

<h2>Abstract</h2>	
Title	Considering an effective Russian vocabulary learning method employing derivational affixes – Based on linguistic analysis of frequency data from corpora –
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<p><u>Abstract</u></p> <p>This paper examines an effective vocabulary learning method of Russian language employing derivational affixes as the language abounds with morphological methods in word formation. Therefore, vocabulary can be efficiently extended by learning its derivational affixes. This paper discusses four research questions (RQs) to linguistically verify the learning effect and develop the description of Russian derivational affixes:</p> <p>RQ-1: Quantitative confirmation of vocabulary expansion by learning derivational affixes (Chapter V)</p> <p>RQ-2: Selection of derivational affixes worth learning (Chapter VI)</p> <p>RQ-3: Selection of the meanings of the verbal prefix <i>npo-/pro-</i> worth learning (Chapter VII)</p> <p>RQ-4: Description of image schema and radial category of the verbal prefix <i>npo-/pro-</i> (Chapter VII)</p> <p>This paper comprises eight chapters: chapters I to IV introduce and explain necessary information regarding latter analyses (the above-mentioned RQs are discussed in chapters V to VII).</p> <p>Chapter I introduces the background and RQs of this paper in terms of the necessity to learn derivational affixes to expand Russian vocabulary. Chapter II examines word counting units (“token”, “type”, “lemma”, and “word family”). In chapter III, Russian language corpora and their frequency dictionaries are mentioned. Chapter IV discusses which corpus to employ for our RQs.</p>	

Hence, the main (written) and spoken corpora of “Russian National Corpus” (“RNC-M” and “RNC-S”) are employed in the analyses.

Chapter V discusses RQ-1; compared to English, Russian is a more synthetic language in producing concepts and lexemes (they are primarily formed using prefixes and suffixes). Therefore, it is estimated that learners’ vocabulary can be efficiently expanded by learning derivational affixes (5.1., 5.2.), because Russian contains an extensive amount of derivational words. To confirm that linguistically and quantitatively, data of 5,000 most frequent lemmas in RNC-M and RNC-S are re-counted by the “word family” unit and the degree of increase in text coverage is calculated (5.3.). Results reveal that the text coverage of a specific number of words such as 1,000, 2,000, greatly increases by using “word family.”

Table 1. Text coverage by “lemma” and “word family” in RNC-M/RNC-S

	RNC-M			RNC-S		
	Lemma	Word family		Lemma	Word family	
500	53.0%	63.3%	(= 1,212 lemmas)	69.4%	76.2%	(= 1,132 lemmas)
1,000	60.9%	72.1%	(= 2,533 lemmas)	75.3%	81.4%	(= 2,364 lemmas)
1,500	65.9%	76.1%	(= 3,627 lemmas)	78.3%	83.5%	(= 3,400 lemmas)
2,000	69.4%	78.2%	(= 4,397 lemmas)	80.3%	84.6%	(= 4,206 lemmas)
2,500	72.0%	79.3%	(= 4,927 lemmas)	81.7%	85.3%	(= 4,801 lemmas)

This result demonstrates the effectiveness of learning derivational affixes for expanding Russian vocabulary as it implies that derivatives are contained within high frequency words.

However, Russian has innumerable derivational affixes. From the applied linguistics perspective, they are divided into “more frequently used,” “frequently used,” and “less frequently used” in actual language usage. Therefore, chapter VI is devoted to acquiring objective evidence of which derivational affixes are frequently used (affixes learners often encounter that are effective for vocabulary expansion). In order to select affixes worth learning, we calculate the frequency (total frequency of derivatives that contain the affixes) and productivity (total number of derivatives with them) of each affix recorded in 5,000 high frequent words in the RNC-M and RNC-S (6.2.). The following derivational affixes indicate a high value of the two criteria: prefixes – *no-/po-*, *c-/s-*, *в-/в-*, *вы-/вы-*, *при-/при-*, *про-/про-*, *у-/у-*, *не-/не-*, *ни-/ни-*; suffixes – *-о/-о* (adverb), *-а/-а-*, *-ва/-ва-*, *-ива/-ива-* (verb), zero suffix (noun), *-н/-н-*, *-ск/-ск-*, *-ов/-ов-* (adjective), and so on. The list obtained from this analysis is a basis for considering which affixes to learn for vocabulary expansion.

However, Russian derivational affixes, particularly verbal prefixes, are exceedingly ambiguous (learning their meanings are important in order to understand the derivatives since they display quite a high frequency and productivity in our analysis). While considering a truly effective vocabulary learning method, it is desirable to select not only derivational affixes with high learning priority, but also the meanings with which the affixes are frequently attached to base words. Therefore, in chapter VII we select the meanings worth learning for the prefix *npo-/pro-* whose frequency and productivity are very high in the previous chapter's analysis, describing the semantic classification of *npo-/pro-* in detail, ultimately presenting nine meanings (7.1., 7.2.).

Table 2. Nine meanings of the prefix *npo-/pro-* in our analysis

	Term	Meanings	Base verbs and Prefixed verbs	
1	THROUGH	Action of moving through something or penetrating something	ломать break	проломать bore
2	PASS	Action of passing by something	ехать go	проехать go by...
3	MISS	Action of missing something due to doing other things or not doing it well	спать sleep	проспать miss...due to being asleep
4	DISTANCE	Action of moving through a certain distance	бежать run	пробежать run through a certain distance
5	DURATION	Action of continuing during a given period	сидеть sit	просидеть sit for a certain time
6	EXTENSION	Action of extending (something)	тянуть pull	протянуть extend
7	THOROUGH	Action of doing something thoroughly	варить boil	проварить boil enough
8	EXPEND	Action of exhausting or spending all money	пить drink	пропить waste money on drinking
9	HARM	Action of doing harm to something	студить cool	простудить let catch cold

Subsequently, we identify prefixed verbs with *npo-/pro-* recorded in the self-made corpus with one million words. Finally, measuring the frequency of each meaning in the corpus, we confirm which *npo-/pro-* meaning is attached to these verbs based on the context (7.3.). The results are provided below.

Table 3. Frequency of each *npo-/pro-* meaning in a one million words corpus

Meanings	Frequency	Meanings	Frequency
1. THROUGH	688	6. EXTENSION	219
2. PASS	68	7. THOROUGH	1,066
3. MISS	60	8. EXPEND	5
4. DISTANCE	459	9. HARM	32
5. DURATION	228	10. UNKNOWN	41

Results reveal that the meanings “THROUGH,” “DISTANCE,” and “THOROUGH” should be first presented to learners given their high frequency. The subsequent meanings to be introduced are “DURATION” and “EXTENSION”, followed by “PASS” and “MISS”. The analysis results are the basis for the order in which to present meanings.

Furthermore, we describe the image schemas and radial category employed in cognitive linguistics (7.4.) for the prefix *npo-/pro-* in order to reduce the learning burden of studying individual meanings. Image schemas and radial category can be employed to learn ambiguous language units such as prefixes. The description of *npo-/pro-* in this chapter is significant for future empirical research.

Chapter VIII summarizes the above-mentioned results and states future tasks.