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THE STATE OF THE PERMIC LANGUAGES ON THE BASIS
OF THE TERMINOLOGICAL DICTIONARY PROJECT
"TERMINOLOGIA SCHOLARIS * ШКОЛЬНАЯ ТЕРМИНОЛОГИЯ"

Abstract. On the initiative of the institute Collegium Fenno-Ugricum, in 2010–2011 the school terminology of ten subjects in five Finno-Ugric languages of Russia (Erzya, Moksha, Mari, Komi, Udmurt) has been elaborated to provide means for writing school books in the mother tongue, thus providing for vernacular instruction in these subjects. By now, the analysis of the 5 × 10 terminological dictionaries has been completed. The article presents the results on the Permic languages.

Keywords: Komi, Udmurt, terminology, project "Terminologia scholaris".

1. Initial remarks

As reported in *Linguistica Uralica* (Pusztay 2014) — on the initiative of the institute Collegium Fenno-Ugricum in 2010–2011 the school terminology of 10 subjects in five Finno-Ugric languages of Russia (Erza, Moksha, Mari, Komi, Udmurt) has been elaborated as an EU supported project, the results of which have been published in 5 × 10 = 50 terminological dictionaries, 50–100 pages each.

The aim of the project was to create the conditions of teaching all subjects in the mother tongue, i.e. a school terminology. Since the closing of national schools in the 1960s teaching children their mother tongue has been mainly reduced to the first few years of village primary schools, school subjects are taught in Russian. As early as in the 1920s–1930s the terminology of school subjects has been worked out in Finno-Ugric languages of Russia, which our contemporary authors have probably relied on.

The ever diminishing usage of Finno-Ugric languages will sooner or later lead to giving them totally up, making a contribution to the language-eliminating process of globalisation. At present the preservation, the extension of usage and the improvement of attitudes to the above mentioned languages depends largely on schools rather than on families, among other reasons because of the high prestige of a language of education.

After the publication of the terminological dictionaries their linguistical analysis has also been done (Pusztay 2015a; Пустай 2013a; 2013b; 2014; 2015a; 2015b). For the summary of the analysis of the Mordvin languages see Pusztay 2015b, for the Mari analysis Pusztay 2016.

Komi terminological dictionaries compiled within the framework of the project are:

Г. В. П у н е г о в а, Словарь лингвистических терминов на коми языке для общеобразовательных школ — Шёр велӧдчанінъяслы кыв терминъяслӧн кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 37 pp.

Е. В. Остапова, В. В. Филиппова, Словарь терминов по литературе на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы литература терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 50 pp.

Н. В. Остапов, Словарь терминов по истории на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы история терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 77 pp.

Н. В. Остапов, Словарь терминов по обществознанию на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы йёзкотыр йылысь тёдём терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 37 + 9 pp.

Н. В. Колегова, В. Ф. Маркова, А. Г. Мусанов, Словарь географических терминов на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы география терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 45 pp.

А. Н. Ракин, Словарь терминов по биологии на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы биология терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 39 pp.

А. А. Кокшарова, М. С. Федина, Словарь химических терминов на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы химия терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 43 pp.

М. В. Кузьбожева, Словарь физических терминов на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы физика терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 45 pp.

Н. А. Габова, Л. Н. Мишарина, Словарь математических терминов на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы математика терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 42 pp.

Е. В. Остапова, Словарь терминов по информатике на коми языке для общеобразовательных школ — Шёр велёдчанінъяслы юёртданбур терминъяслён кывкуд, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 33 pp.

Udmurt terminological dictionaries compiled within the framework of the project are:

Н. А. Сергеева, Словарь лингвистических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы кылтодон удыскылъёсын удмурт кылын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 39 pp.

Л. Н. Федорова, Словарь литературных терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын литература удыскылъёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 63 pp.

О. Б. Стрелкова, Словарь исторических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын истори удыскылъёсын кылбугор, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 65 pp.

О. А. Тронина, Словарь терминов по обществознанию на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын обществознания удыскылъёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 44 pp.

Н. Н. Тимерханова, Словарь географических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо

школаослы удмурт кылын географи удыскылгёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 67 pp.

О. Б. Стрелкова, Словарь биологических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын биологи удыскылгёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 40 pp.

О. А. Тронина, Словарь химических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын химия удыскылгёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 39 pp.

В. Л. Шибанов, Словарь физических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын физикая удыскылгёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 46 pp.

Н. Н. Тимерханова, Словарь математических терминов на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын математика удыскылгёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 45 pp.

