DESIGNING THE LINGUISTIC DATABASE
“POLITICAL NEOLOGISMS IN ENGLISH”

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Purpose is to study the stages of designing a linguistic database “Political neologisms in English”.

Methods: methods of empirical research (observation, comparison, modeling), methods of the theoretical level (abstraction, analysis and synthesis, the method of ascent from the abstract to the concrete), linguistic methods (word-formation analysis (to determine the plan of expression of the neologism, namely the identification of the mechanism of formation of a single word); morpheme analysis (to outline the morphological features of neologisms, delimitation of ending, base, root and affix); component analysis (for the analysis of the structure and system of lexical meaning, which, in turn, allowed to divide the units by certain thematic groups and determine the evaluative component in the lexical meaning of neologisms), as well as the method of continuous sampling and the method of quantitative calculations).

Results. Characteristics of LDB “Political neologisms in English” are: 1) type of language units: tokens – neologisms; 2) volume: 1200 units; 3) aspect of the description of lexical semantics: political neologisms; 4) data source: the site “Word Spy”, online dictionary of neologisms “The Rice University Neologisms Database”, etc.; 5) linguistic tasks: research of productive ways of creating political neologisms in English; 6) methods: word-formation analysis, analysis of dictionary definitions, component analysis; 7) field of application: science, education, lexicographic practice; 8) database type: relational.

Conclusions. A database is an ordered set of data intended for storage, accumulation and processing using computer technologies; a linguistic database is a set of systematized linguistic data. To create and maintain linguistic databases, specialized programs are used – database management systems. Access DBMS is used in cases where an application requires storage and processing of heterogeneous information about a large number of objects and assumes the possibility of multi-user mode. The process of designing LDB “Political neologisms in English” is a sequence of transitions from an informal verbal description of a linguistic information structure to a formalized description of linguistic objects – neologisms. LDB “Political neologisms in English” contributes to the systematization and development of computer methods of individual private linguistic research.

Key words: computer technologies, data set, datalogical stage, English, infological stage, innovations in language.
ПРОСКУТУВАНЯ ЛІНГВІСТИЧНОЇ БАЗИ ДАНИХ «ПОЛІТИЧНІ НЕОЛОГІЗМИ В АНГЛІЙСЬКІЙ МОВІ»

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Мета – опрацювати етапи проєктування лінгвістичної бази даних «Політичні неологізми в англійській мові».

Методи: методи емпіричного дослідження (спостереження, порівняння, модельювання), методи теоретичного рівня (абстрагування, аналіз і синтез, метод сходження від абстрактного до конкретного), лінгвістичні методи (словотвірний аналіз (для визначення плану вираження неологізму, а саме виявлення механизму творення окремого слова); морфемний аналіз (для окреслення морфологічних ознак складників неологізму, розмежування закінчення, основи, кореня та афікса); компонентний аналіз (для аналізу структури і системи лексичного значення, що, своею чергою, дозволило розподілити одиниці за певними тематичними групами та визначити оцінний компонент у лексичному значенні неологізмів), а також метод сучасної вибірки та метод кількісних підрахунків).


Висновки. База даних – упорядкована сукупність даних, призначених для зберігання, накопичення й обробки за допомогою комп’ютерних технологій; лінгвістична база даних – сукупність систематизованих лінгвістичних даних. Для створення та ведення лінгвістичних баз даних використовуються спеціалізовані програми –системи управління базами даних. СУБД Access застосовується в тих випадках, коли прикладне завдання вимагає зберігання й обробки різноманітної інформації про великі кількості об’єктів і передбачає можливість розрахованого на багато користувачів режиму. Процес проєктування ЛБД «Політичні неологізми в англійській мові» є послідовністю переходів від неформального словесного опису лінгвістичної інформаційної структури до формалізованого опису лінгвістичних об’єктів – неологізмів. ЛБД «Політичні неологізми в англійській мові» робить внесок у систематизацію та розвиток комп’ютерних методів індивідуальних спеціалізованих лінгвістичних досліджень.

Ключові слова: комп’ютерні технології, сукупність даних, датологічний етап, англійська мова, інфологічний етап, новотвори у мові.

