Volume 72
2022

RLJ

Russian Language Journal

Special Issue

Collaboration Beyond the Classroom: Undergraduate Research in Russian Language Studies

Special Issue Editors

Svetlana Sokolova
Anna Endresen

actr

A Journal of the American Council of Teachers of Russian

Russian Language Journal

Editorial Group

Editor:
Jennifer Bown, Brigham Young University

Assistant Editors:
Sofia Kasmeridi, ACTR
Karen Evans-Romaine, University of Wisconsin-Madison

Associate Editors:
Cori Anderson, Rutgers University
Ewa Golonka, University of Maryland
Liudmila Klimanova, University of Arizona

Special Issue Editors:
Svetlana Sokolova, The Arctic University of Norway
Anna Endresen, The Arctic University of Norway

Editorial Consultant:
Dan E. Davidson, American Councils for International Education, ACTR, and Bryn Mawr College (Emeritus)

Editorial Board

Brooke Ballenger, Central High School, Bellevue Middle School, TN
Nina Bond, Franklin and Marshall College, PA
Richard Brecht, American Councils Research Center, DC
Robert Chura, St. Louis High School, MO
Julia Denne, By the Onion Sea Program, IL
Meredith Doubleday, UNC Chapel Hill, NC
Irina Dubinina, Brandeis University, MA
Elena Farkas, Romig M.S., AK
Raquel Greene, Grinnell College, IA
Olga Klimova, University of Pittsburgh, PA
Susan Kresin, University of California, CA
Kaylin Land, McGill University, Quebec, CA
Lauren Nelson, Pritzker College Prep, IL
Diana Nemec-Ignashev, Carleton College, MN
Heather Rice, University of Texas at Austin, TX
Elizabeth Lee Roby, Friends School, MD
Kira A. Rogova, St. Petersburg University, RF
John R. Rook, Smith Middle School, CT
Izolda Savenkova, Dickinson College, PA
Eleonora D. Suleimenova, al-Farabi Kazakh National University, KZ
Mark Trotter, Indiana University, IN
Nataliya Ushakova, Staten Island Technical H.S., NY
Irwin Weil, Northwestern University (Emeritus), IL

Copyright © 2022 by ACTR

Russian Language Journal

Volume 72, 2022

CONTENTS

Introduction to the Special Issue

Student Co-Creation of Teaching Resources, Methods, and Social Integration — 1
Laura Janda, Anna Endresen, Svetlana Sokolova

ARTICLES

Novel Digital Resources

Visualizing Russian: Illuminating Corpora, Conjugations, and Classrooms — 5
Steven J. Clancy, Paige Lee

Empirically Determined Strategic Input and Gamification in Mastering Russian Word Forms — 29
Laura A. Janda, Jan Ove Nikolai Almendingen, Linn Thea Kaldager Josefsen

Construxercise!: Implementation of a Construction-Based Approach to Language Pedagogy — 47
Anna Endresen, Valentina Zhukova, Elena Bjørgve, Daria Demidova, Natalia Kalanova, Zoia Butenko, George Lonshakov, David Henrik Lavén

Flipping the Classroom? From Text to Video in Teaching Russian Grammar — 71
Tore Nesset, Kristian Bjørklund, Petter Hov Jacobsen

New Participatory Methods for Teaching L2 Russian

The Participatory Approach and Student Active Learning in Language Teaching: Language Students as Journalists and Filmmakers — 87
Svetlana Sokolova, Andrei Rogatchevski, Kristian Bjørklund, David Henrik Lavén, Håkon Sverdrupsen

Outside the Earth: Translating and Exploring with Tsiolkovsky 109
Michael Pilipchuk, Olga Lyanda-Geller

Teaching Discourse Markers to Students with Students: The Case of Italian Learners of L2 Russian 127
Beatrice Bernasconi, Marina Giampietro

Socio-linguistic Integration

Psychological Safety in the Russian Language Classroom 151
Kelly Knickmeier Cummings, B. Amarilis Lugo de Fabritz, Tia-Andrea Scott, Nsikakabasi Ekong, Isabella Mason

Grammars in Contact: A Linguistic Study of Russian in Brighton Beach, New York 171
Oksana Laleko, Yana Miroshnychenko

REVIEWS

Kudyma, Anna S. 193
Russian: From Novice High to Intermediate
Iryna Kaplun

Minakova-Boblest, Elena. 196
Modern Russian Grammar in Use: A Systematic Reference and Practice Book.
Evgeny Dengub

Thomas Jesús Garza, ed. 198
Practices That Work. Bringing Learners to Professional Proficiency in World Languages.
Olena Chernishenko

Betty Lou Leaver, Dan E. Davidson, and Christine Campbell, eds. 202
Transformative Language Learning and Teaching.
Benjamin Rifkin

Dengub, Evgeny and Susanna Nazarova. 205
Etazhi: Second Year Russian Language and Culture.
Cori Anderson

Contributors

Jan Ove Nikolai Almendingen:
UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: jal040@post.uit.no

Cori Anderson:
Rutgers University
New Brunswick, NJ
e-mail: cori.anderson@rutgers.edu

Beatrice Bernasconi:
Roma Tre University
Sapienza University of Rome
Rome, ITALY
e-mail: beatrice.bernasconi@uniroma3.it

Elena Bjørgve:
UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: elena.bjorgve@uit.no

Kristian Bjørklund:
UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: kbj070@post.uit.no

Jennifer Bown:
Brigham Young University
Provo, UT
e-mail: jennifer_bown@byu.edu

Zoia Butenko:
University of Oslo
Oslo, NORWAY
e-mail: zoja.butenko@gmail.com

Olena Chernishenko: American University
Washington, DC
e-mail: ochernis@gmail.com

Steven J. Clancy: Harvard University
Cambridge, MA
e-mail: sclancy@fas.harvard.edu

Iryna Kaplun: Johns Hopkins University
Baltimore, MD
e-mail: irinacledu@jhu.edu

Kelly Knickmeier Cummings: Howard University
Washington, DC
e-mail: kelly.knickmeiercum@Howard.edu

Daria Demidova: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: dashademidova1998@gmail.com

Evgeny Dengub: University of Southern California
Los Angeles, CA
e-mail: dengub@usc.edu

Nsikakabasi Ekong: Howard University
Washington, DC
e-mail: nsikakabasi.ekong@bison.howard.edu

Anna Endresen: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: anna.endresen@uit.no

Marina Giampietro: Roma Tre University
Rome, ITALY
e-mail: mar.giampietro2@stud.uniroma3.it

Petter Hov Jacobsen: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: pja021@post.uit.no

Laura A. Janda: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: laura.janda@uit.no

Natalia Kalanova: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: kalanovanv@gmail.com

Linn Thea Kaldager Josefsen: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: ljo132@post.uit.no

Oksana Laleko: State University of New York at New Paltz
New Paltz, NY
e-mail: lalekoo@newpaltz.edu

David Henrik Lavén: UiT The Arctic University of Norway
Tromsø, NORWAY
e-mail: david.laven@uit.no

Paige Lee: Harvard College (2023)
Cambridge, MA
e-mail: paigelee@college.harvard.edu

George Lonshakov:	University of Trento Trento, ITALY e-mail: gglonshakov@gmail.com
B. Amarilis Lugo de Fabritz:	Howard University Washington, DC e-mail: blugo@Howard.edu
Olga Lyanda-Geller:	Purdue University West Lafayette, IN e-mail: okogan@purdue.edu
Isabella Mason:	Howard University Washington, DC e-mail: isabella.mason@bison.howard.edu
Yana Miroshnychenko:	State University of New York at New Paltz New Paltz, NY e-mail: miroshnyana@gmail.com
Tore Nesset:	UiT The Arctic University of Norway Tromsø, NORWAY e-mail: tore.nesset@uit.no
Michael Pilipchuk:	Purdue University West Lafayette, IN e-mail: mpilipch@purdue.edu
Benjamin Rifkin:	Fairleigh Dickinson University Madison, NJ e-mail: b.rifkin@fdu.edu

Andrei Rogatchevski:	UiT The Arctic University of Norway Tromsø, NORWAY e-mail: andrei.rogatchevski@uit.no
Tia-Andrea Scott:	Howard University Washington, DC e-mail: tiaandrea.scott@bison.howard.edu
Svetlana Sokolova:	UiT The Arctic University of Norway Tromsø, NORWAY e-mail: svetlana.sokolova@uit.no
Håkon Sverdrupsen:	UiT The Arctic University of Norway Tromsø, NORWAY The Norwegian Barents Secretariat, Kirkenes, NORWAY e-mail: haakon@barents.no
Valentina Zhukova:	UiT The Arctic University of Norway Tromsø, NORWAY e-mail: valentina.a.zhukova@uit.no

Introduction

Student Co-Creation of Teaching Resources, Methods, and Social Integration[1]

Laura Janda, Anna Endresen, Svetlana Sokolova

Undergraduate research is a high-impact practice that increases student learning and is driven by engaging in mentoring relationships with faculty while building a culture of innovation and scholarship. This volume of the *Russian Language Journal* presents a special collection of articles entitled "Collaboration Beyond the Classroom: Undergraduate Research in Russian Language Studies." Undergraduate students have contributed to these articles as researchers and coauthors on topics related to Russian-language study, namely, the co-creation of teaching resources, methods, and sociolinguistic integration.

Nine articles are arranged in three thematic groups. Group 1 features students as co-creators of novel digital resources (Clancy & Lee; Janda et al.; Endresen et al.; and Nesset et al.). Group 2 focuses on student involvement in developing new participatory methods for teaching L2 Russian (Sokolova et al.; Pilipchuk & Lyanda-Geller; and Bernasconi & Giampietro). Group 3 explores issues of sociolinguistic integration (Knickmeier Cummings et al. and Laleko & Miroshnychenko).

Clancy and Lee open Group 1 with "*Visualizing Russian*: Illuminating Corpora, Conjugations, and Classrooms." *Visualizing Russian* is a collaborative research project that resulted in the creation of a novel tool that visualizes the distribution of language data covering a wide range of topics, from vocabulary and morphology to syntactic patterns. This tool provides Russian learners with information on the complexity of texts, the compatibility of words in selected texts, and frequency information. The student collaborator explored novel web visualization

[1] Work on this special issue is supported by three grants received by the CLEAR research group (https://site.uit.no/clear/): MAJAK: Det russiske læringsfyrtårnet from UiT The Arctic University of Norway (2021–2022) and two grants from the Directorate for Higher Education and Skills of the Norwegian Ministry of Education and Research: UTF-2020/10129 and CPRU-2017/10027.

techniques for language data and applied statistical language analysis. *Visualizing Russian* presents a case for the merits of combining language instruction with advances in computer sciences and corpus linguistics.

The contribution by Janda et al. entitled "Empirically Determined Strategic Input and Gamification in Mastering Russian Word Forms" describes an innovative research-based educational resource for learning Russian inflectional morphology, the SMARTool (Strategic Mastery of Russian Tool; https://smartool.github.io/smartool-rus-eng/), and proposes two ways to use this resource in the classroom or online: "Treasure Hunt" and "Story Time." Both gamification strategies are student-driven and designed by the instructor and the students to make the SMARTool resource more accessible and beneficial for learners.

In "*Construxercise!*: Implementation of a Construction-Based Approach to Language Pedagogy," Endresen et al. present *Construxercise! Hands-On Learning of Russian Constructions* (https://constructicon.github.io/construxercise-rus/), a research-based resource that proposes new ways of teaching constructions and idiomatic syntactic units. The resource was built under close collaboration between faculty members and students, including both native and non-native speakers of Russian. The outcome of this collaboration is a free open-access website that offers over 150 exercises for mastering Russian discourse constructions and organizing classes on conversation. The authors discuss in detail the methodology of building this resource, its organization, and the overall approach to teaching and learning Russian via its frequently attested and representative syntactic structures (constructions) that equip learners with ready-to-use communicative patterns.

Nesset et al.'s "Flipping the Classroom? From Text to Video in Teaching Russian Grammar" brings grammar instruction to a new level by proposing the collaborative co-creation of instructional grammar materials. While working on the grammar sections of a new beginners' Russian course, the instructor collaborated with two students on the creation of scripts for instructional videos explaining grammar points. Student coauthorship was fundamental in designing the videos to facilitate the learning process and move a significant amount of transmission of information out of the classroom.

Group 2 opens with "The Participatory Approach and Student-Active Learning in Language Teaching: Language Students as Journalists

and Filmmakers," in which Sokolova et al. combine the participatory approach with student active techniques to foster language learning. This method is used in both text and video production, based on the results of the course Media Language in Use, which familiarizes students with four major media genres (news article, interview, book/film review, and op-ed), and the film project *Our Common Victory* (2020, https://site.uit.no/clear/2020/09/07/var-felles-seier/), which incorporates documentary filmmaking into learning L2 Russian.

Pilipchuk and Lyanda-Geller, in "*Outside the Earth:* Translating and Exploring with Tsiolkovsky," present a collaborative research project that stemmed from the innovative interdisciplinary course Russian for Rockets. The student translated Konstantin Tsiolkovsky's science fiction novel *Outside the Earth*, a work mostly unknown to STEM specialists and students outside Russia. The collaboration resulted in a book-length scholarly study aid containing both translations and extensive scientific, engineering, and linguistic commentary. This contribution presents a case for the merits of combining translation studies, second language learning, and interdisciplinary research at the crossroads of science, engineering, and humanities.

Bernasconi and Giampietro's article "Teaching Discourse Markers to Students with Students: The Case of Italian Learners of L2 Russian" provides a comparative analysis of the use of Russian discourse markers by native speakers and L2 learners. The authors propose a didactic procedure for teaching discourse markers to L2 learners as an alternative to traditional textbook presentation. They suggest a four-stage game-centered process that focuses on four types of discourse markers: approximators, shields, fillers, and reformulators. The task-based design of the didactic intervention accommodates students' communicative needs and provides scaffolding through an appropriate learning schedule.

Knickmeier Cummings et al.'s "Psychological Safety in the Russian Language Classroom," which opens Group 3, draws attention to L2 Russian instruction and learning for students of color in the U.S., with a focus on psychological safety, based on experiences at Howard University, the only Historically Black College or University (HBCU) that offers a Russian minor. The article emphasizes the importance of student-inspired and student-led ideas in facilitating an equitable and inclusive environment, creating representative characters in textbooks,

and providing learning activities that reflect other cultures, minorities, and underrepresented and underserved communities.

Finally, the contribution by Laleko and Miroshnychenko, "Grammars in Contact: A Linguistic Study of Russian in Brighton Beach, New York," examines the speech production of 17 adult heritage Russian speakers that belong to the largest integrated community of Russian speakers in the U.S.: Brighton Beach, New York. The authors analyze grammatical innovations in heritage Russian in three linguistic domains: case, gender, and verbal aspect. The experimental design can serve as a methodological example for future research in the study of heritage Russian. This study is relevant for teaching L2 Russian because many students of Russian programs are heritage speakers, and the study demonstrates the importance of the supporting speech community in preserving heritage Russian.

The goal of this special issue is to initiate and widen discussion on the role of undergraduate research in language teaching and to uncover synergies between undergraduate research and other topical issues, such as student active learning, digital humanities, and sociolinguistic integration.

Visualizing Russian: Illuminating Corpora, Conjugations, and Classrooms

Steven J. Clancy, Paige Lee

Author Note

The *Visualizing Russian* project has received support from the Barajas Dean's Innovation Fund for Digital Arts and Humanities from the office of the Dean of Arts and Humanities at Harvard University, from the Davis Center for Russian and Eurasian Studies at Harvard University, and from the Foreign Language Advisory Group (FLAG) at Harvard University. The project has received developmental support since 2014 from Arts and Humanities Research Computing, particularly from Arthur Barrett, Senior Software Engineer in Academic Technology for the Faculty of Arts and Sciences (FAS), with previous input and development from Christopher Morse and advice from Cole Crawford.

Correspondence concerning this article should be addressed to Steven Clancy, Slavic Languages and Literatures, Harvard University, Barker Center, 12 Quincy Street, Cambridge, MA 02138, United States. Email: sclancy@fas.harvard.edu

1. Introduction: Visual tools for language learners, teachers, and linguists

The *Visualizing Russian* (Clancy, 2014–2022) project offers a suite of tools benefiting language learners, teachers, and linguists and enabling each of these user groups to access the complex system of the Russian language through visualization methods in order to leverage the powers of compression and expansion of a massive data set. Users can analyze texts for relative difficulty with regard to vocabulary content with *Visible Vocabulary*, create frequency lists and identify the most commonly used word forms for each lemma in a text or compare sets of target vocabulary to covered forms in a particular text with the *Mini-Story Creator*, compare the relative frequency of near-synonyms or other items in a semantic domain with the *Quick Lemma* tool, view the usage frequency of various nouns in particular cases with the *Case Distribution* tool, and identify

the case governance and preposition usage of Russian verbs in the *Verb Histogram* tool. Additional components provide word-formation analysis by breaking down words into component prefixes-roots-suffixes, gauge imperfective/perfective aspect usage for individual verb pairs, visualize verb forms across various person/number/tense/aspect combinations, and identify the field of morphologically related or semantically related words for any target word.

Along the way, the project has also provided an ideal undergraduate research opportunity outside the usual literature and culture framework for a student majoring in Slavic Languages and Literatures and Computer Science. With input and guidance from the rest of the team, Paige Lee, the undergraduate coauthor of this paper, has designed, prototyped, tested, and deployed tools to the *Visualizing Russian* website in addition to contributing to the maintenance and development of the data set. She has also analyzed Russian language data sources such as the disambiguated morphological standard subcorpus of the Russian National Corpus (RNC subcorpus) (Lyashevskaya et al., 2005) to bring "real world" statistics and examples to the tools to demonstrate hot spots in paradigms based on actual language usage. In the process of developing these tools, she has explored novel web visualization techniques for language data using JavaScript and the D3 library; gained a deeper knowledge of the intricacies of Russian morphology, semantics, syntax, and grammar; applied concepts in statistical language analysis such as word embeddings and principal component analysis; and learned about the role that digital pedagogical tools can play in Russian language teaching and learning. These tools have also contributed to the creation of a new Russian textbook series, *Foundations of Russian* (Clancy et al., in press), which presents a curated 4,000-word beginner-to-intermediate vocabulary target based on the most frequently occurring and communicatively necessary words in Russian. These textbooks are informed by frequency and leverage research from usage-based, cognitive, and constructional approaches to linguistics.[1]

[1] The *Foundations of Russian* textbook project shares similar goals with the *Min russiske reise* [My Russian Journey] textbook under development at the University of Trømso, Norway, in conjunction with the SMARTool, the Russian Constructicon, and other tools. See Sokolova et al. (in press) for more information about this open educational resource (OER).

In this paper, we lay out the goals and origins of the *Visualizing Russian* project in Section 2, then turn to the evolution of the vocabulary categories used in the database and provide a brief description of the tools in Section 3. Due to space limitations, detailed descriptions of all tools are available on the project website.[2] In Section 4, we discuss how the project provided a research opportunity for an undergraduate student and expanded the traditional academic path for a major in Slavic Languages and Literatures. In Section 5, we present some usage scenarios for the tools and demonstrate the benefit for learners, teachers, and linguistic researchers.

2. *Visualizing Russian*: Project goals

All of the tools in the *Visualizing Russian* project stem from the goal of finding ways to present the complexity of Russian morphology, lexicon, and grammar in a way that is visually appealing to learners. As teachers balance the use of authentic materials alongside materials created for language learners, they struggle to make authentic materials accessible to students while ensuring that pedagogical materials meet the targets of their curriculum. The *Visualizing Russian* tools assist with both goals. Using authentic materials—perhaps written or audiovisual materials created by and for native speakers for communicative purposes or raw sentence-length examples taken from language corpora—is quite difficult, particularly in languages such as Russian with vocabulary largely unrelated to English and with a high degree of morphological complexity. Several new tools and repositories have begun to address such difficulties in addition to *Visualizing Russian*. The SMARTool[3] based on Janda and Tyers's (2021) work on word-form frequency utilizes corpus-based examples that mitigate the difficulties learners face when dealing with the lexical and syntactic complexities of sentences created for native speakers in natural contexts. The Russian Constructicon[4] includes constructions and examples for partially idiomatic constructions that are otherwise

[2] The curious reader may try out any of the tools described here at https://visualizingrussian.fas.harvard.edu. Since the tools rely heavily on color, visualization, and dynamic user interaction, the tools are best experienced hands-on at the site with texts and words that individual users are most interested in analyzing.

[3] See the SMARTool at https://smartool.github.io/smartool-rus-eng/.

[4] See the Russian Constructicon at https://site.uit.no/russian-constructicon/.

difficult for learners to analyze or acquire. The CoCoCo[5] tool provides corpus-based information on collocations. The Textometr/*Текстометр*[6] tool analyzes texts and correlates the vocabulary content with the standardized lists of "lexical minimums" compiled for the Test of Russian as a Foreign Language (TORFL)/*Тест по русскому языку как иностранному* (*ТРКИ*) and thereby rates a given text on the Common European Framework of Reference for Languages (CEFR) and TORFL scales. Resources such as these open doors for the use of quantitative tools and data sources in the language classroom and in the creation of teaching materials. Researchers in second language acquisition and foreign language pedagogy can continue to measure the efficacy of such tools as they determine adequate percentages of known and unknown lexical items for effective reading in extensive reading and instructional contexts. Meanwhile, teachers can elaborate on the uses of the tools in the classroom and in the creation of learner materials.

The backbone behind most tools on the *Visualizing Russian* website is the project database, which Clancy began compiling around 2009 by hand-entering vocabulary items from various textbooks used to teach Russian (*Live from Russia* [2008–2009], *Making Progress in Russian* [1997], *Leaping into Russian*/*С места в карьер*, *Начало* [1995]). The lexical items in that database were later combined with static lexeme and frequency information from Sharoff's (2008) frequency lists based on the RNC (lemma frequency list, form frequency list), and the database was also expanded to include more than 30,000 lexemes[7] with forms obtained in 2017 from the Russian version of Wiktionary (https://ru.wiktionary.org), along with subsequent manual entry. Our database was initially informed by the lexical selection and frequency information contained in these sources but at present is an amalgam of many sources of information about the basic lexical and morphological facts of Russian, and we have incorporated frequency information from the RNC itself. The current database features over 300 fields for nearly 33,000 entries of lemmas, multiword expressions (e.g., [, *потому что*] [because], [*после того, как*] [after], [*как раз*] [just]), and highly frequent collocations (e.g., *день рождения* [birthday], *домашнее*

[5] See the CoCoCo tool at https://cococo.cosyco.ru.
[6] See the Textometr/*Текстометр* tool at https://textometr.ru.
[7] Before the publication of the dictionary (Sharoff et al., 2013), Sharoff had made various frequency lists based on the RNC available on his website (http://corpus.leeds.ac.uk/serge/frqlist/), but the exact files no longer seem to be available.

задание [homework]), along with inflected word forms and lexeme and form frequency information.

As the database was becoming increasingly comprehensive for Russian, Clancy turned to officially launching the *Visualizing Russian* project in 2014 with the goal of making the complexity of the Russian language and this vast assortment of quantitative information available to students, teachers, and researchers in a visually compelling, relevant, and useful format. As the project began to come together in 2013–2014, Clancy was motivated by work in big data visualization, including new implementations of HTML5, CSS, and JavaScript, particularly the D3.js library, to turn these powerful visualization tools to the analysis of language. Even a decade later, a deep-dive *New York Times* article on the effects of an avalanche, "Snow Fall,"[8] remains an impressive and technologically inspiring piece that exemplifies this new kind of webpage experience. Information and plentiful examples of possibilities can be found at Bostock's site for D3.[9]

Inspiring language applications include online interlinear readers[10] and dictionaries[11] as well as text analysis and concordancing tools such as Anthony's *AntWordProfiler*[12] and the work and play of "internet polyglot entrepreneurs," particularly Kaufmann's LingQ.[13] LingQ has powerful features for keeping track of individual learners' known words and progress in vocabulary acquisition, especially for learners attracted to Krashen's comprehensible input approach to language acquisition (see Krashen [2003, pp. 1–14] for a summary of the basic tenets of this "just listen and read" approach). However, LingQ's treatment of "words" as word forms rather than as lemmas is a nonstarter for morphologically complex languages, in which a learner would need to indicate manually that they knew a term such as *Эбола* [Ebola] and in which related case forms such as *Эболу*, *Эболы* would not be considered parts of the same word when occurring later in that text or in a subsequent text. Given that Russian verbs alone conservatively present 33 word forms (not counting all the case forms of the participles)

[8] See https://www.nytimes.com/projects/2012/snow-fall/index.html#/?part=tunnel-creek.
[9] See Bostock (2021) and additional sites: https://observablehq.com/@mbostock and https://observablehq.com/@d3/gallery.
[10] See https://interlinearbooks.com.
[11] See https://nodictionaries.com.
[12] See http://www.laurenceanthony.net/software/antwordprofiler/.
[13] See https://www.lingq.com/.

when considered as aspectual pairs, compared to the typical English verb with 4–5 word forms, this is clearly not the most effective approach for measuring words known in a grammatically and morphologically complex language. *Visible Vocabulary*, described in more detail in the subsequent sections, currently takes a levels approach to evaluating textual difficulty and learner-appropriateness, but it is also possible to set vocabulary knowledge and learning goals at an individual level, which resources such as LingQ and Livingston's *Hedera* project[14] already excel at. *Visible Vocabulary* and *Hedera* have a collaborative relationship among digital humanities projects at Harvard, and in future iterations, we hope to compile targeted vocabulary for levels as well as a measure of individual user achievement and learning goals.

3. *Visualizing Russian*: Description of the suite of tools

Visualizing Russian has developed gradually with iterative improvements and refinements to the basic tools, expansions of the database, and the addition of new tools and features as new ideas have come to us. The ability to break the project down into smaller parts with shorter-term goals has made the project particularly well suited for including an undergraduate researcher on the team and has also helped the project weather the departure of multiple professional programmers who worked on the project for varying periods of time. Our general process is to propose an idea for a visualization or an analytical feature, either as a refinement to an existing tool or as an idea for a new tool. Then, we experiment with various statistical methods, ideas for visualization, and new sources of linguistic data. As a new tool comes online, we work through stages of development before deploying the tools into service on the website's public page.

3.1. Vocabulary levels for learners of Russian

As we develop the project, we keep the needs of learners, teachers, and researchers in mind and hope that all tools will benefit each of these

[14] *Hedera* (Livingston, 2022) sees itself more as a compendium of curated texts appropriate for beginning and intermediate language students (focusing mostly on learners of Latin) and as a tool for keeping track of learned and targeted vocabulary items. For more information, see https://atg.fas.harvard.edu/hedera and https://hederaproject.org. *Visible Vocabulary* showcases frequency-based and pedagogically motivated vocabulary goals and more easily allows for the incorporation of authentic materials of variable linguistic and lexical difficulty.

users. The central tool in *Visualizing Russian* is the text parser, *Visible Vocabulary*. This is the "Swiss Army knife" of the website, and we will likely incorporate features that are developed in the subtools into the text parser over time.

Visible Vocabulary began as a means of identifying the relative difficulty of texts and their appropriateness for use in courses for students at various levels of Russian proficiency. Simultaneously, Clancy had begun work on the *Foundations of Russian* textbook project, beginning with the intermediate level of Russian but planning all along to also complete the elementary and advanced levels. *Foundations of Russian* is intended to be informed by frequency of vocabulary and by language use as exhibited in corpora and authentic materials.

With these goals in mind, Clancy worked to identify the critical vocabulary items for university students of Russian. The *Visible Vocabulary* tool currently utilizes four levels: Core (green words), Foundations (blue words), Expansions (purple words), and Specializations (orange words) (Table 1). Words that are absent from the database remain unanalyzed (black), and thus an implicit fifth level emerges from among these unanalyzed words, mostly proper nouns, neologisms, slang, more recent borrowings, exceedingly rare words, the occasional misspelling, or a lexeme for which the word forms are missing in the database.

Table 1. Vocabulary Levels in the Visible Vocabulary Database

Core (green)	Targets ~1,500 lexemes, most frequent or communicatively necessary vocabulary
Foundations (blue)	Builds another ~2,500 lexemes, informed by frequency but also by pedagogical/communicative goals
Expansions (purple)	Next-most frequent 15.6K words in the database
Specializations (orange)	Least frequent 12.5K words in the database
Unanalyzed words (black)	Items not in the database: proper nouns, neologisms, slang, more recent borrowings, exceedingly less frequent words, lemmas with word forms missing from the database

The Core and Foundations levels together represent roughly 4,000 of the most frequent and communicatively necessary words in the Russian language. Frequency and ranks have been obtained from the Sharoff (2008) frequency lists and directly from the RNC. Word inclusion has been informed by frequency, but pedagogical and communicative concerns have motivated our choices as well. Core vocabulary accounts for roughly 1,500 lexical items (currently reflected as 1,879 entries in the database including aspectual pairs and adjective/adverb forms together as a single lexeme). We do admit items into the Core level that do not appear in the first 1,500 words, when frequency alone is considered, to include aspectual counterparts, adjectives and their adverbs, and items in necessary domains for language learners (e.g., various foods and drinks, months, days of the week, etc.). If frequency were the only concern, various domains would regularly have gaps, and related words would not be learned for quite some time.[15]

With the Core group consisting of the most frequent and necessary words and the Foundations level comprising a relatively genre-free belt of words needed in all domains, the remaining two levels are almost purely determined by frequency and comprise the remainder of lexical items in the Russian language as represented in the database. The Expansions level (purple words) includes the next most frequent 15,600,words in the language. The Specializations level (orange words) includes the remaining 12,500 words in the database. Sharoff's (2008) lists included a lemma-frequency list and a form-frequency list. If we look at the levels of form frequency according to the lemmas they belong to, an interesting pattern emerges reflecting the character of these four levels. Figure 1 considers the total number of lemmas per level to which ranges of word forms belong in 6,000-word belts observed throughout 48,000 word forms.

The following characteristics emerge for each level: Core (green) words show Zipfian descent (Zipf, 1935) among the 1,500 most frequent lemmas in the language, yet the continuing solid line shows that even among the most frequent lemmas, not all forms in declension and conjugation are highly frequent, and some less-frequent lemmas are

[15] Days of the week appear from ranks 1,547 (*среда* [Wednesday]) to 8,834 (*вторник* [Tuesday]). Nationality terms even for a single country/group are broadly scattered in frequency, for example, words related to France/French appear from 1,490 to 17,419 yet are included in any beginner's textbook.

included among Core (green) words for pedagogical purposes. The Foundations (blue) words represent a relatively stable descent from 25% to 15% of the forms in their belts. This is characteristic of the need for these words as a foundation for vocabulary as these items appear across genres and in any and all domains. The Expansions (purple) words represent the new words a speaker steadily encounters in ongoing life experience with the language. Specializations (orange) words (and unanalyzed forms missing from the database) are reliably rare words. These major levels ripple through the other tools in the *Visualizing Russian* suite of tools described in the sections that follow. Due to space limitations, we describe only some of the major tools and their features. Full details are available for all tools on the project website.

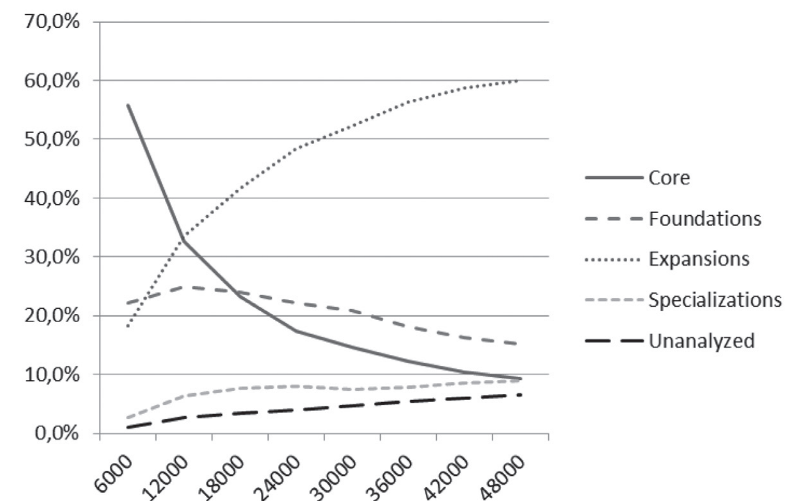


Figure 1. Form frequency and level characteristics (6,000-word belts).

3.2. Visible Vocabulary tool

The *Visible Vocabulary* tool (Figure 2) visualizes the relative difficulty of a Russian text based on Core, Foundations, Expansions, and Specializations vocabulary. Words are colorized according to their level, and summary vocabulary-level statistics are shown for the text as a whole, including a bar chart and pie graph showing the percentage by level in the text. These measures provide the user with an understanding of the text's general difficulty, whether for the purpose of instruction or individual reading. Given the importance of building

Core and Foundations for beginning and intermediate students, these two levels can be combined into one segment in the charts for a better estimate of what an intermediate or early advanced student should find approachable in the text. The colored text below the summary statistics provides a visual map of familiar and potentially unfamiliar words for the reader, a helpful feature for both language learners (which words to focus on learning) and teachers (which words to gloss in materials). Beginning and intermediate students know their attention is best served by mastering green and blue words, while more advanced students can direct their attention to acquiring the vocabulary of specific domains and greater nuance represented by purple words.

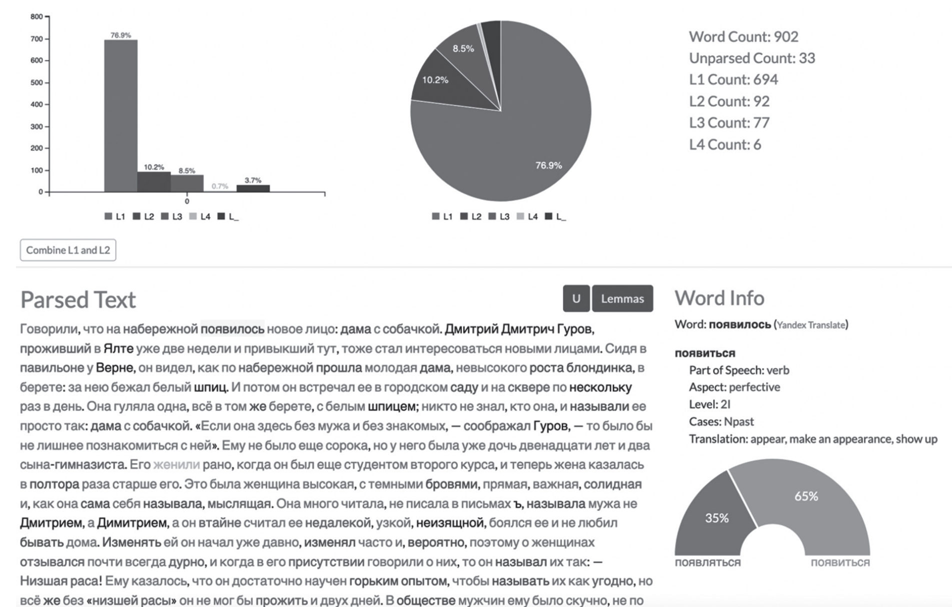


Figure 2. Word-level breakdown and coloring on the first part of Anton Chekhov's "Lady with the Lapdog" in the Visible Vocabulary tool.

Clicking on any word in the text brings up a word information panel to the side of the text, providing additional grammatical information. Clicking on a verb shows grammatical information about the verb form as well as a gauge visualization showing the verb's relative aspect ratio of imperfective to perfective. Stress patterns are shown for nouns, and words at the Core and Foundations levels have English

glosses. The user can copy-paste any text into the tool, analyze the text, then copy-paste the colorized text into a word processor for printing out and further editing, or the user can read and interact directly with the text in the tool as an online reader. We have solved several problems with processing text, including parsing hyphenated words (*кто-то* [someone]) and multiword expressions (", *потому что*" [because]). The tool scales up well: hundreds of pages of text can be processed at a time; a novel the size of *The Brothers Karamazov* can be analyzed in four parts.

3.3. Verb Histogram tool

The *Verb Histogram* tool is designed to provide information about verb constructions to help learners better understand the prepositions and cases used with verbs and thereby increase their command of the language. The tool uses data from the disambiguated subcorpus of the RNC to reveal verb constructions, word orderings, and construction frequencies throughout the corpus (Figure 3).

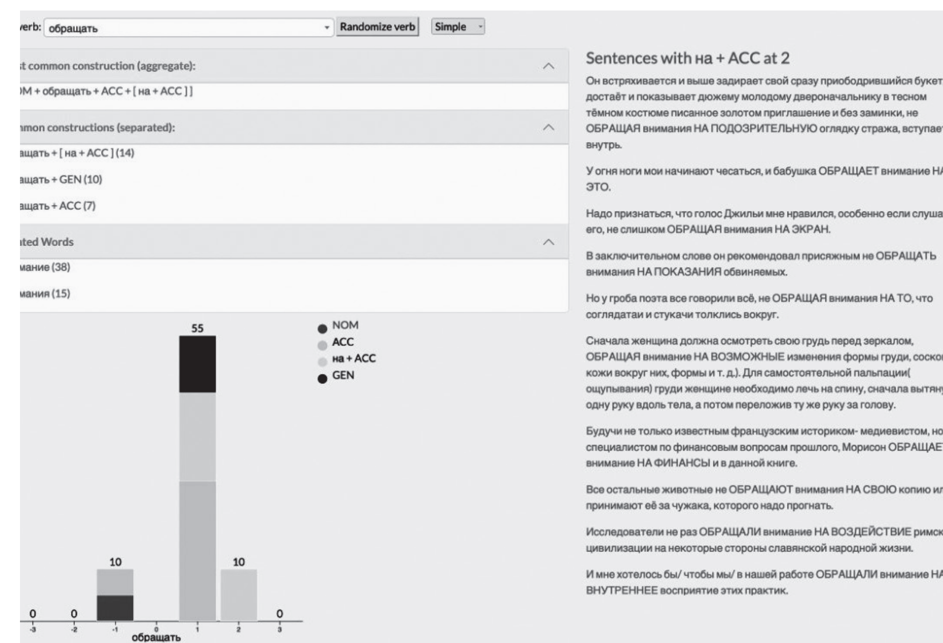


Figure 3. Graphical breakdown of обращать [turn, direct] across case constructions in the Verb Histogram tool. "-/+1" indicates that the construction begins one word before or after the target verb.

The tool displays a histogram of cases and prepositions plus cases surrounding every verb in the corpus. For example, if the user looks up *обращать* [turn, direct], the resulting histogram reveals that some common constructions with *обращать* are *на* + accusative, bare accusative, and bare genitive. The summary construction at the top of the tool immediately tells us that the most common string of constructions is [NOM + *обращать* + ACC + (*на* + ACC)]. The related-words section of the tool offers additional information on words that frequently appear with the verb in question. The data from the corpus reveals these suggested constructions as well as the common collocation *обращать внимание* [pay attention].

The histogram is interactive and includes corpus sentences representing each construction component. Perhaps the user is curious about the use of *обращать* with the genitive case. Clicking on the GEN label in the histogram legend reveals 11 example sentences with GEN in the position immediately following the verb, all of which involve *не обращать внимания* with GEN of negation. The tool makes case usage visible and accessible and conveys verb constructions in an accessible, standardized way.

3.4. Case Distribution tool

The *Case Distribution* tool generates radar charts for a noun's case usage profile based on the RNC subcorpus. The chart shows how often a word occurs in its different case forms. Radar charts are a good way of visualizing relative frequency data across categorical items. In the tool's basic view, the categories are always the six Russian cases (nominative, accusative, genitive, locative, dative, and instrumental[16]). In the detailed view, case usage is broken down to include bare case use and preposition + case. For example, "genitive" might break down into "*для* + genitive," "*от* + genitive," and so on in the detailed graph. Clicking on the categories around the perimeter of the radar chart displays the actual sentences from the RNC subcorpus.

For example, a user may input a noun like *квартира* to get a better idea of its case breakdown. In the basic chart (Figure 4), we see forms of *квартира* singular (yellow) appearing most frequently in the accusative case (96 instances) and locative case (93). The most frequent case among the plural forms (blue) is the genitive case (19). The tool tells us the total counts: there are 300 singular and 57 plural instances of the word *квартира* in the RNC subcorpus.

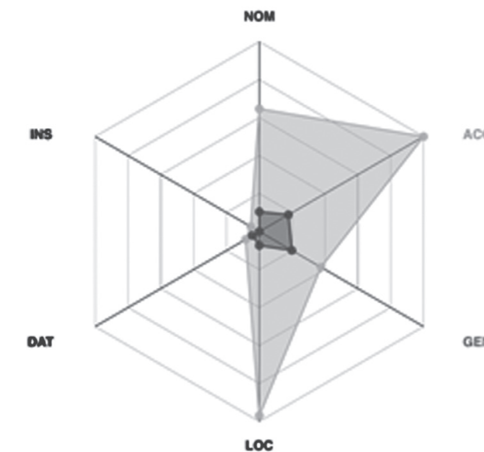


Figure 4. Basic chart view for noun cases (квартира).

From the detailed view (Figure 5), the most common preposition + case collocation *is в квартире*, which makes up 86/300 of the singular examples. The user can see that *в* [in] is used much more frequently than *на* [on, at], revealing information about preposition usage. Clicking on the label provides the user with example sentences.

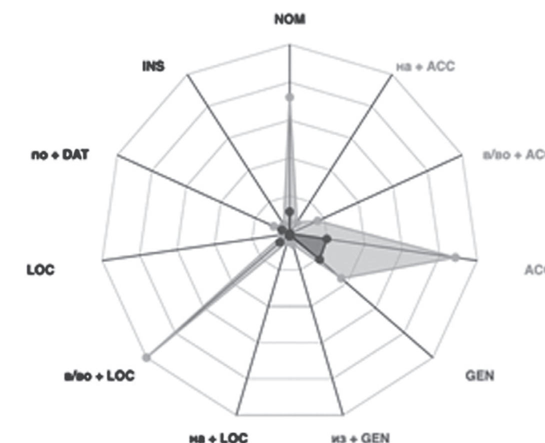


Figure 5. Detailed chart view for noun cases (квартира).

[16] This ordering of the cases most efficiently deals with overlaps in case endings (syncretisms), and the hexagonal format of the radar chart allows for easy comparison across cases (direct/oblique, etc.).

Words that are better represented in the abridged corpus present more interesting and, we believe, reliable visualizations than do words with relatively few occurrences. In the future, we would like to determine the occurrence thresholds necessary for a stable, illustrative case graph. Our attempts to create truly representative case graphs from raw corpus data have not yet proven fruitful due to case syncretism. We are also developing analogous tools for verbs and adjectives, but the greater number of morphological forms in verbs make the visualization more cumbersome.

3.5. Additional and future tools

Space precludes detailed discussion of four additional tools: *Mini-Story Creator*, *Quick Lemma*, *Wordburst*, and *Similarity*, but we encourage readers to go to the website to try out all of these tools and find further information.

The *Mini-Story Creator* allows for the creation of a new text or analysis of an existing text for lemma frequency and word form counts in comparison with a set of target vocabulary items. Students can create texts using target vocabulary, and teachers can verify the presence of target vocabulary in their materials.

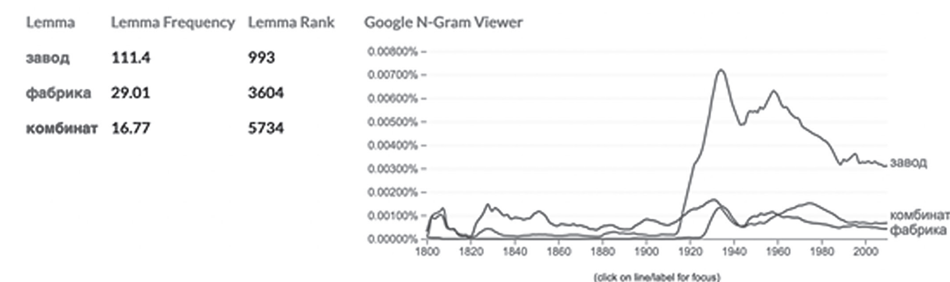


Figure 6. Near-synonym comparison in the Quick Lemma tool (manufacturing locations: завод, фабрика, комбинат).

The *Quick Lemma* tool provides information about the frequency of all of the various forms of a particular Russian word or about the frequency of a set of lemmas as represented in the project database, the RNC, and the Google Ngram Viewer[17] (Figure 6).

[17] See Michel et al. (2010) and https://books.google.com/ngrams.

The *Wordburst: Word Formation* tool breaks down words into prefixes, roots, and suffixes and provides a dynamic graph of words related by root.

Figure 7: Word Formation tool for root lay/put.

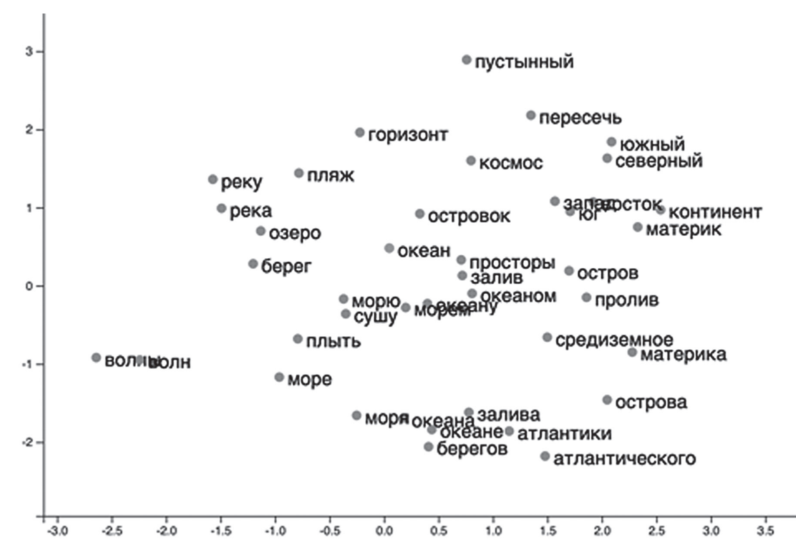


Figure 8. PCA graph for 40 words related to океан [ocean].

For example, the user may be interested in words with the root associated with lay/put (Figure 7). Items closer to the center have higher frequency than items at the periphery, and colors represent vocabulary levels.

The *Similarity* tool incorporates techniques from natural language processing of vector spaces to explore sets of related words with semantic and contextual connections (see Pennington, et al. 2014). Figure 8 shows the principal component analysis (PCA) graph for words related to *океан* [ocean].[18]

We have far from exhausted the work we would like to do with the database itself and are only beginning to implement vector embeddings and other big data and deep learning methods.

4. *Visualizing Russian* and undergraduate research opportunities

Research opportunities for undergraduate students are heavily weighted toward science and engineering in general and are reflected in the physical space and laboratory resources on a typical university campus. Support for undergraduate research in the humanities, even with regard to digital humanities, is of relatively recent provenance. However, creative thinking can extend the notion of humanities research and create opportunities for undergraduates in projects that benefit humanistic fields of study.