А. В. Егоров, Словарь терминов по информатике и информационным/компьютерным технологиям на удмуртском языке для общеобразовательных школ — Огъядышетсконъя шоръёзо школаослы удмурт кылын информатика но информационной/компьютерной амалгёсыя удыскылгёсын кыллюкам, Сыктывкар—Ижевск—Йошкар-Ола—Саранск—Бадачоньтомай 2011. 46 pp.

The analysis of the terms uses two viewpoints: the origins and the structure of the terms.

As for their origins terms can be the own words of the given language, international words (which naturally arrived in the Fenno-Ugric languages with Russian mediation), can be russified international words (international > Russian, e.g. *mobile* > *мобиль-ность*), or Russian ones. The study of compounds and expressions of several words also uses the combinations of this three-fold division (e.g. international + international > Russian, international + Russian, international + own, international + international > Russian + own, Russian + own, Russian + international > Russian etc.).

As for the structure of terms they can be of one or more elements. One-element terms can be stem words, derivatives or compounds. Language economy plays a great role especially in creating terms (Galinski, Cluver, Budin 1999 : 2209). The fewer words a term consists of the more succesful it is, i.e. the closer the word/term proportion is to 1, the better it is (Hoffmann 1999 : 1542).

2. The analysis of the Komi material

2.1. Classification of terms according to origin

subject	number of terms	The types of terms according to origin (%)					
		0	1	2	3	4	5
language	325	61.2	9.8	3.4	4.3	19	19.6
literature	334	47.9	24.3	5.7	6.6	38.7	13.5
history	447	52.1	14.7	1.6	10.1	29.9	17.8
social studies	288	75	11.1	2.4	1	14.5	10.3
geography	452	54.4	19	2.4	2.7	26.5	18.8
biology	397	85	7.1	1.8	2	11.2	3.6
physics	297	36.7	11.8	1.7	1	18.3	45.2
chemistry	325	28	21.5	4.6	4.9	37.1	34.7
mathematics	349	28.7	8.9	0.3	3.7	19.8	51.7
information technology	263	31.2	31.6	1.5	4.2	41.9	27.1

The types of terms according to origin are:

0 = own language

1 = international

2 = russified international

3 = Russian

4 = hybrid terms without an own language word

5 = hybrid terms containing an own language element

The order of subjects on the basis of the percentage of own language element terms:

biology	85%
social studies	75%
language	61.2%
geography	54.4%
history	52.1%
literature	47.9%
physics	36.7%
information technology	31.2%
mathematics	28.7%
chemistry	28.0%

The order of subjects on the basis of terms of exclusively foreign origins:

biology	11.2%
social studies	14.5%
physics	18.3%
language	19.0%
mathematics	20.1%
history	20.9%
geography	26.5%
chemistry	37.1%
literature	38.7%
information technology	42.9%

Hybrid terms containing an own language element:

mathematics	50.8%
physics	43.5%
chemistry	32.9%
information technology	22.9%
geography	18.4%
language	18.1%
history	17.2%
literature	12.9%
social studies	10.0%
biology	3.6%

Hybrid terms without an own language word:

biology	11.2%
social studies	14.5%
physics	18.3%
language	19.0%
mathematics	20.1%
history	20.9%
geography	26.5%
chemistry	37.1%
literature	38.7%
information technology	42.9%

2.2. Terms according to structure

2.2.1. The realization of language economy: the proportion of words/terms

a) the amount of native language terms (in brackets the corresponding Russian terms):

literature	1.3 (1.2)
language	1.6 (1.5)
information technology	1.6 (1.7)
biology	1.7 (1.3)
social studies	1.9 (1.3)
geography	1.9 (1.5)
chemistry	1.9 (1.4)
history	2.1 (1.4)
physics	2.1 (1.9)
mathematics	2.2 (2.2)

b) total number of terms:

literature	1.4
language	1.6
biology	1.7
information technology	1.7
social studies	1.8
geography	1.8
history	1.9
chemistry	2.0
physics	2.2
mathematics	2.4

2.2.2. The structure of all terms

Termini containing one, two, three etc. elements (%)