Introduction

The development and optimization of specialized databases (DB) for storing and processing units of linguistic research are important tasks of modern linguistics (see the works (Волошина, 2020; Гарбера, 2018; Гриценко, Кобиринка, Ткачук, 2019; Дарчук, Лангенбах, 2014; Кочергина, 2019; Кольцова, 2022)). Thus, databases are relevant in modern linguistics for the representation of: a) the negative-evaluative vocabulary in the framework of linguistic expertise (Кочергина, 2019); b) the concept human in the phraseology of Eastern Steppe Ukrainian dialects based on the ideographic, axiological, structural classification of idioms (Гарбера, 2018); c) the idioms to denote the material state of human in Ukrainian and English phraseology based on the system of cultural codes (Волошина,
2020); d) fundamental human emotions in English phraseology based on the study of the emotional picture of the world (Кольцова, 2022), etc., as well as to create a digital database “All-Slavic Linguistic Atlas”, elaboration of methods of use which will expand comparative the phenomenon of lingua slavica (Гриценко, Кобиринка, Ткачук, 2019), etc.

The relevance of the study is due to the lack of a linguistic database (LDB) of political neologisms in English.

The purpose of the article is to study the stages of designing a linguistic database “Political neologisms in English”. The objectives of the study: 1) to study and generalize the specifics of database design in applied linguistics; 2) to develop the concept of the linguistic base of the data “Political neologisms in English”; 3) to solve the problems of the infological and datalogical stages of the design of this database.

The object of the article is a database, the subject is a linguistic database “Political neologisms in English”.

When developing the LDB “Political neologisms in English”, the following general scientific and special linguistic methods were used: methods of empirical research (observation, comparison, modeling), methods of the theoretical level (abstraction, analysis and synthesis, the method of ascent from the abstract to the concrete), linguistic methods (word-formation analysis (to determine the plan of expression of the neologism, namely the identification of the mechanism of formation of a single word); morpheme analysis (to outline the morphological features of neologisms, delimitation of ending, base, root and affix); component analysis (for the analysis of the structure and system of lexical meaning, which, in turn, allowed to divide the units by certain thematic groups and determine the evaluative component in the lexical meaning of neologisms), as well as the method of continuous sampling and the method of quantitative calculations).

1. Theoretical principles of creating a linguistic database

The basic concepts of creating databases are: ‘database’ as “a file in which information is stored in a special format, i.e. data” and ‘database management system’ (DBMS) as “a program with which information is entered into the database, viewed, sorted, filtered, searched for, imported, etc.” (Свиридова, 2010: 6). Ye. Karpilovska clarifies that in applied linguistics data is information “about language objects, regardless of the conditions of their implementation, situations and features of use, their connection with other language objects”, and the database is “array (set) of such information” (Карпіловська, 2006: 34). L. Rychkova argues that LDB possess the characteristic features of traditional databases with one difference – they are a specific form of existence and representation of linguistic material (Рычкова, 2010: 112).

The DBMS development technology contains several stages, the main of which are:
1) designing the database structure and relationships between tables;
2) development of the structure of individual tables and data entry into tables;
3) development of requests;
4) development of a data schema that implements the designed relationships between tables and queries;
5) development of forms;
6) development of reports for printing documents.

A. Baranov notes that currently there are no DBMS intended for linguistic purposes, however, existing ones are suitable for them, for example, D-Base, ACCESS, FOX-Base, PARADOX (Баранов, 2001: 82). Consider the database objects that Access works with (Свиридова, 2010): 1) tables are the main objects of the database (the creation of any database begins with the creation of the first table; everything that is stored in the database is stored in its tables); 2) queries – the main object for working with a filled database; special objects that allow making complex data selections from tables, including interrelated ones, and presenting them in the form of resulting tables; 3) forms – specially created
screen forms that can have a tabular form or show only one record in the form; 4) reports – conversion of data from electronic to paper form; 5) pages are data access pages, which are a special type of web pages (the user interacts with the database, using only a browser program; such programs can not only contain static information for viewing reports, but also have the form of dynamic pages, allowing the user to create database queries that retrieve or modify the desired data); 6) macros (the simplest programs) with which you can automate the execution of frequently repeated operations (opening the same form, printing a specific report or selecting a menu command); 7) modules are programs written in the Visual Basic for Applications (VBA) programming language (if it is necessary for the DBMS to perform some non-standard operations, special modules are created for this).