The undergraduate degree in Slavic Languages and Literature, or the "Typical Russian Major," is a program of study that generally includes coursework in language, literature, and culture. The coursework often includes extensive language study, exposure to the Slavic literary canon in English translation with some readings in the target language, and discussions of Slavic cultures in linguistic and literary contexts. In this framework, the research opportunities for undergraduates working toward a Slavic degree may involve information gathering and analysis of specific authors, works, literary movements, literary theories, historical moments, and linguistic developments, or some combination of these topics.

Visualizing Russian extends beyond the bounds of these "normal" Slavic research opportunities for undergraduates or even the typical pursuits of graduate students. At its core, our project is an interactive interface intended for any level of scholar, from undergraduates learning Russian to linguistic researchers interested in testing their hypotheses on corpus-based visualizations of language data. In comparison to an

[18] These tools are powered by the embeddings of the Natasha/Navec project (Kukushkin, 2022).

article or book that takes on a static end form at publication, our work is continually modified and improved based on evaluation and feedback. Rather than solely benefiting the research community, the project is also available to nonresearchers, including students and teachers. Another difference between *Visualizing Russian* and other humanities projects is the explicitly digital nature of our project. The end product of our work is currently available on the web at no charge and takes advantage of many of the affordances of the digital display, such as user interactivity, dynamic figures, and vast database storage. The integration of "big" data into the website allows for massive flexibility and customizability for users to find information on the words and sentences they are interested in.

Visualizing Russian is unique in general as a digital humanities research project, but it has been particularly valuable because it coincidentally aligns well with the specific interests of the undergraduate researcher and coauthor of this paper, Paige Lee. Paige is pursuing a joint concentration (Harvard-speak for a double major) in Computer Science and Slavic Languages and Literatures. Having already matriculated with advanced knowledge of Russian, Paige is interested in the union of these fields, and she hoped to conduct research on a topic that combined Slavic language and culture with computational tools and frameworks. The *Visualizing Russian* project combined these interests, allowed her to build on existing language knowledge and computational skills, and additionally introduced her to new fields and interests, such as digital pedagogical tools and corpus linguistics.

This "out-of-classroom" research experience has augmented Paige's professional and personal development. She has learned new technical skills in web development and linguistic data analysis from working on a live, dynamic website in collaboration with Arthur Barrett, a professional academic technologist at Harvard. Her work on the project sparked her interest in the ever-expanding field of natural language processing, in which computational tools are used to analyze human language. The project also has significantly refined her skills in designing and implementing web-based data visualizations.

From the faculty perspective, individual professors may be hesitant to work with undergraduate researchers because of the temporary nature of their availability. Paige has already worked on *Visualizing Russian* for

two years, including highly productive work during a leave of absence during the pandemic, and still has a year not only to contribute to the project but also to allow experience with the project to form her plans for a senior thesis in Slavic and Computer Science. The modular nature of the project can also add value to the contributions even of short-term participants, as they can work on specific small-scale tools that are integrated as components of the project as a whole. Paige's longevity with the project over the course of her undergraduate years as well as the "suite of tools" nature of *Visualizing Russian* contribute to forming a productive research opportunity.

Finally, this has been Paige's first experience working on any kind of project with a team of academic researchers. Exposure to the academic research and publishing process is invaluable for any student interested in pursuing higher education or academic careers. Meanwhile, Paige learned how to develop a website in a team setting, a task requiring a specific set of skills in version control and web development. The professional diversity of the team (a Slavic linguist, a technology professional and his team, and an undergraduate student) allowed for cross-disciplinary insights, contributing to a well-rounded final product. As Paige is a current language student, her perspective mirrored that of a potential end user of the tool, which is especially helpful during the feedback process. The benefits of this collaboration will be assets for Paige's personal and professional growth going forward.

5. Usage scenarios

The *Visualizing Russian* tools have already been used in numerous teaching and learning contexts. The *Mini-Story Creator* allows creators of teaching materials to verify that their dialogues, texts, and examples match with target vocabulary and ensure that target vocabulary is being recycled in those materials. *Visible Vocabulary* allows teachers to select the most appropriate texts by level for their students and allows independent learners to focus their study on more frequent vocabulary (green and blue words) at earlier levels, while more advanced students can focus on developing genre-specific vocabulary and professional jargon in texts by paying more attention to less-frequent vocabulary (purple and orange words). The *Verb Histogram* tool allows for quick classroom demonstration of verbal case governance along with relevant

examples from the RNC. The tools are thus equally applicable to authentic materials and pedagogical materials, both of which have their place in teaching and learning Russian as an L2.[19]

5.1. Learning materials and textbook development

Authentic texts and pedagogical texts created by native-speaking teachers often unnecessarily complicate matters for students. While these more complicated texts have a certain native flair, they can distract and confuse learners at a time when their attention would be better focused on obtaining a broad general vocabulary across a number of semantic domains. In the preparation of *Foundations of Russian* (Clancy et al., in press), such examples have been spotlighted using the *Visual Vocabulary* tool:

> *«Каждое слово имеет значение, — говорит она. — Убеждать — значит правильно* ***подбирать*** *выражения.*
> ["Each word is significant," she says. "Persuading is a matter of correctly choosing expressions."]
>
> *Строя дома из кубиков маленький Боря скучал, зевал, а потом и совсем* ***уснул****.*
> [While building a house out of blocks, little Borya got bored, yawned, and then totally fell asleep.]
>
> *Вы не* ***подскажете****, как добраться до вокзала?*
> [Could you tell me how to get to the train station?]
>
> *Какими масками можно* ***напугать*** *людей на Хеллоуин?*
> [What masks can you use to scare people with on Halloween?]

For an intermediate student of Russian, encountering rarer lexical items (purple and orange words) in their textbook is not only unnecessary and confusing but also misses the opportunity to showcase and repeat the target vocabulary for the level (Table 2).

[19] However, authentic corpus examples are often long, complicated, and difficult to extract from the broader narrative context they were originally used in. As one reviewer of this article noted, we are still very much in need of short, dialogue-style utterances, even if we can maintain a corpus-based but simplified approach.

Table 2: Verbs Found in Some Native-Speaker Texts That Could Be Replaced with Target Vocabulary

Form used by native speaker...	Target vocabulary for intermediate students...
подбирать|подобрать (orange|purple)	выбирать|выбрать (green|green)
|уснуть (|purple)	засыпать|заснуть (blue|blue)
заходить|зайти (blue|blue)	входить|войти (green|green)
|подсказать (|purple)	|сказать (|green)
заваривать|заварить чай (purple|purple)	варить|сварить (blue|blue)
|напугать (|purple)	пугать|испугать (blue|blue)

Frequency plays into these usages in various ways. While the specific construction *заваривать|заварить чай* is a more frequent collocation than is *варить|сварить чай*, the latter verbal pair is overall more frequently used[20] and thus more urgent for students to know so that they are aware of cooking by boiling water as a general concept among cooking verbs in Russian before they add a more nuanced verb like *заваривать|заварить* to their vocabularies. Likewise, in the preceding examples, a basic level of expression is established in the green and blue words that needs to be acquired by learners before they turn their attention to near-synonyms and more specialized items.

5.2. Guided acquisition of lexical items

Students studying Russian as an L2 in the classroom with a teacher have a guide on hand for their learning, but when they study on their own or read independently, they lack direction about which lexical items are statistically more frequent. For instance, a learner reading a selected passage from Gogol's *Dead Souls* might encounter a number of items from 19th-century realia (*приданое* [dowry, *purple*], *помещик* [landowner, *purple*], *кучер* [coachman, *purple*], *форейтор* [postilion, *purple*], *экипаж* [carriage, *purple*]); diminutive or nonstandard forms (*тысячонок* [a thousand, unanalyzed]), *внутренно* [inwardly, unanalyzed]); and high-level vocabulary (*досадовать* [be vexed by, *purple*], *разведать* [reconnoiter, *purple*], *лакомый* [tasty, *orange*]). Reading with guidance from *Visible Vocabulary*, the independent student can gauge the relative frequency of words and also make better judgments about what words are likely to be archaic or less-than-ideal candidates for inclusion in vocabulary lists. This is the sort of advice an instructor might give. A beginner-intermediate student would know to focus in general on green and blue words and to leave purple words for later acquisition, whereas even an advanced student would have a better sense of what purple words would be good to pay attention to while casting aside the least-frequent orange and unparsed words except for momentarily understanding their use in the passage at hand. For teachers preparing handouts for their students, it instantly becomes obvious which words are most in need of being glossed to make reading such a passage more approachable.

[20] Forms of *заваривать|заварить* with *чай* occur roughly 3.7 times as often in the main corpus of the RNC as *варить|сварить* with *чай*, but overall *варить|сварить* [12,664|4,678 = 17,342] are more frequent lemmas than are заваривать|заварить [770|1654 = 2424] in terms of occurrences in the RNC. An anonymous reviewer pointed out that *заваривать|заварить чай* has especially taken off since around 1980. However, "coffee" tells another story, in which the verbs are reversed with *варить|сварить*, with *кофе* around 5.1 times more frequent as *заваривать|заварить*.

5.3. Case governance in the classroom

The *Verb Histograms* tool can be used in the classroom to demonstrate what cases and prepositions Russian verbs tend to be used with and what the main constructions are for each verb. Teachers and textbooks regularly explain that *помогать|помочь* [help] is used with a dative receiver of the assistance or that "answer a question" is expressed by *отвечать|ответить* plus the preposition *на* with the accusative case. With the *Verb Histogram* tool, these constructions can be shown along with broader case and preposition usage and with copious examples from a corpus. For the preceding verbs, the results of the tool show that "help" is also used with the infinitive and that an "answer" can be directed to a dative receiver or to a question (*на вопрос*) or that one can "answer for" someone or something (*за* + accusative). However, potential drawbacks here include poor construction representation due to lack of data for some verbs and the fact that authentic corpus examples are often difficult to understand and may thus fail to exhibit the essential point of the basic case governance for our students.

6. Conclusion

A large-scale project like *Visualizing Russian* would not have been possible without time, dedication, and financial support, but most essentially, it would not have been possible without collaboration. Given the intersection of linguistic analysis, pedagogical expertise, technical and programming skills, and visual design, it is unlikely that a single researcher could make much progress on their own. It is simply too difficult to keep one's feet in all of these different areas and to keep up with changes in programming languages, new tools, and contemporary web design and data visualization. However, a large-scale, long-running project such as this proved to be an excellent project for collaboration among individuals from a variety of backgrounds, gaining attention and support from initiatives in digital humanities and serving as an opportunity not only for undergraduate research but also for thinking about ways we can expand the traditional understanding of a Slavic Languages and Literatures undergraduate major.

References

Bostock, M. (2021). *D3.js*. https://d3js.org

Clancy, S. (2014–2022). *Visualizing Russian*. A suite of tools for exploring the data behind the Russian language. http://visualizingrussian.fas.harvard.edu

Janda, L. A., & Tyers, F. M. (2021). Less is more: Why all paradigms are defective, and why that is a good thing. *Corpus Linguistics and Linguistic Theory*, *17*(1), 109–141. doi.org/10.1515/cllt-2018-0031

Krashen, S. (2003). *Explorations in language acquisition and use.* Heinemann.

Kukushkin, A. (2022). *Natasha/Navec*. GitHub. https://github.com/natasha/navec

Livingston, I. (2022). *Hedera*. https://hederaproject.org

Lyashevskaya, O. N., Plungyan, V. A., & Sichinava, D. V. (2005). О морфологическом стандарте Национального корпуса русского языка [On the morphological standard of the Russian National Corpus]. Национальный корпус русского языка: 2003–2005. Результаты и перспективы [Russian National Corpus: 2003–2005. Results and prospects.] (pp. 111–135). https://ruscorpora.ru/media/uploads/2022/04/21/k3.pdf

Michel, J.-B., Shen, Y. K., Aiden, A. P., Veres, A., Gray, M. K., Brockman, W., The Google Books Team, Pickett, J. P., Hoiberg, D., Clancy, D., Norvig, P., Orwant, J., Pinker, S., Nowak, M. A., & Aiden, E. L. (2010). Quantitative analysis of culture using millions of digitized books. *Science*, *331*(6014), 176–182. doi.org/10.1126/science.1199644

Pennington, J., Socher, R., & Manning, C. D. (2014). GloVe: Global Vectors for word representation. https://nlp.stanford.edu/projects/glove/

The Russian National Corpus (RNC). (2003–2022). https://ruscorpora.ru

Sharoff, S. (2008, June). Russian frequency lists. http://corpus.leeds.ac.uk/serge/frqlist/

Sharoff, S., Umanskaya, E., & Wilson, J. (2013). *A frequency dictionary of Russian*. Routledge.

SMARTool: The Strategic Mastery of Russian Tool. (2020–present). https://github.com/smartool/smartool-rus-eng and https://smartool.github.io/smartool-rus-eng/

Wiktionary (Russian version). (2017). https://ru.wiktionary.org/

Zipf, G. K. (1935). *The psycho–biology of language: An introduction to dynamic philology*. Houghton Mifflin.

Past and present Russian language textbooks mentioned

Andrews, E., Dolgova, I., Flath, C., Maksimova, E., & Van Tuyl, J. (1995). *С места в карьер/Leaping into Russian: A systematic introduction to contemporary Russian grammar*. Focus Information Group.

Clancy, S., Egorova, V., Green, D., & Willis, O. (in press). *Foundations of Russian*. Routledge.

Davis, P. A., Bronstein, Oprendek, D. V., Bronstein, A., & Fleszar, A. (1997). *Making progress in Russian: A second year course*. Wiley, 2nd ed.

Lekić, M. D., Davidson, D. E., & Gor, K. S. (2008–2009). *Live from Russia* (*Russian stage one*), 2nd ed. Kendall Hunt.

Lubensky, S., McLellan, L., Ervin, G. L., & Jarvis, D. K. (2001–2002). *Начало* [Start], 2nd ed. McGraw-Hill Education.

Sokolova, S., Bjørgve, E., Janda, L. A., Kosheleva, D., Nesset, T., & Zhamaletdinova, E. (in press). My Russian journey: Rethinking teaching Russian to beginners. In S. Nuss & C. Martin (Eds.), *Student-centered approaches to Russian language learning: Insights, strategies, and adaptations (Russian language pedagogy and research)*. Routledge.

Empirically Determined Strategic Input and Gamification in Mastering Russian Word Forms

Laura A. Janda, Jan Ove Nikolai Almendingen
Linn Thea Kaldager Josefsen

1. Introduction

We propose two designs to gamify second language (L2) learning of Russian inflectional morphology: Treasure Hunt and Story Time. The goal of these designs is to focus learning on high-frequency word forms that are most strategic and effective for L2 acquisition in a way that stimulates engagement and builds lifelong learning skills.

These two gamification designs emerged from a student focus group that was convened to propose implementations for the SMARTool (see Section 3). After an initial brainstorming session, the ideas were further developed by the instructor, honed by the students, and tested in class. Students have also contributed to and commented on the contents of this article.

In Section 2 we briefly identify the problem, namely, the enormous number of paradigm forms potentially present in Russian paradigms and their skewed distribution. We cite research showing that inflectional morphology is a major hurdle for L2 learners but not for native speakers, who use only a fraction of the potential forms and can easily understand and produce forms that they have never encountered. Furthermore, evidence demonstrates that learning can be enhanced by strategically concentrating on the highest-frequency forms. Access to the highest-frequency forms of over 3,000 lexemes is provided by the SMARTool described in Section 3, but that resource is relatively static, meaning that more guidance is needed on how to implement this tool in the classroom and in self-study. Our two proposed designs are presented in Section 4 (Treasure Hunt) and Section 5 (Story Time). Conclusions are offered in Section 6.

2. The challenge of inflectional morphology

Russian is just one of many languages that have *rich inflectional morphology*, meaning that words can have many different forms to signal grammatical

categories such as case, number, person, tense, and so forth. Each Russian noun has at least a dozen forms, each adjective about 30 forms, and each verb several dozen forms (20 verb forms, plus inflections of participles). The full paradigms for even a modest vocabulary of a few thousand words constitute an array of over 100,000 word forms. However, the frequency of word forms follows a highly skewed Zipfian distribution (Karlsson, 1986; Zipf, 1949), meaning that only a handful of the potential forms of any given word occur frequently, while the remainder are rare (many vanishingly so).

In other words, while Russian morphology can produce a huge volume of word forms, only a small fraction of word forms are commonly used. Only three word forms are needed to account for the majority of uses of an average high-frequency inflected Russian word (Janda & Tyers, 2021). For many words, including all lower-frequency words as well as words that are closely associated with a given grammatical construction, over 90% of uses involve only one inflected form. For example, *протяжение* [expanse] is a fairly high-frequency word (with over 31 occurrences per million words in the Russian National Corpus,[1] henceforth "RNC"). Although this word is attested in all 12 paradigm forms in the RNC, the locative singular *протяжении* accounts for 92% of the uses of this word. The dative plural *протяжениям* and instrumental plural *протяжениями* forms are attested only once each, and these in the 19th and 18th centuries, respectively. Given that the RNC contains over 337 million words, a quantity roughly equivalent to the lifetime exposure of a human being between 40 and 70 years old to their native language, this fact indicates that many native speakers have probably never encountered these word forms. However, all native speakers of Russian can be expected to readily understand and produce these forms in appropriate contexts, as evidenced by rare occurrences that turn up in Google searches. Janda and Tyers (2021) showed that less than one tenth of 1% of Russian nouns are attested in all 12 paradigm forms, regardless of the size of the corpus. The skewed distribution of forms is much more pronounced with lower-frequency words, which typically occur in only one inflected form (note that given the Zipfian distribution, approximately one half of unique lexemes are

[1] See https://ruscorpora.ru.

very rare, and these are known as *hapaxes*). This means that Russian native speakers are exposed only to partial paradigms for the vast majority of words that they know.

Thus we face a linguistic conundrum termed the *Paradigm Cell Filling Problem* (Ackerman et al., 2009): the fact that native speakers of languages with rich inflectional morphology routinely recognize and produce forms that they have never been exposed to. It is not entirely clear how first (native) language (L1) learners acquire and navigate rich morphologies. Evidence shows that native speakers are sensitive to frequency (Goldberg, 2006, Chapter 5). Janda and Tyers (2021) suggested that native speakers acquire many partial paradigms. Since the frequency distribution of forms is unique for each word, the partial paradigms overlap, and collectively they cover the entire set of paradigm cells for each declension and conjugation class. This makes it possible for native speakers to triangulate from words whose given form is very common to words whose form is very rare. Returning to the preceding example of *протяжение* [expanse] that has no RNC attestations of dative and instrumental plural in the 20th or 21st centuries, native speakers have recourse to other words in the same declension class that have very frequent dative and instrumental plural forms, such as *упражнение* [exercise] (see the common phrases *ответы к упражнениям* [answer key] and *тетрадь с упражнениями* [book of exercises]).

Empowering L2 learners to navigate rich inflectional morphology in a native-like manner is a significant challenge (Hopp, 2010). Morphology is considered to be both essential to L2 acquisition and a "bottleneck," as well as more difficult than both syntax and semantics, and multiple studies have shown that learning the myriad word forms in inflected languages is more difficult than learning other aspects of language (Jensen et al., 2019; Slabakova, 2009, 2014). L2 learners largely lack the resources of language experience that native speakers can fall back on when manipulating morphological forms. L2 learner acquisition is necessarily compressed because L2 learners do not have the tens of thousands of hours of language exposure that enables native speakers to build up their extensive reservoirs of overlapping partial paradigms. Can we find shortcuts to help L2 learners acquire a native-like fluency with inflectional morphology?

Janda and Tyers (2021) conducted a machine learning experiment using data from the SynTagRus corpus. The experiment compared two training simulations: one that involved learning the full paradigms for Russian nouns, verbs, and adjectives (henceforth "full model") and one in which the computer learned only the single most-frequent inflected form of each lexeme (henceforth "single form model"). In the testing phase, the task for both models was the same: to predict given forms for new (previously unseen, not included in the training) lexemes. In other words, the training would include (among others) the lexeme *книга* [book], for which the full model was trained on all forms for all case and number combinations, but the single form model was trained only on the most common form, namely the accusative singular *книгу*. The testing phase then asked each of the two models to predict the accusative singular form of a new lexeme, for example *рыба* [fish], that was not included in the training phase. The training phase for both models began with 100 lexemes and was repeatedly increased in round after round to 200, 300, and so on, up to 5,400 lexemes. In each round, the two models were tested on the prediction of given inflected forms for 100 new lexemes. From the 11th round (after training on 1,100 lexemes) through all subsequent rounds, the single form model consistently outperformed the full model. The full model never scored above 80% correct predictions, whereas the single form model scored above 80% on most rounds, and above 90% on some rounds. Analysis of errors showed that even when the single form model made incorrect predictions, its errors were less serious (measured in *Levenshtein distance*, the number of letters needed to be changed to achieve the correct answer; see Levenshtein, 1965/1966). In other words, at least for a computer, learning Russian inflectional morphology is more effective when focusing on the most frequent forms instead of memorizing entire paradigms.

Janda and Tyers's (2021) experimental results suggest that learning should be focused on the most-frequent inflected forms rather than on whole paradigms. Language instructors have probably always tried to emphasize the word forms that seem most common, but thanks to the existence of large corpora like the RNC, it is possible to scientifically determine exactly what forms are the most common. However, this is not a trivial task because each lexeme has a unique distribution of inflected forms. For example, the top three most-frequent forms of *церковь* [church] are genitive singular, nominative singular, and instrumental singular, but for the near-synonym *храм* [temple, house of worship], the top three most frequent forms are accusative singular, accusative plural, and dative singular. Furthermore, just knowing the most-frequent forms gives us an incomplete picture. The grammatical constructions and collocations that motivate the same forms for different lexemes can be very different. As we saw previously, *протяжение* [expanse] occurs predominantly in the locative singular form, a fact that is motivated by its prominent role in a grammatical construction meaning "during" that consists of the preposition *на* [on] followed by *протяжении*, in turn followed by a noun phrase in the genitive case that refers to a time period. There are many other nouns that have a preference for the locative singular, and for each lexeme there is a specific motive, involving different prepositions, meanings, and collocations.

To reduce the burden of memorizing inflected forms for L2 learners of Russian and boost their morphological accuracy, we need to focus on the most frequent word forms. The selection of high-frequency forms can be informed by corpus data. However, each and every lexeme presents a unique set of motives for its highest-frequency forms, requiring investigation of the grammatical and lexical contexts that are most typical for each word.

Evidence shows that the majority of language produced by native speakers of any language consists of stringing together prefabricated units (*chunks*) such as "read a book" or "I'm trying to" in English. Estimates vary, but perhaps over 80% of language is the recombination of well-rehearsed chunks (see Dąbrowska, 2004, p. 19 for an overview of scholarly literature). It therefore makes sense to steer L2 learners' attention to the word forms and contexts that predominate in Russian discourse.

3. Strategic stratification for learning inflectional morphology

Linguistic corpora are not in themselves new, but there has to date been little substantial implementation of corpora in language teaching. The oldest language corpora were founded in the 1970s, and large digital collections of language samples with hundreds of millions of words have existed for over a decade. However, with some notable exceptions (Hopp, 2010), corpus resources have been aimed primarily at linguists, not L2 learners, and it has been difficult to find ways to connect L2 learners to the powerful benefits of using corpus language data.

The research described in Section 2 has inspired the development of the SMARTool[2] (Strategic Mastery of Russian Tool; Janda, 2019). The aim of the SMARTool is to give learners and instructors access to Russian word forms stratified by frequency, with the focus restricted to the word forms and contexts that are most strategic for learners to acquire.

The SMARTool is a free, publicly available resource that does not require a password, is accessible across a multitude of devices, and requires nothing more than a stable internet connection. The SMARTool was built using open-source code stored on GitHub and was deliberately designed to facilitate portability to other languages. Over 3,000 nouns, verbs, and adjectives are represented in the SMARTool, spanning Common European Frame of Reference (CEFR) proficiency Levels A1 through B2, representing a basic minimal vocabulary for each level. Corpus data[3] has been used to determine the most-frequent inflected forms of each lexeme. For most words, the three most-frequent forms are included, but if only one or two word forms account for over 90% of attestations of a given lexeme, then only those forms are included. There are therefore about 9,000 word forms represented in the SMARTool, less than 10% of the total number of potential word forms associated with the vocabulary. The collocational preferences and typical grammatical contexts of every single word form have been identified on the basis of corpus data, and all word forms are presented in their characteristic contexts, namely, in a corpus-inspired example sentence. Audio versions of all sentences are available at the click of a button, as are English translations, so learners can check both pronunciations and meanings.

For example, if a user looks up the noun *вопрос* [question] in the SMARTool, they receive the following sentences (including the translations, if the user has checked the box to request them):

[2] See the SMARTool at https://smartool.github.io/smartool-rus-eng/.

[3] The SynTagRus (https://github.com/UniversalDependencies/UD_Russian-SynTagRus) corpus was used to determine the most-frequent inflected forms of each lexeme. In addition, the Russian National Corpus (see Section 2) and the Collocations, Colligations and Corpora resource (CoCoCo; https://cococo.cosyco.ru/download.html) were consulted to determine collocational preferences and typical grammatical contexts. Example sentences are inspired by these corpus resources, meaning that they have been simplified to focus on the given word forms and their immediate contexts. It is not feasible to use unedited corpus examples in beginning and intermediate L2 Russian instruction because (a) individual sentences extracted from a corpus are often hard to understand even for native speakers without more context, and (b) corpus sentences tend to be long, containing extraneous information that distracts from the learning goals.

Быть или не быть, вот в чём ***вопрос***. (Nom.Sing)
"To be, or not to be, that is the question."

Никто не может ответить на мои ***вопросы***. (Acc.Plur)
"Nobody can answer my questions."

У нас много ***вопросов*** *к президенту*. (Gen.Plur)
"We have many questions for the president."

This information indicates that the following three case and number combinations are most common for this word, in descending order: nominative singular, accusative plural, and genitive plural (a tab at the top of the page directs the user to the list of abbreviations if needed). Furthermore, we learn several crucial constructions that go with these three most-frequent word forms, namely *(вот) в чём вопрос* [that is the question/what is the question], *ответить на вопросы* [answer questions], у + genitive *вопрос/много вопросов* [somebody has a question/many questions], and *вопрос(ы) к* + dative [question(s) for somebody]. Learners are thus equipped with enough information to successfully interpret and use the word *вопрос* [question] in the very contexts they are most likely to encounter.

The SMARTool's filters make it possible for users to select content according to CEFR Levels, Topics (in 18 categories such as *время* [time] and *еда* [food]), Analysis (combinations of grammatical categories, such as locative singular), and Dictionary (permitting the user to both type in part of a word and scroll through the entire inventory). The filters are designed to encourage learner experimentation and autonomy. Search by analysis makes it possible to reverse the perspective of learning inflectional morphology: instead of showing what word forms are most associated with each lexeme, searching by grammatical categories shows which lexemes are most associated with given grammatical categories. Especially when learning challenging verb forms (like gerunds and participles), it can be useful to find out what words actually occur frequently in those forms. For instance, examples are provided for high-frequency perfective gerunds such as *оглянувшись* [after taking a look around]. In addition, the SMARTool A1 vocabulary serves as the learner dictionary for *Min rusisske reise* [*My Russian Journey*], an online beginner

course in Russian.[4] A scaled-down version of the SMARTool (sourced from the same data set) that can be filtered for the 35 lessons in that course is also available.[5]

Representation of the Russian language in the SMARTool is limited somewhat by the available data, which is itself skewed, particularly in terms of gender. The Russian language expresses gender in all singular past-tense verb forms (e.g., "was": *был* [masculine singular], *была* [feminine singular], *было* [neuter singular]), as well as singular forms of adjectives and participles, and for many ethnonyms and professional titles there are distinct male and female forms (e.g., "an American": *американец* [masculine], *американка* [feminine]). Kuznetsova (2015) showed that in corpus data, past-tense forms of verbs associated with human subjects typically have three times more attestations of masculine forms than of feminine forms. For example, the RNC contains 407,823 attestations of *сказал* [he said] but only 119,855 attestations of *сказала* [she said], a ratio of over 3.4:1. Skewed data of this type is not particular to Russian or to language corpora. As Criado-Perez (2019) and D'Ignazio and Klein (2020) have shown, underrepresentation of women is endemic across all kinds of data. We aim to correct for the skew in data by taking appropriate steps to improve the gender balance in our gamification exercises.

The SMARTool is an important step forward in using corpus data to make a real difference in the experience of L2 learners of Russian. The tool gives learners and instructors access to the most strategic inflected forms and usage contexts for a basic vocabulary of nouns, verbs, and adjectives. It is interactive in the sense that users can search according to topics, grammar, lexicon, and proficiency level, with both translations and audio on demand. However, beyond this, the SMARTool is a static resource and risks being underutilized, like a reference book that merely collects dust on a shelf. Users need instructions on how to use the SMARTool and a motive to do so. We offer two designs for engaging users in such a way that they will learn by doing, and in so doing acquire lifelong learning skills that they can apply beyond the tasks at hand. While gamification is meant to add some fun to the business of acquiring inflectional morphology, it is also more than that. Gamification encourages learners to transition from passive reception to

[4] See https://mooc.uit.no/courses/course-v1:UiT+C001+2020/about.

[5] See https://smartool.github.io/min-russiske-reise/.

active inquiry (see Harvey Arce & Cuadros Valdivia, 2020). Our goal is to spark curiosity and creative expression by challenging users to take advantage of the potential of the SMARTool. We plan to create apps like the SMARTool itself that can be used across various devices (laptop, tablet, smartphone).

Sections 4 and 5 present two gamification concepts that emerged from focus group meetings with undergraduate L2 learners of Russian in 2020 and 2021. The concepts were generated and initially developed in the focus group. The faculty member (Janda) further refined the ideas and worked out specific exercises that were vetted by focus group members, and in 2022 these exercises were piloted with a new cohort of undergraduate students. Two focus group members (Almendingen and Josefsen) were consulted in the writing and editing of this article.

4. Treasure Hunt

The Treasure Hunt design launches users on explorations into various corners of the Russian language. Explorations guide users to useful discoveries not only about inflectional morphology but also about phonology, semantics, syntax, derivational morphology, and even alternative ways of categorizing the human experience—all without needing to learn any linguistic terms. Treasure Hunt activities are stratified for proficiency level, and even A1 users (with a vocabulary of only a few hundred words) have ample opportunities to go on Treasure Hunts. Treasure Hunts can be undertaken in groups or individually, in the classroom or during self-study.

Each Treasure Hunt begins with a simple Prompt, an instruction on how to use a SMARTool search function to extract a target set of sentences, and a question to consider. After deducing an answer using the SMARTool, users can compare their answers with an Answer Key. A Take-Away Idea summarizes the result and what users can do with it.

Here we cite four examples of Treasure Hunts from the A1 level and describe some Treasure Hunts for more advanced levels.[6] Note that we do not cite the sentences that the SMARTool presents for these examples; the user will find these examples when they consult the resource. We also do not translate words here since users can find translations in the SMARTool.

[6] These and more Treasure Hunts are available at https://smartool.github.io/exercises/.

4.1 Treasure Hunts for CEFR level A1

1.
Prompt:
Choose: Search by dictionary

Find all the words that begin with *а*- and *э*-.

What do these words have in common?

Answer Key:
All of the words that begin with *а*- and *э*- in the SMARTool dictionary are borrowed words in Russian.

Native Russian words do not begin with *а*-. The only exceptions are *ахать*, *ахнуть* [say ah!].

Native Russian words do not begin with *э*-. The only exceptions are *этот* [this/that] and other forms of this word (*эта*, *эти*, etc.).

In general, most Russian words begin with a consonant. This includes words that begin with *е*-, *ю*-, *я*-, which begin with the consonant *j*- (sounds like *y*- in English). If a Russian word begins with a vowel, it is one of these: *и*-, *о*-, or *у*-.

Take-Away Idea: If you encounter a long new word that begins with a vowel, it is probably a borrowed word. If you sound it out, you will probably recognize it. For example, *экономический* means "economic," and you don't need a dictionary to figure that out.

2.
Prompt:
Choose: Search by dictionary

Look up these words: *российский*, *русский*, *иностранный*. Look at the sentences.

What kinds of items can be *российский*, and what kinds can be *русский*? Can you compare this with the use of the word *иностранный*?

Answer Key:
We use *российский* to describe items connected to Russia as a state (*паспорт*, *Федерация*).

We use *русский* to describe items connected to the Russian language, culture, and ethnic identity (*алфавит*, *литература*, *авангард*).

For many items, you can use both adjectives, depending on what you want to emphasize.

For example: *российские журналисты* are journalists from Russia, whereas *русские журналисты* are journalists who are Russian.

The word *иностранный* can be used to describe both geopolitical relationships and those of language and culture.

Take-Away Idea: *Русский* is about ethnic identity; *российский* is about a relationship to the Russian Federation.

3.
Prompt:
Choose: Search by dictionary

Look up these words: *кухня*, *ресторан*.

Read the sentences. There are two patterns that have to do with going to a place, being in a place, and going away from a place. Can you identify the two patterns?

Once you have found the two patterns, look up and try to sort these words into two groups according to the two patterns:
страна, мир, место, дом, школа, город, квартира, класс, свет, центр, улица, комната, район, театр, парк, музей, стадион, гостиница, остановка, вокзал, факультет, бассейн, общежитие, Россия, аэропорт, фабрика, столовая, аптека, номер, завод, университет, клуб, концерт, сад, площадь, здание, столица, кабинет, лекция, этаж

Answer Key:
The two patterns are:
на кухню (accusative), *на кухне* (locative), *с кухни* (genitive)[7]
в ресторан (accusative), *в ресторане* (locative), *из ресторана* (genitive)

The pattern with *в* and *из* is used more than the one with *на* and *с*.

Take-Away Idea: The prepositions *на* and *с* are mostly used with large, open places (*стадион*, *фабрика*, *завод*, *остановка*, *свет*, *место*, *вокзал*), surfaces (*площадь*, *этаж*), and events (*концерт*, *лекция*). With other places, we use the prepositions *в* and *из*.

4.
Prompt:
Choose: Search by topic and choose *еда* [food].

Toggle through all the entries and look at the nouns. Notice what

[7] Note that the SMARTool represents patterns of highest frequency. It is also possible to say *в кухне*, but this phrase is much less common than *на кухне* in Russian.

words appear in singular and what words appear in plural. Can you make some generalizations?
Answer Key:
Only singular in the SMARTool: *вода*, *масло* (NB! both "butter" and "oil"), *сок*, *сыр*, *мороженое*, *сахар*, *картошка*, *колбаса*, *чай*, *пиво*, *хлеб*, *мясо*, *молоко*, *вино*, *еда*.[8]

Both singular and plural in the SMARTool: *продукт* (usually plural if referring to food), *салат* (plural refers to various kinds or portions of salad), *яйцо, суп* (plural refers to various kinds of soup), *соль* (if plural usually not about food but about chemicals), *курица* (plural *куры* is used for animals, not food), *рыба* (plural рыбы is used for animals, not food), *яблоко*.

Only plural in the SMARTool: *фрукт, овощ*.

Take-Away Idea: Many foods are primarily understood as substances in Russian, even if they come in fairly large pieces (potatoes, sausages, fish, chicken). These words tend to occur mostly or exclusively in the singular. Note that *фрукты*, *овощи*, *продукты* (when it means "groceries") almost always occur in the plural, probably because they are not homogeneous (there are lots of kinds of fruits and vegetables and groceries). Food items that one tends to count (apples, eggs) are used in both singular and plural.

These and similar Treasure Hunts were piloted in a class with students that had just completed their first semester of study at UiT The Arctic University of Norway (A1 level) in January 2022. Students reported that this was a fun way to review vocabulary, that it was interesting to find differences between words and uses on their own, and that the Take-Away Ideas presented "cool facts." All students reported that they had learned something useful and that they would recommend similar exercises to other students.

4.2 Treasure Hunts for more advanced levels

At more advanced levels, Treasure Hunts target morphology (e.g., formation and use of short-form adjectives, comparatives), case usage (e.g., use of various cases with and without prepositions), and challenges

[8] Note that both *картошка* and *колбаса* can also appear in plural in Russian, though less often.

associated with nonfinite verb forms (all the various participles and gerunds). Motion verbs and aspect (including biaspectuals) can be addressed, along with prefixation (since there are separate perfective and imperfective entries for most verbs in the SMARTool). Advanced Treasure Hunts probe more nuanced questions, for example, the special meanings of the so-called "second genitive" and "second locative" as opposed to the genitive and locative, as in these SMARTool examples:

Петя выпил два ***стакана*** *компота.* (Gen.Sing)
"Petya drank two glasses of compote."
Хотите ***компоту****?* (Gen.Sing)
"Do you want to drink some compote?"

Я долго собиралась на работу, поэтому завтракать пришлось на ***бегу****.* (Loc.Sing)
"It took me a long time to get ready for work, so I had to eat breakfast on the run."
В ***беге*** *главное — правильная техника, иначе легко получить травму.* (Loc.Sing)
"The most important thing in running is the right technique, otherwise it's easy to get injured."

Treasure Hunts are designed to inspire linguistic curiosity and to encourage learners to gather data and deduce patterns and to incorporate these patterns into their own repertoires. Our plan is to devise a score system so that each student can work toward a personal goal at each proficiency level.

5. Story Time

The goal of Story Time is to build skills and confidence in productive communication in Russian. Story Time helps learners become confident writers, and, when used in the classroom, speakers. Story Time activities take advantage of the fact that all lexemes in the SMARTool are searchable according to topic, and many lexemes belong to more than one topic. Filtering lexemes by topic facilitates the targeting of word forms that learners can use to construct coherent narratives. Since there are 18 topics, and many groups of words can be sourced from each

combination of topic and proficiency (CEFR) level, Story Time provides ample opportunities for learners at all levels from A1 to B2. The task for learners is to use the models of word forms and their typical contexts presented in the SMARTool to build their own sentences and, ultimately, paragraphs.

Table 1 gives examples of how Story Time Prompts and expectations can be scaled up from A1 to B2. In the first example, an A1 user is asked to write one sentence based on the SMARTool model sentences for two words on a given topic. As an example, we show the topic *магазин* [shopping], which in level A1 includes, among others, the words *купить* [buy] and *одежда* [clothing] that have been selected for this prompt. These are just two of 40 words available for the combination of Level A1 and *магазин* [shopping]. Every combination of level and topic presents many lexemes in the SMARTool for many more Story Time prompts. The user receives only the information in the first four rows of Table 1 and begins their work from the prompt. When the user consults the SMARTool entries for *купить* [buy] and *одежда* [clothing], they find sentences that model these constructions and collocations: *красивая одежда* [beautiful clothing], *удобная одежда* [comfortable clothing], *постирать одежду* [launder clothing], *я хочу купить* + acc [I want to buy something], and *он/она купил/купила (себе)* + acc [he/she bought (him/herself) something]. Based on these models, the learner can write a sentence like *Я хочу купить (себе) красивую одежду* [I want to buy (myself) beautiful clothing] (among many other good answers). As the learner advances through proficiency levels, the prompts involve more and more difficult vocabulary, along with greater expectations for length and coherence of narration. With the prompt for level B2, the learner can write a whole paragraph about international trade and economics.

Story Time can be a part of self-study, a homework assignment, or a classroom assignment. In a classroom setting, Story Time can be a competitive and/or group assignment in which students can perform their stories orally, and fellow students can also check each other's work to see whether the use of word forms and constructions matches the models in the SMARTool. An alternative classroom activity is the co-creation of a larger narrative by combining several prompts and having students or teams of students take turns adding to a story one sentence at a time. Since the SMARTool vocabulary is quite large, it can potentially

source tens of thousands of Story Time prompts.[9] If implemented as a regular part of a daily or weekly study routine, Story Time is an efficient way to hone communication skills, combining building up a repertoire of idiomatic phrases with students' creative expression of their own ideas. Ideally, Story Time will be linked to an analyzer specially designed to give feedback to L2 Russian learners on their writing errors (see Reynolds et al., 2022).

Table 1: Examples of Prompts for Story Time Activities Across Proficiency Levels and Topics

CEFR level	A1
Number of words in Prompt	2
Task	Write 1 sentence
Example of Topic and Prompt	Topic: магазин [shopping] Prompt: купить, одежда
Word forms, constructions, and collocations modeled in SMARTool	красивая одежда, удобная одежда, постирать одежду, я хочу купить + acc, он/она купил/купила (себе) + acc

CEFR level	A2
Number of words in Prompt	3
Task	Write 2 sentence
Example of Topic and Prompt	Topic: погода [weather] Prompt: юг, тёплый, лить
Word forms, constructions, and collocations modeled in SMARTool	на юг, на юге, с юга, на улице теплее, льёт дождь

[9] Some of these prompts are available at https://smartool.github.io/exercises/.

CEFR level	B1
Number of words in Prompt	4
Task	Write 2–3 connected sentences
Example of Topic and Prompt	Topic: здоровье [health] Prompt: принимать, операция, желудок, анализ
Word forms, constructions, and collocations modeled in SMARTool	принимать лекарство, принимать участие в + loc, операция на + loc, операция проводится под общим наркозом, у +gen болит желудок, боль в желудке, расстройство желудка, анализ крови, результаты анализа

CEFR level	B2
Number of words in Prompt	5+
Task	Write a paragraph of 3–5 sentences
Example of Topic and Prompt	Topic: учёба/работа [study/work] Prompt: вкладывать, безграничный, биржа, ввоз, бюджет
Word forms, constructions, and collocations modeled in SMARTool	вкладывать в бизнес/акции, вкладывать деньги/доходы, безграничные возможности, безграничный доступ, колебания биржи, на бирже, биржа труда, ввоз товаров/оружия, заниматься ввозом, попытка ввоза, федеральный бюджет, деньги в бюджете на + acc, внести поправки в бюджет

6. Conclusion

Our goal is to take the next step in realizing the potential benefits of the SMARTool by offering designs to engage L2 learners in constructing their own understanding of Russian vocabulary and grammar. Both Treasure Hunt and Story Time are student-centered activities that encourage users to make and implement their own discoveries. These designs present the SMARTool as a space for experimentation and development for learners who will continue to find new words and phrases about which to ask "How do you say that in Russian?" Treasure Hunt and Story Time provide guided prompts for open-ended learning experiences that can transfer to unguided lifelong learning skills. The variety of prompt levels in Treasure Hunt and Story Time facilitate use even in classrooms with students at different proficiency levels, a challenge we often encounter in L2 Russian instruction. The open-source architecture of the SMARTool invites the creation of parallel SMARTools for other languages, along with the exercise designs suggested here.

References

Ackerman, F., Blevins, J. P., & Malouf, R. (2009). Parts and wholes: Patterns of relatedness in complex morphological systems and why they matter. In J. P. Blevins & J. Blevins (Eds.), *Analogy in grammar: Form and acquisition* (pp. 54–82). Oxford University Press.

Criado-Perez, C. (2019). *Invisible women*. Abrams Press.

Dąbrowska, E. (2004). *Language, mind and brain*. Georgetown University Press.

D'Ignazio, C., & Klein, L. F. (2020). *Data feminism*. MIT Press. https://doi.org/10.7551/mitpress/11805.001.0001

Goldberg, A. E. (2006). *Constructions at work: The nature of generalizations in language*. Oxford University Press.

Harvey Arce, N., & Cuadros Valdivia, A. (2020). Adapting competitiveness and gamification to a digital platform for foreign language learning. *International Journal of Emerging Technologies in Learning (iJET)*, *15*(20), 194–209. https://www.learntechlib.org/p/218340/

Hopp, H. (2010). Ultimate attainment in L2 inflection: Performance similarities between non-native and native speakers. *Lingua*, *120*(4), 901–931. https://doi.org/10.1016/j.lingua.2009.06.004

Janda, L. A. (2019). Businessmen and ballerinas take different forms: A strategic resource for acquiring Russian vocabulary and morphology. *Russian Language Journal*, *69*(1), 175–193.

Janda, L. A., & Tyers, F. M. (2021). Less is more: Why all paradigms are defective, and why that is a good thing. *Corpus Linguistics and Linguistic Theory*, *14*(2), 109–141. https://doi.org/10.1515/cllt-2018-0031

Jensen, I. N., Slabakova, R., Westergaard, M., & Lundquist, B. (2019). The Bottleneck Hypothesis in L2 acquisition: L1 Norwegian learners' knowledge of syntax and morphology in L2 English. *Second Language Research*, *36*(1), 3–29.https://doi.org/10.1177/0267658318825067

Karlsson, F. (1986). Frequency considerations in morphology. *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung*, *39*(1), 19–28. https://doi.org/10.1524/stuf.1986.39.14.19

Kuznetsova, J. (2015). Are verbs politically correct? A corpus study of gender in Russian verbs. *Gender and Language*, *9*(3), 391–434. https://doi.org/10.1558/genl.v9i3.16650

Levenshtein, V. I. (1965/1966). Dvojnye kody s ispravleniem vypadenij, vstavok i zameščenij simvolov. *Doklady Akademii Nauk SSSR*, *163*(4), 845–848. Binary codes capable of correcting deletions, insertions, and reversals. *Soviet Physics Doklady*, *10*(8), 707–710.

Reynolds, R. J., Janda, L. A., & Nesset, T. (2022). A cognitive linguistic approach to analysis and correction of orthographic errors. *Russian Journal of Linguistics*, *26*(2), 390–407. https://doi.org/10.22363/2687-0088-30122

Slabakova, R. (2009). How is inflectional morphology learned? *Eurosla Yearbook*, *9*(1), 56–75. https://doi.org/10.1075/eurosla.9.05sla

Slabakova, R. (2014). The bottleneck of second language acquisition. *Foreign Language Teaching and Research*, *46*(4), 543–559.

Zipf, G. K. (1949). *Human behavior and the principle of least effort*. Addison-Wesley.

Construxercise!: Implementation of a Construction-Based Approach to Language Pedagogy

Anna Endresen, Valentina Zhukova
Elena Bjørgve, Daria Demidova
Natalia Kalanova, Zoia Butenko
George Lonshakov, David Henrik Lavén

1. Introduction

Language is a tool for communication. The ability to speak, to engage in a meaningful conversation, and to comprehend the speech produced by native speakers is the main purpose of second language (L2) learning, and Russian is no exception. A recent survey of the current students and alumni of the Russian program at UiT The Arctic University of Norway (UiT) administered in December 2021 revealed that our students would like more training in practical speaking and writing skills as well as more focus on conversational Russian.

This challenging demand arguably exists in many Russian programs and is faced by most instructors of L2 Russian, simply because the process of organizing speaking practice in the classroom without digressing into instruction on grammar and vocabulary is not straightforward. Existing textbooks on conversation tend to offer long texts with questions for discussion, grammar exercises, and long glossary lists for memorization and require from the instructor a great deal of effort to create an active discussion in the classroom (compare Bjerkeng & Bräger, 2004; Bondar' & Lutin, 2006; Černyšov & Černyšova, 2018; Dengub & Nazarova, 2021). Sending students to a Russian-speaking country and hoping that they will figure out the speech patterns of Russian on their own is just as insufficient if not preceded by explicit instruction on how Russians speak.

