystery-of-basel-papyrus-solved.html.

Kirsch, Adam. 2014. "Technology Is Taking Over English Departments: The False Promise of the Digital Humanities." New Republic, May 2, 2014. Accessed June 19, 2020. https://newrepublic.com/article/117428/limits-digital-humanities-adam-kirsch.

Kramsch, Claire. 2019. "Between Globalization and Decolonization: Foreign Languages in the Cross-Fire." *In Decolonizing Foreign Language Education: The Misteaching of English and Other Colonial Languages*, edited by Donaldo Macedo, 50–72. New York: Routledge.

Kuhn, Thomas S. 1970. *The Structure of Scientific Revolutions*. Chicago: The University of Chicago Press.

Levenberg, Lewis, Tai Nelson, and David Rheams, eds. 2017. *Research*

Methods for the Digital Humanities. New York: Palgrave Macmillan.

Macedo, Donaldo. 2019. *Decolonizing Foreign Language Education: The Misteaching of English and Other Colonial Languages*. Donaldo Macedo, ed. New York: Routledge.

McGann, Jerome J. 2008. "The Complete Writings and Pictures of Dante Gabriel Rossetti: A Hypermedia Archive." Rossetti Archive. Accessed June 25, 2020. http://www.rossettiarchive.org.

Mellon Foundation. n.d. Grants Database. Accessed November 30, 2020. https://mellon.org/grants/grants-database/.

MIT Global Languages. "Research." Accessed December 6, 2020. https://mitgsl.mit.edu/research/digital-humanities-and-creative-pedagogies.

MLA (Modern Language Association). 2012. "Guidelines for Evaluating Work in Digital Humanities and Digital Media." Accessed December 14, 2019. http://www.mla.org/guidelines_evaluation_digital.

NAFSA. n.d. "Trends in U.S. Study Abroad." Accessed December 8, 2020. https://www.nafsa.org/policy-and-advocacy/policy-resources/trends-us-study-abroad/.

Nemtchinova, Ekaterina. 2014. "Developing Information Literacy Skills in the Beginning Language Classroom: A Case for WebQuests." Russian Language Journal 64: 83–109.

Pannapacker, William. 2009. "The MLA and the Digital Humanities." The Chronicle of Higher Education, December 28, 2009. Accessed May 30, 2019. http://chronicle.com/blogPost/The-MLAthe-Digital/19468/.

Ramsay, Stephen. 2013. "Who's In and Who's Out?" In Defining Digital Humanities: A Reader, edited by Melissa Terras, Julianne Nyhan, and Edward Vanhoutte. New York: Ashgate Publishing.

Reagan, Timothy G., and Terry A. Osborn. 2020. *World Language Education as Critical Pedagogy: The Promise of Social Justice*. New York: Routledge.

University of Wisconsin–Madison. 2015. "Classical Russian Literature and Digital Humanities (Russian Digital Libraries: New Developments)." Facebook. Accessed March 20, 2019. https://www.facebook.com/events/334722813400537/?ref=1&action_history=%5B%7B%22surface%22%3A%22permalink%22%2C%22mechanism%22%3A%22surface%22%2C%22extra_data%22%3A%5B%5D%7D%5D.

Sula, Chris Alen, S. E. Hackney, and Philip Cunningham. 2017. "A Survey of Digital Humanities Programs." *The Journal of Interactive Technology and Pedagogy*, no. 11. Accessed December 12, 2020.
https://jitp.commons.gc.cuny.edu/a-survey-of-digital-humanities-programs/.

Schnapp, Jeffrey and Todd Presner. 2015. "Digital Humanities Manifesto 2.0." *Multitudes* 59, no. 2: 181–95.

Schnapp, Jeffrey, Todd Presner, and Peter Lunenfeld. 2009. "Digital Humanities Manifesto 2.0 Launched." Accessed March 25, 2020. http://www.toddpresner.com/?p=7.

Schreibman, Susan, Ray Siemens, and John Unsworth, eds. 2004. *A Companion to Digital Humanities*. Blackwell Publishers.

Stanford, The Center for Early Modern and Medieval Studies. 2018. *Newsletter*, 2017/2018. Accessed December 1, 2020.
https://cmems.stanford.edu/sites/g/files/sbiybj9401/f/cmems_newsletter_18_0.pdf/.

UCLA Center for Digital Humanities. 2014. "Big Data and Big Novels: Text Mining the Prose of the Russian Revolution." Accessed October 10, 2020. http://www.cdh.ucla.edu/projects/big-data-and-big-novels-text-mining-the-prose-of-the-russian-revolution/.

Volodin, A. Iu. (Володин, А. Ю.) 2014. «Digital Humanities (Цифровые гуманитарные науки): В поисках самоопределения». *Историческая информатика* 26, no. 3: 5–12.

Wing-Bo Tso, Anna, ed. *Digital Humanities and New Ways of Teaching*. Singapore: Springer. 2019.

The Contested Works of the Bakhtin Circle: A Stylometric Investigation[1]

Brittany Pheiffer Noble

Mikhail Mikhailovich Bakhtin (1895–1975) emerged in the last quarter of the twentieth century as one of the most important theorists of literature, language, and cultural theory in the West. The discovery of the thinker in the nearly immediate wake of his death dovetailed with late twentieth-century critiques of language, authorial authority, and questions around the ethics of reading and media consumption. Bakhtin's biography fueled his popularity: his was a life largely lived on the margins of an oppressive regime, and he wrote prolifically while surviving famine, siege, exile, health problems, and an almost complete absence of professional recognition save for a small circle of disciples at the end of his life.

In 1984 Michael Holquist and Katerina Clark published an exhaustive intellectual biography of Bakhtin, weaving together literary analyses of his works with interviews and secondhand accounts of his life from people who knew him. In the biography, which was and remains a foundational secondary source on Bakhtin's thought, Holquist and Clark devote several chapters to their arguments for Bakhtin's authorship of at least seven texts, which texts had been attributed to other early Soviet writers: Ivan Kanaev, Pavel Medvedev, and Valentin Voloshinov.[2] The current study isolates the disputed texts by the latter two thinkers.

The theory of Bakhtin's disguised authorship predates Holquist and Clark, but it was their defense of the idea that conveyed the theory to the Anglophone world and, thanks to their prestigious positions in American academia that served as the foundation for a debate that continues today. The theory in fact dates back to 1970, when Soviet linguist Vyacheslav Ivanov publicly mentioned that Bakhtin was the author of works by his

[1] The author would like to thank Dr. Dirk Speelman of KU Leuven for his course on corpus linguistics and his much-appreciated assistance in fine-tuning the R code for the analysis used herein.

[2] Holquist and Clark begin their argument by alleging that at least seven texts are misattributed, but then they propose, rather hesitantly, for two additional contested texts. See Michael Holquist and Katerina Clark, "The Disputed Texts," chap. 6 in *Mikhail Bakhtin: A Life* (Cambridge: Harvard University Press, 1984), 146ff.

two colleagues, Voloshinov and Medvedev, who themselves only provided "small insertions" to the texts that were then published under their names. Ivanov's claims were repeated in a 1973 publication and then introduced to the Francophone and Anglophone world by literary scholar Tzvetan Todorov.[3] Combined with the weight of Clark and Holquist's subsequent arguments, these events led to an overarching acceptance of the theory of Bakhtin's authorship, which acceptance in turn led to the VAAP (the Soviet copyright office) classifying the contested texts as Bakhtin's. All subsequent publications of the seven disputed texts have been published in the USSR and the Russian Federation under Bakhtin's name.[4] Even scholars with no clear position on the debate have erred on the side of Bakhtin, citing him as author and including the disputed texts in volumes on early Bakhtin.[5]

Holquist and Clark's evidence for Bakhtin's authorship was threefold: anecdotal evidence, thematic overlap, and evidence of intellectual caliber. Holquist and Clark cite a number of people, including Bakhtin himself, who alleged that Bakhtin wrote the contested works. Bakhtin's own claims are particularly befuddling. In "private conversations," Bakhtin and his wife claimed his authorship, and in 1975 he agreed to prepare a document for the Soviet copyright office clarifying his authorship of the three monographs and the article "Discourse in Life and Discourse in Poetry."[6] However, when actually pressed to sign the document, he refused to. A number of firsthand witnesses provide varying accounts of conversations where authorship has been alleged or denied, but over the course of time it has become increasingly difficult to address the validity of these claims.[7]

---

[3] Tsvetan Todorov, *Mikhail Bakhtin: The Dialogic Principle*, Theory of History and Literature 13 (Manchester: Manchester University Press 1984), 6.

[4] See the volume *Bakhtin: pod maskoi* [Bakhtin: behind the mask], ed. Shelugorova (Moscow: Labyrinth, 2000), for a lengthy explanation of the contested works in the Russophone world.

[5] For instance, see Pam Morris's introduction to The Bakhtin Reader: Selected Writings of Bakhtin, Medvedev and Voloshinov.

[6] Holquist and Clark, 147. Unfortunately, the authors give no details as to who the eyewitnesses were that heard Bakhtin confirm his authorship. The authors themselves did not consult with Bakhtin.

[7] Further firsthand accounts continue to muddy the waters: Voloshinov's first wife claimed that Bakhtin wrote both *Marxism and the Philosophy of Language* and *Freudianism*. Bakhtin's wife claimed that she typed up *The Formal Method in Literary Scholarship*, and Medvedev's children have insisted that their father wrote The Formal Method, although they were very young children at the time it was composed. Holquist and Clark cite political sensitivity and commitments to anonymity in a refusal to name the source that alleged Bakhtin's authorship of Kanaev's work.

In terms of the other two grounds for authorship—thematic content and intellectual quality—contemporary linguistic and literary scholarship may still have something to add. Holquist and Clark support the anecdotal claims for Bakhtin's authorship by charting "Bakhtinian" themes in the disputed texts. Their discovery of these themes is consistent with Bakhtin's work of the time and with his later work, but the discovery hardly settles the question of authorship, since there was never any doubt that Bakhtin, Medvedev, and Voloshinov worked in close intellectual collaboration for a number of years (forming the core of what is now referred to as the "Bakhtin Circle"). Holquist and Clark offer some limited semantic justifications for Bakhtin's authorship, citing Bakhtinian phrases in the disputed texts by Voloshinov and a preponderance of words that take the prefix *so-*.[8] For instance, Voloshinov discusses dialogism and monologism, themes now canonical in the Bakhtinian oeuvre.

The final argument as to the caliber of Voloshinov's and Medvedev's intellect is the most problematic argument in the case for Bakhtin's authorship. First of all, it is reductive, since by reallocating authorship of the strongest intellectual works to Bakhtin, it naturally follows that there is less evidence for Medvedev and Voloshinov's critical acumen based on the remaining undisputed texts. However, the case is also complicated by the long and storied life that Bakhtin enjoyed but that his colleagues could not. Both Voloshinov and Medvedev died in 1938. Medvedev, an ambitious career man at the center of the Soviet publishing machinery, was executed in the purges. Voloshinov, like so many, simply disappeared. The fact that his works also disappeared from Soviet libraries and publishing houses may indicate that his death was also politically motivated. Bakhtin's great works were all published much later in his life; it would be over thirty years before his 1920s work on Dostoevsky reemerged in its finished form. Likewise, much of his work on carnival, Rabelais, and the speech genres was published in the post-Stalin period. In fact, Bakhtin had almost no publications to his name before he was exiled in 1929. It would appear that the remarkable output of his post–World War II years inspires, or at least allows for, a retroactive image of the author that conceives of him not as the author of one well-received article on Dostoevsky but as an almost miraculously productive thinker who, in addition to publishing documented evidence for teaching and public lecturing, published three

[8] Holquist and Clark, 161. The Russian word so [co] means "with" and can also be used a prefix on verbs and nouns. Holquist gives the examples of "co-choice," "co-creative," and "co-being" as Bakhtinian terms that appear in Voloshinov.

monographs and dozens of articles within two and a half years.[9] Two works included in the present analysis were written in the 1920s but not published for almost fifty years. One work, *The Problem of Creative Work in Dostoevsky*, was released in 1929 to very positive reception but is excluded from the stylometric analysis for reasons elaborated below. In short, there are only two undisputed texts, of which only one was published during Bakhtin's life, from which to judge the intellectual caliber of early Bakhtin.

A critical reading of Holquist and Clark's argument raises the question as to what they actually mean by authorship. Without digressing too much into notions of authorial intent and originality, Holquist and Clark indicate that several of the Voloshinov texts could have been written by Voloshinov from Voloshinov's notes, but those notes were on Bakhtin's thought (for instance, "On the Borders of Poetics and Linguistics," treated in this study as work definitely by Voloshinov, is on Bakhtin's thought). In this case and a few others, it appears that Bakhtin did not so much publish under a friend's name as participate in some degree of intellectual collaboration that could qualify as intellectual plagiarism in today's academy.

All three arguments for Bakhtin's authorship present different problems, many of which Carol Emerson and Gary Morson treat in their refutation of Holquist and Clark in 1989 in *Rethinking Bakhtin*.[10] They fundamentally destabilize Holquist and Clark's contentions by questioning their investigative methodology: the latter defend their claims about Bakhtin's authorship on the basis that the burden of proof lies on those who would reject it. As Emerson and Morson point out, in every other literary debate the officially published author has the benefit of the doubt. Nevertheless, even for Emerson and Morson, the refutation of Bakhtin's involvement relies on theoretical argumentations about authorship and on literary interpretations of Bakhtin's own motivations, thus sharing a methodological similarity with Holquist and Clark. Where Holquist and Clark claim that Bakhtin's assumed identities embodied his ideas of carnivalesque revelry or subversion, Emerson and Morson remind readers of Bakhtin's emphasis on the ethical dimension of creativity whichBakhtin would not undermine by coopting the voice of another. They read the

[9] Such estimations of Bakhtin's early career lead Titunik, a defender of Voloshinov's authorship, to compare Holquist and Clark's biography to hagiography. Irwin R. Titunik, "The Bakhtin Problem," Slavic and East European Journal 30 (Spring 1986): 91.

[10] Caryl Emerson and Gary Morson, *Rethinking Bakhtin: Extensions and Challenges* (Evanston: Northwestern University Press, 1989).

collapse of four authors into the person of Bakhtin as a "monologization" of Bakhtin's thought that is contrary to his lifelong defense of polyphony.[11]

Nina Perlina, Irwin Titunik, Boris Gasparov, Craig Brandist, and others have contested the theory of Bakhtinian authorship on a number of grounds.[12] The copious arguments and counterarguments are too lengthy to elaborate at present; however, it stands to note that these arguments are primarily concerned with deciphering content according to literary or ideological measures. On the ideological level, the debate over Bakhtinian authorship is not only whether he wrote the texts by Kanaev, Medvedev, and Voloshinov, but also whether he accepted some form of Marxism that informed these works. As most scholars agree that Bakhtin was a committed Orthodox Christian, Marxist ideology appears sacrilegious, or intellectually impossible. On the other hand, perhaps political language was "window dressing" to advance a subversive (Christian) message about the power of art. Other scholars have advocated for the compatibility of Marxism and Christianity, searching for clues that Bakhtin's understanding of political Marxism was informed by a pious anti-capitalism. In short, Bakhtin's texts and the disputed texts have been combed through for hidden meanings and secret clues as to what they really mean so that readers can know what Bakhtin really thought. A stylometric analysis cannot answer the question of sincerity in unpacking Marxist ideology, but it could, in theory, look for a more objective fingerprint than the ones that literary scholars have been hunting for.

1. Stylometry and Attribution

Stylometry, especially the use of frequency or stop word analysis, has proven to be an apt tool in computational linguistics for investigating questions of authorship. One of the most successful and early examples is Mosteller and Wallace's study of the Federalist Papers, which study isolated frequency words in anonymously written articles and determined that a significant portion of the Papers had been authored by Madison.[13]

[11] Emerson and Morson, *Rethinking Bakhtin*, 48.

[12] See Titunik, "The Bakhtin Problem," *Slavic and East European Journal* 30 (Spring 1986): 91–95; Perlina. "Funny Things Are Happening on the Way to the Bakhtin Forum," *Kennan Institute Occasional Papers* (Washington, DC), no. 231 (1989); Gasparov, "Razvitie ili restrukurirovaniie: vzgliady akademika T.D. Dycenko" [Development or rebuilding: views of academician T. D. Lysenko], Logos, no. 4 (1999); Brandist, *The Bakhtin Circle: Philosophy, Culture and Politics* (London: Pluto Press, 2002).

[13] See Mosteller and Wallace, *Applied Bayesian and Classical Inference: The Case of The Federalist Papers* (New York: Springer, 1984).

More recent stylometric studies have focused on the contested authorship of Shakespeare, Jane Austen, and Frank Baum, to name but a few.[14] Stylometric analyses allow computational linguists and literary scholars to compare corpora of known and unknown authors, co-authored texts and texts with contested authorship. Using frequency word lists for authorial attribution is one of the most tested and proven methods of stylometric analysis. Fox et al. used function word frequencies as a cornerstone of their computational analysis of Elizabethan texts and the debate over Shakespeare and Marlowe, following in the footsteps of several computational linguistic studies of the Shakespeare question, which studies have relied on function-word frequency as a key point of analysis.[15]

The digital scholarship of John F. Burrows, particularly his creation of the delta test for authorial attribution, is a significant development in stylometric analysis. Burrows's method calculates frequency words from several authors, even as many as twenty-five in a study; and in calculating the distances for each word with each author, the method can point to convincing correlations of authorship for attested or co-authored texts. Burrows's method has been used by others in recent studies to show how the delta test can nimbly process large corpora and copious features of the text into granular yet readable quantitative results.

Fox et al.'s Shakespeare studies have demonstrated one important factor in stylometric analysis: controlling for time period. In their work comparing several Early Modern British authors, Fox et al. found that if they did not control for relatively short time periods (ten to fifteen years), there was much larger variation in the probability of authorship. The same study argued for convincing statistical probability for determining attribution by looking solely at frequency words and n-grams. Frequency word analysis also proved—for the Federalist Papers and Elizabethan drama—to be a useful tool for scholars to divorce their analysis from the natural (but sometimes obfuscating) tendency to search for thematic similarities in cases of contested authorship. David Hoover's application of the delta test found that frequency word analysis renders even better results as the corpus size increases. While Burrows's original applications of the delta test (such as on Juvenal and his contemporaries) included pronouns in the frequency tables, Hoover and others have argued that excluding pronouns

[14] José Nilo G. Binongo, "Who Wrote the 15th Book of Oz? An Application of Multivariate Analysis to Authorship Attribution," Chance 16, no. 2 (2003): 9–17.

[15] Merriam and Matthews, 1994, cited in Fox et al., "Statistical Stylometrics and the Marlowe-Shakespeare Authorship Debate," Brown University Theses (n.d.), accessed December 27, 2017, https://cs.brown.edu/research/pubs/theses/masters/2012/ehmoda.pdf.

yields better results for authorial attribution. By using large data sets and checking the delta frequency numbers in uncontested works, scholars have demonstrated over the past century the reliability of stylometric analyses for authorial attribution. As will be discussed in the conclusion, with a properly prepared corpus, the delta test could provide further insight into the authorial questions of the Bakhtin Circle.

One previous study takes a quantitative approach to the problem of Bakhtin's authorship. In the commentary to the 2000 edition of *Bakhtin: Behind the Mask*, Ivan Peshkov looks at collocations in a series of three analyses.[16] First, Peshkov compares four texts: *Marxism and the Philosophy of Language* (Voloshinov/Bakhtin?), *The Formal Method in Literary Scholarship* (Medvedev/Bakhtin?), *The Problems of Dostoevsky's Creative Work* (Bakhtin), and *The Psychology of Art* (Vygotsky; this is an undisputed text used as a test for accuracy). Peshkov creates a list of all words and all syntagmata (1512 and 2754) in the corpus of four files and looks at lexical and syntagmatic overlap. Based on this comparison, he concludes that Marxism and Formal Method were likely written by the same person. He does not, however, conclude that that person was Bakhtin. He expands this collocation study to further texts from the same period by Bakhtin and by undisputed authors (Vygotsky, Vanocur, and Propp) and reinforces his conclusion that *Marxism and Formal Method* were by the same author, with closest overlap to Bakhtin but not with conclusive similarity to Bakhtin.[17] He then compares Voloshinov's notes with these findings and concludes that whoever wrote Voloshinov's notes also wrote *Marxism and Formal Method*.

Peshkov then turns his collocation study to compare *Marxism, Formal Method, Problems of Dostoevsky*, and a later Bakhtinian work, *The Problem of Content, Material, and Form*. Peshkov's comparison of collocations isolates common idiomatic phrases like "in place of" as well as marked terms from the Bakhtinian canon: "internal speech," "the internal form of the word," and "all types of ideological." He concludes—without any quantitative evidence—that Bakhtin's language has a "sharper rhythm" than that of *Marxism and Formal Method*. His study proposes that the evidence points to Voloshinov as author of the texts originally attributed to him, but his study discredits Medvedev as author of *Formal Method* and implies that *Formal Method* is better ascribed to Voloshinov than Bakhtin.

[16] See I. Peshkov in *Bakhtin: pod maskoi*, 602–635.

[17] Peshkov, 613.

2. Methodology

As mentioned, Holquist and Clark claim that seven unattributed works were definitely written by Bakhtin: one monograph by Medvedev, one article by Kanaev, and two monographs and three articles by Voloshinov. Holquist and Clark allow that two more articles by Voloshinov were possibly but not likely written by Bakhtin. The sole Kanaev text is excluded from the study because the article has only been disputed by Holquist and Clark, who give no evidence for their claims other than that Kanaev himself admits—not to them personally, and unknown to whom—that he did not write it. The remaining texts by Voloshinov and Medvedev are analyzed here.

For the present study, fourteen texts were used, three of which are uncontested control texts. One further text of uncontested authorship, *Bakhtin's Problems of Dostoevsky's Creative Work*, is included in one test (Figure 8) but is excluded from the control sample because it was prepared for publication by Medvedev.[18] Of the ten remaining texts, seven texts identified by Holquist and Clark are treated as spurious. Three texts remain that are treated as spurious by the Russian publishers but whose authorship Holquist and Clark attribute (most likely) to Voloshinov. These three texts were also all published in 1930, well over a year after Bakhtin had been arrested and sentenced to exile. These texts, which may very well be based entirely on Bakhtin's ideas (as alleged in the Russian publication and by Holquist and Clark) are treated here as the work of Voloshinov, regardless of the source of their intellectual inspiration.[19] For a table of the texts used, see Table 1. It is easiest to create a corpus for Bakhtin using control texts. Two early works were prepared as the control corpus: *The Author and Hero in Aesthetic Activity* and *Toward a Philosophy of the Act*, together totaling around 28,000 words. Finding control texts for the other two authors proved much more difficult. In the case of Medvedev, he was a prolific editor but a very sparse writer. His main career was as a literary bureaucrat and publisher, and he had a leading position within the early Soviet literary world, heading the State Publishing House in Leningrad in the late 1920s.[20] After Bakhtin was arrested in January of 1929, Medvedev still prepared his text, *The Problems of Dostoevsky's Creative Work*, for publication at his publishing house. In the mid-1930s, Medvedev wrote the monograph, *Formalism and*

[18] It is possible the Bakhtin finished a full draft in longhand by December of 1928, but there is no concrete evidence of how complete his manuscript was and how much work Medvedev did to prepare the text for publication. See *Bakhtin: pod maskoi*, ed. Shelugorova, 432.

[19] A related study, beyond the scope of the current paper, would be to apply the stylometric analysis used to identify translation style to works edited by the Bakhtin Circle.

[20] Holquist and Clark, 112.

the Formalists, which revisits themes from *Formal Method* but with a much stronger ideological bent. His other writings are largely limited to very short, scathing reviews published in Soviet literary magazines. No copy of his *Formalism* monograph could be located to use for the present study (and dating and censorship issues would also preclude its efficacy). Therefore, the only text that is disputed to be by Medvedev is the monograph *The Formal Method in Literary Scholarship* of around 21,000 words. As the only possible Medvedev text, it is represented by its own authorial color (green) in the biplots that follow.

The case of Voloshinov poses different problems. Voloshinov published more original work than Medvedev, but nearly everything that he wrote has been tainted by the all-encompassing allegations of Bakhtinian authorship. In the Russian volume of Bakhtinian works Behind the Mask, all but one text by Voloshinov from the 1920s is attributed to Bakhtin, functionally reducing Voloshinov to an alias for Bakhtin. However, as mentioned earlier, three texts are undisputed by Holquist and Clark and were published over a year after Bakhtin's arrest and exile. Moreover, Brandist argues convincingly that, based on more recent archival and biographical resources, "Voloshinov and Medvedev were indeed specialists in the areas in which they published, at a time when Bakhtin was primarily concerned with other matters."[21] His monograph on the Bakhtin Circle is a defense of the thinkers as a genuine intellectual circle—that is, a group of philosophers whose shared but distinct ideas and ideologies survive as neither the momentous work of a single genius nor the "completed whole" of an analogous continental school of thought.[22] For these reasons, the following three (semi-disputed) texts have been included in the Voloshinov control group: "What is Language?" and "Discourse and its Social Function," which constitute parts one and three, respectively, of *Stylistics of Literary Discourse* (1930), and "On the Borders of Poetics and Linguistics." Finally, a text of Voloshinov's draft for his doctoral dissertation (1927–1928), uncontested by Russian or American scholars, is used as a final control text.[23] These four texts consist of around 28,500 words.

[21] Brandist, 9.

[22] Brandist, 5.

[23] The draft includes material that would later appear in *Marxism and the Philosophy of Language*. See B*akhtin: pod maskoi*, ed. Shelugorova, 573ff.

Table 1. Works analyzed

Author	Title	Year	Word count	Status
Bakhtin	*The Problems of Dostoevsky's Creative Work (monograph)*	1929	53,400	Uncontested (prepared for publication by Medvedev)
Bakhtin	*The Author and Hero in Aesthetic Activity*	1923	11,200	Uncontested
Bakhtin	*Toward a Philosophy of the Act*	1921	16,800	Uncontested
Voloshinov	*Notes on Marxism*	1927–1928	4,600	Uncontested
Medvedev/ Bakhtin	*The Formal Method in Literary Scholarship (monograph)*	1928	20,900	Contested by Holquist/Clark, VAAP, and Peshkov
Voloshinov/ Bakhtin	*"What is Language?"*	1930	6,800	Contested by VAAP
Voloshinov/ Bakhtin	*Construction of an Utterance*	1930	7,900	Tentatively contested by Holquist/Clark; contested by VAAP
Voloshinov/ Bakhtin	*"Discourse and its Social Function"*	1930	6,400	Contested by VAAP
Voloshinov/ Bakhtin	*Marxism and the Philosophy of Language (monograph)*	1929	49,400	Contested by Holquist/Clark and VAAP
Voloshinov/ Bakhtin	*Freudianism (monograph)*	1927	22,900 (excerpt)	Contested by Holquist/Clark and VAAP
Voloshinov/ Bakhtin	*"Beyond the Social: On Freudianism"*	1925	10,700	Contested by Holquist/Clark and VAAP
Voloshinov/ Bakhtin	*"Discourse in Life and Discourse in Poetry"*	1926	8,500	Contested by Holquist/Clark and VAAP
Voloshinov/ Bakhtin	*New Trends in Linguistic Thought in the West*	1928	7,800	Contested by Holquist/Clark and VAAP

3. Stylometry and frequency words

As many computational linguistic studies have shown, a stylometric analysis of frequency words is useful not only for a quantifiable analysis of stylistic preferences but also because looking at frequency lists can shed light on stylistic tics or preferences of authors. While looking at the common tone or style of frequency words in a single author is not a purely objective measure, an initial glance at preferred frequency words can intimate larger, more quantifiable differences in the use of language. Bakhtin's and Voloshinov's texts may share many thematic similarities, but their most preferred frequency words largely vary.

Somewhat surprisingly, the term "with"—identified by Holquist as a tell for a Bakhtinian work — is only slightly more frequent in uncontested Bakhtin texts than in other texts. Many of the more telling words reflect stylistic preferences: Bakhtin has a marked preference for the demonstrative pronouns that have an emphatic quality in Russian. For example, his most frequent words have a stylistically emphatic quality: "there" [вот] , "yes" [да] (can be non-semantic for emphasis), and "further, even more" [даже]. Voloshinov, on the other hand, prefers conjunctive phrases with a positive or negative connotation: "as if" [будто], "because of" (negative connotation) [из-за], "rather" [либо], and "which is" [то есть]. Two locative adverbs ("whither" [куда] and "whence" [откуда]) are very high frequency and denote, in Russian as in English, spatial and well as conceptual connectivity.

See Tables 2 and 3 for more detail.

Table 2. Bakhtin's top frequency words

Words (by ChiDist)	**Translation**
вот	there
да	yes (or marker of emphasis)
откуда	whence
собой	self
те	those
чей	whose
без	without
даже	further
кто	who
тот	that

Table 3. Voloshinov's top frequency words

Words (by ChiDist)	**Translation**
будто	as if
из-за	because of (negative)
кто	who
куда	whither
либо	rather
откуда	whence
почему	why
про	about, for
то есть	which is
тоже	also

4. Preparing the corpus

All the texts used are out of copyright and available online in digital format. Each text was copied into a .txt file, and the long quotations and citations of other authors were deleted. After running a few preliminary tests for frequency words, I decided to create my own list of function words based on examples from earlier Russian studies (see appendix). I did so for several reasons: First, the key words based on sheer frequency were often very thematically marked (words such as "artistic," "Freudian," or "creative"). By avoiding such words in my keyword counts, I could avoid replicating the studies mentioned above that were run by literary scholars who approached the question of authorship from an examination of thematic concerns.

A second reason to use my own frequency list was to eliminate personal pronouns. In fact, in an initial test (see results below), I used a frequency list that included personal pronouns. When the stylometric analysis was conducted with a function word list that included personal pronouns, there was a much more pronounced dissimilarity between Bakhtin's works and those of Voloshinov and the spurious texts. Bakhtin's style (and content) is noticeably influenced by the presence of the authorial "I," and his (undisputed) works abound in first-person pronouns. However, following Hoover, Fox, and others, I decided to carry out the more targeted analyses without using personal pronouns. I chose to do this not only because of the stylometric precedence but also because Russian is a "pro-drop" language, where conjugated verbs do not require a nominative pronoun. Therefore, a truly nuanced analysis of pronoun usage in this corpus, or in any Russian language corpus, would need to have

the texts properly tagged beforehand. Instead, as will be demonstrated, the stylometric analysis based on function words reveals subtle stylistic preferences by each author.

The biplots below were created with a function word list of 67 common words (see appendix). Ten of these words can be declined, so my code accounted for each lemma (altogether over 100 declined forms) being ascribed to the correct nominative form in the function list.

5. Running the stylometric analyses

The study at hand was framed to be an initial investigation into whether a stylometric analysis could (or could not) contribute to the debate around authorial attribution in the Bakhtin Circle. I have used correspondence analysis, an established method for this type of computational linguistic analysis. As will be shown, the results point to the productivity of a stylometric approach. Further, and ideally more complex, analyses of the texts could be done using other methods. Creating a corpus with several more authors, including Kanaev and uncontested authors, would work well for the delta test and would lend a further nuance to the quantitative analysis. In the conclusion, I discuss further stylometric analyses based on my initial findings.

Working in R, I used Speelman's package for correspondence analysis and biplots, with modifications to suit the Cyrillic corpus and, as mentioned, to characterize each lemma as a single feature.[24] In brief, the correspondence analysis takes each of the thirteen texts as an object and the function words as features. The correspondence analyses measure the chi-square distance of each word in the function list and the words' weight in each text. By using the chi-square test, I found that the correspondence analysis corrects for different in corpus size, making segmentation unnecessary. These findings, which are initially produced in a table in R, can be plotted on a two-dimensional graph, creating a visual of the clustering or lack of clustering of texts based on authorship. In the biplots below, the pale gray crosses represent function words and the colored diamonds represent a text.

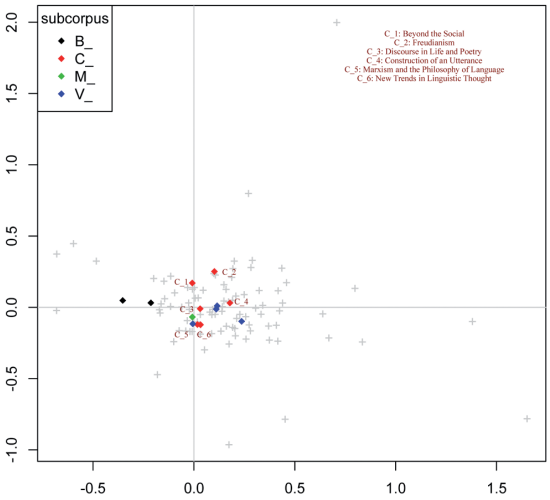
As will be shown briefly, the results of the chi-square stylometric analysis are promising in terms of resolving questions of disputed authorship.

[24] For the code and a guide to using it, see Speelman's (forthcoming) *Mastering Corpus Linguistics Methods: A Practical Introduction with AntConc and R* (New York: John Wiley & Sons, 2021).

6. Results of the correspondence analysis as depicted in biplots

A number of tests were carried out to check for semantic similarity. The pale gray crosses represent each of the function words by chi-square distance from the expected observed frequency. The black triangles are the Bakhtin texts, the red triangles are the contested texts, the green diamond is the sole uncontested Medvedev text, and the blue diamonds are the four Voloshinov texts. Figure 1 explains which text corresponds to each red diamond. Each contested work was tested against the Bakhtin and Voloshinov control groups, including *The Formal Method in Literary Scholarship*, as per Peshkov's contention that it is actually a work by Voloshinov. *Freudianism* and «Beyond the Social» were tested independently and together, as «Beyond the Social» represents an early draft of one chapter from *Freudianism*, so any particular similarity to *Freudianism* was of special interest.

Following the studies of Peshkov and Emerson/Morson (among others), *Marxism and the Philosophy of the Language* was then treated as an uncontested work for an additional round of comparisons against the remaining disputed Voloshinov texts.



See Figure 1 in the online appendix for the biplot of seven contested texts (six by Voloshinov, one by Medvedev) and controls.[25]

[25] For high-resolution color images of all the figures in this article see the online appendix at https://www.actr.org/rlj-vol-71-appendix.html or by scanning this QR code:

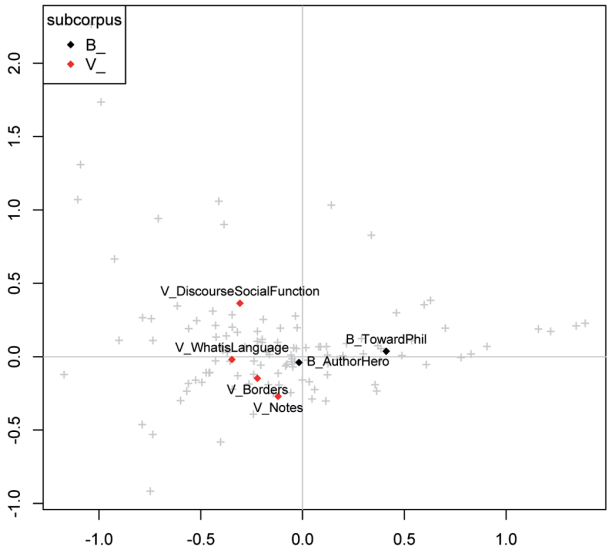
7. Findings

A biplot of all the disputed texts and control groups can be see here for an overview of how they group. The undisputed Voloshinov text along the y-axis—the *Notes*—is here and in other tests always very similar to *Marxism and the Philosophy of Language*." The proximity to Medvedev's *Formal Method* also lends weight to Peshkov's argument for Medvedev's authorship.

As one can see from this initial plot, two of the uncontested Voloshinov texts are already very close to each other, and Bakhtin's texts already show a noticeable influence of different function words than the other texts.

8. Voloshinov's authorship

In most cases of a contested text by Voloshinov, the results showed that the disputed text was more similar to Voloshinov's work than to Bakhtin's.

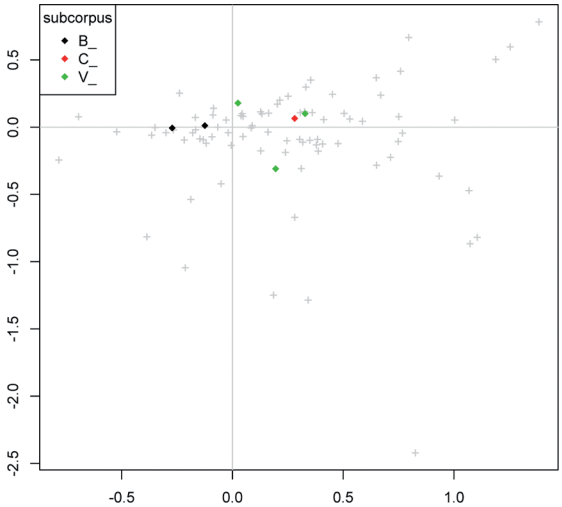


See Figure 2 in the online appendix for the biplot of uncontested Voloshinov and Bakhtin texts.

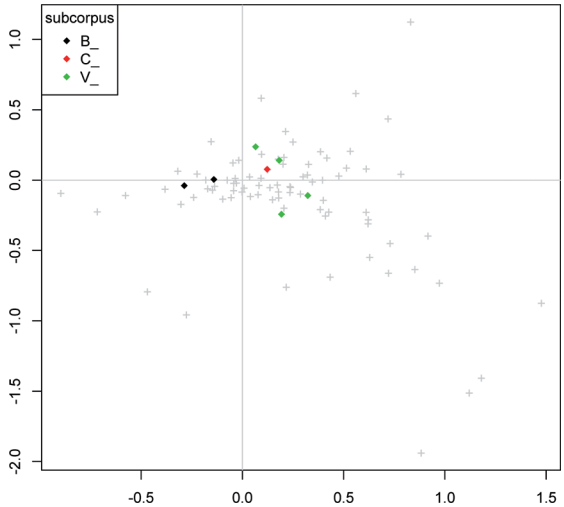
The clearest example of the proximity of a contested Voloshinov text to the Voloshinov control group is the disputed passage from *Stylistics of Discourse* (1930), "Construction of an Utterance" (see Figure 3). This text was very close to its preceding and succeeding segments, "What is Language?" and "Discourse and its Social Function," and it appears to be by the same author as the control texts by Voloshinov. Likewise, "The Latest Trends in Linguistic Thought" (1928) was markedly similar to Voloshinov's

notes (1927–1928) and "On the Borders" (1930) (Figure 4). Figure 5 shows the result for "Discourse in Life."

Marxism and the Philosophy of Language was definitively clustered with the Voloshinov control texts and, quite tellingly, was closest in vocabulary frequency to Voloshinov's notes from 1927 to 1928, indicating—as also found by Peshkov—that the author of Voloshinov's notes (i.e., Voloshinov!) is the same as the author of *Marxism and the Philosophy of Language.* See Figure 6 below.

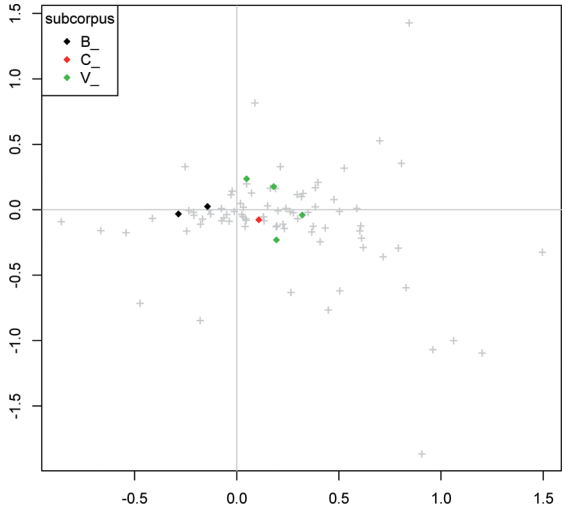


See Figure 3 in the online appendix for a plotting of "Construction of an utterance" as contested work.

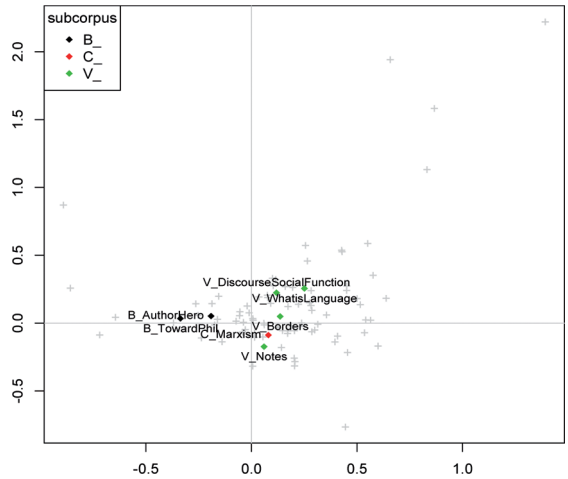


See Figure 4 in the online appendix for a comparison of Bakhtin, Voloshinov, and "The Latest Trends in Linguistic Thought."

The least clear result was "Beyond the Social," the 1925 article that introduces Voloshinov's (or Bakhtin's) ideas on Freudianism. Isolated, it is only marginally more similar to the Voloshinov control set (see Figure 7), but when tested with «Beyond the Social» (see Figure 7), it appears that the two contested works on Freud cluster more certainly with Voloshinov. Even Holquist and Clark intimate that Voloshinov could have "written" Freudianism, albeit based on notes on Bakhtin.[26]



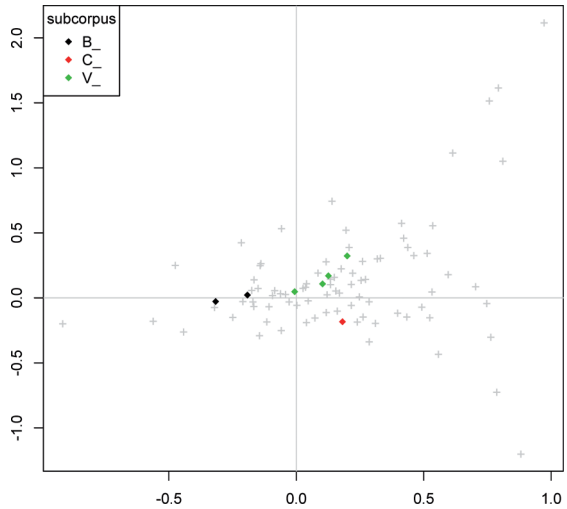
See Figure 5 in the online appendix for the comparison of Bakhtin, Voloshinov, and "Discourse in Life."



See Figure 6 in the online appendix for thebiplot of Marxism as Contested work.

[26] Holquist and Clark, 160.

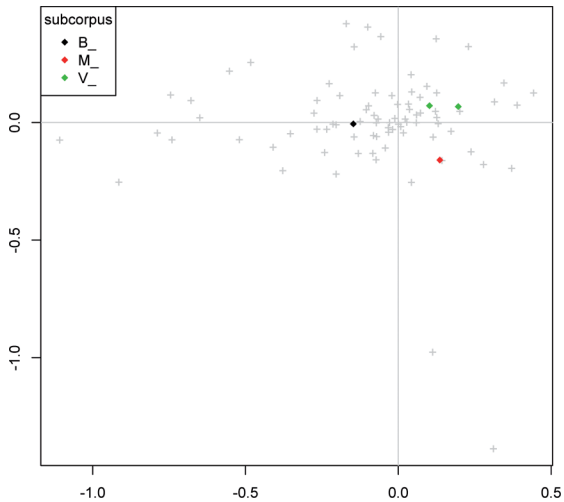
The comparison of *Formal Method* to the control texts of Bakhtin was also somewhat inconclusive. However, following Peshkov, if we can say that *Marxism* was definitely written by the author of the notes, we could then use the notes and Marxism as control texts for Voloshinov. Peshkov's collocation sample (*Problems of Dostoevsky, Marxism, Formal Method*, and Voloshinov's *Notes*) was used to create Figure 8 (below) and supports his argument that—using Dostoevsky as a control text[27]—*Formal Method* appears more lexically similar to *Marxism* and the *Notes*. Even using a text edited by Medvedev, we see how Bakhtin's text is distant from the other texts.



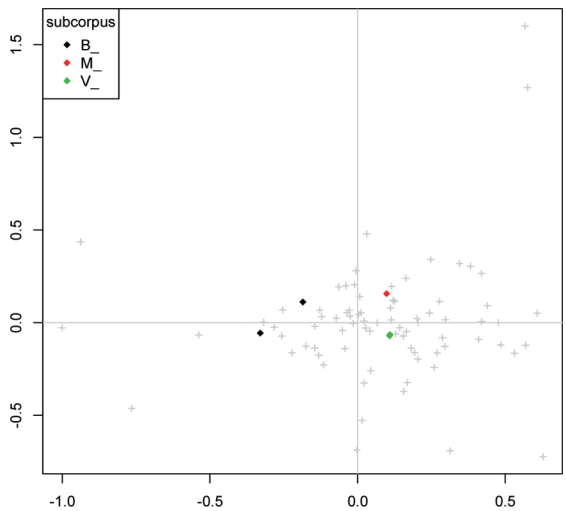
See Figure 7 in the online appendix charting Bakhtin, Voloshinov, Freudianism, and «Beyond the Social».

When we compare the two known Bakhtin texts with *Formal Method*, Voloshinov's *Notes*, and *Marxism*, we find a clear case of clustering, with the Bakhtin texts close to each other, the two Voloshinov texts (*Marxism* and *Notes*) essentially transposed on top of each other because they are so similar, and *Formal Method* distinct from both pairs of control texts (Figure 9).

[27] This study, as mentioned, did not routinely use the Dostoevsky study, since it was prepared for publication by Medvedev, which fact may render it more similar to Formal Method than to Bakhtin's original text.



See Figure 8 in the online appendix for a comparison of Problems of Dostoevsky, Notes, Marxism, and Formal Method (after Peshkov).



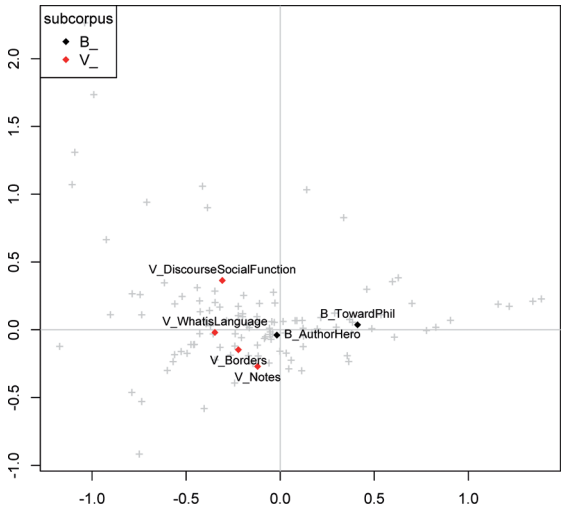
See Figure 9 in the online appendix for the charting of. Bakhtin, Formal Method, Voloshinov's Notes, and Marxism.

9. Conclusion

The results of just one type of stylometric analysis of the disputed texts indicate that there is a high likelihood that Bakhtin's authorship should be contested in most cases. Tentatively, it would appear that the entirety of *Stylistics of Discourse*, "The Latest Trends in Linguistic Thought," "Discourse in Life and Discourse in Poetry," and *Marxism and the Philosophy of Language*

were written by Voloshinov. Without a control text for Medvedev, it is more difficult to make a clear claim about the text, yet the biplots illustrate its proximity to *Marxism* (closer) and Bakhtin's work (farther).

While I explained earlier that using pronouns in function word lists has been shown to cloud the results of stylometric tests for authorship, a single correspondence analysis made between Voloshinov and Bakhtin using a function word list with personal pronouns shows that the two corpora of the authors retain their distance from each other. Perhaps this strengthens literary scholars' claim that Bakhtin deployed personal pronouns more often than usual in Russian.



See Figure 10 in the online appendix for the analysis of Bakhtin and Voloshinov control texts using function word list with pronouns.

Further studies, using additional control texts and isolating n-grams as well as frequency words, would lend a further nuance and clarity to the findings of the present study. For this initial investigation of the three authors, I have not done the delta test for several reasons. First, there is the problem of corpus size. As discussed, control texts are sparse for Medvedev and Kanaev. However, following Burrows, Hoover, and Binongo, creating a canon of twenty or twenty-five authors could isolate the similarities or lack of similarities for some of the contested texts and furthermore indicate what, if any, conclusions could be drawn about texts that share some degree of authorship, such as Bakhtin's *Problems of Dostoevsky's Poetics*, which was edited for publication by Medvedev.

The correspondence analysis carried out here provides a humble complement to the theoretical arguments of literary scholars and

philosophers who have attempted to untangle nearly a century of textual and biographical confusion surrounding the so-called Bakhtin Circle. The results of the stylometric analysis indicate we should indeed assume that Medvedev and Voloshinov are authors and specialists in their own right, and when we do so, the texts of the Bakhtin Circle invite us to investigate the unique philosophical projects of each of these thinkers. The results are also an invitation for further, more mathematically granular analysis, paving the way for a deeper understanding of authorship and collaboration in early Soviet thought.

Appendix 1
List of function words

а	из-за	от
без	из-под	откуда
будто	или	по
бы	к	под
в/ во	как	почему
ведь	когда	при
вон	кому	про
вот	кто	с/со
где	куда	сколько
да	ли	собой
даже	либо	так
для	лишь	те
до	на	то
если	над	то-есть
еще	не	тоже
ещё	нет	только
же	ни	тот
за	нибудь	у
зато	но	уже
зачем	прежде	хотя
и	о	чей
из	об	это

Appendix 2

Scan this QR code to access the full resolution color images

References

Bakhtin, Mikhail. *Avtor i geroi v esteticheskoi deyatel'nosti* [The author and hero in aesthetic activity]. St. Petersburg: Azbuka [Alphabet], 2000.

Bakhtin, Mikhail. *Problemy tvorchestva Dostoevskogo* [The problem of creative work in Dostoevsky]. *Sobranie sochinenii* [Collected works], vol. 2. Moscow: Gorky Institute of World Literature, 1996.

Bakhtin, Mikhail. *K filosofii postupka* [Toward a philosophy of the act]. Moscow: Labyrinth, 1996.

Bakhtin, Mikhail. *Bakhtin: pod maskoi* [Bakhtin: behind the mask]. Edited by Shelugorova. Moscow: Labyrinth, 2000.

Binongo, José Nilo G. "Who Wrote the 15th Book of Oz? An Application of Multivariate to Authorship Attribution." *Chance* 16, no. 2 (2003): 9–17.

Brandist, Craig. *The Bakhtin Circle: Philosophy, Culture and Politics*. London: Pluto Press, 2002.

Emerson, Caryl, and Gary Morson. *Rethinking Bakhtin: Extensions and Challenges*. Evanston: Northwestern University Press, 1989.

