

МИНИСТЕРСТВО НА ОБРАЗОВАНИЕТО И НАУКАТА НА РЕПУБЛИКА БЪЛГАРИЯ  
КИРИЛО-МЕТОДИЕВСКИ НАУЧЕН ЦЕНТЪР ПРИ БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТЕ  
ИЖЕВСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ ИМ. М. Т. КАЛАШНИКОВА  
НАУЧНОЕ СООБЩЕСТВО “ПИСЬМЕННОЕ НАСЛЕДИЕ”  
DIGITAL MEDIEVALIST SCHOLARLY COMMUNITY  
ФОНДАЦИЯ „УСТОЙЧИВО РАЗВИТИЕ НА БЪЛГАРИЯ“

**Писменото наследство  
и информационните технологии**

El’Manuscript–2014

Материали от V международна научна конференция  
Варна, 15–20 септември 2014 г.

София · Ижевск  
2014

Сборникът е издаден с финансовата подкрепа на Министерството на образованието и науката на Република България по процедура за подкрепа на международни научни форуми.

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**Писменото наследство и информационните технологии** [Текст] : материали от V международна науч. конф. (Варна, 15–20 септември 2014 г.) / отг. ред. В. А. Баранов, В. Желязкова, А. М. Лаврентъев. — София ; Ижевск, 2014. — 448 с.

Сборникът съдържа материали от конференция, посветена на разработването и създаването на съвременни средства за съхраняване, описване, обработка, анализ и публикуване на ръкописни и старопечатни книжовни паметници и исторически извори, а също и на въпросите за подготвянето на електронни ресурси в областта на хуманитаристиката и тяхното използване в научните изследвания и преподаването.

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ISBN 978–954–9787–25–2

## Old Church Slavonic Concordances in Language Teaching and Learning

Svetlana Ahlborn

*Old Church Slavonic, concordance-aided teaching of ancient languages, TITUS, AntConc*

The present study examines how concordances can be applied in the teaching and learning of Old Church Slavonic. The essay gives a description of selected Old Church Slavonic resources, presents free concordance programs and demonstrates the teaching method used, including examples of concordance use in the classroom. Finally, recommendations are made that are necessary for the successful implementation of the corpus-aided teaching of ancient languages.

### *Introduction*

Studying an ancient language requires learning skills in critical analysis and the reading of texts, as well as in becoming accustomed to aspects of palaeography, historical phonology, morphology and grammar. Consequently, a teaching approach using concordance tools can be regarded as an additional and effective step in helping a student become acquainted with the texts of a(n ancient) language.

### *Corpus data*

The Old Church Slavonic (OCS) resources for the syllabus were taken from the TITUS database. TITUS (Thesaurus Indogermanischer Text- und Sprachmaterialien) began development in 1987 thanks to the effort of Jost Gippert and has existed in its online form (<<http://titus.uni-frankfurt.de>>) since 1994.

The OCS texts were originally written in Cyrillic and/or Glagolitic. The TITUS database comprises texts in Cyrillic (Codex Suprasliensis, Sava's book, Vita Constantini and Vita Methodii) and texts in Glagolitic (The Kiev Folia, Codex Assemanianus and Codex Marianus).

For the most part, these resources are freely available. These texts, which constitute the oldest of OCS, are used in language teaching in order to explain orthographical, grammatical, and other aspects of OCS, and they form an integral part of the typical syllabus. Verses of TITUS texts are cross linked with each other and with parallel passages of texts of the same genre in other languages. Taking the OCS version of the Codex Marianus as an example, one can compare parallel text passages within Codex Zographensis, Codex Assemanianus, Sava's book and the Russian and Old Greek New Testaments.

All texts are encoded in HTML and in XML (the latter appearing online soon) using UTF-8 encoding. Hence, the TITUS database with its powerful online search opportunities is a perfect prerequisite in the course of preparing language lessons by using data-driven learning.

In order to show the types of exercises that can be created using this resource, the advantages of using concordances should be summarized first.

#### *Concordances*

Concordance tools allow one to search quickly for a specific word form in a digitalized text. The search result of a concordance is usually represented in the so-called KWIC view (“key word in context”), with search results located in the middle of the contextual line. The approach of using concordances in teaching and learning of a language is called “data-driven learning” (DDL) [Johns 1986, 151–162].

In order to work with concordances, language learners should learn the “strategy of observation” [Johns 1988, 24]. Based on the text samples prepared by a teacher, learners have to draw a conclusion by themselves: they have to find out the regularity and to formulate a grammatical rule. This approach should promote quick understanding and aid in memorizing of the aspects of the unfamiliar language.

Despite the apparent benefits of language corpora, very few teachers are currently using them in their classrooms, especially in the teaching of ancient languages.

#### *AntConc in comparison to other programs*

There exist at least three corpus linguistics programs that can be used for carrying out linguistic research as well as for tailor-made solutions and data-driven learning: AntConc 3.2.4, Compleat Lexical Tutor 6.2 and TextSTAT 2.9. AntConc seems to have advantages over the others: it can be downloaded and installed on a computer without any additional software packages (such as ActivePython or ActivePerl), and it allows the use of individual fonts. Due to these advantages AntConc has been chosen for the preparation of teaching materials.