	1	2	3	4	5	6	7	8	9
language	44.3	47.7	6.8	1.2	–	–	–	–	–
literature	72.5	21.9	5.1	0.6	–	–	–	–	–
history	41.8	33.6	18.3	5.8	0.4	–	–	–	–
social studies	45.1	37.2	13.5	3.5	0.3	0.3	–	–	–
geography	45.8	36.1	12.4	3.1	1.5	0.9	0.2	–	–
biology	45.1	43.1	9.3	2.5	–	–	–	–	–
physics	24.9	44.8	20.9	5.1	2.4	1.3	0.4	–	–
chemistry	41.8	34.2	15.1	4.3	3.4	0.3	0.6	–	0.3
mathematics	17.8	45	24.4	8.9	2.6	0.9	0.6	–	–
information technology	52.5	35.7	8.4	2.7	0.8	–	–	–	–

2.2.3. The structure of purely Komi terms

Termini containing one, two, three etc. elements (%)

	1	2	3	4	5	6
language	44.7	47.7	6.5	1	–	–
literature	73.8	22.5	3.1	0,6	–	–
history	25.3	44.2	22.7	7,7	–	–
social studies	41.2	40.3	13.4	4,2	0,5	0,5
geography	41.5	40.2	13	1,6	2,8	0,8
biology	40.1	48.1	9.7	2,1	–	–
physics	21.1	54.1	21.1	3,7	–	–
chemistry	40.7	38,5	14.3	4,4	2,2	–
mathematics	23	48	17	9	3	–
information technology	51.2	37.8	7.3	3,7	–	–

2.2.4. The order of subjects on the basis of the one component native language terms (%)

literature	73,8
information technology	51,2
language	44,7
geography	41,5
social studies	41,2
chemistry	40,7
biology	40,1
history	25,3
mathematics	23,0
physics	21,1

3. Parallelisms

1 = both native language

2 = native language — loanword

3 = native language — hybrid term with a native component

4 = loanword — hybrid with a native component

5 = both are hybrids with a native component

	1	2	3	4	5
language	9	14	14	2	–
literature	13	7	4	1	1
history	–	4	–	–	–
social studies	–	6	–	–	–
geography	5	4	–	–	–
biology	32	8	–	–	–
chemistry	–	6	3	6	–
physics	–	–	–	1	–
mathematics	1	3	–	–	–
information technology	1	4	–	2	–

4. Closing remarks

Terminological activity in the Komi language is outstanding. On the basis of native language terms Komi comes to the first place among the five Finno-Ugric languages studied. In details:

1. place: history, social studies, biology, chemistry, information technology
2. place: language, literature, geography, physics, mathematics

On the basis of one-component native language terms Komi comes to the fifth place. In details:

1. place: literature
2. place: language
3. place: chemistry, information technology
4. place: geography, physics, mathematics
5. place: history, social studies, biology

5. The analysis of the Udmurt material

5.1. Classification of terms according to origin

subject	number of terms	The types of terms according to origin (%)					
		0	1	2	3	4	5
language	279	83.9	3.9	2.2	2.5	–	7.5
literature	324	59.6	17.3	4	2.2	–	16.9
history	437	20.6	32.3	4.3	23.1	0.9	18.8
social studies	289	66.1	18.7	4.5	1.4	–	9.3
geography	538	54.6	18.8	2.4	1.3	0.7	22.2
biology	390	75.9	10.5	3.3	3.6	0.3	6.4
physics	307	38.8	11.4	2	0.7	2	45.1
chemistry	154	27.3	24.7	9.7	1.9	0.6	35.8
mathematics	349	30.1	7.7	0.3	2.6	2.9	56.4
information technology	284	22.2	30.3	4.2	3.2	5.3	34.8

The types of terms according to origin are:

0 = own language

1 = international

2 = russified international

3 = Russian

4 = hybrid terms without an own language word

5 = hybrid terms containing an own language element

The order of subjects on the basis of the percentage of own language element terms:

language	83.9%
biology	75.9%
social studies	66.1%
literature	59.6%
geography	54.6%
physics	38.8%
mathematics	30.1%
chemistry	27.3%
information technology	22.2%
history	20.6%

The order of subjects on the basis of terms of exclusively foreign origins:

language	8.6%
mathematics	12.5%
physics	16.1%
biology	17.7%
geography	23.2%
literature	23.5%
social studies	24.6%
chemistry	36.9%
information technology	42.9%
history	60.6%

Hybrid terms containing a native language element:

mathematics	57.4%
physics	45.1%
chemistry	35.8%
information technology	34.9%
geography	22.2%
history	18.8%
literature	16.9%
social studies	9.3%
language	7.5%
biology	6.4%

Hybrid terms without a native language word:

language	0%
literature	0%
social studies	0%
biology	0.3%
chemistry	0.6%
geography	0.7%
history	0.9%
physics	2.0%
mathematics	2.9%
information technology	5.3%