The goal of this article is to advocate a construction-based approach to language pedagogy and argue that this approach can serve as an efficient alternative way to organize conversational practice in L2 Russian. We explore the benefits of this approach by building a new educational resource for learning and teaching Russian discourse

constructions called *Construxercise! Hands-on learning of Russian constructions*.[1] The resource was built in close collaboration with students and is inherently both student-driven and student-oriented. It offers over 150 practical exercises that strengthen spoken and written text production skills and can be used both in the classroom or for self-guided study. The exercises are grouped by lessons and by the functions they perform and target common tasks that every student is expected to solve, namely, how to clarify their point, add information, provide an example, express an opinion, and so on.

Remarkably, discourse constructions are traditionally thought of as linguistic devices that can primarily benefit L2 learners who have already reached an advanced level of language proficiency (Shekhtman et al., 2002), whereas beginners and intermediate learners are expected to focus on acquiring the "basics" of grammar and vocabulary instead. In reality, less-advanced learners (A1–B1) are no less eager to practice their conversational skills than their more advanced peers. The need to address this challenge is even more important given that beginners and intermediates (a) comprise the predominant category of learners and (b) are likely to drop the study program altogether if they don't get a chance to practice speaking. In this article, we explore the benefits of teaching Russian discourse constructions at relatively early stages of learning L2 Russian and argue that the proposed novel educational materials make this endeavor highly promising.

The remainder of the article is structured as follows. Section 2 outlines the notion of a construction and the benefits of the construction-based approach to language learning. Section 3 details the methodology used in building the *Construxercise!* resource. Section 4 presents the final product, explains the structure of the interface, and discusses the target constructions. We show how constructions yield templates for text production in Section 5. Finally, we summarize our findings and insights in Section 6.

2. A construction-based approach to language pedagogy

Any language provides a potentially unlimited number of possibilities for combining words into sentences and generating new utterances. Yet,

[1] *Construxercise! Hands-on learning of Russian constructions* is available at no charge at https://constructicon.github.io/construxercise-rus/.

in practice, the linguistic behavior of language users is very restricted: speakers employ a limited number of specific patterns that are frequent in use and entrenched in their minds. A growing body of studies shows that over 80% of spontaneous speech production of native speakers is predominated by prefabricated units, or *chunks* (see Dąbrowska, 2004, p. 19, for literature overview), and that these "chunks" are highly beneficial for L2 learners to master (Smiskova-Gustafsson, 2013).

Constructions are conventional recurrent patterns that exist at all levels of linguistic complexity and typically comprise prominent structures of phrases and sentences that speakers operate with. Lack of knowledge of constructions creates a barrier that prevents L2 learners from achieving native-like fluency. Furthermore, Russian constructions are often nontransparent for L2 learners. Compare the typical Russian multiword constructions listed in the following examples.[2] Note that constructions can be more schematic (examples [1–3]) or more idiomatic (examples [4–6]):

(1)	ID 1944	**NP-Acc зовут NP-Nom**	*Мою дочку зовут Маша.* "My daughter's name is Maša."
(2)	ID 339	**у NP-Gen быть NP-Nom**	*У Паши есть кот.* "Paša has a cat."
(3)	ID 484	**NP-Dat Cop пора VP-Inf**	*Мне пора идти в школу.* "It is time for me to go to school."
(4)	ID 365	**что касается NP-Gen, то Cl**	*Что касается спорта, то я никогда не любил бегать.* "As far as sports are concerned, I never liked jogging."

[2] Here and elsewhere in this article, we present Russian constructions following the convention in the *Russian Constructicon* (see Section 2), by providing the identification number (ID), the general morphosyntactic formula (boldfaced), and a representative illustration (italicized) for each construction. The idea is that the students can take advantage of both resources, and these resources complement each other. All constructions that are featured in *Construxercise!* are described and illustrated in the *Russian Constructicon*. The latter resource adopts common syntactic abbreviations widely used in other constructicon resources (e.g., NP for noun phrase) and abbreviates the names of morphological categories according to the Leipzig Glossing Rules (e.g., Gen for the genitive case). To minimize the inconvenience these abbreviations can cause for users of the *Construxercise!* resource, we provide necessary explanations under the tables and in the instructions for the tasks.

(5) ID 33 **без пяти минут NP** *без пяти минут врач*
“a doctor to be”

(6) ID 460 **NP-Nom Cop что надо** *Праздник что надо!*
“The party is super-duper!”

Many constructions contain both fixed lexical parts and open slots that can be filled with various lexemes. For example, in the construction ***что касается*** **NP-Gen,** ***то*** **Cl**, the words “*что касается*” and “то” are fixed elements, while NP-Gen (= noun phrase in the genitive case) and Cl (= clause, sentence) are open slots that can be filled with various words. Thus, this construction provides a structure that can be used to build an entire sentence, for instance, ***Что касается*** *спорта,* ***то*** *я никогда не любил бегать* [As far as sports are concerned, I never liked jogging] or ***Что касается*** *музыки,* ***то*** *мне нравится классика* [As far as music is concerned, I prefer classical music].

The constructionist approach to language originated in the 1980s and has developed into a recognized linguistic movement shaped by the Construction Grammar theory (Croft, 2001; Fillmore et al., 1988; Goldberg, 2006), in which constructions are viewed as the central unit of language structure and language description. *Constructions* are defined as form-meaning (or form-function) pairings that are learned in the process of language use. Constructions vary in the degree of their schematicity or idiomaticity and can be more or less compositional: they can represent properties of specific predicates (as in example [3]), basic grammar rules (as in example [2]), more complex discourse patterns (as in example [4]), more metaphorical phrases (as in example [5]), or structurally irregular patterns (as in example [6]). In each language, constructions comprise a structured inventory, a *construct-i-con* (a term coined by the same principle as *lex-i-con*). The same term also refers to the practical representation of such an inventory in the form of an electronic database, where the constructions of a single language are collected and thoroughly described. Today, constructicon resources exist for six languages: English, German, Swedish, Brazilian Portuguese, Japanese, and Russian (Lyngfelt 2018).

The *Russian Constructicon* was built over several years and launched in 2021. It is a free, open-access electronic resource designed

for both researchers and L2 learners of Russian.[3] It offers a large searchable collection of over 2,200 Russian grammatical constructions accompanied by thorough descriptions of their meanings and corpus-based illustrative examples of their use (Endresen et al., 2020; Janda et al., 2020). The interface of the *Russian Constructicon* has various search possibilities, including the one shown in Figure 1, in which users can find relevant constructions by searching on the “Home” page for exact strings of words in the formula or the illustration. In the window on the right, users can also scroll through the entire list of constructions and quickly find a relevant item by its ID number.

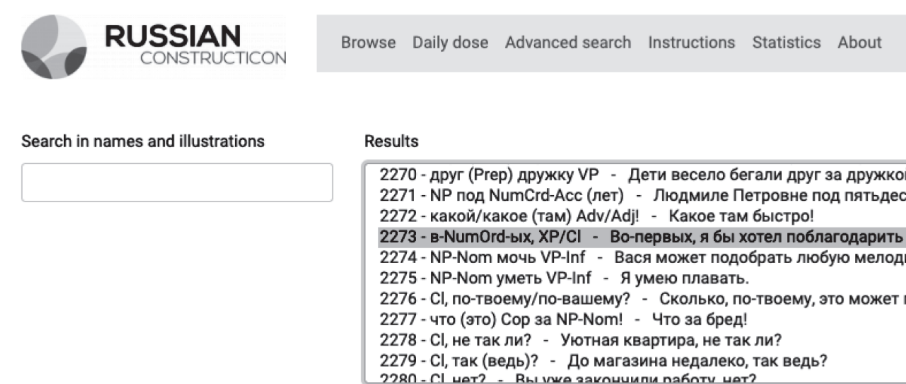


Figure 1: Interface of the Russian Constructicon opened on the “Home” page

We argue that the construction-based approach to language learning is highly beneficial for L2 learners because it focuses instruction on the most strategic constructions widely used by native speakers (see also Janda et al., 2020; Nesset et al., this volume). This approach is more efficient than traditional instruction because it provides learners with ready-to-use communicative patterns that can be easily employed for building sentences and texts. The construction-based approach involves both grammar and vocabulary but shifts the focus to conversation.

The focus on strategic constructions is especially relevant for L2 Russian, because it can significantly speed up the learning process. It normally takes time to learn the basics of grammar to be able to produce

[3] See https://constructicon.github.io/russian/.

meaningful utterances in a language with highly complex morphology like Russian. Yet, the sooner students start practicing their conversational skills, the better. The construction-based approach supports active speaking and writing even at early stages of L2 learning. Shifting the focus of instruction to text production tools and communication skills can potentially change the entire experience of L2 learning by making it more efficient and rewarding.

The idea of applying the construction-based approach to language pedagogy is not new. Though the concept has been discussed in previous literature, it has never been fully implemented (Ellis, 2013). The creators of the *Swedish Constructicon* also see this approach as one of the priorities of their work (Lyngfelt et al., 2018). When it comes to L2 Russian, in some parts of grammar it is not possible to avoid constructions, and they are introduced in most textbooks (compare the use of modals like *можно* [possible], *нужно* [necessary], and *должен* [must]). If we consider specifically textbooks on conversational Russian, we observe that some of them do introduce constructions sporadically, although constructions are not the main focus of instruction. For example, we find minimizing constructions like *ни копейки* [not a kopeck], *ни слова* [not a word], and *ни шагу* [not a step] in the textbook *Поехали!-2* (Černyšov & Černyšova, 2018, p. 12), which also includes a small section on the reduplicative construction exemplified with *Идея как идея* [The idea is neither good nor bad] (Černyšov & Černyšova, 2018, p. 10). Some discourse constructions like *в конце концов* [at the end of it], *в основном* [mainly], and *как правило* [as a rule] are presented in the textbook *Этажи* (Dengub & Nazarova, 2021, p. 260), but they are presented as set expressions and are accompanied only by English glosses, without any exercises or explicit explanation of their use.

Instead of working with constructions, most textbooks on conversation provide a text for reading and a list of questions for discussion. The same pattern is often used for text production tasks: the authors of a textbook define a topic and provide some questions that the students can answer in their essay, but supporting language tools for text production are missing (cf. Bjerkeng & Bräger, 2004; Bondar' & Lutin, 2006; Černyšov & Černyšova, 2018; Dengub & Nazarova, 2021).

In this light, *Construxercise!* fills an essential gap in existing educational resources for L2 Russian. *Construxercise!* is the first attempt

to consistently explore the potential of the construction-based approach in language pedagogy on a large scale. We shift the focus of instruction from grammar and vocabulary to constructions, introducing them through a series of exercises, and test whether consistent instruction about discourse constructions improves our teaching of conversation and text production skills.

Our focus on a specific type of constructions, namely, discourse constructions, partly overlaps with the Shekhtman Method of Communicative Teaching (Shekhtman et al., 2002; see particularly the tactics of embellishment, complication, answer expansion, and the use of "islands"). However, Shekhtman et al. have specified that their techniques are effective for teaching communication (rather than language system) and benefit "superior-level" learners by bringing them to even higher ("distinguished") levels of language proficiency. Moreover, Shekhtman et al. (2002) stated that the implementation of this method requires individual instruction or instruction in small homogeneous groups of students.

In contrast, the novelty of our resource lies in providing for students the ability to practice conversational and communicative skills by means of learning discourse constructions at much earlier stages of L2 acquisition (A2–B1). We offer exercises that do not require sophisticated vocabulary or advanced grammar but let the learners gain self-confidence by upgrading the coherence and fluency of their speech production. Moreover, our exercises can be used in nonhomogeneous groups of students, which is a much more realistic picture of L2 classrooms. Finally, we argue that the benefits of the construction-based approach to language learning extend far beyond discourse constructions: this approach can be employed in teaching more "basic" (or "fundamental") grammar phenomena (e.g., constructions in examples [1–3]) and can enhance development of conversational and communicative skills from the very start of learning L2 Russian.

3. This project: Methodology

Our methodology to a large extent evolved alongside the project. The project proceeded over the course of six months in 2022. In this section, we break this process down into five stages (see Figure 2) and explain our focus, priorities, and insights at each stage.

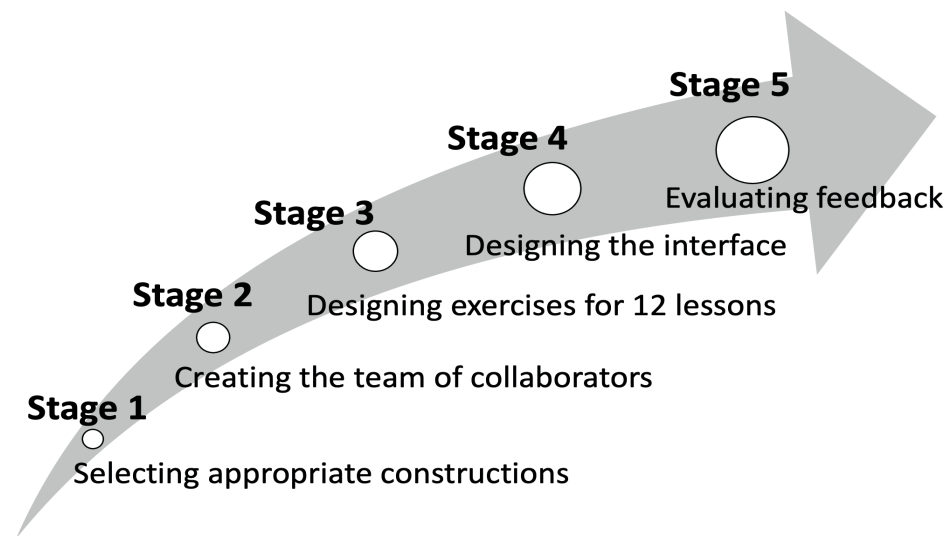


Figure 2: The five stages of the creation of the Construxercise! resource

Stage 1 was primarily devoted to preparatory work: we chose the relevant groups of constructions from the *Russian Constructicon*, developed their linguistic descriptions, and organized them in a single database. In each group of constructions, we selected the items that correspond to the Common European Framework of Reference (CEFR) A1 to B2 levels of language proficiency. We selected representative and frequent constructions that are useful for L2 students of Russian to master.[4] These constructions help to organize a speaker's monologue or dialogue. Most of the selected constructions are stylistically neutral and are widely used in texts of various registers, genres, and topics.

Our objective was to create construction-focused exercises that would help improve learners' text production skills. We focused on discourse constructions because these constructions are particularly useful for empowering learners to actively engage in conversational and written genres. We used the multilevel semantic annotation of constructions available in the *Russian Constructicon*[5] and selected the constructions that belong to the semantic types Discourse Structure (the

[4] For example, for the function "Provide an example," we prioritized the constructions ID 1841 ***например*, XP/Cl**; ID 1840 ***к примеру*, XP/Cl**; and ID 2350 ***так*, Cl** but not ID 2351 ***для примера*, XP/Cl,** and ID 2352 **XP/Cl (*за примерами) далеко ходить не надо*: Cl**, which are less frequent and more marked.

[5] See https://constructicon.github.io/russian/semantic-types/.

subtypes termed Exemplification, Clarification, Topic, Topic Change, Sequence, Discourse Additive, Summary, and Subjectification), Epistemic Modality (the subtypes High and Low degree of certainty), and Degree of Accuracy. Overall, we selected a total of 57 constructions (see Section 4 for more details).

In Stage 2 we recruited the team of collaborators. For our purposes, it was crucial to combine both native and non-native perspectives on Russian and both student and instructor perspectives on the choice and presentation of the material. Therefore, our team included 10 active collaborators with highly diverse academic backgrounds and training. The group members had partly complementary and partly overlapping expertise, and each group member had a unique role in the project.

Two developers of the *Russian Constructicon*, Valentina Zhukova (PhD student) and Anna Endresen (postdoctoral researcher), contributed the scholarly principles of the construction-based approach to language pedagogy and description of the data. Together with Elena Bjørgve, senior instructor of L2 Russian, they selected the strategic groups of constructions for each lesson. Elena Bjørgve implemented the newly created exercises in the classroom. Two MA-level exchange students specializing in Teaching Russian as a Foreign Language (Daria Demidova) and Theoretical Linguistics (Natalia Kalanova), together with Zhukova, Endresen and Bjørgve, were actively involved in creating the exercises. Zoia Butenko, an exchange BA student, and George Lonshakov, an exchange MA student, both majoring in Computational Linguistics, created the code, architecture, and functionality of the interface. Another BA student, Tatiana Perevoshchikova, was also engaged in the work on digital representation of the lessons. David Henrik Lavén, a third-year BA student in the Russian program and a Norwegian-Swedish bilingual, provided detailed learner's feedback on all instructions, the exercise content, and the interface. Bjørgve, Endresen, and Lavén controlled for possible effects of Norwegian-Russian interference, such as false friends and other items that required extra annotation. Laura A. Janda, professor of Russian, was involved in the project at all stages, especially in the overall idea, design, and the English version of the resource.

The main result of this active collaboration with the students at both BA and MA levels and both non-native (Janda and Lavén) and native speaker (the remainder of the team) perspectives on Russian was

a fully-fledged resource that is intrinsically student-driven and student-oriented. The student collaborators contributed a very fresh, up-to-date, and creative view of the data, the task content, and the life situations that the exercises refer to. The student collaborators mostly belong to the same generation and are of approximately the same age as the target users of this product (learners of L2 Russian in our Russian program at UiT) and thus were able to supply appropriate contemporary cultural references for both the content and design. Participation in this project was highly beneficial for our student collaborators: it contributed to their professional career prospects and provided them with new experience.

In terms of management of teamwork, such a diverse group of collaborators who worked on rather different tasks required holding several meetings each week, focusing either on exercises or website design or the feedback on the instructions. Yet, this was worth the effort. Coordinating joint work, distributing tasks, exchanging opinions, and holding regular discussions ensured well-verified content and a robust final product. Overall, this collaboration has been highly successful and resulted in timely completion of the project.

Stage 3 was devoted to intensive weekly teamwork on creating exercises for the chosen constructions. The work proceeded over three months and involved five members of the team (Zhukova, Demidova, Kalanova, Endresen, and Bjørgve). Each week we created a new lesson that was introduced in the classroom the following week. Each lesson took approximately 45 to 60 minutes to complete and contained 12–15 exercises on five to six constructions. Overall, we created 12 lessons that contained over 150 exercises. The lessons were incorporated into the BA-level course Practical Written and Oral Russian in the Russian program at UiT. This course was taught by Elena Bjørgve in the Spring semester of 2022. Most students of this course are native speakers of Norwegian or Swedish. Immediately implementing the educational materials in class made it possible to promptly adjust our approach according to the needs of the students, and ultimately to develop an optimal structure for each lesson with the most favorable repertory and sequence of different types of exercises (see Section 4).

The students attended weekly in-person classes devoted to constructions over the course of three months. In each class on constructions, the students worked with a paper handout covering one

lesson. They did not use the *Construxercise!* website because it was in development, but they had access to the *Russian Constructicon*.

The students had very different levels of language proficiency in L2 Russian. The group included 11 students from the second and third years of the Russian program: most students were at the A2 or B1 level, and a few students were at a more advanced level (B2 or C1).[6] The group also included two advanced heritage speakers of Russian. Our objective was to provide exercises that would benefit students of different levels sitting together in a single classroom.

To focus on the selected discourse constructions, we tried to minimize other linguistic difficulties caused by the lexical and grammatical properties of our texts. We adjusted the main body of the exercises to the A2–B1 level with the help of the "Tekstometr" software[7] and in close consultation with Bjørgve. In addition, we provided bonus exercises that featured more advanced vocabulary and grammar suitable for more advanced students.

Because we had to incorporate our materials into the content of the existing course, we used topics and vocabulary that were already part of the curriculum, in alignment with the chapters of the textbook *Kak sprosit'? Kak skazat'?* (Bondar' & Lutin, 2006). We designed our lessons according to these topics, broadly employed for conversational practice in Russian elsewhere (such as "Traveling abroad," "Holiday celebrations," "Personal appearance," etc.; see Table 1 in Section 4 for the full list of topics). However, the sets of constructions introduced in our exercises are not restricted to these topics. All of the constructions exhibit a wide scope of use and are frequenly employed in authentic Russian texts of various genres and types.

All lessons have a similar organization (see Section 4) and end with a written homework assignment that consists of producing a short text using newly learned constructions. These texts helped us to ensure that the students successfully understood and learned the new material on constructions introduced in class.

Stage 4 focused on designing the interface and took place in parallel with Stage 3. We built the website with Github Pages software[8]

[6] The students' language proficiency levels were established not on the basis of where they are in the program but rather on their instructor's (Bjørgve's) evaluation.
[7] See https://textometr.ru.
[8] See https://pages.github.com/.

in compliance with open-access principles. The code can potentially be used for building similar resources for other languages. The central ideas that motivated the work on the interface were (a) user-friendly design so users can easily find what they need, (b) architecture that can accommodate various types of exercises, and (c) interactivity that makes it possible to do the exercises in real time and check whether the given responses are correct.

In Stage 5 we collected and analyzed the learner feedback and defined future steps for improving the resource. We asked the students who attended the course to complete a short questionnaire and evaluate the classes devoted to the study of constructions. The form contained eight statements accompanied by a 5-point Likert scale, with the options *Completely disagree*, *Partly disagree*, *Neither agree nor disagree*, *Partly agree*, and *Completely agree*. The ninth question was an open-ended question that invited the students to suggest specific improvements for construction-based classes and exercises or provide any other comments.

Overall, the students' feedback was highly positive. The results of the survey showed that the students found learning discourse constructions interesting (100%) and useful (100%) and would recommend our exercises on constructions to other students (100%). Most students liked to study constructions (75%) and agreed that the classes improved their communication skills, made it easier to speak Russian (87.5%), and gave them confidence to do so (87.5%). Some students specifically praised our exercises for having "more natural language" and providing clear explanations.

The students also mentioned that the classes could have been better integrated into the Russian study program. They pointed out that the course in question is considerably loaded with grammar and vocabulary information and translation assignments that make it difficult to spend enough time on discourse constructions. They suggested that it would be preferable to (a) have a course built entirely on constructions and (b) include constructions in several parallel courses and thus set aside more time and attention in the program to work on them.

Bjørgve provided us with positive feedback on behalf of the instructor. She confirmed that the exercises indeed succeeded in engaging her students in lively conversations and supporting the primary focus of the classes on speaking Russian.

Taking into consideration the feedback from the evaluation questionnaire survey, we plan to improve the resource by adding a few more features, for example, a video instruction manual as well as short videos about relevant constructions for each lesson. We also concluded that the abbreviations used in the morphosyntactic formulae of the constructions should be explained each time in the task instructions.

The experience we gained creating the *Construxercise!* resource shows that teaching discourse constructions is a promising approach in language pedagogy and should be explored further. Constructions work well for promoting conversational practice and text production. Discourse constructions can also be included in listening comprehension and reading exercises. The explanation of vocabulary and grammar rules could be reorganized to involve the constructions they are frequently embedded in. We can expand the *Construxercise!* resource to other semantic types of constructions that convey relevant cognitive concepts often included in conversational topics: many assessment constructions evaluate or describe personality, professional skills, or importance (Endresen & Janda 2020), while other constructions specify means of transportation, temporal relations, price, and so forth.

Another important insight we gained from this project is that the construction-based approach is flexible enough to accommodate learners of different language proficiency levels in a single class. The *Russian Constructicon* contains constructions that correspond to all levels of language proficiency (from A1 to C2), so there is always something to learn, even for advanced students. And, even when working on the same set of constructions, it is possible to regulate the appropriate level of training exercises in terms of vocabulary and grammar and thus make the materials appropriate for different levels and needs.

4. The product: *Construxercise!*

In this section we discuss the major characteristics of the *Construxercise!* resource and explain how it is organized. We especially focus on the key properties of the interface: its multifunctionality, interactivity, and clear, concise language of instruction.

Construxercise! is designed to be a useful practical tool for both learners and language instructors of L2 Russian. The proposed exercises are multifunctional and can be used both in the classroom

and for self-guided study. The interface contains four pages: "Home," "Lessons," "Functions," and "About." The "Home" page (Figure 3) briefly summarizes the major purpose of the resource, whereas the "About" page provides more detailed information about target users, the notion of construction, and the architecture of the website.

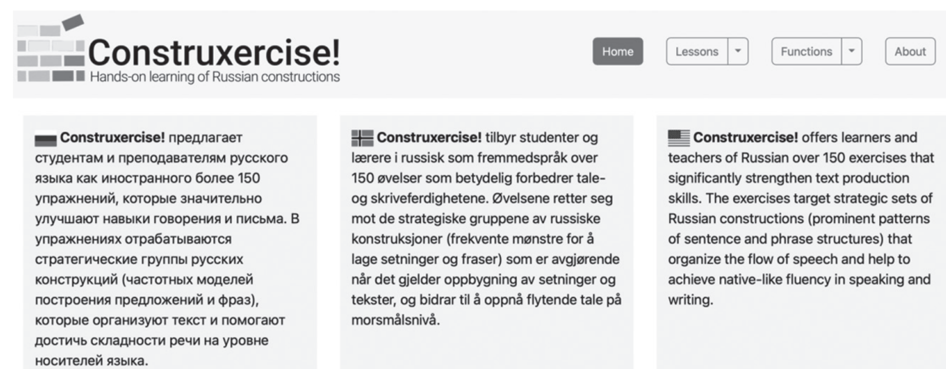


Figure 3: User-friendly interface of the Construxercise! resource opened on the "Home" page

Construxercise! is a free, open-access website containing over 150 exercises on Russian discourse constructions that organize the flow of speech and help learners to achieve native-like fluency in speaking and writing. The website has an interactive interface that allows users to complete the exercises online or download a printable version of each lesson or function. Users can type in their responses on the website, check if the responses are correct, and view the correct responses and an explanation. All information is provided in English, Norwegian, and Russian. All constructions introduced in *Construxercise!* are thoroughly described and illustrated in the *Russian Constructicon* (see Section 2).

The exercises are grouped by lessons and by functions. On the "Lessons" page, the user can find 12 lessons for the topics listed in Table 1. Each lesson introduces a group of five to six constructions using vocabulary and grammar connected to a given topic.

Table 1: Overview of 12 Lessons Available in the Construxercise! Resource

Lesson number	Topic of the lesson
1.	Знакомство. Introducing oneself.
2.	Поездка за границу. Traveling abroad.
3.	Устройство на работу. Getting a job.
4.	Поход к врачу. Going to the doctor.
5.	Закрепление уроков 1–4. Review lessons 1–4.
6.	Транспорт. Getting around.
7.	Праздники. Holiday celebrations.
8.	Еда. Cooking and eating.
9.	Внешность. Personal appearance.
10.	Характер. Describing personality.
11.	Одежда. Getting dressed.
12.	Закрепление уроков 6–11. Review lessons 6–11.

Each lesson opens with an overview table of constructions followed by two microtexts, in which nearly every sentence contains a new construction, as illustrated in example (7) from Lesson 1.[9]

(7) Познакомьтесь! Матвей Белов – студент медицинского факультета. **Кроме того,** Матвей занимается каратэ и хорошо плавает. Матвей **не только** учится, **но и** работает санитаром в больнице. Это полезный опыт, **к тому же** неплохая зарплата. **Кстати говоря,** в этой больнице лежала моя тётя. Она говорит, что Матвей – замечательный санитар и, **плюс ко всему,** у него очень хорошее чувство юмора.

"Let me introduce Matvej Belov to you! He is a student at the Department of Medicine. **In addition,** Matvej does karate and swims well. He is **not only** studying **but also** working as a hospital

[9] We are aware that having a construction in each sentence might make our microtexts linguistically dense. Moreover, we chose simple vocabulary and word order. We prioritized short texts to reduce the time spent reading. The "naturalness" of texts was verified against a panel of native speakers.

attendant. This gives him useful experience, and the salary is not bad **either**. **By the way,** my aunt was a patient in that hospital. She says that Matvej is a wonderful hospital attendant, and **on top of that,** he has a very good sense of humor."

In example (7), all five constructions introduce additional information and thus perform the same function, and the lesson is devoted to the subtle differences in their use. Usually, a lesson contains constructions from several functions. After reading the microtexts, users master the new constructions through a series of exercises that fall into three main categories: (a) "guided-practice" exercises that focus on linguistic properties of constructions and require filling in the blanks, choosing the appropriate continuation of a sentence, reformulating a sentence using a certain construction, and so on; (b) "partly guided practice" exercises that ask the learner to choose an appropriate construction from a list of options or to complete a sentence; and (c) "self-guided practice" exercises that imitate communication and contain problem-solving tasks inspired by real-life situations (participating in a job interview, ordering in a restaurant, explaining a health problem to a doctor, applying for a tourist visa, etc.). All exercises proceed from easy to more complex and from usage-oriented[10] to communication-oriented. Each lesson culminates with exercises that engage students in producing a dialogue or monologue using newly learned constructions and key words. Most exercises and texts are short. The exercises are ordered in such a way that the students get a variety of types of activities to avoid getting bored.

Users can also access the exercises on the "Functions" page, where the constructions are grouped according to their purpose in the discourse: to express one's opinion, to add information, to clarify one's point, and so on. We list a few constructions for each function in Table 2. The full lists of constructions for each function are available on the website, yielding 57 constructions in total.

[10] Usage-oriented exercises focus primarily on the linguistic properties of the constructions.

Table 2: The Nine Functions of Discourse Constructions in the Construxercise! Resource

ID	Construction	Illustration
FUNCTION 1: Пояснить. Clarify your point.		
1087	**иными/другими словами, XP/Cl**	*Наш корреспондент выехал в аэропорт, чтобы взять интервью.* ***Другими словами****, задать несколько вопросов.* "Our correspondent drove to the airport in order to conduct an interview. **In other words,** in order to ask some questions."
1833	**XP, а именно XP**	*Он мне подарил книгу,* ***а именно*** *энциклопедию о динозаврах.* "He gave me a book, **namely**, an encyclopedia of dinosaurs."
FUNCTION 2: Привести пример. Give an example.		
1840	**к примеру, Cl/XP**	*Вот,* ***к примеру,*** *мне нравится Мерилин Монро.* "**For instance,** I like Marilyn Monroe."
2350	**так, Cl**	*Кошки намного хуже нас видят цвета.* ***Так,*** *красный цвет им недоступен.* "Cats are much worse at seeing colors than we are. **For example,** they can't see the color red."
FUNCTION 3: Добавить информацию. Add information.		
1872	**(и) кстати (говоря), Cl**	***И кстати,*** *он пришёл без подарка.* "**And by the way,** he came without a present."
1874	**(Так) мало того – Cl**	***Мало того,*** *Маша привела с собой друзей.* "**And to top it off,** Masha brough some friends with her."

FUNCTION 4: Ввести тему. Introduce a topic.		
6	**(а/так) что насчёт XP?**	***Что насчёт*** *пятницы? Какие у тебя планы?*[11] "**How about** Friday? Do you have any plans?"
365	**что касается NP-Gen, то Cl**	***Что касается*** *спорта,* ***то*** *я никогда не любил бегать.* "**As far as** sports **are concerned,** I never liked jogging."
FUNCTION 5: Упорядочить аргументы. Structure your argument.		
2273	**в-NumOrd-ых, XP/Cl**	***Во-первых,*** *я бы хотел поблагодарить своего тренера.* "**First of all,** I would like to thank my coach."
2353	**С одной стороны, XP/Cl. С другой (стороны), XP/Cl**	***С одной стороны,*** *мои знания были глубоки-ми,* ***с другой стороны,*** *односторонними.* "**On the one hand,** my knowledge was deep, but **on the other hand,** it was one-sided."
FUNCTION 6: Подвести итог. Draw a conclusion.		
1839	**таким образом, Cl**	***Таким образом,*** *наша команда за год добилась важных результатов.* "**Thus,** our team achieved important results in the course of one year."
836	**в целом Cl**	***В целом*** *кино достойно просмотра.* "**On the whole,** this movie is worth watching."
FUNCTION 7: Выразить своё мнение. Express your opinion.		
11	**(как) по мне, (так) Cl**	***Как по мне,*** *это ещё не беда.* "**In my opinion,** it is not such a big problem."
2222	**честно говоря, Cl**	***Честно говоря,*** *я с вами не согласен.* "**To tell the truth,** I don't agree with you."

[11] We represent this open slot as XP, because apart from NP-Gen illustrated in the table, it can be filled with an infinitive (***Что насчёт*** *пойти в бассейн?* [**How about** going to the swimming pool?]) or an adverb (***Что насчёт*** *завтра?* [**How about** tomorrow?]).

FUNCTION 8: Узнать мнение собеседника. Ask someone for their opinion.		
2281	**Cl, не правда ли?**	*Интересный художник,* ***не правда ли?*** "He is an interesting artist, **don't you think?**"
693	**а NP-Nom не ду-мать-Prs, что Cl?**	***А ты не думаешь, что*** *это слишком дорого?* "**Don't you think** it is too expensive?"
FUNCTION 9: Смягчить категоричность высказывания. Hedge.		
1133	**мягко говоря, Cl**	*Он,* ***мягко говоря,*** *не подарок.* "**To put it mildly,** he is no joy to be with."
934	**грубо говоря, Cl**	*Разница совсем небольшая. Все видят,* ***грубо говоря,*** *одно и то же.* "The difference isn't so big. **Roughly speaking,** everyone sees the same thing."

These discourse constructions are simple to use because most of them are **clause + modifier constructions,** meaning that the fixed lexical element of the construction is an adverbial that modifies an entire clause. The fixed lexical elements in these constructions are mostly parenthetical (the Russian term *вводные слова*) and do not disturb the overall syntactic structure of the sentence they are inserted in. This makes these constructions relatively easy to learn even at early stages of L2 acquisition. At the same time, these constructions are widely used and can express a variety of pragmatic and semantic nuances. Moreover, the constructions can function to scaffold text, by providing milestones or control points in text production.

5. Strategic sets of constructions as text templates

Constructions serve as building blocks and help speakers generate a monologue or dialogue on the fly. Combining constructions in strings yields strategic templates of text organization at the microlevel. Such templates can be employed for producing texts of potentially any topic and genre.

One way to practice this in class is with the *Снежный ком* [snowball] exercise, in which a text is generated jointly by a group of students. Each student repeats what has already been said by their

peers and adds a new sentence at the end. The entire sequence of relevant sentences is repeated several times and helps the students to learn the template. We provide an illustrative example for a template from Lesson 5: after having introduced a topic, the speaker lists several arguments, adds some information, expresses their opinion, and draws a conclusion (Figure 4).

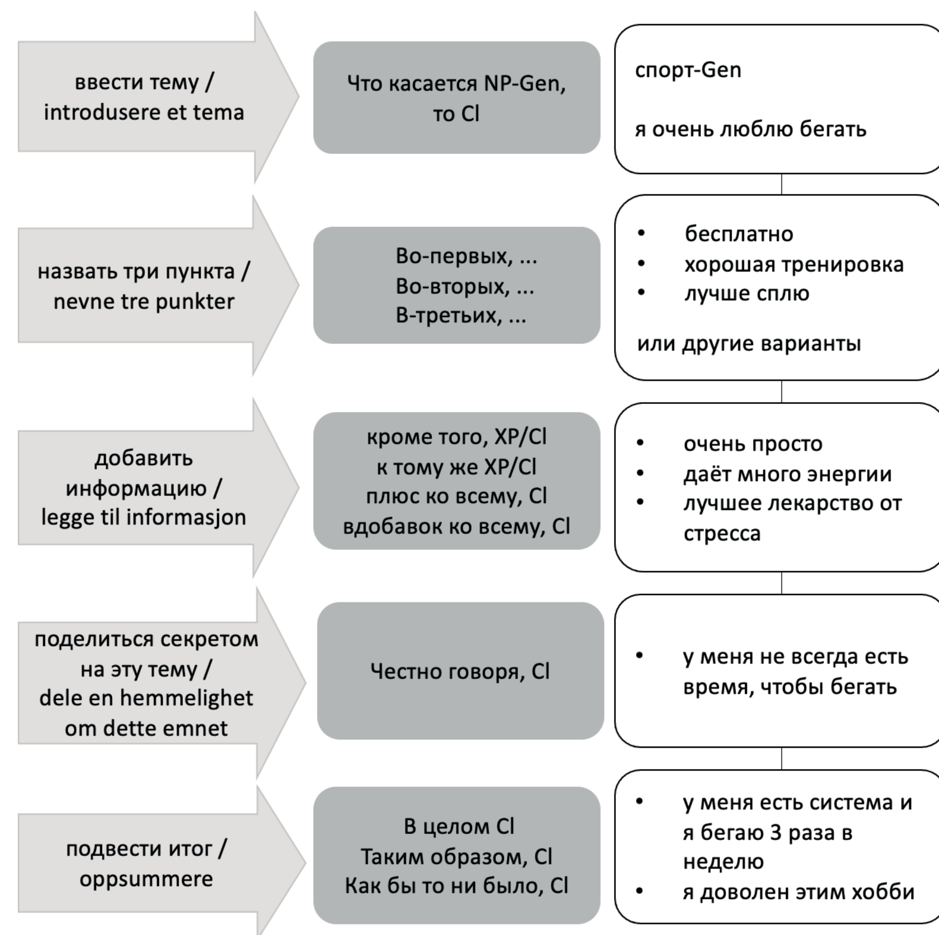


Figure 4: A template for text production task from Lesson 5 for Norwegian students

Using the structural template in Figure 4, students can generate texts on different topics, like sports (example [8]) or music (example [9]):

(8) **Что касается** спорта, **то** я очень люблю бегать. Почему? **Во-первых,** это бесплатно. **Во-вторых,** это хорошая кардиотренировка. **В-третьих,** бег улучшает настроение. **Плюс ко всему,** это лучшее лекарство от стресса. **Честно говоря,** у меня не всегда есть время, чтобы бегать. **В целом,** у меня есть система и я бегаю три раза в неделю.
"**As far as** sports **are concerned,** I like to run. You ask why? **First,** it's free. **Second,** it's a good cardio workout. **Third,** running improves one's mood. **Plus,** it's the best stress reliever. **To be honest,** I don't always have time to run. **In general,** I have a system and run three times a week."

(9) **Что касается** музыки, **то** мне нравится рок. **Во-первых,** в рок-песнях интересные философские тексты. **Во-вторых,** это лучшее лекарство от стресса. **В-третьих,** рок всегда современный. **Кроме того,** я слушаю русский рок и учу новые русские слова. **Честно говоря,** не все рок-песни красивые. **В целом,** каждая рок-группа уникальна.
"**As far as** music is **concerned,** I like rock. **First,** rock songs have interesting philosophical texts. **Second,** it is the best cure for stress. **Third,** rock music is always modern. **Besides,** I listen to Russian rock and learn new Russian words. **To be honest,** not all rock songs are beautiful. **In general,** every rock band is unique."

A simple template can contain one construction per function. The next step is to show the students that there is a range of possibilities for each function, and the speaker can choose from a list of competing constructions. Templates of constructions are the focus of our review lessons 5 and 12. The same principle to some extent is employed in each lesson, in which we provide microtexts featuring the five to six constructions to learn. We find that templates—useful strings of strategic constructions—are a promising aspect of the construction-based approach because they offer ready-to-use text structures that benefit learners at all levels.

6. Conclusions

The contribution of this article is threefold. First, we propose a new educational research-based resource for learners and teachers of L2 Russian, thus filling a critical gap in existing pedagogical resources.

Second, we explicate the methodology of creating this resource and show the benefits of collaboration between undergraduate and graduate students on the one hand and language instructors and researchers on the other hand. Third, we elaborate on the innovative construction-based approach to language pedagogy that makes second language learning more strategic, efficient, and student-oriented.

Our major objective was building a practical and useful tool for both learners and instructors of L2 Russian. This objective inspired and motivated the key properties of the new resource: multifunctionality, interactivity, and clear, concise instruction language. The resulting product is multifunctional because it serves the needs of different types of users and offers educational materials that can be used as either a central or complementary teaching resource and either in class or for self-guided study. *Construxercise!* is a free and open-access website that hosts over 150 exercises designed to improve the learner's text production skills both in speaking and writing by mastering 57 discourse constructions. The exercises challenge the learners with real-life problem-solving tasks that engage them in conversation. By means of *Construxercise!*, we show that it is possible and highly impactful for learners to train in speaking and writing even at early stages of learning Russian (A2–B1 levels) instead of postponing extensive conversational practice to later stages characterized by more sophisticated vocabulary and grammar.

The methodology we adopted in this project yielded a nontrivial outcome. The team possessed multifaceted expertise that shaped the resulting product in the best possible way. Joint efforts, distribution of tasks, and regular weekly meetings ensured verification of both task design and content. Having both native and non-native perspectives on Russian, as well as both instructor and student perspectives, was especially important to the success of the project and made the resource both student-driven and student-oriented.

The resource's focus on highly frequent and widely encountered constructions equips students with ready-to-use communicative units presented as clear sentence structures and phrase patterns. Moreover, constructions can be easily combined into strategic sets, or templates, that make the task of generating any text, oral or written, much easier. In addition to providing the crucial linguistic skills that make the speech of non-native

learners more fluent, coherent, and native-like, mastering constructions gives the learners an additional bonus, namely, the confidence to engage in conversation, a feeling of personal progress and enthusiasm to further practice speaking and writing in Russian, as demonstrated by our course evaluation survey. These practical implications produced by our project and the principles of learning a second language by its constructions can be further explored and promoted for the benefit of both learners and language instructors. These principles go far beyond learning Russian and can enrich and modernize instruction of any foreign language.

Acknowledgments
This work is supported by the Directorate for Higher Education and Skills of the Norwegian Ministry of Education and Research (HK-dir; https://hkdir.no). We also gratefully acknowledge the financial and administrative support of UiT The Arctic University of Norway.

References

Bjerkeng, M., & Bräger, T. (2004). *Sosedi 3: Begynnerkurs i russisk*. [Neighbours 3: A beginner course in Russian]. Fagbokforlag.

Bondar', N. I., & Lutin, S. A. (2006). *Kak sprosit'? Kak skazat'? Posobie po razvitiju reči dlja izučajuščix russkij jazyk kak inostrannyj*. [How to ask? How to say? A manual to speech development for students of Russian as a foreign language]. Russkij jazyk.

Černyšov, S., & Černyšova, A. (2018). *Poexali!-2. Russkij jazyk dlja vzroslyx: bazovyj kurs* [Let's go!-2. Russian for adults: A course for low-intermediate,] (Vol. 2, 6th ed.). Zlatoust.

Croft, W. (2001). *Radical Construction Grammar: Syntactic theory in typological perspective.* Oxford University Press.

Dąbrowska, E. (2004). *Language, mind and brain*. Georgetown University Press.

Dengub, E., & Nazarova, S. (2021). *Etaži: Second year Russian language and culture*. Georgetown University Press.

Ellis, N. (2013). Construction Grammar and second language acquisition. In T. Hoffman & G. Trousdale (Eds.), *The Oxford handbook of Construction Grammar* (pp. 365–378). Oxford University Press.

Endresen, A., & Janda, L. A. (2020). Taking Construction Grammar one step further: Families, clusters, and networks of evaluative constructions in Russian. *Frontiers in Psychology*, *11* [Special issue

"*Defining Construction: Insights into the Emergence and Generation of Linguistic Representations*"], 1–22.

Endresen, A., Zhukova, V., Mordashova, D., Rakhilina, E., & Lyashevskaya, O. (2020). Russkij konstruktikon: Novyj lingvističeskij resurs, ego ustrojstvo i specifika [The Russian Constructicon: A new linguistic resource, its design and key characteristics]. *Computational Linguistics and Intellectual Technologies*, *19*, 226–241.

Fillmore, C. J., Kay, P., & O'Connor, M. C. (1988). Regularity and idiomaticity in grammatical constructions: The case of *Let Alone*. *Language*, *64*(3), 501–538.

Goldberg, A. (2006). *Constructions at work: The nature of generalizations in language*. Oxford University Press.

Janda, L. A., Endresen, A., Zhukova, V., Mordashova, D., & Rakhilina, E. (2020). How to build a constructicon in five years: The Russian example. *Belgian Journal of Linguistics*, *34* [Special issue "The Wealth and Breadth of Construction-Based Research"], 162–175.

Lyngfelt, B. (2018). Introduction. Constructions and constructicography. In B. Lyngfelt, L. Borin, K. Ohara, & T. T. Torrent (Eds.), *Constructicography: Constructicon development across languages* (pp. 1–18). John Benjamins.

Lyngfelt, B., Bäckström, L., Borin, L., Ehrlemark, A., & Rydstedt, R. (2018). Constructicography at work: Theory meets practice in the Swedish constructicon. In B. Lyngfelt, L. Borin, K. Ohara, & T. T. Torrent (Eds.), *Constructicography: Constructicon development across languages* (pp. 41–106). John Benjamins.

Nesset, T., Bjørklund, K., & Jacobsen, P. H. (this volume). Flipping the Classroom? From Text to Video in Teaching Russian Grammar.

Shekhtman, B., Leaver, B. L., Lord, N., Kuznetsova, E., & Ovtcharenko, E. (2002). Developing professional-level oral proficiency: The Shekhtman Method of communicative teaching. In B. L. Leaver & B. Shekhtman (Eds.), *Developing professional-level oral proficiency* (pp. 119–140). Cambridge University Press.

Smiskova-Gustafsson, H. (2013). *Chunks in L2 development: A usage-based perspective*. [Doctoral dissertation, University of Groningen]. https://pure.rug.nl/ws/portalfiles/portal/14408764/H_Gustafsson_Dissertation.pdf

Flipping the Classroom? From Text to Video in Teaching Russian Grammar

Tore Nesset, Kristian Bjørklund
Petter Hov Jacobsen

1. Introduction

The notion of a "flipped classroom" has received considerable attention in recent years. This article reports on a project in which an instructor and two students co-created teaching materials to facilitate flipping the classroom. The purpose of the article is twofold. First, we explore some aspects of flipped classrooms in Russian language courses. Second, we reflect on the opportunities and limitations of student involvement in pedagogical development.

Recent work in cognitive linguistics and Construction Grammar suggests that the linguistic competence of language users can be modeled as a *constructicon*, a network of linguistic patterns with form and content (*constructions*) that are connected in numerous ways (Janda et al., 2018; Janda et al., 2020 and Endresen et al., this volume). This squares with the widespread idea of constructivism in pedagogy, whereby each learner constructs a knowledge network in the process of acquiring a language (Biggs, 1999; Biggs & Tang, 2011). To construct knowledge networks, L2 learners must engage in classroom activities that allow them to be active learners rather than passive listeners. How can we achieve that? One influential response is flipping the classroom (Abeysekera & Dawson, 2015): moving transmission of information out of the classroom and thereby freeing up valuable classroom time for student active learning activities. While in theory flipping the classroom may seem simple, in actual practice it is not. However, it is worth the effort. In a large meta-analysis of about 200 studies of flipped classrooms, Strelan et al. (2020) found a moderate positive effect of flipped classrooms on student performance, with the largest effects for the humanities.