Evert, Stefan, Thomas Proisl, Fotis Jannidis, Isabella Reger, Steffen Pielström, Christof Schöch, and Thorsten Vitt. "Understanding and explaining Delta measures for authorship attribution." *Digital Scholarship in the Humanities* 32, no. S2 (December 2017): S4–16. https://doi.org/10.1093/llc/fqx023.

Fox, Neal, Omran Ehmoda, and Eugene Charniak. "Statistical Stylometrics and the Marlowe-Shakespeare Authorship Debate." *Brown University Theses* (n.d.). Accessed December 27, 2017. https://cs.brown.edu/research/pubs/theses/masters/2012/ehmoda.pdf.

Gasparov, Boris. "Razvitiie ili restrukturirovaniie: vzgliady akademika T. D. Lycenko" [Development or rebuilding: views of academician T. D. Lysenko]. *Logos* 4 (1999).

Grondelaers, Stefan, Dirk Geeraerts, and Dirk Speelman. "A Case for a

Cognitive Corpus Linguistics." *Methods in Cognitive Linguistics*, edited by Monica Gonzalez-Marquez, Irene Mittleberg, Seana Coulson, and Michael J. Spivey, 149–169. Amsterdam and Philadelphia: John Benjamins, 2007.

Holquist, Michael, and Katerina Clark. *Mikhail Bakhtin*: A Life. Cambridge: Harvard University Press, 1984.

Hoover, David L. "Testing Burrows's Delta." *Literary and Linguistic Computing* 19 (2004): 453–475.

Jakobson, Roman. *Shifters, Verbal Categories and the Russian Verb*. Cambridge: Harvard University Press, 1957.

Mosteller, Frederick, and David L. Wallace. *Applied Bayesian and Classical Inference: The Case of The Federalist Papers*. 2nd ed. New York: Springer, 1984.

Morris, Pam, ed. *The Bakhtin Reader: Selected Writings of Bakhtin, Medvedev and Voloshinov*. 2nd ed. London, 2003.

Perlina, Nina. "Funny Things Are Happening on the Way to the Bakhtin Forum." *Kennan Institute Occasional Papers* (Washington, DC), no. 231 (1989).

Titunik, Irwin R. "The Bakhtin Problem." *Slavic and East European Journal* 30 (Spring 1986): 91–95.

Todorov, Tsvetan. *Mikhail Bakhtin: The Dialogic Principle*. Theory of History and Literature 13. Manchester University Press, 1984.

Voloshinov, Valentin. "Po tu storonu sotzial'nogo. O freidizme" [Beyond the social: on Freudianism]. *Zvezda* [Star] 5, no. 11 (1925): 186–214.

Voloshinov, Valentin. "Konstruktsiia vyskazyvaniia" [Construction of an utterance]. *Literaturnaia uchyoba* [Literary studies], no. 3 (1930): 65–87.

Voloshinov, Valentin. "Slovo i evo sotzial'novo funktsia" [Discourse and its social function]. *Literaturnaia uchyoba* [Literary studies], no. 5 (1930): 43–59.

Voloshinov, Valentin. "Freidizm" [Freudianism]. In *Bakhtin: pod maskoi* [Bakhtin: behind the mask], edited by Shelugorova. Moscow: Labyrinth, 2000.

Voloshinov, Valentin. "Marksizm i filiosofiia yazyka" [Marxism and the philosophy of language]. In *Bakhtin: pod maskoi* [Bakhtin: behind the mask], edited by Shelugorova. Moscow: Labyrinth, 2000.

Medvedev, Pavel. "Formal'nyi metod v literaturovedenii" [The formal method in literary scholarship]. In *Bakhtin: pod maskoi* [Bakhtin: behind the mask], edited by Shelugorova. Moscow: Labyrinth, 2000.

Translation in the Russian Language Classroom: Coming in from the Cold

Brian James Baer, Tatyana Bystrova-McIntyre, Irina Dzero

1. Introduction

For the past several decades, translation and interpreting have been largely excluded from the communicative language classroom—and not without reason. In traditional foreign language classrooms, "literal" or close translation was often used as a comprehension check or as part of a vocabulary or grammar drill, divorced from real-world context. This in turn encouraged students (and, on some rare occasions, foreign language teachers) to view language proficiency—and, by extension, translation competence—as a kind of linguistic matching game.

2. Translation in the communicative classroom

In Hans Vermeer's (2000) terms, bilinguals were believed to merely "transpose" the words of one language into another (222), which essentially equated translators and interpreters with walking dictionaries. This idea of translation was only strengthened by the rapid rise over the past twenty-five years of machine translation tools, such as GoogleTranslate, Babelfish, and Bing Translator, which, for some, obviate the need for proficiency in a foreign language altogether.

Correspondingly, when the behaviorist models that generated the now-infamous drill-and-kill activities were replaced by communicative and immersive approaches to language teaching, translation—viewed as undermining the principles of those approaches—was largely from the curriculum (Canale and Swain 1980). When language educators ignored translation, they deprived learners of the opportunity to develop more sophisticated ways to think about translation and cross-cultural communication—for where else but the foreign language classroom could one expect to address such issues? Recently, however, translation and interpreting have found their way back into the foreign language curriculum—but with a twist. As Byram (2000) notes in his entry on translation in the *Routledge Encyclopedia of Language Teaching and Learning*, there are now "more imaginative ways of integrating and adapting

professional aspects of translation and even interpretation [. . .] into language teaching" (637).

A number of Russian textbooks now feature translation- and interpreting-related activities. Unlike in the past, however these new tasks focus on communicating and negotiating meaning rather than specific grammatical structures and vocabulary. Moreover, they are often tied to real-world situations and in this way foster a more complex notion of translation as a form of cross-cultural mediation. For instance, the Golosa elementary and intermediate textbooks include interpreting tasks simulating real-world encounters. Another Russian textbook, *Beginner's Russian*, offers translation assignments phrased in terms of translating ideas, not words; for example, one activity includes translating an advertising brochure for an American chain restaurant opening in Russia.

This integration of translation- and interpreting-related activities into the foreign language curriculum reflects the broad recommendations of the 2007 Modern Language Association (MLA) Report "Foreign Languages and Higher Education: New Structures for a Changed World." This report recommended that foreign language departments reorient themselves away from the unrealistic goal of "replicat[ing] the competence of an educated native speaker, a goal that postadolescent learners rarely reach," and instead toward "the idea of translingual and transcultural competence, [which] places value on the ability to operate between languages." Moreover, the report invokes a view of translation as a form of cultural mediation, distinguishing it from popular notions of translation as a simple kind of linguistic matching game. Indeed, transfer competence is a key feature of translator and interpreter expertise. In terms of World Readiness Standards, such activities align with the Comparisons standard, "developing insight into the nature of language and culture in order to interact with cultural competence." Language comparisons foster learners' awareness of connections and differences between the cultures studied and their own. More broadly, our view of translation as a cognitive tool aligns with Essential Learning Outcomes of the Liberal Education and America's Promise program of the Association of American Colleges and Universities (aacu.org/leap), in particular the outcomes of improving inquiry, analysis, critical and creative thinking, knowledge of human cultures, and intercultural knowledge and competence.

This article will build on these early efforts by reviewing the rationale for integrating translation- and interpreting-related activities in the foreign language classroom, focusing on the latest research. We will then propose some general principles from the field of translation studies

to help instructors develop translation- and interpreting-related tasks that align with the fundamental principles of the communicative approach to language instruction; following this, we will provide a selection of sample tasks. We hope to stake out common ground between language teachers and translator trainers by reimagining the purpose of language proficiency at all levels in what Michael Cronin has called an "age of translation" (2013, 3).

3. Research on translation in the foreign language classroom

Research in second-language pedagogy, translator and interpreter training, and other areas offers a convincing rationale for integrating translation- and interpreting-related tasks in the foreign language classroom. Kirsten Malmkjaer (1998), for example, argues that real-life translation activities focused on linguistic units above the word level help instructors evoke reading, writing, listening, and speaking in a meaningful context. A task-based approach to the use of translation in a Russian language classroom benefits students in that it helps them move faster toward the idea that language is not about words but about meanings that exist in cultural contexts – a core principle of the communicative approach.

Recent research findings in second-language acquisition also support the return of translation and interpreting to the Russian classroom. At a panel devoted to translation in second-language development held at the 2013 MLA convention, Bradley M. Blair reported on an empirical study that suggested that exposure to translation appeared to accelerate the acquisition of reading proficiency.

Another empirical study conducted at Kent State University by Josiany Rocha in 2010 demonstrated that the use of translation in a writing classroom helped second-language learners "adjust to more native-like ways to convey information" (46) and thus "improve their ability to communicate more effectively" (53). Rocha argues that since translation involves comparing and contrasting the ways information is organized in different languages, "it can be a valuable tool in helping students become aware of the different perspectives" on information presentation in their first, or native, language (L1) and their second language (L2; 9). Thus, the use of translation in the second-language classroom helps address a problem outlined by Shutterheim (2002), who points out that even advanced L2 speakers "follow patterns of information organization of their first language" (195).

Further evidence of the benefits of exposure to professional translation and interpreting skills was provided by a research group in California. The group discovered that conducting translation- and

interpreting-related activities among heritage speakers helped foster an awareness of career opportunities and a self-image as a language professional. In this way, the students' linguistic resources, which as an index of their immigrant status had been a source of shame and stigma, became the basis of a professional identity (Angelelli 2011). The group went on to devise a model curriculum for teaching translation and interpreting skills to this specific population (see Angelelli, Enright, and Valdés 2002).

Last but not least, in this learner-centered world, students' opinions should count as well. Research shows that learners consider translation exercises helpful (Lavault 1985; Hervey, Higgins, and Haywood 2002). In his 2006 research study at the University of Cambridge, Angeles Carreres found that his student respondents unanimously found translation useful for their learning. In another study, Jean Conacher (1996) analyzed her students' responses to a translation course and found that the students also viewed translation as a positive factor in learning a foreign language. She noted, "[T]hese students may never become translators, but they will never fail to appreciate the dedication, commitment, and expertise of the professional translators they may one day employ" (180).

4. Other rationales for including translation in the foreign language curriculum

There are other rationales for integrating translation- and interpreting-related activities into the foreign language curriculum beyond accelerating the development of language proficiency and a professional self-image. The research demanded of translation and interpreting offers excellent opportunities to (re)acquaint students with old tools such as dictionaries and new ones such as computer-assisted tools (CAT), machine translation (MT), and corpora, providing students with a more sophisticated and nuanced understanding of the uses – and, importantly, the limitations – of these tools.

4.1. Dictionaries and MT tools

Many proponents of the communicative method, especially those working in immersion programs (STARTALK), discourage their students from using dictionaries and MT tools, viewing them as interfering with the task-based approach, in which learners are required to use the language they know to solve a problem and not translate from English. Interestingly, dictionaries have been under attack for centuries. Already in 1899, Henry Sweet criticized dictionaries for heaping up "useless material" and thus confusing their users (145–46).

The reality is that students often turn to MT, online encyclopedias, thesauri, and other tools, and they do it unthinkingly and with little critical distance. The integration of translation- and interpreting-related activities into the foreign language classroom can provide an especially productive context for a discussion of these tools. Indeed, a survey conducted in 1999 among first-year MA students in translation at Kent State University revealed that most students had never been explicitly taught how dictionaries are made or how they should be used. Many students are therefore unaware that meanings are presented in most dictionaries according to decreasing frequency of usage, while other dictionaries contain entries arranged according to when the meaning first entered the language. Some questions for classroom discussion might include the following: How are dictionaries designed? Are they designed around a single concept or around words? What is the difference between a concept and a word? Then, instructors should invite students to consider or build a concept-oriented graph of an idea, with more than two languages employed, for greater impact (see fig. 1).

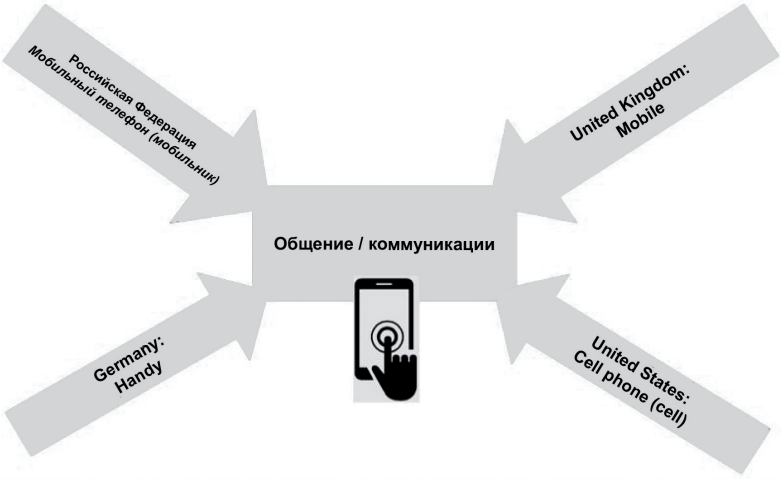


Figure 1. Example of concept-oriented representation of terms: one concept (with its definition); multiple terms in languages and locales (cell phone icon designed by Freepik).

Related discussions might address how MT tools operate—What are their strengths and weaknesses? Can they be helpful to us? Activities based on MT tools and other modern developments in linguistics help bridge gaps between classroom and real world settings and build on the technology-savvy nature of today's student population.

4.2. Corpus tools

Translation activities can also be designed to involve corpus analysis. Corpora are large collections of electronic texts that represent a larger textual population and have been assembled according to explicit design criteria (Zanettin 2002, 11). Bilingual parallel corpora are collections of original texts aligned with their translations. Using parallel corpora in pedagogical settings has a number of advantages. Lynne Bowker (2001) notes that corpora offer "a common evaluative framework" for students and trainers (361), helping students be more receptive to their trainers' feedback by allowing students to "see for themselves that it [feedback] is based on corpus evidence and not merely on the subjective impressions or incomplete understanding" of their teachers (Bowker 2003, 180). In this way, corpora contribute to the development of students' self-assessment and peer-assessment skills while reinforcing their sensitivity to language in context (Baer and Bystrova-McIntyre 2009; Bowker 2003; Uzar 2004).

Exercises with bilingual translational corpora also allow learners to achieve a higher level of autonomy, since students can experiment with tools on their own. With bilingual corpora, students can investigate concordances and KWICs ("key words in contexts" in original texts and translations); collocations (patterns of lexical co-occurrence and how they differ in Russian and English); frequencies of words, phrases, terms, or grammatical structures in different text-types; and much more. For instance, when composing official letters, students may investigate the use of greetings in English and Russian. For advanced students, comparing and contrasting patterns of information organization in bilingual translational corpora may help them become more sensitized to the idea that information and cohesive patterns differ between languages and cultures. For instance, students may investigate the use of punctuation in Russian and English and observe some surprising differences in punctuation patterns.

4.3. Digital humanities

In addition, work with multilingual corpora and translation activities in a language classroom are natural and effective ways of introducing digital humanities (DH) into the curriculum. Today, the ability to collect, maintain, and manipulate digital datasets for research is a survival skill. Other DH tools that can benefit the Russian language classroom include survey and basic statistical analysis tools (e.g., SurveyMonkey or GoogleForms), visualization tools (any software producing graphs, charts, etc.), and publishing tools (MS Publisher or any software with provided templates).

Being able to access a storehouse of declarative knowledge is not enough to succeed in the modern world. One must be able to research and find and evaluate possible solutions. Translation- and interpreting-related activities that require such research and decision-making can foster a number of transferable skills that will benefit students for life (see, for example, Fallows and Steven 2000). In the world where the knowledge we gain is promptly becoming obsolete, transferable skills become key to survival (Arbesman 2012).

4.4. Job prospects

It is an open secret that graduates of Slavic language programs often struggle finding or simply identifying their future careers. Not every student is interested in pursuing K–12 or college teaching or a research PhD. Expanding the real-world use of translation and interpreting in curriculum design may help connect students of Russian to possible career paths, addressing the problem of employment for Russian language graduates. Many students are not aware that, according to the Occupational Outlook Handbook (2014–15) published by the US Department of Labor's Bureau of Labor Statistics, "employment of interpreters and translators is projected to grow 46 percent from 2012 to 2022, much faster than the average for all occupations." For something that is so ubiquitous, translation and interpreting have been out of favor in Russian language instruction for far too long.

The fear of including translation or interpreting in the discourse on language pedagogy tends to be "even more acute" in the context of translation into the learners' L2s (Carreres 2006, 1). This is because in the United States, translation into L2 is often seen as undesirable. In its guide for buying translation services, the American Translators Association (ATA; 2011) states that "professional translators work into their native language." Furthermore, "a translator who flouts this basic rule is likely to be ignorant of other important quality issues as well" (16).

The ATA's stance echoes the position of the prominent translation scholar Peter Newmark (1988): "The only way you can translate naturally, accurately and with maximum effectiveness" is into your native language (3). If we take the ATA and Newmark at their word, Russian teachers in the United States should not even bother asking their students to translate into their L2. In Russia, and in many other parts of the world, however the ATA guidelines and Newmark's prescriptivism are rarely applied. On the contrary, translators are expected to work bidirectionally. In fact, this is true for most of today's world. As Mary Snell-Hornby (2000) states, translation into English as a non-mother tongue "is a fact of modern life" (37; see

also Pokorn 2000). And, realistically speaking, it is not possible to find a sufficient number of native English speakers to translate the ever-growing body of Russian content that requires translation and interpretation.

Moreover, the rapid growth of the language industry has resulted not only in an increased demand for translation and interpreting services but also in the diversification of available jobs. Language majors can now find work as software localizers, computational linguists, project managers, in-house terminologists, and revisors and editors of both human- and machine-generated translations. In fact, studies show that, at least for some text-types, editing machine-translation output may be faster than translating from scratch. For example, in the study by Carl, Dragsted, Elming, Hardt, and Jakobsen (2011), translation speeds for MT plus post-editing were found to be, on average, faster than human translation. Strong editing skills help translation graduates find translation-related work in technical writing or editing, editing their own translations, and dealing with poorly written texts in general (Mossop 2001, iv), thus making students more marketable and versatile in their job search.

5. Designing effective translation-related tasks: general guidelines

Three basic concepts from the field of translation studies can provide guidance for instructors interested in developing translation- and interpreting-related tasks that align with the general principles of the communicative approach (CA), specifically, the focus in CA on language in context. Those concepts are (1) translation as a decision-making process; (2) *Skopos* theory; and (3) text-types or speech genres.

One way to align translation activities with the communicative approach is to encourage an understanding of translation not as a linguistic matching game but, to quote the Czech scholar Jiří Levý, as a complex decision-making process (see Levý's seminal 1967 essay entitled "Translation as a Decision Making Process"). In this process, there is rarely, if ever, a single "right" answer but many possibilities for consideration. As Levý insists, the decisions made in one sentence will have implications for subsequent translation decisions made in the remainder of the text. In a simple Russian declarative sentence, for example, such as *Студентка положила очки на стол* 'A/The student (has) put the/her glasses on the table,' there are a number of interpretive decisions to be made, especially when we do not know its surrounding context. To reiterate Levý's thought, decision-making here involves the use of articles; whether to identify the student's gender and, if so, how; whether to use possessive pronouns, which are used with far greater frequency in English than in Russian; and

what verb tense to use, as the English verbal system is more complex and explicit than the Russian.

The concept of *skopos*, Greek for 'purpose' or 'goal,' as developed in translation studies by scholars such as Katarina Reiss and Hans Vermeer (1984; translated into English by Christiane Nord in 2014), provides guidance for translators in this decision-making process. *Skopos* theory emphasizes that every translation—like every real-world use of language—is situated: it is produced for specific readers with a specific purpose in mind. Often referred to as functionalist, *Skopos* theory authorizes translators to produce texts that meet the communicative needs of the target audience, which is especially helpful to novice translators who tend to cling to the syntax of the source text, producing unnatural texts riddled with "translationese." Moreover, the *Skopos* approach encourages students to assess the extent to which the target text readers share the background knowledge of the source text readers, and if they do not share background knowledge, how to adjust for that through additions (explicitation) and omissions (removing unnecessary explanations). This underscores the need to include a translation brief with every translation-related assignment. The brief, typically generated by the client, indicates why the translation is being done (purpose), for whom it is being done (addressee), and where it will be published (venue).

To make students understand the web of decision-making that goes on in translation, it is important that translation activities be based on complete texts rather than isolated phrases and sentences. For novice learners, these texts can be linguistically simple, such as business cards, but the focus on a complete text will foster in learners the understanding that the meaning of any single word or phrase must be checked against the context. A focus on textual features will sensitize students to extra-linguistic or cultural features, such as the Russian practice of presenting names with last name first, followed by first name and patronymic. Promoted in translation studies as text-types (Neubert and Shreve 1992; Reiss 1971) and by Mikhail Bakhtin as "speech genres" (1986), this approach also encourages students to expand their resources beyond dictionaries to include parallel texts, that is, texts written in the target language for target language readers. Similar to authentic materials in L2 acquisition, parallel texts foster an awareness of textual features such as cohesion and coherence, argument structure, and discourse organization, which characterize various text-types and may be quite different across languages and cultures. Therefore, translation- and interpreting-related activities with a text-type approach can foster genre sensitivity not only in learners' L2 but in their L1 as well.

6. Sample tasks

The ten sample tasks below integrate the principles outlined above with basic principles of communicative language learning. We begin each task with a goal, using an outcome-oriented approach to curriculum design. The tasks are primarily open-ended, which allows for their use, with slight adaptation, by learners of different levels, as described in the ACTFL Proficiency Guidelines (2012; Distinguished, Superior, Advanced, Intermediate, and Novice). Many tasks are suitable for mixed classrooms, where heritage and non-heritage learners work together. Our goal is not to provide a set-in-stone scenario but to equip foreign language teachers with theories, tools, and inspiration. Most tasks require learners' familiarity with the translation brief. Our suggestion is to adapt any existing translation brief rubric to the needs of each particular classroom and use it consistently with assignments involving translation and interpretation. Figure 2 provides an example of such an adapted brief.

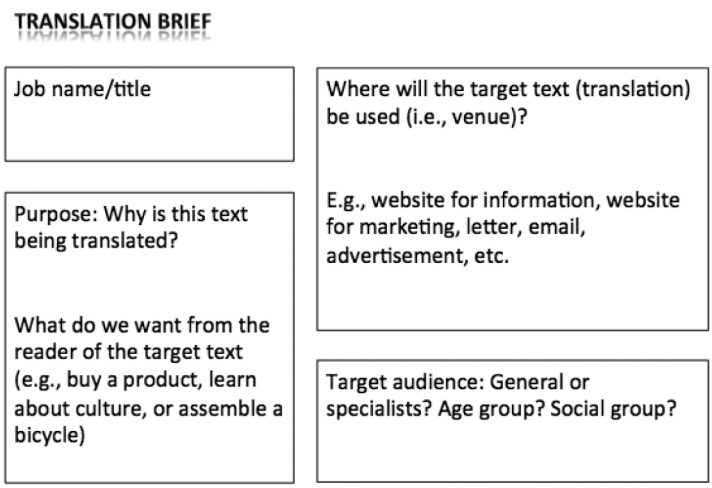


Figure 2. Sample translation brief

Below is a template that describes the various parts of the lesson plans presented in this section:

TITLE: Broad topic
GOAL: What learners will be able to do upon completion of this task
LEVEL: Generally, flexible; provided for convenience of use
MATERIALS: Self-explanatory
PRE-TASK: Preparation; background knowledge activation, subtasks,

planning, framing, predicting outcomes
TASK: Task procedure and possible developments/deviations
P**OST-TASK:** Follow-up, learner reports, self-reflection, spiraling up to next task
TRANSLATION/INTERPRETATION CONCEPTS: Link to translation/interpreting studies (for instructor's information)
WORLD READINESS STANDARDS: Indicators of which of the 5 Cs are best addressed in the task

SAMPLE TASK 1: Слова в контексте: Learning to use dictionaries and MT tools
GOAL: Learners will be able to better understand differences between dictionary entries and words in context
LEVEL: Any
MATERIALS: Online or paper dictionaries; access to the internet
PRE-TASK: Have students type anything they know in Russian and English into an MT tool (e.g., GoogleTranslate) and see what happens if they add more words
TASK: Instructor guides students in their experimenting with MT (e.g., in GoogleTranslate, type in the Russian *замок*). What translation does the MT tool suggest in its main window (castle)? What other translations does the MT tool provide in the displayed entry and why (most frequent—'castle' and 'lock')? What happens if we add different contexts—have the students' and your own imagination run free. Is the MT tool understanding the difference between *замок* as castle and *замок* as lock? (In our experience, as of September 2015, it rarely does; the context has to be very suggestive of one or the other.)

Variations: Remember to weave in the stress variation. How do we find out the correct stress for each meaning? Does a dictionary help us? Can we get the MT tools or online dictionaries to model for us the correct pronunciation for each of the meanings in the experiment? In the end, have the students assess the limitations of MT tools and dictionaries and, on their own, design some guidance for using them. Employ group work, and then have groups teach each other best practices for using MT tools and dictionaries. In the end, as the Roman philosopher Seneca put it, "while we teach, we learn".
POST-TASK: Learners create similar examples on their own. Learners try to make MT tools behave/translate in different ways by varying the context

TRANSLATION/INTERPRETATION CONCEPTS: Focus on meaning, not on words; importance of context
WORLD READINESS STANDARDS: Cultures, Comparisons
SAMPLE TASK 2: Localize a map of the United States
GOAL: Learners will be able to recognize cognates and connect their background knowledge of geography
LEVEL: Novice
MATERIALS: Contour map of the United States; Russian-language map of the United States (with states indicated). Include a creation date, in American format, on the contour map (e.g., 09/12/15 for September 12, 2015)
PRE-TASK: Briefly discuss localization (why localization—from "local," the audience, the target of our activity). Activate vocabulary (e.g., *география, карта, штат, город, столица, дата*). Set outcomes: a map localized into American English. Provide examples of British/American/Russian maps. Reiterate the importance of the assignment instructions (brief)
TASK: Students work in pairs labeling the states on the map of the United States with English equivalents
VARIATIONS: Instead of the United States map, use any other graph appropriate for localization: a map of the Red Square or Times Square, a graph indicating departments in a shopping mall, etc.
POST-TASK: Count successful states; supply any missing states. Twist: Who localized the date?
TRANSLATION/INTERPRETATION CONCEPTS: Localization, cognates
WORLD READINESS STANDARDS: Cultures, Connections, Comparisons

SAMPLE TASK 3: Translation versus Transcreation
GOAL: Learners will be able to formulate some principles of marketing translation and feel more comfortable with departing from the grammar and vocabulary of the original text
LEVEL: Any
MATERIALS: Ads of famous companies (McDonald's, Nike, Adidas, Apple) in English and Russian
PRE-TASK: Find examples of advertising campaigns in other languages. If need be, learners may use dictionaries to identify the verbatim. Students formulate their own instructions/brief for the provided marketing translations/transcreations. Discuss the following quote:
"I don't know the rules of grammar . . . If you're trying to persuade people to do something, or buy something, it seems to me you should use their

language, the language they use every day, the language in which they think. We try to write in the vernacular" (David Ogilvy)
TASK: Students work in pairs/groups identifying the messages conveyed in the original ad and its target counterpart. Students brainstorm the list of principles they identified
POST-TASK: Students create an ad for a Russian chain restaurant after researching its website in Russian (e.g., *Теремок* [teremok.ru]). If level permits, students spiral up to the task of localizing the restaurant's homepage into English, imagining that the restaurant is to open a branch in your area
TRANSLATION/INTERPRETATION CONCEPTS: Transcreation, localization, purpose/audience orientation of a linguistic material
WORLD READINESS STANDARDS: Communication (Interpretive, Presentational), Cultures, Comparisons

SAMPLE TASK 4: Genres in cultures: Recipes
GOAL: Learners will become more sensitive to genre differences between Russian and American cultures while being exposed to vocabulary and structures of authentic Russian recipes
LEVEL: Any
MATERIALS: Russian recipes (preferably from authentic recipe books or family archives; look for an authentic dish, such as *Пасха*)
PRE-TASK: Activate students' background knowledge about cooking and the dish(es) you are planning to employ using pictures, food preparation videos, modeling, etc. What do we expect from recipes?
TASK: Set the task as localizing the given recipe for a general American audience. Have the students run the authentic recipe through an MT tool or, for advanced levels, translate the recipe into English while commenting on the process. What are the students noticing? Differences in terminology? Are they comfortable with the results they are getting?
POST-TASK: In a template (Word, Publisher, etc.), students create a recipe book page for the given recipe keeping the target audience in mind. Then, have the students choose a short American recipe and try to render it into Russian, keeping in mind the discovered preferences of the general Russian audience
TRANSLATION/INTERPRETATION CONCEPTS:
Genre-sensitivity, localization, target audience
WORLD READINESS STANDARDS:
Communication (Interpretive, Presentational), Cultures, Comparisons

SAMPLE TASK 5: Purpose and target audience: University website
GOAL: Learners will be able to identify culturally important issues in Russian university education by analyzing the design of an authentic university website and pondering (as appropriate to their Russian language level) localization of one such website
LEVEL: Any
MATERIALS: Any Russian university website
PRE-TASK: Activate students' background knowledge: What can we expect? What is the target audience of this website in Russia? What would the target audience be for the localized version of this website in English?
TASK: Provide students with a screenshot of an American university's website. Have them find Russian equivalents for sections they see. Is there a mission statement? What do the Russian (if any) and English mission statements focus on? How easy is it to find information? What can it imply, culturally? Is there a provision for American students to study at the Russian university?
POST-TASK: Students offer their own English version of the Russian website with the goal of attracting American students to study at that university for their study-abroad. Consider adding reasons for studying Russian (in English or in both English and Russian, depending on your students' level)
TRANSLATION/INTERPRETATION CONCEPTS: Localization, cultural sensitivity, *skopos*/purpose, target audience
WORLD READINESS STANDARDS:
Communication (Interpretive, Presentational), Cultures, Comparisons

SAMPLE TASK 6: Roommate for a conference hotel/university dormitory/etc.
GOAL: Learners will be able to put together a culturally appropriate ad for a potential roommate at an international conference in a prominent Russian city
LEVEL: Any
MATERIALS: Roommate seeking ads in Russian and English
PRE-TASK: View roommate-seeking ads in Russian and American cultures. Discuss similarities and differences. Brainstorm cultural norms. Activate vocabulary and structures as appropriate to the level of students
TASK: Students create their ads in Russian
POST-TASK: Students test reactions to their ads on native speakers of Russian (Was it appropriate? Would they choose them as roommates? Why

or why not?)
TRANSLATION/INTERPRETATION CONCEPTS:
Cultural sensitivity, genre sensitivity, target audience
WORLD READINESS STANDARDS:
Communication (Interpersonal, Presentational), Cultures, Comparisons

SAMPLE TASK 7: Any genre, any level
GOAL: Learners better understand the skills of a translation editor
LEVEL: Any level, mixed classroom (heritage and true beginners)
MATERIALS: A short text (100–300 words) of any genre. Russian into English and/or English into Russian
PRE-TASK: Review linguistic backgrounds of your students. Can they identify their strengths and weaknesses in Russian? Activate students' background knowledge on the subject. Introduce the translation brief. If you have worked with MT tools in class before, try to predict difficulties MT tools may have with the text you chose
TASK: Students run the text through an MT tool and then edit it (alone or in groups)
POST-TASK: Students run their edited versions through an MT tool and analyze differences in the original and the back-translation
TRANSLATION/INTERPRETATION CONCEPTS:
MT, translation brief, editing
WORLD READINESS STANDARDS: Communication (Interpersonal [if editing in groups], Interpretive, Presentational), Cultures, Connections (potentially), Comparisons

SAMPLE TASK 8: Genre sensitivity: Any genre, any level
GOAL: Learners collaboratively acquire deepened textual sensitivity to a genre
LEVEL: Any level, mixed classroom (heritage and true beginners)
MATERIALS: A short text (100–300 words) of any genre. Russian into English and/or English into Russian
PRE-TASK: Review linguistic backgrounds of your students. Can they identify their strengths and weaknesses in Russian? Discuss the typical life cycle of a translation project in a small company: translation-editing-proofreading. Introduce the translation brief. Have the students predict their successes and potential difficulties and (self-)select their roles in the process. Activate students' background knowledge on the topic selected
TASK: Students translate texts on their own. Then, true Russian language

learners are paired up with heritage learners to create a collaborative version of the translation
POST-TASK: Students translate another text collaboratively or change directionality
TRANSLATION/INTERPRETATION CONCEPTS: The process of translation typical for the language industry: translation-editing-proofreading
WORLD READINESS STANDARDS: Communication (Interpretive, Presentational), Cultures, Connections (depending on the genre selected), Comparisons

SAMPLE TASK 9: Genres within and between cultures
GOAL: Learners collaboratively acquire deepened textual sensitivity to genres within American culture and between Russian and American cultures
LEVEL: Any level, mixed classroom (heritage and true beginners)
MATERIALS: Three short texts or excerpts (100–200 words) of any genres but on a similar topic (e.g., university life, environment, etc.). Russian into English and/or English into Russian
PRE-TASK: Introduce genres. How are their features different in the original language? Set a generalized translation brief (e.g., focusing on potential target audiences). Activate students' background knowledge. Make predictions on the MT's success with different genres
TASK: Students run the three texts through an MT tool and assess the MT's success, while also comparing their predictions to the results
POST-TASK: Students edit one of the three texts based on the in-class critique of the MT outcomes
TRANSLATION/INTERPRETATION CONCEPTS: MT, editing, post-editing, genre sensitivity
WORLD READINESS STANDARDS: Communication (Interpretive, Presentational), Cultures, Connections, Comparisons

SAMPLE TASK 10: Having fun with cultural differences
GOAL: Learners deepen their appreciation of cultural differences between Russian and American audiences through machine-translating and then post-editing culturally sensitive jokes (*анекдоты*) or song lyrics
LEVEL: Any level
MATERIALS: Jokes, song lyrics, or other genres that demonstrate cultural variations between Russian and American cultures. See sample screenshots in Figures 3a and 3b

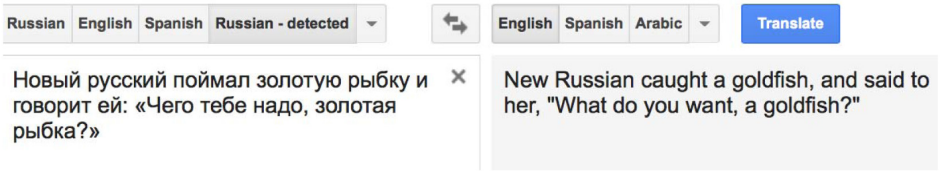


Figure 3a. MT and genre/cultural challenges (retrieved September 2015 from translate.google.com)

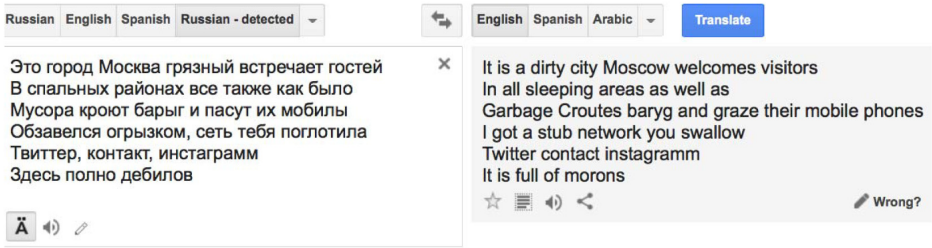


Figure 3b. MT and cultural challenges (original retrieved from http://songspro.ru/8/Zanuda-otvajnyy-feat-Guf/tekst-pesni-gorod-ubiytsa; translation retrieved September 2015 from translate.google.com)

PRE-TASK: Introduce the genre of the source texts. What culture-related challenges can be predicted? How do the histories of Russian and American civilizations influence the cultural references evident in the texts?
TASK: Students read the texts or, if their level requires, use online resources to get the verbatim. Students criticize the verbatim and brainstorm potential solutions to the culture-related issues
POST-TASK:
Students produce a final draft of one of the source texts
TRANSLATION/INTERPRETATION CONCEPTS: Culture sensitivity and cultural differences, MT, post-editing, target audience, focus on the effect versus information
WORLD READINESS STANDARDS: Communication (Interpretive, Presentational), Cultures, Comparisons.

In addition to the interpreting and translation assignments evoking real-world situations, revamped Russian language curricula could include twenty-first-century tasks, such as the following: creating and using domain-specific corpora and conducting parallel text research, using CAT tools, editing texts translated by machines and humans, comparing source texts with their translations in order to evaluate translator choices, serving as cultural mediators, and more. Translation and interpreting

assignments are capable of opening various topics for class discussions, which contributes to the development of such transferrable skills as critical thinking and self-reflection. But this would be a subject for another article and, perhaps, a different target audience.

7. Conclusion

By reintroducing translation and interpreting into foreign language curricula, we acknowledge the ubiquity of translation in our culture. Businesses, large and small, are proud to maintain multilingual websites. Rapidly developing MT and online translation tools haunt us at every step of our way on the internet ("Translate this page?"). Our smartphones are equipped with translation and speech-to-text interpreting apps. In Michael Cronin's words, we no longer live in the age of information or "the knowledge society"—we live in the age of translation (2013, 3). By integrating translation- and interpreting-related activities into a communicative classroom, we help our students navigate this world in a responsible and ethical way. Moreover, by reintroducing translation and interpreting in the foreign language teaching in the ways suggested above, we can foster in language learners a positive self-image so they see themselves not as failed native speakers but as successful cultural mediators.

References

ACTFL Proficiency Guidelines. 2012. ACTFL Central. Accessed December 12, 2020. https://www.actfl.org/resources/actfl-proficiency-guidelines-2012.

American Translators Association. 2011. "Translation: Getting It Right." Accessed October 19, 2018. http://www.atanet.org/publications/Getting_it_right.pdf.

Angelelli, Claudia. 2011. "Expanding the Abilities of Bilingual Youngsters: Can Translation and Interpreting Help?" *In Interpreting Naturally. A Tribute to Brian Harris*, edited by M. J. Blasco Mayor and M. Amparo Jimenez, 103–20. Bern, Switzerland: Peter Lang AG.

Angelelli, Claudia, K. Enright, and G. Valdés. 2002. "Developing the Talents and Abilities of Linguistically Gifted Bilingual Students: Guidelines for Developing Curriculum at the High School Level." *The National Center on the Gifted and Talented*. University of Connecticut. University of Virginia. Yale University. Accessed October 19, 2018. http://www.gifted.uconn.edu/nrcgt/reports/rm02156/rm02156.pdf.

Arberman, Samuel. 2012. *Be Forewarned: Your Knowledge is Decaying*. Harvard: HBR Series.

Baer, Brian and Tatyana Bystrova-McIntyre. 2009. "Assessing Cohesion: Developing Assessment Tools on the Basis of Comparable Corpora." *In ATA Scholarly Monograph Series, XIV. Testing and Assessment in Translation and Interpreting Studies: A Call for Dialogue Between Research and Practice*, edited by C. Angelelli and H. Jacobson, 159–83. Amsterdam/Philadelphia: John Benjamins.

Bakhtin, Mikhail. 1986. *Speech Genres and Other Late Essays*. Austin, TX: University of Texas Press.

Blair, Bradley M. 2013. *MLA Convention*.

Bowker, Lynne. 2001. "Towards a Methodology for a Corpus-Based Approach to Translation Evaluation." *Meta* 46, no. 2: 345–64.

Bowker, Lynne. 2003. "Corpus-based Applications for Translator Training." *In Corpus-based Approaches to Contrastive Linguistics and Translation Studies*, edited by S. Granger, J. Lerot, and S. Petch-Tyson, 169–83. Amsterdam and New York: Rodopi.

Byram, Michael. 2000. "Translation." *In Routledge Encyclopedia of Language Teaching and Learning*, edited by Michael Byram and Adelheid Hu. London: Routledge.

Campbell, Stuart. 1998. *Translation into the Second Language*. London and New York: Longman.

Canale, M. and M. Swain. 1980. "Theoretical Bases of Communicative Approaches to Second Language Teaching and Testing." *Applied Linguistics* 1: 1–47.

Carl, Michael, B. Dragsted, J. Elming, D. Hardt, and A. L. Jakobsen. 2011. "The Process of Post-editing: A Pilot Study." *Copenhagen Studies in Language* 41: 131–42.

Carreres, Angeles. 2006. "Strange Bedfellows: Translation and Language Teaching." *Sixth Symposium on Translation, Terminology and Interpretation in Cuba and Canada*. Accessed October 19, 2018. http://www.cttic.org/publications_06Symposium.asp.

Conacher, Jean E. 1996. "Native Speaker to Native Speaker: Crossing the Translation Gap." *In Teaching Translation in Universities: Present and Future Perspectives*, edited by P. Sewell and I. Higgins, 161–82. London: CILT.

Cook, Guy. 2010. *Translation in Language Teaching*. Oxford: Oxford University Press.

Cronin, Michael. 2013. *Translation in the Digital Age*. New York: Routledge.

Essential Learning Outcomes of the Liberal Education and America's Promise program of the Association of American Colleges and Universities (aacu.org/leap).

Fallows, Stephen and C. Steven, eds. 2000. *Integrating Key Skills in Higher Education: Employability, Transferable Skills, and Learning for Life*. London: Kogan Page.

Foreign Languages and Higher Education. 2007. Report of the MLA Ad-hoc Committee on Foreign Languages. Accessed October 19, 2018. http://www.mla.org/pdf/forlang_news_pdf.pdf.

The Occupational Outlook Handbook. 2014–15. US Department of Labor's Bureau of Labor Statistics. Accessed December 12, 2020. https://www.bls.gov/ooh.

Fraser, Barry J. 2012. *Classroom Environment*. New York: Routledge.

Hervey, Sándor, I. Higgins, and L. Haywood. 2002. *A Course in Translation Method: Spanish to English*. London: Routledge.

Hutchins, W. John. 1995. "Machine Translation: A Brief History." *In Concise History of the Language Sciences: From the Sumerians to the Cognitivists*, edited by E. Koerner, F. Konrad, and R. Asher, 431–45. Oxford: Pergamon Press.

Jacobson, Roman. 1959. "On Linguistic Aspects of Translation." *In On Translation*, edited by R. Brower, 232–39. Cambridge, MA: Harvard University Press.

Kudyma, Anna, F. Miller, and O. Kagan. 2010. *Beginner's Russian*. New York, NY: Hippocrene Books.

Lavault, T. Élisabeth. 1985. *Les fonctions de la traduction dans l'enseignement des langues*. Paris: Didier Erudition.

Levý, Jiří. 2000. "Translation as a Decision Process." *In The Translation Studies Reader*, edited by L. Venuti, 148–59. New York: Routledge.

Malmkjaer, Kirsten. 1998. *Translation and Language Teaching*. Manchester, UK: St. Jerome.

Mossop, Brian. 2001. *Revising and Editing for Translators*. Manchester, UK and Northampton, MA: St. Jerome.

Newmark, Peter. 1988. *A Textbook of Translation*. New York: Prentice Hall International.

Neubert, Albrecht and Gregory S. Shreve. 1992. *Translation as Text*. Kent, Ohio: The Kent State University Press.

Pokorn, Nike. 2000. "Translation into a Non-Mother Tongue in Translation Theory: Deconstruction of the Traditional." *In Translation in Context: Selected Contributions from the EST Congress Granada, 1998*, edited by A. Chesterman, N. G. San Salvador, and Y. Gambier. Amsterdam and Philadelphia: John Benjamins.

Reiss, Katharina. 1971. *Moeglichkeiten und Grenzen der Uebersetzungskritik. Kategorien und Kriterien fuer eine sachgerechte Beurteilung von*

Uebersetzungen [Possibilities and limitations of translation criticism. Categories and criteria for a fair evaluation of translations]. Munich: Hueber.

Reiss, Katharina and H. Vermeer. 2014. *Towards a General Theory of Translational Action: Skopos Theory Explained*. Translated by C. Nord. New York: Routledge.

Robin, Richard, K. Evans-Romaine, and G. Shatalina. 2013. *Golosa: A Basic Course in Russian. Book 1*. Upper Saddle River, NJ: Prentice Hall.

Rocha, Josiany. 2010. *Translation and Perspective Taking in the Second Language Classroom*. Accessed October 19, 2018. https://etd.ohiolink.edu.

Snell-Hornby, Mary. 2000. "'McLanguage': The Identity of English as an Issue in Translation Today." *In Translation into Non-Mother Tongues*, edited by M. Grosman, M. Kadric, I. Kovacic, and M. Snell-Hornby, 35–45. Tübingen: Stauffenburg Verlag.

Stutterheim, Christiane, R. Nüse, and J. Murcia-Serra. 2002. "Cross-Linguistic Differences in the Conceptualization of Events." *In Information Structure in a Cross-linguistic Perspective*, edited by H. Hasselgård, S. Johansson, B. Behrens, and C. Fabricius, 179–98. Amsterdam: Rodopi.

Sweet, Henry. 1899. *First Middle English Primer: Extracts from the Ancren riwle and Ormulum, with Grammar, Notes, and Glossary*. Oxford: Clarendon Press, Uzar, Rafał. 2004. "A Toolbox for Translation Quality Assessment." In Practical Applications in Language and Computers, edited by B. Lewandowska-Tomaszczyk, 153–62. Frankfurt: Peter Lang.

Vermeer, Hans J. 2000. "Skopos and Commission in Translational Action." *In The Translation Studies Reader*, edited by L. Venuti, 221–32. London and New York: Routledge.

World Readiness Standards for Learning Languages. 2015. National Standards in Foreign Language Education Project. Accessed December 12, 2020. https://www.actfl.org/resources/world-readiness-standards-learning-languages

Zanettin, Federico. 2002. "Corpora in Translation Practice." *First International Workshop on Language Resources for Translation Work and Research Proceedings*. Accessed October 19, 2018. https://files.ifi.uzh.ch/cl/yuste/postworkshop/repository/fzanettin.pdf.

Reading Russian for the Disciplines: Google Translate

Richard Robin

For many graduate students in areas such as history, economics, sociology, security policy studies, and arms control, the Russian reading requirement represents a significant barrier in terms of required coursework or reading proficiency, since Advanced-level reading proficiency at a minimum is necessary for reading in these disciplines. The question is, must that barrier be maintained? In a time when online machine translation (MT) is available on smartphones, is requiring a demonstration of L2 reading proficiency as part of the path to an advanced degree any more meaningful than requiring that statisticians be able to add up a column of figures in their heads? The answer revolves around another question: can those with little or no reading proficiency in Russian be taught to make use of Google Translate to extract information from Russian-language texts?

A casual glance at blog posts (e.g., Calico Spanish 2013; Sra Witten 2013; u/rayyychul, NikkitheChocoholic, topshelfesteem, theodore_boozevelt 2018) confirms the presence of widely held fears about the inadequacies of translation engines in the hands of students. Users complain about inaccuracies and misreading, even when translation engines feed fairly straightforward text. Studies of MT contain numerous cautionary if not disdainful tales of mistranslation (Steding 2009; Clifford, Merschel, and Munné 2013; White and Heidrich 2013); these tales often come from those who require a high degree of precision, such as translators.

For a scholastic purist, the notion that specialists in disciplines touching on regional area studies should be able to read material in the original language is axiomatic. Nevertheless, to insist on purism with regard to reading foreign languages for the disciplines is unrealistic. Those with less than adequate reading proficiency will turn to translation bots (nonhuman online translators), probably taking refuge in the world's largest bot, Google Translate (GT). Schumann, referring to his own partial proficiency in Persian, Russian, French, and German, claims, "If I could quickly and easily receive usable information from a [machine translation] device, I might be able to make much more extensive use of these languages. But this enterprise would not be directed toward improving my ability to use these

languages, but rather toward learning to use MT technology effectively in order to obviate the need to increase my proficiency" (2013, 154).

If we desire to pursue the goal of using MT to "obviate the need to increase proficiency," we must answer two questions:

(1) Does GT render usable content for the task at hand?

(2) If GT has comprehension-inhibiting inadequacies, can we prepare non-proficient users of the target language to overcome them so that the users' needs for extracting the required information are met?

This article is concerned with reading requirements for graduate studies in disciplines other than language and literature. The target level is typically Advanced (minimal working capability) and, for some programs, Superior. When discussing MT and graduate reading-requirements, the notions of information extraction and argument summary are important. This paper does not propose that foreign language (FL) learners turn to GT to produce compositions in L2, although a number of people have suggested a path toward that activity—among these people are Garcia and Peña (2011), Korošec (2011), and White and Heidrich (2013). Nor is the suggestion being made that language learners should use GT as a translation crib-sheet for obscure literary works for which no literary translation is available.

The article will first examine the road that lies ahead of would-be Russian readers who have limited reading proficiency—ACTFL Novice or Intermediate—and then, by presenting a taxonomy of MT errors, it will look at the barriers to the successful use of GT. In that light, the breadth of the problems in using GT will be examined to determine whether they are insurmountable. For GT problems that are surmountable, potential interventions will be examined.

The article takes as its point of departure Aiken and Balan's (2011) study on GT successes—situations in the recent past where FL readers were able to use GT to enhance their reading comprehension on established tests. The reading comprehension of 75 American students was tested on TOEFL-equivalent passages in Chinese, German, Hindi, Korean, Malay, and Spanish that were translated into English with GT. The subjects did not have access to the original FL texts. The average TOEFL-equivalent reading score of 21.9 exceeded the 21-point TOEFL minimum required by the graduate program at University of California, Los Angeles. In short, without pedagogical intervention in maximizing the comprehensibility of the GT-generated English text, the subjects' comprehension of the passage was, on average, sufficient for graduate study. In a separate study, Karnal and Pereira (2013) determined that Brazilian Portuguese "non-proficient

undergraduate" readers of English understood 62% of a 170-word abstract that GT translated from English into Portuguese that appears to require Advanced Low comprehension without GT. In this case, GT provided the boost required to push these readers into the Advanced level—a promising result for those who seek to use GT in place of teaching students enough of the language to bring reading to that level. The question is, can the level of comprehension be brought higher than just 62%, and can it be done consistently? In fact, the mercurial accuracy of MT is due in large part to how it works.

1. Machine Translation

At this point, a primer on machine translation is in order, even if there is a risk of repeating what in the MT world is common knowledge.[1]

1.1. Types of MT engines:

Rule-based machine translation (RBMT), the oldest MT model, translates based on a lexicon/morphology, a set of rules, and a list of exceptions and phrasal units. RBMT engines include SYSTRAN, Moses, and OpenLogos. Most are no longer in use.

