EXPENDITURE OF USING DEMONSTRATIVE MULTIMEDIA AS A SOCIAL OBJECT IN CLASSES IN PHILOLOGICAL DISCIPLINES

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Abstract: The article deals with using demonstration multimedia tools by philological teachers as techniques during the lectures with students of the specialty "Secondary Education" of the educational program "Ukrainian Language and Literature. World Literature". Multimedia has been analyzed as a social object, which provides pedagogical interaction of scientific methodology of rational-logical thinking with emotional and imaginative presentation and perception of information and its further understanding. The possibilities of using presentations for demonstration, generalization, informing during lectures have been investigated. Speech and verbal-visual messages in pedagogical discourse make it possible to understand information, which is the purpose of the lecture as a communicative social system, and the use of multimedia means provides a combination of two modes – speech and visual. The article states the sense of using multimedia means at lectures in philological disciplines for the reproduction of theoretical material in schemes, tables, logic circuits, algorithms of certain types of linguistic analysis. The efficiency of assimilation of scientific information in the classes with the use of multimedia tools was checked. It has been found that multimedia gives it information capacity, compactness, emotional appeal, clarity, mobility, multi-functionality; presentations with hyperlinks to additional resources on the Internet can serve the student as an electronic tutorial, and embedded interactive tests as an electronic way of control. The expediency of using presentations to optimize students' work in the classroom, improve the perception and memorization of scientific information, and increase the level of academic achievement has been confirmed.

Keywords: Demonstration, Generalization, Information and reference, Interactive social system, Lecture, Social object, Training multimedia.

1 Introduction

Modern scholars study the educational environment of higher education institutions in the aspect of its analysis as a social system, the components of which are subjects, objects, processes and ideas. Different forms of organisation of the educational process (lecture, workshop, training, round table, etc.) are considered one of the types of social systems, namely the interactive system of interaction of subjects [4, p. 72]. The interaction between the participants of such social systems is made possible by the presence of a social object [9] as a factor of connection between them. The existence of such a facility and the selection of activities that will provide all entities with shared access to it is a condition for effective management of the social system.

Since social systems (and these forms of work) are based on communication [23, p. 119], we consider it necessary to qualify lectures, workshops, training, etc. as communicative social systems, which, in addition to interactive ones, also provide informational and perceptual interaction [1] between participants in the learning process.

According to Luhmann, communication combines three interdependent components: information, communication and understanding [25, p. 116]. The condition for the functioning of the communication system can be considered the need to achieve understanding, i.e. the purpose of communication is the choice of such a way of communicating information that ensures its perception and awareness.

One of the forms of organisation of the educational process in higher education is a lecture. As a genre of professional communication, it reflects the interaction between teacher and students and serves to communicate scientific information. In pedagogy, the lecture is characterised as a form and a verbal teaching method.

Lecture (from the Latin *lectio* – reading) as an oral form of presenting the material, which appeared in ancient Greece and became the leading method of teaching in universities in the late nineteenth – early twentieth century. Modern approaches to understanding the lecture as a social system have led to the search for new opportunities for communication during this type of lesson. The following methods of presenting the material are tested: problem lecture, lecture-visualisation, lecture with planned errors, binary lecture, lecture-conference, lecture-press conference, lecture-briefing, lecture-dispute, etc. [16, 18].

Management of the social system is aimed at achieving understanding through the rational use of human, material and other resources, using scientifically sound forms, principles, functions and methods [4, p. 72].

According to N. Luhmann, the social system consists of communication, in the process of which three types of selection (selection) coexist: selection of information, selection of the message of this information, as well as selective understanding or misunderstanding of the message and information [3, p. 115]. Features of the system as an integrated whole are formed through the relationship of its parts: people, actions and communications [3]. To interact, people have to interpret the meanings and intentions of others.

The successful functioning of the lecture as a social system is conditioned to the appropriate choice of ways, methods and ways of optimal rhetorical expression - the ability to work with facts, arguments, the composition of speech. One of the types of tactical rhetorical techniques is the use of multimedia tools (graphics, tables, drawings, diagrams, audio, video, etc.), as well as cloud technologies, mobile applications, interactive panels. Multimedia serves as a social object that provides pedagogical interaction of the scientific methodology of rational-logical thinking with emotional-image representation and perception of information and its subsequent operation.

