



USING OF DIGITAL
TECHNOLOGIES IN
LINGUISTICS
AND LANGUAGE TEACHING
AND LEARNING

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Active development of modern society, demand for new knowledge from various fields of science and technology have led to widespread involvement and using in higher education, in particular in linguistics and language teaching and learning, innovative information and communication technologies (ICT) and tools. The digitalization of social environments has made it crucial to pinpoint the possibilities of digital teaching and learning in the context of language education.

The main challenges are

forming in students skills to use information technologies in the process of teaching, in particular in linguistics, in the learning of a native and a foreign language

creating and editing documents, making presentations

effectively searching for information in global network

working with electronic dictionaries and databases

acquainting students with the elements of machine translation

The main goal is using innovative ICT to solve linguistic and didactic tasks.

We will consider the using of digital technologies in linguistics and language teaching and learning, although this division is quite conditional, because learning and teaching of language and the linguistics researching as a science of language are very interrelated concepts.

USING OF DIGITAL TECHNOLOGIES IN LINGUISTICS

Computer linguistics is the most sensitive and mostly dependent on the ICT.

Computer linguistics combines different fields of science. These include machine translation, computer dictionary, the creation of national machine funds and national corpuses, and so on. The issues learned by computer linguistics can be grouped as follows [3, p. 698; 5, p. 5]:

- Processing of the natural language (This provides syntactic, morphological, semantic analysis of the text.);
- Automatic translation systems of texts;
- Selection of facts, information, information from texts;
- Creation of expert systems-knowledge system;
- Creation of questionnaires (dialogue);
- Optical recognition of symbols. (For example: Fine Reader);
- Automatic speech recognition;
- Automatic speech synthesis;
- Development of information retrieval systems;
- Corpus linguistics (including the creation and use of electronic corpus of texts);
- Creation of electronic dictionaries.

The information search system, based on the electronic collection of texts in a particular language, is called **corpus**. The language of the national corpus, at a certain stage of its existence, represents all of its variants. Corpus linguistics is a field of linguistics dealing with the creation and use of text cores. The creation of national language corpus that incorporates all the peculiarities of the language should be one of the primary tasks facing linguistics. Language corpus, in turn, is subdivided into phonetic subcorpus, lexicographic subcorpus, subcorpus of dialect texts, and so on, which facilitates the search process for linguistic researchers [3, p. 700].

For example, **GRAC** (*Maria Shvedova, Ruprecht von Waldenfels, Sergiy Yarygin, Andriy Rysin, Vasyl Starko, Tymofij Nikolajenko et al. (2017-2022): GRAC: General Regionally Annotated Corpus of Ukrainian. Electronic resource: Kyiv, Lviv, Jena. Available at uacorporus.org*).

General Regionally Annotated Corpus of Ukrainian (GRAC) is a large representative collection of texts in Ukrainian accompanied by a program that enables customization of subcorpora, searching words, grammatical forms and their combinations as well as post-processing of the query results. The query can be sorted, balanced samples can be extracted and different statistical information collected.





The corpus is meant for linguistic research in grammar, lexicon, history of written Ukrainian as well as for use in preparing dictionaries and grammars.

The corpus can be used for advanced study of the language as well as for writing textbooks, learner's dictionaries and exercises using examples from real texts, taking into consideration the frequencies, collocations etc.

The corpus does not represent the standard normalized language; it includes words and word combinations that do not belong to the present-day standard norm.

The corpus encompasses the timespan between 1816 and 2021 and includes more than 90 thousand texts by about 26 thousand authors [1].

USING OF DIGITAL TECHNOLOGIES IN LANGUAGE TEACHING AND LEARNING

The use of new information technology in teaching allows the student to be considered as a central figurehead of the educational process and leads to a change in the style of the relationship between its subjects. At the same time, the teacher ceases to be the main source of information and occupies the position of the person who organizes and controls the independent and cognitive activities of the students.

The teachers should not necessarily become the experts in technology. However, they should possess knowledge of digital components of the learning and teaching process so that they may increase the students' interest in following it. Importantly, the teachers should become the facilitators and the guides of the education process rather than the mere knowledge transmitters.

A very valuable tool for language learning is the online language training platform. Innovative online platforms and digital technologies in professional training in linguistics can be classified into:

modern linguistic
multimedia
laboratories

learning content
management (LCMS)
and learning
management (LMS)
systems

massive open online
courses

software
applications

videoconferencing
software

social media



For example, **LMS** or **LCMS** works as a school's educational and administrative center, effectively synchronizing devices so that learning can be undertaken from anywhere the student wishes. These systems are aimed at making study time more flexible so that the students may efficiently organize their learning and successfully achieve learning goals. The most typical activities of such learning include engaging in discussions with their peers, taking online tests and quizzes, accessing course syllabi, grade charts, learning audio and video materials, etc. Importantly, linguistics students may use digital technologies to prepare group and individual projects, presentations, reports [2, p. 128-129].





For example, **Moodle** (<https://moodle.org/?lang=uk>) is one of the famous online platform in Ukraine. Moodle LMS has a new personality and a redefined user experience that improves online teaching and learning for educators, learners and administrators.

The most popular educational online platforms among Ukrainians, which also cover language and linguistic tasks, are: Prometheus, EdEra, WiseCow, Українська команда Google, BYM online, EduHub, Impactorium, Coursera, TED, ПостНаука, Khan Academy, Stepik.



CONCLUSION

Information technology has a direct impact on the development of linguistic science. There are two potential roles for ICT in linguistics: as a means of developing and testing models and as a means of gathering and analysing data. For example, one may use a computer to help make some model of word formation properly specific and also to gather and analyse some data on word forms. Data, or corpus, work is a natural arena for IT: computers can rapidly match, sort, count and so forth vast volumes of material; and as these are increasingly text that is already machine-readable, so there is no data-entry effort for ICT the linguist [4, p. 109-111].

The using of modern information technology in language teaching and learning allows to update and to intensify the educational activities of students, save time, organize individual and group classes, monitor results work, effectively use world experience, create conditions for practical acquisition of knowledge, formation of skills, effective implementation of language education, especially in the context of the COVID-19 pandemic and the war in Ukraine.

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