Statistical machine translation (SMT), corpus-based, is the basis for GT, which accesses Google's massive corpus of translated documents and looks for statistical matches, with priority given to adjacent words that form n-grams. (N is replaced by the number of words in the expression, so *в этом году* [in this year] is a trigram.) The strategy is to balance the search for equivalents based on competing factors: the length of the n-gram (*longer* is selected as the best translation) and the frequency of its occurrence (*more frequent* is selected as the best translation). Such a massive corpus allows GT to disambiguate previously recorded meaning while retaining regard for actual meaning. For example, GT correctly translates *Рыбак рыбака видит издалека* as 'Birds of a feather flock together' (literally, 'one fisherman recognizes another fisherman from far away') with *рыбак рыбака* as a digram. *Рыбак рыбака ненавидит* is rendered as 'Birds of a feather hate.' In terms of grammar, Google knows nothing. If you type 'This year,' GT first produces *В этом году*, a trigram that statistically predominates over этот год. Add 'was,' and the translation switches to *Этот год был*, the

[1] Readable surveys on machine translation basics can be found in Costa-jussà, M., Fonollosa, J. (2015). For a non-technical history of MT, see Lewis-Kraus, Gideon. 2015. "Tower of Babble." *New York Times Magazine* (June), 48–52.

statistically predominant form. Then complete the sentence with 'hard,' and GT produces *В этом году было трудно*.

Example-based machine translation (EBMT) is something of a predecessor to SMT from the 1990s and early 2000s. EBMT matches fragments against a database of real examples, tagging the corresponding translation fragments and then recombining them by analogy to give the target text (Nagao 1984, cited by Somers 1999).[2] For example, '<DET> that is almost <DET> a personal record <PREP> for <PRON> me <DET> this autumn!' yields *<DET> c' est pratiquement <DET> un record personnel <PREP> pour <PRON> moi, <DET> cet automne!*

Hybrid MT is most commonly data-driven: it processes SMT or EBMT and is the principle behind Microsoft's Bing translator. Such systems might build a lexicon and grammar from an initial corpus of parallel texts or use a corpus to weight alternatives of rule-based output (Costa-jussà and Fonollosa 2015). Examples of post-processing include a part-of-speech parser to correct word-disorder (Mohaghegh, Sarrafzadeh, and Mohammadi 2012), which is a major problem in GT translations of Russian; proposals to deal with problematic multiword units such as those found in English separable phrasal verbs (Monti et al. 2011); and individual word disambiguation (Vintar, Fišer, and Vrščaj 2012). Other hybrid MT developers seek to add a dose of human correction. For Chinese, Huang et al. propose a "look-ahead" system add-on for human intervention for both GT and Bing. The system can be taught to inform the user of the target-language grammar and lexicon that one can expect to follow "the translation prefix" of a source text. The result is akin to a machine schema check: it offers "predictions of lexically translated grammar patterns following the current inputted translation prefix, and adapting to the user's translation choices to resolve ambiguities [. . .] in the source

[2] Consider Nagao's example (1984):
(1) He buys a book on international politics.
(2) a. He buys a notebook.
Kare wa no¯to o kau.
HE topic NOTEBOOK obj BUY.
b. I read a book on international politics.
Watashi wa kokusai seiji nitsuite kakareta hon o yomu.
I topic INTERNATIONAL POLITICS ABOUT CONCERNED BOOK obj
(3) Kare wa kokusai seiji nitsuite kakareta hon o kau.

sentence" (2013, 15-2).[3] Resnik, Buzek, et al. (2010) simply add humans to MT output: monolingual target-language readers identify troublesome translation output; monolingual source-language readers paraphrase the troublesome passage in the original.

1.2. Evaluating MT

Most frequently MT is evaluated by programs that look for co-occurring n-grams, the two most common of which are BLEU and NIST. Shen (2010) found that on short sentences, GT performed better than the hybrid Bing or RBMT (Babel Fish), while Bing outperformed GT in sentences under 140 characters in some language pairs. Despite GT's success in translating longer sentences, length remains the overall enemy of accuracy, as Seljan, Vičić, and Brkić (2012) found in both human and BLEU analyses of Croatian-English translations. Mohaghegh et al. summarize the differences between SMT and RBMT accuracy succinctly: RBMT is better at syntax, morphology, structural semantics, and lexical reliability, but SMT is stronger in lexical semantics and lexical adaptivity (2012, 874).

1.3. MT Precision and Text Difficulty

Clifford, Granoien, et al. (2004) studied the correlation of the precision of SMT output in four languages, including Russian, to difficulty levels as measured by the proficiency guidelines of the Interagency Language Roundtable (ILR). Translation accuracy was measured by BLEU/NIST scores. None of the languages show a consistent fall in NIST scores as the proficiency level required to read the text increases. Figure 1 shows that for all the languages analyzed, NIST accuracy fell as the ILR level rose from 1 (~Intermediate[4]) to 2 (~Advanced). But for Russian, NIST accuracy levels rise steadily as the proficiency level required to comprehend the text rises, suggesting that machine translations of material requiring high reading proficiency might be as comprehensible or more comprehensible than "easier" texts.

[3] The proposal is a logical outgrowth for the use of technology with Chinese because in a less sophisticated form it underlies the basic principle of Chinese word processing: writers enter text in Romanized pinyin, the device then predicts the possible characters letting the writer to select the correct one.

[4] Unless otherwise noted, all references to proficiency levels in this article are based on the ACTFL Proficiency Guidelines (2012).

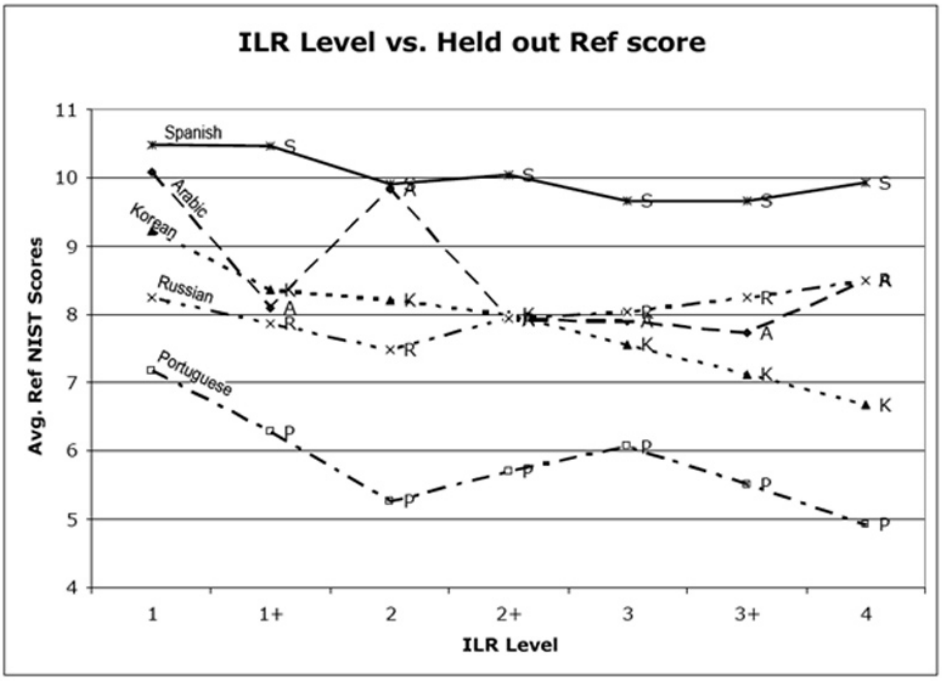


Figure 1. Adapted from Clifford, Granoien, et al. (2004)

The date of the study should be noted: in 2003, SMT was still in its infancy. The translated corpus was much smaller than it is today, which means that precision was lower.[5] Moreover, the authors admit that the corpus used in the calculations was also small, just a paragraph for each language. Whatever its faults, the study suggested (it turns out correctly, as we shall see) that difficulty level in terms of required proficiency is not the main determinant in the comprehensibility of a statistically based MT.

2. Taxonomies of Errors

Purely statistical analyses of MT performance suggest that in terms of raw accuracy, GT is not inferior to RMBT or hybrid engines, but BLEU and NIST numbers tell us little about error type. Taxonomies requiring human judgments have been proposed, many of them aimed at creating rule-based algorithms to post-edit SMT output. Farrús et al. (2010) created a taxonomy based on spelling, punctuation, and lexical, morphological,

[5] In fact, the English translation of the Russian passage of 38 words was barely comprehensible using the SMT output of 2003, but in 2016 GT produced an almost perfect translation.

semantic, and syntactic (clitics, word order, missing elements, etc.) errors for use in evaluating GT as it translates between Spanish and Catalan. Ghassemiazghandi (2014) cites mostly lexical and semantic errors in his short study of English-Malay translations through GT. In their analysis on GT accuracy versus that of Moses, an RBMT system, Costa et al. (2014) categorize errors into those of "substance" (punctuation, capitalization, spelling), lexis (omission, addition, untranslated, wrong choice), grammar and semantics (collocational, idiomatic, confusion of homonyms—e.g., glasses: spectacles or dishware?), discourse (style, variety), and those that "should not be translated."

Of course, any analysis of SMT errors addresses a moving target. As the corpus expands, accuracy increases. High-frequency collocations, even recent ones, are incorporated quickly. GT correctly renders *вне зоны приема*, a common collocation only as old as cell phones, as 'out of range.' On the other hand, easy-to-understand colloquial turns of phrases that are not common collocations are rendered inaccurately because of SMT's low ability to handle disambiguation when the appropriate n-gram is not found.

2.1. Corpus-Based Taxonomy of Russian-English Errors

The taxonomies discussed above laid the foundation for the survey that follows. The corpus that informs the discussion consists of seven texts from multiple-choice graduate reading-comprehension tests used in an international affairs program at a U.S. university. The proficiency difficulty levels of these texts were assigned by the test-makers based on ACTFL guidelines:

Table 1. Core corpus (sample texts and their GT translations are in the appendix)

Topic	Words	Level
How to judge quality ice cream	659	AL
Easing of Moscow traffic jams	651	AM
AllaPugacheva's childhood	731	AH
Why companies lay off employees	767	AH
Attracting Chinese tourists to Russia	791	AH
The decline of the Russian Academy of Sciences	789	S
Russia's demographic decline	678	S

These texts were translated from Russian into English using GT. Normally, when readers suspect something is amiss in translation, GT can be coaxed into providing alternative translations. However, in a timed test (60 to 120 minutes), where readers are typically required to read through about 2500 to 4000 words and answer as many as 25 to 40 multiple choice questions, using GT that explores alternative translations might not be practical because this requires tedious manual intervention. For this reason, only the initial GT translation was considered in the analysis.

Before engaging in a detailed discussion of error taxonomy, we need to understand the proportion of correct and incorrect translations (translation incidents) in this corpus. The GT translation of the seven articles of about 700 words each (and 5,066 words total) produced 171 incidents that would require a human reader to consult with the original for clarification. This amounts to one such incident for approximately every 30 words. Of the seven texts, the colloquially written Alla Pugacheva article proved the most challenging for GT. This should not be surprising. The dry language characteristic of many Superior-level texts contains mainly frequently translated n-grams. More colloquial prose might have fewer n-grams or n-grams of low frequency (not often translated and not recognized by GT, even though human readers can figure out the meaning). Estimated to require Advanced High skills, the text about Pugacheva is not as challenging for human L2 readers as text at the Superior level. Even low-level readers who know the Russian grading system will understand that Alla was given *тройки* ('Cs') for certain subjects in school, but GT does not recognize *выставить тройки* ('to give Cs') as an n-gram, and it mistranslates, telling us that Alla 'put troikas.' If, therefore, we remove the one colloquially written article from the mix, thus raising the percentage of neutral, non-colloquially written texts, the GT translation incident average drops to 127 over 4335 words, or one incident every 34 words.

An example of more acceptable GT translation comes from a less colloquially written paragraph from the article on Moscow traffic jams, which requires Advanced Mid proficiency:

> This trend [a decrease in traffic jams] was observed in the beginning of the year. We conducted a study in February, comparing the speed of traffic on major streets of Moscow on weekdays. It was found that on the first working day of the year on the roads of Moscow was somewhat freer than a year ago—said "KP" Leonid Mednikov, expert of the analytical center "Yandex".—So, the situation between the Garden Ring and the Third Ring Road has improved. During the day the car is moving at 7–10% faster than last year. In the evening rush hour difference is even greater—13%.

For a central paragraph in an editorial on the demise of Soviet science, which requires Superior-level reading proficiency, GT gives us this paragraph in understandable if inelegant prose:

> Today, we have already cut off from the many fruit-bearing branches. This—the scientific community, organically connected with the culture of the ancient civilizations of the Caucasus and Central Asia. This—the science of brotherly Ukraine and Belarus. Now these parts, once a single organism of Soviet science, became scientific community of sovereign states, and we need to build a relationship with them in the framework of international cooperation.

Such a text is comprehensible to any English-speaking scholar with near-zero Russian language proficiency but with a minimal background in the history of Soviet science and education.

To address comprehension issues that result from various degrees of GT imprecision, such as those provided above, a taxonomy of errors is required. An analysis of the GT inaccuracies produced the following taxonomy:

2.1.1. Lexicon

GT made mistakes between wrong word, wrong meaning, or GT's failure to attempt to find an equivalent. Examples:

Wrong word—GT: 'plant cream butter' ← orig.: *мороженое растительно-сливочное* → correct: 'creamy vanilla ice cream'

Wrong meaning—GT: 'mass fraction' ← orig.: *массовая доля* →correct: 'big dollop'

Left untranslated—GT: 'in place termoskleyki' ← orig.: н*а место термосклейки* → correct: 'on the place of the heat-seal'

2.1.2. Semantics or idiomaticity

In instances involving semantic disambiguation, the translation is hard to decipher because, while lexically faithful, it simply misses the meaning in context:

GT: 'appreciate the value of an open radio wave communications' ← orig.: *оценить значение открытой радиоволновой связи* → correct: 'appreciate the value of over-the-air communication'

GT (on the decrease in traffic jams): '[T]his summer the city has gone all free' ← orig.: *[Э]тим летом город поехал совсем свободно* → correct: '[T]his summer the city started moving about freely'

GT: '[they] park their cars in two or three rows' ← orig.: *паркуют свои машины в два-три ряда* → correct: '[they] double- and triple-park'

2.1.3. Word order

Overall, GT handles deviation from SVO poorly:

GT: '[T]he Chinese from Russian tourism scare high prices for a number of services' ← orig.: *[К]итайцев от российского туризма отпугивают высокие цены на целый ряд услуг* → correct: 'High prices for a number of services scare the Chinese away from Russian tourism'

2.1.4. Pronouns

Despite Voigt and Jurafsky's 2012 study showing a surprising degree of cohesion (often pronoun-dependent) in translations, in this corpus pronominal errors were frequent, because pronouns in Russian are often omitted or replaced by reflexive pronouns with antecedents of indiscernible gender (to GT):

GT: 'Alla would sit at the piano and start his show' ← orig.: *Алла садилась за рояль и начинала свое шоу* → correct: 'Alla would sit at the piano and start her show'

2.1.5. Verb tense and voice

GT has trouble with English aspect and, more confusingly, often mixes up the passive voice and active voice:

GT (in the context of "things are now better"): 'Chinese citizens began to buy luxury items' ← orig.: *Граждане Китая стали покупать предметы роскоши* → correct: 'Chinese citizens have begun to buy luxury items'

GT: 'A method for transmitting information wirelessly cultivated for many years' ← orig.: *Способ передачи информации без проводов совершенствовался многие годы* → correct: 'A method for transmission of information without wires was perfected over a period of many years'

2.1.6. Participles

Participles, especially when they appear to the left of the modified noun, pose challenges:

GT: 'Ministers will report on the issue indirectly shifted responsibility' ← orig.: *Доложившие о проблеме министры косвенно переложили ответственность* → correct: 'Ministers who reported on the issue indirectly shifted responsibility'

GT: '[T]he reported lack of attention many of them linked to the index—in fertility' ← orig.: *[О]днако [он] доложил о*

недостаточном внимании многих из них к связанному показателю—рождаемости → correct: '[He] reported on the lack of attention shown by many of them to the indicator involved—fertility rates'

2.1.7. Morphosyntax issues (grammar rules ignored)

As a pure SMT model, GT misses any morphological clues that would inform both word order and meaning:

GT: 'the volume of its decline' ← orig.: *объем его уменьшится* → correct: 'its volume declines'

GT: 'Class Pugacheva' ← orig.: *класс Пугачевой* → correct: 'Pugacheva's class'

GT: 'There's also the school' ← orig.: *там же в училище* → correct: 'Right there in the school'

2.1.8. Proper names

GT is often stumped by names and uses several wrong variants in the same document:

GT: 'from Allin class' ← orig.: *из аллиного класса* → correct: 'from Alla's class'

GT: 'no special brightness Allais did not notice' ← orig.: *никакой особой яркости в Алле не замечала* → correct: 'She found no particular spark in Alla'

GT: 'Allah' ← orig.: *Алла* → correct: 'Alla.' Apparently GT culled this form from an extant mistranslation of 'Allah' to *Алла* instead of *Аллах*. In most other places in the document, *Алла* is translated correctly.

It should be noted that proper names figure into nearly all cases of what Costa et al. (2015) label "unnecessary translation," as well as into some instances of failure to translate. Translation failure includes instances where translation is simply not customary (e.g., specialized terms like *nomenklatura*) and where translation misleads by translating what should be left in the original:

GT: 'For example, in "The Messenger" sales force' ← orig.: *К примеру, в компании «Связной» штат продавцов* → correct: 'For example, in the Svyaznoi corporation, the sales force'

GT: '[T]he country is unsafe to visit,"—explains the oil' ← orig.: *[С}трана небезопасная для посещения»,—объясняет Маслов* → correct: '[T]he country is unsafe to visit," explains Maslov'

2.1.9. Punctuation

Beyond easily discerned differences in convention, the Russian use of dashes and period conspire, sometimes in concert, to obscure GT's meaning:

> GT: '[N]atural population growth, which last year amounted to about 30 thousand. Man—started with the good news, Prime Minister Dmitry Medvedyev'[6] ← orig.: *[П]рирост населения, который в прошлом году составил около 30 тыс. человек,—начал с хороших новостей Дмитрий Медведев* → correct: "[N]atural population growth, which last year amounted to about 30 thousand people," Medvedev began, citing the good news first.' Obviously other types of errors are involved here, but punctuation and capitalization are the initiators of the incomprehensible translation.

2.2. Category summaries

The table below shows summary figures—the number of errors in each category. However, error types overlap, and even a short sentence can encompass a number of error types. In the analyzed corpus, 19 of 208 translation incidents happened in isolation, not a very high number.

Table 2. GT category error summaries[7]

	Lexicon	Idiom	Word Order	Pronoun	Tense/ aspect	Participles	Grammar	Proper name	Punctuation
n of 208*	88	65	34	23	26	5	73	17	8

This informal categorization is close to other such catalogues of errors, cited earlier (see previous pages 7–8), in which lexical problems and idiomaticity dominate numerically but in fact represent a minority of all errors involving grammar: morphosyntactic relationships, tense, pronoun cohesiveness, and writing conventions.

[6] The improper use of the quotation marks in the GT version is sic.

[7] The total number of errors is larger than 208 because some incidents can be considered to belong to more than one error category.

2.3. Weighting errors

Costa et al. (2015, § 6.0–6.2) weighted taxonomized error difficulty—how much the errors interfered with comprehension for translation purposes—on a four-point scale. On the other hand, Popović, Avramidis, et al. (2013) weighted errors in their survey as minor or not. In order to predict how well GT will help readers rather than translation editors, we need a scale that reflects on-the-fly information gathering: to what extent they interfere with or slow down the reader. This article proposes the following scale:

(0) **Error is stylistically inappropriate but does not interfere with comprehension.** These kinds of errors were not catalogued.

(1) **GT text may confuse someone at the Novice level** (typically first-year college Russian) but otherwise can be understood without referring to the original: 'Alla attended the 496th school,' instead of School #496.

(2) **GT text becomes clear once the reader familiar with Russian structure consults the original.** (A dictionary might be required for an individual ambiguous word). Most of these errors originate in GT's problems with morphosyntax, verb tense/aspect, and word order:

GT: 'which is now introducing the Moscow Department of Transportation' ← orig.: *которую сейчас внедряет департамент транспорта Москвы* → correct: 'which the Moscow Department of Transportation is now introducing'

GT: '[" . . . "] continues to Eugene B. Pugachev' ← orig.: [« . . . »]—*продолжает Евгений Борисович Пугачев* → correct: '[" . . . ,"] adds Evgeniy Pugachev'

GT: 'Class Pugacheva' ← orig.: *класс Пугачевой* → correct: 'Pugacheva's class'

(3) **Advanced Russian reading proficiency is required to retrieve meaning.**

GT: 'many companies today do cleaning staff' ← orig.: *многие компании занялись сегодня чисткой кадров* → 'today many companies have started laying people off'

GT: 'It is very similar and at the same time funny portrayed the then idols' ← orig.: *Она очень похоже и в то же время смешно изображала тогдашних кумиров* → correct: 'She impersonated the pop idols of the day very accurately and at the same time humorously'

(4) **Superior-level proficiency or thorough background knowledge is required.**

GT: '[A]nd takes their place of competent, professional yet affordable, it is able to perform an abbreviated amount of problems of their predecessors' ← orig.: *[И] берет на их места компетентных, но недорогих профессионалов, вполне способных выполнять сокращенный объем задач их предшественников* → correct: '[A]nd in their places [he] puts competent but affordable professionals, fully capable of handling the decreased volume of work of their predecessors'

GT: 'Sometimes, so she obtained almost the whole "import" of the song' ← correct: *Иногда таким образом у нее получались чуть ли не целые "импортные" песни* → correct: 'That's how at times she managed to come up with entire "foreign" songs'

GT: 'We always swing right' ← orig.: *Мы все время качали права* → correct: 'We were always demanding our rights'

GT: 'We just now have to go to manual control' ← orig.: *Мы просто сейчас уже вынуждены выходить на ручное управление* → correct: 'We are now forced to turn to administration by fiat'

3. Text Proficiency Level and GT Difficulty Rating

This article defines a word as a spellchecker would (i.e., as anything followed by a space, unhyphenated line break, or punctuation). We can make a rough estimate of a text's difficulty rating after GT translation by adding up the difficulty levels of all the errors based on the proposed scale and dividing by the number of words in the text. This approach produces the results outlined in table 3.

The post-GT difficulty estimate for six of the seven texts falls in a narrow band from 6 to 10 with no discernible link to ACTFL level. The only outlier, as we mentioned, is the colloquial but uncomplicated Pugacheva text. Its many SVO inversions, along with a few references to Soviet realia (particularly a passage about Alla's performance of "foreign" songs), might push an estimation of the text's difficulty to Advanced High. But that discrepancy cannot explain the wide gap in the Google error ratings between the Alla texts and other texts of the same difficulty level or higher once low-level errors are removed. Most of the problem is in the colloquial nature of the Alla text. Less-frequent colloquial turns of phrase, especially those represented by what is best ascribed to authorial voice, create

disambiguation problems. GT disambiguates poorly unless the word in question is contained within an n-gram that has a close equivalent. Consider GT's problem with *Старшеклассники звали Пугачеву на свои вечера* → GT: 'High school students called Pugacheva its evening' for 'High school students invited Pugacheva to their parties.' Does GT find any matchings for звать and 'invite'? The closest comes in the translation of *Вас никто не звал* → GT: 'You had not been asked.' But change the pronoun and GT finds a different n-gram, in this case a common digram: *Меня звали на вечер* → GT: 'My name was on the evening.' Moreover, GT runs into a pronoun problem with свой. And obviously there is no n-gram for *звали на свои вечера* or for that matter even a trigram match for *на свои вечера*.

Moreover, the level of the individual GT errors was low, not requiring reference to the original text, or requiring only a quick glance at the Russian by a low-proficiency reader. But the volume of GT errors per text adds up to a high per-word difficulty score. In short, a colloquially written text causes readers who have not yet reached the required level of proficiency to refer constantly to the original for the meaning of almost every sentence.

Table 3. Difficulty index, total, 208 incidents[8]

Topic	Level[9]	Words	Difficulty Points	Rating (%)*
How to judge quality ice cream	AL	659	61	9
Easing of Moscow traffic jams	AM	651	43	7
AllaPugacheva's childhood	AM	731	137	19
Why companies lay off employees	AH	767	62	8
Attracting Chinese tourists to Russia	AH	791	57	7
The decline of RAN	S	789	80	10
Russia's demographic decline	S	678	61	9

[8] Rating = Difficulty points divided by the Number of Words, which gives us a rough estimate of the amount of the text that was challenging.

[9] Here and elsewhere, the article uses the following abbreviations for ACTFL proficiency: AL for Advanced Low, AM for Advanced Mid, AH for Advanced High, S for Superior

Table 4. Difficulty index with level 1 errors removed (see Weighting Errors on page 6), 171 incidents

Topic	Level	Words	Incidents	Difficulty Points	Rating (%)
How to judge quality ice cream	AL	659	13	39	6
Easing of Moscow traffic jams	AM	651	17	41	6
Alla Pugacheva's childhood	AM	731	44	124	17
Why companies lay off employees	AH	767	23	59	8
Attracting Chinese tourists to Russia	AH	791	18	49	6
The decline of RAN	S	789	28	76	10
Russia's demographic decline	S	678	28	58	9

Table 5. Difficulty index with level 1 and 2 errors removed (see Weighting Errors on page 17), 104 incidents

Topic	Level	Words	Incidents	Difficulty Points	Rating (%)
How to judge quality ice cream	AL	659	13	39	6
Easing of Moscow traffic jams	AM	651	9	19	3
AllaPugacheva's childhood	AM	731	25	86	12
Why companies lay off employees	AH	767	11	45	5
Attracting Chinese tourists to Russia	AH	791	10	33	4
The decline of RAN	S	789	18	56	7
Russia's demographic decline	S	678	18	46	7

3.1. Stealth errors

Even GT errors that ordinarily are easily corrected with the help of the original can be treacherous. Like the monolingual post-editors studied by Resnik et al. (2010), readers relying on GT's English output are cued to return to the original when something seems not quite right in the translation. However, GT errors sometimes produce smooth-sounding, logical, or close-to-logical text, while its meaning is far from the original and sometimes virtually the opposite:

GT: 'so ice cream was stored properly' ← orig.: *значит, мороженое неправильно хранили* → correct: 'that means that the ice cream was stored improperly'

GT: 'She appreciated the school' ← orig.: *Ее ценили в школе* → correct: 'She was appreciated at school'

GT: 'my grandmother chased her short skirt' ← orig.: *моя бабушка гоняла ее за короткую юбку* → correct: 'my grandmother got after her for her short skirt'

Stealth errors can occur at any difficulty level. For example, *старше на двадцать лет* gives us 'older than twenty years,' rather than 'twenty years older,' but readers may miss stealth errors unless they perceive that the translated text does not match the original.

3.2. A summary of readers' needs

The preliminary evidence from the analysis of GT errors described in the previous sections demonstrates a similarity to GT or SMT error-types catalogued in the literature. Using that information, we can prepare students to use GT to read in their fields. We need to determine the areas in lexicon and morphosyntax to allow readers to obtain the information they need.

Table 6. Error types and difficulty levels of texts in this corpus

Topic	Level	Column A Lexico-semantic*	Column B Grammar, convention*	Column C Word/ Grammar %*
How to judge quality ice cream	AL	21	23	91 (−9)
Easing of Moscow traffic jams	AM	10	11	91 (−9)
Alla Pugacheva's childhood	AH	42	50	81 (−19)
Why companies lay off employees	AH	19	18	106 (+6)
Attracting Chinese tourists to Russia	AH	14	27	52 (−48)
The decline of RAN	S	32	28	114 (+14)
Russia's demographic decline	S	15	27	56 (−46)
Total		153	184	83 (−17)

*Column C is the ratio of lexical issues (Column A) to grammar issues (Column B). Minus figures indicate more problems with GT grammar error types; plus figures show more problems with lexicon and semantics.

The types of errors encountered in GT can be categorized based on their frequency. Improper word choice accounts for the plurality of GT errors (88), and incorrectly translated idiomatic meanings came to 65, a total of 153 for lexico-semantic issues. Ignored grammar, word order, and writing conventions represent the majority of GT incidents in the corpus (186). his ratio is similar for five of the seven corpus articles as shown in the Table 6 above.

These results suggest that any preparation for using GT must include a comprehensive review of the structure of the Russian language, especially morphosyntax (e.g., case agreement, verb tense, and untangling word order).

Lexico-semantic problems must be handled individually. A large number of them are discernible by students who have taken a minimal amount of Russian, perhaps just one college year. In other cases, context makes it clear that the GT translation of a single word must be checked:

GT: 'The company will still be grateful to the scientists' ← orig.: *общество еще будет благодарно ученым* → correct: 'society / people / our country will still be grateful to the scientists'

GT: 'Evacuation vehicles of violators' ← orig.: *Эвакуация машин нарушителей* → correct: 'Towing violators' cars'

GT: 'Cleaning staff' ← orig.: *чистка кадров* → correct: 'labor cuts; personnel cuts; work force cuts'

Many other lexical/semantic errors might escape scrutiny and yet deal only a light blow to meaning. The article on Moscow traffic, which is estimated to require Advanced Mid reading proficiency, tells us *Используя нашу интеллектуальную систему, позволяющую наблюдать за передвижением машин по городу, мы перестроили и скорректировали работу светофоров.* The overall meaning is not lost if readers accept GT's rendering of "intelligent system" for "system based on AI" or "smart system."

True challenges come from places where disambiguation requires background knowledge:

GT: 'a building gathered at the new "the block" method' ← orig.: *строение собранное по новому "блочному" методу* → correct: 'prefab building.' Both Google and Yandex searches of *блочный метод* produce references first to psychology and education, then to computer programming, followed by prefabrication in construction—and this final meaning is only in "dictionary" Russian with no links to multiple language

pages such as those found in Wikipedia. In short, *собрать по блочному методу* poses a challenge for translation.

GT: 'Almost one girls gathered—there was nothing else here and wait' ← orig.: *Собрались практически одни девицы—другого тут нечего было и ждать* → correct: 'Just about the only ones who came were girls. What else could one expect?' A click in the GT target translation box gives the alternative "alone" but not "only." For *нечего*, no GT alternative is close to "there is no reason." The meaning of this sentence would probably be lost.

Such examples suggest that any pedagogical approach to teaching Russian reading through GT will still, as before, require some glossing.

4. Proposals for student preparation

It should be obvious by now that pedagogical interventions should take two routes: (1) a comprehensive survey of the structure of Russian and (2) strategies for dealing with disambiguation and idiomaticity.

Comprehensive grammar-coverage has been a staple of materials for reading for the disciplines since pre-proficiency days (see Dewey and Mercereau 1963; Arnt 1981). Back then, students were required to translate sentences featuring the grammatical point being covered. Now we might present students with the Russian input and flawed GT output and ask the students to untangle using what was just covered.

Handling lexicon is less straightforward than dealing with grammatical structure. How should we go about building the core lexicon required for the most basic check on the accuracy of the GT translation? Two solutions are apparent: (1) traditional brute-force lexical presentation, where students are given glosses for core vocabulary that is served up in texts containing examples of the grammar being presented; or (2) selected lexical presentation, where students are required to build up a core lexicon from clean (or cleaned) GT output. Both routes assume the same requirement: disambiguation requires a core lexicon—probably something that can be acquired for receptive purposes—along with the basic morphosyntactic structure, over the course of a semester (45 hours) and honed during the next semester.

Once a core vocabulary is in place, lexical and semantic disambiguation is easy in the majority of cases, specifically those involving high-frequency vocabulary items as well as words where GT errs but where the context (and translation of the word in question) is clear or GT itself provides lexical alternatives to be plugged into context. Consider the

GT sentence: 'People are constantly leaving and had to re-look footage' translated from *Люди постоянно уходили, и приходилось заново искать кадры.* The easily detectable tense error aside, readers will have seen GT's rendering of кадры as 'staff' a half dozen times previously in this article about cutting labor costs. Highlighting the verb 'look' in the output box gives students the alternative 'search,' helping them to better understand the sentence as a whole.

Disambiguation for less frequent vocabulary presents greater challenges. We can envision preparatory materials with various amounts of scaffolding containing standard instruction in reading strategies, particularly those strategies surrounding the use of background knowledge, context, and textual-cohesion detection. However, the goal is not to decipher meaning directly but to fill in GT's gaps. At its most dense, scaffolding would simply provide a glossed bridge over GT's lexical thin ice. For example:

GT: 'Stripping Dobor permanent staff and recruits solve performance problems is not always' ← orig.: *Зачистки персонала и постоянный добор новобранцев решают проблемы эффективности далеко не всегда* → correct: 'Firing staff and constantly looking for new people is hardly a good way to solve issues of efficiency in every case '

Here we would create exercises with glosses for *зачистки, постоянный добор, and далеко не.*

Ultimately the scaffolding crutch must lead to self-directed strategies, at first through hybrid devices—hints for difficult places and clues about background knowledge and context. The following sample assignment shows students how they can figure out that GT has erred, by asking them questions that directly compare the two texts:

Look at the highlighted part of the GT text and then answer the questions that follow.

Text 1

Russian	GT
В этом году на туристов из КНР приходится уже 16% от общего турпотока в РФ.	This year, tourists from China accounted for 16% of the total tourist traffic in Russia.

Но для его увеличения придется не только больше рассказывать китайцам о России, но и повышать качество услуг.	*But it will not only increase the longer talk to the Chinese about Russia,* but also improve the quality of services.

Does the italicized passage make sense as written for the context given?
If the quality of services must also be improved, what other improvement is suggested in the first part of the sentence? Hint: *придется* is similar to *надо* but "harsher." (Not only *this*, but also *that*.)

Text 2

Russian	GT
Но главное — это процесс разрушения нашего научного потенциала как целостной системы. Надежды на то, что можно финансировать и спасти хотя бы одну ее часть (например, только фундаментальную науку) — иллюзорны.	But the main thing—it's the process of destruction of our scientific potential as an integrated system. I hope that can be financed and save at least one part of it (for example, only basic science)—illusory.

Does the second sentence make sense as written?
What is the subject noun of the second sentence? Is it singular or plural?
Are there any plural long-form or short-form adjectives that modify the subject?
How might the answers to those questions change the GT translation?

The two example exercises above use local context to lead students into detecting and correcting GT errors, but less obvious cases require students to examine a snippet of GT text in an article's much longer context. Consider how students might be instructed to handle the following impenetrable GT output:

GT: '"Basically, we travel to the Chinese firms engaged and purposeful development of the Russian policy to promote services in China is not"—said the orientalist.' ← *"В основном поездками к нам занимаются китайские фирмы, и целенаправленной развитой российской политики по продвижению услуг в Китае нет"*,—говорит востоковед.

Even before looking at grammatical form, readers should consider the overall context. So far in this piece, readers have followed a discussion of the reasons why few Chinese tourists visit Russia. The person quoted is a Russian expert on East Asia. That sets up an expectation that it is the Chinese companies that are engaged in something (setting up tour groups to Russia) and that something is missing in China—a developed policy on Russia's part for providing tourist services to Russia.

5. Problems Left Unsolved

Preparing students to use GT will not lead to universal comprehension of all texts, even those that do not require Superior reading proficiency. We have touched on three issues that remain as barriers to total comprehension:

(1) *Stealth errors.* It can be assumed that GT users start with GT output and look at the original only when they detect problems. However, GT output that makes sense but is incorrect might not be caught. Yet of the five stealth errors cited in this article, only one ('the ice cream was stored properly,' instead of 'stored improperly') would have led to thematic communication problems. Even the latter error is likely to be discovered in the larger context of the article.

(2) *Difficult prose.* Visibly bad GT output might lead back to a difficult original passage whose cultural references and inventive use of lexicon make it impenetrable for those with meager L2 reading proficiency, especially where context is not supportive enough. In such cases, dictionaries are unlikely to help.

(3) *Authorial rhetoric.* We often associate authorial rhetoric with Superior reading. But the Alla Pugacheva text shows that authorial rhetoric, even when easily followed by human readers, runs GT into the ground. In such cases, readers must check every bad GT expression against the original, a process that is likely to frustrate those readers who thought that GT would save effort. At the level of defended opinions and hypothetical suppositions, authorial rhetoric varies. Consider a straightforward, dryly written editorial in which the author makes an argument based on assembled facts as compared to a brightly written op-ed dripping with authorial enthusiasm. A more strident authorial voice could be the one additional element that turns much of the GT output into mush, while the other Superior-level textual characteristics in the piece could make it hard for non-Superior readers to comprehend the meaning.

6. Implications for the Profession

In this article we have explored GT's pitfalls in rendering Russian into understandable English for Russian readers who have minimal proficiency at the Novice and Intermediate levels. However, the analysis of GT's errors suggests that minimally proficient readers can acquire just enough knowledge of Russian structure and enough of a core vocabulary to allow use of GT to simulate reading proficiency at the Advanced and even Superior level if the readers' background knowledge of the subject is sufficient to make up for output that is often gibberish. We predict that preparation to use GT successfully might take a college year for beginners. To say the least, such an approach represents a paradigm shift in how we treat reading in a foreign language for a specialty. Larger legitimate questions remain as to whether such a direction is good or bad as a matter of educational philosophy. Should an area specialist be allowed to substitute GT proficiency for an independent capacity to handle L2 texts? Or in other words, what kinds of experts on Russia are real experts if they cannot pick up a Russian newspaper and understand what is written on the front page?

For many years Soviet-era graduate programs did not require scholars to demonstrate that they could read newspaper articles of any significant length. Until the proficiency revolution of the late twentieth century, most graduate reading tests consisted of something like a translation of several hundred words from L2 over a period of time with a dictionary. This slow and labor-intensive process was a meaningless formality.

In more recent times, graduate programs have used timed comprehension tests covering a wider range of material with limited or no dictionary use. Such tests demonstrated reading proficiency, but the effort required to reach the necessary proficiency has increased. Advanced proficiency might be attainable in a reasonable amount of time at the cost of great effort (two to four semesters of coursework), and attaining Superior proficiency takes longer. But armed with those higher levels of proficiency, what might the potential MA or PhD graduate be reading professionally? That depends on the task at hand. GT would prove a valuable tool for skimming through large amounts of material, such as in an initial search for sources in research. Even after an initial filtering, GT permits comprehension of a complex text by someone with receptive grammatical competence and a first-year core vocabulary. However, GT is only of little use where researchers need to handle original texts that cannot be photocopied and then scanned (such as archival material or material in

old orthography), but otherwise it can be a powerful tool for specialists dealing with Russia.

Moreover, a Russian area specialist today more than ever might need more than one area language—for example, Ukrainian[10] or any number of Central Asian Turkic languages. GT allows such specialists to acquire reading skills for two or three area languages in the same two years that used to be required to acquire reading skills in one language. Of course, the agglutinative Turkic languages of Central Asia have their own problems in GT, a fact noted by both Google (2011) and Microsoft Developer (2014).

A shift in a reading-proficiency requirement that emphasizes handling large amounts of material, even if Superior-level nuance is occasionally missed, may represent a realistic compromise, especially for those whose disciplines are highly quantitative. A researcher using target-language source material to examine trends in demographics, economics, climate, etc., or whose research involves reading formulaic texts such as government regulations, could use GT to economize on language training. Even a project involving changes in the media's presentation of the image of the United States could conceivably involve initial data collection of texts that could be filtered through GT, although the final study might involve Superior-level nuance requiring background knowledge that is typical of higher levels of reading proficiency.

7. GT Beyond Reading

The use of GT for reading in the disciplines goes to the heart of the role of foreign-language learning in academia. If we accept GT as an imperfect but useful *information extraction* tool, then its use should be uncontroversial. That is a separate issue from using GT as a *language acquisition* tool, something beyond the immediate scope of this article. Nevertheless, a widespread acceptance of GT for reading is sure to segue into a discussion of GT for language production, specifically writing. Godwin-Jones (2011) and Garcia and Peña (2011) have speculated about how GT might play a role in language acquisition. Korošec (2011) found in a survey that only ten percent of translation students reported not using GT. If students can be taught to use GT to aid reading, why not teach the methods that work in getting more accurate renditions of things that students want to express?

[10] Users of GT for Ukrainian can expect to experience the same problems that face readers of Russian. GT translates Russian as the intermediary language. For other language pairs, English is often the intermediary language, which explains the frequent loss of the T/V distinction when translating from Russian to Romance languages.

Would a combination of GT-use strategies, combined with Google searches for correct context, be inferior to trusting the L1 to L2 half of a bilingual dictionary? Such issues will come into even sharper focus as SMT improves with an ever-increasing corpus.

8. Conclusion

In this study we have analyzed GT translation inaccuracies from reading materials at the Advanced and Superior levels. We have found that because of the high number of incidents generated by the failure of GT's statistical approach to account for grammar, word order, and blind copying of writing conventions, readers who are prepared with knowledge of Russian morphosyntax, a core vocabulary, and an awareness of circumstances under which GT is likely to err, can expect to be able to extract meaning from the kind of material required for graduate study in a range of related disciplines. The estimated ACTFL difficulty level of a text has little bearing on GT accuracy. Texts with low-frequency colloquial turns of phrase or styles with authorial voice, while not necessarily difficult for L2 human readers, result in GT mistranslations that will require closer comparison with original text in order to be understood. Some GT stealth errors, unless exposed by context, might escape detection. Overall, however, a certain level of acquired-language competence allows GT users to function as effectively as the students who pass the reading requirements of many graduate programs. That speculation, fueled by the textual evidence presented, suggests that such practices be tested on a wide scale.

Appendix A: Selections from the corpus of translated texts

These passages have been condensed for space.

How to judge quality ice cream

SOURCE: Kukartseva, Anna. 2016. "Glavnye pravila pri vybore morozhenogo. "*Komsomolskaya Pravda.* June 10, 2016. http://www.kp.ru/daily/26393.3/3269279/.

Как найти самое лучшее холодное лакомство, подсказывают эксперты Росконтроля [. . .]	How to find the best cool treat, suggest experts Roskontrolya [. . .]
Упаковка—без дыр. Следите, чтобы упаковка не была порвана. Тогда меньше шансов, что внутрь попадут	Packaging—without holes. Make sure that the packaging has not been damaged. Then less likely fall into the disease-causing microbes.

болезнетворные микробы.
Пробуем читать этикетку. Если состав не читается (нанесен на место термосклейки или напечатан мелко), это нарушение правил маркировки, не покупайте такое мороженое. [. . .]
Повторно замороженную сладость легко распознать, если она в прозрачной упаковке: мороженое будет расслоившимся, с кристаллами льда, объем его уменьшится. Когда мороженое упаковывают на заводе, оно насыщено воздухом, это называется взбитость. Так оно держит форму и кажется объемным. А на вкус—легким, воздушным. Подтаявший экземпляр этот воздух теряет и на вкус становится хуже.

We try to read the label. If the composition can not be read (is applied in place termoskleyki or finely printed), is a violation of labeling rules, so do not buy ice cream. [. . .]
Re-frozen sweet easy to recognize if it is transparent packaging: ice cream will exfoliate with ice crystals, the volume of its decline. When ice cream is packed in the factory, it is saturated with air, it is called overrun. So it keeps its shape and it seems three-dimensional. And the taste—light, airy. Melted copy of the air and loses the taste becomes worse.

Ищем в составе растительные жиры. Внимательно прочитайте состав. В настоящем мороженом отсутствуют растительные жиры и химические добавки. Но часто, чтобы снизить себестоимость продукта, молоко в мороженом заменяют растительным маслом, обычно пальмовым, рапсовым или кокосовым. В таком случае производитель обязан честно написать на этикетке: «мороженое растительно-сливочное» или «мороженое с растительным жиром». Если в состав продукта входит заменитель молочного жира, применение понятий «молочное», «сливочное», «пломбир» в наименовании в маркировке не допускается.

We are looking at the composition of vegetable fats. Read carefully the composition. This frozen vegetable fats and no chemical additives.
But often, to reduce the cost of the product, milk substitute in ice cream vegetable oil, typically a palm, rapeseed and coconut. In this case, the manufacturer must honestly write on the label: “Plant-cream butter” or “ice cream with vegetable fat.” If the product includes milk fat substitute, the use of the concepts of “milk”, “butter”, “cream” in the name in labeling is not allowed.

Easing of Moscow traffic jams

SOURCE: Grigoryeva, Maria. 2014. "Transportnye reformy v Moskve pomogli pobedit' probki?" *Komsomolskaya Pravda*. July 21, 2014. http://www.kp.ru/daily/26409/3284079/.

ГОРОД ЕДЕТ ДАЖЕ В ЧАСЫ-ПИК И ЗИМОЙ, И ЛЕТОМ НЕ ТОРМОЗИМ

Ситуация с пробками в Москве за последние полгода действительно существенно улучшилась: «Яндекс. пробки» еще весной в утренние и вечерние часы-пик фиксировали заторы не более 5–6 баллов, а уж этим летом город поехал совсем свободно.

Специалисты называют наступивший сезон отпусков одной из причин разгрузки дорог: люди массово уезжают отдыхать. Меньше всего заторов, как правило, во второй половине июля—первой половине августа. Но отпуска—далеко не единственная причина разгрузки города. [. . .]

Получается, что Москва теперь едет не только летом, но и в другое время года, чего с ней давно не случалось. Это подтверждают и эксперты нидерландской компании TomTom, выпускающей устройства для автомобильной и персональной GPS-навигации. Когда в начале апреля компания опубликовала ежегодный рейтинг загруженности дорог за 2014 год, Москва в нем впервые за последние два года перестала быть безусловным лидером, откатившись на четвертое

CITY GOES EVEN PEAK HOURS AND IN WINTER AND SUMMER IS NOT INHIBITED

The situation with the traffic jams in Moscow for the past six months really has improved significantly, "Yandex" in the spring in the morning and evening rush hours congestion recorded no more than 5–6 points, and only this summer the city has gone all free.

Experts call the holiday season comes one reason for unloading the road: people en masse leave the pitch. Least of all congestion is usually in the second half of July—early August. But holiday—not the only reason for unloading the city.

[. . .]

It turns out that Moscow is now coming not only in summer but also in the rest of the year, which it had not happened. This is confirmed by experts of the Dutch company TomTom, which produces devices for automotive and personal GPS-navigation. When, in early April, the company published an annual ranking of the traffic congestion in 2014, Moscow For the first time in the last two years, he has ceased to be the undisputed leader, fell back to fourth

место и пропустив вперед Стамбул, Мехико и Рио-де-Жанейро. А ведь еще в 2012 и 2013 годах столица Россия занимала в рейтинге совсем не почетное первое место [. . .]

place and passed forward Istanbul, Mexico City and Rio de Janeiro. But back in 2012 and 2013, the capital of Russia was in the rating is not honorable first place [. . .]

Alla Pugacheva's childhood

SOURCE: Belyakov, Aleksei. 1997. "Chast' pervaia. Alka."*Alka, Allochka, Alla Borisovna. Roman-Biografiia*.
http://ussrmusic.narod.ru/articles/other/3/1.html.

Алла училась в 496-й школе, которая находилась в Лавровом переулке. Школа была новой и открылась именно тогда, когда наша героиня пошла в первый класс—в 1956 году. (Сейчас это пятиэтажное здание занимает Центр детского творчества.)

Alla attended the 496th school, which was located in Laurel Lane. The school was new and opened just when our heroine went to the first class—in 1956. (Now this five-story building occupies the center of children's creativity.)

Класс Пугачевой был большим и, что называется, трудным. "Мы все время качали права",—вспоминают одноклассники Аллы. Сама она тоже нередко проявляла строптивость, несмотря на регулярные нагоняи от Зинаиды Архиповны. Правда, за активность Аллу как-то выбрали старостой класса.

Class Pugacheva was great and they say, difficult. "We always swing right"—says Alla classmates. She herself is also often showed obstinacy, despite regular scolding from Zinaida Arhipovna. However, for the activity Alla somehow chose his class.

Ее ценили в школе за музыкальное образование. Старшеклассники звали Пугачеву на свои вечера, чтобы она аккомпанировала их выступлениям. Понятно, какую зависть это обстоятельство вызывало у девчонок из аллиного класса.

She appreciated the school for musical education. High school students called Pugacheva its evening that she accompanied their performances. Clearly, some envy this circumstance caused the girls from Allin class.

Она сходу подбирала любые песни, но на публике сама петь не решалась. Отчасти и потому, что

She immediately picked up any of the songs, but in public she did not dare to sing. Partly because shy gap

стеснялась щели между передними зубами. Поэтому, общаясь с мальчиками, улыбалась несколько неестественно, прикрывая верхней губой свой "недостаток" [. . .]

between his front teeth. Therefore, dealing with the boys, she is smiling somewhat unnatural, covering his upper lip "deficiency" [. . .]

"Во дворе Алла тоже всегда была заводилой,—продолжает Евгений Борисович Пугачев.—Я-то был маменькиным сынком, а она наоборот всегда общалась с местной шпаной". В районе Крестьянки на местную молодежь наводил страх парень по кличке Джага. Кроме неприятной внешности, он славился еще и как обладатель "финки", финского ножа, воспетого всей блатной лирикой.

"In the courtyard Alla also always been the ringleader—continues to Eugene B. Pugachev.—I was a mama's boy, but on the contrary it has always communicated with the local punks. "In the area of peasant women in the local youth troubling guy named Jag. In addition to the unpleasant appearance, he was known also as the owner of the "finca" Finnish knife thug lyrics sung throughout.

Но Алла и с ним разговаривала достаточно вызывающе. Возможно, после этих диалогов у нее дрожали руки-ноги, но своей смелостью она всех поражала. [. . .]

But Allah and spoke to him quite challenging. Perhaps after these dialogues in her trembling hands and feet, but his courage it all hit. [. . .]

На курсе у Аллы собрались практически одни девицы—другого тут нечего было и ждать. Поэтому она с интересом присматривалась к симпатичному однокурснику Мише Шуфутинскому, и скоро они стали приятелями. (Там же в училище Алла познакомилась еще с Людмилой Зыкиной и Екатериной Шавриной—вот они-то как раз оказались на вокальном отделении. С Зыкиной особой дружбы не завязалось: все-таки она была уже известной певицей и вообще старше на двадцать лет. А с Шавриной Пугачева приятельствует по сей день.)

The course Alla gathered almost one girls—there was nothing else here and wait. So she looked eyeing the handsome classmate Misha Shufutinskii, and soon they became friends. (There's also the school Alla got acquainted with Lyudmila Zykina and Catherine Shavrina—that they somehow just appeared in the vocal department. With no Zykina special friendship ensued: after all, she was a famous singer and generally older than twenty years. And Shavrina Pugacheva friendship to this day.)