5.2. Terms according to structure

5.2.1. The realization of language economy: the proportion of words/term

a) the amount of native language terms (in brackets the corresponding Russian terms):

social studies	1.4 (1.3)
biology	1.5 (1.4)
literature	1.6 (1.2)
geography	1.6 (1.6)
language	1.7 (1.6)
history	1.8 (1.6)
information technology	1.8 (1.8)
chemistry	2.0 (1.6)
physics	2.0 (1.9)
mathematics	2.3 (2.1)

b) total number of terms:

history	1.4
social studies	1.4
biology	1.4
literature	1.5
geography	1.6
chemistry	1.7
language	1.7
information technology	1.9
physics	2.1
mathematics	2.5

5.2.2. The structure of all terms

Termini containing one, two, three etc. elements (%)

	1	2	3	4	5	6	7	8
language	44.1	44.8	9.7	1.1	0.4	–	–	–
literature	59.0	29.6	9.9	1.5	–	–	–	–
history	67.0	25.2	6.4	0.9	0.5	–	–	–
social studies	64.7	31.5	3.8	–	–	–	–	–
geography	53.3	34.9	8.4	3.2	–	0.2	–	–
biology	65.4	27.7	5.6	1.0	–	0.3	–	–
physics	24.8	47.6	21.5	2.9	2.3	1.0	–	–
chemistry	46.1	35.7	12.3	2.6	1.9	1.3	–	–
mathematics	16.0	46.1	22.6	8.3	3.4	2.0	–	1.4
information technology	41.2	38.4	14.1	3.2	2.5	0.7	–	–

5.2.3. The structure of purely Udmurt terms

Termini containing one, two, three etc. elements (%)

	1	2	3	4	5	6
language	42.3	47.0	9.4	0.9	0.4	–
literature	56.0	32.6	10.4	1.0	–	–
history	40.0	44.4	12.2	2.2	1.0	–
social studies	60.7	35.6	3.7	–	–	–
geography	55.4	31.3	8.8	4.4	–	–
biology	62.5	29.4	6.8	1.0	–	0.3
physics	22.7	55.5	20.2	1.7	–	–
chemistry	38.1	40.5	14.3	2.4	–	4.8
mathematics	20.0	49.5	18.1	6.7	4.8	1.0
information technology	42.9	42.9	11.1	1.6	1.6	–

5.2.4. The order of subjects on the basis of the one-component native language terms (%)

biology	62.5
social studies	60.7
literature	56.0
geography	55.4
information technology	42.9
language	42.3
history	40.0
chemistry	38.1
physics	22.7
mathematics	20.0

6. Parallelisms

- 1 = both native language
- 2 = native language – loanword
- 3 = native language – hybrid term with a native component
- 4 = loanword – hybrid with a native component
- 5 = both are hybrids with a native component
- 6 = both are loanwords

	1	2	3	4	5	6
language	5	4	1	–	–	–
literature	2	–	–	–	–	–
history	1	3	–	–	–	–
social studies	3	–	–	–	–	–
geography	13	19	1	–	–	–
biology	25	3	1	–	–	–
chemistry	–	3	1	–	–	–
physics	2	–	–	–	–	–
mathematics	–	1	–	–	4	–
information technology	–	5	6	7	8	1

7. Closing remarks:

Udmurtian terminological activity is outstanding. On the basis of native language terms Udmurt comes to the second place among the five Finno-Ugric languages studied. In details:

1. place: language, literature, geography, physics, mathematics
2. place: social studies, chemistry, information technology
3. place: history, biology

On the basis of one-component native language terms Udmurt takes the second place. In details:

1. place: social studies, geography, biology
3. place: language, history, physics
4. place: chemistry, information technology
5. place: literature, mathematics

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ЯНОШ ПУСТАИ (Нитра)

**СОСТОЯНИЕ ПЕРМСКИХ ЯЗЫКОВ
НА ОСНОВЕ ПРОЕКТА ТЕРМИНОЛОГИЧЕСКИХ СЛОВАРЕЙ
«TERMINOLOGIA SCHOLARIS * ШКОЛЬНАЯ ТЕРМИНОЛОГИЯ»**

По инициативе института NH-Collegium Fenno-Ugricum в 2010—2011 году была выработана терминология 10 школьных предметов на пяти финно-угорских языках (коми, марийский, мокшанский, удмуртский и эрзянский) Российской Федерации, чтобы обеспечить создание учебников и преподавание этих предметов на родном языке. Сделан анализ 5 × 10 терминологических словариков. В настоящей статье публикуются результаты анализа по пермским языкам.