V. Pasichnyk and V. Reznichenko determine the basic requirements to the DBMS (Пасічник, Резніченко, 2006):

a) simplicity and flexibility of application development (DBMS should significantly facilitate the process of creating and maintaining applications that work with databases);

b) multiple and multifaceted use of data (users who understand the same data differently should be able to use it differently);

c) ease and flexibility in use (users should easily know what data is at their disposal and have easy access to data);

d) simplicity and flexibility of changing, expanding and configuring the database (changes to the database should be performed regardless of the applications that already exist and use the database; these operations should be performed as simply and efficiently as possible);

e) efficiency of data storage and processing (DBMS should provide a simple and efficient increase in data without compromising existing methods of use, as well as easy reorganization and restructuring of data; DBMS should support the planned redundancy or reduce it; data requests can be executed at the speed needed to use them effectively);

f) low cost of storage and use of data (DBMS should provide lower cost of storage and use of data than any other information systems);

g) protection against unauthorized access, distortion and destruction (the system must provide the necessary level of data protection; information must be protected from interruptions, the impact of force majeure, as well as from incompetent or malicious access to data of persons who may update, distort or delete them);

h) maintaining the required level of data independence (DBMS is required to have mechanisms to maintain logical and physical data independence);

j) maintaining the required level of data integrity (means of describing and maintaining integrity constraints should be sufficient to describe the rules, laws and constraints in force in the subject area; provided that certain constraints are not directly supported, the DBMS should provide opportunities for their description and support through appropriate programming tools);

k) developed administration tools (it is assumed that the DBMS provides all the necessary tools to support the functions of database administration).

According to Ye. Karpilovska, designing a linguistic database (LDB) involves two stages (Карпіловська, 2006: 34):

1) infological – the stage of selection of information and its structuring, or the stage of internal formalization of information, the stage of modeling the content of information. The task of this stage is to select the objects of description, types of information about their structure and operation. This is the stage of studying and describing a certain subject area, its internal formalization. The result of the linguist’s work at this stage is a conceptual information model of such a subject area. O. Mickevich emphasizes that an infological model is a model of a subject area, designed taking into account expert information and the needs of potential users. It should be logical, visual, representative, contain all the information for further design stages, easily transform into database models for common DBMS (Мицкевич, 2012: 204);
2) datalogical – the stage of registration of information in the appropriate language of presentation, suitable for computer processing, or the stage of external formalization of information, the stage of modeling its form, the transformation of information into data. The task of this stage is to develop ways to represent objects and information about them in computer memory, special markers-alarms for error-free “recognition” by the computer of a particular type of information, rules for interacting types of information and retrieving information from the database in the right form or volume, i.e. it is a stage of external formalization of information about language objects. The stage contains two stages of data organization:

a) logical – the connection of the conceptual information model obtained at the infological stage, with the operating system of a particular type of computer, with those databases that it uses, the choice of form of data organization, accepted and acceptable for such databases;

b) physical – the choice of rational structure of the database in computer memory, methods of working with it, based on the capabilities provided by the technical performance of the computer (the amount of its RAM and disk memory, performance), its hardware and software, DBMS capabilities. The strategy of creating indicative and reliable linguistic databases is aimed at their multiple and multifaceted use, i.e. processing by different parameters and types of information about the language objects presented in such databases.

Today, in applied linguistics, there are two main types of LDB: 1) full-text LDB are documentary databases in which complete texts related to any discursive sphere (digital libraries, text collections and text corpuses) are presented; 2) LDB proper are factual information systems and contain structured information about linguistic units of various kinds. A. Klochko supplements the classification of LDB with the term ‘individual electronic linguistic database’ (Клоцьо, 2006), by which a researcher understands a special type of database, which must have a specific structure, optimized for individual linguistic research and providing for the possibility of modification in the event of further clarification of tasks.

2. LDB concept “Political neologisms in English”

Factographic LDB “Political neologisms in English” is being developed within the framework of the basic provisions of the theory of neology, derivatology, lexical semantics, political discourse, theory of nomination. Characteristics of LDB has the form:

1) type of linguistic units of description: lexemes – neologisms.

By neologism we mean any new word or expression that appears in the language, as well as borrowings and new meanings of known words, the nomination of already mastered objects of reality; as a two-sided unit, determined by the novelty of form (word-forming neologisms) and / or content (semantic neologisms).