“Она бывала у меня дома,—с улыбкой вспоминает Шуфутинский,—и моя бабушка гоняла ее за короткую юбку”. [. . .] Алла садилась за рояль и начинала свое шоу. Она очень похоже и в то же время смешно изображала тогдашних кумиров—Эллу Фицджеральд и даже Луи Армстронга. Но лучше всего ей удавалась, разумеется, Эдит Пиаф. Пугачева, кстати, умела помимо прочего петь на разных “языках”, что тоже невероятно забавляло окружающих. Она просто придумывала иностранный текст, который очень походил то на французский, то на английский язык. Иногда таким образом у нее получались чуть ли не целые “импортные” песни.

“She’s been to my house,—recalls with a smile Anybody—and my grandmother chasing her short skirt.” [. . .]
Alla would sit at the piano and started his show. It is very similar and at the same time funny portrayed the then idols—Ella Fitzgerald and Louis Armstrong even. But the best she could, of course, Edith Piaf. Pugachev, by the way, among other things she could sing in different “languages”, which is also incredibly amused others. She simply invented a foreign text that looked very much like the French, then in English. Sometimes, so she obtained almost the whole “import” of the song.

Why companies lay off employees

SOURCE: Podtserob, Maria. 2015. “Kompanii slishkom uvleklis’ chistkami personala, govoryat eksperty.” *Vedomosti.ru*, № 3874. July 15, 2015. http://www.vedomosti.ru/management/articles/2015/07/16/600791-kompanii-slishkom-uvleklis-chistkami-personala-govoryat-eksperti.

Под разговоры о кризисе и сокращениях персонала многие компании занялись сегодня чисткой кадров, говорят эксперты рынка труда. Расчет прост: на рынке сейчас полно кандидатов, которых можно нанять на меньшее жалованье, а стараться новички будут не меньше, а то и больше старых сотрудников. Взять хотя бы строительные гипермаркеты, где в последнее время увольняют всех—

By talking about the crisis and the reduction of personnel, many companies today do cleaning staff, experts say the labor market. The calculation is simple: the market is now full of candidates who can be hired at lower wages, and the Cubs will try to at least, maybe more older employees. Take, for building hypermarkets, which recently laid off all—from vendors to the main hall of replacing staff at the Russian guest

от продавцов до главного по залу, заменяя российский персонал на гастарбайтеров, приводит пример Наталья Курантова, директор по работе с ключевыми клиентами Kelly Services.

workers, gives an example of Natalia Kurantova, Director of Key Account Kelly Services.

По словам экспертов, часто для массовой замены персонала находится официальный повод—изменение стратегии или ввод нового продукта, реально же за этим стоит желание заменить менее эффективных сотрудников на более эффективных. Курантова рассказывает, что, например, в фармацевтических компаниях бывает так, что закупили новый рецептурный препарат, а все медицинские представители компании до этого продавали безрецептурные препараты. Их квалификация больше компанию не устраивает, переучивать их не хочется, компании кажется, что легче и дешевле взять готовых специалистов с рынка, которые будут работать эффективнее. [. . .]

According to experts, often for a mass replacement of staff is the official reason—a change of strategy or to enter a new product really is behind this desire to replace less efficient staff more efficient. Kurantova says that, for example, pharmaceutical companies, it happens that they have bought a new prescription drug, and all the medical representatives of the company before selling OTC drugs. Their qualifications and more companies are not happy, they do not want to retrain, the company seems to be that it is easier and cheaper to take a ready-made market specialists who will work effectively. [. . .]

Однако компания, которая часто обновляет персонал, должна решать сразу несколько проблем: как интегрировать новичков, как их мотивировать, как при этом не потерять старых ценных, предупреждают эксперты. Если в компании не построены внутренние процедуры, то опасно уповать на то, что новые сотрудники повысят эффективность компании, замечает Анна Бурова, руководитель

However, the company, which is frequently updated staff must solve several problems at once: how to integrate newcomers, how to motivate them, how to not lose old securities, experts warn. If the company is not built internal procedures is dangerous to rely on the fact that the new employees will increase the efficiency of the company, says Anna Burov, head of consulting and recruitment Manpower Group.

подразделений консалтинга и рекрутмента Manpower Group.
К тому же, добавляет Виктория Филиппова, партнер хедхантинговой компании Cornerstone, часто зачистки персонала заканчиваются тем, что в компанию действительно выстраивается длинная очередь из кандидатов с рынка труда, но эти кандидаты могут быть как компетентные, так и не очень, как мотивированные, так и лентяи.
«А чтобы разобрать 700 резюме, которые упали в ящик в один день, нужно как минимум иметь в запасе больше 24 часов в сутки. Плюс к этому растут расходы на поиск, на адаптацию новых сотрудников и на замену тех, кто не прошел испытательный срок»,—добавляет Филиппова [. . .]
Зачистки персонала и постоянный добор новобранцев решают проблемы эффективности далеко не всегда, но в некоторых случаях они оправданны, говорят эксперты.
К примеру, в докризисные хлебные времена компания нанимала дорогих специалистов и менеджеров. А в кризис объем их обязанностей сократился и платить им в прежнем объеме стало слишком накладно, отмечает Филиппова.
Вот работодатель и берет на их места компетентных, но недорогих профессионалов, вполне способных выполнять сокращенный объем задач их предшественников.

Besides, adds Victoria Filippova, Partner headhunting company Cornerstone, often stripping the staff ends up in your company really a long line of candidates from the labor market, but these candidates can be both competent and not as motivated and lazy.

"And in order to make out 700 resumes, which fell into a box in one day, you need to at least have left more than 24 hours a day. Plus, the rising costs of finding, in the adaptation of new employees and to replace those who have not passed the probationary period",—adds Filippov [. . .]
Stripping Dobor permanent staff and recruits solve performance problems is not always, but in some cases they are justified, experts say. For example, in the pre-crisis times grain companies hire expensive specialists and managers. And in a crisis reduced the volume of their duties and pay them in the same volume was too expensive, said Filippov.
Here the employer and takes their place of competent, professional yet affordable, it is able to perform an abbreviated amount of problems of their predecessors.

Attracting Chinese tourists to Russia

SOURCE: Romanova, Karina, and Viktoriya Shtykova. 2015. "Kitayskiy milliard dlya Rossii." *Gazeta.ru*. July 19, 2015. http://www.gazeta.ru/business/2015/07/17/7643517.shtml.

Китайские туристы в 2014 году оставили в России более $1 млрд. В этом году на туристов из КНР приходится уже 16% от общего турпотока в РФ. Но для его увеличения придется не только больше рассказывать китайцам о России, но и повышать качество услуг, а также бороться со стереотипами о россиянах, отмечают эксперты. [. . .]

Туризм приносит миллиарды долларов, но особенно выгоден в том случае, если в ту или иную страну приезжают китайцы. Граждане КНР—самые расточительные в мире. Среднестатистический турист из Китая, по данным маркетинговых исследований компании GfK, тратит на одну поездку порядка 15 тыс. юаней, что равно $2400 или около 138 тыс. руб. [. . .]

Китайские туристы тратят много денег на поездки из-за того, что в стране поднялся средний класс, который привык к относительно дешевым китайским товарам и не считает их престижными, объясняет заведующий Школой востоковедения НИУ ВШЭ Алексей Маслов. По этой причине за рубежом они любят покупать, например, сумки и обувь престижных марок, в том числе и в России. [. . .]

Chinese tourists in 2014 left Russia more than $ 1 billion. This year, tourists from China accounted for 16% of the total tourist traffic in Russia. But it will not only increase the longer talk to the Chinese about Russia, but also improve the quality of services, and to fight stereotypes about Russians, experts say. [. . .]

Tourism brings billions of dollars, but it is particularly advantageous in the case in one country or another come the Chinese. Citizens of China—the most wasteful in the world. The average tourist from China, according to market research company GfK, spending per trip about 15 thousand. Yuan, equivalent to $ 2,400, or about 138 thousand. Rub. [. . .]

Chinese tourists spend a lot of money on travel due to the fact that the country went up the middle class, which is used to relatively cheap Chinese goods and does not consider their prestigious, explains the head of the School of Oriental HSE Alexei Maslov. For this reason, abroad they like to buy, such as handbags and shoes of prestigious brands, including in Russia. [. . .]

Российские маршруты в Китае слабо раскручены, отмечает Маслов. «В основном поездками к нам занимаются китайские фирмы, и целенаправленной развитой российской политики по продвижению услуг в Китае нет»,— говорит востоковед. Для увеличения въездного турпотока из Китая в Россию необходимы комплексные меры по продвижению нашего туристического потенциала, соглашается Пятихатка. «Для российской стороны важно лично взаимодействовать с туристическими администрациями и туркомпаниями китайских провинций, организовывать и приглашать китайских туроператоров и СМИ в информационные туры по регионам нашей страны, а также активнее освещать туристический потенциал России в китайских СМИ и интернете»,—пояснила она.

Russian routes in China slightly unwound, said Maslov. "Basically, we travel to the Chinese firms engaged and purposeful development of the Russian policy to promote services in China is not"—said the orientalist. In order to increase tourist arrivals from China to Russia requires comprehensive measures to promote our tourism potential, agrees Pjatihatki. "For the Russian side, it is important to personally interact with tour companies and tourism administrations Chinese provinces, to organize and to invite the Chinese tour operators and the media in the information tours by region of the country, as well as actively covered the tourism potential of Russia in the Chinese media and the Internet,"—she explained.

Немалое влияние на китайский турпоток оказывает убеждение, что российские курорты могут быть опасными. «В китайском интернете широко распространено мнение, что Россия—страна небезопасная для посещения»,—объясняет Маслов.

Considerable influence on the flow of tourists has a Chinese belief that Russian resorts can be dangerous. "The Chinese Internet is widely believed that Russia—the country is unsafe to visit,"—explains the oil.

The decline of the Russian Academy of Sciences

SOURCE: Gubarev, Vladimir. 2010. "Chayepitiya v Akademii: Istina prekrasna i v lokhmot'yakh!" *Pravda.ru*. March 1, 2010. http://www.pravda.ru/science/academy/01-03-2010/1019718-9/.

Волею судеб мы стали не просто свидетелями, но и участниками исторической драмы, в которой многим—я не исключаю и себя—слышатся трагедийные ноты.
В чем же драма и даже трагедия момента? Сегодня прекращает свое существование Академия наук Союза Советских Социалистических Республик. Та самая Академия, которая в бурях века спасла и сохранила сердце и душу российской науки. Та академия, которая помогла создать сотни научных школ у себя и в братских республиках, достигла выдающихся мировых результатов практически во всех областях знаний. [. . .]
Сейчас наука всех суверенных государств бывшего СССР, включая Россию, скачкообразно становится структурно ущербной.
Дай Бог, чтобы нам удалось компенсировать подобную ущербность интеграцией в мировое научное сообщество, достраивая недостающие звенья—но скоро и этого может не получиться, даже при самых благоприятных обстоятельствах, до которых весьма далеко. [. . .]

The will of fate we have not only witnessed but also members of the historical drama in which many—I do not exclude myself—we hear tragic note.
What's the drama and even tragedy moment? Today ceases to exist the Academy of Sciences of the Union of Soviet Socialist Republics. The same academy that in the storms of the century saved and kept the heart and soul of the Russian science. That academy, which has helped create hundreds of scientific schools at home and in the fraternal republics, has achieved outstanding results of the world in almost all fields of knowledge. [. . .]

Now science is all sovereign states of the former Soviet Union, including Russia, abruptly becomes structurally flawed.
Would to God that we were able to compensate for such a flawed integration into the global scientific community, constructing additions missing links—but soon, and this may not be possible, even under the most favorable circumstances, to which are very far away. [. . .]

Но главное—это процесс разрушения нашего научного потенциала как целостной системы. Надежды на то, что можно финансировать и спасти хотя бы одну ее часть (например, только фундаментальную науку)—иллюзорны. Наука—единый живой организм, а не конгломерат автономных механизмов. К сожалению, концепции спасения отечественной науки, ее выживания и возрождения нет ни у политиков, ни у научной общественности. Реальные драматические процессы заслонены новыми идеологическими мифами, утопическими прожектами и абстрактными суждениями. [. . .]	But the main thing—it's the process of destruction of our scientific potential as an integrated system. I hope that can be financed and save at least one part of it (for example, only basic science)—illusory. Science—a single living organism, not a conglomerate of autonomous arrangements. Unfortunately, the concept of salvation of domestic science, its survival and revival no politicians nor the scientific community. The real drama processes obstructed new ideological myths projects utopian and abstract judgments. [. . .]
Кризис Академии наук СССР—это, прежде всего, кризис нашего Союза. [. . .] Нелегкий путь, полный ежечасной работы и трудного поиска, предстоит пройти нашему научному сообществу в ближайшие годы. [. . .] Осилим ли мы его?	The crisis of the Academy of Sciences of the USSR—is, above all, a crisis of our Union. [. . .] The hard way full hourly work and difficult search, to go to our scientific community in the coming years. [. . .] We mastered it?
Я думаю, осилим. Залогом тому служат интеллектуальная мощь нашего сообщества, присущее ему понимание интересов народа и стремление служить благу России, всего народа!	I think the master. The key to this are the intellectual power of our community, its inherent understanding of people's interests and the desire to serve the good of Russia, of all people!
Возьмем, к примеру, радио. Оно родилось в фундаментальных экспериментах нашего соотечественника А. С. Попова и итальянского ученого Г. Маркони.	Take, for example, radio. It was born in the fundamental experiments of our compatriot Alexander Popov and Italian scientist G. Marconi.

Способ передачи информации без проводов совершенствовался многие годы, и, наконец, мы получили сеть радиовещания. Но сейчас мало кто способен оценить значение открытой радиоволновой связи. И хотя об этом много написано в учебниках, перед глазами потребителя возникает не А. С. Попов и не Г. Маркони, а радиосистема, произведенная на таком-то заводе. Корни фундаментального открытия отошли далеко на задний план, а само открытие как бы воплощается в изделиях, технике, которые производят предприятия. Так, жизнь со множеством повседневных забот как бы забывает о первопроходцах, людях науки, без которых не было бы ни отрасли производства, ни постоянной модернизации.

A method for transmitting information wirelessly cultivated for many years, and finally, we have broadcasting network. But now few people can appreciate the value of an open radio wave communications. Although much has been written about it in textbooks, before the eyes of the consumer there is no AS Popov and G. Marconi and radio produced at such a plant. The roots of the fundamental discoveries moved far into the background, and the discovery as it is embodied in products, technology, producing enterprise. So, life with a variety of everyday problems like forgetting pioneers, men of science, without which there would be neither industries nor the constant modernization.

Russia's demographic decline

SOURCE: Manuilova, Anastasia. 2015. "Smertnost' prishla, otkuda ne zhdali." *Kommersant №102*. June 11, 2015. http://www.kommersant.ru/doc/2745977/.

Прирост уровня смертности в России стал главной темой прошедшего вчера в правительстве совещания по реализации концепции демографической политики. "Сейчас подходит к концу второй этап ее выполнения, и, хотя еще десять лет назад ситуация казалась практически непреодолимой, сейчас мы

The increase in mortality in Russia has become the main theme of the yesterday's meeting of the government on the implementation of the concept of demographic policy. "Now coming to the end of the second phase of its implementation, and, although ten years ago the situation seemed almost insurmountable, we are now able to enter the natural population growth,

могли выйти на естественный прирост населения, который в прошлом году составил около 30 тыс. человек,— начал с хороших новостей премьер-министр Дмитрий Медведев.— Ожидаемая продолжительность жизни тоже выросла, сейчас это 71 год". Но есть и тревожные тенденции, сразу же подчеркнул глава Белого дома,— начала расти смертность. За первые четыре месяца 2015 года число умерших в сравнении с сопоставимым периодом прошлого года выросло на 3,7%. "В этом необходимо самым капитальным образом разобраться",— поставил перед министрами задачу премьер. [. . .]

which last year amounted to about 30 thousand. Man—started with the good news, Prime Minister Dmitry Medvedyev Life expectancy also increased, now it's in '71. " But there is a disturbing trend, once the head of the White House—began to grow mortality. In the first four months of 2015 the number of deaths compared to the same period last year increased by 3.7%. "This must be a way to figure out the most capital"—has set the task of prime ministers. [. . .]

Доложившая по теме глава Минздрава Вероника Скворцова причастных к росту печального показателя косвенно определила— это профильные руководители отдельных регионов. Она пояснила, что до 2014 года смертность снижалась, однако примерно с его середины положительная динамика стала замедляться и по итогам года показатель остался практически на уровне 2013-го.

To report on the head of the Ministry of Health Veronika Skvortsova involved in the growth of the sad figure implicitly defined—is profiled heads of individual regions. She explained that until 2014, the death rate decreased, but about his middle positive trend began to slow, and at year-end figure remained almost at the level of the 2013th.

Впрочем, отметила министр, по регионам по части таких смертей ситуация сильно различается—и Минздрав ставит это в вину руководителям на местах. Министр сообщила, что по результатам совместных с Росздравнадзором и Фондом ОМС выездных проверок за последние два года было уволено

However, the minister said, in regions of the deaths of the situation is very different—and the Ministry of Health is putting the blame on the local leaders. The Minister said that the results of joint ventures with RZN and MHIF-site inspections in the past two years have been laid off 29 regional health ministers. Overall, in 2014 the

29 региональных министров здравоохранения. В целом за 2014 год число нарушений, допущенных медицинскими организациями, превысило 22,5 тыс. “В прошлом году сумма штрафных санкций Росздравнадзора достигла 73 млн руб., было возбуждено 41 уголовное дело”,— сообщила госпожа Скворцова. По ее словам, она еженедельно принимает доклады по ситуации в каждом регионе.	number of violations committed by medical organizations, has exceeded 22.5 thousand.”In the past year, the amount of penalties Roszdravnadzor reached 73 million rubles., Was filed 41 criminal cases,”—said Ms. Skvortsova. According to her, she receives weekly reports on the situation in each region.
“Мы просто сейчас уже вынуждены выходить на ручное управление”,— поделилась министр наболевшим с Дмитрием Медведевым.	“We just now have to go to manual control”—shared with sore Minister Dmitry Medvedev.
“В ближайшее время фокус внимания при обсуждении демографических проблем будет смещаться в сторону темы смертности, как раньше он полностью был сосредоточен на приросте рождаемости”,— сказала “Ъ” присутствовавшая на совещании глава Института социального анализа и прогнозирования РАНХиГС Татьяна Малева. При этом, по ее словам, проблемы прироста уровня рождений остались теми же—и сокращение финансирования социальных мер поддержки может существенно их усугубить.	“In the near future the focus of attention in the discussion of population issues will move toward the theme of death as before it is completely focused on the growth of birth rate,”—he said “Kommersant” was present at the meeting, the head of the Institute for Social Analysis and Forecasting RANHiGS Tatiana Malev. At the same time, she said, the problem of the level of growth of births remained the same—and the reduction of funding for social support measures can significantly exacerbate them.

References

Aiken, M., and S. Balan. 2011. “An Analysis of Google Translate Accuracy.” *Translation Journal* 16 (2). http://translationjournal.net/journal/56google.htm.

Arant, P. 1981. *Russian for Reading*. Bloomington, IN: Slavica Publishers.

Fischer, E. (2013). "Online Translators and Dictionaries for World Language." *CalicoSpanish* (blog). February 4, 2013. http://calicospanish.com/online-translators-and-dictionaries.

Choe, P. 2007. "Query Translation-based Cross-language Diagnosis for Nonnative English Users." PhD diss., Purdue University. ProQuest Information and Learning Co. (UMI Microform 3307490).

Clifford, R., N. Granoien, D. Jones, W. Shen, and C. Weinstein. 2004. "The effect of text difficulty on machine translation performance—A pilot study with ILR-rated texts in Spanish, Farsi, Arabic, Russian and Korean." *LREC*. Monterey, CA: Defense Language Institute. https://www.lrec-conf.org/proceedings/lrec2004/pdf/613.pdf.

Clifford, J., L. Merschel, and J. Munné. 2013. "Surveying the Landscape: What is the Role of Machine Translation in Language Learning?" *@tic. Revista d'innovació educativa*, no. 10: 108-121. https://ojs.uv.es/index.php/attic/article/view/2228.

Costa, A., W. Ling, T. Luís, R. Correia, and L. Coheur. 2015. "A Linguistically Motivated Taxonomy for Machine Translation Error Analysis." *Machine Translation* 29, no. 2 (June): 127–161.

Costa, A., T. Luís, and L. Coheur. 2014. "Translation Errors from English to Portuguese: An Annotated Corpus." *Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC'14)* (May), 1231–1234.

Costa-jussà, M., and J. Fonollosa. 2015. "Latest Trends in Hybrid Machine Translation and its Applications." *Computer Speech & Language* 32 (1): 3–10.

Dewey, H. W., and J. Mersereau Jr. 1963. *Reading and translating contemporary Russian.* New York: Pitman.

Farrús, M. R., J. B. Costa-jussà, J. Mariño, and J. Fonollosa. 2010. "Linguistic-Based Evaluation Criteria to Identify Statistical Machine Translation Errors." *Proceedings of the 14th Annual Conference of the European Association for Machine Translation*, 167–173.

Garcia, I., and M. I. Peña. 2011. "Machine Translation-Assisted Language Learning: Writing for Beginners." *Computer Assisted Language Learning: An International Journal* 24 (5): 471–487.

Ghassemiazghandi, M., and T. Mahadi. 2014. "Losses and Gains in Computer-Assisted Translation: Some Remarks on Online Translation of English to Malay." *Translating and the Computer* 36: 194–201.

Godwin-Jones, R. 2011. "Autonomous Language Learning." *Language Learning & Technology* 15 (3): 4.

Google. 2011. "Google Translate Welcomes You to the Indic Web." *Google Official Blog*, June 21, 2011.
https://googleblog.blogspot.com/2011/06/google-translate-welcomes-you-to-indic.html.

Huang, C., M. Chen, P. Yang, and J Chang. 2013. "A Computer-Assisted Translation and Writing System." *ACM Transactions on Asian Language Information Processing (TALIP)* 12 (4): 15-1–15-20.

Jelinek, F. 1988. "Applying Information Theoretic Methods: Evaluation of Grammar Quality." *Workshop on Evaluation of NLP Systems* (December).

Karnal, A., and V. Pereira. 2013. "Reading Comprehension and the Use of Google Translator." *International Journal of English Linguistics* 3 (6): 113–118.

Korošec, M. 2011. "The Internet, Google Translate and Google Translator Toolkit—Nuisance or Necessity in Translator Training?" *Tralogy* (March): 3–4.

Microsoft Developer Network—MSDN. 2012. "Agglutinative Languages." *Microsoft.* https://msdn.microsoft.com/en-us/library/ms693102%28v=vs.85%29.aspx?f=255&MSPPError=-2147217396.

Mohaghegh, Mahsa, Abdolhossein Sarrafzadeh, and Mehdi Mohammadi. 2012. "GRAFIX: Automated Rule-Based Post Editing System to Improve English-Persian SMT Output." *Proceedings of COLING* 2012, 873–882.

Monti, J., A. Barreiro, A. Elia, F. Marano, and A. Napoli. 2011. "Taking On New Challenges in Multi-Word Unit Processing for Machine Translation." *Proceedings of the Second International Workshop On Free/Open-Source Rule-Based Machine Translation*, 11–19.

Nagao, M. 1984. "A Framework of a Mechanical Translation between Japanese and English by Analogy Principle." In *Artificial and Human Intelligence*, edited by A. Elithorn and R. Banerji, 173–180. Amsterdam: North-Holland.

Popović, M., E. Avramidis, A. Burchardt, S. Hunsicker, S. Schmeier, C. Tscherwinka, D. Vilar, and H. Uszkoreit. 2013. "Learning from Human Judgments of Machine Translation Output." *Proceedings of the XIV Machine Translation Summit*, edited by A. Way, Kh. Sima'an, M. L. Forcada, D. Grasmick, H. Depraetere, 231–238.

Resnik, P., O. Buzek, C. Hu, Y. Kronrod, A. Quinn, B. B. Bederson. 2010. "Improving Translation via Targeted Paraphrasing." *Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing*, 127–137.

Sato, S., and M. Nagao. 1990. "Toward Memory-Based Translation." *COLING 1990 Volume 3: Papers Presented to the 13th International Conference on Computational Linguistics*, 247–252.

Schumann, J. H. 2013. "Societal Responses to Adult Difficulties in L2 Acquisition: Toward an Evolutionary Perspective on Language Acquisition." *Language Learning* 63:190–209.

Seljan, S., T. Vičić, and M. Brkić. 2012. "BLEU Evaluation of Machine-Translated English-Croatian Legislation." *ELRA*, 2143–2148.

Shen, E. 2010. "Comparison of Online Machine Translation Tools." *Tcworld* (June). http://www.tcworld.info/e-magazine/translation-and-localization/article/comparison-of-online-machine-translation-tools/e-magazine/content-strategies.

Somers, H. 1999. "Review Article: Example-Based Machine Translation." *Machine Translation* 14 (2): 113–157.

Sra Witten. 2013. "Google Translate . . . NEVER." *Flipped Classroom Network* (blog). January 23, 2013. http://spanishflippedclass.blogspot.com/2013/01/google-translatenever.html.

Steding, S. 2009. "Machine Translation in the German Classroom: Detection, Reaction, Prevention." *Die Unterrichtspraxis* 42 (2): 178–190.

Turcato, D., and F. Popowich. 2001. "What is Example-Based Machine Translation?" P*roceedings of the Workshop on Example-Based Machine Translation* 21 (September) http://citeseer.ist.psu.edu/685499.html.

u/rayyychul, NikkitheChocoholic, topshelfesteem, theodore_boozevelt. 2018. Reddit r/Teachers. "Language Teachers: How do you deal with Google Translate?" August 29, 2018. https://www.reddit.com/r/Teachers/comments/9bfc9t/language_teachers_how_do_you_deal_with_google/.

Vintar, Š., D. Fišer, and A. Vrščaj. 2012. "Were the Clocks Striking or Surprising? Using WSD to Improve MT Performance." *Proceedings of the 13th Conference of the European Chapter of the Association for Computational Linguistics*, 87–92.

Voigt, R., and D. Jurafsky. 2012. "Towards a Literary Machine Translation: The Role of Referential Cohesion." *Workshop on Computational Linguistics for Literature*, 18–25. Montréal: Association for Computational Linguistics.

White, K., and E. Heidrich. 2013. "Our Policies, Their Text: German Language Students' Strategies with and Beliefs about Web-Based Machine Translation." *Die Unterrichtspraxis/Teaching German* 46 (2): 230–250.

Russian's Most Frequent Words and Implications for Vocabulary Instruction

William J. Comer

1. Introduction

In the field of teaching English as a second language (ESL), vocabulary studies have grown in prominence since the development of the General Service List (West 1953). This list sought to define the most common and useful words in English to provide a focus for teachers in instruction and for learners in developing their language proficiency. Since then, the development of electronic language corpora and concordance software has greatly expanded the ESL field's capacity for studying vocabulary frequency and usage (Dang 2020). For example, researchers have tried to determine vocabulary size (i.e., how many of the most frequent words) a learner needs to read and comprehend authentic texts easily (Schmitt and Schmitt 2014). Nation (2013) suggests that knowledge of the 8,000–9,000 most frequent word families would cover about 98 percent of the vocabulary used in English novels and news reports. If a nonnative reader knows 98 percent of the vocabulary in a text, that reader should then be able to use context to figure out the remaining unknown words. Researchers have tried to measure a learner's vocabulary size with instruments like the Vocabulary Levels Test (VLT), which assesses learners' receptive knowledge of word meanings starting with items from the first 1,000 most frequent word families (i.e., the first band) down to the fourth 1,000 most frequent words (Kremmel and Schmitt 2018).

In the teaching of foreign languages, researchers such as Davies and Face (2006), Lipinski (2010), Tschichold (2012), and Wagner (2015) have used corpora and concordance software to interrogate the nature of vocabulary included in language textbooks. The creation of the Russian National Corpus (Sichinava 2005), the General Internet-Corpus of Russian (http://www.webcorpora.ru/), and their related frequency dictionaries (Liashevskaia and Sharov 2009; Sharoff, Umanskaya, and Wilson 2013) has stimulated the development of both the online Russian Vocabulary Level Test (RVLT) for learners of Russian as a foreign language (Institute for Test Research and Test Development, n.d.) and research articles such as

those by Comer (2019) and Talalakina, Brown, and Kamrotov (2019). These studies complement previous vocabulary-related publications (Browning, Hart, and Solovyova 2001; Townsend 1975) that have tended to provide linguistic descriptions of Russian word formation.

Particularly relevant for the current project is Hacking and Tschirner's (2017) study that explores the relationship between vocabulary knowledge and reading proficiency in Russian. They measured the vocabulary knowledge of forty-eight learners of Russian using the receptive tasks of the RVLT and then correlated that data with the learners' reading proficiency scores based on ACTFL levels. They found that learners who control the first 2,000 most frequent words in Russian have reading proficiency scores at the ACTFL Intermediate level, while knowledge of the 3,000–5,000 most frequent words was associated with reading proficiency at the ACTFL Advanced level and higher. Although these correlations are based on a relatively small number of subjects, and advanced reading proficiency requires more than vocabulary knowledge, Hacking and Tschirner's data nevertheless strongly suggest that helping learners to acquire the first 5,000 most frequent words in Russian could have significant benefits for their reading proficiency.

This finding then raises the following two questions: what kind of learning burden do the 5,000 most frequent words in Russian pose for language learners, and what do we know about the nature of those words?

The term *learning burden* can be understood as the amount of effort it takes an L2 learner to "know" a new word. Sánchez-Gutiérrrez, Miguel, and Olsen (2019) postulate that two key factors in the learning burden of any vocabulary item are the word's length and its abstractness. That is, the longer or more abstract a word is, the harder that word is to learn. However, Sánchez-Gutiérrrez, Miguel, and Olsen note that both these factors can be (partially) mitigated by a word's closeness to a learner's L1. According to Nation (2013), this closeness is expressed in factors such as the degree to which the L1 and L2 words have the same sounds, orthography, meaning and uses in collocations. In working with bilinguals, various researchers (Costa, Caramazza, and Sebastian-Galles 2000; Sherkina-Lieber 2004; Temnikova and Nagel 2015) have found a facilitation effect for cognates (i.e., words that present similarly in the L1 and L2). This facilitation effect happens even when cognate words are written in different scripts (Hoshino and Kroll 2008). Thus, a short international word for a concrete object (e.g., парк [park]) should present the lightest learning burden while a long word for an abstract concept whose form bears no relationship to words

in a learner's L1 (e.g., свидетельствовать [to testify, bear witness]) would present the heaviest.

Another mitigating factor in the learning burden may be whether the new L2 word is a member of a word family that is already familiar to the learner. For example, the learning burden for the verb свидетельствовать [to bear witness] may be lighter if a student already knows the word свидетель [a witness].[1] For ESL, Bauer and Nation (1993) and Webb (2010) have strongly asserted that knowing one member of a word family eases the burden on a learner in recognizing and learning other members in the family. For this reason, ESL vocabulary studies almost always use word families rather than individual lemmas (i.e., a dictionary head word together with the inflected forms belonging to the same part of speech) to measure the size of a learner's vocabulary.

For Russian specifically, the regular processes of word formation may potentially mitigate a word's learning burden for students. Keefe (2004) discovered in her survey about reading practices in postsecondary classrooms that teachers of Russian have a very strong belief that learners *can* guess the meanings of unknown words by looking at word-formation cues. Indeed, since words in Russian can add multiple prefixes and suffixes to a single root, a single word family in Russian can be larger and the relationship between the members may be more visually obvious than in English. For example, the word family based on the single root игр- includes the nouns игра [game], игрок [player], and игрушка [plaything, toy]; the verb играть [to play]; and the adjectives игрушечный [toy] and игривый [playful, frisky], but the English equivalents draw on three different word families (e.g., game, play, toy). Furthermore, the addition of prefixes to a single root can build new words with new meanings (e.g., выиграть [verb, to win] and проиграть [verb, to lose]), which can spawn their own related nouns, adjectives, and adverbs.

For ESL, McLean (2018) has recently called into question the mitigating effect of word families, finding that learners in his study recognized inflectional forms of a word much better than derivational members of a word family. For L2 Russian, Comer and Keefe (2000) and Comer (2012a) have shown various ways that students can sometimes misuse word-formation cues when guessing the meanings of unfamiliar words during reading.

[1] Learners presumably can use some word-formation cues (e.g., that the suffix -овать makes a verb) even if they cannot separate out each component or morpheme (e.g., с + вид + е + тель + ство + ова + ть) of an unfamiliar word.

Since word formation may be a powerful tool for recognizing vocabulary in Russian, and possibly for easing a student's burden of learning new words, including a word-formation analysis of Russian's most frequent 5,000 words in this discussion of vocabulary learning burdens makes sense. Furthermore, it is important to apply the word-formation perspective not just to the list as a whole but also by units or bands of one thousand words since this finer unit of analysis may reveal trends that can help teachers shape and prioritize vocabulary work at different levels of instruction.

2. Research question

What is the nature of the 5,000 most frequently used words in Russian in relationship to the construct of learning burden? What insights does this information provide teachers and materials designers in conceptualizing vocabulary instruction for learners of Russian?

3. Methods

The researcher downloaded the first 5,000 most frequent words in Russian together with their parts of speech from Liashevskaia and Sharov (2009), which is derived from the Russian National Corpus.[2] Using this list of lemmas, the researcher formed the basic entries for an expanded database in LibreOffice's Dbase program. This software solution was selected because it offers a free customizable environment that allows for rapid prototyping and modifications. The Dbase program also allows the whole database (data, tables, forms, queries and reports) to be shared in a single file (available at: https://archives.pdx.edu/ds/psu/34010; DOI: 10.15760/wll-data.01), which teachers and other researchers can download and modify for their own future research.

After downloading the frequency list, the author added fields to the database to characterize each lemma from the list. These fields contain data about an entry's word length, origins (e.g., international and compound words), morphological structure (i.e., prefix, root, suffix), membership in a word family, verbal governance, and so forth. On questions about etymology and governance, the researcher consulted multiple dictionaries at dic.academic.ru including Shanskii and Bobrova (2004), which was particularly helpful on etymology.

[2] The researcher chose the Liashevskaia and Sharov (2009) list since it is freely accessible in electronic format.

3.1. Definitions

3.1.1. International words

The construct *international words* is difficult to define precisely since Modern Russian has not only borrowed words from many other languages but also exported some words to other languages. International words in Russian can include, for example, деньги [money], which was borrowed into Russian from Turkic languages, and театр [theater], a word of ancient Greek origin which was borrowed into Russian in the eighteenth century from French. International words can also include those borrowed into English from Russian, such as historical terms (e.g., czar, ruble, Soviet). For this study, the researcher marked words that are shared between Russian and English (e.g., царь [czar] and компьютер [computer]) or words that may have been borrowed into both languages from a single common source (e.g., театр, which English also borrowed from French) as international. This designation was applied to words that are spelled almost identically in both English and Russian. International words in which the Russian form has an added derivational or grammatical suffix (e.g., активный [active]) were categorized separately as *derived international words*. This category includes adjectives derived from recognizable place names (e.g., московский [Moscow-adj.], петербургский [Petersburg-adj.]). Some words, although undoubtedly international and shared between English and Russian, have very different phonological or orthographical realizations in these two languages, and this may obscure the connection between the words. Such words (e.g., бульвар [boulevard] and шпион [spy]) were characterized separately as *possibly recognizable international words*. For this study, the category of international words generally does not include most English and Russian words that simply share Indo-European heritage, like брат [brother] and солнце [sun], since learners are unlikely to recognize these connections without some specialized training.

3.1.2. Separating words into parts

The process of dividing words into parts proceeded mostly along morphological principles rather than semantic principles. Thus, the word правый [right] was divided into the root прав- and suffix -ый; управлять [to govern] was divided as the prefix у-, root прав-, and suffix -ять; and правительство [government] was divided into the root прав- and suffix -ительство.

Since Russian has a finite set of native prefixes, it was relatively straightforward to separate prefixes from the rest of the word. Spelling of prefixes was regularized (рас- > раз-) for ease of sorting and counting

occurrences in the database. Double prefixes on words such as производить were separated into про- and из- as two distinct entries. Words like получать [to receive] were divided into prefixes and roots since, etymologically, the initial по- is a prefix, even though the root луч- is no longer productive.

Most high-frequency roots were readily identified since the base form can be a separate word (e.g., вид [view], бег [run]), word form (книг- [book]), or morpheme (пис- [write]). Base forms of international words (e.g., университет [university]) were categorized as roots if they combined with derivational suffixes (e.g., университетский [university-adj.]). The spelling of roots was regularized for ease of sorting and counting; roots with vowel -ø alternations were regularized with the vowel (e.g., the root of звать [to call] is listed as зов- and брать [to take] is listed as бер-, although the root of создать [to create] is retained as -зд-.)

Suffixes in Russian encompass a very large and diverse range of forms, which encode both derivational and grammatical information. For this study it was not practical to divide suffixes into separate component parts when multiple morphemes are added to a root. Thus, words like править [to rule], правитель [ruler], правительство [government], правительственный [government-adj.] were all divided as the single root прав- with the suffixes -ить, -итель, -ительство, and -ительственный, respectively. Future iterations of the database may need to break the postroot parts of words into multiple suffixes.

Derived international words were divided without separating out borrowed prefixes (e.g., автоматический [automatic] was divided as автомат- and -ический without distinguishing the Greek prefix авто- [auto-]). Compound words were separated by including a word's first element in the prefix field, even though the first element technically is not a prefix (e.g., международный [international] and самолёт [airplane] were separated as между-, на-, род-, -ный and сам-, -лёт, respectively).

Compound words included groupings of words where two parts have fused together: prepositions with adverbs (e.g., неподалеку [nearby]), noun parts (законопроект [legislative proposal], вуз [institution of higher education], колхоз [collective farm]), numbers (двадцать [twenty]), and hyphenated words (по-русски [in Russian], куда-то [somewhere]).

3.2. Interrater reliability

A small subset of one hundred items from the 5,000 were selected at random for verification by an independent rater. Pronouns, prepositions, and other service words were removed from the subset, which left a total

of ninety-four items. The researcher prepared a training guide of ten sample items that he had rated for international status and divided into word parts. Using the guide, the independent rater was tasked to rate the ninety-four items. The independent rater agreed with the researcher 99 percent of the time in identifying international words, 93 percent of the time in identifying derived international words, and 90 percent of the time rating items as possibly recognizable international words. In identifying prefixes the researcher and the independent rater agreed in 98 percent of cases. Identifying the dividing point between roots and suffixes proved more challenging, and interrater agreement was only 62 percent for roots and 13 percent on suffixes. The low rate of agreement on suffixes suggests that the database may need further elaboration of the suffix category so that connecting vowels, individual derivational elements, and grammatical elements are separated.

4. Results

4.1. Word Length

The 5,000 most frequent words in Russian range in length from one to twenty-three characters (mean = 7.6, mode = 7; SD = 2.7), with most words between five and ten characters in length. As a point of comparison, the most frequent 5,000 words in English range from one to sixteen characters in length, (mean = 6.4, mode = 5; SD = 2.4), with most English words between four and nine characters in length (Davies 2020).

4.2. Parts of speech

In the list, nouns account for 2,279 entries (46 percent); verbs for 1,245 entries (25 percent); adjectives for 791 entries (16 percent); adverbs for 401 entries (8 percent); and prepositions for 63 entries (1.25 percent).

Approximately half of the 1,245 verbs include both imperfective-perfective aspect pairs (e.g., писать/написать [to write]) and trios (e.g., играть/поиграть/сыграть [to play]). Of the 1,245 verbs, there are 151 pairs (302 verbs total) with and without the reflexive particle -ся. The list includes 102 motion verbs (with and without prefixes) and another 24 motion verbs (e.g., приходиться [to have to], нестись [to rush]) that have transferred meanings.

Of the 401 adverbs, 144 entries (ending in -но and -ски) are derived from adjectives that are also present in the list.

Of the 5,000 words, 242 are compound words, including 47 nouns (e.g., столетие [century], полномочие [authority], самоуправление

[self-governance]); 33 compound adjectives (e.g., благородный [noble], всевозможный [various]); and 105 compound adverbs (e.g., безусловно [undoubtedly], по-прежнему [as previously]).

4.3. International words

International words of all types make up 1,045 entries (21 percent) of the list: 269 can be categorized as international, 490 as derived international words, and 286 as possibly recognizable international words.

4.4. Word families

On the basis of their roots, 4,081 words in the list of 5,000 can be clustered into 758 word families, which have on average five members (range 2–65). The breakdown of word families and their size is presented in table 1.

Table 1. Number of word families by size

Family size	Number of families
2	303
3	126
4	75
5	48
6	30
7	34
8	17
9	22
10	16
≥ 11	87

4.4.1. Word formation — prefixes

The compounding elements без-, благо-, все-, между-, and сам- start 34 words in the list. The negative particle не- starts a total of 85 entries, and of these, 45 have nonnegated partners in the list (e.g., редко/нередко [rarely/often]).

In the 5,000 word list, almost 2,000 entries start with a prefix, and there are 160 instances of words having two prefixes before the root (e.g., производить [to produce]). Table 2 presents the most common Russian prefixes and their frequencies by bands of one thousand words. Overall, the most frequent prefixes are с/со-, по-, and о/об-, while prefixes that

primarily express directional meanings (в/во-, вы-, при-, рас/раз-, etc.) are moderately frequent. After the first 1,000 most frequent words, prefixes regularly occur in just over 40 percent of words in each thousand-word band.

Table 2. Frequency of prefixes by thousand-word bands

Prefix	First	Second	Third	Fourth	Fifth	Total
в/во-	17	22	17	17	11	84
вз/вс-	4	3	3	0	8	18
воз/вос-	8	8	10	5	11	42
вы-	9	17	18	17	16	77
до-	3	14	13	15	8	53
за-	13	27	37	36	31	144
из-	12	19	21	16	17	85
на-	28	22	23	23	32	128
о/об-	32	49	40	36	38	195
от-	14	18	23	19	20	94
пере-	1	7	6	8	6	28
по-	45	55	53	65	38	256
под-	4	8	12	12	8	44
пре-	4	5	6	7	10	32
пред-	10	5	8	9	4	36
при-	15	23	29	15	20	102
про-	12	18	17	15	21	83
раз/рас-	7	13	17	29	18	84
с/со-	51	49	51	55	52	258
у-	20	29	33	32	40	154
Total	305	403	425	419	401	1953

4.4.2. Roots

The most common roots that build large word families (>20 members) are listed in table 3, and their frequencies are listed by thousand-word

bands. Although some roots (e.g., им-, да-, стан-) have a relatively even distribution across all five bands, others tend to be more frequent in the first two bands (e.g., ход-, ид-, род-) or in the fourth and fifth bands (e.g., ступ-, лаг-). The roots that have more than twenty members account for slightly less than 160 entries in each thousand-word band.

Table 3. High-frequency roots by thousand-word bands

Root (sample word)	First	Second	Third	Fourth	Fifth	Total
им- (иметь)	15	17	16	6	13	67
да- (дать)	8	11	14	8	9	50
стан- (стать)	9	9	10	9	6	43
ход- (ходить)	15	10	6	4	7	42
каз- (казать)	11	8	13	5	4	41
бер-/бор-/бир- (брать)	4	10	9	11	4	38
лаг-/леж-/лож- (лежать)	7	6	8	13	4	38
вод- (водить)	7	7	5	8	9	36
дел- (делить)	8	8	9	7	3	35
прав- (править)	8	6	5	9	6	34
став- (ставить)	10	5	4	6	6	31
ид- (идти)	12	5	4	3	1	25
след- (следить)	4	5	7	3	5	24
ступ- (ступить)	1	6	5	9	3	24
вет- (привет)	7	4	4	4	3	22
мен- (менять)	2	7	7	3	3	22
род- (родить)	7	7	2	2	4	22
яв- (явиться)	3	7	3	6	3	22
вид- (видеть)	5	3	7	4	2	21
стой- (стоять)	6	3	4	6	1	20
уч- (учить)	3	8	2	4	3	20
Total	158	158	159	139	102	712

4.4.3. Noun suffixes

Table 4 summarizes the most frequent noun suffixes, which are clustered by typical semantic meaning. In the first 5,000 words, the deverbal suffixes -ение and -ание are the most frequent with 257 occurrences, followed by the general noun suffix -ка at 136 occurrences. Semantically, suffixes that are connected with abstract nouns and notions occur most frequently. Suffixes typically associated with actors or agents are significantly less frequent. By contrast, certain suffixes associated with special declensional patterns (e.g., -анин, -мя) are not very frequent, although six of the ten nouns ending in -мя do appear among Russian's 5,000 most common words.

Table 4. Noun suffixes by thousand-word bands

Word category	First	Second	Third	Fourth	Fifth	Total
Abstract nouns						
-ение	15	45	48	43	38	189
-ание	14	13	21	11	9	68
-ство	14	15	11	6	10	56
-ность	3	16	9	10	14	52
-ация	5	2	6	6	9	28
-ость	2	4	4	8	9	27
-ствие	3	6	2	0	4	15
Subtotal	56	101	101	84	93	435
Actors/agents						
-ник	5	8	3	14	10	40
-тель	5	9	9	8	4	35
-ец	4	4	4	4	7	23
-ик	2	2	2	3	2	11
-а/-янин	1	0	1	2	1	5
Subtotal	17	23	19	31	24	114
General						
-ка	4	19	42	38	33	136
-ица	2	8	2	4	2	18

-ина	3	7	1	1	5	17
-мя	2	0	0	3	1	6
Subtotal	11	34	45	46	41	177
Grand total	84	158	165	161	158	726

4.4.5. Adjective suffixes

Table 5 presents the data on the most typical adjectival suffixes, starting with the most common -ный at 345 instances. The suffixes -ский and -ческий account for over one hundred entries for adjectives. Other relatively high-frequency adjectival suffixes are -нный and -тельный. These five suffixes alone account for 64 percent of all adjective endings in the 5,000 most frequent words. While the -ный suffix is relatively equally distributed among all five bands, the other suffixes occur more frequently in the third through fifth bands.

Table 5. Frequent adjective suffixes by thousand-word bands

Suffix	First	Second	Third	Fourth	Fifth	Total
-ный	39	60	81	78	87	345
-ский	7	7	9	16	21	60
-ческий	5	5	11	11	12	44
-нный	1	8	12	10	3	34
-тельный	0	6	6	3	7	22
Total	52	88	119	119	131	509

4.4.6. Verbs

Apart from the grammatical suffixes -ать(ся) and -ить(ся), which occur in 721 of the 1245 verbs, the derivational suffixes -овать(ся) and -евать(ся) are the most frequent in the list, with a total of 81 entries, distributed among the five thousand-word bands as follows: 8 in the first band, and then 9, 25, 23, and 16, respectively.

5. Discussion

5.1. Word length, parts of speech, and international words

From a learning-burden perspective, the Russian data presents a mixed picture. One factor (i.e., the large number of international words among

the first 5,000) suggests a lighter learning burden, while other factors (e.g., word length) suggest challenges for learners.

While the average word length in Russian is only 1.2 characters longer than in English, the difference in modes is two characters: five-letter words are the most common in the English list, and seven-letter words are the most common in the Russian list. This difference in length suggests a larger learning burden for students of Russian than for students learning English as a foreign language since words are simply longer. Additionally, Russian has far fewer three- and four-letter words than English (140 Russian three-letter words to 276 in English; 323 four-letter Russian words to 823 in English), so when students first start to learn Russian, there are fewer short, high-frequency words for them to practice as they try to develop fluent reading skills.

Furthermore, over 20 percent of the Russian list (1,128 words) are ten or more characters in length, which is longer than the eight- to nine-letter span that the average adult English reader can take in during a single eye-fixation (Rayner and Castelhano 2007). This suggests that learners of Russian will more frequently encounter words that require them to make additional eye fixations on a word when reading silently, and this slows readers' speed.

Finally, these word length calculations are made only on the basis of the most frequent Russian lemmas, but the length of inflected forms can be longer than an associated lemma. The longer inflected forms impose additional burdens: the learner spends more time reading the longer inflected form, and the learner needs additional processing time to associate the inflected form with the lemma and then with its base meaning.

The part-of-speech data shows that just under half of the 5,000 most frequent words are nouns, which may be less challenging for learners to acquire. However, the noun-suffix data reveals that about 20 percent of those nouns represent abstract notions, which are more challenging to learn than words denoting concrete objects. The verb data suggests that verbs may be less of a lexical challenge for learners since almost half of the 1,245 verbs are related pairs of perfective and imperfective verbs. Since imperfective-perfective pairs are often closely related morphologically and share a single meaning, this would seem to impose a smaller burden on students learning the most common verbs. Furthermore, since the basic meaning of many verbs that occur both with and without the particle -ся is similar, the presence of so many paired -ся and non-ся verbs may help learners recognize meaning. However, since -ся verbs are often used in middle and passive voice sentences, the syntactic reading environment in

which learners encounter -ся verbs may be complicated enough to negate any advantage that could come from knowing the lexical meaning of the non-ся form (Comer 2012b).

The fact that just over 20 percent of Russian's most frequent words are international in nature does suggest a great vocabulary advantage to English L1 learners. However, English learners need to be able to recognize the derivational suffixes that these international words often acquire in Russian. This certainly requires some intentional training for students (Barcroft 2012; McLean 2018). Providing such instruction to learners from the late novice stage onward may help them grow their vocabulary more efficiently. Such training with derived international words may be a useful occasion for introducing learners to the overall notion of Russian word formation. Learners also need training to identify international words whose phonological or orthographical realizations differ in English and Russian and to expand their decoding techniques in guessing these words' meanings.

The fact that 80 percent of the words considered in this study can be linked together into word families suggests that word formation can be a very powerful tool for helping learners acquire high-frequency vocabulary. However, it must be stressed that the word family counts given here only relate to the first 5,000 words, and many roots identified in the first 5,000 words will have additional family members at lower frequency levels. For example, in the first 5,000 words, возить [to transport] and перевозка [transportation] are the only two members of the word family built on the воз- root. However, knowledge of this root and Russian prefixes and suffixes can help a learner recognize seventeen other members of this word family that appear in the 5,000 to 20,000 word-frequency range.[3]

The frequency of prefixes, roots, and suffixes is presented by thousand-word bands so that this data can help inform teachers' decisions about what prefixes, roots, and suffixes to work with earlier or later in their

[3] Although Hacking and Tschirner (2017, 513) have found a correlation between word knowledge at the 5,000 word level and ACTFL advanced high/superior reading-proficiency levels in Russian, 5,000 words are far fewer than the 8,000–9,000 word families that cover 98 percent of the vocabulary in English-language newspapers and novels (Nation 2013, 26). And this raises several questions for future study: does Nation's estimate apply to Russian texts? Can one be a superior-level reader in Russian without knowing 98 percent of the words in a text? Are there compensatory vocabulary strategies (such as word-formation cues) that superior-level readers of Russian use to make up for the percentage of unknown words in a text? Does knowing the first 5,000 words of a language give learners enough experience with a variety of word families to intuit the meaning of related words that appear at lower frequency levels?

curriculum. For example, although the ход- and ид- roots form smaller word families than the roots им- and да-, there are more ход- and ид-related words in the first 1,000 most frequent Russian words. Thus, it may make more sense to work with them earlier in instruction, especially since verbs of motion (e.g., ходить [to go], идти [to go]) are a typical grammar topic in beginning and intermediate courses.