The present study investigates the practical challenges of flipping the classroom in a beginners' Russian course, and to some extent in more advanced courses. Our contribution can be summarized as follows. First,

we show that it is possible to free up valuable classroom time but that doing so requires specially designed learning materials that students can use outside the classroom. Second, we argue that students can play an important role in designing learning materials, because they know what they want from a textbook. Third, our project indicates that it is necessary to go beyond the traditional printed textbook. Accordingly, we discuss the advantages of a more flexible digital learning environment in which instructional videos can be embedded. Fourth, our experience suggests that an extreme version of a flipped classroom, in which all explicit instruction is removed from the classroom, is not a viable option, at least not in a beginners' Russian course. Fifth, we show that student coauthorship has a positive side effect as an important learning experience for the students and professor who participate as coauthors. Finally, we identify some obstacles that must be overcome for student coauthorship to work well.

Our argument is structured as follows. In Section 2, we discuss student coauthorship of instructional texts in a digital learning environment. In Section 3, we discuss instructional videos. In Section 4, we address our classroom experience so far and report on student evaluations. After a discussion of student involvement in pedagogical development in Section 5, we summarize our contribution in Section 6.

2. Coauthored instructional texts in a digital learning environment

Our collaboration was part of a larger project, in which a group of scholars at UiT The Arctic University of Norway created a new beginners' Russian course (Common European Framework of Reference [CEFR] A1), *Min russiske reise* [My Russian Journey] (see Sokolova et al. [in press] for a detailed discussion). The course is digital and consists of 35 lessons in which students follow two siblings on a trip through Russia.[1] The two siblings were born in Norway but have a Russian family background. In Russia, the siblings meet distant relatives and solve a family mystery. Each lesson contains texts (narrative texts and dialogues), vocabulary, exercises, and grammar.

Our task was to create the grammar sections for each lesson and to write a "mini grammar," a reference section that summarizes and describes all the language patterns that are covered in the course. An

[1] The course is available at https://mooc.uit.no/courses/course-v1:UiT+C001+2020/about.

important premise of the project was that students should have access to materials in their native language, in this case Norwegian. Three issues became clear from the outset. First, taking the ideas of flipped classrooms seriously, we realized that we needed relatively detailed explanations of the relevant language patterns. Previously, our university had used the textbook *Свидание в Петербурге* (Lærkes et al., 1999a–b), which includes very brief explanations of relevant linguistic patterns in each lesson. While these explanations work well as a supplement to classroom instruction, they are too brief to be suitable for self-study outside the classroom. In a flipped classroom setting, students are supposed to acquaint themselves with the relevant language patterns before class, and we therefore concluded that more elaborate explanations were necessary.

The second point we realized early in the process concerned the digital format. Providing detailed explanations of language patterns would be impossible in a traditional printed textbook for the simple reason that it would require too many pages. As is well known, publishers want to keep the number of pages low to make textbooks affordable. A digital format is more flexible, since there is no upper limit on the number of pages. Our course is open access, so there is no commercial publisher involved. Another advantage of the digital format is that both text and videos can be included. We return to the videos in Section 3.

Third, we realized that flipped classrooms require simple and user-friendly explanations. Vettori and Warm (2017) have shown that students' conceptions of excellent teaching are complex and multifaceted. However, in their analysis of a data set of about 3,000 student evaluations, they showed that students often appreciate a teacher's ability to provide good explanations and prefer that explanations be combined with illustrative examples: "If a teacher explains well and patiently, this is considered to be one of the most important signals of excellence" (Vettori & Warm, 2017, p. 199). This is where student coauthorship enters the picture. They know better than anyone else what they consider to be simple and user-friendly. Therefore, two bachelor of arts (BA) students in the second semester (Authors 2 and 3) were engaged to assist the professor (Author 1) in creating the grammar sections.

For each lesson, we identified a number of language patterns that needed to be explained. Author 1 prepared a draft that included examples

from the texts and some prose describing the patterns in question. All three authors then met together and examined the explanations in considerable detail, after which Author 1 rewrote the explanations (sometimes more than once). This procedure was repeated in weekly cycles until all authors were happy with the explanations and all lessons were covered. We worked together for almost two semesters. The students were in their second year of study and did not know any Russian before they enrolled in our study program at the university. They received a small honorarium for each session.

Typical conversations at our weekly meetings involved questions from Author 1 to Authors 2 and 3, such as, "Is this example too long and complicated?" "Will a first-semester student understand this explanation?" and "Is this rule simple enough?" Typical responses would be that examples could be simplified and that the sentences in the explanations were too long or had too many difficult words. Occasionally, we also decided to simplify rules. In some instances, we removed whole paragraphs, which we decided contained information that did not belong in a beginners' course. As a result of the meetings, the grammar sections became much simpler and more user-friendly. We will elaborate on this point in Section 4, in which we discuss student evaluations.

A concrete example of how we worked involves "soft" adjectives like *синий* [dark blue]. Author 1 drafted a paragraph explaining that (almost) all soft adjectives have the letter *н* in the stem-final position. The problem with this generalization is that many other adjectives also have a stem-final *н*, such as *красный* [red]. Authors 2 and 3 found the explanation confusing and unhelpful. Author 1 suggested a couple of rewrites, but because the rewrites did not satisfy Authors 2 and 3, we decided to exclude the passage from our grammar altogether.

All sections have approximately the same structure:

(1) Typical structure of grammar sections:
- a. Introduction
- b. Relationship to source language (Norwegian)
- c. Examples from target language (Russian)
- d. Explanation based on examples
- e. Summary: Explicit rule

The introduction (typically one or two sentences) explains what the relevant language pattern is used for. Here is an English translation of the introduction to the section on adjectives in Lesson 7: "In order to describe the properties of things, you need adjectives like *small*, *white*, *beautiful*, and *big*." In other words, we focus on function (what needs to be expressed), not on form. We furthermore avoid a formal definition of "adjective," because we decided that the four example words are more informative for beginners. Although we try to keep the inventory of grammatical terms as small as possible, we do not adopt the radical position of Janda and Clancy (2002), who stated that "there is virtually no linguistic terminology used in *The Case Book for Russian*" (p. viii).[2] In general, we prefer simple explanations with examples over more detailed definitions that might be found in reference grammars and general linguistics textbooks.[3]

Following the introduction, the grammar sections typically relate to the corresponding patterns in Norwegian, which is the native language of the target readership.[4] Going back to Section 7 as an example, we show that some Norwegian adjectives have different forms for three genders. Again, instead of discussing the category of gender, we simply provide an example of one Norwegian adjective in all three genders. Doing so relates the relevant language pattern in the target language to something the students already know so that the Russian pattern will not come across as exotic or difficult. Then, the Russian adjective endings are presented with the following examples that involve vocabulary that has been introduced in Lesson 7 or earlier lessons. The relevant endings are boldfaced:

(2) Masculine: *бел**ый** стол* [white table]
Feminine: *бел**ая** стена* [white wall]
Neuter: *бел**ое** кресло* [white armchair]

After the examples, we make the point that, similar to Norwegian, Russian adjectives have different endings for the three genders. The section

[2] As pointed out by an anonymous reviewer, the programmatic statement that there is "virtually no grammatical terminology" in *The Case Book for Russian* may be somewhat overstated; the book does contain some grammatical terminology, such as the names of the cases.

[3] In a focus group meeting where we tested an early version of a lesson on a panel of students, one of the students commented that it was good that we used standard grammatical terminology, because the same terminology is used in other courses in languages and linguistics at the university.

[4] With regard to gender of adjectives, we could point to parallels between Norwegian and Russian, but for other phenomena it was necessary to show that Norwegian and Russian are different.

concludes with a simple rule stating the ending for each grammatical gender in Russian.[5]

As mentioned, in addition to the grammar sections in each lesson, we also created a reference "mini-grammar" based on all the grammar sections from the lessons. We edited the text of the "mini-grammar" to form a coherent whole, but the explanations of each language pattern are otherwise identical to those in the lessons. The "mini-grammar" is organized in a traditional way to promote ease of reference:

(3) Organization of "mini-grammar":
a. Alphabet and writing rules
b. Parts of speech
c. Sentences: Parsing of sentences and case usage
d. Constructions

The section on parts of speech focuses on inflection and provides paradigms for nouns, pronouns, adjectives, and verbs. The sections on verbs also include very brief introductions to aspect, verbs of motion, and reflexive verbs. The section on sentences explains how to identify main syntactic functions (subject, direct object, indirect object, etc.) and includes one subsection for each syntactic function that explains the case usage for each function. The explanations resemble those in Nesset (2014) but are much shorter and simpler. The section on constructions is inspired by studies in Construction Grammar (Goldberg, 1995, 2006; Endresen et al., this volume), which argue that the often nontransparent multiword patterns of a language constitute the backbone of native speakers' linguistic competence. Our "mini-grammar" covers the *надо/нужно* constructions, the *у меня (есть)* construction, the *у меня болит* construction, the *мне холодно* construction, and the *мне сорок лет* [age] and *нравиться* [like] constructions. Most of the constructions in question are included in the *Russian Constructicon*, discussed in Endresen et al. (this volume).

The grammar sections and the "mini-grammar" would be less effective without the contribution of the student coauthors. The student coauthors helped remove superfluous material, replace difficult words with simpler phrases, and select and edit relevant examples. As a result, the student coauthors had considerable influence on the output of our collaboration.

[5] Grammatical gender illustrates the value of teaching materials that are calibrated toward the native language of the students. Since English does not have grammatical gender, gender in Russian needs to be presented in a different way to native speakers of English. As pointed out by an anonymous reviewer, it is possible to draw on the students' competence in other languages. For students who are native speakers of English but also know a language that uses grammatical gender (e.g., Spanish or German), it is possible to introduce Russian gender via Spanish or German.

3. Instructional videos in a digital environment

Taking seriously Vettori and Warm's (2017) focus on good explanations as an important aspect of excellent teaching, we decided to include instructional videos in our course. The videos were based on the coauthored grammar lessons described in the previous section, but, due to time limitations, Authors 2 and 3 did not participate directly in the production of the videos.

There is some evidence that students who watch videos before class in addition to reading assigned materials are better prepared for class than students who only complete assigned readings from a textbook (Stelzer et al., 2010; see also De Grazia et al., 2012). Videos have furthermore been shown to be motivational for students (Sande et al., 2021). However, as pointed out in a number of studies, positive results are most likely if the videos meet the following criteria (see, e.g., De Grazia et al., 2012; Raths, 2014; and Sande et al., 2021 for discussion):

(4) a. They must be short.
b. They must be devoted to a single topic.
c. They must be of satisfactory technical quality.
d. They must be compatible with different platforms, including smartphones.

Taking these criteria in account, we decided to include at least one video in each lesson. The videos are short, typically between two and four minutes, and are each devoted to a single topic. With regard to technical quality, we used the Camtasia software for Mac, which makes it possible to create videos combining screen recording and web camera capture of the instructor. We installed an external microphone (Blue Yeti) to provide sufficient sound quality. We followed the advice of Sande et al. (2021), who have argued that it is not necessary "to strive for a flawless recording" and suggested that "videos must be of sufficient quality, but they do not need to be perfect" (p. 231). The videos are in MP4 format, which can be used on smartphones.

The videos are structured as follows. On the first slide, the instructor (Author 1 of the present study) presents himself and introduces the

topic. The instructor's face is visible. Then, on the next slide, the talking head disappears, and the topic is explained in a stepwise fashion. By way of example, consider the presentation about the *у меня болит* construction in Lesson 28. First, the viewer is presented with a Norwegian example. Similar to the instructional texts discussed in the previous section, the video focuses on function. The Norwegian example shows the text, and the viewer must figure out how to say it in Russian. As shown in Figure 1, a Russian example is then given. The three callouts pinpoint the semantic contribution of each part of the Russian example.

Figure 1: Presentation of the у меня болит construction in the video for Lesson 28

An example in the plural shows that the verb agrees with the body part. After presenting examples in the past and the future tenses, a simple rule is given that summarizes the properties of the construction. Figure 2 shows the complete slide, in which all information about the construction has been supplied.

Vettori and Warm (2017) have shown that a teacher's sense of humor figures prominently in students' conceptions of excellent teaching. To create a humorous and informal atmosphere, the instructor presents himself in each video as "your grammar uncle." Each video ends with the words "Don't forget that I'm your grammar uncle." We created a special logo for the "grammar uncle" and included it on the first and last slides of each video (see the lower-right portion of Figure 2).

Producing videos was a learning experience for Author 1, who had very limited experience producing videos before the project started. Author 1 completed a one-hour training session with a professional but was then responsible for figuring out the process on his own. The learning curve was steep in the beginning, but after a few weeks of experimentation, Author 1 felt at ease with the recording and editing, and he was satisfied with the resulting videos. Although this project has ended, he continues to make videos for other courses.

Figure 2: Complete slide for the у меня болит construction in the video for Lesson 28

To summarize, even for an instructor with very limited video production experience, it is possible to acquire the necessary skills to produce videos in just a few weeks. It is important to note that while instructional videos may be a valuable supplement to textual materials, video recording requires considerable time and effort. In our experience, creating a short video of 2–4 minutes on average takes 2–3 hours. However, if the videos can be reused several times (for example, every year a course is offered), we find it worthwhile to invest the required time and effort.

4. Experience so far and preliminary evaluation

What was the effect of the grammar sections and the instructional videos on the actual classroom practice? Do they facilitate flipping the classroom? What do the students say? Because the complete course has been offered only once, it is too early to draw definite conclusions. However, some preliminary remarks are in order. We will consider both the experience of the instructors and the course evaluations by the students.

Author 1's experience as a course instructor was substantially different from previous years in which he used a traditional printed

textbook. With the digital resource, the students had access to more detailed material, which they could use when preparing for the class. In accordance with the concept of a flipped classroom, this outside preparation made it possible to set aside more classroom time for active learning, for example, working on the exercises in groups.

Some limitations need to be taken into consideration, however. First, instructors must consider what kind of students are enrolled in the course. Our students' backgrounds and skills are quite diverse, since the course is open to anyone who meets the general requirements for admission to Norwegian universities. Some students have had some previous exposure to Russian, while others are true beginners. Some students are right out of high school, while others have previous university experience. It seems fair to say that the flipped-classroom strategy we adopted worked better for stronger students. Taking advantage of the text materials and the instructional videos requires both related skills and discipline. At the same time, it stands to reason that the students who used the materials outside the classroom got more out of the classroom time than they would have otherwise. A possible response to the student diversity problem is to provide instruction for students, detailing how to make the most of the text materials and the instructional videos.

A second point is that the flipped-classroom strategy we adopted made it easier to adjust the classroom practice to the needs of individual students. Because more time was freed up for group work and other active learning activities, we were able to help weaker students overcome their challenges and could give stronger students extra exercises to work on in class.

A third and very important point concerns the version of the flipped-classroom strategy that is adopted. Taken at its extreme, flipping the classroom implies moving all transfer of information out of the classroom. We opted for a more cautious approach. We presented the relevant language patterns briefly in class, and students participated in student active learning activities after short question-and-answer periods. Stated differently, the strategy we adopted was not *qualitatively* different from our previous, more traditional classroom practice. But it was *quantitatively* different, insofar as we freed up more time for student active learning activities in the classroom.

What did the students say? In a digital questionnaire distributed at the end of the semester, students rated the course relatively highly and generally commented that the course materials included good and relevant examples and phrases that are useful in everyday speech. Students furthermore appreciated the copious and detailed grammar sections. They also commented favorably about the instructional videos. Students pointed out that the explanations were easy to follow. They also mentioned that the videos could be revisited many times and were thus useful for review purposes.

The first few lessons of "My Russian Journey" was also tested in a high school class. The feedback from the high school students resembled that of the university students. The high school students also found the grammar sections helpful, but compared to university students, they emphasized the value of the instructional videos even more strongly. This may indicate that videos are particularly useful for younger students. At the same time, the positive feedback from the high school students may suggest that we succeeded in creating videos with simple and focused explanations, which may be helpful not only for university students but also for younger learners.

The course is offered every fall semester, so in a few years we will be able to draw more definite conclusions. However, the instructors' experience and student evaluations so far suggest that a combination of carefully designed grammar sections and instructional videos may facilitate successful implementation of a moderate version of the flipped classroom.

5. Student involvement in pedagogical development: Opportunities and challenges

What are the lessons learned about student involvement in pedagogical development? In general, our experience was positive. Not only did we succeed in creating a product that instructors and students find helpful, but we also learned a lot from working together. At the same time, some challenges emerged that need to be taken into account to ensure a successful project.

The students (Authors 2 and 3) reported that they improved their knowledge about the Russian language through the project. In a sense, they received an extra weekly language class while the project lasted.

During our meetings, they would say things like "Oh, I forgot about that" and "Aha, now I understand how that construction works." There is some truth to the saying that you do not understand something until you have explained it to someone.

In addition to strengthening their Russian language competence, Authors 2 and 3 felt the project improved their academic writing skills. Working intensely on structuring a text and explaining abstract notions to first-year students was a useful experience. They also found it interesting to participate in the planning and implementation of a pedagogical development project. Both academic writing and project development are transferrable skills that are useful beyond the Russian classroom.

Two challenges emerge from our collaboration. First, Authors 2 and 3, who were second-year students when we worked on the project together, argued that participating in a project like this was challenging. Although they would gladly recommend participating to other students, in their opinion, the project might have been more suitable for third-year students.

The second challenge concerns time management. Students have busy lives, and their primary focus is to do well in their courses and also have time for extracurricular activities and jobs. In other words, there are limits to how much students can be expected to do in a pedagogical development project. Author 3 pointed out that in order to carry out the project successfully, the time requirement must be communicated from the outset.

Author 1 (the professor) also learned a lot from the collaboration. Even for a language instructor with more than 25 years of classroom experience, it was helpful to see exactly what students found difficult. Quite often, he was surprised. Words or concepts that seemed simple to Author 1 were considered problematic by Authors 2 and 3. It was useful to be reminded that only the students themselves know what is challenging and what is not challenging for them.

Another important lesson concerns the structure of the work. As mentioned in Section 2, Author 1 prepared a draft version of the relevant texts before each meeting. It would have been conceivable to start each meeting with a tabula rasa and then brainstorm about the contents before starting to write together. While this approach would have given the students more influence on the process, we are nevertheless satisfied that we did not choose this option, because it would have required too much time. Stated differently, a professor can benefit immensely from collaborating with students, but the professor must be prepared to take the lead and produce concrete materials that can be discussed in the meetings.

6. Concluding remarks

In this article, we have reported on a project in which a professor and two second-year students co-created teaching materials for the purposes of flipping the classroom in a beginners' Russian course. Our contribution can be summarized as follows. First, we demonstrated that it is possible to free up classroom time for student active learning activities by designing effective learning materials that the students can use outside the classroom. Second, we suggested that students can play an important role in designing these learning materials. Third, we argued that flipping the classroom forces us to go beyond the traditional printed textbook and explore the opportunities of a digital learning environment in which instructional videos can be embedded. Fourth, our project does not lend support to extreme versions of flipped classrooms; instead, we opted for a moderate version whereby some, but not all, transmission of information was moved out of the classroom. Fifth, we argued that student coauthorship has a welcome side effect, insofar as it represents a valuable learning experience for the participants—both for the students and the professor. Finally, we identified some obstacles that must be overcome for student coauthorship to be successful. In particular, it is important to utilize more advanced students because some projects may be more suitable for them than for first- or second-year students. It is also important to clarify how much time the students will be expected to spend on the project. We also suggest that the professor prepare concrete materials for all meetings in order for the project to yield the desired output.

Our study leads to a number of questions for future research. Although the course materials we created have received positive evaluations, the complete course has been offered only once. Therefore, it is necessary to investigate student evaluations in the years to come to gain more knowledge about the relationship between student coauthorship of

learning materials and flipped classrooms. While these and other issues remain open, we hope our project will inspire other professors and students to work together. Student coauthorship is a promising strategy for improving the way we teach Russian.

References

Abeysekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: Definition, rationale and a call for research. *Higher Education Research & Development*, *34*(1), 1–14. https://doi.org/10.1080/07294360.2014.934336

Biggs, J. (1999). What the student does: Teaching for enhanced learning. *Higher Education & Development*, *18*(1), 57–75. https://doi.org/10.1080/0729436990180105

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university*. Open University Press.

De Grazia, J. L., Falconer, J. L., Nicodemus, G., & Medlin, W. (2012, June). *Incorporating ScreenCasts into chemical engineering courses* [Paper presentation]. 2012 ASEE Annual Conference & Exposition, San Antonio, Texas. https://doi.org/10.18260/1-2--21519

Endresen, A., Zhukova, V., Bjørgve, E., Demidova, D., Kalanova, N., Butenko, Z., Lonshakov, G., & Lavén, D. H. (this volume). "Construxercise!": Implementation of a construction-based approach to language pedagogy.

Goldberg, A. E. (1995). *Constructions*. University of Chicago Press.

Goldberg, A. E. (2006). *Constructions at work*. Oxford University Press.

Janda, L. A., & Clancy, S. J. (2002) *The case book for Russian*. Slavica.

Janda, L. A., Endresen, A., Zhukova, V., Mordashova, D., & Rakhilina, E. (2020). How to build a constructicon in five years: The Russian example. *Belgian Journal of Linguistics*, 34 [Special issue "The Wealth and Breadth of Construction-Based Research"], 162–175.

Janda, L. A., Lyashevskaya, O. N., Nesset, T., Rakhilina, E. V., & Tyers, F. M. (2018). A Constructicon for Russian: Filling in the gaps. In B. Lyngfelt, L. Borin, K. Ohara, & T. T. Torrent (Eds.), *Constructicography: Constructicon development across languages* (pp. 165–181). John Benjamins. https://doi.org/10.1075/cal.22.06jan

Lærkes, H., Leervad, H. Møller, H., Schousboe, P., & Hertz, B. (1999a). *Свидание в Петербурге/Møde i Petersborg. Læsebog*. Gyldendal.

Lærkes, H., Leervad, H. Møller, H., Schousboe, P., & Hertz, B. (1999b). *Свидание в Петербурге/Møde i Petersborg. Øvebog*. Gyldendal.

Nesset, T. (2014). *Russiskstudentens beste venn. Elementær innføring i kasuslære*. (2nd ed.). Novus Press.

Raths, D. (2014). Nine video tips for a better flipped classroom. *The Education Digest*, *79*(6), 15–21.

Sande, J., Leite, I., & Kyte, L. (2021). Self-produced videos in a flipped classroom for engineering students and nursing students. *Education Applications & Developments*, *VI* (6), 223–235. https://doi.org/10.36315/2021ead18

Sokolova, S., Bjørgve, E., Janda, L. A., Kosheleva, D., Nesset, T., & Zhamaletdinova, E. (in press). My Russian Journey: Rethinking teaching Russian to beginners. In S. Nuss & C. Martin (Eds.), *Student-centred approaches to Russian language learning: Insights, strategies, and adaptations (Russian language pedagogy and research).* Routledge.

Stelzer, T., Brookes, D. T., Gladding, G., & Mestre, J. P. (2010). Impact of multimedia learning modules on an introductory course on electricity and magnetism. *American Journal of Physics*, *78*, 755–759. https://doi.org/10.1119/1.3369920

Strelan, P., Osborn, A., & Palmer, E. (2020). The flipped classroom: A meta-analysis of effects on student performance across disciplines and education levels. *Educational Research Review*, *30*. https://doi.org/10.1016/j.edurev.2020.100314

Vettori, O., & Warm, J. (2017). "Because she loves what she is doing." Student conceptions of excellent teaching. In S. Dent, L. Lane, & T. Strike (Eds.), *Collaboration, communities and competition* (pp. 195–203). Sense. https://doi.org/10.1007/978-94-6351-122-3_12

The Participatory Approach and Student Active Learning in Language Teaching: Language Students as Journalists and Filmmakers

Svetlana Sokolova, Andrei Rogatchevski
Kristian Bjørklund, David Henrik Lavén
Håkon Sverdrupsen

1. Introduction

This article contributes to two recent discussions in pedagogy and education, namely, the impact of the participatory approach (Jenkins et al., 2009; Yowell & Rhoten, 2009) on learning and the benefits of student active learning (Sokolova et al., in press; Spasova & Welsh, 2020). The participatory approach incorporates texts and tasks on the topics of interest that are relevant to students' daily lives and potential workplaces. Student active learning builds upon the idea that "L2 learners must engage in classroom activities that allow them to be active learners rather than passive listeners" (see Nesset et al., this volume). This idea is closely connected with the flipped-classroom approach (Abeysekera & Dawson, 2015; Strelan et al., 2020), in which traditional lecture content is moved out of the classroom, thereby freeing up valuable classroom time for student active learning tasks.

We show that the participatory approach and student active learning techniques dovetail to improve language learning. We summarize our experience with a new Russian course, Media Language in Use, introduced at UiT The Arctic University of Norway (UiT) in the Fall semester of 2020, and an educational film project, *Our Common Victory*, completed in the Spring semester of 2020 (see Bjørgve et al., 2020), which incorporated the active use of documentary filmmaking into learning Russian as a foreign language. In both cases, the student projects were multifaceted and included the following stages: (a) a brainstorming stage, (b) a preparatory stage with lectures on the selected topic given by specialists, (c) individual and group work to further develop the concept, (d) collection of relevant vocabulary and constructions, (e) a production stage (filming, interviewing, collecting data for the written genres), (f) and

a postproduction stage (editing the film, making subtitles, and writing an article, a review, or an op-ed and presenting it to a peer audience). We placed particular focus on interview techniques, which activate a range of practical language skills. While collaborating on the projects, language students became amateur journalists and filmmakers. The written genres they worked with reflect the types of texts that were most relevant for their potential future workplaces.

While the participatory approach ensures that the proposed topics are of interest to students, student active learning techniques provide a suitable environment for optimal interaction among class participants. With these projects, we moved away from the linear hierarchical communication of the typical teacher-student relationship and organized classes as joint workshops, in which all participants, including instructors, have shared responsibility. Providing meaningful tasks relevant for career development and creating a mutually supportive atmosphere in the classroom allowed students to master practical language skills above their proficiency level.

We present our argument through three case studies. First, we provide backstage insights into working with two text-oriented media genres as part of the language curriculum within the course Media Language in Use: book/film review (Sections 2.1 and 2.2) and interview (Sections 2.3 and 2.4). We then detail our experiences with the film-oriented project *Our Common Victory*, for which students made a documentary film (Section 3). Each section offers both the instructors' and the students' perspectives on the project, similar to Ryūnosuke Akutagawa's famous 1922 story "In a Grove" (Akutagawa, 1952) and its award-winning film adaptation (Kurosawa, 1950), which feature several different eyewitness versions of the same event. We first present the two perspectives independently to highlight the aspects that were most salient for the students. We then summarize the two perspectives in the conclusion (Section 4). Appendices 1–2 present the outcomes of the joint student and instructor work in the Media Language in Use course.

2. Text-oriented projects: "Media Language in Use"

The course Media Language in Use (Common European Framework of Reference [CEFR] level B1–B2) familiarizes students with four major media genres: news article, interview, book/film review, and op-ed.

Each genre is covered by a different instructor in six teaching hours, spanning three teaching weeks (with one two-hour class per week). Students are usually instructed in a mixture of Russian, English, and Norwegian, depending on their native language and relative fluency in these three languages. It should be noted that multilingual instruction is a common practice in Russian language classes at UiT (and possibly further afield) to accommodate Erasmus exchange students who may not know the host country's language and rely mostly on their English (rather than their less-advanced Russian) skills for communication and study purposes.

In the first segment of the class, students receive general information about the media genre and analyze a text sample provided in the course curriculum. In the second segment, the instructor and students collaborate on genre-specific projects (we provide selected examples in subsequent sections). In the last segment, students choose one genre for their course project and start working on their projects under individual supervision. At the end of the semester, students present the preliminary results of their projects to their peers and all course instructors at a mini-workshop. Before submitting the final course project, students have the opportunity to polish their Russian texts with the help of an assigned instructor and write a short project description (one to two pages) in their native language (usually Norwegian; occasionally, native speakers of Danish, Swedish, or Polish take the course, in which case English may become a lingua franca for both students and instructors). In their project descriptions, students explain why they chose a particular genre and outline the challenges they faced during the project, both related and unrelated to language.

In the following sections, we detail our experience with a collaborative effort between instructors and students, based on the two genres most popular among students: review and interview.

2.1. The review genre: The instructor's perspective

In the Media Language in Use course, instruction about the review genre is largely based on the instructor's (Rogatchevski's) considerable personal experience as a reviewer. In the past 35 years, Rogatchevski has published over 130 reviews of films, fiction, poetry, art exhibitions, theatrical performances, and academic monographs in venues that included, among

others, *Независимая газета* [*Independent Newspaper*] (Moscow), *Русская мысль* [*Russian Thought*] (Paris), *BBC Russian*, *Kinokultura* (Bristol), *The Times Literary Supplement* (London), and *The Los Angeles Review of Books*. The following descriptions, which encompass reviews' customary characteristic features, originate from the instructor's personal knowledge and not from a secondary literature source.

Based on the students' language proficiency and lack of prior professional experience, the Language Learning for Business and Professionals approach is not a suitable choice for this course segment. Rather, the instructor focuses on teaching students how to write a review using the fairly common structural, lexical, and syntactical conventions of the genre. The main language production output goal for this course segment is a concise review of a few hundred words that is linguistically and factually accurate. To ensure factual accuracy, the instructor must be acquainted with the books/films/shows that students choose to review as their last assignment of the course segment.

In class, students are first instructed about the dos and don'ts of review writing: (a) making sure they familiarize themselves with the material they are reviewing; (b) explaining why they liked or did not like the material using a couple of illustrations; and (c) avoiding the temptation to show off (i.e., prioritizing their own ego over the material under review). Furthermore, students are instructed that the review structure should consist of three principal parts: the introduction, the main section (*pro et contra*), and the conclusion.

As a rule, the introduction to the review covers the plot and conflict summary and the material's context, ideally in one or two paragraphs (the context may include the historical background, information about the author, awards and prizes, etc.). The main part of the review summarizes both the praiseworthy and questionable aspects of the material (the reviewer's attitude should be supported by representative examples). The conclusion of the review addresses the following questions: Is the material worth attending/reading/buying? What kind of audience does it suit? Finally, students are asked to give their review a catchy title (this should be the final task, completed after the review has been written).

Before the next class, students watch a (short) film in Russian, with subtitles in English or a Scandinavian language, chosen by the

instructor in advance (watching a film usually takes up much less self-study time than reading a book, hence the preference for films) and read and analyze a published review of the film. Students also watch another short film (a documentary or animation, also in Russian with subtitles, again chosen in advance by the instructor), and review it in about 300 words in Russian. The review drafts are co-edited with the instructor in class so that students, while actively participating in the editing process, can see how the language and content can be improved. The third and final assignment of the review course segment is to write in Russian a review of a film in any language (preferably Russian), chosen by the student independently of but in discussion with the instructor.

In the following section, we detail the experience of Lavén, a third-year BA student who reviewed the animation short *Шпионские страсти* [The Passions of Spies] (Gamburg, 1967) and co-edited his review in class with his instructor (see Appendix 1). The instructor's goal during the editing process was to interfere with the student's text as little as possible while helping the student make the text linguistically correct and meaningful. Lavén is a mature student with a diverse cultural experience. His ideas about the film were sufficiently profound and his Russian already quite advanced to merit only superficial involvement from the instructor.

During the editing process (carried out in a classroom with other students present and with Lavén's permission), Lavén was asked to identify the linguistic mistakes in his review. After such an identificaton, he was encouraged to suggest a correction. Lavén cooperated eagerly and helpfully. The instructor's input consisted only of providing the concluding sentence of the review (*Тема пародии остается актуальной и сегодня* [The topic of parody remains relevant today]) and the review title (drawing a parallel between the late 1960s when the animation was filmed and our time): instead of *Шпионские страсти* [The Passions of Spies], the instructor proposed *Шпиономания в зеркале сатиры: Тогда и сейчас* [Spy Mania in the Mirror of Satire: Then and Now]. Lavén kindly agreed to the suggestion. The resulting final edit has been added to the PowerPoint presentation of the review course segment for training purposes for other classmates and future students.

2.2. The review genre: The student's perspective

In this section, we provide Lavén's written experience of writing a film review. Lavén is a native speaker of Swedish and is also fully fluent in Norwegian and English. He chose to write his feedback in English:

> The purpose of this assignment was to watch the Soviet animated film called *Шпионские страсти* [The Passions of Spies] and write a short review of it. I naturally started by watching and getting familiar with the film, which was easily accessible on YouTube. I also read a little about the film on Wikipedia to learn a little bit about the director, and maybe a little bit about the spirit in which it was conceived. The instructor also talked about the film and his personal relationship to it, growing up in the Soviet Union in the late 1960s, which I thought was very interesting. I personally liked the film, and thought it was very original and unique, which definitely inspired and helped me get started working on the review.
>
> During the writing process, my main focus was not grammar and spelling. I tried to write a good review that would be properly structured and meet the criteria which we had talked about earlier in class. Also, my goal was to write an enjoyable review that would actually be fun and interesting to read. Having spent the last eighteen months learning Russian and Russian grammar without any previous knowledge of the language, constantly worrying about finding the correct grammatical forms, I found it very liberating to be able to write creatively, freely and personally. It gave me for the first time a real sensation that my Russian was "taking off," and it boosted my confidence. The pedagogical approach of discussing the students' work, correcting it, and reworking it slightly together in class was a new experience to me, but a very positive one. It was fun to discuss my own, and the other students', work together. I really appreciated the comments from the instructor and the other students in the group. During discussions I had the opportunity to identify my own mistakes, which was very helpful because it made me realize how difficult this is (your own work can make you blind after a while). It taught me how comments from teachers and peers can definitely improve your work. However, this process was very time-consuming, and it would probably not be possible in a large group of students. There were only four of us, and we all know each other well, which enabled us to discuss each other's work in a very relaxed and comfortable environment.

2.3. The interview genre: The instructor's perspective

The interview segment of the Media Language in Use course builds on the instructor's (Sokolova's) experience with the interview-oriented film project *Our Common Victory* (2020), addressed in more detail in Section 3. While working earlier (in 2017-2018) on another interview-oriented film project *Homo ludens* (see Sokolova & Reisæter, 2017-2018), together with the internationally acknowledged team from the REC.A film studio,[1] the instructor helped develop the compendium *Documentary Film Basics* (Bokova et al., 2017), which contains a substantial section on interview techniques.

In the interview class, students learn about the main characteristics of interview as a genre, including finding a new angle of communication with a public person and providing unique information. Students also learn what to avoid when interviewing, including the following: (a) conducting a pseudo-interview, a format sometimes used by public-relations (PR) specialists in which frequent questions of the target audience are presented in the form of answers from the expert, e.g. with an intent to promote a specific brand; (b) making comments in which the interviewer's point of view outweighs the expert's answers; (c) flattering the interviewee, a technique often used by new interviewers who are eager to talk with a famous person; and (d) engaging in conflict, which most often occurs in biased political or business interviews to create negative PR.

We particularly emphasize the role of an interviewer and the types of questions interviewers should ask during an interview. During the first class in the interview segment, students analyze the types of questions presented in a published interview offered as part of the class curriculum.[2] We encourage students to begin an interview with more general questions about the interviewee to foster conversation. We

[1] See https://www.rec-a.ru/about/.

[2] We used an abridged and slightly simplified version of the interview given by the Belarusian film director Daria Zhuk to the *Village* journal (Sugak 2018). We wanted to select a text that would be both topical and suitable for CEFR level B2.

instruct students not to overuse closed questions that can be answered only with "yes" or "no" but mention that these questions can be handy to shift the topic or to give the interviewee some time to relax. We also instruct students that the core of the interview comprises specific questions (using the question words "when," "where," "why," etc.) and alternative questions like "Do you plan to continue working in the USA, or would you prefer to return to Belarus?" The interviewer can also use clarifying questions when the interviewee's answer is not complete or when something needs to be specified.

During the second class, the students interview a Russian speaking guest. In 2021, the guest was Igor Shaytanov, a member of the Tromsø International Film Festival (TIFF) team in charge of selecting Russian and Eastern European films for screening. Before the in-class interview, the students learned how to prepare for an interview. We provided links to news articles about Igor and his profile and asked students to prepare their own list of questions for the interview. During the first part of the class, before the interview began, students created a joint file with questions and analyzed the type and order of the questions, with special emphasis on the opening and wrapping-up questions. All the students contributed to this joint file, distributed the questions among themselves, and took turns asking the questions during the interview.

During the third class, students usually present an outline of their interview projects to the instructor and their peers, providing information about the interviewee and a list of questions. At the end of the class, the students informally present their outlines to an experienced journalist[3] and receive instruction about challenging issues that might arise in the interviews. After finalizing their topics, the students conduct the interviews and start working on their respective texts under the instructor's individual supervision (both during office hours and via email).

One student, Bjørklund, a third-year BA student, chose the interview as his final course project (his interview appears in Appendix 2). As it can be challenging for students to find a Russian native speaker to interview, students can conduct their interviews in any language, but the final project must be submitted in Russian. Students are also asked to provide a list of the project vocabulary that they found challenging.

[3] In 2021, we invited Kirsten Elise Johannessen, a regular contributor to local newspapers such as *ITromsø* and *Nordlys*, as the external expert.

Typically, student interviews utilize rather informal speech, as the students mostly choose to interview their friends (e.g., international students). In Fall 2021, Bjørklund interviewed his mother, who is the head manager of their family farm. The interview, conducted in Norwegian and translated into Russian, addresses the challenges faced by present-day farmers in Norway, including the difficulties associated with combining regular office work with on-farm responsibilities. Discussing such a professional topic presented a challenge for Bjørklund, who has a CEFR level of B2, as a significant amount of industry-specific terminology was used. Bjørklund received some minor feedback from the instructor regarding Russian grammar[4] but otherwise successfully tackled the professional vocabulary on his own.

One Norwegian term was particularly difficult for Bjørklund to translate, as the Norwegian realia had no matching phenomena in Russia: *avløsere* [temporary farm workers] vs. the Russian suggestion *вре́менные наёмные сельскохозяйственные рабочие* (*сезонщики*). In this case, Bjørklund and the instructor had to consult external specialists to find an appropriate Russian translation for the Norwegian term.

2.4. The interview genre: The student's perspective

In this section, Bjørklund shares his perspective of the interview project; he chose to summarize his reflections in English:

> The new course "RUS-2022 Media Language in Use" gave us students an opportunity to learn about media genres and their uses, but also to make our own texts as an undergraduate project. For the interview genre, the courses' lectures taught us especially about the purpose of interviews in Russian, what they consist of and how to use a suitable language, based on the target group and interview type.
>
> To use what we had learned in practice, we got the great opportunity to prepare and conduct an interview with Igor Shaytanov, a producer at the Tromsø International Film Festival. During the preparation, we worked together to create an interview based on the courses' lectures. This included coming up with

[4] In general, the instructors try to retain as much of the students' original text as possible, so some minor stylistic roughness may remain. In the process of correction, however, it is crucial that the students have the opportunity to correct the grammatical errors they recognize and, in other cases, can explain what has been corrected and why.

balanced questions, choosing the target group [and] the interview type, and finding out what we wanted to achieve by interviewing Igor. It turned out to be very beneficial and interesting, because we gained experience, in addition to learning more about him.

In the process of making our interview, we once again got to use what we had learned in practice. This bit consisted of three parts: the project description, the interview, and the glossary. The choice of topic was completely optional and flexible, which gave us an opportunity to decide what we ourselves wanted to find out more about. The interview itself could be conducted in any language, but the final project had to be written in Russian. Regardless of the languages used, such a process provides learning benefits in the sense that you either have to translate at a professional level to keep the interview as original as possible, or you get a training in listening and speaking. As a guideline for writing professionally, lectures included a list of common constructions and suitable expressions in Russian for interviews, and we could, at any point, ask the teacher for help. After handing in our written interviews, we received good feedback from both the teacher and other students, because we looked through each other's work in class.

Overall, the course "RUS-2022 Media Language in Use" is a very good addition to the bachelor's degree in Russian, because it focuses on the use of the language in practice. For students, this is both important and instructive, in terms of future work and professionalising the language skills.

3. The Film-oriented project: *Our Common Victory*

3.1. The instructor's perspective

The project *Our Common Victory* (Bjørgve et al. 2020) was planned in connection with the 75th anniversary of the end of World War II. The project combines three academic components—history, language, and film—and was primarily aimed at students within the Russian Studies program at UiT, which has a strong historical component. To discover what people know and remember about World War II 75 years after its end, a group of seven students from UiT traveled to Arkhangelsk and conducted interviews with eight representatives of different generations (two in each age group): people who survived the war (age 80+), survivors' children (age 60+), survivors' grandchildren (age 40+), and survivors' great-grandchildren (age 20+).[5]

Through the lectures and seminars on World War II, as well as through personal communication with people who experienced the war, the students gained deeper insight into how the war affected Northern Norway and Russia. Throughout the project, the students had considerable exposure to both Russian and Norwegian: the interviews were conducted in Russian, and certain episodes were translated into Norwegian. The project resulted in a short documentary film called *Our Common Victory*,[6] which the students were mainly responsible for producing. They were introduced to interviewing and filming techniques, selected relevant episodes, and wrote the Norwegian subtitles. The last component of the project was the social contact established across the border, fortified by joint academic and social gatherings, excursions, and the film's premiere, hosted at UiT and accompanied by a lively discussion.

The project involved 1) a preproduction stage that was meant to orient the participants in the details of World War II in Northern Norway and Northern Russia, 2) a production stage that included conducting and filming interviews, and 3) a postproduction stage, which involved analyzing and sorting the footage, as well as editing the film. At the preproduction stage, the student participants were offered introductory lectures about World War II: two lectures on the war in the North were held by Norwegian history professors at UiT (Kari Aga Myklebost and Marianne Neerland Soleim) before the students' trip to Russia; two additional lectures covering the same events with a special focus on the Arkhangelsk region were offered by Russian history professors (Andrej V. Repnevskij and Mikhail N. Suprun) at Northern (Arctic) Federal University (NArFU), Arkhangelsk, during the first days of the trip. The lectures in Arkhangelsk directly preceded the production stage that involved interviewing the informants. In addition to the history lectures, the preproduction stage included two seminars that covered methodological issues in connection with the interviews (e.g. how to conduct interviews

[5] Eight students were supposed to participate (one interviewer per one interviewee), but one student could not come.
[6] The film is available at https://www.youtube.com/watch?v=qAdYm-JF_co&t=2740s.

with time witnesses from the war). The students were also encouraged to discuss and formulate questions for the film project *Our Common Victory*.[7]

The concept for the film was discussed by students at a brainstorming seminar that concluded the session of lectures by history professors at UiT. At this informal meeting with tea and snacks, the students and the instructors examined some of the following issues: what tasks each student was most interested in (e.g., formulating questions, interviewing, filming, editing, working with subtitles, etc.); what the students knew about World War II in the North, what this war meant to them, what they would like to learn about the war, and what kinds of questions they could ask the interviewees. The students drafted a plan that outlined preliminary working groups, provisional division of labor within the groups, and potential topics for the film. The topics, however, were further adjusted onsite, in Arkhangelsk, as it was hard to predict interview outcomes beforehand without much information available about the interviewees. The general questions that constituted the main concept for the film were as follows: What do the interviewees know about the war, and what do the war and Victory Day mean to them and their families?

The project was exceptionally multifaceted and engaged the students in various tasks. While some activities included familiar assignments, such as translating (the subtitles), other activities were quite new and thus more challenging for the students, e.g. coming up with the concept for the film, preparing questions for the interviews, and analyzing the recorded material.

One major challenge for students was choosing the interview questions and asking them at the interview. The students realized that it was necessary to collect information about the interviewees in order to come up with suitable and more personal questions. While in Arkhangelsk, the instructors provided the students with short biographies of each interviewee and helped them make a list of relevant questions.

Two student groups were formed consisting of three and four people, respectively. Each group was initially assigned to three interviewees. After the first interview, the group of four interviewers split in two and interviewed two more interviewees. Some students were

[7] The list of activities offered at the preproduction stage is available at https://site.uit.no/russianfilmclub/2020/01/30/our-common-victory-pre-production/.

responsible for asking questions and keeping the conversation going, while others were in charge of the camera work. We typically used three recording devices: two for filming and one, a cell phone, to record the sound. In general, each interview lasted for about an hour. Interviews with older informants (age 80+) took a little longer and contained more digressions and reminiscences. As many interviews were highly emotional, this dynamic presented an additional challenge for the student interviewers.

The last major challenge was sorting through the recorded material and selecting relevant episodes for the film. Rather than utilizing a predesigned script as some professional documentaries do, we opted for free communication with the interviewees, following the pattern of the general questions.

The original plan was for Norwegian students to interview Russian respondents in Russia, and Russian students to interview Norwegian respondents in Norway. The goal for the language component of the project was thus to place the students in an environment where using a foreign language would be most natural. We managed to complete the Russian interviews before March 2020 but had to cancel the interviews scheduled in Norway because of the COVID-19 pandemic.

Originally, one of the additional goals of the project was to provide students with opportunities to learn the technical skills of editing a film and working with subtitles. During the preproduction stage, the research technician at UiT MediaLab and film director Fredrik Mortensen presented a lecture to students on how to make a film from scratch. Mortensen was supposed to guide student volunteers through the process of editing at MediaLab when the footage was ready, but due to the outbreak of COVID-19 and a strict quarantine in Norway, we were unable to complete this step. The students selected the episodes for the film, while the editing was transferred to REC.A (Murmansk, Russia), our previous collaborative partner.[8]

Within the first three months of the nationwide quarantine, many students faced challenges staying motivated to work on the project. We kept in touch with students through email and online meetings via Teams or Zoom. Some students volunteered to proceed with the film editing and subtitles. Because the project received funding from the Norwegian

[8] The film was edited using Adobe Premiere and Blackmagic DaVinci Resolve.

Barents Secretariat (BAR002-1045584, 265,000 NOK), we were able to pay small compensations to the student participants. The work on the subtitles (translating the Russian text into Norwegian) was divided among six student volunteers, who received approximately 800–1,500 Norwegian Krone for their work, depending on the length of the episode they translated.