2) volume: 1200 units;

3) aspect of the description of lexical semantics: political neologisms.

Political discourse is one of the largest areas of functioning of innovations due to the intensive process of renewing its lexical composition. Neologisms in the field of political vocabulary appear in language during the changes taking place in the life of society. Neologisms as an object of political linguistics belong to the socio-political vocabulary of language. The purpose of political linguistics is to identify patterns of interaction of socio-political events for changes in language and vice versa.

Political neologism as a lexical innovation models a new vision of the object of nomination. Political neologisms are formed on the basis of the use of resources of the word-forming system of language, as a result of semantic derivation, as well as borrowings. Political neologisms of the English language are formed at the expense of own resources and/or borrowed elements and units;


5) linguistic tasks: research of productive ways of creating political neologisms in English;
6) methods: word-formation analysis (to determine the type of word-formation and isolation of derivation models); analysis of vocabulary definitions, its contextual environment, component analysis (for semantic description and formation of thematic groups of political neologisms);
7) scope: intended for a) research purposes; b) providing program competencies of the educational component “English language” of educational and professional programs of the specialty 035 “Philology” (field of knowledge 03 “Humanities”) of higher education institutions; c) use in lexicographic practice;
8) DB type: Microsoft Access relational database management system included in the Microsoft Office package. The choice of this program is due to its convenient graphical interface and the presence of a wide range of possibilities.

3. Infological stage of LDB “Political neologisms in English”
At the infological stage a) selected novelties on the basis of novelty and belonging to the political vocabulary; b) the type of word formation is clarified and derivation models are singled out; c) thematic groups of neologisms are formed.

Political neologisms in English are formed using six ways of word formation: affixation (22%), word formation (29.3%), abbreviation (20.5%), telescope (22.2%), truncation of bases (4%), conversion (2%) (see (Громовенко, 2021)).

In English we observe the following trend in terms of productivity of semantic word formation methods: lexical-semantic (87%), morphological-semantic (8%), lexical-syntactic (5%). The semantic development of political vocabulary is due to the increase in the number of meanings in the word. The specificity of political neologisms is associated with the actualization of the processes of metaphorization, metonymization and appeal: while maintaining the original form of lexical innovation, the content plan is characterized by novelty. Special attention should be paid to proper names, namely the names of presidents, on the basis of which new lexical units were formed.

LDB is based on three groups of political neologisms in English: 1) in the thematic group “State” political neologisms in English reflect the importance of the state in the international arena, the specifics of public administration, government activities, government work, legislative processes, policies, activities persons related to management; 2) the thematic group “Political groups” in English unites units that nominate supporters and members of political forces, their cooperation, elections; 3) the thematic group “Socio-political life” in English consists of innovations that indicate the events of socio-political life, actions and political preferences of their participants, individuals and groups according to their political views, and includes lexical items nominating age and participation in political processes.

4. Datalogical stage of LDB “Political neologisms in English”
LDB consists of several interconnected tables, which contain data distributed over rows (records) and columns (fields). Each record is a collection of the values of several fields, which, depending on their function, contain data of different types, for example, text, numeric, hyperlinks, attachments.

When filling out the main data tables, such information is entered:
Political neologism_superdiversity
Lexical meaning_extreme diversity, particularly with respect to the ethnic and racial mix of a population
Thematic group_population
Type of word formation_prefixal
Context_Social scientist Dr Jenny Phillimore, from the University of Birmingham, said: “Diversity is being replaced by superdiversity” (Daily Express, June 13, 2013)
Conclusions

By a database in the article we mean an ordered set of data intended for storage, accumulation and processing using computer technologies; by LDB – a set of systematized linguistic data. To create and maintain LDB (updates, providing access to them upon request and issuing them to the user), specialized programs are used – database management systems. Access DBMS is used in cases where an application requires storage and processing of heterogeneous information about a large number of objects and assumes the possibility of multi-user mode. The process of designing LDB “Political neologisms in English” is a sequence of transitions from an informal verbal description of a linguistic information structure to a formalized description of linguistic objects – neologisms. LDB “Political neologisms in English” contributes to the systematization and development of computer methods of individual private linguistic research.

We see the prospect of further research in the development of LDB “Political neologisms in English”.

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