However, frequency is only one factor in making instructional choices. The highest-frequency prefixes and roots may not provide the most transparent examples for introducing beginning and intermediate learners to word-formation principles. The prefixes с-/со-, по-, and о-/об- have the highest frequency, and yet these prefixes often add the least concrete semantic significance to the words they start. Furthermore, while learners at an early stage may encounter these high-frequency prefixes, they cannot reliably see them as prefixes since they lack a knowledge of possible Russian roots that the prefixes can attach to. If teachers try to encourage learners to find prefixes too early, students may find prefixes where they do not exist (e.g., dividing the word старый [old] into *с + тар + ый).

Similarly, the root with the largest word family is им-, which does form some clusters where the root is highly visible (e.g., иметь [to have], имущество [belongings], преимущество [advantage], преимущественно [predominantly] and even поймать [to catch]) and the meanings of the related forms are relatively straightforward. With other members of this word family (e.g., взять [to take], занять [to occupy], обнять [to embrace], отнять [to take away], поднять [to lift], понять [to understand], принять [to accept], and снять [to take down]), this root is obscured in both lemmas and inflected forms. With these words, the meaning that the prefixes add to the root is also not completely transparent. For example, most learners need assistance moving from the literal spatial meaning of снять [to take down from] to the transferred usage "to remove an article of clothing" (taking clothing down from one's body) to the metaphorical "taking down from," which lies at the meanings "to film" (taking down images), and "to rent" (taking down a living space from the market). Despite its frequency, the им- root is perhaps the least transparent root to choose for introducing students to word formation.

5.2 Incorporating word-formation work into instructional materials

Barcroft offers many practical suggestions for planning vocabulary instruction in communicative language teaching (CLT): namely, assuring repeated exposure to new words, featuring them in meaning-bearing input, focusing initially on form-meaning connections, and then expanding

to semantic elaboration of target words (2012, 17). Barcroft's incremental approach to vocabulary acquisition reflects the idea that learners slowly accrue the many features (meaning, orthography, morphology, phonology, collocational properties, etc.) that go into knowing a word (Yanagisawa and Webb 2020). Furthermore, Barcroft's approach recognizes that frequent exposure to new words alone is not the sole or most significant factor for learners' vocabulary development. Eckerth and Tavakoli (2012) have found that an elaborate processing of form–meaning relationships was more important for learners' ultimate retention of new words than frequency of encounters alone. Similarly, Laufer and Rozovski-Roitblat (2015) have found that for retaining the meanings of new words, what learners do with words when reading and in postreading tasks seems to be more important than the quantity of encounters. According to Teng (2019), the informativeness of contexts makes a difference in how often a word needs to be encountered before learners start to acquire it.

These general principles and research findings can help us define specific places in vocabulary instruction in which word-formation principles can maximally help learners get to know different features of new words. This overcomes a major disadvantage of traditional approaches to word formation used in Russian textbooks, in which students encounter long lists of morphologically related, but semantically disparate, words. Such word lists are often minimally related to the textbook unit's themes, and it is often unclear how thoroughly a learner is expected to know these words.

Breaking up word-formation instruction into multiple activities spread over multiple years of a curriculum, designing activities to use words from the same word family in recognition exercises before using them in subsequent production activities, and working with smaller subsets of words from the same word family can make word-formation instruction serve the goals of CLT better. For example, focusing on a few suffixes that create different parts of speech around a single notion (e.g., игра [game], играть [to play], игрок [a player], игрушка [a toy], игрушечный [toy-adj.]) is productive for an intermediate-level student who might already be familiar with one or two words in the cluster. Focusing on prefixes that can be added to this root (e.g., играть [to play], выиграть [to win], проиграть [to lose], доиграть [to finish playing], переиграть [to play again], заиграть [to start to play]) should form a separate unit of instruction, especially since the English equivalents of выиграть and проиграть have only a vague relationship to the notion of playing. If a teacher wants to work on verbal prefixes with the root игр-, then it might make more sense to present them to learners in two clusters: one in which prefixes represent different

phases of "play" (e.g., играть, доиграть, переиграть, and заиграть) and the other featuring the outcomes of "play" (e.g., играть, выиграть, and проиграть).

In the next part of this article, working from the considerations mentioned above, I suggest some vocabulary and word-formation activities that can be staged at different levels of student instruction.

*5.3. Sample word-formation work across levels of instructio*n

While the use of international words is well established in current Russian textbooks for teaching the basic letter-sound correspondences of Russian, a teacher can find opportunities to work with derived international words as well. For example, when working with the letter *ц*, a teacher could include international words ending in the suffix -ация (e.g., ситуация [situation], операция [operation], организация [organization], информация [information]) and help learners notice how the suffix corresponds to -tion in English. The activity might embed the Russian words in English-language sentences so that learners have some contextual clues for deciding on the words' meanings. After guessing the English equivalents, the students might be tasked with circling the element that is the same in all the Russian words as well as the one that is in all the English equivalents that they found. As a final step in this activity, learners might be asked to complete a sentence like: "Russian words with the suffix -ация often correspond to English words ending in _____."

Similarly, when learners are introduced to the conjugation of verbs ending in -овать, a teacher might take the opportunity to help learners see how many other verbs in Russian are made by adding -овать (e.g., рисковать [to risk], рекомендовать [to recommend], арестовать [to arrest]) and -ировать (e.g., контролировать [to control], планировать [to plan], анализировать [to analyze], реагировать [to react], демонстрировать [to demonstrate]) to international words. The teacher might embed these words in short English or Russian sentences (adapted from high-frequency combinations found in the Russian National Corpus) to provide contextual clues for students to guess the words' meanings and see how they are used in sentences.

Similarly, after learning some basic verbs, there might be an occasion to introduce learners to the noun suffix -тель (e.g., писатель [writer], читатель [reader], учитель [teacher], житель [resident], покупатель [buyer], слушатель [listener], любитель [amateur]). A teacher might format work regarding this suffix as a set of Russian-English analogies. After giving the model "писать: to write :: писатель : writer," the teacher might

have learners work through items like "слушать: to listen :: слушатель: _____." In such analogies жить could be glossed as "to live, to dwell" and любить as "to like." As a second step, one could ask students to think about the fact that words rarely have single equivalents and to guess which words from the list could also be the equivalents of "shopper," "amateur," and "resident, inhabitant." As a third step, learners could be asked to associate these "doers" with the places one would likely find them: на концерте [at a concert], в магазине [in a store], в городе [in a city], в школе [at school], and so forth. Later, this suffix might be revisited with additional analogies including: "водить : to drive :: водитель : _____" and "посетить : to visit :: посетитель : _____;" or "руковод_ _ _ : to lead :: руковод_ _ _ _ _ : leader" and "побед_ _ _ : to win :: побед_ _ _ _ _: winner, victor."

Other word-formation work at the beginning level will depend on the opportunities provided by the textbook's selection of lexical items. Thematic work on household items that includes the words холодильник and чайник might be the opportunity to have students notice not only the suffix -ник but also the fact that it refers to a thing that makes something (e.g., чай + ник [the thing for making tea]; холод + иль + ник [an appliance for making things cold]). Teachers may also ask students to explain similarly suffixed words like памятник [monument] and учебник [textbook], as well as the less causal meaning of -ник in words like школьник [school pupil], ученик [school pupil], and работник [worker]. The days of the week in Russian provide an opportunity for seeing word formation in action in a culturally rich way, and exploring this vocabulary can also be an occasion to teach or recall the ordinal numbers.

After introducing verbal aspect and the notion of adding prefixes to verbs to make imperfective/perfective pairs, the teacher might find an opportunity to have learners notice that some prefixes can change the base meaning of a verb even as they make a perfective verb. This new perfective verb will then require a new (i.e., secondary) imperfective verb with the same altered meaning. The most frequent verbs of this type that are featured in first-year textbooks are говорить/сказать [to say, tell] and рассказать [to narrate] and its secondary imperfective рассказывать [to narrate]. Although beginning students have a limited vocabulary to see this pattern in action, drawing their attention to the pattern encourages students to start noticing an important dimension of verbal prefixes.

Introducing spatially prefixed verbs of motion is another opportunity to return to the notion of adding new meaning to a base verb

with prefixes in Russian. As the students' repertoire of spatial prefixes that combine with the roots ход- and ид- grows, there may be an occasion to point out how the same spatial meanings can be added to other verb roots (e.g., вступать [to join, to step into]; выступать [to perform, to step out onto a stage]; приступать [to start, to step up to]; and уступать [to concede, to step away from]). Presenting students with such explanatory translations as well as English equivalents may make the words more memorable.

This regular word-formation work can be presented either as word notes on vocabulary lists or through activities in which learners have to guess word meanings by analogy, match Russian-English equivalents, decode words embedded in illustrative sentence contexts, or complete fill-in activities with new words. Depending on the opportunities afforded by the lexical composition of a textbook's readings, activities targeting specific aspects of word formation can be included in prereading and postreading activities.

As students are asked to read more, a teacher might help students see how suffixes can work as a system for converting words into different parts of speech. A teacher might start this work using clusters of international words with Russian derivational endings, visually organized so that students can see the similarities (and differences) of suffixes across different word bases (for samples, see Figure 1). After learners figure out equivalents for the words, the teacher can encourage them to notice which suffixes make adjectives, which ones make nouns for people, and which make nouns for abstract notions. It is important to include some words in these exercises that do not combine with all suffixes so that learners do not approach word formation too mechanically and create words that do not exist. Following this vocabulary recognition activity, a teacher can have the students try to use each cluster of words in fill-in sentences, in which the blanks are cued to different parts of speech.

демократ демократия демократический демократичность	эмоция эмоциональный эмоциональность	демонстрант демонстрация демонстрировать

Figure 1. Activity with international words containing derivational suffixes

After some experience with word sets like these, learners might move on to sets with a larger range of suffixes and meanings (e.g., публика [public-noun], публичный [public-adj.], публиковать [to publish], публикация [publication], and опубликование [publishing]; or орган [organ], огранизация [organization], организовать [to organize], организовывать [to organize], организатор [organizer], and организационный [organizational]). Word sets like these might be accompanied by short illustrative sentences adapted from examples in the Russian National Corpus so that learners see the words in context. After getting familiar with how these suffixes combine with international roots, the teacher might select a familiar Russian root and show students the same suffixation processes. For example, the string холод [cold-noun], холодный [cold-adj.], холодно [cold-adv.], холодность [coldness], холодеть [to grow cold], холодить [to make cold], and холодильник [refrigerator] should contain a number of words already familiar to students. After helping students recognize less familiar items, a teacher could point out the difference between the verbs холодеть [to grow cold] and холодить [to make cold].

At a much later stage, it can be instructive for students to learn how to distinguish the differences of meaning that a prefix, root, or suffix has. For example, understanding that вед/вест comes from two different roots, one connected with the notion of "knowing, knowledge" and the other with "leading," can help students make sense of the range of meanings that words built on these two different families have. A sample activity for distinguishing these homographic roots, as well as background information on them, is given in the appendix. Teachers might devise similar activities to help learners distinguish the different meanings that prefixes like у- and под- have. If learners think of these prefixes only in their spatial meanings (уйти [to go away] and подойти [to go up to]), they may misinterpret verbs such as узнать [to find out], увидеть [to see], and поднимать [to lift].

These are just some ideas about how word-formation work can be built into a curriculum over multiple levels. At the more advanced levels, word-formation work may be one way of helping learners get more familiar with words at the 3,000–5,000 word-frequency levels, which are poorly represented in advanced-level textbooks for Russian, as Talalakina, Brown, and Kamrotov (2019, 201–2) have documented.

6. Conclusions

This study offers an analysis of Russian's most frequently used words, which should prove useful to researchers for future studies and textbook

authors for writing pedagogical materials. The author recognizes that some interpretations of this analysis are speculative and will need to be confirmed by future empirical studies that gather data from learners about the actual learning burdens they face when working on new words in Russian. Nevertheless, the study also provides suggestions for how word-formation activities might be included in textbooks across a curriculum to help learners reach higher levels of reading proficiency. Finally, the study offers the field a new electronic tool that others can use, improve, expand, and reshare in the spirit of open access that marks many successful projects in the digital humanities.

Acknowledgments
The author wishes to thank Jane Hacking at the University of Utah for rating a subset of the data used in this study.

Appendix
Sample Activity for Advanced Students on Distinguishing the Two Different вед-/вест- Roots

Background: There are two roots that are now spelled the same but have very different meanings.

вед—to know, knowledge (related to German wissen, English wit)

вед—to lead, (similar to the Latin root -duct in English words like abduct, conduct, etc.)

With both roots, two phonological rules apply:

1. When a root ending in *д* is followed by an ending starting in т, the *д* > с

Example: вед + ти → вести = to lead

2. When a root ending in *д* is followed by an ending starting in *л*, the *д* disappears.

Example: вед + *л* → вёл = he led

Activity: Read the words and sentences below and decide whether the вед/вест root in these words carries the meaning "to know" or "to lead." What might be a good English equivalent for the specific word built on this root? Highlight a word and write your answers in the margins.

Известие	Известие о его смерти шокировало всех.
Поведение	Учителя очень строго относятся к поведению учеников.
Ведущий	Это ведущий специалист в сфере информатики.
Разведка	Разведка сообщает о концентрации советских войск на северо-западе.

Разведчик	Разведчик добывает для нас информацию о нашем противнике.

List continues with известный, проведение, заведение, весть, повесть, введение, неведомый, сведение, произведение, медведь, совесть, and so forth.

References

Barcroft, Joe. 2012. *Input-Based Incremental Vocabulary Instruction*. Alexandria, VA: TESOL International Associates.

Bauer, Laurie, and Paul Nation. 1993. "Word Families." *International Journal of Lexicography* 6: 253–79.

Browning, Gary, David K. Hart, and Raisa Solovyova. 2001. *Leveraging Your Russian Roots, Prefixes and Suffixes*. Bloomington, IN: Slavica.

Comer, William J. 2012a. "Lexical Inferencing in Reading in L2 Russian." *Reading in a Foreign Language* 24 (2): 209–30.

Comer, William J. 2012b. "The Role of Grammatical Knowledge in Reading for Meaning in Russian." *Slavic and East European Journal* 56 (2): 232–55.

Comer, William J. 2019. "Measured Words: Quantifying Vocabulary Exposure in Beginning Russian." *Slavic and East European Journal* 63 (1): 92–114.

Comer, William J., and Leann Keefe. 2000. "How Do Džon and Džejn Read Russian? On-Line Vocabulary and Its Place in the Reading Process." *In The Learning and Teaching of Slavic Languages and Cultures*, edited by Olga Kagan and Ben Rifkin, 311–25. Bloomington, IN: Slavica.

Costa, Albert, Alfonso Caramazza, and Nuria Sebastian-Galles. 2000. "The Cognate Facilitation Effect: Implications for Models of Lexical Access." *Journal of Experimental Psychology: Learning, Memory, and Cognition* 26 (5): 1283-96.

Dang, Thi Ngoc Yen. 2020. "Corpus-Based Word Lists in Second Language Vocabulary Research, Learning and Teaching." *In The Routledge Handbook of Vocabulary Studies*, edited by Stuart Webb, 288–303. New York: Routledge.

Davies, Mark. 2020. "5000 Most Frequent Words in English." Word Frequency Data. https://www.wordfrequency.info/top5000.asp.

Davies, Mark, and Timothy L. Face. 2006. "Vocabulary Coverage in Spanish Textbooks: How Representative Is It?" *In Selected Proceedings of the 9th Hispanic Linguistics Symposium*, edited by Nuria Sagarra and Almeida J. Toribio, 132–43. Somerville, MA: Cascadilla Proceedings Project.

Eckerth, Johannes, and Parveneh Tavakoli. 2012. "The Effects of Word Exposure Frequency and Elaboration of Word Processing on Incidental L2 Vocabulary Acquisition through Reading." *Language Teaching Research* 16 (2): 227–52.

Hacking, Jane F., and Erwin Tschirner. 2017. "The Contribution of Vocabulary Knowledge to Reading Proficiency: The Case of College Russian." *Foreign Language Annals* 50 (3): 500–518.

Hoshino, Noriko, and Judith F. Kroll. 2008. "Cognate Effects in Picture Naming: Does Cross-Language Activation Survive a Change of Script?" *Cognition* 106 (1): 501–11.

Institute for Test Research and Test Development. n.d. Vocabulary Test Russian Receptive. Accessed October 20, 2020. https://www.itt-leipzig.de/static/vltrussian_01r/.

Keefe, Leann M. 2004. "The Place and Pedagogy of Reading in the Russian Language Curriculum." PhD diss., University of Kansas.

Kremmel, Benjamin, and Norbert Schmitt. 2018. "Vocabulary Levels Test." *In The TESOL Encyclopedia of English Language Teaching*, edited by John Liontas, 1–7. Hoboken, NJ: John Wiley.

Laufer, Batia, and B. Rozovski-Roitblat. 2015. "Retention of New Words: Quantity of Encounters, Quality of Task, and Degree of Knowledge." *Language Teaching Research* 19 (6): 687–711.

Liashevskaia, Olga N., and Sergei A. Sharov. 2009. *Chastotnyi slovar' sovremennogo russkogo iazyka (na materialakh Natsional'nogo korpusa russkogo iazyka)*. Moscow: Azbukovnik. http://dict.ruslang.ru/freq.php.

Lipinski, Silke. 2010. "A Frequency Analysis of Vocabulary in Three First-Year Textbooks of German." *Die Unterrichtspraxis* 43 (2): 167–74.

McLean, Stuart. 2018. "Evidence for the Adoption of the Flemma as an Appropriate Word Counting Unit." *Applied Linguistics* 39 (6): 823–45.

Nation, I. S. P. 2013. *Learning Vocabulary in Another Language*. 2nd ed. New York: Cambridge University Press.

Rayner, Keith, and Monica Castelhano. 2007. "Eye Movements." *Scholarpedia* 2 (10): 3649. http://www.scholarpedia.org/w/index.php?title=Eye_movements&action=cite&rev=126973.

Sánchez-Gutiérrrez, Claudia, Nausica M. Miguel, and Michael K. Olsen. 2019. "Vocabulary Coverage and Lexical Characteristics in L2 Spanish Textbooks." *In Understanding Vocabulary Learning and Teaching: Implications for Language Program Development*, edited by Peter Ecke and Susanne Rott, 78–98. Boston, MA: Cengage.

Schmitt, Norbert, and Diane Schmitt. 2014. "A Reassessment of Frequency and Vocabulary Size in L2 Vocabulary Teaching." *Language Teaching* 47 (4): 484–503.

Shanskii, Nikolai M., and Tat'iana. A. Bobrova. 2004. "Shkol'nyi etimologicheskii slovar' russkogo iazyka." Proiskhozhdenie slov. https://etymological.academic.ru.

Sharoff, Serge, Elena Umanskaya, and James Wilson. 2013. *A Frequency Dictionary of Russian: Core Vocabulary for Learners*. New York: Routledge.

Sherkina-Lieber, Marina. 2004. "The Cognate Facilitation Effect in Bilingual Speech Processing: The Case of Russian-English Bilingualism." *Cahiers linguistics d'Ottawa* 32: 108–21.

Sichinava, Dmitrii V. 2005. "Natsional'nyi korpus russkogo iazyka: ocherk predystorii." *In Natsional'nyi korpus russkogo iazyka 2003–2005*, 21–30. http://ruscorpora.ru/new/sbornik2005/03sitch.pdf.

Talalakina, Ekaterina, Tony Brown, and Mikhail Kamrotov. 2019. "Lexical Profiles of L2 Russian Textbooks." *Russian Language Journal* 69: 195–212.

Temnikova, Irina, and Olga Nagel. 2015. "Effects of Cognate and Relatedness Status on Word Recognition in Russian-English Bilinguals of Upper-Intermediate and Advanced Levels." *Procedia-Social and Behavioral Sciences* 200: 381–86.

Teng, Feng. 2019. "The Effects of Context and Word Exposure Frequency on Incidental Vocabulary Acquisition and Retention through Reading." *Language Learning Journal* 47 (2): 145–58.

Townsend, Charles E. 1975. *Russian Word-Formation*. Cambridge, MA: Slavica.

Tschichold, Cornelia. 2012. "French Vocabulary in Encore Tricolore: Do Pupils Have a Chance?" *Language Learning Journal* 40 (1): 7–19.

Wagner, Jennifer. 2015. "Vocabulary, Variation, and Culture in American University Textbooks of French." PhD diss., University of South Australia.

Webb, Stuart. 2010. "A Corpus Driven Study of the Potential for Vocabulary Learning through Watching Movies." *International Journal of Corpus Linguistics* 15: 497–519.

West, Michael. 1953. *A General Service List of English Words*. London: Longman, Green, and Co.

Yanagisawa, Akifumi, and Stuart Webb. 2020. "Measuring Depth of Vocabulary Knowledge." *In The Routledge Handbook of Vocabulary Studies*, edited by Stuart Webb, 371–386. New York: Routledge.

Towards Intelligent Correction of Collocational Errors in Russian L2 Academic Texts in the CAT&kittens Writing Support Platform[1]

Aleksandr Klimov, Olesya Kisselev, Mikhail Kopotev

1. Introduction

The study of academic language is driven to a large extent by the need to teach second language (L2) writers about established practices and patterns found across different genres and registers common in academic written discourse. Over the span of the past few decades, the area of academic language research has been hugely influenced by two interconnected digital approaches: computer-assisted language learning (CALL) and computational linguistics, including corpus linguistics approaches and tools.

CALL has enjoyed a long history in the field of language education. Following the cautious success of the first computer-assisted instruction systems, such as PLATO (Van Meer 2003), scores of CALL services have been created to address various instructional needs of language learners. Today, multiple language-learning digital platforms, such as Duolingo, Rosetta Stone, and others (Heil et al. 2016), provide language learners with language activities, flashcards, and communicative tasks; the majority of these platforms target the most commonly taught languages, such as English and Spanish. Fewer CALL tools and platforms have been developed for the study of less-resourced and less commonly taught languages, with some notable exceptions, such as Revita (Katinskaia, Nouri, and Yangarber 2018), a platform for self-study of such endangered languages as Erzya, Komi-Zyrian, and North Saami, as well as some more commonly studied languages, such as Swedish, German, and Russian.

Other CALL resources are designed for native speakers and advanced L2 learners; these tools check texts for possible grammatical and stylistic deviations and are envisioned as a writing scaffold or an editorial assistant. One of the most widely used such resource is Grammarly (Nova

[1] The authors are grateful for the assistance of all students who worked on various stages of this project. Our special thanks to Yves Wienecke from the Portland State University. We also very much appreciate suggestions made by the reviewers of the manuscript and the editors of the Special Issue.

2018), which allows English language writers to check spelling, grammar, and punctuation errors and to evaluate their vocabulary usage (specifically, overuse of particular lexical items, hedging devices, passive voice, etc.) and writing style.

Corpus linguistics methods have similarly made great strides in the area of instructional language resources (Crossley et al. 2017, 51). Corpus-based tools, for instance, have immensely contributed to the analysis of English academic discourse and have added to the repertoire of resources for teaching English for Academic Purposes in the classroom and beyond (Ackermann and Chen 2013; Biber, Conrad, and Cortes 2004; Durrant and Mathews-Aydınlı 2011; Gray and Biber 2013).

Despite the fact that corpus-based and computational approaches to the study of the Russian language have enjoyed brisk development in the past decade, practical CALL and corpus-based applications for Russian are few. Some promising work has begun to address this lack of resources. Visualizing Russian (Clancy et al. 2019), for example, provides an analysis and visualization of the relative difficulty of a Russian text and level of difficulty of words in the text, and the above-mentioned Revita platform (Katinskaia, Nouri, and Yangarber 2018) provides opportunities for learners to practice languages, including Russian. Another online resource, Collocations, Colligations, and Corpora (Kopotev et al. 2015), allows teachers and learners to actively examine phraseological aspects of Russian, providing information of the collocational and colligational behaviors of searched items.

The project that the current paper reports on, titled CAT&kittens and available online at catandkittens.linghub.ru, aims to contribute to the repertoire of resources, by creating a large systematically collected Corpus of Academic Texts (CAT) and a platform for the evaluation of features of non-native texts (a.k.a. "kittens") against the features of academic Russian attested in the corpus.

The rest of this paper is structured as follows: in Section 2, we provide a brief overview of previous research on academic Russian and present a case for the necessity of corpus-based research in this area. Section 3 describes the compilation of the CAT and the future writing support platform, discussing some pertinent methodological considerations. Here, we also provide a brief introduction to the tools and services developed based on the analyses of the corpus. We then introduce the algorithm we developed for the detection and correction of miscollocations in L2 academic texts. We conclude the article by discussing the potential of CALL and corpus-based tools.

2. Russian for academic purposes in the corpus-based era

The study of the Russian academic genre has flourished in the 1960s and 1970s. The majority of studies concerning Russian academic writing belong to two major traditions: the prescriptivist tradition and the descriptivist tradition (often pre-corpus). The prescriptivists are represented by several key studies conducted in the late 1970s through the early 1990s (cf. Vasilyeva 1976; Mitrofanova 1985; Kozhina 1993) and implement introspective methods of analysis. These works are based on limited sets of data, often inadequate for generalizations, with examples of usage often based on the author's own experience and intuition and not based on extensive data analyses. The problems associated with the prescriptivist approach persist in the most recent books on academic stylistics, for example, Golubeva and Maksimov (2020), which are based on outdated introspection and recommendations that do not reflect recent developments in contemporary academic Russian.

The descriptivist tradition in the study of the Russian academic genre, dating back to the 1960s, has always emphasized the use of larger amounts of data to provide generalizations regarding language use. A number of seminal studies, such as Piotrovsky (1971) and Piotrovsky, Bektaev, and Piotrovskaya (1977), were conducted using a corpus-analytic framework and investigated academic style from various perspectives: from analyzing word lengths to phraseology and vocabulary. The obvious limitation of early corpus-based research was the size of corpora that researchers had access to at the time; the biggest corpus of the era, Zasorina (1977), comprised only one million tokens. Early statistical approaches do not meet the standards of modern corpus linguistics. Most importantly, the observations gleaned from those early studies have reduced relevance today, given that the Russian academic style is changing rapidly as it is being increasingly influenced by the Western academic tradition. In light of these observations, there is an evident need for a new corpus-based exploration of the Russian academic genre.

It is important to mention that the field has made some strides in the direction of corpus-based exploration. For example, the Russian National Corpus (RNC; www.ruscorpora.ru), one of the largest text corpora of the Russian language, contains an academic genre sub-corpus (ca. 27.4 million tokens). The academic sub-corpus represents various text types and sub-genres, such as article annotations, dissertations, research articles, and educational texts. The academic sub-corpus also contains a large number of texts representing the popular science sub-genre. However, the

academic sub-corpus provides no filter to sort the different sub-genres, which results in a considerable obstacle in conducting research with these data. Another issue with the RNC academic data is that it is unbalanced in terms of the size of the academic disciplines represented in the corpus. For example, while the Philology sub-corpus consists of ~2.5 million tokens pulled from 412 documents of the diverse sub-genres and History has ~6.6 million tokens from 1,372 texts, Sociology is only made up of ~500 thousand tokens from 102 texts, thus making the balance weak—not only in terms of the number of tokens but also in terms of the balance of text types, consequently decreasing style diversity and representativeness. The RNC does not provide fine-grained classification: it does not allow searching only for Linguistics texts, for instance, instead including them in the Philology sub-corpus. Finally, and most importantly, the RNC is not available for downloading and additional processing, making its further utilization in applied research impossible.

Another digital Russian project that provides some access to academic Russian is the Russian academic sub-corpus RU-AC of the larger IntelliText project led by Sharoff, http://corpus.leeds.ac.uk/itweb. IntelliText allows its users to search by words, collocations, and grammatical tags; however, RU-AC is relatively small (five million tokens) and consists of mixed-quality student papers and thus cannot be considered representative.

The purpose of the CAT&kittens project is twofold: we hope to contribute to the study of the contemporary Russian academic language through the corpus-based study of various linguistic features and to create a writing support platform that provides a set of language-analyzing and editing services. We describe corpus construction and the tools based on it.

3. Corpus construction

3.1. Corpus description

The CAT is envisioned as a large corpus of academic Russian language spanning multiple disciplinary domains. It currently includes 3600 research articles sourced from high-impact peer-reviewed Russian academic journals; the articles represent six general disciplinary fields: Economics, Education and Psychology, Legal texts, Linguistics, History, and Sociology. To ensure that the corpus reflects the contemporary state of the Russian academic language, the corpus consists of articles published between

2010 and 2018.[2] The current size of the corpus is 14.010.588 tokens, which is rather small given the linguistic nature of the task being attempted; a bigger corpus, CyberCAT, based on the largest Russian scientific online library CyberLeninka, https://cyberleninka.org, is now under construction. The numbers of texts and tokens per discipline in the CAT are presented in Table 1. Upon completion, the corpus will be available for online and offline use.

Table 1. Distribution of texts in CAT

Discipline	Texts	Tokens
Economics	600	2.494.422
Education and Psychology	600	1.880.004
Legal texts	600	2.636.290
Linguistics	600	2.691.363
History	600	2.808.313
Sociology	600	1.500.196
Total	3600	14.010.588

3.2. Data preprocessing

There exist a number of options for encoding Cyrillic characters; in this project, we used the UTF-8 encoding since it is a *de facto* standard and is required by the UDpipe tagger (Straka and Straková 2017), which is used to annotate the data. UDpipe is a trainable pipeline that combines tokenizing, POS-tagging, lemmatization, and dependency parsing tools for CoNLL-U files (ibid.). Using this pipeline allows us to provide not only basic information such as frequencies of tokens but also more valuable information on grammatical characteristics of the tokens and lemmas as well as syntactic dependencies.

[2] Since Russian is one of the academic lingua francas (Pavlenko 2006), it is reasonable to assume that some papers are authored by non-native speakers. However Russian leading academic journals require proofreading by a native speaker, which improves quality. At the algorithm level, we set a frequency threshold to filter out rare collocations (see Section 4.3.1).

Id	Form	Lemma	UPosTag	XPosTag	Feats	Head	DepRel	Deps	Misc
# newdoc									
# newpar									
# sent_id = 1									
# text = В работе показан процесс разработки платформы.									
1	В	в	ADP	_	_	2	case	_	_
2	работе	работа	NOUN	_	Animacy=Inan|Case=Loc|Gender=Fem|Number=Sing	3	obl	_	_
3	показан	показать	VERB	VERB	Aspect=Perf|Gender=Masc|Number=Sing|Tense=Past|Variant=Short|VerbForm=Part|Voice=Pass	0	root	_	_
4	процесс	процесс	NOUN	NOUN	Animacy=Inan|Case=Nom|Gender=Masc|Number=Sing	3	nsubj:pass	_	_
5	разработки	разработка	NOUN	_	Animacy=Inan|Case=Gen|Gender=Fem|Number=Sing	4	nmod	_	_
6	платформы	платформа	NOUN	NOUN	Animacy=Inan|Case=Gen|Gender=Fem|Number=Sing	5	nmod	_	SpaceAfter=No
7	.	.	PUNCT	_	_	3	punct	_	SpaceAfter=No

Figure 1. UDpipe markup sample

Before the application of UDpipe, all the texts entered in the corpus were preprocessed: all references, tables, figures, university and author names, and page numbers in the running heads were omitted; the texts were divided into separate sentences marked with periods; all punctuation marks defining the end of the sentence were transformed into periods; and other punctuation marks (i.e., commas, semicolons, etc.) were deleted. All numbers in the texts were replaced with the NUM token (where NUM stands for any number or figure used in the text[3]). Only the main sections of the articles (introductions, literature reviews, methodology and results sections, and discussion and conclusion sections) were entered in the corpus; all tables, figures, equations, and references (in-text citations, as well as bibliographies) were deleted automatically using custom Python scripts available at https://github.com/kopotev/CATandkittens.

3.3. Corpus-based language assessment tools

CAT&kittens is a multifunctional platform under development with different features for learners and teachers to be available when completed. Apart from the collocation substitution algorithm that we present in the paper in greater detail, the platform is designed to also assess other textual aspects.

The first level of checking is a set of *readability* metrics, or an estimation of the text's difficulty level. To assess the readability, we use the Flesch Reading Ease and the Flesch-Kincaid Grade level tests, both adapted for use with Russian academic texts (Solovyev et al. 2018). Average sentence length and type/token ratio (TTR) in the L2 text are also compared to the

[3] In a small number of cases, the specific number constitutes an invariable part of a collocation; such collocations are lost through our preprocessing procedure. However, this substitution allows for significant reduction of noise in the data.

same parameters in the CAT to show how the learner's text compares to the general level of difficulty accepted in the academic discourse.

Another set of metrics concerns lexical variation. The set of lexical analysis is closely connected to both collocational and readability measurement checks. It includes a check on the low-frequency items, including *hapax legomena*, a check on overuse/underuse of specific lexemes and terms that are unattested within the discipline domain; in addition to simply identifying deviations, the system suggests alternatives when available.

The third set of metrics is an academic-specific grammar check. Unlike available spell-checkers, this set of tools is focused on detecting deviations that are featured in academic writing—specifically those deviations produced by non-native speakers, such as genitive chains or prodrop. In this paper, we focus on one of these sets, the collocational issues in L2 academic writing, and we give a brief overview of methods and algorithms designed for detection and correction of miscollocations and review preliminary evaluation of these methods.

4. Collocations

4.1. Collocations in learner texts

The definition of the term *collocation* differs depending on the theoretical orientation; in traditional phraseology (Mel'cuk 1995; Men 2018), *collocation* is defined as a lexical unit based on the semantic relationship of the words it comprises. In the statistical approach, collocations are defined as a syntagmatic lexical relation between two or more words that co-occur with relatively high probability, based on statistical measures (Stubbs 2001, 2009; Evert 2008). In this article, we utilize the latter approach, identifying collocations statistically.

The ability to produce standard or native-like collocations—that is, multi-word expressions whose co-occurrence is greater than chance—is a notoriously difficult skill to acquire for L2 speakers of a language (Nesselhauf 2005; Römer 2010). Collocations specific to particular disciplinary fields may present a unique challenge for L2 academic writers, simply because the chances of being exposed to such collocations are small. The following examples of miscollocations (i.e., collocations non-attested in standard Russian) come from samples of L2 data; however, even native speakers of the language may exhibit gaps in collocational knowledge when producing texts outside of their immediate area of expertise or experience.

Example 1.

a. *используем	точки	зрения
use.Prs.1Pl	point.Pl.Acc	view.Gen.Sg

[we] use the points of view

Cf. Rus.

b. рассматриваем	точки	зрения
consider.Prs.1Pl	point.Acc.Pl	view.Gen.Sg

[we] consider the points of view

Example 2.

a. *исследования	на	сфере
research.Nom.Pl	on.Pr	sphere.Loc.Sg

research in the sphere

Cf. Rus.

b. исследования	в	сфере
research.Nom.Pl	in.Pr	sphere.Loc.Sg

research in the sphere

4.2. Automatic extraction of collocations in learner data

Collocational research has been at the forefront of corpus-based approaches to the study of the standard and learner language varieties. And while identification of standard collocations is methodologically well established, automatic detection of collocational errors is still developing.

The first approaches that were proposed following the innovative work on error detection by Shei and Pain (2000) were rule-based; predictably, these approaches returned highly accurate results but within a very limited environment in which the rules worked best (Eeg-Olofsson and Knutsson 2003). Later, statistically based algorithms became the mainstream in the field, either based on basic statistical techniques (Park et al. 2008) or based on more advanced machine learning algorithms (Brockett, Dolan, and Gamon 2006; Gamon et al. 2008; Wu, Chen, and Chang 2017), which led to increased accuracy in detecting miscollocations, although accuracy in correcting them still lagged behind. Many proposed algorithms have relied on nonspecified internet searches (Guo and Zhang 2007; Bolshakov and Gelbukh 2003), while some alternative approaches have utilized prefabricated error databases consisting of common collocational errors (Futagi et al. 2008). Other algorithms have tested the assumption that collocations in L2 are influenced by a native language by utilizing reverse translations to detect miscollocations (Chang et al. 2008).

An integrated approach to miscollocation detection and correction can be found in Ferraro et al. (2014), who take into account previous findings: specifically, they account for graphically similar collocates, calquing from students' native languages, collocate association strength, and the context of miscollocations. Even this integration still does not allow reaching a reliable level of accuracy in collocational error detection. The authors conclude that "the potential of contextual features has not been fully explored as yet" (Ferraro et al. 2014, 17); this remains to be explored in further works.

One way to account for contextual features is to apply distributional semantics modeling in order to locate a word or a word combination in its semantic space. This approach has been tested in Kochmar (2016) and Rodríguez Fernández (2018), and the results are very promising.

4.3. Current approach to collocational errors extraction and correction

In order to detect and correct instances of miscollocations in our data (see Section 4.1. for examples), we rely on methods that attest to the strength of collocations in academic texts and methods of distributional semantics to look up the closest semantic neighbors and suggest alternative standard collocations.

A significant advantage in this work is that the academic genre is inherently more clichéd and contains more fixed collocations than many other genres. Example (3) shows the difference between general and academic texts.

Example 3.

a. Автор	*[расследует	вопрос]	об
author.Nom.Sg	investigate.Prs.1Sg	question.Acc.Sg	about.Pr
*[установлении	закона]		
establishment.Loc.Sg	law.Gen.Sg		

The author investigates the question of the establishment of the law

Cf. Rus.

b. Автор	исследует	вопрос	о
author.Nom.Sg	study.Prs.3Sg	question.Acc.Sg	about.Pr
принятии	закона		
enactment.Loc.Sg	law.Gen.Sg		

The author studies the question of the enactment of the law

In example (3) two nonstandard expressions are used in the same sentence: **расследует вопрос* 'investigates the question' and **установлении закона* 'establishment of law.' The first expression is unattested both in the CAT and the RNC. The second expression can be used in science texts with the meaning 'to discover a [physics] law'; however, this expression is unattested in the corpus of humanities disciplines (to which the learner text belongs as well). Thus, the platform identifies such a phrase as a candidate for correction and attempts to find a corresponding replacement in our academic domains.

Identifying a miscollocation that is not present in the reference corpus is not a challenging task computationally. Its replacement with a semantically similar collocation, however, is challenging. There are two general methods for substitution of unattested collocations in the learner text: (1) straightforward frequency-based substitution and (2) substitution based on distributional semantics modeling.

4.3.1. Finding an unattested collocation

Each text can be presented as a set of words, that is, a syntagmatic n-gram or a linear string, where the number of words is equal to *n*. Thus, each text can be presented as a long list of 2-grams (i.e., strings of two words), then 3-grams, 4-grams, etc. But the resulting strings are *not* collocations, neither in the statistical sense nor in the traditional phraseological sense, since according to our definition, a collocation should be statistically significant.

A simple way to identify a recurrent string of words is to count frequencies of every n-gram and to consider the most frequent n-grams that surpass some threshold—for example, five instances in the reference corpus—as legitimate collocations. The task of collocation replacement in this case is straightforward and follows these steps: first, splitting a learner's text into 2-, 3-, 4-grams, etc., and then, comparing the resulting n-grams to the list of most frequent n-grams in a reference corpus. Any n-gram found in the text and not present in the corpus is considered unattested and a candidate for replacement. This method does not always work as intended: simple absolute frequencies elicit many function-word-based collocations, such as *так* и 'as well as' and *как* в 'as in' that technically are not collocations but rather discontinuous units; however, it tends to push those rare collocations that are content-word-based to the very bottom of the extracted strings.

To make sure that we extract meaningful and pedagogically useful collocations, probabilistic measures need to be applied. For collocation

extraction, several statistical metrics are generally used (Pivovarova, Kormacheva, and Kopotev 2017):

(1) **T-score** is a widely used test that looks at the mean and variance of the sample and then compares this observed mean with a predicted mean, scaled by the variance. It allows one to understand whether a string of co-occurring words is a collocation or not; it is a measurement of collocation certainty based on the frequency.

(2) **Log-likelihood (LL)** measures the likelihood of two words appearing in a corpus independently of each other.

(3) **Pointwise Mutual Information (MI)** evaluates the possibility of seeing a second collocate given a first and vice versa.

(4) **The Dice score** is like MI, but it is less sensitive to infrequent collocations.

These measures have their pros and cons when applied to the Russian language (for more detail, see the discussion in Pivovarova, Kormacheva, and Kopotev [2017]). Although probabilistic measures can result in strings with function words only as top collocations, they also help extract such strings as *смотри также* 'see as well,' *анонимный рецензент* 'anonymous reviewer,' and *неполным оканьем* 'incomplete retention of unstressed [o],' as well as other collocations that may be useful for L2 writers. While the method of using simple raw frequencies generates many clusters of function words, the collocational metrics listed above have a strong tendency to detect meaningful phrases (Pivovarova, Kormacheva, and Kopotev 2017).

The more computationally challenging task is to automatically correct miscollocations. In what follows we describe the approach CAT&kittens takes to provide possible substitutions for miscollocations found in L2 academic texts.

4.3.2. Distributional semantics in lexical and collocation deviation detection

Distributional semantics is a field of computational linguistics that attempts to understand semantic similarities of linguistic items based on their represented distributional properties. The idea behind distributional semantics is that words that occur in similar contexts tend to have similar meanings (Turney and Pantel 2010, 142–43); this idea is referred to as *distributional hypothesis*. The context consists of the content words in a window of a maximum of five tokens. The similarity of two words is a consequence of the fact that they are both tuned to predict the same context.

The words then are treated as points in multidimensional space so that distance between them can be calculated. The visualized representation of semantic distances of content words from example (2) can be found in Figure 2. Figure 2 is a two-dimensional visualization of the semantic distances between words *автор* 'author,' *расследовать* 'investigate,' *исследовать* 'study,' *вопрос* 'question,' *установление* 'establishment,' *принятие* 'enactment,' and *закон* 'law,' produced by the RusVectores skip-gram model trained on Taiga corpus (Kutuzov and Kuzmenko 2016). The figure shows that the closer the words are, the more similar are the contexts in which they occur (it can be said that such words are codistributed).

Figure 2. Semantic distances of the words in Example 3.

Models of distributional semantics, such as word2vec (Mikolov et al. 2013), GloVe

(Pennington, Socher, and Manning 2014), ELMo (Peters et al. 2018), and BERT (Devlin et al. 2018), represent words as vectors of fixed dimensions (word embeddings) that are produced with neural networks. Some older models allowed only for context-free representation of word similarity; the more recent ones, such as ELMo and BERT, allow for differentiating between meanings based on the context. Distributional semantics frameworks can be used in many ways: for paraphrasing suggestions and plagiarism detection, in semantic searches, for word sense disambiguation, and for many other tasks. In our research, we are interested in the implementation of the models for replacing miscollocations.

Our platform uses a combination of statistics with distributional semantics to produce replacements of the miscollocations. The algorithm consists of three main steps:

(1) We retrieve all n-grams from the text submitted for checking. After that, all extracted n-grams are evaluated against the collocations found in the CAT. If an expression is not found in the reference corpus, it is marked as "unattested," and the algorithm proceeds to the next stage. This step is applied to all 2-, 3-, and 4-grams; however, for the sake of brevity, we describe the following steps using only 2-gram collocations as examples.

(2) The system considers all words in the string for possible replacement; for example, the phrase *расследовать вопрос* 'to investigate the question' is analyzed as two strings "*расследовать* X_{noun}" and "X_{verb} *вопрос*." Our algorithm then finds the closest semantic neighbor to the fixed word (that is not X in each string) to replace X, given that the substitutions for X are the same part of speech as the original X. This can be achieved in two ways: taking into consideration the meaning of the given collocate (*расследовать* 'to investigate' or *вопрос* 'question' in the case) or ignoring it. The first approach proved to be more efficient because the given collocate narrows the search scope. Using this method, we find a triangle in the space of embeddings (such as the space represented in Figure 2), where two dots are the original words and the third dot is a neighbor closest to both. This yields a list of several possible replacements for a given expression; for instance, *исследовать вопрос* 'to study the question,' where *исследовать* 'to study' is the closest semantic neighbor to both *расследовать* 'to investigate' and *вопрос* 'question.' Two approaches to semantic addition are generally used to locate a miscollocation and its substitutions in semantic space: additive and multiplicative (Mitchell and Lapata 2008). We utilize the additive model, which allows the algorithm to join several vectors and locate the nearest point in the semantic space.

(3) The resulting list of replacements may contain collocations that are non-attested in the academic genre and are, thus, infelicitous to use in an academic paper. To this end, a filter is used, which checks whether the suggested collocation is attested in the CAT. As a result, only those collocations that are semantically close to the original and are represented in the CAT are offered to the platform user for consideration.

The location of individual words within embedding spaces is by no means precise, and simple proximity within the embedding space is by no means a guarantee of well-formed collocations. Two assumptions are made in order to eliminate this issue. The first is based on the nature of collocations, which, as opposed to grammatical rules, are syntagmatic and linearly restricted. Therefore, applying the statistically based filters presented in Section 4.3.1 to the list of collocations reduces the number of occasional lapses. The second assumption is based on POS-filtering, which takes into account proper syntax and allows for filtering semantically close, but syntactically ill-formed word combinations. Filtering based on these two assumptions eliminates many of possibilities from consideration, but some still seem to be inappropriate word substitutions.

The algorithm we utilize also has two limitations: it provides collocations of the same length as the original one, and the output is lemma-based. The first limitation means that replacements from a bigram **делать исследование* 'to do research' is only possible to a n-gram of the same length (e.g., *проводить исследование* 'to conduct research'); the replacement to a unigram (e.g., *исследовать* 'to study') is not yet possible with our algorithm. The second consideration means that collocations from a learner text must be lemmatized before being processed. After all the possible replacements are found, the algorithm provides the user with the suggested *lemma collocations*. As a result, we get a collocation, which a writer should put in the right form.

To illustrate collocation substitution in action, we have taken an authentic learner text and run the replacement algorithm for two unattested bigrams. Some of the replacements are found in a general Russian corpus; however, not all are suitable for use in academic discourse. There are three main ways that the algorithm presents the results to the user. First, it provides the tokens for replacement, which are the collocations in the same form as the original one—for example, **расследовал вопросы* 'investigated the questions' → *исследовал вопросы* 'studied the questions.' Second, if a token collocation is not found in the CAT, the algorithm suggests the closest lemma collocations, which the platform asks the user to grammatically adjust to the context: **расследовал вопросы* 'investigated the questions' → *ИССЛЕДОВАТЬ ВОПРОС* 'to study question'.[4] Third, in cases when the algorithm can find neither tokens nor lemmas, it underlines the miscollocations and proposes that they are possibly nonstandard/nonacademic, without providing a possible candidate for substitution.

[4] Capitalized letters designate lemma, not token.

Below, we will illustrate each step of the algorithm with two of the analyzed collocations to show token replacements and lemma replacements.

*Case 1: *Большая важность 'big significance.'* In the first step, the algorithm finds that the given collocation is not attested in the CAT. The collocation is then lemmatized and split into two sets: 'X$_{adjective}$ ВАЖНОСТЬ' and 'БОЛЬШОЙ X$_{noun}$.' In the next step, the algorithm looks for semantically closest neighbors to both lemmas, noun and adjective, respectively (see Table 2).

Table 2. Cosine neighbors and their distances for БОЛЬШОЙ 'big' and ВАЖНОСТЬ 'importance'

БОЛЬШОЙ 'big'		ВАЖНОСТЬ 'significance'	
lemma	cosine distance	lemma	cosine distance
ОГРОМНЫЙ 'giant'	0.685	ЗНАЧИТЕЛЬНОСТЬ 'importance'	0.603
ГРОМАДНЫЙ 'enormous'	0.648	ЗНАЧИМОСТЬ 'significance'	0.541
ВАЖНЫЙ 'important'	0.588	ОГРОМНОСТЬ 'hugeness'	0.536
БОЛЬШИЙ 'bigger'	0.586	ЗНАЧЕНИЕ 'importance'	0.517
КОЛОССАЛЬНЫЙ 'colossal'	0.570	СЕРЬЕЗНОСТЬ 'seriousness'	0.508

In the next stage, the algorithm looks up token word combinations in the CAT, which has the same tagset as was in the learner's text; for example, the tagset for the word *важность* 'significance' is (*NOUN Animacy=nan|Case=Nom|Gender=Fem|Number=Sing*). It returns a list of all possible combinations, whether they are actual collocations or not—for example, огромная важность 'giant significance,' *громадная важность* 'enormous significance,' *колоссальная важность* 'colossal significance,' *большая* значимость 'big significance,' *большое значение* 'great importance,' and the like. To discriminate between these candidates, the last step is applied; the CAT filter, which looks for real, statistically significant collocations in

the reference corpus. The output is two well-formed collocations, *большая значимость* 'big significance' and *большое значение* 'great importance,' which both are semantically close to the original and yet are attested in academic discourse.

*Case 2: *Расследую вопрос* 'I investigate a question' is a semantic deviation where the learner likely confuses two words, *расследую* 'I investigate' and *исследую* 'I study.' After the algorithm identified the original collocation as unattested in CAT, it then suggested several semantically close replacements, outlined in table 3.

*Table 3. Replacements and their semantic distances for *расследую вопрос 'I investigate a question'*

РАССЛЕДОВАТЬ 'investigate'		ВОПРОС 'question'	
lemma	cosine distance	lemma	cosine distance
ВЫЯСНЯТЬ 'look into'	0.577	РАССЛЕДОВАНИЕ 'investigation'	0.602
ОБСУЖДАТЬ 'discuss'	0.550	ПРОБЛЕМА 'problem'	0.577
РАЗБИРАТЬ 'see into'	0.536	ВЫЯСНЕНИЕ 'identification'	0.514
ОБЪЯСНЯТЬ 'explain'	0.519	ОБВИНЕНИЕ 'accusation'	0.486
ИССЛЕДОВАТЬ 'study'	0.387	ОБСУЖДЕНИЕ 'discussion'	0.485

The subsequent tagset-based token collocation search generated the following token phrases, both felicitous and infelicitous: *выясняю вопрос* 'I look into a question,' *обсуждаю вопрос* 'I discuss a question,' *разбираю вопрос* 'I sort out a question,' *объясняю вопрос* 'I explain a question,' *исследую вопрос* 'I study a question,' *расследую расследование* 'I investigate an investigation,' *расследую проблему* 'I investigate a problem,' *расследую выяснение* 'I investigate an identification,' *расследую обвинение* ' I investigate an accusation,' and *расследую обсуждение* 'I investigate a discussion.' Since only *исследую вопрос* 'I study a question' is attested in

the CAT above the frequency threshold ≥ 3, the platform suggests this collocation as the only possible replacement.