3.2. The student's perspective

Sverdrupsen was a first year MA student at the time of the project's completion. He selected and transcribed episodes from the interviews that he had conducted, and prepared respective subtitles for the film. Following is his written perspective on the project, written in Norwegian and translated into English by Sokolova:

> In the spring of 2020, I participated in the project *Our Common Victory* and traveled to Russia. I have always been interested in World War II, and especially the war on the Eastern Front. This is a part of history that is often overlooked when we talk about the war here in Norway. I appreciated the opportunity to learn more about the topic through new methods.
>
> The most interesting thing was to get different perspectives on the war. Before the trip to Arkhangelsk, we had some lectures with Norwegian professors at UiT. Then we had lectures with Russian professors in Arkhangelsk. Even when the same events were described, different angles and views emerged. Given the current situation, it is interesting that the memory of the war is so different.
>
> In the lectures and interviews, it was difficult to understand everything that was said. This is because some interviewees used difficult language and many technical terms, for example, military terminology. I learned a lot from this, especially in the work of editing the film. I helped to make the subtitles for the film.
>
> One of the things I remember best from the interviews is our meeting with someone who survived the war as a child. His story of the post-war famine made a deep impression on me.
>
> The highlight of the trip for me was the visit to Severodvinsk. I knew before that the city was a military one, and basically not open to foreigners. I was a little unsure of what I was going to discover. However, the closed city turned out to be a completely normal Russian city.

4. Conclusion

In this article, we have presented advances in the use of the participatory approach to foreign language instruction through three case studies: two text-oriented genres as part of the language curriculum within the course Media Language in Use (review and interview) and the film-oriented project *Our Common Victory*. The participatory approach is meant to incorporate linguistic tasks into topics of interest that are relevant to students' daily lives. The written genres that students work with in the Media Language in Use course reflect the types of texts that are relevant for their potential careers as journalists, advisers, translators, or film festival organizers, as emphasized by the feedback presented by Lavén and Bjørklund. Sverdrupsen highlighted the benefits of learning relevant terminology through transcribing interviews and working with subtitles for a film. All three students appreciated tackling linguistic problems in practically oriented projects, supported by valuable feedback from both instructors and class peers.

While conducting and filming an interview could present technical challenges that may distract students from specific linguistic tasks, our experience with these projects indicates that such challenges can be resolved by providing thorough feedback at all levels of the process and by close interaction with and among the students.

The instructors place major focus on the methodological challenges of language instruction: students' difficulties with writing an advanced Russian text can be resolved through joint co-editing of student texts in class. The students emphasize additional challenges with terminology that inevitably appear in practically oriented texts. At the same time, the students appreciate the additional knowledge they gained by participating in such multifaceted projects – for instance, when visiting a closed Russian city or learning about different perspectives on the same historical phenomenon.

With these projects, we have created a natural environment for mastering the language at higher levels (CEFR B and C) and presented a case for the merits of the participatory approach that fosters student active learning.

Appendix 1. A Joint Student-Instructor Review Written During the Media Language in Use Course

Шпиономания в зеркале сатиры: Тогда и сейчас (рецензия Давида Лавена на «Шпионские страсти» Е. Гамбурга, написана для занятия 11 октября 2021, с поправками Андрея Рогачевского)

«Шпионские страсти» – советский чёрно-белый мультипликационный фильм, выпущенный в тысяча девятьсот шестьдесят седьмом году. Эта пародия режиссёра Ефима Абрамовича Гамбурга на шпионские фильмы стала очень популярной и считается культовым фильмом.

Сюжет такой. В Советском Союзе построили замечательное зубоврачебное кресло, которое лечит все стоматологические заболевания. У Директора иностранного разведывательного управления болит зуб. Поэтому он посылает шпиона в Советский Союз, чтобы украсть кресло из зубоврачебного техникума. План кражи – поставить бомбу, спрятанную в коробке конфет под креслом, и вывезти его через подземный ход. Проблема в том, что Советский Союз полон своих агентов, которые пробуют остановить работу иностранного шпиона и его помощников. Все шпионят за всеми, все вовлечены в систему доносов. Никому невозможно доверять. На экране развиваются невероятные приключения шпионов, агентов, лающих котов и говорящих младенцев, которые используют удивительную технологию.

В шестидесятые годы, когда шла холодная война, шпионские фильмы стали очень популярными. На западе, самый известный и любимый герой жанра – английский шпион Джеймс Бонд, объезжающий весь мир в процессе поразительных похождений.

Мне кажется, что этот фильм – настоящая пародия, насмехающаяся над жанром шпионских фильмов, особенно в части употребления технологии и сцен действия, именно так, как в фильмах про Джеймса Бонда. Кроме того, в фильме присутствует элемент критики системы Советского Союза, среди прочего системы доносов. К примеру, даже младенцы могут позвонить в разведку. Такая политическая сатира придаёт фильму ещё один интересный элемент. В заключение о немаловажном: музыка к фильму прекрасна, она создает какую-то авантюрную атмосферу.

Я бы рекомендовал фильм людям, которые ценят оригинальное искусство кино. Тема пародии остается актуальной и сегодня.

Appendix 2. Student Interview Project from the Media Language in Use Course

«Заниматься сельским хозяйством – это образ жизни»

Интервью с фермером и медсестрой из Сёррейсы

Кристиан Бёрклунд - 3 декабря 2021

ОВЧАРНЯ: Зимой в овчарне полно животных. Красный свет хорош для сна овец. Фото: Кристиан Бёрклунд

Всё больше и больше фермеров закрывают свои фермы. Я поговорил с фермером Гри Бёрклунд, чтобы узнать её мысли об этой отрицательной тенденции. Мы также получим представление о жизни фермера.

– *Вы давно занимаетесь сельским хозяйством?*

– Мои родители начали заниматься сельским хозяйством, когда мне было семь лет. Поэтому в детстве я получила хороший опыт, помогая на ферме. С 1994 (тысяча девятьсот девяносто четвёртого года)[9] по 2004 (две тысячи четвёртый год) мы с моим мужем там были временными наёмными сельскохозяйственными рабочими. В 2004 году (две тысячи четвёртом году) мы купили ферму и построили в 2016 году (две тысячи шестнадцатом году) новую современную овчарню. Сегодня у нас 220 (двести двадцать) овец.

[9] In all practical Russian courses at UiT, students are asked to spell out numbers in writing.

– *Как выглядят Ваши рабочие дни?*
– Я думаю, что мои рабочие дни выглядят очень разнообразно, потому что у овцеводческой фермы много рабочих задач. Я также медсестра и работаю полный рабочий день в доме престарелых в Сёррейсе. Зимой овец содержат в овчарне и кормят трижды в день. Мой муж пенсионер, поэтому он работает полный рабочий день на ферме. Мы делим обязанности по кормлению, так что мне просто нужно ходить в овчарню раз в день. Весной, однако, в овчарне становится более беспокойно из-за окота. Таким образом, с начала мая до середины июня я беру отпуск с работы в доме престарелых. Тогда у нас есть план работы, потому что, помимо кормления овец, мы следим за окотом, который происходит круглосуточно.

– *Что представляет собой продукция овцеводства?*
– Продукцией овцеводства являются в основном мясо и шерсть, из которой делают пряжу. Овцы также важны для культурного ландшафта, поскольку они пасутся и предотвращают загустение леса. Сенокос важен для кормления и сохранения земли под паром.

– *Давайте поговорим больше о Ваших рабочих задачах на ферме.*
– Да. Помимо практической части у меня есть административные задачи. Они состоят из учёта фермы, оплаты счетов, планирования работы, ответственности за сотрудников и контроля качества в сельском хозяйстве. В практической части я отвечаю за маркировку овец и ягнят, списки овец, стрижку и сортировку овечьей шерсти, а также за поиск овец осенью.

– *У Вас есть сельскохозяйственное образование?*
– У меня нет формального сельскохозяйственного образования, но у меня большой опыт работы. Я также прошла несколько курсов, среди прочего, курсы по благополучию животных, защите растений и первой помощи. Моя компетентность в качестве медсестры ценна при наблюдении за больными животными.

– *Выгодно ли заниматься сельским хозяйством?*
– Это экономично, но очень важно, чтобы у вас был контроль над инвестициями и организацией работы. Теперь на фермах должно быть

не менее ста овец. Из-за особого рабочего дня работу на ферме также можно совмещать с другой профессией. Это положительно скажется на экономике. В овцеводстве раз в год получают доход, когда осенью отправляют ягнят на убой. В феврале получают субсидию, которая рассчитывается исходя из количества овец на ферме.

– *Вы упомянули ранее об ответственности за сотрудников. Можете ли Вы рассказать нам немного о своих сотрудниках?*
– Да, у нас на ферме двое временных наёмных сельскохозяйственных рабочих, которые работают неполный рабочий день. У них много разных задач, таких как кормление, работа на тракторе и поиск овец осенью.

– *Сельское хозяйство кажется трудоёмким. Скажите, пожалуйста, это образ жизни?*
– Да, заниматься сельским хозяйством – это образ жизни. Это значит, что кормление и уход за животными важны каждый день, круглый год. Если вы собираетесь начать заниматься сельским хозяйством, то вам действительно нужно этого захотеть. Я также рекомендую другим фермерам время от времени делать перерывы в работе, чтобы заняться другими делами. Вот почему временные наёмные сельскохозяйственные рабочие очень важны: если вы делаете перерывы в работе, они могут работать вместо вас.

– *Как Вы думаете, почему фермеры перестают заниматься сельским хозяйством?*
– Мне кажется, что фермеры перестают заниматься сельским хозяйством, потому что они в этом не видят выгоды. Это трудоёмко и может быть затратно. В современном сельском хозяйстве много требований, которые создают трудности для многих. Очень важно, чтобы у вас был контроль над инвестициями, иначе у вас будет много долгов, которые приведут к снижению мотивации.

– *Что Вы рекомендуете людям, которые хотели бы начать заниматься сельским хозяйством?*
– Прежде всего важно следовать за своей мечтой. Я рекомендую поговорить с другими фермерами, чтобы получить хороший совет.

Вам легко может стать одиноко, будучи фермером, поэтому контакты очень важны.

– *У Вас на ферме иногда бывают посетители?*
– У нас есть предложение для людей с деменцией, которых мы приглашаем на ферму. Глядя на овец, мы дарим людям большую радость в повседневности. На этом я не зарабатываю деньги, но я рада, потому что могу использовать свой опыт медсестры в случаях деменции у пациентов. В нашем регионе такое предложение есть только у нас.

– *Каким Вы видите будущее фермы?*
– Я выросла со своей семьей. С раннего возраста у меня была цель – купить ферму. К счастью, мне это удалось. Я очень верю, что некоторые из моих детей купят эту ферму так же, как и я купила. Это очень успокаивающая мысль – знать, что ферма не опустеет.

– *Хотите ли Вы сказать что-то в заключение?*
– Несмотря на рост количества закрывающихся ферм, я надеюсь, что эта тенденция скоро изменится. К счастью, у нас скоро смена правительства.

Gloser [Vocabulary]
Вре́менные наёмные сельскохозя́йственные рабо́чие – avløsere (midlertidig ansatte gårdsarbeidere)
Овча́рня – fjøs
Корми́ть/покорми́ть – å fôre
Кормле́ния – fôring
Круглосу́точно – døgnet rundt
Пря́жа – garn
Пасти́сь – å beite
Предотвраща́ть/предотврати́ть загусте́ние леса́ – å forhindre fortykning av skog
Сохране́ние земли́ под па́ром – vern av brakkmark
Учёт фе́рмы – gårdsregnskap
Контро́ль ка́чества – kvalitetskontroll
Наблюде́ние – observasjon
Рассчи́тываться исходя́ из – å beregne ut fra

Ухо́д за живо́тными – dyrestell
Пустеть/опусте́ть – å tømme, å bli tom
Сме́на прави́тельства – regjeringsskifte

References
Abeysekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: Definition, rationale and a call for research. *Higher Education Research & Development*, *34*(1), 1–14. https://doi.org/10.1080/07294360.2014.934336
Akutagawa, R. (1952) “In a Grove” [1922], in his *Rashomon and Other Stories*, transl. by Takashi Kojima (pp. 15-28), C.E. Tuttle and Co.
Bokova, S., Gavel, V., & Znaskevich, A. (2017). *Основы работы над документальным фильмом* [Documentary Film Basics]. https://site.uit.no/russianfilmclub/wp-content/uploads/sites/316/2017/10/Kompendium-HOMO-LUDENS.pdf
Gamburg, E. (1967). *Шпионские страсти* [The Passions of Spies], USSR, b/w, 20 min, https://www.youtube.com/watch?v=IVY25EMDooo
Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robison, A. J. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century* (The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning). MIT Press.
Kurosawa, A. (1950). *Rashōmon*, Japan, b/w, 88 min. https://www.youtube.com/watch?v=kvUolkugNv4
Nesset, T., Bjørklund, K., & Hov Jacobsen, P. (this volume). Flipping the classroom? From text to video in teaching Russian grammar.
Bjørgve, E., Sokolova, S., & Reisæter, G. (2020). *Our Common Victory* [Norwegian: Vår felles seier]. Educational film project supervised by E. Bjørgve, S. Sokolova, and G. Reisæter at UiT The Arctic University of Norway, funded by The The Norwegian Barents Secretariat (i.e. https://barents.no/en)
Sokolova, S., Bjørgve, E., Janda, L. A., Kosheleva, D., Nesset, T., & Zhamaletdinova, E. (in press). My Russian Journey: Rethinking teaching Russian to beginners. In S. Nuss & C. Martin (Eds.), *Student-centred approaches to Russian language learning: Insights, strategies, and adaptations* (Russian language pedagogy and research). Routledge.

Sokolova, S., & Reisæter, G. (2017-2018). Interview-oriented film project *Homo ludens* supervised by S. Sokolova and G. Reisæter at UiT The Arctic University of Norway, funded by The Norwegian Barents Secretariat (172525) and available at https://site.uit.no/clear/2019/11/11/homo-ludens/.
Spasova, S., & Welsh, K. (2020). Mixing it up with blended learning. In E. Dengub, I. Dubinina, & J. Merrill (Eds.), *The art of teaching Russian* (pp. 405–430). Georgetown University Press.
Strelan, P., Osborn, A., & Palmer, E. (2020). The flipped classroom: A meta-analysis of effects on student performance across disciplines and education levels. *Educational Research Review 30*. https://doi.org/10.1016/j.edurev.2020.100314
Sugak, E. (2018). "Американские мужчины мне нравятся больше": Дарья Жук о грин-карте и домогательствах продюсера ["I like American men more": Daria Zhuk about the green card and the producer's harassment]. *The Village Belarus*. https://www.the-village.me/village/culture/int/271869-zhuk
Yowell, C., & Rhoten, D. (2009). Digital media and learning. *Forum for the Future of Higher Education*, 13–16. John D. and Catherine T. MacArthur Foundation. http://forum.mit.edu/articles/digital-media-and-learning/

Outside the Earth: Translating and Exploring with Tsiolkovsky

Michael Pilipchuk, Olga Lyanda-Geller

1. Introduction

This article describes a study that grew out of research and translation work completed within the framework of a series of innovative interdisciplinary courses called "Russian for Rockets." While there are currently no language study requirements in most science, technology, engineering, and mathematics (STEM) disciplines, there is a high demand among STEM majors in U.S. universities for language courses with a strong technical component. In particular, a poll at the Purdue School of Aeronautics and Astronautics conducted in 2018 showed that over 90% of respondents were interested in taking a course in technical Russian.[1] This finding resulted in the development of unique language courses in the Russian Program at Purdue University that explore science and engineering from linguistic and cultural perspectives. These courses target students with different levels of proficiency in Russian (from elementary through intermediate to advanced) and with various majors, interests, and backgrounds. The courses are part of the Purdue School of Languages and Cultures LSP (Languages for Specific Purposes) initiative, in which we address the needs of a versatile community of students in our language classes focusing on their specialized professional areas.

Recent course offerings within the series include "Russian for Scientists and Engineers," "Russian, Rockets and Space," and the grant-winning course "Technical Russian."[2] Co-taught in collaboration with

[1] The poll was designed and conducted by Dr. Alina Alexeenko (Aeronautics and Astronautics, College of Engineering, Purdue University) and Dr. Olga Lyanda-Geller (School of Languages and Cultures, College of Liberal Arts, Purdue University) in October 2018. The survey was completed by Purdue Aeronautics and Astronautics majors.
[2] The course Russian, Rockets and Space (offered in Fall 2019) was taught by Dr. Alina Alexeenko and Dr. Olga Lyanda-Geller for the Purdue Honors College. The courses Russian for Scientists and Engineers (offered in Summer 2019) and Technical Russian (offered in Spring 2021) were designed and taught by Olga Lyanda-Geller for the Purdue Russian Program. The Technical Russian course was awarded a course development stipend from Indiana University in March 2020.

Language and Engineering faculty, and including speakers from a variety of disciplines, these unique courses have seen a steep increase in popularity among STEM and non-STEM students alike. While continuing to work on their proficiency in Russian, students taking these multidisciplinary courses learn about the history of science and current scientific and engineering technologies in the Russian-speaking world. The ability to foster collaboration with Russian-speaking partners[3] and to have direct access to authentic materials in Russian can spur significant scientific and technological breakthroughs. An illustration of this need in fostering the collaboration is NASA's requirement of knowledge of the Russian language for many jobs in the U.S. space program. Students who took these interdisciplinary courses enjoyed working on interesting and challenging projects, including but not limited to translation studies.[4] This faculty-student collaboration resulted in two conference panels and a book project that stemmed from the translation work.

In these specialized Russian courses designed for scientists and engineers, which attract students from the entire Purdue campus, we work with authentic Russian and English texts and corpora themed around space. In this paper, we focus on our translation and commentary on Konstantin Tsiolkovsky's *Вне Земли* [*Outside the Earth*], a science fiction novel that was started in 1896, finished and partially published in 1916, and fully published in 1920 (Tsiolkovsky, 1920).

2. Scholarly and educational contributions

The annotated translation project we discuss here stemmed from our classes dedicated to the Russian language, rockets, and space that targeted students with different language skills. The courses' objectives included learning about the history of space exploration and current space technologies. The courses' learning outcomes consisted of building basic translating and interpreting skills to work with specialized English and Russian texts, as well as developing an understanding of key scientific discoveries.

[3] This includes professionals, researchers, scholars, industry, business and government representatives in the US and abroad with whom students will be able to collaborate now and in the future.

[4] Other projects included presentations about the animals used by space programs, astronaut fatalities, and other space-related presentations. There were also interdisciplinary projects involving using different software, for example, to explore the possibilities of applying coding for studying space vocabulary and corpus design.

Space remains only partially explored so far. To enable future Elon Musks, we need to constantly reevaluate the ideas of space pioneers and explorers. Interest in space is reflected not only in aerospace scientific and engineering papers but also in children's literature, literature for young adults, and popular science. Students who took these interdisciplinary courses, regardless of their major areas of specialization, reported that they were inspired by the possibility of getting acquainted with these diverse scholarly and artistic texts in their original language.

Students with mixed STEM and liberal arts backgrounds and different levels of language proficiency enrolled in these specialized space-oriented Russian classes. Multiple research and translation projects stemmed from the partnership between aerospace engineering and Russian faculty and students. We confirm that productive work with authentic sources and documents is possible for students of all levels, including students with little or no background in the language. We chose primary and secondary reading sources that would provide the maximum benefit to students. After just one semester of Russian, the beginners were able to work with original texts, such as technical manuals and excerpts from newspapers and memoirs. Students with more advanced language skills, including those from STEM departments and those with no aerospace background, reported enjoying reading and translating literary sources, in particular, space-based science fiction, such as Konstantin Tsiolkovsky's *Outside the Earth* (1920) and Aleksei Leonov's children's book *Солнечный ветер* [*Solar wind*] (1977).

This paper, however, describes a collaborative project between a Russian faculty member and an undergraduate heritage student of Russian who is an Aerospace major and a Russian minor. The collaboration resulted in a book-length scholarly contribution containing both translation and extensive scientific, engineering, and linguistic commentary.[5] This project contributes to broadening the language, literature, and engineering horizon of students' education via implementing inspiring research and translation work.

[5] The next stage of our collaborative work is a book proposal with a subsequent publication of the book.

3. Methods

Due to the interdisciplinarity of our project, we combined different methods in the study, bearing in mind the following target audiences:

(i) Speakers of English with interest in aerospace engineering working toward improving their Russian reading proficiency

(ii) Heritage speakers of Russian both with and without special aerospace background working toward expanding their literary and scientific vocabulary and improving their syntax, grammar, and style

In our translation work, we primarily used two methods: source text analysis and translation with commentary (Williams & Chesterman, 2015). Source text analysis with a prior examination of semantic, syntactic, and stylistic characteristics of the original text prepared the student translator to find better translation solutions. As Tsiolkovsky's text is an original science fiction novel with highly specialized technical components, the result of our work is a cross-genre translation.[6]

While working on the translation, we also provided cultural, historical, linguistic, scientific, and engineering commentaries on various aspects of the text. Translation with commentary required language, literature, and engineering research from both authors of the paper. We focused on collaborative product-oriented research with a descriptive and explanatory approach to the source text (Saldanha & O'Brien, 2015).

This combination of methods allowed us to pursue our research and educational purposes, which were different from providing yet another artistic translation.[7] Our purpose was to prepare an annotated bilingual edition of a novel with scientific and linguistic commentaries,

[6] Our cross-genre translation project brings together elements of science fiction and scientific and technical literature.

[7] In 1979, Adam Starchild translated *Outside the Earth* as part of his edited collection of Tsiolkovsky's science fiction (Tsiolkovsky, 1979/2000). In the introduction to his collection of translations, Adam Starchild professed to being "an avid science fiction reader" to whom the translation was "a labor of love" (Tsiolkovsky, 1979/2000, p. 4). Our new translation combines both the artistic and engineering perspectives, with an emphasis on the science component. Adding the engineering perspective has resulted in changes in the language made to better suit the target demographics: people with an interest in science, language, and space travel, rather than just science fiction fans. Furthermore, in the more than 40 years since the publication of Starchild's collection of Tsiolkovsky's works, technical lexicon has significantly evolved, which further justifies the need for a retranslation. For example, Starchild translates the word *шар* as "globule," while our translation renders it as "sphere," as it is commonly used in modern aerospace science.

thus making a science fiction masterpiece available for reading in the original language to a broad audience—from high school and college students to independent learners of Russian.

4. Work on the project

4.1. Choice of the source text: The importance of translating Tsiolkovsky's science fiction

In the engineering program at Purdue University, students begin in a common curriculum before applying to a specific program. When Michael Pilipchuk was accepted into the Aerospace program, one of the first classes he took was Introduction to Aerospace Design. Students in the class were passionate about different aspects of aviation or space travel and conducted research on its history before the class began. However, when the students started learning the fundamental rocket equations, instructors noticed a gap in their collective knowledge: most of the students were not familiar with Russian rocket scientist and author Konstantin Tsiolkovsky. Some students recognized the Ideal Rocket Equation he had derived, but his name was a mystery. The reason that Tsiolkovsky was unknown was not that he was one of the first rocket scientists in the world, because, for example, his contemporary, Robert Goddard, is well recognized, even among people who do not specifically know his work. Konstantin Tsiolkovsky's contributions to rocket science are just as vital, but his name remains, undeservedly, largely unknown to the Western world, despite his renown in Russia.

For the course Russian, Rockets and Science, students were assigned to read the first few chapters of Tsiolkovsky's fictional work *Outside the Earth*. One student, Michael, was surprised to realize that the man behind one of the most fundamental equations of rocket science turned out to be a science fiction author as well. Reading the first four assigned chapters of the novel was not enough for Michael, and he continued working on translating other chapters of the book, which ended up turning into his main assignment for that class. When the semester ended, the translation was not yet complete, so the project and the faculty-student collaboration expanded beyond the class. The goal became to make a coauthored, guided book-size reader that would include side-by-side translations and commentary both on the language (Olga Lyanda-Geller) and on the science aspects of the work (Michael Pilipchuk).

4.1.1. Tsiolkovsky as a scientist

Now considered one of the three founders of rocket science,[8] Konstantin Eduardovich Tsiolkovsky (1857–1935)[9] came from humble beginnings. After an illness left him almost deaf at the age of 10, he was forced to quit school and resort to studying at home. Having overcome illness and adversity to get an education, Tsiolkovsky used his mostly self-taught knowledge to design airplanes and dirigibles. To test them, he built the first wind tunnel in Russia, where he conducted research on drag and aerodynamics. Tsiolkovsky's interests then gradually shifted to space, leading to his most ground-breaking work. His passion for space encouraged him to explore life beyond Earth and write about the possibility of life in space.

The crown jewel of Tsiolkovsky's research was in chemical propulsion. Tsiolkovsky was one of three rocket scientists to independently derive the ideal rocket equation, forming the foundation of the field of rocketry at the beginning of the 20th century. Tsiolkovsky was the first of the three to publish the equation, in 1903. The relationship outlined in the Ideal Rocket equation relates the change in velocity provided by an engine of a given efficiency (specific impulse), gravity, and the change in mass, which accounts for the quantity of burned fuel. In short, it is the idealized version of the equation comparing a rocket's change in speed to fuel burn in the absence of external forces.

Tsiolkovsky's work has been widely recognized by space explorers. His legacy has been revered not only in Russia, where he was born, but also in Western nations. This point of view has been shared, in particular, by Wernher von Braun, who laid the foundation of practical rocket science and engineering (Braun et al., 1985). In the former Soviet Union and in modern Russia, though, Tsiolkovsky has been the subject of apologetics, and his achievements have at times been exaggerated. In general, there was a tendency in the Soviet Union to create a cult of a Russian scholar, at the expense of silencing the contributions of the rest of the world. For instance, Tsiolkovsky could have been represented as the only founding father of modern rocketry and astronautics, while he actually was one of the few, together with the Frenchman Robert Esnault-Pelterie, the Germans Hermann Oberth and Fritz von Opel, and the American Robert H. Goddard. Or Tsiolkovsky could have been credited with being the first to suggest the idea of a multi-step rocket in 1929, while in reality Goddard had patented this idea six years earlier, in 1914 (Mars [2021] and Dunbar [2013]). This tendency continues today, and traces of "Tsiolkovsky's myth" can still be found in literature (see, e.g., Alekseeva [2007]; Demin [2005]; and Majsova [2018]).

However, had nothing to do with creating this myth, just as he had nothing to do with creating the "Tsiolkovsky anti-myth" that exists in modern criticism. This anti-myth, which appeared after the dissolution of the Soviet Union, exaggerates Tsiolkovsky's weaker points (see, e.g., Hagemeister [2012] and Salakhutdinov [2003]), and is also not justified. In this regard, Tsiolkovsky's books stand by themselves, and an unbiased study is necessary to discover the true scale of this visionary.

4.1.2. Tsiolkovsky as a science fiction writer

Books helped Tsiolkovsky continue his education after his hearing loss and were his life-long passion. Tsiolkovsky appreciated the works of Jules Verne— in particular, his novels *From the Earth to the Moon* (1865) and *Around the Moon* (1869). Verne's works unlocked Tsiolkovsky's interest in science and exploration and also served as a source of ideas. Tsiolkovsky's literary interests directly fed into his scientific inquiries and vice versa, and writing provided a way for him to express scientific ideas in a manner comprehensible by the lay reader. To this end, Tsiolkovsky's first notable work was *На Луне* [On the Moon], written in 1887, first published in 1893. *Outside the Earth*, the work translated for this project, was his third book, initially published in 1916.

As we learn from Tsiolkovsky's preface to the first edition of the novel *Outside the Earth*, in 1896 he contemplated writing a detailed scientific work that would theoretically justify in a literary form his proposals for creating a rocket-propelled spacecraft (Vorob'iev, 1958). Tsiolkovsky started working on the novel, wrote the first few chapters, and then postponed his work. In 1916, the journal *Природа и люди* [Nature and people] suggested that he should return to the book. Tsiolkovsky finished the novel and started publishing it in the journal. However, only approximately a half of *Outside the Earth* was published

[8] Together with Hermann Oberth (1894–1989) and Robert H. Goddard (1882– 1945).

[9] The amount of biographical, critical, and scholarly literature dedicated to Tsiolkovsky in different languages is immense. To start acquaintance with Tsiolkovsky's biography, one might consider Andrews (2009); Golovanov (1970); Demin (2005); and Vorob'iev (1940).

because the journal ceased to exist. The entire novel was first published as a book four years later (Tsiolkovsky, 1920). Despite its fictional style and format, the novel actually outlines a well-reasoned, strict scientific program of future human exploration of space and interplanetary travel. Tsiolkovsky artistically expressed his scholarly idea that humankind could explore space if an international team of scientists, engineers, and inventors were provided with the necessary working conditions. In *Outside the Earth*, Tsiolkovsky assembled an imaginary international team of real and fictional scholars from the past and present who worked on creating rocket-propelled spacecraft, and he sent them on their first space adventures.

Tsiolkovsky realized that his scientific treatises were unlikely to be read by the average person, so he included extensive explanations of his scientific ideas and theories in his science fiction works. In *Outside the Earth*, the characters with no special scholarly background ask the scientists to explain scientific phenomena. For example, in nearly every scene, a character says, “But I thought . . .” or “But isn’t. . .” and then the scientists, named after the greatest luminaries of mankind, including Newton, Galileo, and Helmholtz, correct the errant ideas, as in the following exchange:

> – Какой это эфир? Неужели тот, который имеется у нас в аптеке? – спросил, улыбаясь, другой из рабочих.
> – О нет! Это подобие воздуха, но только поразительно упругого и крайне разреженного, – заметил Гельмгольц. – Сущность эфира довольно загадочна.
>
> “What is this ether? Is it the same one that we keep in the medicine cabinet?” asked another of the workers with a smile on his face.
> “Oh, not at all! Its essence is similar to that of the air, but amazingly firm and very sparse,” noted Helmholtz. “The essence of ether is rather mysterious.” (Tsiolkovsky, 1920, p. 20)

Tsiolkovsky made it possible for readers to learn about the realities and potential future of science without the need for a textbook. In fact, Tsiolkovsky provided an uncanny explanation of space flight in his novel. Cosmonaut Yuri Gagarin (1961) reported that during his first space journey, he experienced exactly the same conditions he had read

about as a child in Tsiolkovsky’s *Outside the Earth* and in other science fiction works written for children and adults. Such was the power of Tsiolkovsky’s artistically expressed scholarly works, which continue to inspire generations of space explorers.

4.2. Book translation

4.2.1. Class project

Although the class Russian, Rockets and Science, with its individualized approach, welcomed students with different levels of proficiency in Russian, it was primarily aimed at students with no prior knowledge of the language. Thus, students needed practice reading materials that would accommodate an elementary-level vocabulary but do so without relying on overly simplistic stories that may not appeal to college students. Translated readers, which juxtapose the text and translation, are a good solution for language learners, because they offer the definitions of unfamiliar words.

With this idea in mind, the Aerospace and Russian professors who taught the course translated the first four chapters of *Outside the Earth* and assigned it as homework. Having grown up in a Russian-speaking household, Michael Pilipchuk already had a near-native language proficiency and took the class more for the history and policy of the Space Race rather than for the language fundamentals. Therefore, he needed an assignment that would better align with his needs. Because the first few chapters of the book piqued his interest, he continued to translate the work, creating the opportunity for his classmates to keep reading and learning.

4.2.2. Questions, difficulties, and unexpected surprises of translation

Difficulties with translation can be split into lexicographical complications and technical or engineering-adjacent complications. On a literary level, three main factors make translation difficult. The first factor is the age of the language. When Tsiolkovsky wrote a century ago, the technology involved in air travel was in its infancy, and the language associated with it was undeveloped. An example of this is demonstrated in the word *аэростат* [aerostat], which is the “generic” version of the term “zeppelin,” a class of airships named for their inventor. The English *Dictionary of Aviation* has a similarly obscure word—“aerostat”—with the same meaning since

both words derive from Greek roots (Crocker, 2007,). Although "zeppelin" is a better-known term, we used "aerostat" in the translation to convey the older feel of the language.

Obscure non-technical language proved to be the second complicating factor. A more extreme example of this is the word *балахонщик* [balakhonshchik]. According to Vladimir Dal's (1863) *Explanatory Dictionary of the Living Great Russian Language*, *балахонщик* is defined as "кто шьет балахоны, торгует ими, носит их" ["he who sews sacks (shapeless garments), sells them, or wears them"] (p. 37), resulting in a vague meaning. To find this definition, it is necessary to reference a dictionary that was published in 1863 because the word is not currently in use. Since the word is derived from the word *балахон* [balakhon], meaning "loose overalls" or "robe," the translated text has it as "the person wearing the robe." This phrase, however, is inconveniently long, and the term is used frequently, making for tedious reading. As a work-around, we changed the word to "robed figure" and later to "spacewalker." Although the later version is not an accurate translation, it causes less confusion for the reader, particularly since the term is used well after the robes are no longer worn.

The third factor is the very long sentences used in Russian. English allows for that as well, but they are less frequently used, creating a contrast in style. Translators solve this problem in different ways: some choose to follow the author's style, while others change the wording to something more apt in the receiving language. In our case, we attempted to preserve Tsiolkovsky's writing style, adding explanatory notes when necessary. As previously stated, this has forced us to make the long sentences work in English rather than splitting some of them into shorter, more manageable sentences.

In addition to the aforementioned linguistic difficulties, there are those that result from the technical aspect. Of these, the biggest challenge is dealing with the mix of shockingly accurate predictions with beliefs that have long since been proven wrong. On one hand, retaining the inaccurate information highlights how amazing Tsiolkovsky's correct predictions and calculations are. However, on the other hand, it leaves the door open for misinforming the reader, who may not know what is accurate and what is not. An example of this challenge is the notion of where the atmosphere ends and space begins. Tsiolkovsky (1920), through one of his characters, states that the atmosphere extends only 300 kilometers above the surface of the Earth. In another instance, when a character is in orbit at an altitude of 1,000 kilometers, Tsiolkovsky states that the nearest gas molecules are 800 kilometers away, implying that the atmosphere extends 200 kilometers above the Earth. Aside from the discrepancy between the figures, both are incorrect. The uppermost layer of the atmosphere is considered to end about 10,000 kilometers above the Earth, and the international consensus for the beginning of space is the Kármán line, at 100 kilometers (National Environmental Satellite Data and Information Service, 2016).

Less-blatant errors come in the form of statements that are scientifically correct but potentially misleading to a reader with less in-depth knowledge. Providing a rotating rocket as a solution for weightlessness, while accurate, for example, is nowhere near as simple as Tsiolkovsky makes it seem. Rotating a rocket around too small a radius would cause problems due to a disparity between the acceleration at the wall and closer to the center. Specifically, a person standing on the wall would experience higher acceleration at their feet than head. While a large rotation diameter resolves this problem and prevents dizziness, Tsiolkovsky glosses over the difficulties of constructing the massive structures needed for such an endeavor. As with some of the literary difficulties, the technical issues were kept in the text to preserve the original work.

4.2.3. Commentary work

Because we were pursuing both research and educational purposes, namely, to transform the text from a purely literary work into a study aid and to guide the reader through the novel's complexities, we added informative commentary to the translation. We included annotations on both the scientific/aerospace and the Russian components of the text. In addition to introducing corrections to scientific ideas from a modern perspective, we also commented on various aspects of Russian culture, providing the reader with a better understanding of both topics.

In our commentary about the aerospace aspects of the text, we addressed several overarching themes. The first theme was erroneous information, which required a straightforward explanation according to currently accepted knowledge. As one of the founders of rocket science,

Tsiolkovsky did not have the century of research and development that today's readers have access to. To ensure that the reader learns the correct scientific information, we added annotations citing reputable sources in the footnotes.

We also provided unit conversions in our annotations. In the original text, measurements are often provided in stones and versts, terms that are now rarely used and are likely unknown to the reader. Footnotes provide measurements in commonly known units, such as kilograms and kilometers.

Additionally, some of our commentary discusses the modern uses and implications of Tsiolkovsky's writings, including notes about how a technology is currently used, for example, or the ways in which modern rocketry is trying to incorporate Tsiolkovsky's ideas.

To reinforce the literary and linguistic components of Tsiolkovsky's work, we also included notes on the language, culture, and history of Russia. Every literary work is a reflection of the time and place in which it was written, and *Outside the Earth* can be used as a backdrop to introduce the reader to the conditions in the Russian Empire at the start of the 20th century. This was an important and turbulent period in the country, eventually leading to its collapse. As such, the opinions and views of contemporary writers can provide readers with an idea of what the times were like.

Our linguistic commentary primarily targets readers with intermediate to advanced levels of proficiency in Russian and includes explanations about different language phenomena, such as complicated or unusual syntactic constructions, interesting vocabulary choices, colloquialisms, abbreviations, and ellipses. We also draw the reader's attention to Russian idioms and phrases, providing their English equivalents. Whenever beneficial, we offer our comments on the author's style.

Our annotations on scientific components are provided in both English and Russian. The language commentaries are provided in both languages, especially when a more advanced grammar topic is used, or only in Russian by providing a synonym or an antonym or by paraphrasing an expression. The number of comments per chapter is commensurate with the chapter's length and complexity. An example of an annotated paragraph is given in the Appendix.

4.2.4. The results of the projects

Broadly, students who completed the LSP (Languages for Specific Purposes) Russian, Rockets and Space courses built basic translating skills required to work with specialized English and Russian texts. They also developed an understanding of key scientific discoveries that enabled space exploration.

Due to a flexible, individualized approach to the course projects, research work that had begun during the course continued beyond the classroom. This effort resulted in two conference panels, "Russian, Rockets and Space in Translation," consisting of students' original research that was presented at the 2021 Midwest Slavic Conference, hosted virtually by Ohio State University, April 15–18, 2021,[10] and at the 2020 Central Slavic Conference, St. Louis, MO, February 28–March 1, 2020.[11]

Speaking in a narrow sense, the Tsiolkovsky project discussed in this article provides an example of a successful advanced collaboration on a complex matter that is far beyond the scope of standard undergraduate-level work.

In this multiyear, team faculty-undergraduate project to create an annotated translation of Konstantin Tsiolkovsky's *Outside the Earth*, a course project was converted into an interdisciplinary research work gathering sources about space, science, and Russian culture, history, and language. The end result, a side-by-side annotated translation, provides an educational tool for learning Russian. We are also preparing a book proposal, for which the target audience is Russian language learns with an interest in STEM, as well as aerospace researchers in general. The scientific component of the work should help create a basic foundation for a technical lexicon.

[10] The panel "Russian, Rockets and Space in Translation" included the following undergraduate and graduate students' papers:
Michael Pilipchuk, "The Importance and Experience of Translating Tsiolkovsky";
Geoffrey Andrews, "Linguistic Trajectories: Tracking Spaceflight-Driven Changes in Russian and English Lexica";
Justin Mansell, "Translating Russian Airplanes Using a Common Language: Engineering."

[11] This panel, also entitled "Russian, Rockets and Space in Translation" consisted of the following undergraduate students' presentations:
Ryan Grunsten and Christine Rodriguez, "Space Race Propaganda of the US and USSR";
Michael Pilipchuk, "The Importance of Translating Tsiolkovsky"; and
Tristan Schefke, "Translating *Solar Wind*, a Children's Book by Alexei Leonov."

4. Conclusion and perspectives

Our faculty-undergraduate collaboration has resulted in a successful translation study and research. Combining the methods of source text analysis and translation with commentary, we achieved our research and pedagogical purposes of providing a broad audience with an annotated bilingual reader.

Our work has also demonstrated the feasibility of similar projects in various areas on the boundary of science, engineering, and humanities. In particular, we have shown that translation projects are viable for learners with different language proficiencies. Even after just one semester of Russian, students with no previous background in the language were able to work with authentic documents in the original Russian and enjoy the possibility of applying their newly acquired language skills to their other professional areas of study. Students with more advanced language proficiency were able to pursue more ambitious research endeavors. This article describes one such project as an example. Research done for the Russian for Rockets courses primarily focused on intersections of Russian and mathematics, physics, aerospace engineering, computer science, history, and political science. Projects on intersections of other fields of knowledge await their exploration. In future work, it would be of interest to enhance digital and computational components of such projects.

Appendix

Sample paragraph with engineering and Russian comments

— Если бы вы и были правы, считая тяжесть необходимой, — возразил бывший тут учитель физики, — то ведь ничего нет легче, как• ее произвести искусственно, вращением жилища. Там это вращение вечно, ничего не стоит, поэтому и тяжесть также вечна и ничего не стоит; кроме того, величина ее совершенно зависит от нас; она может быть и меньше земной и больше, пределы ее изменения безграничны… Вот в том-то и преимущество ••: на Земле тяжесть неизменная, а тут какой угодно ••• силы, начиная с нуля. Кстати, о температуре: при очень близком расстоянии от Земли ее нельзя очень сильно понижать: мешает теплое лучеиспускание планеты; но по мере удаления от нее это понижение может становиться все значительней и значительней ••••. На расстоянии Луны, где находятся теперь наши мировые скитальцы, температуру можно понизить чуть не до абсолютного нуля, т. е. ••••• до 273° ниже точки замерзания воды. (Tsiolkovsky, 1920, p. 72)	"If you were correct in considering gravity necessary," objected a present physics teacher, "then there's nothing easier than to artificially recreate it by rotating the home.* There, that rotation will be permanent and require nothing, so gravity is also permanent and at no cost; besides, its magnitude will be completely up to you—it can be less than Earth's or greater, and there's no end to possible changes . . . That's the advantage—on Earth, gravity is constant, but here—of any magnitude, starting at zero. Also, about temperature: near Earth you can't lower it too much—the planet's heat radiation interferes—but as you move away from it, this decrease can be more and more substantial. At the same distance as the Moon, where our cosmic wanderers were now located, the temperature can be lowered almost to absolute zero, meaning 273 degrees below water's freezing point."**

* scientific and engineering comments
• language and style comments

* This is theoretically possible but requires either massive sizes or incredible rotational speeds for practical results.

Это теоретически возможно, но требует либо гигантских размеров, либо очень быстрого вращения для практического применения.

** Regarding the temperature estimate, Tsiolkovsky did not consider the role of the presence of atmosphere on Earth and its almost nonexistence on the Moon, as well as its nonexistence in open space. As we now know, the Moon's temperatures at night are indeed low, -183 degrees C (although this is much warmer than -273 C). However, during

the day, the absence of screening of sunlight radiation by the atmosphere results in temperatures as high as 106 C.

** По поводу оценки температур: Циолковский не рассматривал роль присутствия атмосферы на Земле и её практическое отсутствие на Луне, а также её отсутствие в открытом космосе. Например, как мы знаем теперь, температура на Луне ночью действительно низкая, -183° Цельсия (хотя это намного больше, чем -273° Ц). Однако днём отсутствие экранирования солнечной радиации атмосферой приводит к температурам до 106° Ц.

• "Нет ничего проще, как..." A more conventional way of introducing the subordinate clause here would be "нет ничего проще, чем..."

•• "Вот в том-то и преимущество, что..." = "Преимущество именно в том, что..."

••• "Какой угодно" = "любой"

•••• "всё значительнее и значительнее": Inn constructions with repetitions, Russian can repeat the comparative form of the used adjective or adverb, although the form "всё более и более значительно" is also common.

••••• "т.е." = "то есть"

References

Alekseeva, V. I. (2007). *К. Э. Циолковский. Философия космизма* [K. E. Tsiolkovsky: Philosophy of cosmism]. Samoobrazovanie.

Andrews, J. T. (2009). *Red cosmos: K. E. Tsiolkovskii, grandfather of Soviet rocketry*. Texas A&M University Press.

Braun, W. von, Ordway, F., & Dooling, D. (1985). *Space travel: A history*. Harper & Row.

Crocker, D. (2007). *Dictionary of aviation*. A&C Black Business Information and Development.

Dal', V. I. (1863). *Толковый словарь живого великорусского языка* [Explanatory dictionary of the living great Russian language]. (Vol. 1). Tipografiia A. Semena.

Demin, V. N. (2005). *Циолковский* [Tsiolkovsky]. Series "Жизнь замечательных людей" ["The life of wonderful people"]. Molodaia grardiia.

Dunbar, B. (2013, June 5). *Konstantin E. Tsiolkovsky*. Retrieved from https://www.nasa.gov/audience/foreducators/rocketry/home/konstantin-tsiolkovsky.html

Gagarin, Y. A. (1961). *Дорога в космос. Записки летчика-космонавта СССР* [Road to space. Notes of a pilot and cosmonaut from the USSR]. Pravda.

Golovanov, I. K. (1970). *Этюды об ученых* [Sketches about scientists]. Molodaia gvardiia.

Hagemeister, M. (2012). Konstantin Tsiolkovskii and the occult roots of Soviet space travel. In B. Menzel, M. Hagemeister, & B. G. Rosenthal (Eds.), *The new age of Russia: Occult and esoteric dimensions* (pp. 135–150). Verlag Otto Sagner.

Leonov, A. A. (1977). *Солнечный ветер* [Solar wind]. Progress.

Majsova, N. (2018). The cosmic subject in post-Soviet Russia: Noocosmology, space-oriented spiritualism, and the problem of the securitization of the soul. In N. Bernsand & B. Törnquist-Plewa (Eds.), *Cultural and political imaginaries in Putin's Russia* (pp. 232–258). Brill.

Mars, K. (2021, March 17). *95 years ago: Goddard's first liquid-fueled rocket*. NASA. Retrieved from https://www.nasa.gov/feature/95-years-ago-goddard-s-first-liquid-fueled-rocket

National Environmental Satellite Data and Information Service (NESDIS). (2016, February 22). Where Is Space? https://www.nesdis.noaa.gov/news/where-space/

Salakhutdinov, G. M. (2003). *Мифы о творчестве Циолковского* [Myths about Tsiolkovsky's work]. AMI.

Saldanha, G., & O'Brien, S. (2015). *Research methodologies in translation studies*. Routledge.

Tsiolkovsky, K. (2000). *The science fiction of Konstantin Tsiolkovsky*. (A. Starchild Ed. & Trans.). University Press of the Pacific. (Original work published 1979)

Tsiolkovsky, K. E. (1920). *Вне Земли* [Outside the Earth]. 4-ya Sovetskaia tipografiia.

Tsiolkovsky, K.E. (1989). *На Луне* [On the Moon]. Pravda.

Verne, J. (201). *From the Earth to the Moon, and Around the Moon*. Fantastic Books Publishing.

Vorob'iev, B. N. (1940). *Циолковский*. [Tsiolkovsky.] Series "Жизнь замечательных людей." ["The life of wonderful people."]. Molodaiia grardiia.

Vorob'iev, B. N. (1958). *Работы К.Э. Циолковского по межпланетным сообщениям* [K. E. Tsiolkovsky's works on interstellar transit]. In K. E. Tsiolkovsky, *Вне Земли* [Outside the Earth] (pp. 5–20). Izdatel'stvo AN SSSR.

Williams, J., & Chesterman, A. (2015). *The map: A beginner's guide to doing research in translation studies*. Routledge.

Teaching Discourse Markers to Students with Students: The Case of Italian Learners of L2 Russian

Beatrice Bernasconi, Marina Giampietro

1. Introduction[1]

The present study explores the development of a teaching treatment on discourse markers (DMs) for Italian learners of Russian as a Second Language (L2) using students in the research process. We believe that learners' insights are a valuable resource in the design of teaching treatments tailored to learners' needs. Both researchers and students can benefit from such cooperation when dealing with slippery aspects of spoken language, such as DMs.