The following examples present the concordance printouts, which can be used during lessons of Old Church Slavonic. Two main approaches in the creation of exercises can be distinguished: inductive and deductive.

#### *Inductive teaching method*

In the inductive approach, a task based on concordance printouts is initiated by the teacher. Students have to read the concordance lines (usually between 6 and at most 15 to achieve clear arrangement), classify the samples and, finally, generate a language rule, responding at the same time to the main question of the exercise. For example, students were asked to determine and explain the differences between the written variants ‘ѣко’ (ěko) and ‘яко’ (jako), comparing a concordance printout including samples taken from different resources (Fig. 1).

Students have to look through the lines of the concordance and notice that the writing with [я] (ja) is characteristic of the texts that were originally written in Cyrillic. This exercise promotes further discussion of whether the Glagolitic alphabet included the iotated letters and, if not, what was used instead.

№	КВС	Фр
1	и зъваныймъ · градѣте ꙗко оуже оуготована сжтъ всѣ ·	Assemanianus.txt
2	и зъваныймъ · градѣте ꙗко оуже оуготована сжтъ всѣ ·	Assemanianus.txt
3	шти зъванымъ градѣте · ꙗко оуже готова сжтъ всѣ ·	Marianus.txt
4	шти зъванымъ градѣте · ꙗко оуже готова сжтъ всѣ ·	Marianus.txt
5	ещи зъванымъ · придѣте ꙗко оуже оуготована сжтъ всѣ ·	Ostromirovo.txt
6	ещи зъванымъ · идѣте ꙗко оуже готово · естъ все ·	Verse: 18 Savvina_kniga.txt
7	че зъваныймъ градѣте · ꙗко оуже готова сжтъ всѣ ·	Zographensis.txt
8	и зъваныймъ · градѣте ꙗко оуже оуготована сжтъ всѣ ·	Zographensis.txt

Figure 3: Example of inductive exercise: “Differences in letter writing”.

#### Deductive teaching method

In the deductive approach, an exercise starts with a previously learned rule. After that, students have to observe the prepared samples and explain the irregularities. For example, when studying pronoun declination, students learn that there exist two forms of pronouns for dative and accusative, one of which (the shorter one) is enclitic. Then the students are confronted with the concordance printout with the task of looking through the lines and establishing whether there are irregularities to the rule (Fig. 2).

№	КВС
1	· Verse: 28   Mt., 11, 28 придѣте къ мнѣ вси троуждажшеи са · и обръменеи
2	ланияше са · емоу гла ги · аще хошеши можеши ма истрѣбити ·
3	же петръ рече · емоу ги · аще ты еси повели ми прити къ себѣ · Verse: 25 · она же
4	ишпѣвши поклони са · емоу глжши · ги помози ми · Verse: 13 · и рече ꙗс сътънко
5	· 4, 10 тогда рече · емоу ꙗс · иди за ма согоно · псай бо · естъ гоу боу тво · емоу покл
6	шеши статирь · ть възми и даждь · имъ · за ма · и за са · Verse: 2   Mt., 8, 2 и се

Figure 4: Example of deductive exercise: “Irregularities in syntactical usage of personal pronouns”.

The aim of the exercise is to discover that pronouns like ‘ми’ (mi) (dative) were enclitics and did not occur with prepositions, and that pronouns like ‘ма’ (me) (accusative) could occur with and without prepositions and also appeared in positions after proclitical prepositions. With this goal in mind, students should observe the left context (coloured red in Fig. 2).

Depending on the students’ computer and corpus literacy, further exercises can be proposed. The students can install a concordance program and work by themselves with the texts proposed by the teacher.

*Resources and concordance software recommendations*

Finally, one of the goals of this paper was to offer hands-on recommendations that would help language teachers develop engaging lessons of ancient languages using concordancing software.

*Resource citation*

For the use of concordances in the classroom, it is of great importance for the user to be able to copy excerpts to use as quotations elsewhere. A question for resource developers is how large citation abstracts should be allowed to be.

*Resource reproduction*

Digitized resources should attempt to reproduce original texts as faithfully as possible, using adequate encoding. Exercises, formulated as concordances, can be effectively supplemented through work with (digital) facsimile versions.

*Resource observation*

It might be desirable to save the user's search history because it might contain word forms that would be useful in developing teaching material.

*Concordance software recommendations*

Having an integrated virtual keyboard—instead of using a separate character map application—would be preferable to enable the user to type the Unicode characters directly.

The KWIC display might be improved by employing different font styles (such as bold, italics and underline) in addition to highlighting via different colours. This feature can be valuable when teachers are preparing concordance lines to hand out to students.

Creating exercises using the material of corpus resources is a time-consuming task. It requires careful selection of data, additional editing of resources and the selection of settings in an external program. An ideal solution would be an interface that is integrated directly with the annotated resource, allowing one to download text passages as a virtual subcorpus according to the desired task and to give the results back as concordances.

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