4.4. Evaluation of the procedures

Typically, a computational system is evaluated against two basic metrics: *precision*, or how many of the detected items are correct, and *recall*, or how many of all relevant items are detected. The latter is a challenging task, when it comes to automatic collocation substitution, since a list of substitution candidates can be, at least theoretically, unlimited if the non-attested collocation has no clear attested analogue. Hence, we evaluate only the metric of precision, to measure how many of the produced collocations are adequate substitutions for a detected miscollocation.

To evaluate the precision of our algorithm, before we test it on authentic learner data, we run it in a "controlled environment." To this end, we randomly selected one hundred high-frequency 3-grams collocations from the CAT and created a set of four hundred phrases imitating learner errors. For this, we used the word2vec semantic model based on the Wikipedia and Russian National Corpus (Kutuzov and Kuzmenko 2016) and changed one or more elements of the original collocations to imitate learner miscollocations. All miscollocations were found to be unattested in the CAT. Example (4) provides the source token (a), its lemmatized version (b), and the produced lemmatized non-collocations (c–f).[5]

Example 4.

a. Добыча	полезных	ископаемых
extraction.Nom.Sg	naturalGen.Pl	resourcesGen.Pl

'extraction of natural resources'

b. ДОБЫЧА ПОЛЕЗНЫЙ ИСКОПАЕМОЕ
'extraction natural resource'

c. *ВЫПЛАВКА ПОЛЕЗНЫЙ ИСКОПАЕМОЕ
'melting natural resource'

d. *ДОБЫЧА НЕОБХОДИМЫЙ ИСКОПАЕМОЕ
'extraction necessary resource'

e. *ДОБЫЧА ПОЛЕЗНЫЙ МЕСТОРОЖДЕНИЕ
'extraction natural deposit'

f. *ДОБЫЧА ПОЛЕЗНЫЙ РУДА
'extraction natural ore'

[5] We reiterate here that only lemmatized forms are provided; producing correct tokens is a separate task, which lies outside the scope of the present paper.

Based on this model, we located all miscollocations, obtained a list of substitutions, and checked whether the substitutions contain an original and, thus, correct collocation. In doing so, we ignored the fact that there might be other acceptable substitutions, instead we only controlled for the presence of one correct collocation. When looking at the first 1000 closest semantic neighbors and combining all possible word combinations for 400 miscollocations, the algorithm is able to recover as many as 375 correct collocations, which means that its precision is 93.75 percent. However, this relaxed approach slows down the time processing of the algorithm. If searching is limited to the first 100 semantic neighbors, the number of recovered correct collocations is downgraded to 290, which gives a precision of 72.5 percent.

Although our evaluation procedures prove the algorithm to work well, some further steps are needed. We considered how the algorithm is capable of returning the original form only under limited conditions—that is, by feeding it the miscollocations that imitate learner errors; a full-scale evaluation based on authentic learner data is needed (for more detail, see Kisselev & Furniss 2020).

Further refinement of the algorithm is required. First, we need to examine the difference between lemma- and token-based collocations, since many collocations are, in fact, token-specific. Second, word-embedding spaces produced by the models we have used are prone to mislocating homonyms like *ключ* 'spring' and 'key.' Extending our approach beyond the word2vec and fasttext models toward context-based models is a logical step to improve suggested replacements. We expect that the usage of two recently developed models, ELMo (Peters et al. 2018) and BERT (Devlin et al. 2018), will greatly improve the general quality of the algorithm output.

5. Conclusion

This paper reported the development of a large corpus of academic texts in Russian (namely, the CAT) and the writing support platform CAT&kittens that utilizes the corpus. The primary focus of the paper was to introduce one of the core features of the CAT&kittens platform, that of miscollocation detection and correction.

Automatic extraction and correction of learner miscollocations has been at the forefront of current research in how corpus-based analyses can be utilized in building writing support tools. Given that collocational knowledge is one of the most difficult skills to acquire in the L2, providing language support tools that help learners recognize and correct

miscollocations would be a valuable contribution to the field. Although the robustness of the proposed analysis and the implementation of the algorithm require further testing, the potential of the service under report is significant.

In addition to online detection and correction of misuse of academic language, the CAT&kittens platform has the potential to become a source and a resource for various investigations of this variety of the Russian language. Most currently available research on academic Russian—as well as most widely used pedagogical and reference materials for teaching and learning academic Russian—have rarely been based on or validated by contemporary corpus-based research, with some welcomed exceptions, such as Levinzon, Dzhakupova, and Pliseckaia (2014) and Talalakina, Stukal, and Kamrotov (2020). Our goal is to provide learners of Russian with modern corpus-based tools that will allow for a productive and thorough exploration of contemporary Russian academic genre.

References

Ackermann, Kirsten, and Yu-Hua Chen. 2013. "Developing the Academic Collocation List (ACL)—A Corpus-Driven and Expert-Judged Approach." *Journal of English for Academic Purposes* 12, no. 4: 235–47.

Biber, Douglas, Susan Conrad, and Viviana Cortes. 2004. "If You Look at ...: Lexical Bundles in University Teaching and Textbooks." *Applied Linguistics* 25, no. 3: 371–405.

Bolshakov, Igor A., and Alexander Gelbukh. 2003. "On Detection of Malapropisms by Multistage Collocation Testing." In *NLDB' 2003: 8th International Conference on Applications of Natural Language to Information Systems,* Burg (Spreewald), Germany: 28–41.

Brockett, Chris, Bill Dolan, and Michael Gamon. 2006. "Correcting ESL Errors Using Phrasal SMT Techniques." In *Proceedings of COLING-ACL. Book of Abstract:* 249–56. https://www.aclweb.org/anthology/P06-1032.

Chang, Yu-Chia, Jason S. Chang, Hao-Jan Chen, and Hsien-Chin Liou. 2008. "An Automatic Collocation Writing Assistant for Taiwanese EFL Learners: A Case of Corpus-Based NLP Technology." *Computer Assisted Language Learning* 21, no. 3: 283–99. https://doi.org/10.1080/09588220802090337.

Clancy, S., D. Green, V. Egorova, and O. Willis. 2019. "Foundations of Russian: A Cognitive and Constructional Approach to Teaching Russian Enriched by Frequency Data." In *SCLC-2019. Book of Abstracts*, 15. Cambridge, MA.

Crossley, Scott, David Russell, Kristopher Kyle, and Ute Römer. 2017. "Applying Natural Language Processing Tools to a Student Academic Writing Corpus: How Large Are Disciplinary Differences across Science and Engineering Fields?" *Journal of Writing Analytics* 1. 48–81.

Devlin, Jacob, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova. 2018. "Bert: Pre-Training of Deep Bidirectional Transformers for Language Understanding." ArXiv Preprint *ArXiv:1810.04805*. https://arxiv.org/abs/1810.04805.

Durrant, Philip, and Julie Mathews-Aydınlı. 2011. "A Function-First Approach to Identifying Formulaic Language in Academic Writing." *English for Specific Purposes* 30, no. 1: 58–72.

Eeg-Olofsson, Jens, and Ola Knutsson. 2003. "Automatic Grammar Checking for Second Language Learners-the Use of Prepositions." In. *Proceedings of Nodalida*, Reykjavık, Iceland https://www.csc.kth.se/tcs/projects/xcheck/rapporter/eegolofsson_knutsson03.pdf.

Evert, Stefan. 2008. "Corpora and Collocations." *Corpus Linguistics. An International Handbook* 2: 1212–48.

Ferraro, Gabriela, Rogelio Nazar, Margarita Alonso Ramos, and Leo Wanner. 2014. "Towards Advanced Collocation Error Correction in Spanish Learner Corpora." *Language Resources and Evaluation* 48, no. 1: 45–64.

Futagi, Yoko, Paul Deane, Martin Chodorow, and Joel Tetreault. 2008. "A Computational Approach to Detecting Collocation Errors in the Writing of Non-Native Speakers of English." *Computer Assisted Language Learning* 21, no. 4: 353–67.

Gamon, Michael, Jianfeng Gao, Chris Brockett, Alexandre Klementiev, William B. Dolan, Dmitriy Belenko, and Lucy Vanderwende. 2008. "Using Contextual Speller Techniques and Language Modeling for ESL Error Correction." In *Proceedings of the Third International Joint Conference on Natural Language Processing: Volume-I*. https://www.aclweb.org/anthology/I08-1059.

Golubeva, A., and V. Maksimov. 2020. *Russkii iazyk i kul'tura rechi*. Moscow: Litres.

Gray, Bethany, and Douglas Biber. 2013. "Lexical Frames in Academic Prose and Conversation." *International Journal of Corpus Linguistics* 18, no. 1: 109–36.

Guo, Shesen, and Ganzhou Zhang. 2007. "Building a Customised Google-

Based Collocation Collector to Enhance Language Learning." *British Journal of Educational Technology* 38, no. 4: 747–50.

Heil, Catherine Regina, Jason S. Wu, Joey J. Lee, and Torben Schmidt. 2016. "A Review of Mobile Language Learning Applications: Trends, Challenges, and Opportunities." *The EuroCALL Review* 24, no. 2: 32–50.

Katinskaia, Anisia, Javad Nouri, and Roman Yangarber. 2018. "Revita: A Language-Learning Platform at the Intersection of ITS and CALL." *Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018).* European Language Resources Association (ELRA). https://www.aclweb.org/anthology/L18-1644. 4084–93.

Kisselev, Olesya, and Edie Furniss. 2020. "Corpus Linguistics and Russian Language Pedagogy." In *The Art of Teaching Russian*, edited by Evgeny Dengub, Irina Dubinina, and Jason Merrill, 307–29. Georgetown: Georgetown University Press.

Kochmar, Ekaterina. 2016. *Error Detection in Content Word Combinations*. University of Cambridge, Computer Laboratory. https://www.cl.cam.ac.uk/techreports/UCAM-CL-TR-886.pdf.

Kopotev, Mikhail, Llorenç Escoter, Daria Kormacheva, Matthew Pierce, Lidia Pivovarova, and Roman Yangarber. 2015. "Online Extraction of Russian Multiword Expressions." *The 5th Workshop on Balto-Slavic Natural Language Processing*, 43–45.

Kopotev, Mikhail, Olga Lyashevskaya, and Arto Mustajoki. 2017. "Russian Challenges for Quantitative Research." In *Quantitative Approaches to the Russian Language*, edited by M. Kopotev. O. Liashevskaia, and A. Mustaiokii, 3–29. Abingdon: Routledge.

Kozhina, M. N. 1993. *Stilistika russkogo iazyka*. 3rd ed. Moscow: Prosveshenie.

Kutuzov, Andrey, and Elizaveta Kuzmenko. 2016. "WebVectors: A Toolkit for Building Web Interfaces for Vector Semantic Models." *International Conference on Analysis of Images, Social Networks and Texts*, 155–61. New York: Springer.

Levinzon, A., S. Dzhakupova, and A. Pliseckaia 2014. "Opyt razrabotki elektronnoi sistemy obucheniia studentov napisaniu nauchnykh statei." *Nauchno-tehnicheskaia informatsiia. Seriia 2: Informatsionnye protsessy i sistemy*, 6: 22–32.

Mel'cuk, Igor. 1995. "Phrasemes in Language and Phraseology in Linguistics." In *Idioms: Structural and Psychological Perspectives*, edited

by M. Everaert, E. J. van der Linden, A. Schenk, & R. Schreuder, 167-232. New York. Psychology Press.

Men, Haiyan. 2018. "The Notion of Collocation." In *Vocabulary Increase and Collocation Learning*, edited by H. Men, 9–33. New York: Springer.

Mikolov, Tomas, Ilya Sutskever, Kai Chen, Greg S. Corrado, and Jeff Dean. 2013. "Distributed Representations of Words and Phrases and Their Compositionality." In *Advances in Neural Information Processing Systems*, edited by C.J.C. Burges, L. Bottou, M. Welling, Z. Ghahramani, & K.Q. Weinberger, 3111–3119. https://papers.nips.cc/paper/2013/file/9aa42b31882ec039965f3c4923ce901b-Paper.pdf

Mitchell, Jeff, and Mirella Lapata. 2008. "Vector-Based Models of Semantic Composition."*Proceedings of ACL-08: HLT*, 236–44. https://www.aclweb.org/anthology/P08-1028.

Mitrofanova, O. D. 1985. *Nauchnyi stil'rechi: Problemy obucheniia*. Moscow: Russkii iazyk.

Nesselhauf, Nadja. 2005. *Collocations in a Learner Corpus*. Amsterdam: John Benjamins.

Nova, Muhamad. 2018. "Utilizing Grammarly in Evaluating Academic Writing: A Narrative. Research on EFL Students' Experience." *Premise: Journal of English Education* 7, no. 1: 80–97.

Park, Taehyun, Edward Lank, Pascal Poupart, and Michael Terry. 2008. "Is the Sky Pure Today? AwkChecker: An Assistive Tool for Detecting and Correcting Collocation Errors." In *Proceedings of the 21st Annual ACM Symposium on User Interface Software and Technology*, 121–30. https://dl.acm.org/doi/10.1145/1449715.1449736.

Pavlenko, Aneta. 2006. "Russian as a Lingua Franca." *Annual Review of Applied Linguistics* 26: 78–99.

Pennington, Jeffrey, Richard Socher, and Christopher D. Manning. 2014. "Glove: Global vectors for word representation." *Proceedings of the 2014 conference on empirical methods in natural language processing (EMNLP)*, edited by A. Moschitti, B. Pang, & W. Daelemans, 1532–43. Doha, Qatar: Association for Computational Linguistics. https://www.aclweb.org/anthology/D14-1162.

Peters, Matthew E., Mark Neumann, Mohit Iyyer, Matt Gardner, Christopher Clark, Kenton Lee, and Luke Zettlemoyer. 2018. "Deep Contextualized Word Representations." https://arxiv.org/abs/1802.05365.

Piotrovsky, R. G., K. B., ed. 1971. S*tatistika rechi i avtomaticheskii analiz teksta*. Vol. 1. Leningrad: Nauka.

Piotrovsky, R. G., K. B., Bektaev, and A. A. Piotrovskaya. 1977. *Matematicheskaiia lingvistika.* Moscow: Vysshaia shkola.

Pivovarova, Lidia, Daria Kormacheva, and Mikhail Kopotev. 2017. "Evaluation of Collocation Extraction Methods for the Russian Language." In *Quantitative Approaches to the Russian Language*, edited by M. Kopotev. O. Lyashevskaya, and A. Mustajoki, 137–57. Abingdon: Routledge.

Rodríguez Fernández, Sara. 2018. "Collocation and Collocation Error Processing in the Context of Second Language Learning." PhD diss., Universitat Pompeu Fabra.

Römer, Ute. 2010. "Establishing the Phraseological Profile of a Text Type: The Construction of Meaning in Academic Book Reviews." *English Text Construction* 3, no. 1: 95–119.

Shei, C.-C., and Helen Pain. 2000. "An ESL Writer's Collocational Aid." *Computer Assisted Language Learning* 13, no. 2: 167–82.

Solovyev, Valery, Vladimir Ivanov, and Marina Solnyshkina." Assessment of reading difficulty levels in Russian academic texts: Approaches and metrics." *Journal of intelligent & fuzzy systems* 34.5 (2018): 3049–3058.

Straka, Milan, and Jana Straková. 2017. "Tokenizing, Pos Tagging, Lemmatizing and Parsing Ud 2.0 with Udpipe." In *Proceedings of the CoNLL 2017 Shared Task: Multilingual Parsing from Raw Text to Universal Dependencies*, 88–99. https://www.aclweb.org/anthology/K17-3009.

Stubbs, Michael. 2001. *Words and Phrases: Corpus Studies of Lexical Semantics*. Oxford: Blackwell Publishers.

———. 2009. "Technology and Phraseology: With Notes on the History of Corpus Linguistics." In *Exploring the Lexis-Grammar Interface*, edited by Ute Römer & Rainer Schulze, 15–32. Amsterdam: John Benjamins.

Talalakina, Ekaterina, Denis Stukal, and Mikhail Kamrotov. 2020. "Developing and Validating an Academic Vocabulary List in Russian: A Computational Approach." *The Modern Language Journal* 104, no. 3: 618–46.

Turney, Peter D., and Patrick Pantel. 2010. "From Frequency to Meaning: Vector Space Models of Semantics." *Journal of Artificial Intelligence Research* 37: 141–88.

Van Meer, Elisabeth. 2003. "PLATO: From Computer-Based Education to Corporate Social Responsibility." *Iterations: An Interdisciplinary Journal of Software History* 2, no. 1: 1–21.

Vasilyeva, A. N. 1976. *Kurs lektsii po stilistike russkogo iazyka. Nauchnyi Stil' Rechi*. Moscow: Russkii iazyk.

Wu, Yu-Hsuan, Jhih-Jie Chen, and Jason S. Chang. 2017. "Verb Replacer: An English Verb Error Correction System." In *Proceedings of the IJCNLP 2017, System Demonstrations*, 49–52. https://www.aclweb.org/anthology/I17-3013.

Zasorina, L. N. 1977. *Chastotnyi slovar' russkogo iazyka*. Moscow: Russkii iazyk.

To OPI or Not to OPI: Proficiency-Oriented Instruction and Assessment in U.S. University-Level Russian Programs

OLEKSANDRA WALLO, MOLLY GODWIN-JONES

1. Introduction

Back in 1991, Thompson claimed that the impact of the proficiency movement on how Russian was taught in the United States had resulted in something more akin to Soviet *glasnost* rather than *perestroika*. She meant that while the introduction of ACTFL Proficiency Guidelines and an emphasis on functional ability in a foreign language spurred much discussion in the Russian teaching profession in the 1980s, these developments did not lead to "the actual restructuring of curricula and assessment along functional lines" (375). Thompson mentioned several obstacles to the adoption of the proficiency-based approach for Russian teaching at that time, including a lack of communicative, proficiency-based Russian textbooks; the organization of U.S. language programs around "diffuse goals," such as "developing an understanding of other countries and their cultures" rather than "functional language use" (386); and limited hours devoted to language study in the U.S. educational system.

Since then, many changes have taken place in the Russian teaching field. A new generation of elementary Russian textbooks appeared in the mid-1990s, each book declaring a proficiency orientation and an emphasis on developing communicative competence (Comer 2012). Despite some of their shortcomings, pointed out by Comer (2012), all of these textbooks included communicative activities. A proficiency-oriented web-based open-access textbook for beginning Russian, *Mezhdu nami*, became publicly available in 2015. This was the first textbook to apply the processing instruction approach to Russian language teaching.[1] Some new Russian textbooks for levels above the elementary, such as *Russian: From Intermediate to Advanced* (2014), made students' progress along the proficiency scale into their central focus. In the professional literature, analyses of post-secondary Russian language learners' low scores on proficiency tests, such

[1] Processing instruction is an approach to teaching L2 grammar that takes into account how learners tend to process language input (VanPatten 1996) and aims to train them to correctly connect form and meaning by structuring input in specific ways.

as the Oral Proficiency Interview (OPI) (Thompson 1996; Rifkin 2005), and calls to lower the expectations of proficiency outcomes attainable within traditional university-level Russian language curricula (Rifkin 2003; Isurin 2013) have been increasingly supplemented with reports about creative restructuring of existing curricula. Introducing intensive courses and incorporating hybrid instruction, for instance, has permitted some post-secondary Russian programs to maximize students' language learning time and thereby improve their proficiency outcomes (Garza 2013).

Perestroika-like curricular innovation in some university-level Russian programs began in earnest in the early 2000s, with the launch of the federally funded Language Flagship Program for a number of critical languages, including Russian.[2] Its ambitious goal of enabling students to reach the proficiency level of ACTFL Superior (ILR 3)[3] in the target language by the time they graduate has required the reorganization of program timelines, instruction delivery methods, assessment practices, and more (Murphy et al. 2017). Impressively, the Flagship experiment is proving to be very successful: over three quarters of students in all Flagship programs and languages who graduated in 2014 attained "the goal of ILR 3, with over 95% of students (…) reaching Level 2+" (Nugent and Slater 2017, 23). Having demonstrated that professional competence in a foreign language by graduation is an attainable goal even for Category III languages like Russian,[4] the Flagship model is bound to have an increasing impact on the Russian teaching profession in the years to come. Due to recent and ongoing budgetary crises and the resulting pressure on university-level language programs to justify their existence, the Language Flagship's efficiency and its capacity to deliver measurable, high-proficiency results are becoming attractive to post-secondary Russian programs. For example, some elements of the Flagship model, such as intensive instruction that increases

[2] The Language Flagship is an initiative sponsored by the Defense Language and National Security Education Office and administered by the Institute of International Education.

[3] Unlike the ACTFL Proficiency Guidelines, the Interagency Language Roundtable (ILR) proficiency scale, widely used by governmental agencies, is numerical. The equivalency between the ACTFL oral proficiency levels and the ILR levels is discussed later in this article.

[4] The U.S. Foreign Service Institute divides languages into four categories, based on the average length of time that it takes an L1 English speaker to achieve "professional working proficiency" (ILR 3) in the language. Russian and other Slavic languages are assigned to Category III as "languages with significant linguistic and/or cultural differences from English," requiring about 1,100 hours of instruction before ILR Level 3 can be reached ("Foreign Language Training").

the amount of classroom hours and the level of student engagement in language use, have already been adopted by the Russian program at the University of Texas at Austin (Garza 2017).

The rise of federally funded language programs, such as Project Global Officer (Project GO)[5] and especially the Language Flagship, has also helped bridge the divide between what used to be two very different types of language learners. Thompson (1991) called these two groups "the academic learner" and "the government learner":

> The typical learner in the government setting is an adult in an intensive program who has a utilitarian motive for studying a second language: the need to meet job requirements in the target-language country. The academic learner, on the other hand, is an individual, usually in the late teens or early twenties, who studies a foreign language for a few years in a non-intensive program as part of a more general education in the humanities. (Thompson 1991, 377)

While some of the distinctions between these two kinds of learners remain, a sharp divide between them no longer exists. For example, some academic learners are becoming more like government learners, approaching the study of a foreign language with aspirations to utilize it in future careers in the government sector. Furthermore, in federally funded language programs, the two types of students sometimes learn side by side, using the same standards-based curricula and working towards the same proficiency benchmarks, as measured by proficiency tests, such as the OPI.

Despite the changes outlined previously, it remains unclear to what extent the post-secondary Russian language teaching field as a whole has embraced the proficiency-based approach to instruction and assessment. There is also a lack of information about the reasons that guide collegiate Russian programs to implement this approach or not—or, as we put it in the title of this article, "to OPI or not to OPI." The exploratory two-part study reported in this article aims to begin to fill this gap (1) by examining the trends in the use of some proficiency-oriented practices in university-level Russian programs around the country and (2) by analyzing our recent experience of supervising or teaching in federally funded intensive Russian language programs with externally set proficiency benchmarks, measured by standardized proficiency tests. This experience has given

[5] Project GO is an initiative sponsored by the Defense Language and National Security Education Office and administered by the Institute of International Education.

us first-hand knowledge of the so-called WASHBACK EFFECTS from the proficiency guidelines and tests, has required us to undertake considerable curricular restructuring, and has prompted us to answer for ourselves the questions of whether it is and why it might be worth it to OPI. Thus, in the first part of our study, we conducted a small-scale survey of U.S. university-level Russian programs to ask about their implementation of several common elements of the proficiency-oriented approach; we begin with a brief review of these elements and then discuss our survey and its results. In the second part of our study, we report on the action research (McNiff 1993) of our own teaching or supervision of teaching for speaking proficiency, as measured by a course-final OPI or OPIc, in two intensive Russian language programs. We discuss the programs' oral proficiency outcomes, describe the pedagogical principles and practices that we have found most effective in helping students achieve these outcomes, and reflect on the OPI washback effects.

2. The ACTFL proficiency guidelines and the OPI: pro and contra

The ACTFL Proficiency Guidelines, which define language proficiency in terms of "functional language ability," provide one increasingly popular way to establish externally recognized, proficiency-based language program standards (ACTFL 2012, 3). The Guidelines describe five major levels of proficiency (Novice, Intermediate, Advanced, Superior, and Distinguished) in each of the four language skills (speaking, listening, reading, and writing). Each proficiency level is characterized by specific language abilities, which increase in difficulty in each ascending level. For example, while speakers at the Novice level are able to use "memorized" and "isolated words and phrases" to "communicate short messages on highly predictable, everyday topics" (ACTFL 2012, 9), Intermediate-level speakers can "produce sentence-level language" and "create with the language when talking about familiar topics related to their daily life" (ACTFL 2012, 7). Novice, Intermediate, and Advanced levels are further divided into sublevels of Low, Mid, and High, which capture how well an individual controls the abilities of the given major level. Table 1 shows how the levels of the ILR scale, which is numerical, correspond to the ACTFL oral proficiency levels.

*Table 1. Equivalency between the ACTFL levels and the ILR scale.**

ACTFL	**ILR**
Distinguished	5 4
Superior	3
Advanced High	2+
Advanced Mid	2
Advanced Low	
Intermediate High	1+
Intermediate Mid	
Intermediate Low	1
Novice High	0+
Novice Mid	0
Novice Low	

*Adapted from ACTFL (2015)

The OPI is a standardized test of oral proficiency administered through Language Testing International (or by government-certified testers) that is tied to the ACTFL guidelines in speaking (or the ILR scale). It assesses a person's ability to communicate in a foreign language through a 25–35-minute-long interview between the examinee and a certified tester, which is conducted either in person or by telephone. The interview may cover a wide variety of topics but has a consistent structure: it alternates between level checks and probes. Level-checking questions establish the highest level at which the examinee can sustain performance without linguistic breakdown while probes test the examinee's abilities at the next higher level to ascertain that this level of proficiency has in fact not been reached (Malone and Montee 2010). In the Oral Proficiency Interview by Computer (OPIc), the tester is replaced with a digital avatar and the examinee takes one of five test forms of different proficiency ranges, selected on the basis of the examinee's self-assessment. Prompt topics are tailored to the examinee's interests, as reported in a background survey (Isbell et al. 2019). Both the OPI and the OPIc are recorded and scored independently by two raters certified for the specific format of the test. When the scores of the two raters do not match, a third rater is enlisted.

The ACTFL Proficiency Guidelines and the OPI procedure have been repeatedly revised in response to early criticism and are quite reliable in their current form (Malone 2003; Malone and Montee 2010). The more philosophical critiques that have questioned their validity, however, have

been harder to refute. Malone and Montee (2010) provide a thorough overview of these critiques, ranging from the charge that the guidelines are not grounded in empirical research on language acquisition to the argument that the format of the OPI—a formal interview—does not capture many real-life speaking situations and thus is hardly a global test of speaking proficiency (Johnson 2001; Liskin-Gasparro 2003).

Of special relevance to our study is the ongoing debate about the washback effects from the OPI. On the one hand, "the ACTFL OPI may have a potential positive impact by encouraging students to speak and classroom instructors to emphasize speaking" (Malone and Montee 2010, 979). Scholars who have found college learners' OPI scores falling short of the required benchmarks, such as in teacher certification, advocate for allowing the OPI to transform post-secondary language departments into "clearly articulated, proficiency-based programs" (Kissau 2014, 540). On the other hand, some scholars caution against using the guidelines and the OPI to establish the language program's proficiency standards, suggesting that doing so may devalue the wide scope of the program and its curricular foci beyond proficiency (Norris and Pfeiffer 2003). At the same time, these critics acknowledge the value of the OPI as a form of external feedback on the quality of the curriculum, instruction, and learning in a program, and as a way to provide students with a widely recognized standard rating of their speaking skills (Norris and Pfeiffer 2003).

Finally, there are considerable practical constraints to implementing the ACTFL OPI. Official testing and tester training require an investment of time and finances (Malone and Montee 2010), and regularly administering even unofficial OPIs to large classes may be too time-consuming for instructors.

3. Intensive instruction

In addition to her commentary on the lack of proficiency-based textbooks and of a program focus on functional language ability, Thompson (1991) discussed the issue of limited time devoted to language study in the U.S. educational system, which "mitigate[s] against the acquisition of language skills that could be professionally applied upon graduation" (386). For post-secondary U.S. language programs, this problem is perhaps even more acute now than it was in 1991, with fewer undergraduate students choosing to major in a foreign language and a rising trend of double or triple majors, which places severe constraints on how many years students can devote to studying a language. One solution is intensive instruction, which has been used for decades with government learners and is becoming increasingly

common in academic language programs.

In addition to the fact that intensive courses permit learners to cover more material in a shorter time period, there is growing empirical evidence about the advantage of intensive instruction over traditional "drip-feed" instruction (Stern 1985) for proficiency development (Serrano 2011). Such advantages have been reported both in studies that compared five-week intensive courses with about 25 hours of instruction per week to seven-month courses with 4 hours of instruction per week (Serrano and Muñoz 2007) and in studies that described less intensive year-long courses with 6 hours of instruction per week (Norris and Pfeiffer 2003; Garza 2013), which may be more typical of post-secondary language programs. Garza (2013) found that the OPI ratings of students who completed two semesters of intensive Russian for beginners, with six contact hours per week, averaged higher than the OPI results of students after the traditional two-year sequence of Russian at the University of Texas at Austin, although the innovative curriculum of this course likely accounted for some of this difference. Norris and Pfeiffer (2003) reported a similar advantage for oral proficiency in year-long German intensive courses at Georgetown University: considerably more "intensive-track" learners (two semesters, six hours per week) than "nonintensive-track" students (four semesters, three hours per week) received Intermediate High ratings or above after the same total amount of class hours, even though the curriculum in both tracks was the same (577). This evidence seems to suggest that even a relatively modest concentration of instruction (i.e., six hours per week) may be more effective in fostering students' oral proficiency than the more common three- or four-hour courses taught over a longer period.

Although there is still little empirical research on the connection between intensive instruction and proficiency, teaching intensively for language proficiency has been standard practice in the government sector as well as in some academic summer programs, both domestic and abroad. Consequently, we decided to add intensive instruction to our investigation of proficiency-oriented practices at U.S. university-level Russian programs. We explored the trends in the use of these practices in the Russian post-secondary teaching field by conducting a survey. This part of our study sought an answer to the following research question:

To what extent have post-secondary Russian language programs implemented the proficiency-based approach to instruction and assessment, as evidenced by the teaching of intensive courses, the use of the ACTFL Proficiency Guidelines as benchmarks for student progress, and the incorporation of the OPI into assessment practices?

4. Survey results

The survey was conducted in spring and summer of 2019 using Google Forms. The results do not represent a random sample of post-secondary Russian language programs, but rather a convenience sample. The survey was advertised via the SEELANGs listserv and a Facebook group for teachers of Russian. In addition, some individual colleagues were contacted by email. This technique of collecting data may have resulted in a higher response rate from institutions that already use the proficiency-oriented practices under study or are in favor of them. Some limitations were inherent in the format of the survey, such as close-ended questions, which limited the potential for feedback and did not allow us to ask specific follow-up questions. Nonetheless, the survey does reveal some trends regarding the use of the proficiency-oriented practices under examination.

The survey was completed by 26 participants, as illustrated in Table 2. The majority of respondents represented public research universities (n = 15), with eight participants from private research universities and three from small liberal arts colleges. The departments represented vary from Slavic and East European (n = 8) to Modern and World Languages (n = 14) to a combination of Slavic and other languages (n = 4), such as Slavic and German or Romance languages.

Table 2. Participant representation.

University Profile		**Department Profile**	
Small liberal arts	3	Slavic/East European	8
Public research	15*	Slavic and one/two other languages	4
Private research	8	All languages (i.e., "Modern Languages Dept")	14
TOTAL	**26**	**TOTAL**	**26**

*Including 3 Russian Flagships

Of the 26 participating institutions, almost half (n = 12) teach Russian intensively, while 14 do not (see Table 3). Of our participants, only one small liberal arts college teaches Russian intensively, but four private research universities and seven public universities teach intensively (including all three Russian Flagship Programs that participated in this survey).

Table 3. Number of institutions that teach Russian intensively (not including study abroad).

University Profile	
Small liberal arts	1
Public research	7*
Private research	4
TOTAL	**12**

*Including 3 Russian Flagships and one Summer Language Institute

During the academic year, students in intensive courses are often traditional undergraduate students, including both Russian majors and minors and non-majors. Military students, such as Project GO participants, also make up student populations in intensive Russian courses, in both the summer and the academic year. One institution also mentioned graduate students as typical participants in intensive Russian courses, in both the summer and the academic year. Additionally, several institutions mentioned non-traditional and non-degree seeking students, especially in summer intensive Russian courses. With three schools reporting, the most common combination for student population during the academic year is traditional undergraduate students, Russian majors/minors, non-majors/minors, and military students.

*Table 4. Levels taught intensively (not including study abroad).**

	Academic Year	**Summer**
NA/no intensive courses offered during the term	3	5
Beginner	10	6
Intermediate Low	6	5
Intermediate High	4	2
Advanced	5	1

*Levels are labeled "Beginner, Intermediate Low," etc. rather than "First year, second year," etc., to allow for a more accurate descriptive approach to the levels being taught.

During the academic year, the most common level of Russian that is offered intensively is Beginner, with ten schools reporting this option, as

evidenced in Table 4. Beginner is also the most common level offered in the summer (n = 6), closely followed by Intermediate Low (n = 5). Intermediate High and Advanced are not offered as commonly as the lower levels, in either the academic year or the summer.

Participants reported a range of options regarding the total hours per week and total number of weeks that intensive Russian courses meet. Responses ranged from the lower end of five hours per week for 16 weeks to eight hours a week for 15 weeks. This evidence points to the fact that there is no single standard for semester-long intensive courses in U.S. university-level Russian programs: five hours per week might be considered a regular course at one institution and an intensive one at another. By contrast, summer intensive Russian courses appeared to be more standardized in length, with four institutions reporting courses meeting for 20 hours per week for eight weeks.

Ten institutions reported using the ACTFL guidelines as benchmarks for student progress in intensive Russian courses, while two institutions reported not using them.

Table 5. Specifics of OPI administration.

		Specifics:		*Program Profile*	
Official OPIs	5	Live OPI	1	Public	4*
		OPIc	1		
		Either live or OPIc	1	Private	1
		OPI(c) for some students	2		
Informal OPIs	6	For all students	3	Public	4**
		For Flagship students	2		
		Throughout the semester	1	Private	2

*Including 1 Flagship **Including 2 Flagships

Half of the institutions that teach Russian intensively administer OPIs at the end of the course, as illustrated in Table 5. Five institutions administer official OPIs (either computerized or live for some or all students), and six administer informal OPIs, which are conducted inhouse for training or informal assessment purposes by someone familiar with the

ACTFL guidelines and the OPI technique but not necessarily certified. For levels above elementary, four institutions reported administering either an official or an informal OPI at the beginning of the semester; two institutions conduct OPIs with all students initially, and two administer OPIs to only some students.

For non-intensive courses, six institutions reported using informal OPIs during the semester. One institution uses informal OPIs in all levels of Russian, while four institutions use them for advanced levels. One institution reported using unofficial OPI scores for graduate student classes and assessment.

In overall program assessment, more than half of all respondents (n = 14) reported using some type of OPI as a form of program-final functional language assessment, as represented in Table 6. The split is roughly even between official and unofficial OPIs. More public research universities (n = 9) use OPIs as a form of program-final assessment than private research universities (n = 4) or small liberal arts colleges (n = 1).

Table 6. Administration of the OPI or other tests as a form of program-final language assessment.

	n	*Specifics*	*n*	*Program Profile*	
No	12	Pen-and-paper tests	9		
		Other speaking test	4		
		Avant STAMP	2		
Yes	14	Official OPI for all students	3	Public	9*
		Official OPI for Russian majors/ minors only	5	Private	4
		Unofficial OPI for all students	4	Small liberal arts	1
		Unofficial OPI for Russian majors/minors only	2		

*Including 2 Flagships

Most institutions that do not administer OPIs as a form of program-final assessment reported using traditional pen-and-paper tests (n = 9), such as final exams. Four institutions reported a different type of speaking test, similar to the OPI but not necessarily based on the ACTFL guidelines or

the OPI structure. Finally, two programs reported using the Avant STAMP test, an online proficiency test in all four modalities based on the ACTFL guidelines.[6]

Institutions that reported not administering OPIs as a form of program-final functional language assessment listed cost as the main factor affecting this decision. Five institutions reported a lack of other resources for OPI administration, and six reported a lack of instructor training in the ACTFL OPI. Notably, two participants stated that OPIs are not administered because the OPI is not an effective measure of student progress. Other responses included the need for testing all modalities as a reason for not conducting OPIs as a form of program-final assessment. Approximately half (n = 6) of the institutions that do not administer program-final OPIs are interested in initiating this practice.

These survey results suggest that proficiency-oriented practices are being implemented by a considerable number of post-secondary U.S. Russian language programs. With almost half of our participants teaching intensive Russian courses, of different levels and to various student populations, and with the majority of these institutions using the ACTFL guidelines to measure student progress in these courses, one can say that the proficiency orientation has been gaining ground in Russian programs. The OPI is being utilized as a measure of speaking proficiency by more than a third of the programs in our sample, with nine institutions using it in either intensive or non-intensive courses, or both. Finally, 14 out of 26 institutions surveyed reported using some type of OPI as a form of their program-final functional language assessment, with several more using other proficiency-based speaking tests. Six institutions stated their interest in starting to use the OPI for students at the end of the students' language programs. We conclude from this evidence that despite its drawbacks (such as lingering doubts regarding its validity and the cost of official testing), the OPI is growing in popularity across U.S. university-level Russian programs.

5. Teaching for speaking proficiency: two programs' results and practices

The second part of our study represents action research—an approach to investigating practical aspects of teaching by the practitioners themselves (McNiff 1993). In this section, we scrutinize our own experience of making

[6] The Avant STAMP (Standards-Based Measurement of Proficiency) is an online, computer adaptive language test in reading, writing, listening, and speaking that was developed at the University of Oregon. For more information, please see https://avantassessment.com/stamp.

the transition from working almost exclusively with academic learners within more traditional post-secondary language curricula to supervising or teaching in federally funded language programs, aimed primarily at "the government learner." Oleksandra Wallo, a faculty member in the Slavic department of a large public university, has designed and supervised a university-run off-site intensive Russian program for military personnel (Program 1). Molly Godwin-Jones, an advanced graduate student in the same department, has served as the lead instructor for Project GO summer intensive first-year Russian courses (Program 2). Learners in both programs enrolled as students in short, intensive university courses (8-, 11-, or 14-week long). By the end of each course, learners were required to demonstrate gains in speaking proficiency by taking the official OPI or OPIc. Ensuring that our students in these programs were able to meet the set proficiency benchmarks necessitated curricular restructuring and provided occasion to experience the OPI washback effects first-hand.

Our investigation was guided by the following research questions:

1. What percentage of learners in each intensive Russian program were able to meet the set speaking proficiency benchmark (as measured by the course-final official OPI or OPIc)?
2. What pedagogical principles, used in the two proficiency-oriented intensive Russian programs, helped students meet the speaking proficiency benchmarks and why were they effective?
3. What washback effects did the mandatory course-final official OPI or OPIc have on the programs' curricular design and instruction?

5.1. Program results in speaking proficiency

Intensive elementary Russian courses with no study abroad component in Program 1 lasted either 11 or 14 weeks for a total of approximately 330 contact hours per course, with 6 hours of instruction on most days. There were usually two parallel sections in the course, with 3–7 learners per section. All students were adult learners and true beginners in Russian. By the end of the course, learners were required to demonstrate that they have reached ILR level 1 in speaking by taking a double-rated official telephonic OPI. The program did not focus exclusively on oral communication, but rather provided well-rounded training in several skills. Besides making gains in oral proficiency, learners were also expected to reach ILR level 1

in reading and listening, which they demonstrated by taking the Defense Language Proficiency Test (DLPT).[7]

As Table 7 shows, the success rate of the program in meeting the benchmark for speaking proficiency was high. Of the 55 students who were tested with the official OPI, over 96% reached ILR level 1 (ACTFL Intermediate Low) and 43% exceeded this benchmark, with most reaching ILR level 1+ (ACTFL Intermediate Mid or High).

Table 7. Course-final OPI results in Program 1 (Data from October 2016 to December 2018).

Contact Hours	**# of Students**	**# Tested**	**ILR Goal**	**0+**	**1**	**1+**	**2**
330	57	55	1	2	29	23	1

Intensive elementary Russian courses with no study abroad component in Program 2 lasted eight weeks for a total of 160 contact hours, with about 3 hours of instruction and 1 hour of one-on-one tutoring each day. There was only one section each summer that included three or four Project GO students and one or two non-Project GO students. Project Global Officer is specifically geared towards ROTC students and "aim[s] at improving the language skills, regional expertise, and intercultural communication skills of future military officers" ("About Project GO"). The courses trained all four skills, with a somewhat greater emphasis on speaking, especially in the final two weeks, as students prepared for a course-final official OPIc. This was the only standardized proficiency test administered at the end of Program 2. Another difference between the programs was the amount of time spent on homework, with only 3–4 hours per week for Program 1 students and about 15 hours per week for Program 2 learners.

Program 2 also demonstrated impressive course-final OPI results. Even though Project GO students are expected to reach the speaking proficiency goal of ILR 1 after four semesters of language study or its equivalent, the majority of students (82%) in Program 2 tested at this level after only one 8-week intensive summer course (equivalent to two semesters). As Table 8 shows, two out of 11 students were even able to achieve ILR level 1+ after just one summer of intensive study.

[7] A detailed discussion of reading and listening proficiency is beyond the scope of this article.

Table 8. Course-final OPIc results in Program 2 (Data from summers of 2017, 2018, and 2019).

Contact Hours	# of Students	# Tested	ILR Goal*	0+	1	1+
160	11	11	1	2	7	2

*Project GO proficiency goal after four semesters of Russian or its equivalent

Below we discuss the pedagogical principles that drove speaking instruction in these programs and some of the teaching practices that evolved from year to year during our work there. We adopted these instructional practices because the OPI was set as the final assessment for our courses by external parties. Yet both our program outcomes and existing research on these practices confirm that they are effective in facilitating the development of speaking proficiency—regardless of the type of final assessment used. Some of these practices were recently designated by foreign language education researchers as belonging to High-Leverage Teaching Practices, or HLTPs (Glisan and Donato 2017), and the positive impact of these practices on students' proficiency development is beginning to be closely examined (Vyn, Wesely, and Neubauer 2019).

5.2. The flipped model

Because of the challenges which the Russian alphabet, pronunciation, vocabulary, and grammar present to Anglophone students, it is easy for most of class time in traditional beginner courses to be taken up by more rudimentary work on these building blocks of language. Even though the new generation of elementary Russian textbooks do contain a considerable number of communicative activities, Comer's (2012) quantitative analysis of communicative and "language-focused" exercises in select chapters from *Golosa, Troika, Nachalo*, and *Live from Moscow* revealed that the latter activities significantly outnumber the former (147–8). If an instructor were to closely follow one of these textbooks, it would automatically result in much class time devoted to "the teaching of language form" (Comer 2012, 156).

One solution, implemented in intensive courses by language programs at the University of Texas at Austin, has been the flipped model. As Garza (2017) explains, in this model, "the bulk of overt instruction of grammar, phonetics and lexicon is relegated to outside of class time," whereas time in class "is spent almost entirely in actively engaging the

students, individually and in groups" (231). Although instructors are sometimes concerned about their students' ability or willingness to adequately process new grammar and vocabulary on their own, research on flipped language instruction has repeatedly found the flipped model to be at least as effective as and often superior to traditional instruction for the learning of both grammar (Al-Harbi and Alshumaimeri 2016; Moranski and Kim 2016; Webb and Doman 2016) and vocabulary (Mori, Omori, and Sato 2016; Alnuhayt 2018; Kırmızı and Kömeç 2019). For grammar learning, Tonkin, Page, and Forsey (2019) link the advantages of the flipped approach to the fact that the latter reduces students' cognitive load by allowing them to work through new grammar at their own pace and in advance of being required to use it in cognitively more demanding communicative activities with peers. There is also emerging evidence of the flipped language classroom's positive effect on students' speaking skills (Russell 2018; Sabahattin 2019).

The flipped classroom approach is built into *Mezhdu nami*, one of the newest elementary Russian language textbooks on the market. This textbook was utilized in Program 2. Before coming to class, students read and listened to short dialogues on the *Mezhdu nami* website and then worked through the accompanying reading comprehension and grammar sections, which include self-check exercises. Students were then required to complete an Online Review Check (ORC), consisting of multiple choice, matching, and cloze activities, posted by the instructor on the course management system. The ORCs were graded, and the ORC scores were included in the overall homework grade. Because the questions on the ORCs were not overly challenging and mirrored the grammar explanations or self-check exercises from *Mezhdu nami*, they were a quick and convenient tool to reinforce the new material and to hold students accountable for learning the grammar on their own, as advocated by Mori, Omori, and Sato (2016). Instructors could look at the results of the ORCs to see if any questions were frequently missed and needed to be discussed in class the next day. In the experience of Godwin-Jones, students were usually able to complete the ORCs and rarely required additional instruction. Having thus ascertained before the class that students had a grasp of the assigned building blocks of language, the instructor could engage them in pair or group communicative activities from the first minutes of class.

Besides following the flipped model, *Mezhdu nami* prioritizes class activities that simultaneously focus on the communication of meaning and on language form. These contextualized input and output activities for elementary Russian, based on the principles of input processing (VanPatten

1996), constitute a major pedagogical innovation of this textbook. These types of activities are built in such a way that in the process of generating meaningful utterances, however short, students are prompted to notice how particular grammatical forms encode specific meanings. As a result, students acquire key grammar structures as they engage in communication, which makes grammar subordinate to the development of speaking skills.

5.3. Deliberate vocabulary learning at home

One aspect of the flipped approach that deserves special attention is students' work on vocabulary. Nation (2008) suggests that the first 2,000 most frequently used words are best taught directly. According to Hacking and Tschirner (2017), Russian L2 learners' receptive mastery of the most frequent 1,000 to 2,000 Russian words tends to correspond to intermediate-range reading proficiency on the ACTFL scale. Therefore, we advocate explicit, targeted vocabulary teaching and learning at the lower levels. As Meara (2005) explains, the first step in knowing a word is being able to recognize that it is in fact a word. Explicit vocabulary practice helps students begin to recognize word shapes. Frequency of exposure to a word also plays a significant role in vocabulary learning. According to Nation (2008), "[w]e need to see the learning of any particular word as being a cumulative process where knowledge is built up over a series of varied meetings with the word. At best, teaching can provide only one or two of these meetings" (97). Several other meetings can happen during students' work with the textbook—if the latter recycles vocabulary sufficiently from one unit to the next. For instance, Comer (2019) found a 38% carry-over rate for vocabulary in *Mezhdu nami*. While this percentage is significant, it still leaves it up to students to learn the remaining vocabulary. Consequently, students need out-of-class settings for additional word meetings, which can be provided to them through many freely available online vocabulary-learning tools, such as Quizlet.

Students in Program 1 spent the few weekly homework hours learning vocabulary through Quizlet, where instructors created sets of active vocabulary for each topic. Program 2 used a collective Quizlet folder to make the vocabulary-learning process less intimidating and to help students practice good study skills. Rather than having each student create his or her own set of online flashcards for each unit, the instructor facilitated a group flashcard-making system. Students had to sign up for a certain number of vocabulary sets over the course of the semester, depending on the number of students in the class. The instructor provided all students with a daily vocabulary list containing active words for that

class day. The student assigned to Quizlet was responsible for converting the list into a set of online flashcards and sharing the set to the class folder, which automatically granted access to other class members.

5.4. Setting ambitious speaking goals and building in accountability

Having flipped the classroom by assigning most of the vocabulary learning (and grammar learning in Program 2) to homework, instructors freed up class time for using the material learned at home to communicate in pairs or groups. While these are always challenging activities for beginners, setting clear, specific, yet ambitious speaking goals for each textbook unit and then developing carefully scaffolded tasks for students through backward design ensures that even novice learners can spend much of the class communicating in Russian. This approach was adopted in Program 1, which used the topic-based lessons from a popular elementary-level Russian textbook (*Troika*) for some language input and overall course structure but focused on communicative tasks designed to meet the program's benchmark in speaking proficiency. During each week of this intensive course, students worked on one or two major topics, such as daily routines or leisure activities. The speaking goals set for each topic purposely exceeded both the chapter-final checklists of abilities given in *Troika* and the speaking functions typical of ILR Level 1. For example, after working through the unit on daily routines during the week, students were expected to do more than simply "ask and answer questions about the time when some activities take place" (Nummikoski 2012, 202); they were expected to produce very short narrations about their weekend routines. Although not easy to reach for beginners, such a goal made sense to the learners because it described a useful ability in a topic area of interest to them. (Everyone wanted to talk about the weekend after spending many hours per day in the classroom!) As a result of this ambitious goal setting, more than a third of the learners in Program 1 routinely exceeded the speaking benchmark set for the course, testing at ILR level 1+ or above on their course-final OPI.

Students were held accountable for reaching the communication goals for each unit through weekly speaking sessions, usually held on Fridays. During each thirty-minute session, someone other than the students' instructor[8] would speak to each learner by telephone, engaging them in a conversation that tested the student's ability to converse on the

[8] Program 1 funding made it possible to employ graduate teaching assistants to conduct the weekly speaking sessions, but it is possible to arrange such "external" assessment even without additional funding—for example, by swapping instructors between sections of the same course one day a week.

topic(s) covered during the week. The fact that students had to speak to someone outside their class community on a weekly basis both increased their motivation to reach the weekly speaking goals and provided them with valuable experience ahead of their official telephonic OPI.

5.5. Interactional speaking at the center of classroom activities

In Program 1, the week's activities were designed to build up to the weekly goals and were carefully scaffolded from day to day. The study of the core vocabulary for a new topic would begin at home, over the weekend. On Monday and Tuesday, students would work in pairs to read short dialogues, taken from the textbook or prepared by the instructors, that contained this new vocabulary. In groups, they would also read about the week's topic in short texts, which contained more occurrences of the new vocabulary, and discuss comprehension questions. While not yet fully communicative, these activities flooded the students with relevant input and gave them opportunities to practice pronouncing the new words and recalling them while responding to comprehension questions. On Wednesday and Thursday, students would spend much class time discussing the topic in pairs following general English prompts written by the instructors. Learners would also complete role-play scenarios on the topic. Toward the end of the week, students would take a quiz on the active vocabulary of the week; complete end-of-unit oral exercises from *Troika*, which are focused on production; and take turns conversing on the topic one-on-one with the instructor, in preparation for the Friday speaking sessions by telephone.