Our study has a twofold objective:

1. To compare the use of DMs by Russian native speakers and intermediate Italian learners of L2 Russian. In particular, we focus on four categories of DMs that can facilitate the process of meaning construction in conversation, namely, approximators, shields, fillers, and reformulators.
2. To propose a game-centered teaching treatment with the students' cooperation, using the results from Objective 1.

We collected the data for the present study by conducting a task-based test in the form of a game with four pairs of MA students at Roma Tre University (approximately Common European Framework of Reference [CEFR] level B2) in Rome, Italy, and five pairs of native speakers of Russian. We compared and analyzed the productions of the two groups to highlight differences in the use of the target DMs by native and non-native speakers. The students were involved at different stages of the research. Eight students took the test, provided feedback on it, and suggested ways of incorporating the game into the teaching treatment. Two students contributed to the analysis of the data. One student, namely, the second author, worked on the project as a researcher from its conception to the formalization of the results.

[1] This article is the result of the close collaboration of the two authors, but Beatrice Bernasconi is responsible for Sections 1, 3, 4, and Marina Giampietro is responsible for Sections 2, 5, 6.

The article is structured as follows. After summarizing the state of the research on DMs in L2, we explain the methodology used in the study. Then, we discuss the results of the comparison between native and non-native speakers' productions of DMs. Starting from these results, we illustrate the teaching treatment addressed to intermediate learners and designed with the students' cooperation. Finally, we present some conclusions and future research directions.

2. Discourse markers in L2 acquisition and teaching

DMs constitute a heterogeneous class of linguistic elements that, starting from their original lexical meaning, have developed pragmatic, textual, and procedural functions (Bazzanella, 1995, 2006; Bogdanova-Beglarian et al., 2018; Fedriani & Sansò, 2017; Maschler & Schiffrin, 2015; Molinelli, 2014; Schiffrin, 2001). Although their versatility and multifunctionality make them crucial for successful communication, DMs are particularly resistant to acquisition by L2 learners (Jafrancesco, 2015; Mascherpa, 2016; Nigoević & Sučić, 2011). Even advanced learners do not use DMs to mark correct functions, or, conversely, they mark some functions with DMs that native speakers do not typically use (Aijmer, 2004; Müller, 2005; Romero Trillo, 2002).

Several studies have highlighted that learners struggle to use DMs to express their uncertainty and to overcome disfluencies (Borreguero Zuloaga et al., 2017; Ferroni, 2020; Romero Trillo, 2002). As learners often lack the necessary lexicon to express themselves precisely and speak fluently, DMs like approximators, shields, fillers, and reformulators (Benigni, 2014; In'kova & Gur'ev, 2018; Koljaseva, 2021; Podlesskaja, 2013) can be significantly helpful for them during referential work and, at the same time, can make the production sound more natural. Although there are other categories of DMs that could be helpful in this sense, for example, phatic expressions or focus particles, we chose these four categories as the target strategies because they are most closely related to the meaning-construction process we are discussing. At the same time, narrowing the number of target strategies allowed us to have a manageable amount of data for both analysis and teaching purposes.

Approximators (*sort of*, *kind of*), also called *downtoners* (Jucker et al., 2003), introduce fuzziness within the propositional content (Prince et al., 1982). They act on the semantics of the word in their scope by approximating the word to the prototype. At the same time, they also express an inexact similarity between the word and the thought it represents (Andersen, 1998; Sperber & Wilson, 1991), motivated by the fact that the meaning that the speaker wants to convey "is not sufficiently covered by an available word" (Jucker et al., 2003, p. 1748). Approximators are useful for filling linguistic gaps and masking disfluencies (Benigni, 2017; Podlesskaja & Starodubceva, 2013). Shields (*I think*, *possibly*) express the speaker's commitment to the grade of truth of the utterance (Jucker et al., 2003; Prince et al., 1982), in other words, they signal the speaker's uncertainty about their speech. Reformulators (*that is*) usually introduce a periphrasis of what has just been said to avoid misunderstandings that could arise from the first formulation, when the latter is judged as not correct or clear enough (Blakemore, 1993; Cuenca, 2003). Fillers (*well*, *you know*) are used to gain time in the word-search process and for speech planning (Amiridze et al., 2010) and can be categorized as lexical or non-lexical. Non-lexical fillers, like vocalizations or filled pauses, will not be taken into account here.

DMs are not usually taught in language classes and textbooks (Benigni & Nuzzo, 2018; Pugliese, 2015; Vasileva, 1972). For this reason, studies have proposed and tested alternative ways to teach DMs in different languages, such as treatments based on the use of authentic language data or innovative techniques like input flood (Ferroni, 2019; Ferroni, 2020; Hernández, 2011; Jones & Carter, 2014). However, to our knowledge, this field has been underexplored in L2 Russian (Benigni & Nuzzo, 2018). With the aim of filling this gap in the literature, our study proposes a teaching treatment for approximators, shields, fillers, and reformulators in L2 Russian.

3. Methodology

In this section, we outline the methodology used to collect, transcribe, and analyze the data from the native and non-native speakers' groups and to obtain the students' feedback for the design of the treatment.

3.1. The test: Materials and procedure

The task used for the data collection consists of a cooperative activity in the form of a "spot-the-differences" game to be played in pairs. Such

a task is meant to elicit the target DMs as it creates a semi-spontaneous speech environment in which participants may lack adequate words or concepts to describe what they see. In the game, each participant receives a picture. The two pictures are identical apart from nine differences regarding the presence or absence of objects or their spatial orientation. Participants must find as many differences as possible within a specific time limit. They have access only to their own picture and therefore must cooperate with their partner to accomplish the task. The participants cannot see each other, thus avoiding gestural or mimical interferences. Every other means of communication is allowed to reach the common goal.

For our test, we adapted pictures from an Italian puzzle magazine by adding, removing, or changing a few details (see Appendix), thus making the pictures both accessible for learners and challenging for native speakers to engage in a complex conversation. The test took place online, on the Zoom platform. At the beginning of each session, instructions for the task were provided. Native speakers were given 10 minutes to accomplish the task, while non-native speakers were given 15 minutes because, necessarily, learners need more time for production. During the task, participants were not allowed to communicate with the instructors. At the end of the time limit, participants could still conclude their speech turn. Recordings were saved anonymously.

Five pairs of native speakers (henceforth "NSs") and four pairs of non-native speakers (henceforth "NNSs") completed the task. The NSs were adults (> 18 years old) who were raised and educated in Russia and had at least a high school diploma. The NNSs were MA students at Roma Tre University who had never received any specific instruction on the use of DMs in Russian. Both male and female NSs and NNSs participated (NSs: nine females and one male; NNSs: seven females and one male). However, gender-related differences in the use of DMs were not taken into account in our analysis. The recordings were transcribed and gathered into two corpora. The transcription scheme was adapted from the CLIPS project,[2] a heterogeneous group of spoken corpora of Italian that includes a corpus built on the "spot-the-differences" game. The overall dimensions of the two corpora in terms of duration and number of words are displayed in Table 1.

[2] The CLIPS project is available at www.clips.unina.it.

Table 1. Dimensions of the NSs and NNSs Corpora

	NSs Corpus	**NNSs Corpus**
Duration	54′41″	61′03″
Total number of words	6,660	2,816

3.2. The data sets and their annotation

After collecting and transcribing the two corpora, we annotated and extracted into two data sets all the occurrences of items performing one or more of the four target functions of our study. First, we worked on the annotation separately. Then, we discussed doubtful cases and agreed upon final decisions to overcome any discrepancies. We used the following labels to annotate and select the relevant occurrences: 1. Approximator, for example, *типа* [sort of, like]; 2. Shield, for example, *наверное* [maybe]; 3. Filler, further divided into two subtypes: 3.1 Word Search, for example, *как сказать* [how to say], and 3.2 Speech Planning, for example, *так* [so]; and 4. Reformulator, for example, *то есть* [that is]. When a DM performed different functions in distinct contexts, we assigned it different tags among the different examples. We accounted for these cases by including the same DM in all the relevant categories. When a DM performed more than one function at a time in a given context, we assigned it more than one tag within the same example. These cases are included in a separate category (the Polyfunctional category; see Section 4.5). The annotation scheme is summarized in Table 2.

Table 2. Scheme for the Extraction and Annotation of the Two Data Sets

Function	**Subtype**
1. Approximator	NA
2. Shield	NA
3. Filler	3.1 Word Search
	3.2 Speech Planning
4. Reformulator	NA

The NNS and NS data sets amount to 76 and 371 occurrences, respectively. Despite their high frequency in the NS corpus, three highly

polyfunctional DMs—*ну* [well, so, uh] (128), *вот* [here is] (108), and *такой* [this, so, such] (91), which also perform our target functions—were not included in the data set. These elements would need a separate teaching treatment, since their complexity and polyfunctionality make them particularly difficult to understand and acquire (Bolden, 2016; Kobozeva, 2007; Satjukova & Voejkova, 2010). The outcome of the annotation and the comparison between the two data sets is discussed in Section 4.

3.3. The collection of students' feedback

Nine MA students were engaged to give their feedback on two distinct points: the task used for the test, which would also constitute the starting point for the treatment, and the metalinguistic accessibility of the target categories.

For the first purpose, we asked eight students who took the test to provide feedback. Immediately after completing the test, the students were told the aim of the study and were informally interviewed on the following main points:

- Difficulty: How would you judge the difficulty of the task?
- Duration: Was the given time limit suitable to complete the task?
- Pictures: Was the level of complexity of the pictures appropriate?
- Game format and learning preferences: What is your opinion about the game format? How would you prefer the game to be incorporated into a teaching treatment?

For the second purpose, two students contributed to the development a learner-friendly categorization of the target DMs to be used during the teaching treatment. One of the students is a native speaker of Russian from Ukraine, and the other is one of the Italian MA students who took the test. First, the two students annotated the entire NNS data set using a simplified annotation scheme that included only functions without subtypes with the following five labels: 1. Approximator; 2. Doubt Marker, corresponding to Shield; 3. Word-Search Marker, corresponding to Filler-Word Search; 4. Speech-Planning Marker, corresponding to Filler-Speech Planning; and 5. IDK: "I don't know", for examples they were not able to classify. Since there are no examples of reformulators in the NNS data set, this category was not included in the scheme.

As a second step, the students annotated a sample of 88 examples from the NS data set. This time, the annotation scheme was simplified based on the difficulties the students encountered in the first attempt: Categories 3, Word-Search Marker, and 4, Speech-Planning Marker, were reunited under the label 3, Filler. The general category 4, Reformulator, was included to account for the occurrences in the NS data set. Table 3 summarizes the schemes adopted by the students in comparison with the scheme adopted for the analysis. The outcome of the collaboration with the students is presented in Section 5.

Table 3. Original Annotation Scheme and Schemes Adopted by the Students

Analysis annotation scheme		**1st simplified scheme**	**2nd simplified scheme**
Function	**Subtype**	**Function**	**Function**
1. Approximator	NA	1. Approximator	1. Approximator
2. Shield	NA	2. Doubt Marker	2. Doubt Marker
3. Filler	3.1 Word Search	3. Word-Search Marker	3. Filler
	3.2 Speech Planning	4. Speech-Planning Marker	
4. Reformulator	NA	NA	4. Reformulator
NA	NA	5. IDK	5. IDK

4. How NSs and NNSs use DMs: Results and discussion

As mentioned in Section 3, NSs produced 371 occurrences of target DMs, while NNSs produced only 76. Therefore, approximators, shields, fillers, and reformulators correspond to 5.6% of the total number of words in the NS corpus and 2.7% in the NNS corpus. The 371 occurrences in the NS data set are spread within a range of 42 items, while the occurrences produced by the NNSs are spread within a range of 10 items. The distribution of the functions performed by various DMs varies significantly between the two groups. The most frequent category attested in the NNS data set is Shield (54%), followed by Filler (25%) and Approximator (9%). No reformulators were produced by NNSs. On the other hand, NSs most frequently used fillers (40%), followed

by approximators (25%) and shields (24%). Only 7% of DMs used by NSs belonged to the Reformulator category. Last, in both data sets, polyfunctional DMs that performed two target functions simultaneously in the same context were attested. These cases were more frequent in the NNS data set (11%) and less common in the NS data set (4%). Table 4 summarizes the distribution of DM functions in the two data sets according to both the raw number of occurrences and percentages. The difference between the two groups is statistically significant (X^2 (4) = 41.379, p-value < 0.001) with a medium effect size (Cramer's V = 0.304).

As displayed in Table 4, NNSs used shields far more frequently than did NSs but were less likely to use approximators, which were used more frequently by NSs. Also, fillers were pervasive in NSs' speech, and were also attested, though less pervasively, in NNSs' speech. In the next subsections, we address each group of DMs separately.

Table 4. Distribution of DM Functions in the Two Data Sets

	Appr.	**Shield**	**Filler**	**Ref.**	**Polyf.**	**Total**
NS	93 (25%)	89 (24%)	149 (40%)	27 (7%)	13 (4%)	371 (100%)
NNS	8 (9%)	41 (54%)	19 (25%)	0 (0%)	8 (11%)	76 (100%)

4.1. Approximators

Occurrences of approximators amount to 8 and 93 in the NNS and NS data sets, respectively. This difference is partially ascribed to the dimensions of the data sets. However, considering the relative frequency of approximators in comparison to the other functions, it seems that NNSs struggled to use this kind of DM to express their uncertainty about the propositional content. The discrepancies in the use of approximators between the two groups are not limited to their frequency but also relate to their variety. As shown in Table 5, NNSs used only one item, *как* [as, like], while NSs employed 14 items. Among these, the four most frequent items were *типа* [sort of, like], *как бы* [as if], *как*, and *как будто* [as if].

When NSs were unsure about the nature of an object, they used approximators to associate the object to the closest prototypical concept that was lexically available in their repertoire at the moment of speech—for example, *картина*, *зеркало*, *штора*, *пиджак* in (1) to (4)—and to reduce the degree of commitment to the utterance:

(1) NS1#31 *справа висит **типа** картина или ещё одно зеркало*
[on the right there's **like** a picture or another mirror]

(2) NS5#72 *ну да, и там это получается **как бы** зеркало, потом идёт, ну, полоска*
[well, yes, and, it appears, there's **like** a mirror, then comes, well, a line]

(3) NS6#24 *а потом **как будто** штора, это четыре таких волнистых полосочки*
[and then **something like** a curtain, these four wavy lines]

(4) NS6#6 *ну такое, ну **как** пиджак, пиджак, чёрный*
[well that, well **like** a jacket, jacket, black]

Only four NNSs expressed approximation, and they always employed the same item: *как*. Example (5) shows how NNSs typically used this item in their production:

(5) NNS8#52 *окей, да я вижу **как** рисунки*
[okay, yes I see **like** drawings]

Table 5. Variety and Occurrences of Approximators Used by NNSs and NSs

Approximators—NNSs (8)	**Approximators—NSs (93)**
как (8)	*типа* (22) *как бы* (18) *как* (15) *как будто* (14) *какой-то* (8) *практически* (6) *так сказать* (3) *в принципе* (1) *вроде* (1) *как-то* (1) *какой-нибудь* (1) *не совсем* (1) *что-то такое* (2)

The use of *как* by NSs (4) and NNSs (5) seems to correspond. However, NSs mainly used *как* in combination with other lexical, morphological, and syntactic strategies, such as the quantitative adverb *немножко* [a

bit], diminutives, and disjunctive noun phrases. Last, in the NNS data set, *как* has scope on nouns and noun phrases in 6 occurrences and on an adverb in only one case. In the NS data set, the marker has scope on nouns and noun phrases in 10 examples, on adjectives in 4 examples, and on a verb phrase in 1 example.

4.2. Shields

The use of shields amounts to 41 in the NNS data set and 89 in the NS data set. This kind of marker was by far the most preferred by NNSs, who used 5 items to mark their uncertainty. NSs, on the other hand, produced 21 types of shields, as displayed in Table 6. The four most frequent DMs in the NS corpus were *наверно/е* [maybe], *как бы*, *вроде* [probably], and *может* (*быть)* [might be, may be, possibly]. Except for *может быть*, these items were not attested in the NNS data set.

Table 6. Variety and Occurrences of Shields Used by NNSs and NSs

Shields—NNS (41)	**Shields—NS (89)**
думаю (15)	*наверно/наверное* (21) *как бы* (13)
мне кажется (13)	*вроде* (11) *может (быть)* (10)
может быть (8)	*видимо* (4) *не знаю* (4)
не знаю (4)	*так (пред)полагаю/понимаю* (4)
могу сказать (1)	*думаю* (3) *как будто* (3)
	(мне) кажется (2) *бы сказал(а)* (2)
	как-то (2) *что ли* (2) *в принципе* (1)
	если я правильно понимаю (1) *как* (1)
	какой-то (1) *можно* (1) *пожалуй* (1)
	практически (1) *якобы* (1)

NSs typically used *как бы* to express their uncertainty when describing their picture, as shown in example (6). Different from example (2), *как бы*, in this case, does not approximate the meaning of the item in its scope but is used to express epistemic modality:

(6) NS5#81 *это вот ещё щас раз два три четыре полоски у неё* ***как бы***
[there's also, wait, it has one two three four lines **somehow**]

On the other hand, *наверное* and *вроде* were mainly adopted by the speakers to make comments about the progression of the game, such as to hypothesize about possible differences in the picture or to recap the number of differences already found. This application is illustrated in example (7) and accounts for 7 occurrences of *наверное* and 9 of *вроде*:

(7) NS1#68 *мы* ***вроде*** *нашли пять отличий*
[we **apparently** found five differences]

The two groups used the item *может быть* in slightly different contexts. NSs employed it exclusively to make meta-game comments, as already observed for *вроде* (7) and *наверно*, while NNSs used it half of the time in interrogative sentences, as in example (8):

(8) NNS1#40 *волны?* ***Может быть*** *как волна?*
[waves? **Might it be** like a wave?]

The same difference was also attested for *(мне) кажется* [it seems (to me)] and *думаю* [(I) think], which are more common in the NNS data set.

4.3. Fillers

Fillers were produced by both groups with dissimilar frequencies. Their total occurrences in the two data sets are 19 for NNSs and 149 for NSs. Word-search fillers amount to 15 in the NNS data set and 24 in the NS data set, whereas speech-planning fillers are attested 4 times in the former and 125 in the latter. As shown in Table 7, NSs used 10 DMs as word-search fillers, while only 4 were attested in NNSs' speech. The same goes for the speech-planning function, as the range of items produced by NSs is twice as large as the range produced by NNSs.

Так was the most pervasive DM chosen by NSs for speech planning, beginning the turn, or introducing a new topic. *Так* was also attested, although scarcely, in the production of two NNSs, and its use seems to coincide with the NSs' use, as examples (9) and (10) confirm:

(9) NS3#81 ***так*** *<эээ> рука его лежит на коленях*
[**so** <eee> his hand is lying on (his) knees]

(10) NNS2#53 *<эээ>* ***так*** *у меня есть одна рука на брюки*
[<eee> **so** I have one hand on the trousers]

Table 7. Variety and Occurrences of Fillers Used by NNSs and NSs

Fillers—NNS (19)		**Fillers—NS (149)**	
Word search (15)	**Speech planning (4)**	**Word search (24)**	**Speech planning (125)**
как (5) *как сказать* (5) *не знаю* (4) *щас* (1)[3]	*так* (3) *итак* (1)	*в общем* (5) *как (бы/это) сказать* (4) *значит* (3) *как называется/назвать* (3) *как бы* (2) *не знаю (как)* (2) *как (бы) объяснить/пояснить* (2) *как это* (2) *какой* (1)	*так* (103) *значит* (16) *щас* (4)[3] *итак* (1) *то есть* (1)

The second most frequent item in the NS data set is *значит* [it means], which is absent in the NNSs data set. This DM can be used both as a word-search and speech-planning filler. On the other hand, NNSs employed *как* for the word-search function (11), with no correspondence in the NSs' production:

(11) NNS1#47 *это это итальянский <laugh> <эээ>* ***как*** *<эээ> так <pause> у меня есть направо это зеркало*
[this this is Italian, **like**, so, on the right I have a mirror]

Last, the marker *в общем* [generally] was adopted five times by NSs to signal the conclusion of the word-search process. For example, in (12), the speaker was struggling to find the most adequate description of the man's suit in the picture. She first hesitated (<эээ>), then filled a pause with *не знаю* [(I) don't know], and finally decided to make a list of the pieces of clothing the man is wearing, marking this solution with *в общем*:

(12) NS4#2 *давай, он в чёрном пиджаке с белым <эээ> не знаю с* ***в общем*** *чёрный пиджак, белая рубашка и полосатые брюки, чёрно-белые*

[3] *Щас* is the phonetic realization of *сейчас*.

[okay, he is wearing a black suit jacket with a white <eee> I don't know, with **well** a black suit, a white shirt and striped trousers, black and white]

4.4. Reformulators

The Reformulator category was attested exclusively in the NS data set, for a total of 27 occurrences. *То есть* [that is] was attested 18 times and was the most frequently employed DM to signal explanatory reformulations of concepts, followed by *значит*, which occurred in four cases. Three occurrences of self-correction were also attested with items like *точнее* [more precisely], *вернее* [or rather], and *правильнее* [more correctly]. The locution *имею в виду* [I mean] was also attested once to introduce a clarification. Examples (13) and (14) illustrate the explanatory and corrective uses, respectively, of two reformulators by NSs:

(13) NS2#46 *у меня ящик с двумя ручками,* ***то есть*** *два ящика и там и там ручки*
[I have a drawer with two knobs, **that is**, two drawers and there and there (there are) knobs]

(14) NS6#20 *<ааа> квадрат ой, прямоугольное* ***точнее?***
[<aaa> a square oh, a rectangle **more precisely**?]

4.5. Polyfunctional DMs

As mentioned in Section 3.2, sometimes the same DM performed two functions simultaneously in a given context. These occurrences were gathered into the Polyfunctional category, which accounts for 11% of the NNSs' data and 4% of the NSs' data. Most frequently, a filler for word-search also functioned as an approximator or shield, both in NNSs' and NSs' speech. Only in one example from the NNSs data set did a filler for word search also mark a reformulation. Table 8 summarizes the distribution of these cases.

Example (15) illustrates the use of *как* by an NNS as both an approximator and a filler. This twofold function is suggested by the fact that *как* is used by the NNS to fill a very long hesitation pause. In (16), an NS instead employed the shield *не знаю* both to reduce her commitment and to give herself time to look for the appropriate word:

(15) NN3#27 *а ты видишь <эээ>* ***как*** *<эээ> рисование на зеркало?*
[and do you see <eee > **like** <eee> a drawing on the mirror?]

(16) N2#46 *у тебя нет вот значит та это видимо это* ***не знаю****, царапины или*
[you don't have it, so, it means this, clearly, this **I don't know**, scratches or]

Table 8. Variety and Occurrences of Polyfunctional DMs Used by NNSs and NSs

Polyfunctional—NNS (8)		**Polyfunctional— NS (13)**		
Appr. + F. Word search (7)	**Shield + F. Word search (1)**	**Appr. + F. Word search (4)**	**Shield + F. Word search (8)**	**Ref. + F. Word search (1)**
как (7)	*не знаю* (1)	*как* (2) *так сказать* (1) *как будто* (1)	*не знаю* (7) *наверное* (1)	*так сказать* (1)

4.6. Concluding remarks

Comparing the two data sets leads to a few conclusions. The Approximator, Shield, and Filler categories had already emerged in the NNS's interlanguage, and only the Reformulator category remained unexploited. However, from a quantitative point of view, approximators and fillers were less frequent in the NNS's production. Moreover, NNSs could produce only a small variety of DMs and often relied on the same lexical choices, while the NSs' repertoire was far richer. In the case of approximators, the only item adopted by NNSs, *как*, was frequently exploited by NSs as well, and the uses coincide in the two groups. As for shields, the NNSs used lexical items that were not as common in the NSs' production, sometimes in non-target-like contexts. In general, through the use of lexical fillers, NSs were able to manage the word-search process more effectively than NNS', limiting long pauses and vocalizations.

Last, our task proved to be effective in eliciting the target DMs in the NSs' group. As a consequence, having the NNSs play the same game with a group of NSs within the context of the teaching treatment could be a valid way to expose them to a rich and natural input. Furthermore, the NS corpus could represent a source of material to introduce NNSs to metalinguistic descriptions of DMs. Starting from these premises and with the help of students, we designed a teaching treatment to implement NNS's abilities for meaning approximation, commitment reduction, speech planning, and reformulation.

5. The outcome of the students' collaboration: A proposal for the teaching of DMs

Developing the teaching treatment involved two aspects: selecting target items to be taught to the students and choosing the most effective format for the treatment, for which the students' opinions and suggestions were fundamental.

Table 9. List of Target DMs for the Teaching Treatment

Function	**Item**	**Occurrences**
Approximator	*типа*	22
	как бы	18 (33)
	как будто	14 (18)
Shield	*наверное*	21 (22)
	вроде	11 (12)
	может быть	10
Filler	*так*	103
	значит	19
Reformulator	*то есть*	18

The objects of the teaching treatment were identified with a three-fold intention: (a) implementing the repertoire of DMs whose function was already attested in the NNSs' production by introducing new items, (b) inducing a more native-like use of already-acquired items, and (c) attempting to activate the Reformulator category. We chose the target DMs according to their frequency in the NS corpus and their absence or non-native-like use in the NNS corpus. Following these criteria, we

identified three items for the Approximator and Shield categories and two items for the Filler category. Since the Reformulator category is to be activated in the NNS's production, only the most frequent reformulator was included in the list. If an item performed multiple functions depending on the context in the NS data set (e.g., Approximator and Shield for *как будто*), we decided to include it in its most representative category. Table 9 shows the chosen DMs grouped according to their function, along with their occurrences within that function and, in brackets, the occurrences in the entire NS data set.

The preliminary scheme of the teaching activity consists of three moments: NNS's spontaneous production in order to activate their communicative need to handle uncertainty in speech, the exposition to natural input by NSs, and a metalinguistic reflection based on the NSs' input in which students are presented the target items and their functions. Starting from this general format, the MA students helped us further articulate the teaching activity.

Immediately after completing the task, the students were told the aim of the study and participated in an informal interview in which they expressed their opinions about the task and suggested how they would incorporate it into a teaching treatment. As far as the difficulty of the game is concerned, all of the students found it appropriate for an intermediate proficiency level and stated that, except for some lexical gaps, they were able to express themselves freely. The pictures were judged adequate for the task. Three students commented that colored pictures would have made the task easier and more engaging.

We also discussed the game format. Overall, the students noted that this type of activity is seldom included in language classes, despite its usefulness in improving fluency. Playing a goal-oriented game made them feel free to communicate without worrying about grammar issues.

Additionally, the students suggested that the metalinguistic instruction should take place after playing the game, as the difficulties encountered in carrying out the task would help them realize how DMs could be helpful in the meaning construction process. This type of structure reflects the typical organization of Task-based Language Teaching treatments (Ellis, 2003), in which the starting point for metalinguistic reflection is represented by the students' communicative needs as they emerge while completing a goal-oriented task.

Finally, some students pointed out that playing with NSs could hinder the cooperative component of the activity, as the NSs would compensate for NSS's lexical gaps. Instead, they proposed that students play with each other first and then repeat the game with their teachers.

As for the metalinguistic phase of the teaching treatment, we checked the accessibility of the categories used to classify the DMs with the help of two students. For practical reasons, we will refer to the Ukrainian student as Student 1 and the Italian student as Student 2. The students were asked to annotate the entire NNS data set and a sample from the NS data set with two different annotation schemes. For the NNS data set, the annotation scheme included the distinction between Word-Search Marker and Speech-Planning Marker (see Table 3). In this case, Student 1 annotated 69% of the data set correctly, while Student 2 annotated only 51% correctly. Student 1 was able to identify all the approximators and almost all the shields (82%). She was also able to detect all of the fillers for speech planning but was able to detect only 60% of the fillers for word search. Student 2 performed well in the annotation of approximators (71%) but struggled more with shields (58%) and fillers (37%). In particular, she correctly identified all of the speech-planning fillers but only 20% of the word-search fillers, which she instead ascribed to the former subtype. Based on this result, we adopted a different annotation scheme with a unique label for fillers. Using the second scheme for the NS sample, Student 1's performance remained constant (68%), but Student 2 managed to categorize 60% of the data set correctly. The success rate for the identification of approximators and shields remained unvaried, but both students were able to recognize fillers more effectively. Student 1 correctly labeled 96% of the fillers, while Student 2 correctly labeled 78%.

We included a few examples of reformulators in the sample from the NS data set. Student 1 was able to identify all of the reformulators, while Student 2 correctly labeled only 50%. These results confirm the need to introduce the concept of reformulation and provide students with suitable DMs to carry out this function. In conclusion, the two students confirmed that the second simplified scheme with the labels Approximator, Doubt Marker, Filler, and Reformulator was clearer, and they supported its use during the metalinguistic phase.

What follows is an outline of the teaching treatment considering the students' feedback:

Phase 1. The students play the game. The activity is presented as a challenge in which the pair who finds more differences within the time limit wins.

Phase 2. A listening activity on one of the recordings of the group of NSs is proposed. NNSs receive a copy of the transcript lacking some examples of the nine target DMs and are asked to recognize and insert them correctly. The listening is goal-oriented and gradually draws the students' attention to those items.

Phase 3. The metalinguistic phase of the treatment consists of the guided analysis of the nine target DMs in all the transcripts, with reference to the second simplified annotation scheme and specific attention to the contexts of use. Additional multimedia material provides NNSs with further and diverse input on the same structures, for example, relying on the Multimodal Subcorpus of the Russian National Corpus.[4]

Phase 4. The students use the target DMs, taking turns playing the game with their NS teacher/s, who, at the same time, expose them to natural input. Pictures are different for every game turn.

Because it takes time for NNSs to use DMs fluently and spontaneously, the teaching activity might take up to six hours and be spread over four weeks. This schedule would allow students to acquire the target items gradually. In particular, Phase 1 and Phase 2 could occur during a two-hour class. More time should be devoted to the metalinguistic reflection, namely, Phase 3, which could therefore occupy three hours to be divided into different sessions. Phase 4 could take one final one-hour session, but it could also be repeated over time to consolidate the students' abilities. One might argue that spending six hours on a relatively small set of DMs is not an effective use of time. However, during the treatment, students would also practice their listening and speaking skills. Teachers could therefore decide to replace the usual oral activities with our treatment to make optimal use of classroom time.

[4] The Multimodal Subcorpus of the Russian National Corpus is available at www.ruscorpora.ru/new/search-murco.html.

6. Conclusion

In this article, we proposed a game-centered DM teaching treatment for intermediate Italian learners of L2 Russian, focusing on approximators, shields, fillers, and reformulators. To calibrate the treatment on the students' interlanguage, we analyzed and compared DM production by NSs and NNSs in two spoken corpora, specifically collected for the purposes of this study. Furthermore, we collected students' opinions to tailor the activities to their needs. Overall, learners performed the target functions less than half the time, often relying on the same lexical choices, hence the need to enhance their DM repertoire with alternative items and improve their discourse abilities. In this respect, the analysis of the NS corpus allowed us to select nine highly frequent and easily accessible target items. The students' feedback was essential to define how the game could be concretely incorporated into the teaching treatment and develop a learner-friendly metalinguistic presentation of the target DMs. The outcome of the research is a teaching treatment that comprises a goal-oriented task to highlight students' specific communicative needs, which are consequently met through exposure to natural input and metalinguistic reflection. Future research should focus on evaluating the effectiveness of the activity with another group of intermediate students.

References

Aijmer, K. (2004). Pragmatic markers in spoken interlanguage. *Nordic Journal of English Studies*, *3*(1), 173–190. https://doi.org/10.35360/njes.29

Amiridze, N., Davis, B. H., & Maclagan, M. (Eds.). (2010). *Fillers, pauses and placeholders*. John Benjamins. https://doi.org/10.1075/tsl.93

Andersen, G. (1998). The pragmatic marker like from a relevance-theoretic perspective. *Pragmatics and beyond. New series, 57,* 147–170.

Bartezzaghi, A. (2022, January 20). Che cosa manca? [What's missing?] *La settimana enigmistica*, *4687*.

Bazzanella, C. (1995). I segnali discorsivi [Discourse markers]. In *Grande grammatica italiana di consultazione: Vol. III* (pp. 225–257). Il Mulino.

Bazzanella, C. (2006). Discourse markers in Italian: Towards a "compositional" meaning. In K. Fischer (Ed.), *Approaches to discourse particles: Vol. I* (pp. 449–464). Brill.

Benigni, V. (2014). Strategie di approssimazione lessicale in russo e in italiano [Strategies of lexical approximation in Russian and Italian]. In O. In'kova, M. Di Filippo, & F. Esvan (Eds.), *L'architettura del testo. Studi contrastivi slavo-romanzi* (pp. 203–224). Edizioni dell'Orso.

Benigni, V. (2017). Vaghezza e approssimazione: corpus linguistics e discorso letterario [Vagueness and approximation: Corpus linguistics and literary discourse]. In L. Piccolo (Ed.), *Violazioni: letteratura, cultura e società in Russia dal crollo dell'Urss ai nostri giorni* (pp. 115–133). RomaTrE-Press.

Benigni, V., & Nuzzo, E. (2018). L'insegnamento dei segnali funzionali in russo come lingua seconda [Teaching discourse markers in Russian as a second language]. In A. Manco (Ed.), *Le lingue extra-europee e l'italiano. Aspetti didattico-acquisizionali e sociolinguistici* (pp. 151–165). Società di Linguistica Italiana.

Blakemore, D. (1993). The relevance of reformulations. *Language and Literature*, *2*(2), 101–120. https://doi.org/10.1177/096394709300200202

Bogdanova-Beglarian, N., Blinova, O., Šerstinova, T., Martynenko, G., & Zaides, K. (2018). Pragmatic markers in Russian spoken speech: An experience of systematization and annotation for the improvement of NLP tasks. In *23rd Conference of Open Innovations Association (FRUCT)* (pp. 69–77). IEEE. https://doi.org/10.23919/fruct.2018.8588101

Bolden, G. B. (2016). The discourse marker *nu* in Russian conversation. In P. Auer & Y. Maschler (Eds.), *Nu and its relatives: A discourse marker across the languages of Europe and beyond* (pp. 48–80). Walter de Gruyter. https://doi.org/10.1515/9783110348989-002

Borreguero Zuloaga, M., Pernas Izquierdo, P., & Gillani, E. (2017). Metadiscursive functions and discourse markers in L2 Italian. In A. P. Loureiro, C. Carapinha, & C. Plag (Eds.), *Marcadores discursivos e(m) tradução* (pp. 15–57). Imprensa da Universidade de Coimbra. https://doi.org/10.14195/978-989-26-1446-5_1

Cuenca, M. J. (2003). Two ways to reformulate: A contrastive analysis of reformulation markers. *Journal of Pragmatics*, *35*(7), 1069–1093. https://doi.org/10.1016/s0378-2166(03)00004-3

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press. https://doi.org/10.1080/09571736.2016.1236523

Fedriani, C., & Sansó, A. (Eds.). (2017). *Pragmatic markers, discourse markers and modal particles: New perspectives*. John Benjamins. https://doi.org/10.1075/slcs.186

Ferroni, R. (2019). Come apprendono la competenza interazionale studenti di italiano LS di livello iniziale: una ricerca-azione [How beginner learners of Italian as a Foreign Language acquire interactional competence]. *Studi italiani di linguistica teorica e applicata*, *48*(1), 149–170.

Ferroni, R. (2020). Insegnare i segnali discorsivi a studenti brasiliani d'ILS a partire da un *corpus* di dati empirici [Teaching discourse markers to Brazilian students of Italian as a Second Language from a corpus of empirical data]. In R. Ferroni & M. Birello (Eds.), *La competenza discorsiva e interazionale* (pp. 111–148). Aracne Editrice.

Hernández, T. A. (2011). Re-examining the role of explicit instruction and input flood on the acquisition of Spanish discourse markers. *Language Teaching Research*, *15*(2), 159–182. https://doi.org/10.1177/1362168810388694

In'kova, O. J., & Gur'ev, A. S. (2018). K voprosu o kategorii pojasnenija v russkoj grammatike [On the category of explanation in Russian grammar]. *Russkij jazyk v naučnom osveščenii*, *35*(1), 46–73.

Jafrancesco, E. (2015). L'acquisizione dei segnali discorsivi in italiano L2 [Discourse markers acquisition in L2 Italian]. *Italiano LinguaDue*, *7*, 1–39.

Jones, C., & Carter, R. (2014). Teaching spoken discourse markers explicitly: A comparison of III and PPP. *International Journal of English Studies*, *14*(1), 37–54. https://doi.org/10.6018/ijes/14/1/161001

Jucker, A. H., Smith, S. W., & Lüdge, T. (2003). Interactive aspects of vagueness in conversation. *Journal of Pragmatics*, *35*(12), 1737–1769. https://doi.org/10.1016/s0378-2166(02)00188-1

Kobozeva, I. M. (2007). Polisemija diskursivnych slov i vozmožnosti eë razrešenija v kontekste predloženija (na primere slova *vot*) [Ambiguity of discourse markers—can it be resolved in clausal context? (The case of *vot*)]. *Komp'juternaja Lingvistika i Intellektual'nye Technologii*, *6*, 250–255.

Koljaseva, A. (2021). The divergent paths of pragmaticalization: The case of the Russian particles *tipa* and *vrode*. *Journal of Pragmatics*. https://doi.org/10.1016/j.pragma.2021.08.003

Mascherpa, E. (2016). I segnali discorsivi "allora, quindi, però, ma" in apprendenti di italiano L2 [The use of discourse markers in learners of Italian as L2]. *Cuadernos de Filología italiana*, *23*, 119–140. https://doi.org/10.5209/cfit.54006

Maschler, Y., & Schiffrin, D. (2015). Discourse markers: Language, meaning, and context. In D. Tannen, H. E. Hamilton, & D. Schiffrin (Eds.), *The handbook of discourse analysis* (2nd ed., pp. 189–221). John Wiley & Sons. https://doi.org/10.1002/9781118584194.ch9

Molinelli, P. (2014). Orientarsi nel discorso: segnali discorsivi e segnali pragmatici in italiano [Orienting oneself in discourse: Discourse and pragmatic markers in Italian]. In E. Pirvu (Ed.), *Convegno internazionale di italianistica: Discorso e cultura nella lingua e nella letteratura italiana* (pp. 195–208). Franco Cesati.

Müller, S. (2005). *Discourse markers in native and non-native English discourse*. John Benjamins. https://doi.org/10.1075/pbns.138

Nigoević, M., & Sučić, P. (2011). Competenza pragmatica in italiano L2: l'uso dei segnali discorsivi da parte degli apprendenti croati [Pragmatic competence in L2 Italian: The use of discourse markers by Croatian learners]. *Italiano LinguaDue*, *3*(2), 94–94.

Podlesskaja, V. I. (2013). Nečetkaja nominacija v russkoj razgovornoj reči: opyt korpusnogo issledovanija [Vague language in Russian spoken discourse: A corpus research]. *Komp'juternaja Lingvistika i Intellektual'nye Technologii*, *12*(19), 631–643.

Podlesskaja, V. I., & Starodubceva, A. V. (2013). O grammatike sredstv vyraženija nečetkoj nominacii v živoj reči [On the grammar of expressions of vague language in spoken language]. *Voprosy Jazykoznanija*, *3*, 25–41.

Prince, E. F., Frader, J., & Bosk, C. (1982). On hedging in physician-physician discourse. In R. J. Di Pietro (Ed.), *Linguistics and the professions* (pp. 83–97). Ablex Press.

Pugliese, R. (2015). Figurati, tra i segnali discorsivi. Una prospettiva pedagogica [*Figurati* as a discourse marker. A pedagogical perspective]. In E. Pistolesi, R. Pugliese, & B. Gili Fivela (Eds.), *Parole, gesti, interpretazioni* (pp. 163–207). Aracne Editrice.

Romero Trillo, J. (2002). The pragmatic fossilization of discourse markers in non-native speakers of English. *Journal of Pragmatics*, *34*(6), 769–784. https://doi.org/10.1016/s0378-2166(02)00022-x

Satjukova, D. N., & Voejkova, M. D. (2010). Osobennosti funkcionirovanija mestoimenija *takoj* v ustnoj razgovornoj reči [Functioning characteristics of the pronoun *takoj* in colloquial spoken language]. *Acta Linguistica Petropolitana*, *6*(2), 184–224.

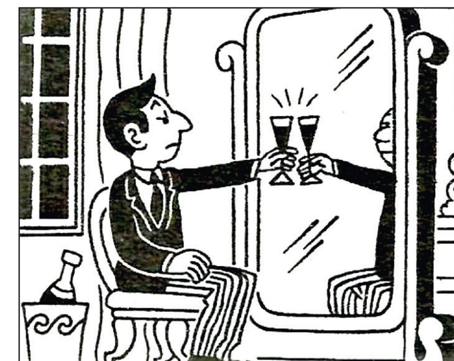
Schiffrin, D. (2001). Discourse markers: Language, meaning, and context. In D. Schiffrin, D. Tannen, & H. E. Hamilton (Eds.), *The handbook of discourse analysis* (1st ed., pp. 54–75). Wiley. https://doi.org/10.1002/9780470753460.ch4

Sperber, D., & Wilson, D. (1991). Loose talk. In S. Davis (Ed.), *Pragmatics. A reader* (pp. 540–549). Oxford University Press.

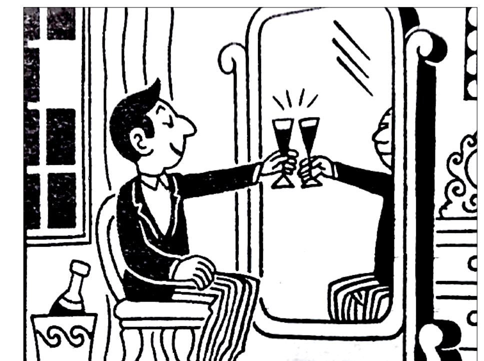
Vasil'eva, A. N. (1972). *Particles in colloquial Russian: Manual for English-speaking students of Russian*. Progress.

Appendix

Pictures used for the "spot-the-differences" game in the test with NSs and NNSs, taken and adapted from the puzzle magazine *La Settimana Enigmistica* (nr. 4687, 20/01/2022)



Picture 1



Picture 2

Psychological Safety in the Russian Language Classroom

Kelly Knickmeier Cummings, B. Amarilis Lugo de Fabritz
Tia-Andrea Scott, Nsikakabasi Ekong, Isabella Mason

1. Introduction

This article seeks to join the ongoing, vibrant discussion about how to foster inclusivity in our classrooms and build a pipeline of Russian language students that is more reflective of the demographic fabric of the United States. Three BIPOC (Black, Indigenous, and people of color) third-year Russian language students and their instructors at Howard University collaborated as coauthors. We drew from the field of organizational behavior to consider the relevance the concept *psychological safety* may have for second language acquisition (SLA), and we begin to assess its utility in the Russian language classroom.

Psychological safety (PS) is the feeling that the workplace or learning environment is safe for interpersonal risk-taking (Edmondson, 2019). When present, PS creates "a climate of curiosity and candor" (Edmondson, 2019, p. 44) and has been shown to increase collaborative learn-how behavior and knowledge sharing, strengthen teams working remotely, and leverage diverse perspectives (Clark, 2020).

We discuss the particular importance PS has for students of Russian who come from historically marginalized communities. In agreement with Lucey (2021), the focus is to center students' voices in developing actions, strategies, and best practices that foster Diversity, Equity, Inclusion, and Access (DEIA) and lead to social justice and successful retention in the field. With that goal in mind, we invited BIPOC undergraduate students to share their invaluable perspectives in this project as we think about the potential usefulness, or "operationalization," of PS in the Russian language classroom.

2. Literature Review

Edgar Schein and Warren Bennis (1965) identified the need for psychological safety (PS), a prominent concept in organizational studies, to make people feel secure and capable of overcoming the defensiveness, or

learning anxiety, they may feel when faced with something that contradicts expectations, leading to collective goals and knowledge sharing instead of self-protection. Next, William Kahn (1990) asserted that PS facilitates employee engagement, allowing people to wholly express themselves during role performances. Kahn determined that when feelings of trust and respect characterize collaborative settings, people tend to believe that they would be given the benefit of the doubt. By 1999, Amy Edmondson (2019) had further developed the idea of PS into *team* PS. Since then, PS has been a valued interpersonal condition in clinical education and hospital settings (Edmondson, 2019). Companies like Google attribute their teams' innovative success to PS (Rozovsky, 2015).

Though workplace and educational environments differ—for example, employees are paid and are generally more mature in age and professional development than typical students—both environments require skills and skill development. *Individual-specific* skills (technical, verbal, written, social, "hard" and "soft," etc.) are equally as important as skills like decision-making, voice, interdependence, and collaboration in *group-specific* and *leader-specific* performance and impact.

A growing body of research considers PS and its mediating role in engagement, creativity, and performance in education: the English as a Foreign Language (EFL) classroom (Tu, 2021), project-based learning contexts (Han et al., 2022), and the perception of well-being and security in K–12 schools (Gilemkhanova, 2019). PS underscores positive psychology's discourse about the role emotions play in language learning (Dewaele et al., 2019; MacIntyre & Mercer, 2014). Foldy et al. (2009) asserted that PS is a foundational necessity when attending to the role of power dynamics in racially diverse groups (a discussion we revisit). Han et al. (2022) observed that students who feel a high level of PS develop adaptive practices for rebounding from failures and mistakes. Soares and Lopes (2020) applied a social network analysis and found a correlation among PS, authentic leadership, high-density networks, and several positive performance outcomes; they determined that "network density and psychological safety coevolve" (p. 69). A network in this context is a set of actors or nodes that correspond to a set of ties or links of a specified type (for example, friendship). Network density (homophily) and PS may be an influencing factor in student retention and career readiness.

Studies find that PS is important for student engagement, a "meta-construct that develops through time and in a positive environment" shaped by emotional, cognitive, behavioral, social, agentic, and academic dimensions (Tu, 2021, p. 3). As it does in the workplace environment, PS highlights leadership roles: for our purposes, instructors. This is especially so when establishing classroom climate, "the social-ecological context in which learners operate which can influence their attitudes, perceptions, behaviors, moods, performance, self-concept, and well-being" (Tu, 2021, p. 2). Classroom climate differs from classroom culture and is determined by such things as the physical environment and facilities; the instructor's ability, methodology, and personality; rules and traditions; and instructional materials.

Experts have identified key elements for PS to be present. Clark (2020) provided a progressive four-stage framework of PS: inclusion safety, learner safety, contributor safety, and challenger safety. Each stage is rooted in the conditional factors of respect, permission, and social exchange. Inclusion safety is present when an individual feels able to interact with others as a human being without threat of harm and without self-regulation. Learner safety is present when an individual can engage in all aspects of the learning and discovery process. Contributor safety occurs when there is autonomy and respect for an individual's ability to create value. Challenger safety provides cover in exchange for candor and innovation. Functioning outside of the parameters of one of the stages can lead to intellectual restriction (paternalism) or exploitation (Clark, 2020).

Similarly, Edmondson (2012) valued the practice of *teaming*, "a dynamic way of working that provides the necessary coordination and collaboration without the luxury (or rigidity) of stable team structures" (p. 42), and described "Four Pillars" of teaming: speaking up, collaboration, experimentation, and reflection (pp. 50–56). Per Edmondson (2012), teams become competitive and innovative when a teaming mindset is implemented: a group recognizes the need for teaming and then establishes a repeating cycle of communication, coordination, interdependent action, and reflection and feedback. PS is the free exchange of ideas, but Edmondson (2019) suggested that it is not being nice for the sake of being nice, a synonym for "extroversion," a lowering of standards, or simply another word for "trust" (pp. 15–19); PS is a "temporally immediate experience" (p. 17).

PS emphasizes the dimensions that influence student engagement—its emotional, cognitive, behavioral, social, agentic, and academic dimensions (Tu, 2021)—and the practice of teaming emphasizes the co-construction of classroom climate among students and the instructor. Edmondson (2014) recommended a three-step process for operationalizing PS within teams: (a) frame the work that needs to be done as a learning problem, (b) acknowledge your own fallibility, and (c) model curiosity.

An example of another widely referenced operational model is "five keys" for effective teams developed by Google: (a) psychological safety, (b) dependability, (c) structure and clarity, (d) meaning of work, and (e) impact of work (Rozovsky, 2015). Google reported that "psychological safety was far and away the most important of the five dynamics we found—it's the underpinning of the other four" because it counteracted the impulse to self-protect through silence and propelled teams "to harness the power of diverse ideas" (Rozovsky, 2015). In a later section, we discuss what the practice of teaming and the goals of Inquiry-Based Learning (IBL) have in common.

These notions about teams, teaming, and PS become relevant to the SLA classroom when we consider the goal of group work in general while also attending to the individual learning experience. Ehrman and Dornyei (1998) noted some time ago that often the general purpose of groups in SLA classrooms is "to enhance the learning process, but not necessarily the growth of individual students" (p. 18). The concept of PS provides a contextual framework to resolve these processes that simultaneously accounts for the group *and* the individual. Kaila (2020) argued that PS provides an operational terminology to discuss numerous qualitative aspects of language learning that have been identified but often prove challenging to translate into practical application models or to measure. Kaila (2020) posited that PS broaches the interpersonal context by functioning as an antecedent to concepts already salient in SLA pedagogy, such as willingness to communicate (WTC), motivation, learning anxiety, learning experience, and, more specifically, Zoltan Dornyei's L2 Motivational Self System.

Dornyei (2019) recognized the "undertheorized" status of the L2 Learning Experience component in his system and noted that the dimension is lacking operationalization (p. 23). He called for an

operational "engagement-specific framework" that could create "links between concrete aspects of actual student engagement and concrete aspects of future student aspirations" (p. 27). The L2 Motivational Self System posits two self-guides called the *Ideal L2 Self* and the *Ought-to L2 Self*, which are informed by a third dimension called the *L2 Learning Experience*. The second language or L2 Learning Experience is defined as "the perceived quality of the learners' engagement with various aspects of the language learning process" (p. 26) and is associated with both the student's imagined experience and the actual experience (p. 23). In response, Kaila (2020) asserted that PS is a "viable factor" and perhaps a "lost piece" in students' L2 Learning Experience (p. 37). This assertion seems plausible when we revisit Edmondson (2014)'s three-step operational model previously outlined. When teaming and co-constructing a positive classroom climate, student and instructor are, in fact, utilizing this operational practice.

There is more to consider about how PS and interpersonal risk-taking inform the language learning journey and the extent to which PS's operational models can be applied in SLA and the Russian language classroom. In the next section, we explore the correlation between PS and diversity.

3. Psychological safety and diversity in the classroom

Acknowledging the need for students to feel PS in a classroom is critical when tackling issues of diversity, equity, and inclusion. When thinking about PS in the Russian language classroom, we are addressing BIPOC students' and students from other marginalized communities' ability to feel comfortable engaging in a subject and a field in which they are severely underrepresented. Only 17 Black or African American women and just 3 Black or African American men earned bachelor's degrees in Russian in the United States in the four-year period from 2009–2010 to 2013–2014 (Murphy & Lee, 2019). At Howard University, the only Historically Black College or University (HBCU) with a Russian program (a Russian minor), we encourage a population that is underserved in the field at large (United Negro College Fund, 2005) and find ourselves in constant dialogue with students about how to support them, as well as how to attract and retain additional students in Russian language courses.

While the number of Black students who have earned a bachelor's degree in Russian is low, the number of students from diverse backgrounds entering our institutions of higher education is increasing. One telling example is Montgomery County Public Schools in Maryland. Montgomery County Public Schools is the 14th largest school district in the U.S. Only 25.3% of the population self-identifies as White, and 39.8% participate in the Free and Reduced Meals (FARMS) program (Montgomery County Public Schools, 2019). The U.S. K–12 population is diversifying from both the racial and socioeconomic standpoint. Data show that post-millennials are the most racially and ethnically diverse American generation to date, and early benchmarks indicate that they are likely to become the most well-educated generation in the history of the U.S. (Fry & Parker, 2018).[1]

The ability to negotiate culturally diverse classroom environments becomes even more relevant when considering the importance of HBCUs and Minority Serving Institutions (MSIs) in promoting students of color in higher education (Gordon et al., 2021). HBCUs, for instance, serve only 0.1% of the overall student population but account for 20% of Black students who complete bachelor's degrees (Ford & Reeves, 2020). Given that the post-millennial generation is already in our Russian language classrooms, what has prevented and continues to prevent students from underrepresented, underserved, and marginalized communities from entering and, more importantly, remaining there? To address this question, our undergraduate coauthors lead the discussion for the remainder of this section, and we cite their respective contributions when apropos.

Dweck (2000) found that students' self-theories about intelligence often assume either an entity view or an incremental view and that these beliefs about ability to learn can be positively shifted toward a growth mindset when early learning experiences in a new subject are aligned with established competencies. According to Dweck (2000), "Those who are led to believe their intelligence is a malleable quality begin to take on challenging learning tasks and begin to take advantage of the skill-improvement opportunities that come their way" (p. 26). Kuh et al. (2006) suggested that faculty should consider the implications self-theories can have on student success and persistence in post-secondary studies, especially for students from historically underserved communities.

[1] Per the study, "'post-millennials' refers to those ages 6 to 21 in 2018."

Contributing undergraduate author Tia-Andrea Scott emphasizes this and advocates for what she calls the "perfectly-imperfect classroom":

> This is an environment where students are allowed to make mistakes and feel comfortable doing so and where students know they will not be judged by their fellow peers or their educators. Many times, students of color, varying sexuality and gender, and different socioeconomic status can feel underrepresented, as if they do not belong in the spaces they are taught about: for example, textbooks, future job environments and workplaces, or higher institutions of education.

Scott adds:

> Students of color are too often at risk of prejudice in their learning environments, leaving them to feel even more threatened when they make a mistake, due to outcomes like how they will appear or what will be said to them. Yet, in a psychologically safe classroom, as well as a perfectly imperfect classroom, a student of color will be able to learn freely, feel supported and gain understanding after their mistakes, and excel in the fact that they can determine their own learning experience and outcome. *This* is how we reach out to students of color in the language learning world.[2]

Scott's input reflects three significant aspects of the language learning experience that PS embodies: implicit theories of voice, fault-tolerant culture, and self-determination theory. We discuss each one in turn.

3.1. Implicit theories of voice

Implicit theories of voice are "taken-for-granted beliefs about when and why speaking up at work [or in the classroom] is risky or inappropriate"

[2] Tia-Andrea Scott is a junior majoring in Political Science and double minoring in Afro-American Studies and Women, Gender, and Sexuality Studies. Growing up, she lived in Georgia, Florida, New York, and Ireland, providing her with a variety of experiences in the K–12 system. Her work with the Board of Education for Pawling Central School District (Pawling, New York) on ensuring diversity in predominantly White regions has provided her with a background in diversifying and improving learning spaces, as well as a passion for amplifying student voices.

(Edmondson, 2019, p. 32). Under such "rules," employees/students self-silence great ideas and contributions. These rules are hard to dismantle and reframe because "silence" provides an immediate benefit for oneself (p. 34). Research shows that implicit voice theories are widely held and augment self-censorship in work environments (Detert & Edmondson, 2011). Implicit theories of voice may account for the inconsistency behind why some demographically diverse teams perform well and others do not (Edmondson, 2019). Scott further shares:

> As a student with a processing disability, I recommend instructors regularly survey and poll the class to monitor the accessibility of their material and pacing. Making such checkpoints a common occurrence improves the sense of PS because it signals to students that it is acceptable to express their respective needs/required accommodations without interference from implicit theories of voice.

3.2. Fault-tolerant culture

Tu (2021) defined *fault tolerance* as "the safety that students and teachers feel in the classroom context for taking initiative, interacting, and speaking out their ideas without being embarrassed, humiliated, and punished" (p. 2). Han et al. (2022) argued that a "fault-tolerant culture positively moderates the relationship between psychological safety and psychological empowerment" (p. 5). During this article project, Scott interviewed Shawn Marshall, English teacher and Teachers Union President in the Hawthorne Cedar-Knolls Union Free District in Westchester County, New York, which predominantly serves students diagnosed with emotional disturbances. Students enrolled at Hawthorne often experience multiple obstacles that can affect their learning and socialization, like attention deficit disorder (ADD), anxiety and depression, autism spectrum disorders, and dissociative identity disorder (DID). The district serves mostly Black and Brown students that come from low socioeconomic backgrounds, undereducated families, and poverty and whose parents have low involvement in their child's education. Marshall (personal communication, March 28, 2022) emphasized the importance of modeling and operationalizing PS in the classroom: schools "need someone to understand the concept of generational trauma on a complex level" and to consider "how inequality in our country directly contributes to trauma." Marshall's classroom serves as an example of why a fault-tolerant environment is necessary; there are multitudes of students like his with soaring potential that benefit from feeling safe enough to learn and make mistakes, as they may not have that environment at home.

In terms of social context, Marshall (personal communication, March 28, 2022) recommends encouraging students to be unafraid to ask about different perspectives, lifestyles, and points of view through the deconstruction of the (intimidating) hierarchy most classrooms unconsciously submit to. Scott provided the perspective that many underrepresented students are used to being met with aggression and only know how to react with the same hostility. To counteract this dynamic, an instructor could share with students that they are enacting Clark's (2020) idea of *inclusion safety*, which entails respect for the individual's humanity, as well as permission to interact, followed by the actual exchange of interaction without harm. Inclusion safety signals to students with trust issues that they are not in danger and builds a structure of interpersonal security needed to feel safe in the classroom.

3.3. Self-determination theory

Marshall's (personal communication, March 28, 2022) recommendations call for a fault-tolerant culture and a consideration of the factors that facilitate an individual's right and motivation to speak and to make collaborative decisions. Self-determination theory offers a mechanism for understanding the relationship between motivation and behaviors and proposes two models for work motivation: autonomous motivation and control motivation. *Autonomous motivation* is the self-driven and optional tendency to implement behaviors when one recognizes their value (self-determination is high), whereas behaviors implemented because of *control motivation* are driven by external, non-selectable stimuli (self-determination is low) (Han et al., 2022). The behaviors people enact at work reflect a combination of both. Self-determination and optimal motivation rely on the satisfaction of three basic needs in the social environment: autonomy (to perceive thoughts and freely decide actions), competence (to sense and experience capability), and relatedness (to experience a sense of belonging and interdependence).

Foldy et al. (2009) have argued that PS and team diversity do not guarantee positive results for team learning without first attending to three cognitive understandings: identity safety, an integration-and-learning perspective, and high-learning frames. *Identity safety* is the notion that one's (racial) identity "is welcome and does not incur risk" (Foldy et al., 2009, p. 26). An *integration-and-learning perspective* is present when a group recognizes the potential in diversity. A *learning frame* is one's mindset toward new situations, information, and ideas.

Coauthor Nsikakabasi Ekong suggests that the operational model of PS facilitates autonomous motivation and self-determination in language learning:

> Psychological safety is linked to three key words: comfort, expression, and acceptance. Without those three words, the very essence of the subject is defeated. For students to experience PS, they must: first, be comfortable enough to approach their instructors with ideas and opinions; second, communicate or express said ideas and opinions without fear of repercussions; and lastly, they must have both verbal and nonverbal authentication that their thoughts are heard and valued. Only under such a climate can learning be said to be *optimal*.[3]

Ekong maintains that:

> one's ability to brew and perfect an idea, or a string of ideas, depends on the socio-emotional factors of their environment. Having talked with students here at Howard University about the topic of PS, they emphasized the following things: the need for encouragement from instructors; the need for positive interaction with zero hint of hostility from both parties; and the need for inclusivity, especially in a country that has diverse demographics like the U.S.

[3] Nsikakabasi Ekong is a junior majoring in Biology and double minoring in Chemistry and Russian. He is from Eket, a city in Akwa Ibom State, Nigeria. Nsikakabasi has been diligently pursuing his passion in science while maintaining mentorship positions on campus. He is pursuing medicine with the hope of helping his community back home in Nigeria and other underrepresented communities.

When answering the question "What does PS look like when undergraduates and faculty collaborate on research projects?" Ekong turned to Clark (2020)'s third and fourth stages of PS: contributor safety and challenger safety. *Contributor safety* is "the respect for the individual's ability to create value" and "the permission for the individual to work with independence and their own judgment"; *challenger safety* is the presence of candor, defined as the "respect for an individual's ability to innovate" and "permission to challenge the status quo in good faith" (p. 103). Ekong emphasizes the benefit of high-learning frames when the condition of PS is present:

> The line between contributor safety and challenger safety is the threshold for *true innovation*: *the birth of fresh ideas*. A good example is the making of this article. We, the students, were allowed contributor safety with the freedom to write from our minds and perspectives while also being able to vet each other's work and provide encouragement.

4. Recommended strategies for establishing psychological safety in the Russian language classroom

All three of our student coauthors expressed two realities that deter BIPOC students and students from other underrepresented and marginalized groups from joining the Russian language classroom. The first: *We do not see ourselves or our communities' intellectual histories reflected in the course materials.* This statement correlates with Anya's (2020) reference to a study that found that "40% [of African American students] reported that their courses would be more relevant if African or Afro-descendant themes were more emphasized in first- and second-year segments" (p. 102). Our students shared that reading Anya's review was reassuring because it comprehensively articulated, with the backing of statistics, the "proof" of something that they had long felt. What offers a positive outlook is that the remedy for this situation offers an actionable, "concrete strategy" (Anya, 2020, p. 104) and that a growing cohort of instructors, textbook authors, and scholars are attending to this issue (Stauffer, 2020).

Our students also provide cautions: they recommend that in developing course materials, instructors thoughtfully avoid reducing underrepresented and underserved intellectuals and their less commonly

taught histories to objects of study. Secondly, our students discern that, in knowledge production, there is work and perspectives that White and other privileged groups cannot do or reach. That is why PS is an important factor in the classroom: it provides the rationale that necessitates and invites diverse voices.

The second reality our students emphasize is that there are systemic relations of power that have had and continue to have cultural and material effects on our field. Gatekeeping mechanisms have led to structural, methodological, pedagogical, and generational effects on the study of Russian by students and scholars who come from historically marginalized communities (Anya, 2020). Examples of these effects include the historical emphasis placed on having intermediate to advanced Russian language proficiency in order to attend study abroad programs and the demographic portrait of the "canon" in language and literature classrooms. Contributing author Nsikakabasi Ekong articulates that "[underrepresented] students are generally unaware of the career opportunities that come with knowing world languages and Russian specifically; one of the ways to move forward would be to increase this connectivity."

Our third student collaborator, Ollie Mason, concurs, suggesting that instructors and advisors could better explain and emphasize the material, psychological, and social benefits of studying Russian.[4] Mason suggests an actionable strategy: invite BIPOC and other underrepresented academics and professionals to join the classroom setting and share their journey in Slavic and Eurasian studies and intersectional careers. If a climate of PS is present, the conversation can proceed without euphemisms lacking rigor that are unsustainable in the 21st century; the conversation can proceed with candor and contributor and challenger safety, calling such things as racism, genocide, and violence what they are. In the context of such earnest discourse and PS, problems can be redefined and reframed in innovative ways because more voices are allowed to be engaged within what has been a historically homogenous educational setting. Once again, this would employ Edmondson (2014)'s three-step model.

[4] Isabella Mason (their preferred name is Ollie) is a junior in the International Affairs Department, interested in studying Russian and Chinese politics. Their interests include media studies, video games, and developmental psychology. Ollie is a two-time fellow in the I.D.E.A.S. in REEES Think Tank, researching representations of indigeneity in Russian media and sci-fi literature (learn more at https://www.reeesthinktank.com/).

Mason has developed Table 1, which organizes what they understand to be the internal and external benefits of studying Russian in a psychologically safe classroom climate.

Table 1. Benefits of Psychological Safety for BIPOC Students Studying Russian, East European, and Eurasian Languages

Category	**Internal benefit** (Benefit to self)	**External benefit** (Benefit to the field/ community/society)
Material	Increases job search options and graduate and professional school competitiveness Enhances resume development, especially through project-based learning	Increases diversity of perspectives, voices, and contributor safety, accelerating creativity and innovative research
Psychological	Increases inclusion and learner safety Facilitates self-actualization	Increases challenger safety in the field
Social	Opens new cultural landscapes and increases cultural appreciation and knowledge	Mitigates gatekeeping mechanisms and racism by insuring inclusion and contributor safety Builds cultural competencies to foster democratic values, participation, and civil society

The internal and external benefits Mason has provided reflect some of the ways in which more inclusive approaches in the classroom can lead to enhanced student engagement and appeal to students from underrepresented backgrounds who increasingly demand easily

identifiable "returns on investment" in the choice of academic subjects.

PS is a collective effort that celebrates diversity of thought. When PS is present, people can be their whole authentic selves while participating in conversations, decision-making processes, the exchange of new ideas, and, importantly, the process of feedback. As Edmondson (2019) has said, "Voice is mission critical" (p. 39). To amplify diverse voices, PS requires leadership (in this case, instructors) to model inclusive attitudes and behaviors while making explicit statements that set clear boundaries, challenge the status quo, and encourage group members to self-promote and take credit for their contributions and impact.

Leaders who model PS regularly request feedback and actively listen to all ideas and concerns while responding with a consistent appreciative manner. They promote asking for and receiving help and model social recognition, encouraging students to openly acknowledge one another so that students feel noticed and valued. They monitor for microaggressions and attitudinal behaviors that isolate others and emphasize building connections (network density; homophily) among students. Another actionable strategy is to seek learner safety for oneself and to experiment in order to do and learn something new. For example, when trying out a new mode of instruction or a new corpus of texts, openly share with your students that you have not done this before. Doing so models transparent, interpersonal risk-taking.

One of the side effects of this growth mindset is that instructors can conceptualize the classroom as encompassing a horizontal framework that looks to create the broadest engagement of instructors and students. Rather than a traditional hierarchical construction, based on evaluative practices that emphasize broad student modes of inquiry, and instead of traditional vertical learning practices, in which success is measured as the ascent along a narrowly defined mastery of linguistic and cultural knowledge, instructors and students *co-construct* the classroom culture and climate (Han et al., 2022).

An emerging teaching practice that applies this horizontal learning framework and PS is the use of group projects that emphasize Inquiry-Based Learning (IBL). Blessinger and Carfora (2014) have defined IBL as "an approach to enhance and transform the quality and effectiveness of the learning experience by adopting a learner-centered, learner-directed, and inquiry-oriented approach to learning that puts more control for learning with the learner" (p. 5). In this approach, "the learner moves from a passive to an active participant in the learning process, [and] the instructor also moves from being an isolated subject matter expert to an instructional leader, learning architect, and learning guide and mentor" (p. 5). IBL is a cognitive, psychological, and social process of which mentorship is an important dimension.

PS can facilitate, or operationalize, the process of co-construction among instructors and students when engaging in IBL. If we revisit Edmondson (2014)'s three-step process, we recognize her claims that (a) framing the work as a learning problem *signals uncertainty and interdependence*, (b) acknowledging your own fallibility *signals that mistakes and feedback are allowed*, and (c) modeling curiosity *signals the necessity for voice*. These benefits of PS summarize the dimensions and components of language learning and self-determination that our three third-year Russian language students discussed.

Finally, we could reframe the Russian language classroom as a contact zone, which HBCUs and MSIs represent. Described by Mary Louise Pratt (1991), *contact zones* are "social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power, such as colonialism, slavery, or their aftermaths as they are lived out in many parts of the world today" (p. 34). By its nature, the Russian language and area studies classroom *is* a contact zone, but one we can make a discursive sanctuary which results in multilingualism, intercultural competencies, regular critical reassessment, (re)reading, and pedagogical innovation. Envisioning our classrooms as contact zones expands our ability to dismantle implicit voice theories and institutional gatekeeping. We come to create the academic equivalent of what Pratt (1991) has identified as *safe houses*: "social and intellectual spaces where groups can constitute themselves as horizontal, homogeneous, sovereign communities with high degrees of trust, shared understandings, [and] temporary protection from legacies of oppression" (p. 40).

Through implementing approaches like the ones we have proposed, instructors can create a classroom that does not deny or erase the complexity of Russian language study or its vibrancy as a contact zone. Such recommendations can establish an atmosphere of support for

developing a broad range of inquiry. They suggest how to implement the stages of inclusion and learner, contributor, and challenger safety explicit in PS. And they reward us with the interdependence, curiosity, and candor that motivates student and instructor alike.

5. Conclusion

The increasing diversity of the language classroom can prove to be both invigorating and challenging to instructors. Considering pedagogical practices that increase PS in the classroom provides instructors who ponder the question "Where do I start?" with actionable strategies when trying to develop a more inclusive learning environment. Reenvisioning the instructor's role as a guide in the classroom can transform our classrooms into a horizontal community of learners who practice successful teaming.

We appreciate the forthright vulnerability and insight of our contributing undergraduate coauthors, and we hope to have initiated a discourse about the potential usefulness, or "operationalization," of PS in the Russian language classroom and its value for the development of DEIA strategies and best practices.

References

Anya, U. (2020). African Americans in world language study: The forged path and future directions. *Annual Review of Applied Linguistics*, *40*, 97–112. https://doi.org/10.1017/s0267190520000070

Blessinger, P., & Carfora, J. M. (Eds.). (2014). *Inquiry-based learning for the arts, humanities and social sciences: A conceptual and practical resource for educators*. Emerald. https://doi.org/10.1108/s2055-364120140000002011

Clark, T. (2020). *The 4 stages of psychological safety: Defining the path to inclusion and innovation*. Berrett-Koehler.

Detert, J., & Edmondson, A. (2011). Implicit voice theories: Taken-for-granted rules of self-censorship at work. *Academy of Management Journal*, *54*(3), 461–488. https://doi.org/10.5465/amj.2011.61967925

Dewaele, J., Chen, X., Padilla, A., & Lake, J. (2019). The flowering of positive psychology in foreign language teaching and acquisition research. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2019.02128

Dornyei, Z. (2019). Towards a better understanding of the L2 Learning Experience, the Cinderella of the L2 Motivational Self System. *Studies in Second Language Learning and Teaching*, *9*(1), 19–30. https://doi.org/10.14746/ssllt.2019.9.1.2

Dweck, C. S. (2000). *Self-theories: Their role in motivation, personality, and development*. Psychology Press.

Edmondson, A. (2012). *Teaming: How organizations learn, innovate, and compete in the knowledge economy.* John Wiley & Sons.

Edmondson, A. (2014, May 5). *Building a psychologically safe workplace* [Video]. TEDxHGSE. YouTube. https://www.youtube.com/watch?v=LhoLuui9gX8

Edmondson, A. (2019). *The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth*. John Wiley & Sons.

Ehrman, M., & Dornyei, Z. (1998). *Interpersonal dynamics in second language learning: The visible and invisible classroom*. Sage Publications.

Foldy, E., Rivard, P., & Buckley, T. (2009). Power, safety, and learning in racially diverse groups. *Academy of Management Learning & Education*, *8*(1), 25–41. https://doi.org/10.5465/amle.2009.37012177

Ford, T. N., & Reeves, R. V. (2020, March 2) *College for people like me: How majority-Black campuses boosts social mobility.* The Brookings Institution. https://www.brookings.edu/blog/up-front/2020/03/02/college-for-people-like-me-how-majority-black-campuses-boost-social-mobility

Fry, R., & Parker, K. (2018, November 15). *Early benchmarks show "post-millennials" on track to be most diverse, best-educated generation yet*. Pew Research Center. https://www.pewresearch.org/social-trends/2018/11/15/early-benchmarks-show-post-millennials-on-track-to-be-most-diverse-best-educated-generation-yet/

Gilemkhanova, E. 2019. Socio-cultural factors of socio-psychological safety of educational environment at school. *Advances in Social Science, Education, and Humanities Research*, *298*. 2nd International Conference on Education Science and Social Development. Atlantis Press.

Gordon, E. K., Hawley, Z. B., Kobler, R. C., & Rork, J. C. (2021). The paradox of HBCU graduation rates. *Research in Higher Education*, *62*(3), 332–358. https://doi.org/10.1007/s11162-020-09598-5

Han, S., Liu, D., & Lv, Y. (2022). The influence of psychological safety on students' creativity in project-based learning: The mediating role

of psychological empowerment. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.865123

Kahn, W. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*(4), 692–724. https://doi.org/10.5465/256287

Kaila, T. (2020). *Psychological safety in the EFL classroom: Teaming up with WTC, language anxiety, learning experience, motivation and teacher leadership*. [MA thesis, University of Turku]. https://urn.fi/URN:NBN:fi-fe20201222102711

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridge, B. K., & Hayek, J. C. (2006). What matters to student success: A review of the literature. Commissioned Report for the "National Symposium on Postsecondary Student Success: Spearheading a Dialog on Student Success." National Postsecondary Educational Cooperative.

Lucey, C. (2021). Diversity, Equity, Access, and Inclusion: Lessons for the Russian Language Classroom, *Russian Language Journal*, *71*(3), 11-16. https://scholarsarchive.byu.edu/rlj/vol71/iss3/1

MacIntyre, P., & Mercer, S. (2014). Introducing positive psychology to SLA. *Studies in Second Language Learning and Teaching*, *4*(2), 153–172. https://doi.org/10.14746/ssllt.2014.4.2.2

Montgomery County Public Schools. (2019, October). *Montgomery County Public Schools at a Glance*. https://www.montgomeryschoolsmd.org/uploadedFiles/about/homepage/At%20a%20Glance2021-22.pdf

Murphy, D., & Lee, S. Y. (2019). The gender and race or ethnicity of majors in languages and literatures other than English in the United States, 2010–2014. *ADFL Bulletin*, *45*(2), 43–92. https://doi.org/10.1632/adfl.45.2.43

Pratt, M. L. (1991). Arts of the contact zone. *Profession*, 33–40. http://www.jstor.org/stable/25595469

Rozovsky, J. (2015, November 15). The five keys to a successful Google team. *re:Work*. https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/

Schein, E., & Bennis, W. (1965). *Personal and organizational change through group methods*. Wiley.

Soares, A., & Lopes, M. (2020). Are your students safe to learn? The role of lecturer's authentic leadership in the creation of psychologically safe environments and their impact on academic performance. *Active Learning in Higher Education*, *21*(1), 65–78. https://doi.org/10.1177%2F1469787417742023

Stauffer, R. (2020). Addressing the representation of diversity in Russian language textbooks. In E. Dengub, I. Dubinina, & Jason Merrill (Eds.), *The art of teaching Russian* (pp. 360–398). Georgetown University Press.

Tu, X. (2021). The role of classroom culture and psychological safety in EFL students' engagement. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2021.760903

United Negro College Fund. (2005). *Internationalization and foreign language course offerings at Historically Black Colleges and Universities*. UNCF Special Programs Corporation, Institute for International Public Policy.

Grammars in Contact: A Linguistic Study of Russian in Brighton Beach, New York

Oksana Laleko
Yana Miroshnychenko

1. Introduction

Within the burgeoning linguistic field of heritage language studies, two research traditions have emerged in recent years. The first, adopted most commonly in the studies of less robustly maintained heritage languages, draws generalizations across grammars instantiated in individual heritage language idiolects, taking as its focal point what diachronic linguists term the *innovation* phase of language change (Croft, 2000). The other approach, manifested most representatively in accounts of linguistic varieties emerging in relatively more established speech communities, focuses more closely on features that become conventionalized among heritage language speakers, a component of language change known as *propagation* (Croft, 2000). Considering the relatively restricted socio-demographic niche of Russian in the United States (Laleko, 2013), most available linguistic investigations of structural properties of Russian as a heritage language in the U.S. have been carried out within the former approach, with data typically drawn from speakers recruited outside of clearly demarcated communities and undergoing language change independently of one another.

This geographically bound study[1] traces the dynamics of heritage language use within the largest integrated community of Russian speakers in the U.S., located in Brighton Beach, New York. Most prior research on Brighton Beach Russian has been observational in nature, focusing predominantly on the sociodemographic and

[1] The study was funded by the Academic Year Undergraduate Research Experience (AYURE) grant from the Research, Scholarship, and Creative Activities office at SUNY New Paltz, aimed at supporting student-faculty collaborative research and scholarship. The student investigator has actively contributed to all stages of the project and played a lead role in participant recruitment, implementation of the data elicitation protocol, transcription, and quantitative analysis and presentation of participant demographics.

linguacultural aspects of language transmission and use in the diaspora at large. Very little is known about the structural linguistic properties of heritage language varieties emerging in this rich, linguistically diverse multilingual context, leaving the door open to questions about the nature and directionality of grammatical change in heritage systems shaped within the confines of an established speech community. Our study takes the first step toward filling this gap. In bringing together two complementary research pathways of heritage linguistics—charting language use within a community and modeling grammars of individual speakers—this investigation serves a dual purpose. On the one hand, it provides a linguistic benchmark for assessing more general questions about the ethnolinguistic vitality of Russian as a heritage language in the U.S.; on the other hand, it expands our grasp of the principles of heritage grammar formation by bringing into focus data from fluent Russian-English heritage bilinguals, a highly understudied population in the North American context.

2. Background

2.1 Historical presence of Russian speakers in Brighton Beach

We collected the data for this study in the Brooklyn neighborhoods of Brighton Beach and Sheepshead Bay, which house a native-born population of 28,839 and a foreign-born population of 49,936, including 28,470 speakers born in Southern and Eastern Europe (U.S. Census Bureau, 2019).

The Russian and Soviet emigration to the New York City area is associated primarily with the settlement of Russian Jews at pinnacle periods of distress in Eastern Europe between the late 19th and 20th centuries (Conn, 2012; Orleck, 1999). The first wave of the emigration, beginning in 1881, brought the first substantial population of Yiddish speakers to New York. Having initially settled within Jewish enclaves throughout the city, many of these immigrants eventually moved to Brighton Beach as a consequence of a building boom in the 1920s. After World War II, middle-class migration to the suburbs left behind an aging population of first-wave Jewish retirees in Brighton Beach. Meanwhile, the immigrants of the second wave, which consisted of Holocaust survivors and people who had been displaced by the upheaval of World War II, were receiving resettlement assistance from aid-based organizations such as the New York Association for New Americans (NYANA) and the Hebrew Immigrant Aid Society (HIAS) (Conn, 2012; Orleck, 1999).

By the late 1970s and early 1980s, many of the elderly first- and second-wave immigrants had either died or moved to less densely populated areas across the country, leaving behind residential and commercial vacancies in their wake. Soviet immigrants comprising the third wave of the Russian-speaking emigration to the area viewed this phenomenon as an opportunity for revitalization, eventually replacing modest antiquated businesses with nightclubs, international grocery stores and markets, restaurants serving pan-Soviet cuisine, and designer clothing boutiques (Orleck, 1999). These efforts have been successful in allowing the newest generations of Russian-speaking immigrants with limited English fluency to develop networks of support among immigrant families.

2.2 The linguistic landscape of Brighton Beach

To date, no formal linguistic studies have systematically examined the trajectories of language maintenance in Brighton Beach, with language pattern documentation often serving a supporting role to the more prominently addressed issues of cultural integration and identity. Most available linguistic descriptions highlight the community's pervasive use of code-mixing, for example, *Мне нужна* ***brush*** *для моих волосов* [I need a brush for my hair] (Visson, 1989), including its effects on script choice strategies in classified ads and signs (Angermeyer, 2005). Approached from this angle, recent sociolinguistic work has challenged the conception of Russian as a key player in the linguistic landscape of Brighton Beach, showing Russian signage to be employed rather restrictively (Litvinskaya, 2010). The best and most recent exemplification of English's role in the creation of a broader identification among Brighton Beach residents is the name change of an iconic local grocery store from Taste of Russia to International Food immediately following the Russian invasion of Ukraine in February 2022 (Agrawal, 2022). This decision signals Brighton's ongoing evolution into a heterogeneous immigrant community that steers away from the speakers' collective ethnolinguistic identification with Russian, calling into question the validity of once-prevalent portrayals of this multinational area as "Little Russia by the

Sea." However, as there has been no sociological or linguistic research regarding these changing sociolinguistic dynamics, we leave these issues to future investigations, turning instead to a review of studies drawing on the linguistic resources of Russian-speaking residents of Brighton Beach.

While a few linguistic studies have engaged Russian speakers from Brighton Beach to observe geographically independent linguistic phenomena, none have aimed specifically at providing a targeted account of the linguistic patterns characteristic of this community. For example, Brighton Beach is discussed in Kantarovich and Grenoble (2017) as the last remaining location where residents can still recall Odessan Russian. However, Odessan Jews have not been the dominant group in Brighton Beach since the 1990s, and the population that remains are mainly overhearers of the dialect. Grenoble (2013) has drawn on informal interviews with Russian-speaking Brighton Beach residents on the boardwalk as part of her investigation of co-constructions employed for completing another speaker's sentence, finding them to serve as markers of solidarity and shared experience. Davidson and Roon (2008) involved six émigré Russian-speaking participants from Brighton Beach and Sheepshead Bay in a study of consonant duration in Russian phonology, focusing on acoustic differences between bilingual and monolingual speakers. In sum, despite the general recognition of diaspora Russian as an actively used and dynamically developing variety across multiple generations of Brighton Beach residents, no accounts to date have tapped into the linguistic riches of this community within the tradition of heritage language research.

3. The Study

3.1 Motivation and research questions

Slavic languages in migration have long been a subject of linguistic and sociolinguistic research (Andrews, 1999; Moser & Polinsky, 2013; Zemskaja, 2001). In recent years, with growing numbers of second- and third-generation speakers, the spotlight on this work has shifted to the study of heritage languages and their linguistic properties. In the U.S. context, grammatical features of heritage Russian have been investigated quite extensively both with reference to formally instructed learners enrolled in heritage language courses (Kagan, 2010) and naturalistic

bilinguals "in the wild" (Polinsky & Kagan, 2007), yielding important insights into the processes of heritage language change more generally and into the inner workings of the individual subsystems forming the grammatical engine of the Russian language.

Among the most frequently documented outcomes of change in heritage Russian is significantly reduced morphosyntactic complexity, manifested across verbal and nominal areas as a decrease in the number of categories and/or features, the elimination of irregularity, and the growth of analyticity (Brehmer, 2021; Laleko, in press). However, considering a high dispersion of Russian speakers in the U.S., participant samples employed in the existing studies have tended to involve bilinguals well integrated into the mainstream culture and exhibiting strong effects of language disuse, with almost no work conducted in input-rich community settings. In this sense, the present study provides a unique opportunity to expand the range of the available data and revisit the issue of morphosyntactic fragility as a hallmark property of heritage grammars in the context of varieties developing in linguistic environments that are more favorable to the preservation of grammatical complexity than the majority of existing studies allow (Laleko & Scontras, 2021). To focus our discussion and contextualize it to prior findings, we concentrate on three areas that have emerged as the most critical pillars of grammatical change in heritage Russian morphosyntax: case, grammatical gender, and verbal aspect.

3.2 Participants

The study involved 17 young-adult heritage Russian speakers between the ages of 18 and 25 (M = 21.1), all of whom completed a detailed sociodemographic questionnaire. The speakers were selected on the basis of their residence in the Brighton Beach area during their childhood years, with 11 speakers continuing to reside in the community to the present day. The majority of the participants were born in the U.S. (N = 13); four speakers were born in a Russian-speaking country (Russia, Belarus, and Kazakhstan) and arrived in the U.S. as young children (M = 5.5).

Table 1. Demographic Information

Participants	N	Mean	Range
Total	17		
Born in U.S.	13		
Born in Russian-speaking country	4		
Gender			
Male	5		
Female	11		
Other	1		
Age		21.1	18–25
Main language of communication			
English	13		
Russian	0		
Can't decide (both)	4		
Language of upbringing			
% Russian		77%	25%–100%
% English		21%	0%–75%
% other		1%	20%
Encouragement to maintain Russian (1–10)		8.4	3–10
Age of Russian exposure		0	0
Age of English exposure		3.8	0–7.5
Age of switch to English		6.6	4–12
Current language use			
% Russian		17%	0%–50%
% English		83%	50%–100%

Each participant was exposed to Russian from birth; all but two were sequential bilinguals with a later onset of exposure to English (M = 3.8). Only one speaker reported regular exposure to a tertiary

language (Ukrainian) at home. The majority of participants reported greater exposure to Russian (M = 77%) than to English (M = 21%) in their childhood, and for four speakers, Russian was the only language experienced in early childhood. For only two participants, Russian exposure constituted less than half of the overall input (25% and 40%). All but one participant reported a high level of encouragement from their family to maintain Russian (M = 8.4 on a 10-point scale).

Looking at the portion of the questionnaire dealing with the current patterns of language use, the average proportion of the use of Russian drops considerably by the time the speakers have reached adulthood (17%). At best, Russian and English are used in equal ratios (for two speakers); at worst, Russian is no longer used on a daily basis (for one speaker). Such variation in the use of the heritage language is commonly observed in adult bilinguals and may be attributed to the fact that some participants were students at English-speaking universities where they do not regularly encounter other Russian speakers.

Table 2. Use of Russian within the Last Six Months and Attitudes

	N	%	Mean	Range
Activities involving Russian				
Spoke on the phone	16	94%		
Listened to music	15	88%		
Socialized with friends	13	76%		
Watched a show or movie	12	71%		
Read a newspaper or short story	5	29%		
Visited a website	4	24%		
Read a book	4	24%		
Attended a community event	3	18%		
Attitudes to Russian (1–10)				
Importance of maintaining			8.4	3–10
Willingness to speak			7.9	2–10
Connection to language			7.5	2–10
Connection to culture			6.2	1–10

To obtain a more fine-grained picture of the participants' ongoing relationship with the Russian language, our survey included questions about the types of activities they had recently undertaken in the heritage language and their attitudes to the language (Table 2). Most participants had socialized in Russian to some degree within the last six months, which affirms that the Russian language maintains a presence in their lives. The most common contexts of socialization included the home, family functions, doctors' offices, and grocery stores in Brighton Beach. Only 18% of participants had attended a Russian-speaking community event within the last six months. Although a possible effect of the COVID-19 pandemic, during which the data were collected, this result nevertheless aligns with the general observation that Russian language use by young adults (in contrast to older speakers) in Brighton Beach is less community-based and more centered around the tight-knit networks of friends and family and occasional interactions with customer service.

With respect to activities that do not require in-person contact, the questionnaire revealed a significant preference for the more passive forms of media consumption, such as listening to music (88%) and watching a television show or movie (71%), over the more active forms of language engagement that presuppose literacy, such as visiting a website (24%) or reading a newspaper (29%) or a book (24%). These results provide an interesting point of comparison with the previous literature. For example, Kagan's (2010) survey of heritage Russian learners enrolled in college-level classrooms positioned the most prevalent areas of heritage language use as follows: speaking on the phone (90%), listening to music (75%), watching TV or videos (69%), visiting a website (52%), reading a newspaper or a book (30%–40%), and attending community events (14%). While converging with these trends on the axis of spoken language use, our results also reveal a contrast between heritage *learners* surveyed in Kagan's (2010) study and heritage *speakers*, our present focus, in the domains related to the participants' levels of biliteracy, with formally instructed learners showing a predictably higher propensity to use their reading and writing skills in real-world settings.

Turning now to analysis of the speakers' attitudes toward the Russian language, the 10-point ratings reveal that speaking Russian serves more to express linguistic solidarity (M = 7.5) than to mark identification with the Russian culture (M = 6.2). The relatively higher median rating

for the linguistic over cultural connection with Russian is indicative of a community comprised of diverse nationalities and identities. For instance, in commenting on their responses in a follow-up interview, some participants identified Judaism to be central to their identity, positioning themselves as mere appreciators of the Russian culture. Other participants considered themselves to be avid consumers of Russian media and food, aligning themselves with the Russian identity as a result. Despite this diversity in cultural identification, most speakers still rated their willingness to use and maintain Russian highly (M = 8.4), further emphasizing Russian as the lingua franca of the community.

Table 3. Formal Instruction in Russian and Proficiency

	N	Mean	Range
Formal instruction			
Yes	11		
No	6		
Duration (years)		3.3	<1–9
Proficiency self-ratings (1–10)			
Understand Russian		9.1	8–10
Speak Russian		6.9	2–8
Read in Russian		5.4	1–10
Write in Russian		3.1	1–7
Words per minute (WPM)		93	46–136

While most participants (11 speakers) had received some formal instruction in Russian (M = 3.3 years), the duration, quality, and context of instruction is highly varied within the group. Five participants reported having received Russian instruction in their country of origin or in the Big Apple Academy, a local K–8 private school that includes coursework in the Russian language and literature; two participants reported having taken heritage Russian classes at a university.

All speakers were asked to rate their Russian language abilities in the four main areas of linguistic competence. As commonly observed in studies with heritage bilinguals, the highest self-ratings were obtained in the domains of understanding (M = 9.1) and speaking (M = 6.9), with

relatively lower ratings for reading (*M* = 5.4) and writing (*M* = 3.1). Notably, the range of individual variation was minimal for spoken language comprehension (between 8 and 10), with all participants expressing a high level of confidence in their receptive abilities, as expected considering the speakers' affiliation with a large and active Russian-speaking community. Conversely, the wide range of variation in the self-ratings of formally acquired skills (reading [1–10], writing [1–7]) underscores the predominantly aural path to language acquisition and maintenance in this community.

To further assess the speakers' fluency in Russian, we utilized an independent proficiency measure, number of words spoken per minute (WPM), shown in prior research to correlate with the heritage speakers' grammatical abilities (Polinsky, 2006, 2008a). To calculate WPM, we used the recordings employed in the main experiment. Despite significant variation, the average WPM value for the group (*M* = 93) was comparable to the average baseline rate of 95 reported for monolingual Russian speakers (Laleko & Dubinina, 2018) and exceeded rates reported in previous studies with adult heritage Russian speakers: WPM = 89 (Laleko & Dubinina, 2018) and WPM = 88 (Dubinina & Malamud, 2017), placing our participants at a very high level of functional fluency in the heritage language.

3.3 Methodology

After completing the pen-and-paper sociolinguistic questionnaire (in English) and an informal follow-up interview (in Russian), the participants were shown a five-minute silent film titled *The Man and the Thief* on a laptop computer and asked to retell its plot in Russian. The silent film was selected based on its high potential to elicit ample instances of the grammatical properties under consideration. In addition to featuring characters of different genders (one woman and two men), it depicts a series of static and dynamic events that unfold continuously throughout the presentation and culminate in an unexpected twist.

4. Results and discussion

4.1 Case

Restructuring of the case system is perhaps the most frequently observed development in heritage Slavic languages in contact with English. In the U.S. context, the six-case nominal paradigm of Russian has been shown

to contract to various degrees across the heritage language proficiency spectrum, yielding only a binary nominative-accusative contrast at its lowest sectors (Polinsky, 2008b). In the domain of argument marking, the directionality of case shift has been shown to follow a predetermined path, with the dative replaced by the accusative for indirect objects and the accusative replaced by the nominative for direct objects, lexically governed cases, and prepositional obliques (Kozminska, 2015 for Polish; Polinsky, 2008b for Russian).

Despite these robustly documented trends in deeply restructured grammars, the onset and extent of their manifestation across heritage varieties remain subject to investigation, with some studies pointing to a relatively higher stability of the Slavic case paradigm under certain conditions. For example, literate, college-instructed heritage learners have been shown to utilize all core distinctions of the baseline Russian system, with only occasional functionally motivated shifts (Isurin & Ivanova-Sullivan, 2008; see also Kisselev et al. (2021) for a comprehensive argument in favor of form-focused instruction in heritage Russian pedagogy).

Furthermore, research with heritage speakers in communities characterized by high ethnolinguistic vitality has similarly shown impressive diachronic stability of case systems in such contexts. Looking at three generations of Russian, Polish, and Ukrainian speakers in Toronto, Canada, a variationist study by Łyskawa and Nagy (2020) found few principled differences in the use of case forms by heritage and homeland speakers. Strong retention of case forms and functions was likewise reported in Wolski-Moskoff (2019) for fluent Polish-English bilinguals in the Chicago area, with a more profound change observed only at the lowest levels of heritage language proficiency. Against this empirical backdrop, our analysis of case forms sought, first, to examine the degree of case change in the corpus overall and, second, to trace the key patterns in the use of noncanonical forms.

We found a total of 28 occurrences of noncanonical case forms (henceforth referred to as "errors") in our corpus. Nearly half (eight) of the speakers in our sample made no errors with case; seven speakers made between one and three case errors, and two speakers made seven case errors each. In line with prior research, the nominative served as the most commonly used replacement case form, accounting for 12 instances of case misuse in the corpus. As observed in earlier studies, the

nominative occurred both with direct objects and with obliques, including after prepositions (e.g., *забрала её* ***сумка***$_{Nom}$ instead of *забрала её сумку*$_{Acc}$ [grabbed her purse], *бежит за* ***поезд***$_{Nom}$ instead of *бежит за поездом*$_{Instr}$ [running after the train], and *с вот* ***эта***$_{Nom}$ ***мужчина***$_{Nom}$ instead of *с вот этим*$_{Instr}$ *мужчиной*$_{Instr}$ [with this man here]). It is notable that the majority of these instances (seven forms) involved the word *мужчина* [man], a lexically masculine noun that falls into the same declension class as the majority of Russian feminine forms and appears to have been reanalyzed as feminine for some heritage speakers (a point to which we return in the next section). What is relevant here is that the effects of this reanalysis appear to extend beyond gender agreement, cascading into the use of case morphology as a likely consequence of higher processing costs associated with formally opaque nouns in heritage Russian (Laleko, 2018). If so, difficulties displayed by some speakers with the selection of the relevant case forms for the word *мужчина* [man] are likely more formal than structural in nature and as such do not necessarily signal dissolution of the Russian case system more generally. This is further evidenced by the fact that the expected, canonical case forms often occurred on the agreeing elements, such as demonstratives and adjectives, within the noun phrase containing the opaque noun, for example, *ограбит этого*$_{Acc}$ ***мужчина***$_{Nom}$ instead of *ограбит этого*$_{Acc}$ *мужчину*$_{Acc}$ [will rob this man] and *обняла этого*$_{Acc}$ *доброго*$_{Acc}$ ***мужчина***$_{Nom}$ instead of *обняла этого*$_{Acc}$ *доброго*$_{Acc}$ ***мужчину***$_{Acc}$ [hugged this kind man].