Besides the speaking activities described above, two further types of oral communication tasks utilized in Program 1 were found particularly effective in preparing students for the speaking interactions characteristic of the OPI at lower proficiency levels. The first type was dubbed "the hot seat": students would take turns sitting in front of the class and answering a series of questions from their peers on the topic(s) studied. The class was instructed to ask questions in a logical sequence, as they might be asked in a real interview, and to build on the responses given. The students in the hot seat were permitted to assume different personas and get creative in their responses to keep the activity interesting and maintain a real information gap. As a result, this activity would meet the main criteria for effective oral interpersonal tasks described by Glisan and Donato (2017): it was engaging, it required everyone to listen to what others were saying, it was highly interactive, and it often involved negotiation of meaning (55-56). The second type of activity involved bringing a guest to class—either a native or a highly proficient speaker of Russian—and placing the guest

in the hot seat. This activity was even more motivating for students, as it would closely resemble authentic communication.

While critics might say that several of the activities described above target only a very limited range of functional abilities (i.e., oral communication in the interpersonal mode) typically tested by the OPI and are therefore nothing other than teaching to the test, we would stress that these abilities are at the core of the language learning process. The first two of the six high-leverage teaching practices (HLTPs) in foreign language education, singled out by Glisan and Donato (2017), are "facilitating target language comprehensibility" and "building a classroom discourse community." Both of these practices are enacted in the activities that helped our students develop their speaking proficiency in the interpersonal mode, thus preparing them for the course-final OPI. Furthermore, as Glisan and Donato point out, giving a prominent place to oral interaction in the classroom makes sense for other reasons, such as the fact that it "will mediate the learning of other aspects of language" (56). We therefore consider such an emphasis in language instruction enabling rather than limiting.

5.6. Targeted OPI preparation

Toward the end of Program 1 and Program 2, we did introduce a small number of more targeted OPI practice activities, following the principle of teaching for how our students will be tested. For students in Program 2, Godwin-Jones used four class sessions to facilitate preparation for the official OPIc. Before engaging in any speaking activities, students reviewed the OPI structure and level descriptions, and the instructor explained what to expect when interacting with the avatar.

One of the most important skills to target in focused OPI preparation is students' ability to speak with greater ease. In a traditional classroom setting, students may feel that they should only speak if their utterance is "correct," or they may be uncomfortable or fearful of speaking. OPI practice activities need to be scaffolded in such a way as to promote students' focus on fluency, even if there might be grammatical errors. Even in truly communicative classrooms, it is unlikely that novice students are accustomed to speaking independently for longer than a minute, as they may have to do during the official OPI, especially when they are probed at a higher level. Giving students the safe space to overcome any fear of speaking and to practice it in a low-stakes situation is an important aspect of these targeted OPI practice sessions.

To aid students in creating more sustained speech, Godwin-Jones used grammar-function pairings with specific lexical topics to help novice

learners create meaningful utterances. Each activity began with either a lexical or grammar recall warm-up. Lexical warm-ups could include word popcorn (instructor states a topic, then each student must say a vocabulary item associated with this topic that has not been previously mentioned; whoever cannot think of a word is out until only one student is left); creating pros and cons lists; and using visual prompts or diagrams. Grammatical recall warm-ups required students to think of specific grammar constructions (i.e., y + genitive case) and "translate" them into speaking functions (i.e., to talk about who owns what). After some warm-up time, students would pair up to speak for as long as possible on a specific topic, incorporating the material reviewed during the lexical or grammatical warm-ups. One partner would speak while the other would keep the time, and then they would switch roles. Students had to write down their time after each session. Partners were not allowed to interrupt or correct each other, nor were they allowed to ask for help from the instructor.

While the timed speaking activities described above aim to develop fluency, instructors in Program 1 used another form of targeted OPI practice to develop accuracy of speech. Towards the end of each thematic unit, students wrote short essays responding to typical OPI prompts, such as describing one's apartment, house, or city. They would then meet with the instructor one-on-one to discuss patterns of errors they made in the essays and to audio-record a sample mini-conversation on this topic with the instructor. For this recording, the student and the instructor would switch roles, with the student playing the role of the interviewer and the instructor responding to the student interviewer's questions based on the information in this student's essay. The purpose of this activity was to give the student a useful model of phonetically, lexically, grammatically, and, in this case, even factually accurate responses to potential OPI questions. Recorded using the free Audacity software, these mini-conversations were then listened to by students for review and further preparation before the official OPI.

6. Conclusion

Even the staunchest critics of the OPI have acknowledged its value as one of the motivating factors to purposely and persistently "work toward development of conversational skills" (Meredith 1990, 295). In the intensive Russian programs described in this study, we found that having the official OPI as a course-final assessment measure had positive washback effects on teaching and learning alike. It forced a focus on target-language communication in the classroom, compelling program supervisors and instructors to consistently rely on the flipped model in

order to make more time for many and varied interactional speaking activities. It also prompted all parties involved to analyze speaking in the way hierarchized by the ACTFL Proficiency Guidelines: for instructors, the guidelines helped better structure in-class speaking activities and provide appropriate scaffolding; for students, the guidelines helped demystify this often intimidating language skill. Having a course-final OPI or OPIc built accountability into the courses and provided students with a standard to reach or even surpass. Consequently, it fostered what Language Flagship Program administrators have called "a culture of high expectations" (Murphy et al. 2017, 33), motivating students to take risks and challenge themselves—which yielded impressive speaking proficiency outcomes.

Our experience of working in the intensive format is in line with previous findings about the benefits of intensive courses for oral proficiency development. However, more empirical research is needed to explain why intensive instruction seems to yield better oral proficiency outcomes and to determine what degree of intensity can produce the best results. One limitation of most research on this issue conducted thus far, including of our study, is the fact that it focuses on lower-level courses. The rapid progress of the students in our intensive courses would likely look very different at the advanced level, and a course-final OPI might not be able to capture it. Thus, the preference among the participants in our survey to use the OPI for program-level rather than course-level assessment is justified.

Yet, as our experience demonstrates, the OPI can be a very useful tool, especially in beginner-level intensive courses. Building the inhouse capacity to administer official, or even informal, advisory OPIs by paying for instructors to get certified or to at least take the OPI training workshop is a smart investment for language programs that seek to become more proficiency-oriented and better guide their students in acquiring oral proficiency in Russian.

References

"About Project GO." 2015. Project GO. Accessed July 2, 2020. https://www.rotcprojectgo.org/about-project-go.

ACTFL. 2012. *ACTFL Proficiency Guidelines 2012*. Alexandria, VA: American Council on the Teaching of Foreign Languages. Accessed June 30, 2020. https://www.actfl.org/sites/default/files/guidelines/ACTFLProficiencyGuidelines2012.pdf.

ACTFL. 2015. "Oral Proficiency Levels in the Workplace." Alexandria, VA: American Council on the Teaching of Foreign Languages. Accessed

July 1, 2020. https://www.actfl.org/sites/default/files/guidelines/OralProficiencyWorkplacePoster.pdf.

Al-Harbi, Sarah S. and Yousif A. Alshumaimeri. 2016. "The Flipped Classroom Impact in Grammar Class on EFL Saudi Secondary School Students' Performances and Attitudes." *English Language Teaching* 9 (10): 60–80.

Alnuhayt, Sarah S. 2018. "Investigating the Use of the Flipped Classroom Method in an EFL Vocabulary Course." *Journal of Language Teaching and Research* 9 (2): 236–42.

Comer, William. 2012. "Communicative Language Teaching and Russian: The Current State of the Field." *In Russian Language Studies in North America: New Perspectives from Theoretical and Applied Linguistics*, edited by Veronika Makarova, 133–59. London: Anthem Press.

———. 2019. "Measured Words: Quantifying Vocabulary Exposure in Beginning Russian." *Slavic and East European Journal* 63 (1): 92–114.

DeBenedette, Lynne, William J. Comer, Alla Smyslova, and Jonathan Perkins. *Mezhdu nami*. Accessed June 30, 2020. http://mezhdunami.org.

"Foreign Language Training." 2020. Foreign Service Institute. Accessed August 2, 2020. https://www.state.gov/foreign-language-training/.

Garza, Thomas J. 2013. "Keeping It Real: Intensive Instruction and the Future of Russian Language and Culture in U.S. Universities." *Russian Language Journal* 63: 7–24.

———. 2017. "Raise the Flag(ship)! Creating Hybrid Language Programs on the Flagship Model." *In Exploring the US Language Flagship Program: Professional competence in a second language by graduation*, edited by Dianna Murphy and Karen Evans-Romaine, 224–43. Bristol: Multilingual Matters.

Glisan, Eileen W. and Richard Donato. 2017. *Enacting the Work of Language Instruction: High-Leverage Teaching Practices*. Alexandria, VA: ACTFL.

Hacking, Jane F. and Erwin Tschirner. 2017. "The Contribution of Vocabulary Knowledge to Reading Proficiency: The Case of College Russian." *Foreign Language Annals* 50 (3): 500–18.

Isbell, Daniel R., Paula Winke and Susan M. Gass. 2019. "Using the ACTFL OPIc to Assess Proficiency and Monitor Progress in a Tertiary Foreign Language Program." *Language Testing* 36 (3): 439–65.

Isurin, Ludmila. 2013. "Hits and Misses in Teaching Russian in the U.S.: The Perspectives of Instructors, Students, and Enrollment." *Russian Language Journal* 63: 25–49.

Johnson, Marysia. 2001. *The Art of Non-Conversation: A Reexamination of the Validity of the Oral Proficiency Interview.* New Haven, CT: Yale University Press.

Kagan, Olga E., Anna S. Kudyma, and Frank J. Miller. 2014. *Russian: From Intermediate to Advanced*. 1st ed. London and New York: Routledge.

Kırmızı, Özkan, and Funda Kömeç. 2019. "The Impact of the Flipped Classroom on Receptive and Productive Vocabulary Learning." *Journal of Language and Linguistic Studies* 15 (2): 437–49.

Kissau, Scott. 2014. "The Impact of the Oral Proficiency Interview on One Foreign Language Teacher Education Program." *Foreign Language Annals* 47 (3): 527–45.

Liskin-Gasparro, Judith E. 2003. "The ACTFL Proficiency Guidelines and the Oral Proficiency Interview: A Brief History and Analysis of Their Survival." *Foreign Language Annals* 36 (4): 483–90.

Malone, Margaret E. 2003. "Research on the Oral Proficiency Interview: Analysis, Synthesis, and Future Directions." *Foreign Language Annals* 36 (4): 491–97.

Malone, Margaret E. and Megan J. Montee. 2010. "Oral Proficiency Assessment: Current Approaches and Applications for Post-Secondary Foreign Language Programs." *Language and Linguistics Compass* 4 (10): 972–86.

McNiff, Jean. 1993. Teaching as Learning: *An Action Research Approach*. London: Routledge.

Meara, Paul. 2005. "Designing Vocabulary Tests for English, Spanish and Other Languages." *In The Dynamics of Language Use: Functional and Contrastive Perspectives*, edited by Christopher S. Butler, María de los Ángeles Gómez González, and Susana M. Doval-Suárez, 271–85. Philadelphia: John Benjamins Publishing Company.

Meredith, R. Alan. 1990. "The Oral Proficiency Interview in Real Life: Sharpening the Scale. *Modern Language Journal* 74 (3): 288–96.

Moranski, Kara and Frederic Kim. 2016. "'Flipping' Lessons in a Multi-Section Spanish Course: Implications for Assigning Explicit Grammar Instruction Outside of the Classroom." *The Modern Language Journal* 100 (4): 830–52.

Mori, Yoshiko, Motoko Omori, and Kumi Sato. 2016. "The Impact of Flipped Online Kanji Instruction on Written Vocabulary Learning for Introductory and Intermediate Japanese Language Students." *Foreign Language Annals* 49 (4): 729–49.

Murphy, Diane, Karen Evans-Romaine, Valerie Anishchenkova, and Zhuo

Jing-Schmidt. 2017. "Laying the Groundwork: Programmatic Models in US Language Flagship Programs." *In Exploring the US Language Flagship Program: Professional Competence in a Second Language by Graduation*, edited by Dianna Murphy and Karen Evans-Romaine, 29–50. Bristol: Multilingual Matters.

Nation, I. S. P. 2001. *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.

———. 2008. *Teaching Vocabulary: Strategies and Techniques*. Boston: Heinle Cengage Learning.

Norris, John M. and Peter C. Pfeiffer. 2003. "Exploring the Uses and Usefulness of ACTFL Oral Proficiency Ratings and Standards in College Foreign Language Departments." *Foreign Language Annals* 36 (4): 572–81.

Nugent, Michael and Robert Slater. 2017. "The Language Flagship: Creating Expectations and Opportunities for Professional-Level Language Learning in Undergraduate Education." *In Exploring the US Language Flagship Program: Professional Competence in a Second Language by Graduation*, edited by Dianna Murphy and Karen Evans-Romaine, 9–28. Bristol: Multilingual Matters.

Nummikoski, Marita. 2012. *Troika: A Communicative Approach to Russian Language, Life, and Culture*. 2nd ed. Hoboken, NJ: Wiley.

Rifkin, Benjamin. 2003. "Oral Proficiency Learning Outcomes and Curricular Design." *Foreign Language Annals*, 36 (4): 582–8.

———. 2005. "A Ceiling Effect in Traditional Classroom Foreign Language Instruction: Data from Russian." *Modern Language Journal* 89 (1): 3–18.

Russell, Victoria. 2018. "An Examination of Flipped Learning in Foreign and Second Language Instructional Contexts." *Open Journal of International Education* 3 (1): 35–60.

Sabahattin, Yesilçinar. 2019. "Using the Flipped Classroom to Enhance Adult EFL Learners' Speaking Skills." PASAA 58: 206–34.

Serrano, Raquel. 2011. "The Time Factor in EFL Classroom Practice." *Language Learning* 61 (1): 117–43.

Serrano, Raquel and Carmen Muñoz. 2007. "Same Hours, Different Time Distribution: Any Difference in EFL?" *System* 35 (3): 305–21.

Stern, H. H. 1985. "The Time Factor and Compact Course Development." *TESL Canada Journal* 3 (1): 13–27.

Thompson, Irene. 1991. "The Proficiency Movement: Where Do We Go from Here?" *The Slavic and East European Journal* 35 (3): 375–89.

———. 1996. "Assessing Foreign Language Skills: Data from Russian." *Modern Language Journal* 80 (1): 47–65.

Tonkin, Kati, Sara Page, and Martin Forsey. 2019. "Managing Cognitive Load with a Flipped Language Class: An Ethnographic Study of the Student Experience." *Foreign Language Annals* 52 (3): 551–75.

VanPatten, Bill. 1996. *Input Processing and Grammar Instruction: Theory and Research*. Westport, CT: Ablex.

Vyn, Reuben, Pamela M. Wesely, and Diane Neubauer. 2019. "Exploring the Effects of Foreign Language Instructional Practices on Student Proficiency Development." *Foreign Language Annals* 52 (1): 45–65.

Webb, Marie and Evelyn Doman. 2016. "Does the Flipped Classroom Lead to Increased Gains on Learning Outcomes in ESL/EFL Contexts?" *CATESOL Journal* 28 (1): 39–67.

Building Bridges with Language and Culture in Russia (Fulbright-Hays Group Project Abroad): Focusing on Intercultural Sensitivity

Alla Kourova, Florin M. Mihai

1. Introduction

In our progressively globalized world, the need to build bridges between people of different languages and cultures has grown exponentially. The phrases GLOBALIZATION, GLOBAL CITIZEN, AND INCREASINGLY INTERCONNECTED WORLD are frequently present in public discourse (Kulturel-Konak, Konak, and D'Allegro 2017). Educators can potentially play a core role in bridging linguistic and cultural gaps between people, groups, and institutions. Closing these gaps was the main goal of the *Building Bridges with Language and Culture in Russia* project. The project was funded by the Fulbright-Hays Group Projects Abroad (GPA) program, which aims to improve US intercultural relations, cultural diplomacy, and intercultural competence by exchanging persons, knowledge, and skills between countries. Through the program, competitively selected American students, scholars, teachers, professionals, scientists, and artists receive scholarships or grants to study, research, or teach. *Building Bridges with Language and Culture in Russia* was an immersive study abroad program at a major metropolitan university in the southeastern United States. It focused on Russia's language, culture, history, politics, and global impact. The GPA in Russia offered participants, who were US high school and university instructors, the opportunity to travel to Russia for a month to engage in language and cultural exchanges. The GPA project participants were then able to use this cultural experience to design and develop curricula, instructional modules, or lesson plans that incorporated their newly acquired knowledge.

The goals of *Building Bridges with Language and Culture in Russia* were very similar to those of many short-term study abroad programs. The literature in the field shows that most study abroad programs seek to improve language skills and language awareness, foster a sense of personal responsibility, and develop intercultural competence and intercultural sensitivity, which manifests in the form of reduced ethnocentrism

(Anderson et al. 2006; Arzberger et al. 2010; Demetry and Vaz 2017). The purpose of the current study was to assess the effects of the short-term study abroad program *Building Bridges with Language and Culture in Russia* on the participants' intercultural sensitivity.

2. Intercultural competence and intercultural sensitivity

Intercultural competence refers to one's capacity to act and react in interculturally appropriate ways (Byram 1997; Bennett 2008, 2017; Lustig, Koester, and Halualani 2017) by using intercultural attitudes, knowledge, and skills (Rissanen, Kuusisto, and Kuusisto 2016; Nameni and Dowlatabadi 2019). According to Dervin and colleagues (2012), the development of intercultural competence is a contextual, never-ending, delicate, and unpredictable process. This development process should focus on context-specific encounters between people with various identities and cultural markers so that everyone's positions and cultural interpretations will be addressed.

Intercultural sensitivity is fundamentally linked to one's ability to identify and navigate important cultural differences. Chen and Starosta (1997) describe intercultural sensitivity as "an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes an appropriate and effective behavior in intercultural communication" (5). Consequently, an individual's aspirations to understand and respect other cultures and their norms represent a central point of intercultural sensitivity. As Hammer, Bennett, and Wiseman (2003) have stated, "Greater intercultural sensitivity is associated with greater potential for exercising intercultural competence" (422). Therefore, intercultural sensitivity is an important construct that is related to but separate from intercultural competence. Intercultural sensitivity contributes to the overall level of intercultural competence and is subsumed by it (Bennett 1986, 1993, 2008; Bhawuk and Brislin 1992; Chen and Starosta 1997, 2000; Peng 2006; Dong, Day, and Collaço 2008; Hammer 2015).

Bennett (1986, 1993; Hammer, Bennett, and Wiseman 2003) has identified and described six stages of intercultural sensitivity in his Developmental Model of Intercultural Sensitivity (DMIS). The first three stages relate to ethnocentrism, while the final three relate to ethnorelativism. Ethnocentrism emphasizes one's own cultural worldview as the central reality, through which other cultures are experienced. On the other hand, ethnorelativism means that one's own cultural worldview is understood and experienced as one among many valid possibilities (Bennett 1993).

According to Hammer and Bennett (1998), the three ethnocentric stages involve ways of avoiding cultural differences, while the three ethnorelative stages represent ways of seeking cultural differences.

In the first stage of intercultural sensitivity, denial, individuals do not consider cultural differences as being important at all. In the second stage, defense, people do perceive cultural differences, but label those differences negatively and experience them as a threat to their own culture's value system. In the third stage of intercultural sensitivity, minimization, individuals attempt to avoid stereotypes and even appreciate differences in language and culture. However, they still consider their own cultural values as universal, rather than viewing those values as simply part of their ethnicity.

The fourth stage, acceptance, requires individuals to be able to shift perspective while still maintaining their commitments to their cultural values. This stage is reached when they accept multiple cultural worldviews as equal. The fifth stage of intercultural sensitivity, adaptation, may allow the individual to function in a bicultural capacity. In this stage, individuals are not only able to take the perspective of another culture but also to function successfully within that culture. In the sixth stage, integration, people can shift perspectives and frames of reference from one culture to another in a natural way. They become adept at evaluating any situation from multiple frames of reference. This sixth and final stage of the model requires both an in-depth knowledge of at least two cultures—one's own and another—and an ability to move easily into the other cultural frame of reference.

3. Impact of language and culture programs on intercultural sensitivity

Research has explored the relationship between study abroad programs and intercultural sensitivity. Most studies comparing the growth in intercultural sensitivity between on-campus students and study abroad students have found a greater increase in the latter category (Williams 2005). However, to what degree students develop intercultural sensitivity while studying abroad depends on individual and contextual factors. Research has indicated that students' prior exposure to and experiences with cultural differences might play an important role in their development of intercultural sensitivity (Pedersen 2010).

Jackson (2009) and Martinsen (2011) have examined study abroad programs' influence on intercultural sensitivity. Jackson's study of 13 Hong Kong students' experience in Oxford, England found that while five students advanced to a higher level of intercultural sensitivity during the five-week

study abroad, seven remained at the same level and one went down a level. However, all participants overestimated their own intercultural sensitivity. Because they believed "it was enough to just be themselves, they seemed blissfully unaware that some of their actions (e.g. communication style) might be impeding relationship-building across cultures" (S68). Martinsen studied a group of 45 students during a six-week study abroad program in Argentina and found a small improvement in their intercultural sensitivity as measured by the Inventory of Cross-cultural Sensitivity (ICCS) (Cushner 1986). Martinsen analyzed the relationships between this modest gain and factors such as the students' motivations for attending the study abroad, the amount of language contact they experienced, their relationship with their host family, and their oral proficiency in the target language. The multiple regression analysis revealed that out of several factors, only language contact accounted for the variance (20%) in the scores on the ICCS. His analysis also showed that greater language contact was not always beneficial. He explained this threshold by suggesting that students needed time away from the target language and culture to reflect on their own cross-cultural encounters.

Bloom and Miranda (2015) conducted a mixed-methods study that examined 12 students' development in intercultural sensitivity over the course of a four-week study-abroad program in Salamanca, Spain. Although the quantitative results did not indicate that students shifted dramatically in intercultural sensitivity over their month-long study abroad experience, an analysis of qualitative data indicated positive changes in the intercultural-sensitivity stages of acceptance, adaptation, and integration, as students felt they identified more with those stages after their study abroad experience than they had before.

Another study that focused on assessing study abroad students' intercultural sensitivity was conducted by Tarchi, Surian, and Daiute (2019). Their study looked at the experiences of 32 US study abroad students and 28 Erasmus Mundus students, all studying in English-speaking programs in Italy. Data were collected using quantitative intercultural-sensitivity measures as well as oral narratives of critical incidents in the foreign culture. The analysis showed that, when narrating their cultural experiences, Erasmus Mundus students adopted an ethnorelative orientation more often than an ethnocentric one. On the other hand, US students employed a more ethnocentric orientation in their narratives. Most of the US students' narratives fell into the minimization stage, as opposed to the Erasmus Mundus students' narratives, which aligned with the acceptance stage.

These studies' findings are congruent with findings from similar research studies: on the whole, short-term study abroad programs have the potential to increase intercultural sensitivity and intercultural competence. However, not all students who participate in those programs will automatically make such gains.

4. Research question

An important body of research has examined the development of intercultural sensitivity among study-abroad university students. However, relatively few studies have examined the role that short-term study abroad may play in the intercultural sensitivity of secondary or tertiary educators. The participants in the *Building Bridges with Language and Culture in Russia* program consisted of university faculty and K–12 teachers. The program developers' explicit goal was to assist this demographic in globalizing their curricula; understanding the linguistic, cultural, and social realities of Russia; and creating a more inclusive environment in their classes through a deeper understanding of Russian society. Therefore, the research question of this study was as follows:

How did the short-term study-abroad program *Building Bridges with Language and Culture in Russia* influence the intercultural sensitivity of secondary and post-secondary educators?

5. Methods

5.1. *Building bridges with language and culture in Russia: program and participants*

Funded by the Fulbright-Hays Group Projects Abroad (GPA), this program focused on Russia's language, culture, history, and politics. The participants in the GPA in Russia and in this study included six university professors in the fields of modern languages, political science, English, English as a second/foreign language, and women's and gender studies, and six high school teachers of history, literature, science, and Russian language. Additionally, the project director (also serving as principal investigator [PI]) and the co-principal investigator (co-PI) participated in the study and directed the study abroad. Both the project director and co-PI work at a large metropolitan university in the southeast United States. Participants' ages ranged from 25 to 70. Of the complete study abroad group (n=14), 13 participants were Caucasian and one was African American. All participants spoke English, and three participants were native Russian speakers, with a fourth being near-native. In addition, two spoke Spanish,

one spoke Romanian, and one spoke Farsi. All participants of this program had traveled abroad prior to this project and had experience collaborating with other cultures. Along with the 4-week study abroad in Russia, the GPA program included the following elements: (1) a 16-hour pre-departure program, (2) an orientation program in Russia focusing on curriculum development in language, culture, history, political science, humanities, and other disciplines, and (3) an 8-hour follow-up program that included discussions among the participants, final project presentations, e-portfolios, teaching and learning modules, lesson plans, and other curricula.

The 16-hour pre-departure program was designed by the project director and co-PI. All participants attended the pre-departure sessions, which included the following: (1) program orientation, (2) Russian language instruction, and (3) Russian history overview. The participants also completed a pre-program Intercultural Sensitivity Survey developed by Zarnick (2010) and based on the Intercultural Sensitivity Index (Olsen and Kroeger 2001).

The in-country segment of the GPA in Russia required all participants to attend classes, seminars, and presentations hosted by the faculty of the Financial University under the Government of the Russian Federation and Moscow City University. Participants took an active role in group discussions, research sessions, language-immersion exercises, cultural and educational visits, e-portfolio assignments, curriculum project development, image and artifact analyses, and other curriculum assignments.

Russian language and literature were presented in the context of culture, history, and politics. Across three weeks spent in Moscow and one week spent in St. Petersburg, participants attended 25 hours of instruction, focusing on language and culture. Professors from the host institutions conducted the formal presentations, and all lectures, seminars, and cultural visits were conducted in both English and Russian, since not all participants were fully proficient in Russian. Each cultural visit, which included urban and rural centers, was selected to support the thematic content of each week's focus (e.g., Moscow, St. Petersburg, Russian art, Russian history, or women in Russian society). Moreover, throughout the in-country experience, the participants interviewed and consulted Russian teachers, students, administrators, government officials, and professors with the purpose of accessing their expertise in and opinions on the weekly themes. The university faculty and host institutions were available for consultation and research support, both during curriculum development abroad and upon returning home.

As part of the post-travel segment of the GPA in Russia, participants attended a workshop and reception. This 8-hour workshop included participating in a debriefing, completing the post-program intercultural-sensitivity survey, writing individual reports on final curriculum projects and learning modules, and meeting with an external evaluator. During the post-travel segment, participants received feedback from the PI and the co-PI on how accurately their individual curriculum projects reflected Russian language and culture. This feedback was important as those projects clearly demonstrated what participants had learned about Russia during the *Building Bridges with Language and Culture in Russia* study abroad program. As shown in Table 1, participants in the project made substantial improvements and additions to their curricula, addressing a wide range of topics related to Russia. Those curriculum enhancements, covering a wide range of subjects in language, literature, history, and art, could not have been done without a direct exposure to Russian language and culture.

Table 1. Participants' curriculum projects.

Participant 1	• Developed a course on advanced Russian language and culture, including videos from the Russian part of the program. • Redesigned two courses on Russian language and culture. • Started working on the book *Exploring Language and Culture in Business Russia: AResearch-Informed Approach*.
Participant 2	• Developed three modules on Russia: Russia's Grassroots Activism (1980s), Soviet Union War Machine and Women's Roles (1940s), and The Women's Liberation Movement in Russia (1860–1930). • Developed a new online graduate class titled Global Women in Crisis and redesigned a course titled Global and Transnational Feminism.

Participant 3	• Created five modules focusing on Russian language and culture to incorporate in an applied linguistics class: Russian Language and Culture Focus #1: Introduction to Russian; Russian Language and Culture Focus #2: Russian Morphology; Russian Language and Culture Focus #3: Russian Phonetics/ Phonology; Russian Language and Culture Focus #4: Russian Grammar; and Russian Language and Culture Focus #5: Russian Culture.
Participant 4	• Developed a curriculum proposal for a course on Pushkin's *EvgeniiOnegin*.
Participant 5	• Developed a new course: Art in Russia. • Developed lesson plans for a course oncommunicative language-intensive Russian for summer STARTALK. • Created a workshop for professors of Russian 20th-century art.
Participant 6	• Developed a digital repository for the Fulbright-Hays GPA as an open educational resource containing media from the project.
Participant 7	• Redesigned a course on the government and politics of Russia by including new instructional modules based on the study of the origins, institutions, and functioning of the Russian political system, including the lingering influence of the old order on domestic and foreign policy.
Participant 8	• Created a course titled Mind Map—Deepening Knowledge with Literary Text Using "The Grasshopper" by Anton Chekhov.

Participant 9	• Developed a new history class for high school, History of the Americas, based on the materials covered in Russia (a unit on Russian perspectives in the Cold War). • Incorporated three lessons at the Model UN into lesson plans for high school students,covering the following topics: (1) can a ruler be both enlightened and absolute?, (2)the story and significance of Peter the Great and his rule, and (3)what does legal code reveal about enlightened despotism in the 18th century?
Participant 10	• Helped a university organize an exchange program with students from Russia.
Participant 11	• Developed a new course, Continental European Fiction. This course examines Russian literature in translation and what it means to be Russian, touching on the political and environmental effects of world war, the way gender and race affect society, the importance of diversity, and the nature of good and evil.
Participant 12	• Developed a new course, Russian and American Academic Preparation and Educational Theories and Practices. The course comparesRussian and American pedagogical theories, research writing, and school systems.
Participant 13	• Developed a new high school–level course, Textual Analysis Film: Integration of Russian Films in Cultural Context. • Promoted the adoption of Russian language as one of the IB group choices, together with Spanish and Latin, to be implemented (2019–2020) at the high school level.
Participant 14	• Developed Russian-based instructional modules for an introductory course in political science.

6. Data-collection instruments

Two instruments were used for data collection in this study. The first one was a quantitative survey designed to assess participants' self-reported perceptions of their own intercultural sensitivity, both prior to attending the short-term study abroad program and following the program. The 48-item Intercultural Sensitivity Survey (ISS) developed by Zarnick (2010) was based on the Intercultural Sensitivity Index developed by Olsen and Kroeger (2001). The ISS provides information about respondents' intercultural sensitivity and their ability to identify and experience relevant cultural differences. All survey items asked respondents to select an answer on a scale of 1–5. The scale includes the following five options: (1) never describes me, (2) seldom describes me, (3) describes me some of the time, (4) describes me well, and (5) describes me extremely well. The data reported in this article come from questions 1–24, as those survey questions relate directly to the research question of this study. Questions 25–48 evaluate substantive knowledge, perceptual understanding, and intercultural communication, which are important constructs but are not directly related to the research question of this study.

The second instrument, qualitative in nature, was a journal. The journal contained four entries that were collected by the end of each week in the program. The journal entries contained the participants' observations regarding daily life, classes, lectures, tours, and meetings with educators and students. Participants were prompted to write about three things they learned, three things they did not expect, and three things they had questions about.

7. Data analysis

7.1. Quantitative data analysis

Out of 14 participants, 11 completed both the pre-departure and post-departure surveys. The descriptive statistics for questions 1–24 are listed in Table 2. The collected data were not normally distributed based on the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality, so a dependent t-test method of comparing the pre- and post-departure results was not appropriate. Instead, the Wilcoxon Signed-Rank test was employed as non-parametric, as it does not assume normality in the data. The significance values are also listed in Table 2.

Table 2. Intercultural sensitivity pre- and post-survey results.

Question	Pre-Test Descriptive Statistics	Post-Test Descriptive Statistics	Significance Wilcoxon Signed-Rank Test
1. I do not really notice cultural differences.	Mean: 1.63 SD: .80 Minimum: 1 Maximum: 3	Mean: 1.90 SD: 1.30 Minimum: 1 Maximum: 4	.257
2. I think that cultural diversity really only exists in other places.	Mean: 1.45 SD: 1.21 Minimum: 1 Maximum: 5	Mean:1.54 SD: 1.21 Minimum: 1 Maximum: 5	.31
3. I feel most comfortable living and working in a community where people look and act like me.	Mean: 1.63 SD: .80 Minimum: 1 Maximum: 3	Mean: 1.90 SD: 1.30 Minimum: 1 Maximum: 4	.18
4. I have intentionally sought to live in a racially or culturally distinct community.	Mean: 3.72 SD:1 Minimum: 2 Maximum: 5	Mean: 3 SD: 1.4 Minimum: 1 Maximum: 5	.19
5. I am surrounded by culturally diverse people, and feel like my cultural values are threatened.	Mean: 1.54 SD: 1.21 Minimum: 1 Maximum: 5	Mean: 1.09 SD: .30 Minimum: 1 Maximum: 2	.18
6. I sometimes find myself thinking derogatory things about people who look or act differently from me.	Mean: 1.81 SD: 1.16 Minimum: 1 Maximum: 5	Mean: 1.45 SD: .52 Minimum: 1 Maximum: 2	.31

Question	Pre-Test Descriptive Statistics	Post-Test Descriptive Statistics	Significance Wilcoxon Signed-Rank Test
7. I believe that aid to developing countries should be targeted to those efforts that help these countries evolve toward the types of social, economic, and political systems that exist in the United States.	Mean: 2.36 SD: 1.36 Minimum:1 Maximum: 5	Mean: 2.18 SD: 1.25 Minimum: 1 Maximum: 5	.15
8. I believe that certain groups of people are very troublesome and do not deserve to be treated well.	Mean: 1.63 SD: 1.28 Minimum: 1 Maximum: 5	Mean: 1.54 SD: 1.21 Minimum: 1 Maximum: 5	.56
9. I have lived for at least 2 years in another country and believe that American society should embrace the values of this culture in order to address the problems of contemporary American society.	Mean: 2.18 SD: 1.72 Minimum: 1 Maximum: 5	Mean: 2.09 SD: 1.44 Minimum: 1 Maximum: 5	.78
10. I understand that differences exist but believe that we should focus on similarities. We are all human.	Mean: 4.09 SD: 1.22 Minimum: 2 Maximum: 5	Mean: 3.90 SD: 1.70 Minimum: 1 Maximum: 5	.68

Question	Pre-Test Descriptive Statistics	Post-Test Descriptive Statistics	Significance Wilcoxon Signed-Rank Test
11. I think that most human behavior can be understood as manifestations of instinctual behavior like territoriality and sex.	Mean: 2.09 SD: 1.04 Minimum: 1 Maximum: 4	Mean: 2.27 SD: 1.27 Minimum: 1 Maximum: 4	.72
12. I think that all human beings are subject to the same historical forces, economic and political laws, or psychological principles. These principles are invariable across cultures.	Mean: 2.72 SD: 1.67 Minimum: 1 Maximum: 5	Mean: 2.72 SD: 1.61 Minimum: 1 Maximum: 5	1
13. I believe that physical displays of human emotions are universally recognizable: A smile is a smile wherever you go.	Mean: 2.81 SD: 1.40 Minimum: 1 Maximum: 5	Mean: 2.63 SD: 1.28 Minimum: 1 Maximum: 5	.48
14. I acknowledge and respect cultural difference. Cultural diversity is a preferable human condition.	Mean: 4.72 SD: .64 Minimum: 3 Maximum: 5	Mean: 4.72 SD: .46 Minimum: 4 Maximum: 5	1

Question	Pre-Test Descriptive Statistics	Post-Test Descriptive Statistics	Significance Wilcoxon Signed-Rank Test
15. I believe that verbal and nonverbal behavior varies across cultures and that all forms of such behavior are worthy of respect.	Mean: 4.27 SD: 1.34 Minimum: 1 Maximum: 5	Mean: 4.72 SD: .46 Minimum: 4 Maximum: 5	.33
16. I think that cultural variations in behavior spring from different worldview assumptions.	Mean: 4.27 SD: .78 Minimum: 3 Maximum: 5	Mean: 4.45 SD: .68 Minimum: 3 Maximum: 5	.60
17. I believe that my worldview is one of many equally valid worldviews.	Mean: 4.45 SD: .52 Minimum: 4 Maximum: 5	Mean: 4.45 SD: .93 Minimum: 2 Maximum: 5	1
18. I have added to my own cultural skills new verbal and nonverbal communication skills that are appropriate in another culture.	Mean: 4 SD: .89 Minimum: 3 Maximum: 5	Mean: 4.27 SD: .90 Minimum: 3 Maximum: 5	.45
19. I believe that culture is a process. One does not have culture: one engages in culture.	Mean: 4.18 SD: .75 Minimum: 3 Maximum: 5	Mean: 3.81 SD: 1.32 Minimum: 1 Maximum: 5	.31

Question	Pre-Test Descriptive Statistics	Post-Test Descriptive Statistics	Significance Wilcoxon Signed-Rank Test
20. I am able to temporarily give up my own worldview to participate in another worldview.	Mean: 4.45 SD: .68 Minimum: 3 Maximum: 5	Mean: 4.27 SD: 1 Minimum: 2 Maximum: 5	.51
21. I have two or more cultural frames of reference, and I feel positive about cultural differences.	Mean: 4.72 SD: .64 Minimum: 3 Maximum: 5	Mean: 4.54 SD: 1.21 Minimum: 1 Maximum: 5	1
22. I feel culturally marginal or on the periphery of two or more cultures.	Mean: 2.90 SD: 1.30 Minimum: 1 Maximum: 5	Mean: 3.09 SD: 1.22 Minimum: 1 Maximum: 5	.15
23. I am able to analyze and evaluate situations from one or more chosen cultural perspectives.	Mean: 4.63 SD: .50 Minimum: 4 Maximum: 5	Mean: 4.27 SD: .90 Minimum: 2 Maximum: 5	.25
24. When faced with a choice about how I am going to respond to a given situation, I am able to shift between two or more cultural perspectives and consciously make a choice to act from one of these cultural contexts.	Mean: 4.27 SD: 1 Minimum: 2 Maximum: 5	Mean: 4.36 SD: .67 Minimum: 3 Maximum: 5	.70

The data in Table 2 revealed that there were not any significant differences between pre- and post-survey results. However, the survey data did pinpoint each participant's place on the intercultural-sensitivity continuum. Zarnick (2010) assigned the survey questions to the six stages of intercultural sensitivity as follows: denial (questions 1–4), defense (questions 5–9), minimization (questions 10–13), acceptance (questions 14–17), adaptation (questions 18–21), and integration (questions 22–24). Figure 1 illustrates the pre- and post–study abroad means for each of the six stages of intercultural sensitivity.

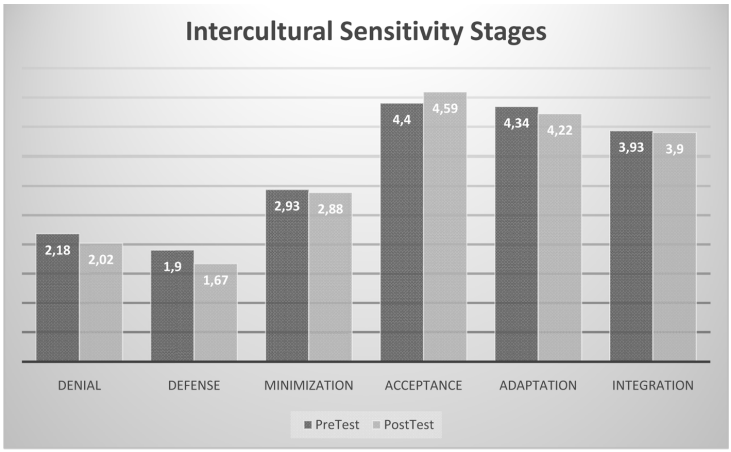


Figure 1. Intercultural-sensitivity stages: pre- and post-departure survey data

When considering the three stages assigned to ethnocentrism—denial, defense, and minimization—there was little change in average scores pre- and post–study abroad. Participants scored an average of 2.18 on the pre-departure survey and 2.01 post-departure for the denial stage. For the defense and minimization stages, respondents averaged scores of 1.90 and 2.93 (pre-departure) 1.67 and 2.88 (post-departure) respectively. These overall decreasing means suggest that the study abroad experience had little negative impact on participants' intercultural-sensitivity levels within the ethnocentric stages, while the lowness of these means could be attributed to the previous life and travel experiences of the participants. Moreover, since participants were people from large, metropolitan environments, they likely experienced cultural differences regularly and thus reported low ratings in the denial, defense, and minimization stages. Therefore, participants were fairly comfortable towards and accepting of diversity, as all three stages of ethnocentrism averaged below 3: "describes me some of the time."

For the three stages of ethnorelativism—acceptance, adaptation, and integration—participants rated high on both pre- and post–study abroad survey results. Of particular interest were the averages recorded for acceptance (pre-departure 4.40 and post-departure 4.59) and adaptation (pre-departure 4.34 and post-departure 4.22). Both stages had an average higher than 4: "describes me well." Based on the descriptive statistics illustrated in Figure 1, the participants were in between the acceptance and adaptation stages, which means that they were making very good progress towards becoming interculturally sensitive. Additionally, it seems like quite a few of the participants were learning to connect with unfamiliar cultures while maintaining their own cultural perspectives. Even though the pre and post means for the integration stage were not as high as the means recorded for the acceptance and adaptation stages, they ranked higher than any of the three ethnocentric stages of denial, defense, and minimization did. The pre and post means for the integration stage were 3.93 and 3.90 respectively, closer to a 4: "describes me well" than a 3: "describes me some of the time."

The analysis of the quantitative data revealed that the four-week experience in Russia did not produce a statistically significant change in participants' intercultural-sensitivity levels after the study abroad program. The pre-departure score analysis showed that the highest overall averages within the stages of the Developmental Model of Intercultural Sensitivity (DMIS) were the acceptance and adaptation stages. Post-departure survey means showed participants at the same stages as they were in the pre-departure survey, with a slight increase for acceptance (from 4.4 to 4.59) and a slight, albeit not statistically significant, decrease for adaptation (from 4.34 to 4.22). The fact that participants' scores did not significantly change within each stage may suggest the short-term study abroad experience had not advanced the participants' intercultural-sensitivity levels; alternatively, it could be claimed that the experience solidified participants' ethnorelative stages. The study abroad did not decrease the reported means for those stages and did not cause participants to regress on the DMIS continuum, as is sometimes the case with individual study abroad experiences (Jackson 2009).

7.2. Qualitative data analysis

The participants' journal entries fit into three main themes: visible aspects of cultural diversity, participants' interactions with native Russians, and participants' views of ethnorelativism. Responses in all three categories demonstrated increasing intercultural sensitivity, especially for the stages of acceptance and adaptation.

7.2.1. Visible aspects of cultural diversity

In several journal entries, participants remarked on Russia's visible cultural diversity, created by people of differing cultures intermingling in their day-to-day lives. For example, this participant illustrated their appreciation for cultural differences when describing visible aspects of St. Petersburg in the following entry:

> One of the things that surprised me is the visible diversity of the city of St. Petersburg, a veritable metropolis that rivals any European capital. The first thing that I have noticed is the fact that you can find people from all over Russia and the former Soviet republics in the streets of St. Petersburg. Also, I could hear not only Russian spoken in the streets, but other languages as well. In addition, all corners of Russia as well as the former Soviet republics were represented in the diversity of eateries and restaurants. In addition to absolutely fantastic restaurants, I could spot Siberian and Uzbek places during our walks on Nevskii Prospect, arguably the most beautiful boulevard in St. Petersburg and perhaps the entire Russian Federation.

Another participant related a dance show to regional differences and how those differences influence aspects of Russian life: "I was completely blown away by the Russian National Dance Show Kostroma. It gave such a comprehensive view of the various regions of this vast country and spanned the centuries as well. I think I even liked this better than Swan Lake. What really surprised me though, was during the café scene I actually recognized one of the songs. It was the song we learned to sing in our language class!"

Another participant used a cultural artifact to thoughtfully connect Russian literature to the daily life of Russian people:

> During one of our trips, we were fortunate to see one of the newer metro stops, Dostoyevskaya, which had Dostoyevsky as its central figure. The metro station described scenes from his literary works, and presented them in a modern way. The station was new but the subject matter was from the literary past, which showed such a strong link between the past and the present, with an impact on future generations. I'd say that this is another cultural characteristic of Russia: we, as Russians, are in the present, looking forward to the future, but we will never forget the past.

Lastly, one participant identified other aspects of diversity when they wrote about visible aspects of medicine in Russia: "What I did find interesting in Russia is that some medicine, which you can find at the pharmacy, has braille. I have never seen this in use and think this is an

extremely important function. It is extremely difficult and dangerous for blind people to take medication or buy and not know what it is unless someone tells them. The use of braille gives these people more autonomy."

7.2.2. Interactions with native Russians

Many journal entries illustrated how participants adapted their language and behavior during their interactions with native Russians. Here is a participant who adapted their language use in a practical situation that any visitor might encounter: "Today I went to the store by myself to try to troubleshoot an error with the mobile hotspot I recently bought, and none of the women behind the counter spoke English. I was so proud of myself for struggling through it and leaving with the issue resolved."

One journal entry showed the participant's appreciation for life in various settings in Russia and offered a glimpse at everyday life in another culture: "I expressed an interest in learning more about the 'typical' Russian lifestyle outside of the big city. While it was brief and quite limited, our trip to the Golden Rings cities gave us a glimpse into the smaller towns and villages. In Vladimir, I was drawn to a local woman sitting outside a gift shop making a lace doily by hand, and I found myself trying to capture her spirit in video. She was genuinely warm and happy and greeted everyone that passed by as though they were old friends." Another entry reported on a chance encounter with a Russian couple: "We were in an elevator in the hotel and a Russian couple asked us where we were from. They were so happy to hear that were from the US and so happy that we loved Russia. They wished us a great stay in their country and you could feel the sincere warmth of their words. I've met so many excited people on this trip that have left an indelible mark on me. I will forever remember them."

7.2.3. Views of ethnorelativism

One participant strongly supported early foreign-language learning in Russian schools, which is not the current norm in the United States. They wrote, "Russia's education system definitely has a few advantages over the United States' system because they start teaching foreign languages in primary school. I hope to be able to advocate for more and higher quality foreign language in the US education system at primary, secondary, and post-secondary institutions." Because the participant does not consider the US-based norm universal, this is an excellent example of acceptance, the ethnorelative stage of intercultural sensitivity that regards multiple cultural worldviews as equal. Another participant, who has been an educator for

more than 25 years, provided additional evidence of ethnorelativism when discussing the potential negative influences of ethnocentrism. This participant noted that "American and Eurocentric cultural stereotypes and prejudices, especially notions of cultural superiority, are major hindrances for Americans learning Russian. This is particularly detrimental when combined with frequent low levels of personal, professional and national humility."

Another participant acknowledged the importance of Russian literature in shaping the Russian culture and people. Perhaps this is yet another example of the ethnorelative stage of adaptation, where this participant is demonstrating the ability to take the perspective of another culture:

> It is difficult for non-Russians to understand the meaning and unparalleled significance of Pushkin in all areas of historical and contemporary Russian life. Other nations have great writers, poets and artists. I can think of none who so animate a nation's national life and self-identity as Pushkin animates Russian life and identity. To understand Pushkin is to understand a large and important part of the Russian people. My first inkling of Pushkin's power came as an undergraduate studying Russian language and literature. Decades later, I continue to marvel not only at Pushkin's art but also at his influence on a nation.

Overall, in many journal entries, participants overwhelmingly appreciated the willingness of the Russian faculty, staff, and presenters to collaborate with them and to establish bridges between Russia and the United States. As one participant stated, "They all have acknowledged the difficult current political climate but emphasized the idea that it was very important to build bridges between the two countries and cultures at the personal and institutional levels."

8. Limitations

Regarding some limitations of the current study on short-term study abroad programs, a control group is necessary in order to apply quantitative methods to the research. These methods also require controlling for other learner variables. Second, the participants were well-traveled educators, some of whom were immigrants to the United States, who had already been exposed to multiple cultures. Therefore, nationality and exposure to other cultures should be investigated further to determine if they have any predictive ability towards gains in intercultural sensitivity. Another limitation is related to the survey administration. Only two surveys were

administered in this study; however, a third survey should be administered months after the study abroad to ensure that the experience is properly internalized (Medina-Lopez-Portillo 2004). Finally, additional research instruments such as self-reports and developmental interviews need to be employed to refine triangulation. For example, in a developmental interview, participants are required to recount specific situations they experienced, explain the cultural differences they encountered, and elaborate on the mediation strategies they used in response to those differences (Hammer 2012). This study and future studies would benefit from hiring an interviewer familiar with the DMIS to administer multiple developmental interviews to the study's participants.

9. Conclusions

The focus of the GPA in Russia's short-term curriculum development project was to understand the role and realities of Russia in a global society by studying its culture, language, history, and politics. The instructional modules and new courses that participants developed as part of this project incorporated their research and collaborative work from the study abroad in Russia. Essential to this curriculum-development process was the construct of intercultural sensitivity, which was measured through quantitative and qualitative instruments. Even though participants' intercultural-sensitivity indices did not dramatically increase from a quantitative perspective, neither did they dramatically decrease. Moreover, when educators utilize course content that promotes developing cross-cultural understanding (as participants did in their curriculum projects), students may, in turn, increase in their own intercultural-sensitivity levels (Drewelow 2013). The participants remained at the acceptance and adaptation stages after the study abroad experiences, as demonstrated by their post-departure means for the two stages (4.59 and 4.22 respectively).

In terms of increasing intercultural sensitivity, future research is needed to see whether the limited results that are typically reported for short-term study abroad programs are due to the duration of the program or the design of the program. According to Bloom and Miranda (2015), short-term programs could prove more effective through a carefully designed curriculum that is implemented prior to, during, and following participants' experience abroad. The model presented in this study, where participants completed pre-departure, in-country, and post-departure activities designed to support their intercultural development, could potentially offer a blueprint for other study abroad programs that encourage educators to integrate intercultural sensitivity into their curriculum and teaching.

References

Anderson, Philip H., Ann C. Hubbard, Leigh Lawton, and Richard J. Rexeisen. 2006. "Short-Term Study Abroad and Intercultural Sensitivity: A Pilot Study." *International Journal of Intercultural Relations* 30 (4): 457–469. https://doi.org/10.1016/j.ijintrel.2005.10.004.

Arzberger, Peter, Gabriele Wienhausen, David Abramson, Jim Galvin, Susumu Date, Fang-Pang Lin, Kai Nan, and Shinji Shimojo. 2010. "PRIME: An Integrated and Sustainable Undergraduate International Research Program." *Advances in Engineering Education* 2 (2): 1–32.

Bennett, Milton J. 1986. "A Developmental Approach to Training for Intercultural Sensitivity." *International Journal of Intercultural Relations* 10 (2): 179–196.

Bennett, M. J. 1993. "Towards Ethnorelativism: A Developmental Model of Intercultural

Sensitivity." In *Education for the Intercultural Experience*, edited by Richard Michael Paige, 21–27. Yarmouth, ME: Intercultural Press.

Bennett, Milton J. 2008. "On Becoming a Global Soul: A Path to Engagement During Study Abroad." In *Developing Intercultural Competence and Transformation: Theory, Research, and Application in International Education*, edited by Victor Savicki, 13–31. Sterling, VA: Stylus Publishing.

Bennett, Milton J. 2017. "*Developmental Model of Intercultural Sensitivity." In The International Encyclopedia of Intercultural Communication*, edited by Young Yun Kim, 1–8. Wiley. http://doi.org/10.1002/9781118783665.ieicc0182.

Bhawuk, Dharm P. S., and Richard Brislin. 1992. "The Measurement of Intercultural Sensitivity Using the Concepts of Individualism and Collectivism." *International Journal of Intercultural Relations* 16 (4): 413–436.

Bloom, Melanie, and Arturo Miranda. 2015. "Intercultural Sensitivity Through Short-Term Study Abroad." *Language and Intercultural Communication* 15 (4): 567–580. https://doi.org/10.1080/14708477.2015.1056795.

Byram, Michael. 1997. *Teaching and Assessing Intercultural Communicative Competence*. Clevedon: Multilingual Matters.

Chen, Guo-Ming, and William J. Starosta. 1997. "A Review of the Concept of Intercultural Sensitivity." *Human Communication* 1: 1–16.

Chen, Guo-Ming, and William J. Starosta. 2000. "The Development and Validation of the Intercultural Sensitivity Scale." *Human Communication 3:* 3–14.

Cushner, Kenneth. 1986. *Human Diversity in Action: Developing Multicultural Competencies for the Classroom*. 2nd ed. New York: McGraw-Hill.

Demetry, Chrysanthe, and Richard F. Vaz. 2017. "Influence of an Education Abroad Program on the Intercultural Sensitivity of STEM Undergraduates: A Mixed Methods Study." *Advances in Engineering Education* 6 (10): 1–32.

Dervin, Fred, Martina Paatela-Nieminen, Kaisa Kuoppala, and Anna-Leena Riitaoja. 2012. "Multicultural Education in Finland: Renewed Intercultural Competencies to the Rescue?" *International Journal of Multicultural Education* 14: 1–13.

Dong, Qingwen, Kenneth D. Day, and Christine M. Collaço. 2008. "Overcoming Ethnocentrism through Developing Intercultural Communication Sensitivity and Multiculturalism." *Human Communication* 11 (1): 27–38.

Drewelow, Isabelle. 2013. "Impact of Instruction on Shaping or Reshaping Stereotypical Cultural Representation in an Introductory French Course." *Foreign Langugae Annals* 46 (2): 157–174. https://doi.org/10.1111/flan.12029.

Hammer, Mitchell R., and Milton J. Bennett. 1998. "The Developmental Model of Intercultural Sensitivity." In *The Intercultural Development Inventory Manual*. Portland, OR: Intercultural Communication Institute.

Hammer, Mitchell R., Milton J. Bennett, and Richard Wiseman. 2003. "Measuring Intercultural Sensitivity: The Intercultural Development Inventory." *International Journal of Intercultural Relations* 27: 421–443.

Hammer, Mitchell R. 2012. "The Intercultural Development Inventory: A New Frontier in Assessment and Development of Intercultural Competence." In *Student Learning Abroad*, edited by Michael Vande Berg, Richard Michael Paige, and Kris Hemmin Lou, 115–136. Sterling, VA: Stylus Publishing.

Hammer, Mitchell. R. 2015. "The Developmental Paradigm for Intercultural Competence Research." *International Journal of Intercultural Relations* 48: 12–13. https://doi.org/10.1016/j.ijintrel.2015.03.004.

Jackson, Jane. 2009. "Intercultural Learning on Short-Term Sojourns." *Intercultural Education* 20 (S1–2): S59–S71.

Kulturel-Konak, Sadan, Konak Abdullah, and Mary L. D'Allegro. 2017. "Global Awareness Interest of College Students." *International Journal of Bias, Identity and Diversities in Education* (IJBIDE) 2 (1): 13–26. https://doi.org/10.4018/IJBIDE.2017010102.

Lustig, Myron W., Jolene Koester, and Rona Halualani. 2017. *Intercultural Competence: Interpersonal Communication across Cultures*. 8th ed. Boston: Pearson.

Martinsen, Rob. 2011. "Predicting Changes in Cultural Sensitivity among Students of Spanish During Short-Term Study Abroad." *Hispania* 94: 121–141.

Medina-Lopez-Portillo, Adriana. 2004. "Intercultural Learning Assessment: The Link between Program Duration and the Development of Intercultural Sensitivity." *Frontiers: The Interdisciplinary Journal of Study Abroad* 10 (January): 179–199.

Nameni, Afsaneh, and Hamidreza Dowlatabadi. 2019. "A Study of the Level of Intercultural Communicative Competence and Intercultural Sensitivity of Iranian Medical Students Based on Ethnicity." *Journal of Intercultural Communication Research* 48 (1): 21–34. https://doi.org/10.1080/17475759.2018.1549586.

Olson, Christa Lee and Kent R. Kroeger. 2001. "Global Competency and Intercultural Sensitivity." *Journal of Studies in International Education* 5 (2): 116–37. doi:10.1177/102831530152003.

Pedersen, Paula J. 2010. "Assessing Intercultural Effectiveness Outcomes in a Year-Long Study Abroad Program." *International Journal of Intercultural Relations* 34 (1): 70–80. https://doi.org/10.1016/j.ijintrel.2009.09.003.

Peng, Shi-Yong. 2006. "A Comparative Perspective of Intercultural Sensitivity Between College Students and Multinational Employees in China." *Multicultural Perspectives* 8 (3): 38–45. https://doi.org/10.1207/s15327892mcp0803_7.

Rissanen, Inkeri, Elina Kuusisto, and Arniika Kuusisto. 2016. "Developing Teachers' Intercultural Sensitivity: Case Study on a Pilot Course in Finnish Teacher Education." *Teaching and Teacher Education* 59 (October): 446–456. https://doi.org/10.1016/j.tate.2016.07.018.

Tarchi, Christian, Alessio Surian, and Colette Daiute. 2019. "Assessing Study Abroad Students' Intercultural Sensitivity with Narratives." *European Journal of Psychology of Education* 4: 873. https://doi.org/10.1007/s10212-019-00417-9.

Williams, Tracy Rundstrom. 2005. "Exploring the Impact of Study Abroad on Students' Intercultural Communication Skills: Adaptability and Sensitivity." *Journal of Studies in International Education* 9 (4): 356–371.

Zarnick, Barbara E. "Short-Term Abroad Programs and the Development of Intercultural Sensitivity." Master's thesis, Loyola University, 2010.

Kopotev, Mikhail, Olga Lyashevskaya, and Arto Mustajoki, eds. 2018. *Quantitative Approaches to the Russian Language*. London: Routledge. 220 pages.

The volume edited by Mikhail Kopotev, Olga Lyashevskaya, and Arto Mustajoki is a testament to the reinvigorated interest in quantitative approaches to the study of the Russian language that has marked the past decade and a half. The trend, largely prompted and sustained by the widespread availability of large and well-annotated corpora, that is, digital collections of linguistic data (Kopotev and Mustajoki, 2008), is on full display in the edited volume. The methods and instruments featured in the collection are overwhelmingly corpus-based; however, many of the studies described in the papers showcase how various approaches to the analysis of language data can be successfully combined.

The ten papers that comprise the volume are divided across four parts. The first two introductory papers are followed by Part II: Topics in Semantics, Part III: Topics in Lexicon-Grammar Interface, and Part IV: Topics in Language Acquisition.

The first paper in the collection (written by the editors) provides a detailed overview of quantitative approaches to the study of Russian, a survey of early and contemporary Russian language corpora and other corpus resources, and a short introduction to the basic statistical methods widely applied in the field. The style and organization of the paper make the topic accessible to readers of various degrees of proficiency in linguistic methods and ensure that the readers can fully engage with the rest of the papers in the volume.

Following the lead of the first paper, the paper by Maria Khokhlova provides a user-friendly yet thorough exploration of one of the foundational issues of corpus linguistics research, that of how linguistic structures (broadly conceived) are distributed across corpora of different sizes and composition. The results of the study, highlighting strong correlations between the order of items on frequency lists and the length, composition, and design of a corpus, provide an important insight into interpreting results of studies based on the analysis of frequencies.

The notion of frequency is taken further in Part II, specifically, in the paper by Anastasiya Lopukhina, Konstantin Lopukhin, and Grigory Nozyrev; here, the authors explore the possibility of analyzing the

frequency of word senses rather than word forms that are—more often than not—polysemous. The paper presents and evaluates a model designed to determine noun sense frequency in Russian. The model is based on semantic vectors, that is, an approach to understanding the sense of a word based on the analysis of the contexts in which it is embedded; it is trained on a raw corpus and is subsequently supplied with the data from the Active Dictionary of Russian (Apresjan 2014). The results of the study suggest a wide applicability of sense disambiguation procedures to the study of semantics, to lexicography, and to language teaching, especially in creating learner dictionaries and other teaching and learning resources.

The other two chapters in Part II approach the exploration of word sense from a slightly different methodological perspective. Thus, the paper by Olga Lyashevskaya, Maria Ovsjannikova, Nina Szymor, and Dagmar Divjak explores the possibility of understanding the meaning of Russian modal words through examining formal and semantic context of the modals in the written subcorpus of the Russian National Corpus. The analyses of the formal and semantic features of the extracted contexts for the modal words involved additional annotation carried out by human raters followed by statistical analyses of the results. The value of the paper lies both in its promise to add empirical credence to the many classifications of modal words proposed in the theoretical literature and in its service as an effective model for conducting linguistic research that combines corpus-based and statistical methods with formal and/or logical models for various linguistic categories and concepts.

Another interesting case study is presented in the third paper in Part II (by Andrey Kutuzov and Elizaveta Kuzmenko). Utilizing the methodology of distributed neural embedding models, this paper investigates how changes in the meaning of lexical items occur over time. Analyzing texts created before 1917, during the Soviet era, and after the collapse of the USSR in 1991, the authors tracked semantically similar nouns and adjectives and assessed how the meanings of these words have shifted historically. The paper may be of great interest to anyone attempting a study of the period from either the historic, literary, social, or cultural studies perspectives and is a potent illustration of the value of digital approaches to humanities.

The notion of frequency, as well as the notion of lexical ambiguity, is picked up again in the paper by Alexander Pipersky, which opens the section on lexicon-grammar interfaces. Focusing on Russian bi-aspectual verbs, that is, an aspectual pair "containing two homophonous verbs having largely intersecting sets of forms" (116), the author tests three quantitative methods used to determine the status of a bi-aspectual verb. The first

one involves assessing relative frequencies of a verb's perfective and imperfective gerunds; the second method analyzes grammatical profiles of bi-aspectual verbs (as reflected in the distribution of its grammatical forms in the corpus); while the third method involved a perception experiment with native speaker participants. The triangulation of the methods can reliably indicate whether a verb is more imperfective- or perfective-like, helping disambiguate verb senses.

The classic example of lexicon–grammar interfacing, namely collocations, are the topic of the paper by Lidia Pivovarova, Daria Kormacheva, and Mikhail Kopotev. This work addresses methodological concerns of extracting collocations by comparing the efficiency of different statistical methods traditionally used to extract collocations—specifically, t-score, log-likelihood, and Dice. By cross-evaluating the results of the statistical extraction procedures with dictionary entries and human rater evaluations, the authors empirically establish the advantages and limitations of the statistical approaches to the extraction of collocations from a corpus. The results of the study are important for collocational studies of either standard or learner varieties of Russian.

The paper concluding Part III, by Anastasia Bonch-Osmolovskaya, demonstrates how quantitative corpus methods can be used in linguistic research. By studying the distribution of dative subject constructions with predicative and adjective forms, the author illustrates that frequency rates of dative subjects differ depending on the type of predicate. The results also differ depending on the subcorpora use, showing clear tendencies across historic periods.

The last two chapters in the volume break away from the collection's larger methodological bend toward corpus analytic procedures and illustrate the more traditional (psycho)linguistic approaches to the analysis of elicited data. The study by Alexei Korneev and Ekaterina Protassova focuses on the development of literacy in bilingual Finnish-Russian children. By using a computer-based digitized tablet that records the process of handwriting, the researchers assessed the development of writing skills, taking into consideration factors such as different home literacy practices. The results of rmANOVA tests reveal that home language may support language skills, but literacy training in another language/script supports the quality of writing as well.

The paper concluding the volume, written by Robyn Orfitelli and Maria Polinsky, explores the limits of the use of grammaticality judgment tasks (GJT) in cases where the use of GJT implies higher demands on metalinguistic decision-making, such as in the case of heritage speakers

subjected to elicited judgments. Discussing the results of the two studies where heritage speakers of Russian were subjected to GJT or a comprehension task, the authors draw on statistical measures to point out the limits of acceptability judgment testing procedures.

Overall, the volume lives up to the stated goal of presenting "current trends in researching Russian quantitative linguistics, to evaluate the research methods vis-à-vis Russian data, and to show both the advantages and the disadvantages of the methods" (3). The papers are written in a user-friendly and accessible way, making the collection a great resource for anyone looking to expand their knowledge of current trends in linguistic research.

Olesya Kisselev
University of Texas at San Antonio

References

Kopotev, M. & Mustajoki, A. (2008). Sovremennaja korpusnaja rusistika. In A. Mustajoki, M. Kopotev, L. Birjulin, & Ju. Protasova (Eds.), *Instrumentarij rusistiki: Korpusnye podxody* (pp. 7-24). Helsinki: Helsinki UP.

Simes, Natasha, and Richard M. Robin. 2019. *Political Russian: An Intermediate Course in Russian Language for International Relations, National Security, and Socio-Economics*, 7th edition. Dubuque, IA: Kendall Hunt. 552 pages.

The newest, seventh edition of *Political Russian* continues to serve the needs of students specializing in international relations, Russian affairs, politics, economics, government, national security, and related fields who wish to improve functional proficiency in reading, listening and speaking at the intermediate and advanced levels. However, the book's reach is much wider. Several features of this course, including those new to this edition, make it a great resource for Russian-language instructors teaching a variety of courses and proficiency levels.

The book is organized into two main parts, or "concentric circles," that target learners at different starting proficiency levels, beginning with novice for second-year students in Circle 1. Circle 2 builds on and expands the skills and competencies acquired in Circle 1. The book aims to develop students' functional proficiency in reading, listening, and speaking; teach them effective strategies for working with authentic texts;

expand students' active and passive vocabulary; and bring students to partial or full control over basic and more complex grammatical concepts and structures, especially those most common in news reports. Each of the 13 thematic units contains rich material on topics frequently encountered in contemporary Russian news sources: official visits and negotiations, elections, economic cooperation and recession, and terrorism and military conflicts, just to name a few.

While this course can be taught from beginning to end as designed, its "circular" organization and modular structure allow instructors the freedom to use elements of the course in a way that best fits the goals and structure of their existing curriculum. Instructors can choose the appropriate starting point in the book based on the level of incoming students' proficiency level and grammar competence. They can also pick and choose the topics to cover and decide on appropriate sequencing. All activities within each unit are carefully scaffolded and integrated, yet the abundance of activities and tasks allows the instructor to choose which activities and how many to use, giving them the ability to emphasize a particular set of skills or competencies over others. Even though each unit or "lesson" is split into sections called "Grammar Exercises," "Speaking Exercises," "Listening Exercises," and "Reading Exercises," instructors can use the activities in an integrated way "without fear that the structure of the book will topple" (xix).

Beyond being a course on its own, the textbook and its ancillaries can be easily and effectively adopted in a variety of Russian-language courses, including courses on Russian mass media, reading and translation-focused courses, and any traditional intermediate or advanced course as a tool for teaching students to work effectively with news sources on a variety of topics.

Several features of the book make it particularly attractive. First, the course offers a rich collection of authentic Russian texts and authentic audio recordings and specifically trains students to work with such texts, focusing on different reading and listening skills, such as global and close reading and listening, skimming, scanning, discerning the structure of the Russian sentence, guessing from context, recognizing and using stylistic devices, such as the natural redundancy in expository prose. The course benefits greatly from the web-based materials, including recordings of texts and dialogues, authentic news reports, as well as Quia® online exercises with autocorrected answers, which allow students to receive immediate feedback on grammar-focused activities while saving instructors time in grading. These materials are available at http://www.gwu.edu/~slavic/

politicalrussian. Speaking exercises and dialogues are new to this edition and provide a variety of discussion questions and tasks, such as retelling and creating news reports, as well as role-play situations—for example, participating in negotiations on a particular issue or giving a speech on an issue as part of an official delegation.

Instructors might find useful several features of the book, including succinct and easy-to-follow grammar explanations, tables, and appendices, with a caveat that all examples are grounded in the context of the thematic units in which they appear. Other useful sections include expressions for quoting sources (for example, "this article deals with," "according to," etc.), lists of useful expressions and idioms, such as the one on page 41, which includes such expressions as "in the course of," "with the support of," and "under what conditions," among others). The introduction to reading strategies on pages 28–32 is a great model of how to approach reading with students in any class. In general, the activities, both pre-reading/listening and post-reading/listening, offer a great model that instructors can easily adapt to their own materials.

As the authors acknowledge, due to the nature of the course, instructors will need to regularly supplement the existing materials with new, more current publications and reports that reflect contemporary realities and language use. However, the activities presented in Political Russian give students the appropriate set of tools in order to deal with new materials and even to explore the news and the topics covered on their own. The scope of speaking exercises is limited in Circle 1 to account for students' level of proficiency, but the instructors should use their judgment in pushing students to create with the language as early as possible and as much as possible.

A few typos notwithstanding, *Political Russian* in its new revised form continues to serve as a rich, diverse, and tremendously useful resource for Russian-language students across different fields of specialization and proficiency levels. It can give instructors what they are looking for, a greater degree of guidance or a greater degree of freedom, depending on the needs and goals of each course and program.

Maria Alley
University of Pennsylvania

DiMattia, Kimberly. 2019. *Unlocking Russian Pronunciation: A Supplementary Multimedia Mini-Course in Phonetics Based on Famous Russian Songs.* Dubuque, IA: Kendall Hunt. 77 pages. Accompanying website: www.unlockingrussianpronunciation.org

Kimberly DiMattia's *Unlocking Russian Pronunciation* provides a much-needed supplement to the instruction of phonetics currently available in most Russian textbooks. Combining insights gained from academic studies of phonetics in the tradition of Elena Bryzgunova and Irina Odintsova, with a thoroughly modern approach to multimedia-driven instruction, *Unlocking Russian Pronunciation* presents the topic in a straightforward and approachable manner. The mini course consists of a textbook and instructional videos, which introduce learners to a hybrid Russian transcription system that aims to make explicit the rules of Russian phonetics. DiMattia's system is designed to be used as a supplemental resource at any level of Russian instruction or by students independently.

Unlocking Russian Pronunciation is first and foremost attuned to the anxieties and needs of L2 Russian learners and consists of strategies students can immediately put into use. In the textbook and website materials, DiMattia focuses on the mechanics—and psychology—of learning to sound more "authentically" Russian. Since DiMattia is not a native speaker of Russian herself, the insights she shares are all ones from which she has personally benefitted. She understands the difficulties of the task at hand and generously shares anecdotes from her own experience, including recordings made during her first-year college Russian course. In this way she serves as an example for L2 students of the degree to which it is possible for them to improve their phonetics—something that could be particularly valuable for students whose Russian teachers are native speakers.

The mini course consists of ten lessons, which are built around seven popular Russian songs: «Калинка», «Цыганская песня», «Катюша», «Мой костёр», «Подмосковные вечера», «Тонкая рябина», and «Грузинская песня». The focus on these songs adds a meaningful cultural component to the materials. Each lesson presents a key topic of Russian phonetics, such as resetting the default mouth position (prompted by the refrain "jaw, tongue, lips") or voiced and voiceless consonants. No prior knowledge is assumed, which means that it is possible to introduce the transcription system as early as in the first semester of elementary Russian. Teachers, as well as more advanced students, will notice that the answer keys in the textbook treat learners as though they have not encountered

any of these topics before. On a practical level this means, for example, that vowel reduction is not noted in the transcriptions until chapter 4. In fact, "Калинка," the first song treated in the book, is transcribed three times in three successive chapters—each time with a more complete knowledge of Russian phonetics reflected in the transcription system. However, specific phonetic rules such as vowel reduction could easily be shared with students before they are introduced in the transcription system. Changes to the transcription system itself could also be introduced, though that would require rewriting the answer keys.

The textbook contains a written introduction to each topic, exercises to practice the rules of transcription from each lesson, answer keys for the exercises, and song lyrics and chords, with notes on how singing will change pronunciation. These materials alone do a solid job explaining the phonetic rules underpinning the transcription system, but it is really in the multimedia supplements, which are hosted at unlockingrussianpronunciation.org, that this system shines. Each lesson is accompanied by an instructional video, a spoken lyrics video, and a performance video for each of the seven songs treated in the book. In the instructional videos (ranging in length from 4 to 26 minutes), DiMattia explains the transcription rules in detail. She pays special attention to the mouth and tongue position and provides students the opportunity to practice making the sounds with her. The spoken lyrics videos serve as a detailed annotation for the written answer keys. In the performance videos, DiMattia—sometimes accompanied by another musician, sometimes alone with her guitar—brings the songs to life for students. In the book, DiMattia suggests that singing is optional, but the lyrics and chords are up on the screen, so that students can easily sing (and even play) along, and it is hard to resist the pull. Also accessible via DiMattia's website are Quizlet sets, which help students practice their transcription skills, and announcements about upcoming live singing sessions and master classes. The website is intuitive and works well on mobile devices.

In addition to these student-focused resources, the website also has materials for instructors looking to incorporate this system into their courses. The teacher section of the site includes a goals menu and feedback form, a suggested ten-week syllabus, recommendations for getting student buy-in and advice based on DiMattia's experience teaching the material, as well as video recordings and PowerPoint presentations from the five-week masterclass that was held in the summer of 2020. Depending on the background and preferences of the instructor, the instructional videos could be assigned to students in a flipped classroom model or used by the

instructors themselves to brush up on the material before introducing it to students. There are also opportunities for teachers to observe classes lead by DiMattia and consult with her individually.

Unlocking Russian Pronunciation provides a structured, yet lively, way of introducing phonetics into the Russian-language classroom. The textbook and website materials are targeted to students with different learning styles and help to make the instructor's job easier. This supplementary course would be of interest to all teachers of Russian, but it might be especially helpful for graduate students starting their Russian-language teaching career and those in the field whose training is primarily in literature and not linguistics.

Irina Kogel
Davidson College

Curtis, J.A.E. 2019. *A Reader's Companion to Mikhail Bulgakov's "The Master and Margarita."* Boston: Academic Studies Press. 178 pages.

Although Mikhail Bulgakov's classic *The Master and Margarita* has become an inevitable fixture of Russian literature survey courses, it can nevertheless present a challenge even for seasoned instructors. As the text repeatedly slips between locales, historical periods, and narrative voices, Bulgakov's novel seems more and more like a world unto itself. In my experience, there always proves to be something in this world—rewritten Gospels, a moving romance, the gun-toting cat—that will draw undergraduates in. And yet, when a tight syllabus gives me but four classes to tackle the novel's elaborate system of leitmotifs, allusions, and historical realia, I feel like I fail to do the work justice.

J.A.E. Curtis's *A Reader's Companion to Mikhail Bulgakov's "The Master and Margarita"* represents a valuable tool not just for such harried instructors, but also for the undergraduate reader interested in further exploring the novel. Curtis, who has authored or edited several essential volumes on Bulgakov, is eminently qualified to compose a work of this type. This book presents a welcome update to the similar companion (to which Curtis contributed) published by Northwestern University Press in 1996. Curtis's text references the subsequent twenty-plus years of Bulgakoviana and tackles the novel's intricacies in a more linear fashion, deftly cataloging "some of the principal lines of debate and disagreement about the text" (xii) for the benefit of professor and pupil alike.

After a brief foreword, Curtis chronicles Bulgakov's life and the winding history of his novel's composition and publication. The chapters concerning this content are deftly composed; Bulgakov's experiences are rendered briskly and vividly. Richer than an encyclopedia entry but lighter than a monograph, this miniaturized "life and works" provides instructors with an economized refresher; it would be quite useful for a morning-of prep for the first class session discussing the novel. Lay readers might be more inclined to skim Curtis's in-depth chronicle of the novel's six drafts, although they would miss telling details about the Stalinist atmosphere in which Bulgakov worked. The repeated appearances of Grisha Konsky—an admirer from MKhAT whose cheerily brazen interest in Bulgakov's manuscript outs him as an NKVD informer—underscore how guarded the author had to be (33).

Grappling with the novel's complexities can prove difficult for the uninitiated, as Curtis sympathetically suggests with an aside to her heterogeneous audience: "It is a real challenge for those of us who have read *The Master and Margarita* more than once to reconstruct now our original impressions of the novel. . . . No subsequent reading can quite recapture that 'innocence'" (49). The middle chapters of the volume are devoted to the vital structural and thematic concerns that make *The Master and Margarita* so complex: its Moscow and Jerusalem/Ershalaim division, Woland's complex morality, Bulgakov's estranged biblical allusions, life in 1930s Moscow, and the writer's elevated role in Russian culture. Curtis's survey of scholarship on these matters takes a more student-friendly tack than the denser, more argument-driven articles that comprise the 1996 NUP companion. She frequently cites and contextualizes (mid-paragraph, not in distant footnotes) not only Anglo-American scholars but also Russian ones—a welcome gesture of recognition in a volume whose readership will skew English-speaking undergraduate. Given that possible audience, however, I sometimes wished that Curtis—in the interest of nourishing a beneficial "innocence"—would be more generous to the more allegorical or cryptographic readings of the novel. She labels them "far-fetched" and "bizarre" (54) or "difficult to agree with" (89), and I worry that an undergraduate reader would take this standard scholarly jockeying as a proscription against inventive, involved reading. Even if interpretations of *The Master and Margarita* as fantastical roman à clef strain credulity, they remain a productive, accessible means of thinking through "the sense of an echoing pattern" (59) that the novel fosters. Curtis does speak approvingly and in detail about looser, more cautious theses regarding possible Woland-Stalin and Yeshua-Master correspondences. Still, the volume sometimes

overcompensates for Curtis's skepticism of overdetermined allegorical readings. The Woland's ball/William Bullitt connection dominates chapter 8; tellingly, the ball is designated "the section with the greatest number of unambiguous links to a real event—and to real people" (90). This connection, however compellingly explored, strays from the ostensible focus of the chapter (political satire) and seems more of a piece with the volume's earlier biographical content. Even if, say, the novel's satirical treatment of the 1930s "apartment question" is a mere "backdrop to the main action" (90), it is an omnipresent backdrop that today's novice readers, far removed from the Soviet experience, need help navigating.

Such readers will greatly benefit from Curtis's later chapters, which directly engage the texture of Bulgakov's style. Her step-by-step dissection of the novel's complex narrative voice (via specific excerpts from the novel) may tread familiar ground for instructors, but those new to literary analysis will benefit from Curtis's instructive close reading and her superlatively lucid definition of *skaz* narration (112). Largely free of reference to thorny interpretive debates, this section makes clear why scholars read structural significance into Bulgakov's tiniest linguistic turns. Curtis's comparison of the English translations of *The Master and Margarita* serves as another valuable, if narrower, close-reading exercise. I suspect that few lay readers who have just finished the book will immediately seek an alternative version of it, but Curtis's observations remain useful in the classroom, where, in my experience, one student will have inevitably ignored instructions and purchased an unsanctioned translation on Amazon. Instructors' preferences for particular translations will probably not be shaken by this section, but the saltiness of Curtis's pronouncements make it a worthwhile read. Curtis's personal reflection on the novel—an intriguing and impassioned account of its political afterlife—rounds out the volume.

All told, Curtis's companion to Bulgakov's allusive and elusive novel hits its multipurpose mark, serving well both novice and experienced readers of *The Master and Margarita*. It represents a valuable addition to university libraries and instructors' individual collections.

Daniel Brooks
Franklin & Marshall College

Simms, Elena, and Tatiana Romanova. 2020. *Russian in a Contemporary World: A Textbook for Intermediate Russian*. London and New York: Routledge. 152 pages.

Russian in a Contemporary World is a new Russian textbook aimed at learners at the Intermediate Mid to Advanced Mid (ACTFL scale) or B1-B2 (CEFR scale) levels of proficiency with a specific focus on improving written and oral skills. This book can be used as the core textbook for third- and fourth-year language courses or as a companion to other textbooks; it seems particularly well suited to serve as a companion to *Russian from Intermediate to Advanced* by Olga Kagan, Anna Kudyma, and Frank Miller.

Russian in a Contemporary World is composed of ten chapters: глобальный международный язык, телевидение, субкультуры, искусство: граффити, судьба – это характер, интернет, наука и человек, гаджеты – лучшие друзья человека, наше будущее, туризм. According to the authors, these topics were selected on the basis of a survey conducted among undergraduate students of the humanities and are thus meant to reflect and respond to their interests. This unique method of topic selection should stimulate discussion and fuel students' interest in the Russian language and culture. Each chapter of the book is further divided into two lessons, each organized around an authentic text that directs learners' attention to a specific cultural issue (for instance, Russian subcultures, popular television channels, or tourist destinations). Numerous pre-reading, reading and post-reading tasks included in the textbook serve four main purposes that will be addressed in turn: vocabulary building, improvement of reading comprehension, speaking, and writing.

The authors, Elena Simms and Tatiana Romanova, carefully designed all tasks to recycle a specific set of vocabulary items in every lesson. This is accomplished via plentiful translation activities, synonym and antonym searches, collocation-matching activities, crossword puzzles, word-formation tasks, and fill-in-the-blanks activities. Interestingly, matching activities are also used in the book to introduce fairly complex linguistic points, such as word formation through suffixation, the formation of participles, or the formation of multi-root words. Overall, the number of times that each key vocabulary item is encountered in the span of a few pages is astounding. This design should ease vocabulary learning for students and help them build associations with other words (i.e., synonyms, antonyms, or collocates). These same vocabulary items are then also recycled in reading comprehension, speaking, and writing tasks.

Several types of activities support the development of reading

comprehension skills. These include true-or-false and fill-in-the-blank questions, ordering tasks, and simple reading comprehension questions. An important strength of this textbook is that types of activities vary in every lesson, which gives each reading experience a sense of newness and prevents monotony.

Furthermore, speaking skills are targeted before and after reading. Lessons commonly start with simple question-and-answer or mingling/surveying activities, proceed with vocabulary learning tasks and reading comprehension activities, and are only then followed by serious discussions. In post-reading activities, students are asked to summarize a text using the key vocabulary of the unit, to agree or disagree with specific statements made by the author, or to engage in a discussion based on prompts such as "Will the internet completely replace television?" or "Should media be censored?" Such tasks are in accordance with the ACTFL guidelines, which specify that expressing opinions, defending arguments, and producing monologic speech are some of the benchmarks of the Advanced level of proficiency, which this book intends to develop.

Finally, each chapter ends with an engaging essay prompt. Importantly, the development of learners' writing skills is supported not only by the constant recycling of individual words and collocations but also by the comprehensive guide to writing argumentative essays located in the appendices, along with lists of reporting and evaluative verbs and common connectors. This type of attention to and guidance for the development of writing skills is mostly unparalleled in third-year Russian textbooks.

Despite its strengths, like all textbooks, *Russian in a Contemporary World* does present some challenges. One challenge concerns the use of glossaries in the book. There are vocabulary lists at the end of each chapter, but there are no glossaries that introduce new vocabulary at the beginning of each lesson or before a reading activity. Moreover, since most texts in the book are authentic, they contain a lot of non-target vocabulary that is not listed in the glossary. The absence of glossaries in the margins of readings may slow down the process of reading and demotivate learners struggling with the abundance of unfamiliar vocabulary.

Furthermore, while the frequent repetition of vocabulary items is, undoubtedly, a strength of this book, the choice of vocabulary items is not always optimal: glossaries occasionally list low-frequency vocabulary or vocabulary that, arguably, does not seem central to the topic of the chapter. For instance, chapter one—Глобальный международный язык—lists only 25 vocabulary items for students to learn and includes words like волноваться, доминирование, навязывание, проникновение,

самобытность. One of the prompts for the crossword puzzle in the same chapter asks students to put in the synonym for the words тождественность, общность, одинаковость.

More importantly, there are no grammar explanations throughout the book, although notes on the formation of participles and verbal adverbs as well as a brief list of nominal suffixes are included in the appendices. Nevertheless, the philosophy of this book seems to be that students can learn this grammar on the basis of examples of pre-formed participles and verbal adverbs and derive new words by analogy.

Overall, *Russian in a Contemporary World* is a wonderful resource with a fascinating selection of topics and a broad range of well-designed activities. Depending on the language instructor's teaching methodology and philosophy, it may be easier to use it as a companion to another textbook. However, if the instructor finds it necessary and is willing to put in time and effort, they can refine vocabulary lists and provide additional grammar explanations in order to use it as their core textbook. Ultimately, the activities presented in the book are geared exceptionally well toward developing an Advanced level of language proficiency and as such, this resource should not be overlooked by instructors of third- and fourth-year Russian courses.

Valentina Vinokurova
University of Arizona

References

American Council On The Teaching Of Foreign Languages. *ACTFL Proficiency Guidelines*. 2012. Alexandria: American Council on the Teaching of Foreign Languages.

Kagan, Olga E., Anna S. Kudyma, and Frank J. Miller. 2015. *Russian from Intermediate to Advanced*. Oxon and New York: Routledge.

Khairov, Shamil, and John Dunn. 2019. *Russian for All Occasions: A Russian-English Dictionary of Collocations and Expressions*. London and New York: Routledge. E-book.

Russian for All Occasions is an ambitious book that places itself somewhere between a bilingual thematic dictionary and a grammar textbook, while covering an impressively wide range of linguistic contexts. Its authors describe it as "a new type of dictionary" (xxvi) intended to aid learners of Russian in comprehending and constructing idiomatic speech. Theoretically,

the project is rooted in the concept of the "communicative fragment" as defined by Boris Gasparov—the idea that indivisible combinations of words, rather than individual words, "provide speakers with the base units for the mnemonic 'lexicon' of their language" (xxvi). With this theory in mind, the authors offer an extensive collection of "frequently occurring mini-contexts" (xxvi), which they organize thematically into four large sections: the person/the family, culture/technology/daily life, society, and the natural world. These sections are in turn divided into thirty-three chapters on more specific topics.

Following the logic of many traditional textbooks, *Russian for All Occasions* begins with the individual and moves outward into broader and more abstract themes, which progress in a logical order. Regardless, the book does not need to be read from cover to cover, and it offers a wealth of materials for learners of Russian with more specific interests that are presented within an easily navigable structure. Readers looking to develop their proficiency along thematic lines can turn to a detailed table of contents at the beginning of the book to explore vocabulary and grammar associated with particular topics. Meanwhile, students of Russian seeking to expand their vocabulary will find the index at the end helpful for tracing the thematic contexts in which particular words appear.

Since the book uses communicative fragments—combinations of vocabulary words that frequently appear together—as its base units, it eschews alphabetic listings in favor of blocks of thematically related entries. For example, a section called "Спать" unites 40 fragments treating different contexts involving the act of sleeping (3–5). The fragments themselves typically appear in the form of full Russian sentences and are paired with complete English translations. The authors helpfully gloss the grammatical and cultural particularities of key words, with a focus on highlighting their differences from English equivalents. They additionally provide stress marks throughout for the benefit of less-experienced language learners.

The book is most valuable as a resource for tasks involving the passive use of Russian, such as independent reading and Russian-to-English translation assignments. Its entries are representative of the kinds of "mini-contexts" learners of Russian are likely to encounter in authentic texts, making it an excellent reference for students. Its structure, which brings together fragments that deal with similar themes, vocabulary, and grammar in different ways, allows it to gloss linguistic subtleties in a way that readers will no doubt find instrumental. The English translations, which are accurate and generally idiomatic, serve as a model of good translation practices. Finally, the authors' decision to include

both contemporary and Soviet-era examples of the Russian language will particularly be appreciated by language learners working with historical or historically themed texts. Overall, the book most distinguishes itself from other thematic dictionaries in that, along with collecting high-frequency words and phrases and their translations, it also seeks to recreate a larger linguistic context that will leave readers better prepared to handle the nuances of the Russian language on their own.

Although the authors envision their book equally as an asset to "those seeking to improve their active command of Russian" (xxxiii), it makes less of a contribution in this area. *Russian for All Occasions* will certainly allow students to augment their presentations and compositions with individual examples of idiomatic Russian adapted from its entries. However, it is difficult to imagine learners of Russian improving their active language skills based on dictionary entries without substantial supplementary materials. Moreover, while the authors devote significant space to explaining and translating Russian phrases that native English-speakers may find difficult, equal attention is not paid to presenting Russian equivalents for concepts idiomatic to English language contexts. To cite one example, in a section on politics, the text cogently glosses the word "*либерал*" in the context of debates between the Slavophiles and Westernizers (391–92), yet it does not at all treat the ways in which the English word "liberal" differs contextually from its Russian counterpart. As a result, students may find the book less useful in developing their ability to express themselves intelligibly in the Russian language.

Regardless, Khairov and Dunn have created a comprehensive resource that is of obvious use to intermediate and advanced students engaging in any tasks requiring the passive use of Russian. Prospective Russian-to-English translators, along with historians and political scientists looking to improve their Russian skills, will also find much to appreciate.

Jason Strudler
Defense Language Institute-Washington

Hayes, Natalia. 2016. *Acquiring the Major Speech Functions in Russian: For Intermediate and Advanced-Level Students. Dubuque*, IA: Kendall Hunt. 258 pages.

Acquiring the Major Speech Functions in Russian is designed to help Russian learners build communicative skills related to major speech situations such as greetings, requests, invitations, expressing gratitude, and so on.

The volume is built around various sets of scenarios from everyday life to help students understand and appreciate the cultural and social context of various speech situations and equips learners with the necessary vocabulary and background knowledge to participate effectively in a given speech act.

The volume consists of a foreword, acknowledgement, introduction, teachers' manual, and thirteen chapters. Every chapter is built around a specific speech function. The topics cover the following: addressing people appropriately; communicating over the phone; greeting and introducing others; giving and accepting invitations; requesting and giving advice; agreeing and disagreeing; apologizing and accepting apologies; expressing support, compassion, and sympathy; giving and accepting compliments; congratulating and accepting congratulations; giving and receiving thanks; and saying good-bye. Every chapter includes four sections. Section A focuses on etiquette phrases, expressions, and commentaries. The author states that the reading assignments are available as supplemental audio recordings. Due to technical difficulties with the website, however, these recordings were not accessible for review. Section B includes drills and exercises that can be used for homework, classwork, or assessment. Section C features learning scenarios. One can truly appreciate the extensive array of diverse and authentic situations. Section D includes written assignments that reinforce speech functions discussed in the chapter. The instructional materials within each chapter target all four basic language skills. The teacher's manual elicits methodology and provides recommendations on how to work with each chapter, namely, what parts should be practiced in class and what exercises should be assigned for homework; "transcripts of several stages of work with a learning scenario"; recommendations on how to provide feedback; and general observations. Furthermore, the volume includes useful cultural notes explaining cultural and social etiquette that might not be intuitive for Russian learners. Some additional linguistic or stylistic analysis would have made some expressions explained even more useful to the learners who use the book for self-study. Pertinent grammar overview is provided where necessary.

The sections with learning scenarios (84 scenarios in total) and written assignments (62 assignments in total) comprise a particularly valuable part of the volume. The choice of the language of the instructions and prompts is not always clear. Written assignments provide detailed situations that require students to respond in writing. These situations and tasks are supposed to reinforce the writing skills and offer additional practice of each chapter's speech functions. *These prompts are in the target language and give*

students an extensive amount of Russian language (vocabulary, grammar, syntax) that can be used in their responses. A significant part of learners' responses in each case would be copying and reproducing the language in the prompt with minor modifications. It might be beneficial to alternate some prompts written in the target language with prompts describing the situation in English. Since some exercises in the book are designed to be used either as homework or as summative and formative assessment, contextualized prompts in English might be more suitable for assessing writing skills. A certain lack of consistency in the translation can also be observed in how the Russian expressions are presented: some expressions are translated while others are not. This might be done purposefully to encourage independent work, or the book might intend these expressions to be explained in class. Slang is a valuable addition in each chapter, and the author provides good guidance on its usage. They are explained where necessary, and Russian learners would benefit if slang expression were translated consistently.

These minor drawbacks do not diminish the overall value of the book. The learning situations comprise a valuable section for instructors, and every language instructor can find something useful there for their classes. Drills and exercises are well organized, and it would be easy for students to navigate this part of the volume on their own. Additionally, the book includes helpful notes on cross-cultural differences, and the formatting allows for using the volume as a workbook. This volume ultimately does what it claims to do: it aids "students in acquiring speech functions in Russian" within a variety of speech situations, and if used effectively, it can help learners improve their communicative skills. This is a practical handbook that can be particularly useful for students who plan to spend some time in a Russian-speaking environment. As the author states, the book can be used successfully to complement the instructions at the intermediate and advanced levels or used within a course focusing primarily on enhancing communicative competency.

Olha Tytarenko
University of Nebraska–Lincoln

MEMBERSHIP APPLICATION / RENEWAL FORM

Join or renew online at www.actr.org. Alternatively, you can fill out this application. Please print or type clearly. Email the completed form to membership@actr.org, or mail the form to
Irina Dubinina, ACTR Membership Secretary, GRALL, MS 024, 415 South Street, Waltham, MA 02453

Are you _____ renewing your membership or _____ joining ACTR?
Which year(s) are you paying for? _____

First Name _____ Middle Initial _____ Last Name _____

Name of Institution/Organization _____
Type of Institution/Organization: elem. school junior high high school college/university
business NGO other

Preferred Mailing Address_____
City_____ State_____ Zip_____ Country_____
Contact Phone # (_____)_____ Email _____

ACTR newsletter delivery preference: ___by mail and email ___by mail only ___by email only
Would you like to receive a paper copy of RLJ? ___ Yes ___ No

Please check the appropriate dues:
[ ] $20 for students and adjunct instructors (does not include Russian Language Journal)
[ ] $50 for lecturers, instructors, pre-college teachers, independent scholars, and retired persons (includes Russian Language Journal)
[ ] $60 for assistant professors (includes RLJ)
[ ] $75 for associate professors (includes RLJ)
[ ] $90 for full professors and non-academic (includes RLJ)
[ ] $250 for life supplement (for Life Members who enrolled prior to 2016, the Life Membership Supplement is a one-time voluntary contribution to ACTR to assist the organization in fulfilling its mission)
[ ] $1500 for one-time dues payment for life membership & subscription to RLJ

Additional Fees:
[ ] $100 sustaining member (in addition to regular member fee). For members who wish to make an additional contribution to the ACTR mission by adding $100 to their regular membership dues.

Donations for
[ ] ACTR Olympiada $ _____
[ ] Laureate Awards $ _____
[ ] AP Test Development$ _____
[ ] Pushkin Endowment $ _____
[ ] Undesignated gift $ _____

Total Due: $_____ Please print or type clearly
__ Check (made payable to American Councils for International Education)
__Visa __ MasterCard __Amex __ Discover
Number_____ Expiration date ____/_____
Security code on the back of the card_____
Name on the card _____
Billing zip code _____

actr

RLJ

Russian Language Journal

INSTITUTIONAL SUBSCRIPTION FORM

(DOES NOT INCLUDE ACTR MEMBERSHIP)

☐ $50 INSTITUTIONS/LIBRARIES WITHIN NORTH AMERICA

☐ $65 INSTITUTIONS/LIBRARIES OUTSIDE NORTH AMERICA

PLEASE CHECK: ☐ NEW SUBSCRIPTION ☐ RENEWAL SUBSCRIPTION

FULL NAME: .....

INSTITUTION: .....

SHIPPING ADDRESS

.....

.....

CITY: .....

STATE: ..... ZIP: .....

COUNTRY: .....

BILLING ADDRESS *(IF DIFFERENT)*

.....

.....

CITY: .....

STATE: ..... ZIP: .....

COUNTRY: .....

TOTAL DUE: ..... (PAYMENT DUE IN ADVANCE IN US DOLLARS ONLY)

☐ CHECK ENCLOSED ☐ SEND INVOICE

CREDIT CARD PAYMENT: VISA AMEX DISCOVER MASTER CARD

CREDIT CARD NO. ……

EXPIRATION DATE (MM/YY) .....

Return by email: rlj@americancouncils.org **by fax: (202) 833-752**

by mail: Russian Language Journal
American Councils for International Education
Subscriptions Coordinator
1828 L Street, NW, Suite 1200
Washington, D.C. 20036 USA

Individual subscription is paid through ACTR membership dues. See ACTR member form for details.

Editorial Policy

Scope. *RLJ* publishes scholarly work on the study and teaching of Russian language and culture, comparative and interdisciplinary research in Russian language, language policy, applied and theoretical linguistics, culture, and the acquisition of Russian as a second language. Pedagogical articles reporting on experimental research results and/or empirically-based evaluations are also encouraged and invited. Research articles should clearly identify the research questions, methods, background literature, results, and implications of the work. Notwithstanding the general scope of *RLJ* as a scholarly journal, from time to time, and at the Editor's discretion, articles providing a perspective on a particular theoretical or applied issue may be considered. All articles submitted to *RLJ* should include adequate documentation, providing credit to primary sources, and relevance to current research.

External Review Process. Journal submissions should be crafted without revealing the author's identity in the body of the work or the bibliographic references. Each submission that meets the overall eligibility criteria for *RLJ* publication will be reviewed anonymously by at least two external evaluators, who recommend as to whether a submission is accepted or rejected and provide feedback to authors. The acceptance of any article is the decision of the Editor of *RLJ*, in consultation with the reviewers, editorial staff, and editorial board, as need be.

Manuscript Length. Manuscripts are generally no more than 7,000 words in length. Authors interested in submitting longer manuscripts are encouraged to contact the Editor to discuss article length and subject matter prior to submission.

Language. *RLJ* is a bilingual annual publication. Contributions may be written in either English or Russian Authors should arrange for satisfactory proof-reading of the draft manuscript if their first language is not English. Manuscripts will be returned to the author(s) where serious language deficiencies remain in the text. It is recommended that native speakers of Russian submit their articles in Russian.

Citations and References. A list of references follows each manuscript, alphabetized by the last name of the authors; all citations in the text must be in this list, and all citations in the list should be referenced in the text. Authors are requested to follow publication manual of the American *Psychological Association, 7th edition*. In order to assist in the editing process, authors should provide all necessary bibliographic information at the time of submission.

Manuscript Preparation. *RLJ* will accept manuscripts that are neatly typed with one-inch margins on all sides, double-spaced. Notes and references follow the body of the paper. *RLJ* observes the style guidelines of the *American Psychological Association, 7th Edition*, with the exception of section headings. Instead of APA headings, please use multilevel numbered headings. Top-level headings should be numbered 1, 2, 3, 4. Second-level headings are numbered 1.1, 1.2, 1.3, and third-level headings, 1.1.1, 1.1.2, 1.1.3. Russian-language quotations should be in Russian; citations and references should be transliterated following the simplified U.S. Library of Congress system. *RLJ* recommends that potential contributors consult the Library of Congress Romanization guide https://www.loc.gov/catdir/cpso/romanization/russian.pdf, removing any diacritical marks and double capitals. The following website can also be used for automatic transliteration https://www.translitteration.com/transliteration/en/russian/ala-lc/ though authors will need to remove diacritical marks and double capitals.

Submission. Manuscripts should be submitted electronically to the editor at the e-mail address rlj@americancouncils.org as an MS Word attachment **no later than April 1** to be considered for the December issue. All manuscripts will be acknowledged; authors are notified within six months whether/when their manuscripts will be published. It is the author's responsibility to obtain and document permission to include copyrighted illustrations in the work. Any illustrations (including tables and charts) must be submitted in camera-ready format, in black and white. If this is not possible, the costs involved for any graphics preparation will be the author's responsibility. The author will cover the costs associated with any requested changes made to submissions already typeset. Electronic documents must be in .doc format. An additional copy of the document may be requested in .pdf format, in case the article contains charts or graphics that may become distorted during electronic transfer of MS Word documents. Authors must submit the following as separate files:

- A title page, with the article's title, and the name, institutional affiliation, and contact information of all authors (e-mail and physical mailing address). For articles with multiple authors, please indicate which author should receive correspondence.
- An English-language abstract of no more than 200 words. Russian-language submissions must include an English-language abstract.
- The body of the article. This file may not contain any references to the authors, and must have a running header at the top of each page with the title of the article. All figures, notes, and references should follow the main body of the text.

Originality. *RLJ* considers only original work for publication. In submitting an article to *RLJ*, the author(s) certify that neither the manuscript nor any substantially similar version of the work is currently being considered or has been published elsewhere.

Rights and Reprints. In agreeing to publish an article in *RLJ*, author(s) assign all rights to *RLJ*. Two off-prints of the published manuscript and one complete copy of the *RLJ* issue in which the work appears will be provided to the author(s). Book review authors receive one off-print and one complete copy of *RLJ*.

Advertising. For current information regarding advertising deadlines, technical requirements, and rates please contact the *RLJ* editorial office (rlj@americancouncils.org)

Back Issues. Back issues of Volumes I to LIV (Nos. 1-179) are sold out and no longer available; microfilm copies of these back issues may be purchased from: XEROX UNIVERSITY MICROFILMS, 300 North Zeeb Road, Ann Arbor, MI 48106. All subsequent issues can be obtained from the editor's office.

RLJ
Russian Language Journal
ISSN 0036-0252

actr

The American Council of Teachers of Russian (ACTR) is a national professional membership association of teachers and specialists in the field of Russian language and culture. Founded in 1974, ACTR is dedicated to strengthening the study and teaching of Russian through the design and implementation of academic exchange, professional training, distance learning, curriculum and test development, research and evaluation, advocacy, and programs of public support and recognition for the Russian field. ACTR is a division of American Councils for International Education.

American Councils for International Education:
ACTR/ACCELS
1828 L Street, NW
Suite 1200
Washington, DC 20036
Tel: (202) 833-7522
Fax: (202) 833-7523
www.americancouncils.org
https://membership.actr.org