Other common case replacement strategies attested in the corpus included shifts from a preposition-governed oblique to the accusative, as illustrated in example (1); to the genitive (e.g., *в этом*$_{Prep}$ ***фильма***$_{Gen}$ instead of *в этом*$_{Prep}$ *фильме*$_{Prep}$ [in this film]); or to a syncretic form ambiguous between the accusative and genitive cases (e.g., *бегают за* ***этого***$_{Gen/Acc}$ ***вора***$_{Gen/Acc}$ instead of *за этим*$_{Instr}$ *вором*$_{Instr}$ [running after this thief]).

(17)	Короче,	он	побежал	за	**эту**	**мужчину**
	shorter	he.$_{Nom}$	ran.$_{M.Pf}$	after	this.$_{F.Acc}$	man.$_{Acc}$
	который	взял	её	сумочку.		
	who.$_{M.Nom}$	took.$_{M.Pf}$	her.$_{F.Acc}$	little-purse.$_{F.Acc}$		

"So, like, he ran after this man who took her purse."

Instances of case errors were also attested in the domain of pronouns, in which baseline Russian exhibits significant allomorphic variation, for example, *перед* ***неё*** instead of *перед ней* [before her] and *помог* ***её*** instead of *помог ей* [helped her].

4.2 Gender

Next, we turn to grammatical gender, another domain in which heritage Russian morphosyntax has been shown to undergo various degrees of change. Looking at gender assignment mechanisms employed by heritage Russian speakers in the U.S., Polinsky (2008a) argued that advanced and intermediate grammars exhibit a shift from the declension-based three-gender system of baseline Russian to a more formally transparent, phonologically governed system, with nouns grouped into three classes largely on the basis of their endings: nouns ending in a consonant are masculine, nouns ending in a stressed *-о* are neuter, and all remaining nouns are feminine. This system is further streamlined in low-proficiency speakers, who retain only the binary masculine-feminine contrast as determined by the nominal ending (consonant or vowel, respectively), with neuter nouns absorbed into the feminine class (Polinsky, 2008a).

Prevalence of formal, ending-based cues has also been attested in gender agreement strategies employed by heritage speakers, manifested particularly robustly in contexts in which the baseline system is characterized by irregularity or underspecification and associated with contextual variation. Targeting fixed and variable agreement patterns with animate sex-differentiable nouns in Russian, Laleko (2018) documented a significant trend toward reanalysis and regularization of opaque (e.g., *папа* [dad]) and referentially ambiguous (e.g., *доктор* [doctor], *коллега* [colleague]) forms in fluent adult English-dominant heritage Russian speakers with an otherwise potent grasp of gender agreement. Studies conducted in Norway have uncovered similar but more pervasive patterns of gender regularization in young heritage Russian bilinguals: in unbalanced speakers, gender distinctions were either reduced to the masculine-feminine contrast or altogether replaced by the masculine default (Rodina & Westergaard, 2017). In light of these findings, our analysis was aimed at determining the overall stability of gender marking in Brighton Beach heritage Russian, as evidenced by the occurrence of noncanonical forms and patterns of

agreement, and identifying the most distinctive processes of change in this morphosyntactic domain.

A total of 18 instances of noncanonical use of gender agreement were attested in the data. Approximately half of the speakers in our sample (eight speakers) made no errors with gender. Among the remaining participants, six speakers made only one error, and one speaker made two errors. The largest number of all errors in the sample came from two speakers, who made four and six errors, respectively.

Overall, the most common error type, accounting for seven instances, involved the use of a masculine agreement pattern with feminine nouns (e.g., *к* ***какому-то***$_{M.Dat}$ ***станцию*** $_{M.Dat}$ instead of *к какой-то* $_{F.Dat}$ *станции* $_{F.Dat}$ [to some station]). It is notable that three instances of such overgeneralization included lexically specified forms referring to females: *женщина* [woman], *девочка* [girl], and *она* [she], as illustrated in example (2). While in line with prior studies pointing to a weakened relationship between gender form and gender reference in heritage Russian, these examples likely reflect difficulties with the online processing of agreement dependencies or with retrieval of the appropriate surface forms (e.g., *у* ***него*** $_{M}$ instead of *у неё* $_{f}$ [at her]) rather than signal underlying changes to the principles of gender assignment. As evident from the rest of the sentence in example (2), two out of three agreement forms match the feminine gender specification of the noun, confirming that the noun retains its feminine value:

(18) Там была **один** женщина она бегала на поезд.
there was.$_{F}$ one.$_{M}$ woman.$_{F}$ she ran.$_{F.IMP}$ on train.$_{M.ACC}$

"There was one woman; she was running to the train."

The second most common error type, accounting for five instances in the corpus, involved reanalysis of the morphophonologically opaque masculine noun *мужчина* [man] into the feminine class based on its formal similarity with feminine nouns (the *-a* ending), for example, ***эта*** $_{f}$ *мужчина* $_{m}$ instead of *этот* $_{f}$ *мужчина* $_{m}$ [this man]. Since the occurrence of feminine agreement with masculine nouns in our data was limited to formally opaque nouns ending in *-a*/*-ja*, we consider these examples to be indicative of change affecting gender assignment.

Adherence to the phonological gender assignment principle was further manifested in our data as a neutralization of gender distinctions between neuter nouns ending in an unstressed *-e* and feminine nouns ending in an unstressed *-a*, resulting in a reanalysis of the less frequent neuter forms as feminine (e.g., ***такая***$_{F}$ ***предложения***$_{F}$ instead of *такое*$_{Neu}$ *предложение*$_{Neu}$ [such proposition]). However, outside of adjectival agreement, a trend toward an overextension of the neuter form was observed with the past-tense third-person verb *быть* [to be], attested in place of plural and singular masculine agreement (e.g., *там* ***было***$_{Neu.Sg}$ *скамейки*$_{Pl}$ instead of *там были*$_{Pl}$ *скамейки*$_{Pl}$ [there were benches]; *способ ограбления было*$_{Neu.Sg}$ instead of *способ ограбления был*$_{M.Sg}$ [the method of theft was]). While infrequent in our corpus, these constructions are nevertheless worthy of future study as a likely indicator of an independent morphosyntactic development in the heritage language—a weakening of subject-verb agreement, with the neuter form of the past-tense copula developing into the unmarked agreement default occurring across singular and plural contexts in grammars affected by change.

4.3 Aspect

Among the most salient features within the verbal domain of Slavic languages is the category of aspect, morphologically encoded as a binary opposition between imperfective and perfective verb forms (e.g., *писал*$_{Imp}$ – *написал*$_{Pf}$ [wrote]). The acquisition and maintenance of aspectual distinctions in heritage Russian bilinguals has received ample attention in the literature. Several studies have documented a gradual disintegration of the perfective-imperfective contrast in the heritage language, with speakers at the lowest end of the proficiency spectrum making no productive use of aspectual morphology and retaining individual verbs in a single aspectual form tied to their lexical properties (Polinsky, 2006). However, research with child heritage speakers of Russian has shown aspectual morphology to be "spared" from change during the initial stages of grammatical restructuring (Bar-Shalom & Zaretsky, 2008), and data from advanced adult speakers have similarly pointed to difficulties with certain contextual functions of aspectual forms rather than with their morphological instantiation (Laleko, 2010). In light of these results, we examined our corpus for signs of change involving the use of aspectual forms. In what follows, we focus very narrowly on the realization of the

perfective-imperfective opposition in our data, leaving outside our scope other instances of change in the verbal domain abundantly represented in our corpus (e.g., verbs of motion, conjugational patterns, tense shifts, and the subjunctive).

Our results characterize verbal aspect as a relatively stable domain in Brighton Beach Russian, with only eight aspectual errors attested in the corpus. The great majority of our participants, 11 speakers, made no errors in their aspectual choices; five speakers made one aspectual error each, and only one participant used three non-target-like aspectual forms. All but two errors in the corpus involved the use of the imperfective form in place of the perfective form (*начинал*$_{Imp}$ instead of *начал*$_{Pf}$ [began], *нравились*$_{Imp}$ instead of *понравились*$_{Pf}$ [liked], *не знал*$_{Imp}$ instead of *не узнал*$_{Pf}$ [never found out], *бежал*$_{Imp}$ instead of *побежал* $_{Pf}$ [ran], *обнимала*$_{Imp}$ instead of *обняла*$_{Pf}$ [hugged], *ходила*$_{Imp}$ instead of *зашла*$_{Pf}$ [went in]). The opposite shift involved two noncanonical occurrences of the verb *купила*$_{Pf}$ [bought] in a durative context, in which *покупала*$_{Imp}$ is required in homeland Russian; one of these uses is illustrated in the second clause of example (3):

(19)	Она	наконец-то	купила	билет	но	пока	она
	she	finally	bought.$_{F.PF}$	ticket.$_{M.ACC}$	but	while	she

купила	там	трейн	ушёл.
bought.$_{F.PF}$	there	train	left.$_{M.PF}$

“She finally bought the ticket, but as she was buying it, the train left.”

In six out of eight instances, the noncanonical form produced by the heritage speaker constituted a morphologically simpler option by lacking a prefix that would have been necessary to derive the target aspectual form. Additionally, in six out of eight instances (including four of six instances of the overextension of the imperfective and both instances of the overextension of the perfective), the attested noncanonical aspectual form matched the lexical specification of the verb, with telic verbs (*buy*) occurring in the perfective form and atelic verbs (*like*, *know*, *run*, *walk*) used in the imperfective form. In the next section, we comment on these findings.

5. Summary and conclusions

Historically, linguistic descriptions of Brighton Beach Russian have disproportionately focused on its lexical properties, leaving a significant gap in the study of its grammatical structure. Meanwhile, a nearly three-decade-long tradition of empirical work on heritage Russian in the U.S., drawing largely on data from speakers removed from speech communities, has taken morphosyntactic change to be the focal point in heritage language development. Crossing these two lines of inquiry, this study sought to investigate grammatical innovations in the speech of adult heritage Russian bilinguals whose linguistically formative years were spent in the largest Russian-speaking community in the U.S. With this goal in mind, we employed a controlled speech production task to obtain and analyze speech samples from 17 heritage speakers of Brighton Beach Russian, focusing on three areas of grammatical change independently documented in other heritage Russian varieties in the U.S.: case, gender, and verbal aspect.

Our findings yield two observations, which will shape the concluding discussion presented in the remainder of this section. First, about half of our participants displayed no signs of overt grammatical change in any of the domains under investigation. These results caution against overly restrictive conceptualizations of heritage language systems as characteristically incomplete or divergent replicas of their source grammars, and underscore the status of heritage bilinguals as native speakers of both of their languages (Weise et al., 2022). These results also inevitably bring into focus the pivotal role a speech community can play in determining the rate and trajectory of heritage language change, calling for more heritage language studies to be conducted in settings conducive to language acquisition, use, and transmission in ways that are more similar to (while never fully identical with) contexts in which homeland varieties develop.

At the same time, our results unequivocally demonstrate that while a high degree of social entrenchment contributes to the preservation of morphosyntactic complexity in a heritage language, it does not entirely prevent grammatical restructuring or categorically reshape its underlying mechanisms. Across all three areas of grammatical change examined in our study, we encountered the same types of processes documented, perhaps to a more significant degree than that observed here, in other heritage varieties of Russian. Overall, nominal morphosyntax proved to be

more vulnerable to change than verbal inflection (Polinsky, 2018). Within the nominal domain, case marking has undergone the most significant reorganization, characterized by the default use of the nominative and strengthening of the more functionally central cases (such as the accusative and genitive) at the expense of obliques. Grammatical gender, while preserved to a relatively higher degree, has witnessed a similar push toward the default masculine pattern, counterbalanced in some cases by the overapplication of the phonological gender assignment principle. The verbal aspectual opposition has shown initial signs of streamlining, succumbing to pressures of complexity-reducing change on two axes: a decrease in formal redundancy (i.e., avoidance of prefixes) and an increase in semantic transparency (i.e., a closer alignment between aspectual forms and inherent verbal features). All of these observed tendencies fit organically within the diachrony of heritage language change established on the basis of work with speakers outside of speech communities, suggesting that existing linguistic models can be successfully extended to research in community contexts.

References

Agrawal, N. (2022, March 19). In New York's "Little Odessa," solidarity with Ukraine, strained friendships. *Los Angeles Times.* https://www.latimes.com/world-nation/story/2022-03-19/in-new-yorks-little-odessa-solidarity-with-ukraine-strained-friendships

Andrews, D. R. (1999). *Sociocultural perspectives on language change in diaspora: Soviet immigrants in the United States.* John Benjamins. https://doi.org/10.1075/impact.5

Angermeyer, P. S. (2005). Spelling bilingualism: Script choice in Russian American classified ads and signage. *Language in Society*, *34*(4), 493–531. https://doi.org/10.1017/s0047404505050190

Bar-Shalom, E. G., & Zaretsky, E. (2008). Selective attrition in Russian-English bilingual children: Preservation of grammatical aspect. *International Journal of Bilingualism*, *12*(4), 281–302. https://doi.org/10.1177/1367006908098572

Brehmer, B. (2021). Slavic heritage languages around the globe. In S. Montrul & M. Polinsky (Eds.), *The Cambridge handbook of heritage languages and linguistics* (pp. 13–44). Cambridge University Press. https://doi.org/10.1017/9781108766340.003

Conn, P. (2012). The dual roles of Brighton Beach. In J. N. DeSena & T. Shortell (Eds.), *Gentrification, immigration, and ethnic politics in a global city* (pp. 337–361). Lexington Books.

Croft, W. (2000). *Explaining language change: An evolutionary approach.* Longman.

Davidson, L., & Roon, K. (2008). Durational correlates for differentiating consonant sequences in Russian. *Journal of the International Phonetic Association*, *38*(2), 137–165. https://doi.org/10.1017/s0025100308003447

Dubinina, I., & Malamud, S. (2017). Emergent communicative norms in a contact language: Indirect requests in heritage Russian. *Linguistics*, *55*(1), 67–116. https://doi.org/10.1515/ling-2016-0039

Grenoble, L. A. (2013). Talking out of turn: (Co)-constructing Russian conversation. In N. Thielemann & P. Kosta (Eds.), *Approaches to Slavic interaction* (pp. 17–33). John Benjamins. https://doi.org/10.1075/ds.20.03gre

Isurin, L., & Ivanova-Sullivan, T. (2008). Lost in between: The case of Russian heritage speakers. *Heritage Language Journal 6*(1), 72–104. https://doi.org/10.46538/hlj.6.1.4

Kagan, O. (2010). Russian heritage language speakers in the U.S.: A profile. *Russian Language Journal*, *60*, 213–228.

Kantarovich, J., & Grenoble, L. A. (2017). Reconstructing sociolinguistic variation. *Proceedings of the Linguistic Society of America*, *2*, 337–354. https://doi.org/10.3765/plsa.v2i0.4080

Kisselev, O., Dubinina, I., & Polinsky, M. (2021). Form-focused instruction in the heritage language classroom: Toward research-informed heritage language pedagogy. *Frontiers in Education*, *5*(53). https://doi.org/10.3389/feduc.2020.00053

Kozminska, K. (2015). Language contact in the Polish-American community in Chicago. *International Journal of Bilingualism*, *19*(3), 239–258. https://doi.org/10.1177/1367006913509901

Laleko, O. (2010). *The syntax-pragmatics interface in language loss: Covert restructuring of aspect in heritage Russian*. [Doctoral dissertation, University of Minnesota.] https://conservancy.umn.edu/handle/11299/92219

Laleko, O. (2013). Assessing heritage language vitality: Russian in the United States. *Heritage Language Journal*, *10*(3), 382–395. https://doi.org/10.46538/hlj.10.3.9

Laleko, O. (2018). What is difficult about grammatical gender? Evidence from heritage Russian. *Journal of Language Contact*, *11*(2), 233–267. https://doi.org/10.1163/19552629-01102004

Laleko, O. (In press). Heritage language forms. In W. Browne & D. Šipka (Eds.), *The Cambridge handbook of Slavic linguistics*. Cambridge University Press.

Laleko, O., & Dubinina, I. (2018). Word order production in heritage Russian: Perspectives from linguistics and pedagogy. In S. Bauckus & S. Kresin (Eds.), *Connecting across languages and cultures: A heritage language Festschrift in honor of Olga Kagan* (pp. 191–215). Slavica.

Laleko, O., & Scontras, G. (2021). On the many dimensions of complexity in heritage languages. *Heritage Language Journal*, *18*(2), 1–37. https://doi.org/10.1163/15507076-12340009

Litvinskaya, A. A. (2010). *Linguistic landscape of "Little Russia by the Sea," A multilingual community in a Brooklyn Area of New York City.* (Publication No. 1479533) [Master's thesis, Indiana University of Pennsylvania].

Łyskawa, P., & Nagy, N. (2020). Case marking variation in heritage Slavic languages in Toronto: Not so different. *Language Learning*, *70*(S1), 122–156. https://doi.org/10.1111/lang.12348

Moser, M., & Polinsky, M. (Eds.). (2013). *Slavic languages in migration*. University of Vienna Press.

Orleck, A. (1999). *The Soviet Jewish Americans.* Greenwood Press.

Polinsky, M. (2006). Incomplete acquisition: American Russian. *Journal of Slavic Linguistics*, *14*(2), 191–262.

Polinsky, M. (2008a). Gender under incomplete acquisition: Heritage speakers' knowledge of noun categorization. *Heritage Language Journal*, *6*(1), 40–71.

Polinsky, M. (2008b). Heritage language narratives. In D. Brinton, O. Kagan, & S. Bauckus (Eds.), *Heritage language education: A new field emerging* (pp. 149–164). Routledge.

Polinsky, M. (2018). *Heritage languages and their speakers*. Cambridge University Press. https://doi.org/10.1017/9781107252349

Polinsky, M., & Kagan, O. (2007). Heritage languages: In the "wild" and in the classroom. *Language and Linguistics Compass*, *1*(5), 368–395. https://doi.org/10.1111/j.1749-818x.2007.00022.x

Rodina, Y., & Westergaard, M. (2017). Grammatical gender in bilingual Norwegian-Russian acquisition: The role of input and transparency. *Bilingualism: Language and Cognition, 20*(1), 197–214. https://doi.org/10.1017/s1366728915000668

U.S. Census Bureau. (2019). *2019: American Community Survey 5-Year estimates subject tables.* https://data.census.gov/cedsci/

Visson, L. (1989). Russian in America: Notes on the Russian spoken by emigres. *Russian Language Journal*, *43*(145), 185–191.

Wiese, H., Alexiadou, A., Allen, S., Bunk, O., Gagarina, N., Iefremenko, K., Martynova, M., Pashkova, T., Rizou, V., Schroeder, C., Shadrova, A., Szucsich, L., Tracy, R., Tsehaye, W., Zerbian, S., & Zuban, Y. (2022). Heritage speakers as part of the native language continuum. *Frontiers in Psychology*, *12*, 717973. https://doi.org/10.3389/fpsyg.2021.717973

Wolski-Moskoff, I. (2019). *Case in heritage Polish*. [Doctoral dissertation, Ohio State University.]

Zemskaja, E. A. (2001). *Jazyk russkogo zarubež'ja: Obščie processy i rečevye portrety*. Jazyki Slavjanskoj Kul'tury.

Kudyma, Anna S. (2022). *Russian: From Novice High to Intermediate*. Abingdon, Oxon; New York, NY: Routledge. Includes bibliographical references and index. 560 pages.

Russian: From Novice High to Intermediate is a remarkable textbook for second- and third-year Russian language courses. It is primarily designed for learners who are already familiar with basic Russian morphology and phonetics and have a beginner's-level vocabulary; it will help learners achieve intermediate proficiency in reading, writing, listening, and speaking. One notable feature of the book is the companion website, accessible without registration, which can be imported into your university's Canvas system.

Russian: From Novice High to Intermediate has 17 chapters that discuss the Intermediate-level topics and relevant language functions needed for ACTFL oral-proficiency interviews. The chapters cover various pertinent themes, such as friends and friendship, family, dating and marriage, food and cooking, holidays, university and education, hobbies and sports, traveling, health and illness, and TV and the internet.

The textbook "provides the following instructional materials, which are aligned with the ACTFL Proficiency Guidelines (2012) and the NCSSFL-ACTFL Can-Do Statements":

- Pronunciation and intonation review and practice
- Vocabulary development and word formation
- A set of Novice high– and Intermediate-level scenarios
- Various Intermediate-level readings (magazine articles, infographics, blogs, forums, social media posts, emails, classifieds, commercials, recipes, menus, PSAs, weather forecasts, TV guides, biographies, short excerpts from Russian poetry, etc.), with assignments that help learners develop efficient reading skills
- A set of listening assignments using authentic video clips (video blogs, advertisements, news reports, etc.) posted on the accompanying textbook website
- Various intermediate-level writing activities (blog posts and comments, Tweets, Facebook posts, WhatsApp messages, emails, advertisements, report writing, etc.) that focus on developing both interpersonal and academic writing

- Cultural references that help build students' intercultural competence
- Topics for class oral presentations
- Guidelines for individual and group projects
- Grammatical explanations and authentic activities that integrate form, meaning, and content (p. ix)

Every chapter of *Russian: From Novice High to Intermediate* includes one to four connected topics, activities to improve pronunciation and intonation, a set of communicative situations, readings and video links, writing tasks, suggestions for projects/interviews, and several grammatical topics corresponding to the chapter's themes.

The chapters also offer activities connected with three modes of communication (interpretive, interpersonal, and presentational) and encourage students to speak and write in paragraphs. The textbook's vocabulary is based on the *Russian Federation Lexical Minimums* and on word frequencies provided by dictionaries and the *Russian National Corpus*. Upon completion of the textbook students are expected to have an active vocabulary of 2,000 words. Many words used in *Russian: From Novice High to Intermediate* reflect topics relevant to present-day learners, including vocabulary related to Facebook, Twitter, YouTube and video-blogs, online chats and messengers, and so on.

Grammatical topics in *Russian: From Novice High to Intermediate* correspond to the needs of communication at the Intermediate level. The book reviews and expands on basic Russian grammar features, allowing students to go over the most difficult points and apply them to a broader range of communicative tasks. Some of the grammar topics included in the volume are case usage, verbal aspect, verbs of motion with and without prefixes, sentences with *который* and with *чтобы*, usage of *себя* and *свой*, verbs of position and placing, and various conjunctions used for complex sentences. Typical second-year grammatical features like participles and verbal adverbs are also introduced in the textbook, with the expectation that they will be used productively in the next level of proficiency. The book's explanations and visual presentations of grammar are very clear and easy to follow; each grammatical feature is no more than two or three pages and is filled with tables and examples and brief activities to practice it. One of the main features of this textbook is that grammar is contextualized through texts and listening as well as productive speaking

and writing activities that help students make connections between form, meaning, and content.

Russian: From Novice High to Intermediate does not have a separate homework book; however, the companion website has a wide variety of exercises that are interactive, engaging, and diverse in structure, including flashcards, self-correcting vocabulary and grammar quizzes, fill-in-the-blank exercises, self-correcting quizzes for identifying features of words, video activities for speaking, and listening exercises and pronunciation practice, among others. Any of these exercises can serve as homework assignments. Course instructors can request access to the "Teacher's Corner" of the companion site by following the link on the main page on the website.

Various aspects of Russian culture are presented in *Russian: From Novice High to Intermediate*. Students read short texts about Pushkin, Leo Tolstoy, Chekhov, Stravinsky, Mussorgsky, and Tchaikovsky; get acquainted with poems by Simonov, Oshanin, and Okudzhava; learn about Tomsk State University; make virtual trips to Kiev and Vladimir; learn how to make Ukrainian borscht; and familiarize themselves with some of the most popular Russian TV shows, such as *«Что? Где? Когда?»*, *«КВН»*, and even *«Модный приговор»*. In addition, many chapters in the textbook have a special cultural note explaining different Russian traditions, for example, education and grading systems, weddings, apartment living, and *спальные районы*. Moreover, the companion website offers numerous supplementary materials and activities, including shorter authentic videos, such as *«Ералаш»*, and longer options, like *«По семейным обстоятельствам»*.

Russian: From Novice High to Intermediate gives the instructor the freedom to use any parts of the chapters in the order that best fits their course goals. Some of the assignments are connected to one another, for example, some activities are based on information introduced in a text or video. Other activities can be completed in any sequence. Characters and names do not travel into each new chapter; the instructor can skip some assignments and students still be able to complete tasks on subsequent pages or chapters. Some textbook activities, such as writing short essays, preparing presentations, creating videos, and conducting interviews, can be given as homework. The abundance of topics and exercises does not seem overwhelming, and the instructor can cover chapters as quickly or as slowly as they need to.

On the whole, *Russian: From Novice High to Intermediate* is an excellent textbook that can be used in various academic years and is sufficient as the primary course textbook. It meets the needs of both experienced and novice instructors and provides diverse, engaging activities that encourage students to actively participate and develop their ability to communicate as literate and culturally aware users of the Russian language at the Intermediate level of proficiency.

Iryna Kaplun
Johns Hopkins University

References

Andrushina, N. P., & Kozlova, T. V. (2000). *Лексический минимум по русскому языку как иностранному. Базовый уровень. Общее владение* [The lexical minimum of Russian as a foreign language. Basic level. General proficiency]. St. Petersburg: Zlatoust.

Russian National Corpus. https://ruscorpora.ru

Minakova-Boblest, Elena. 2020. *Modern Russian Grammar in Use: A Systematic Reference and Practice Book*. Moscow/Munich: Asbuka. 309 pages.

Elena Minakova-Boblest's *Modern Russian Grammar in Use* is a much-needed comprehensive reference grammar and workbook for students of Russian, which can be used in the classroom and by students who study the language on their own (the answer key is a welcome addition for the latter). The book is a good supplement to virtually any contemporary textbook and can also serve as a standalone reference and exercise book for beginning- or intermediate-level language students.

The book starts with an "introductory course" that presents the basic structures of the Russian language. The lexical items used in the examples and the exercises in that section are of high frequency, which makes it possible to use this section at very early stages of language instruction. The "main course" includes sections such as "the noun" (mostly dealing with case forms and usage broken down into six cases), "the adjective," "the adverb," "the verb" (conjugation, imperative and subjunctive moods, verbal aspect, and verbs of motion), "the participle," "the verbal adverb," "the numeral" (including sections on giving the date and telling time), "the simple sentence," "the compound sentence," and "the complex sentence" (broken down into sections based on types of clauses). A unit titled "Real Life" appears at the end of each of these sections and provides communicative practice of grammatical structures. At the end of the book, there is an answer key and a "grammar overview" section containing declension and conjugation charts, as well as a chart with selected perfective verbs with their forms and translations.

The book's design is very convenient: all topics are laid out on a two-page spread with the explanation and examples on the left page and the exercises on the right. This layout is familiar to all learners of English who used the famous *English Grammar in Use* by Raymond Murphy (Murphy et al., 2004). The book's enormous popularity was largely related to the way it was structured and the convenience of its use. By adopting a similar structure, the creators of *Modern Russian Grammar in Use* made their book very user-friendly for students in traditional classrooms and for individual learners.

The grammatical explanations are clear and frequently brief, which is partly determined by the book's layout. While some topics are adequately covered, others (for example, verbs of motion, verbal aspect in the past tense, and *то, что* clauses) could benefit from a longer and more detailed treatment. In the introduction, the author designates advanced students as the book's target audience (along with beginners and intermediate students); however, some advanced students might find the information in the chapters too basic and, at the same time, will not find topics suitable for their level, for example, punctuation rules, figurative use of verbs of motion, and short forms of participles.

Stress is marked for all Russian words throughout the book. English translations accompany all of the examples in the explanations, and some words in the exercises are glossed. Footnotes provide additional information about unfamiliar concepts. The author often offers additional context for target structures through common phrases and illustrations.

The book features many wonderful drawings, photos, and illustrations, setting it apart from similar books on the market, which usually feature no or very few illustrations. All the images in the book are black and white and straightforward, but they serve two important purposes: 1) they enliven the text and often illustrate certain cultural

realia, and 2) they add to the explanations of structures and illuminate them. Several exercises in the book are based on illustrations. The book's numerous charts, tables, and graphs help to organize the information and present it in an effective and concise way.

I would love to see more inclusion and diversity in the next editions of this book. For example, there is often disparity in gender use in exercises and examples, in which more male names (or no females names) are used (ex. 3, p. 219; ex. 3, p. 233; ex. 3, p. 265, to name just a few). More gender-inclusive language would be welcome to replace such words as "salesgirl" (p. 185) and "saleswoman" (p. 174). Some students might also find discussing gender stereotypes (ex. 3, p. 175) awkward and offensive even when asked to argue with them. Most of the book's references to the Russian culture concern Moscow and Saint Petersburg. Expanding the cultural geography to other areas of the Russian-speaking world, as well as using personal names other than traditional Russian names, would also be a welcome change.

Overall, this book can be used as a supplemental text for first-, second- or even third-year Russian language courses or as a primary self-study material for adult learners of Russian.

Evgeny Dengub
University of Southern California

References

Murphy, R., Viney, B., & Craven, M. (2004). *English grammar in use with answers and CD ROM: A self-study reference and practice book for intermediate students of English* (Vol. 1). Cambridge: Cambridge University Press.

Thomas Jesús Garza, ed. *Practices That Work: Bringing Learners to Professional Proficiency in World Languages.* Hollister, CA: MSI Press LLC, 2021. 212 pages.

Practices That Work is an excellent resource for both new and experienced foreign-language instructors, as well as for foreign-language learners. The volume is a compilation of short, thematically organized articles written by numerous experts in the field of foreign-language teaching who share invaluable insights about bringing learners to high-level professional

proficiency in world languages. While *Practices That Work* offers a plethora of effective techniques for instructors, it also provides deep understanding of the learning process, which will benefit the development of learner's self-awareness and autonomy.

In Section 1, "Focus on the Learner," the authors offer examples of best strategies for building learner self-awareness and independence, as well as specific higher-proficiency skills characteristic of higher proficiency. In the first articles in Section 1, Leaver and Ehrman emphasize the importance of diagnostic assessment and teaching. Leaver reminds readers that there is no universal methodology for achieving Professional proficiency; successful learning strategies will vary among learners who are working to achieve the Superior level in the same language and in different languages. Additionally, successful polyglot learners report using different methods for learning different languages. While language aptitude and immersion environment factor into the learning process, they are not decisive components of successful language acquisition but rather are part of an adaptive learning plan that considers the learner's learning style and personality type.

Section 1 continues with various authors offering examples of successful activities that foster learners' autonomy and proficiency gains. For instance, Brendel describes activities that enable learners to adjust their language register, which is one of the "hallmarks of the Distinguished" level (p. 31). He provides a fascinating example of his students learning how to give public speeches while working with the best German speeches of the year that he brought into his class.

In Section II, "Focus on Instruction," the authors offer a diverse collection of teaching techniques and learning environments aimed at helping learners achieve Superior and/or Distinguished levels of proficiency. One of the key techniques is having learners imitate, rehearse, and some would even say memorize "chunks" of native verbal communication, as well as imitate natives' non-verbal communication. Opening the section is Leaver, Shekhtman, and Sibrina's article on further developing the memory capacity of high-level learners. The authors discuss effective memorization techniques, such as for instance "emotionally charging the classroom during the exercises that require memorization" (p. 46), as well as the role of the learner's learning style and personality in selecting memorization techniques.

In their articles, Martin and Fatorre-Olson continue the discussion providing models of authentic interaction to learners and having learners internalize them while working with authentic television and radio programs or studying and staging an authentic play and working with narrative-theater genre. Al-Shalchi extends the discussion by providing insight into the benefits of using the holistic approach with authentic materials and offering input on topics learners "may have limited background information" about, including such benefit as increasing learner motivation. She describes teaching a sample unit in which a single topic is explored from various points of view, such as historical, economical, religious, literary, and so on, with the students watching authentic television interviews, reading authentic texts with statistical information, reading a short authentic novel, and listening to and interacting with a native-speaker guest on that topic.

Another key theme of this section covers the advantages of providing an effective learning environment for high-proficiency learners. The models presented range from a flipped-classroom approach in which a learner finds appropriate teaching materials, hosts class discussions, and leads class activities, to simulated real-life tasks, such as a simulated academic conference in the target language.

To conclude the section, Davidson and Lekič provide a detailed description of the constituents in an effective study-abroad environment and curriculum for Superior-level learners, highlighting the benefits of taking subject courses at local universities, staying with a host family, going on field trips, interviewing locals, gathering research data, and participating in other "experiential learning" opportunities such as internships and field- and volunteer work.

In Section III, "Focus on the Instructor," the authors explore the challenges high-proficiency-level instructors and programs face and ways of overcoming them. Leaver's article brings to the reader's attention the fact that using compensation strategies by learners hinders their ability to achieve the Distinguished level of proficiency, because these strategies are not expected at the level. Instructors are faced with the challenge of having learners abandon the compensation strategies they have been using the entire course of their language learning and must push them toward achieving the near-native "lexical precision, structural accuracy and appropriate register" use (p. 104). Leaver also

suggests fostering metacognitive strategies in learners to help them gain higher proficiency.

Gambhir continues discussing challenges by presenting the issue of communicative differences between non-native speakers, Superior-level learners, and native speakers. He offers a set of exercises that instructors of Superior-Distinguished learners can use to close the gap. For instance, "Complication Exercises" focus on practicing "embellishing" the learners' speech in "literate ways" (p. 109). In his article, Shekhtman points out the lack of automaticity of rare expressions in Superior-level-learner's discourse and emphasizes the importance of its development. He proposes four ways high-proficiency-level instructors can bring learners to the automaticity.

Ehrman's article focuses on yet another challenge Superior- and Distinguished-level learners face: fossilization. She defines several forms of fossilization, including the affective form, which is the most difficult for learners to overcome. Ehrman stresses the importance of the instructor having strong analytical skills, as well as a "strong temperament" (p. 119), and experience in individualized instruction as key factors which help learners achieve native-like competence.

Last, Shekhtman, Lord, and Sibrina, present an effective model of the "short-term project- or task-oriented mini-courses" that are designed to bring learners with a 3/3+ oral-proficiency level to near-native proficiency within specific-domain job-related tasks.

Section IV, "Focus on Skills," provides innovative, detailed models for teaching specific language skills, such as writing, and/or specific language aspects, such as collocations, which help language learners transition to near-native proficiency. The authors also draw readers' attention to topics that are often overlooked in higher-level instruction, including developing learner comprehension of the variety of native handwritings. In the first article in the section, Shekhtman, Lord, and Sibrina present the "rule of the expanded answer" and the "island" rule—techniques learners can use to help them become equal partners in their conversations with native speakers. The authors suggest for instance, that the language instructor presents "islands" from the professional life of the Superior-level speakers.

In their articles, Kubler and Howard discuss the importance and ways of reducing learner's accent and teaching learners to understand

dialects. Chang and Evans-Romaine provide ample examples of high-level listening activities that promote further development of learner's listening-comprehension and speaking. Al-Khanji presents numerous advantages of working on writing with 3/3+-level learners, while Bernhardt gives a detailed account of teaching what he calls "voracious reading" (p. 149). Flanzer describes a course in which she uses cultural journal writing and oral presentations to help her students gain higher discourse proficiency and cross-cultural competence. Finally, Kemp stresses the importance of the ability to support both sides of an argument rather than present their own opinion, for Superior-level speakers.

In section V, "Focus on Assessment," Leaver and Garza provide a formula for setting up effective diagnostic assessment in high-level courses and programs. Leaver offers examples of systematic diagnostic assessment implemented at various institutions, and Garza lays out a framework for the "multi-tiered assessment model of production" (p. 196).

Lastly, every article in the volume gives excellent suggestions for further reading on the topic.

Practices That Work is a valuable resource for both instructors and learners. The volume provides insightful guidance and diverse methodologies for achieving Professional proficiency in world languages.

Olena Chernishenko
American University

Betty Lou Leaver, Dan E. Davidson, and Christine Campbell, eds., *Transformative Language Learning and Teaching*. Cambridge, UK: Cambridge University Press, 2021. 289 pages.

Leaver, Davidson, and Campbell's *Transformative Language Learning and Teaching* is a groundbreaking volume on the theory and practice of transformative teaching in the language learning context. The volume consists of chapters on the transformative learning and teaching of world languages organized into seven thematic parts: theoretical framework, transformative learning and teaching applications in government programs, transformative language learning and teaching applications in university programs, transformative language learning and teaching programs in immersion programs, the learner, faculty development, and assessment. The volume also includes a comprehensive list of works cited that constitutes a tremendous resource for any scholar or practitioner interested in transformative learning and teaching in the languages field.

It is likely of interest to readers of this review that a disproportionate number (considering the number of world languages in existence and the range of languages most frequently taught in the US and Europe) of the contributing authors to this volume are or have been faculty and researchers in the Russian field, including Andrew Corin, Dan E. Davidson, Karen Evans-Romaine, Thomas Jesús Garza, Jason Goulah, Betty Lou Leaver, and Maria Lekic. Other prominent scholars among the list of authors include Ray Clifford, Rebecca Oxford, and Nelleke Van Deusen-Scholl.

The world language education field has experienced many methodological upheavals corresponding to theoretical or practical paradigms since the time human beings organized formal instruction in second or foreign languages. Leaver distills these changes into three large patterns whose practices are based on educational philosophies whose primary paradigm encompasses three elements: (1) transmission, in which information flows unidirectionally from teacher to learner, resulting in rote memory, reproduction, and accuracy; (2) transaction, in which information flows bidirectionally between teacher and learner and between learners, resulting in associative memory, higher-order thinking, and proficiency; and (3) transformation, in which information flows multidirectionally within and beyond the classroom, resulting in critical and creative thinking, as well as personal change (Leaver et al.. The theoretical foundation of the transformative learning model is built on the work of Jack Mezirow, John Dirkx, Lev Vygotsky, and Carl Rogers, among others.

It is important to understand that this volume takes the larger educational movement of transformative learning and teaching—movement whose scope is as broad as the range of disciplines taught in educational settings at any level and whose focus is as deep as all levels of education—and examines applications of this movement in the learning and teaching of world languages. Building on the pedagogical frameworks of the Proficiency Guidelines (whether in the ACTFL or Interagency Language Roundtable versions) and their European cousin,

the Common European Reference Framework, as well as the World-Readiness Standards for Language Learning and substantial research on language learning outcomes in different paradigms and for different purposes, the authors contributing to this volume paint a picture of the impact and potential impact of restructuring world language curricula to focus on transformative learning experiences.

Instructors who teach at any level are mindful of the unrelenting constraint of time in the instructional process: we can ask for better textbooks, smaller classes, or more or better technology, but we can never have more time than is afforded by the programs in which we teach, whether in K–12 or postsecondary environments or in government agencies. As many scholars have shown, time on task in the learning process is a prerequisite for the language acquisition process, but it is not sufficient in and of itself. Learners must want to use that time productively, and they must want to persist in the curricular sequence and beyond. Given the limitations that prevent many world language learners from participating in an immersion experience, whether domestically or abroad, the authors of this volume provide strategies and approaches to enhance the impact of the learning experience. As Crane and Sosulski point out in their chapter, "A shift in perspective—and what an individual then does with their transformed meaning perspective—sets transformative learning apart from other types of learning" (p. 218). The volume's contributions point the way for classroom practitioners to develop and implement new learning tasks that engage learners not only in studying the target language and culture(s) but also in transforming themselves as they do so, enhancing their own sense of compassion and global citizenship as well as their motivation to continue studying the target language after a semester of instruction ends.

The length parameters of this review prevent me from offering even the shallowest analysis of each of the chapters in this outstanding volume. Suffice it to say that the volume includes chapters on language learning as well as on east-west concepts of selfhood, community engagement, service learning, virtual immersion, dual immersion, engagement with migrants and refugees, technology, open-architecture curricular design, and testing and assessment, among others. I confess that I ordered this volume the moment I saw it appear in press and read it cover to cover with great interest as soon as I had it in my hands. Reading it again

for the purposes of this review was just as powerful. The editors of the volume and all the contributing authors are to be commended for their outstanding work, work that has the potential to change our classroom practices—*your* classroom practices—and have an enormous impact on the world language education of all students. It has already had an impact on the way I teach.

Benjamin Rifkin
Fairleigh Dickinson University

Evgeny Dengub and Susanna Nazarova. *Etazhi: Second Year Russian Language and Culture.* Washington, DC: Georgetown University Press, 2021. 412 pages.

The options for second-year Russian textbooks have been very limited, despite a growing number of textbooks at the first-year level and more advanced levels. Этажи fills the need for a stand-alone textbook that can be used for students who have already reached Novice High-Intermediate Low proficiency. What sets Этажи apart is the focus on real-life communication and conversation, and the use of real-life stories, provided by both native speakers of Russian and advanced learners. These written and recorded stories fill the book with relatable content and relevant cultural information, covering topics from dating to holidays to the Russian cafeteria, and serve as the primary linguistic input throughout the book. The topics of the stories are intertwined with the vocabulary and grammar exercises throughout the book, which imparts an authenticity to the activities. This leads to more natural conversations about realistic scenarios, which will attract and keep the attention of students. The book offers a plethora of conversation-based activities, supplemented with vocabulary building activities, grammatical review, and a thorough grammar reference at the end of the book. Этажи will suit the needs of any instructor looking to engage intermediate students (the book could easily be used for second- or third-year courses) with true-to-life conversation topics.

The thematic content includes familiar topics for this proficiency level: family, clothes, health, food, travel, home, school, and work. The organization of the book is novel: there are six units in total, with each

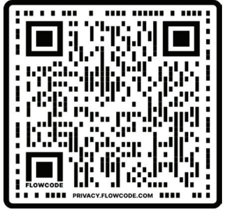
broken into smaller parts. These parts focus on one topic, related to the others in the unit. The first three units have three parts, e.g the first chapter "Семья, Характер, Отношения" while the last three have just two parts, e.g. the final chapter "Учёба, Работа". The parts themselves do not follow a uniform structure, but each begins with a list of vocabulary items that should be familiar to the student, and a list of new words and phrases that will be encountered in this part. The new vocabulary is activated through example sentences for students to comment on, and discussion questions to be completed with a partner. Following the vocabulary activities, the structure of each part varies. There is at least one real-life story, and at least one grammatical topic in every part, both with several related activities. Every chapter includes multiple listening activities, with comprehension questions and follow-up exercises. The audio is available online, both in streaming format and for download; transcripts are available at the end of each chapter. The book balances the daily life in the stories with elements of high culture; each chapter includes a Russian painting by artists like Chagall and Kustodiev, and a short story by such authors as Chekhov, Teffi, and Zoshchenko. The chapters are also supplemented with contemporary authentic materials, such as restaurant menus and magazine articles, and include drawings and photographs of contemporary Russia.

The grammatical elements covered in the book are wide-ranging and focused on the communicative needs of students for the thematic topics. For instance, the words оба/обе are covered in the part on family, as they are frequently used when talking about family. Short form adjectives and imperatives are presented in the chapter on appearance, clothing, and health. Similarly, the more common prefixes for verbs of motion are reviewed in the first half of the book, while the full range of prefixed verbs of motion, including transitive verbs of motion, are reviewed in the second half. One aspect of the book's approach to grammar deserves special recognition: the connection of vocabulary and grammar. The authors have thoughtfully included tricky areas for students, such as expressing the concepts of "different" and "same" in Russian. The reference grammar includes a list of useful phrases for expressing opinions, expressing agreement and disagreement, sequencing information in an argument, etc., which can be used in class discussions and written assignments. Much attention is also given to verb conjugation, with charts to be completed by students throughout each chapter (plus complete charts for many verbs

in the grammar reference), in addition to vocabulary-based activities that put the verb forms into context. On the other hand, the review of cases is largely done in context of the stories or other texts. Students are instructed to identify words and phrases in one or two cases throughout a text, then read about the functions and review the forms of the case(s) in the grammar reference, and finally complete cloze exercises with the cases under review. Instructors who prefer a more drill-oriented approach may find the number of exercises to be insufficient.

Like many newer textbooks, Этажи does away with the stand-alone workbook. The authors have provided a sample schedule of the first chapter for instructors, demonstrating which exercises in the book can be assigned as homework, and which should be done in class. The instructor's materials, available on the publisher's website (http://press.georgetown.edu), also include an answer key and a sample review sheet and test for the first chapter. The website also contains all audio recordings, as mentioned above, as well as links to online flashcard sets for students. The reference grammar at the back of the book is also a valuable resource for students, containing a wealth of information about case, prepositions, adjectives, pronouns, verbal aspect, verbs of motion, time expressions, participles and verbal adverbs, complex sentences, and much more. Indeed, Этажи provides a robust set of material for any intermediate-level course, allowing students to apply the grammar in relevant, real-world scenarios, and to get further acquainted with contemporary Russian language culture through the eyes of native and L2 speakers.

Cori Anderson
Rutgers University



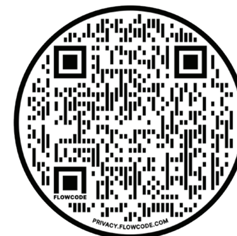
Nominate
outstanding colleagues for

ACTR
Teaching Excellence Awards

Teaching Excellence Awards for **K-12** Teachers (K-8 and 9-12 levels)
Teaching Excellence Award for **Post-Secondary** Instructors
Teaching Excellence Award for **Graduate Student** Instructors

ACTR
Professional Development Fund
in honor of **Olga Kagan**

Two grants up to $300 are awarded annually to help offset the cost of professional development in language pedagogy.
In AY 2022-23 the fund supports **graduate students**.



for more information visit actr.org

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:

☐ AP Test Development $ ____________
☐ ACTR Olympiada $ ____________
☐ Pushkin Endowment $ ____________
☐ Laureate Awards $ ____________
☐ Undesignated gift $ ____________

Please print or type clearly

Total Due: $ ____________

☐ 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 _____________________

INSTITUTIONAL SUBSCRIPTION FORM

(DOES NOT INCLUDE ACTR MEMBERSHIP)

☐ $55 INSTITUTIONS/LIBRARIES WITHIN NORTH AMERICA

☐ $70 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) 833-7523**

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.

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/ACTR
1828 L Street, NW
Suite 1200
Washington, D.C. 20036
Tel: (202) 833-7522
Email: rlj@americancouncils.org
Web: https://scholarsarchive.byu.edu/rlj/

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
americancouncils.org
actr.org