In pedagogical activity, a combination of two modes is often practised – speech and visual, the relationship between which is formed under educational, up-bringing and developmental goals. Verbal and visual messages, as well as computer presentations on educational, research topics, are based on the integration of these modes. Speech and verbal-visual messages in pedagogical discourse are quite influential and allow understanding of information through metaphorisation, rhetorical figures, eloquent examples, convincing arguments, multimedia technologies, which is the purpose of communication [4, p. 19].

1.1 Problem Statement

The use of multimedia tools in the teaching of academic disciplines in the Free Economic Zone is relevant for the study of lectures as a social system. This issue is outlined in studies on the characteristics of intensification of lectures using multimedia presentations [3], methods of using information and communication technologies in class, including software Prezi for developing educational presentations [25], the specifics of preparing interactive classes using multimedia presentations and others. However, the problem of using multimedia as a social subject in the study of philological disciplines in universities is not sufficiently covered.

Oral presentation of theoretical material at certain stages of the study of the humanities should be combined with information that is perceived visually, to illustrate certain theoretical positions. Material carriers of such information are models, graphics, diagrams, maps, images, paintings, etc., which are the result of visual metamodeling and contribute to the formation of visual concepts as cognitive constructs that integrate two forms of information reproduction: visual and verbal through visual [33, p. 32]. The use of multimedia is one of the conditions for

achieving the goal of the lecture - understanding and mastering theoretical material to further operate it in practice.

1.2 Analysis of Recent Publications

Scientific sources contain information on the use of multimedia in the training of specialists in various fields. For example, Yu. Bystrova [8], N. Klemeshova [19], M. Kozak [22] and others analysed the conditions and features of the use of multimedia technologies in higher education. Karpenko, Korotkova, Trotsky [35] and others investigated the use of multimedia tools to learn foreign languages. Reynolds analysed the specifics of creating presentations to memorise educational material [28]. Richard E. Mayer, having studied the potential of graphic computer technology, developed a cognitive theory of multimedia learning and formulated its basic principles [27]. The technique of combining verbal and visual images is discussed in the study by Den Roam [29]. Kucheruk, Karaman, Karaman, Vinnikova studied the use of ICT for the formation of professional competencies in future teachers of Ukrainian language and literature [25].

Several works are devoted to current trends in the use of ICT in the training of specialists in technical fields and economics. Various aspects of the use of multimedia technologies as an object of the social system have been studied: the creation of a model of cloud learning environment [4], [26], [5]; application of Moodle platform tools in the educational process [14], [31]; methodological approaches to the use of multimedia tools in the process of training specialists in various fields [13], [6], [15], [7], [20] and others.

Nowadays, the issue of classification of multimedia tools by purpose analysed the specifics of their use as a means of improving the efficiency of the educational process and some aspects of their use during lectures. Despite the diverse characteristics of the use of multimedia in mathematics, economics, natural sciences, there is insufficient research of them as a social object in classes in philological disciplines, which has led to the relevance of our study.

1.3 The purpose of the Study

The academic purpose is to substantiate theoretically the feasibility and test experimentally the effectiveness of the use of multimedia technologies during lectures provided by the curriculum for bachelors in “Secondary Education” educational program “Ukrainian Language and Literature. World Literature”.

Achieving this goal involves the implementation of the following tasks:

- To outline the state of use of multimedia technologies for various purposes (demonstration, information and reference, training, control) at different stages of classes with bachelor students majoring in "Secondary Education" educational program "Ukrainian Language and Literature. World Literature";
- To analyse the expediency of using demonstration multimedia tools in lectures in philological disciplines;
- Check the effectiveness of the assimilation of scientific information in the classroom using multimedia tools.

2 Materials and Methods

Theoretical and empirical research (analysis of scientific and documentary sources with interpretation, systematisation, generalisation of collected information, substantiation and forecasting of expediency of attraction of multimedia means at lectures in philological disciplines are used to solve problems of research; questionnaires of teachers on the activity of using multimedia tools in teaching philological disciplines, analysis of types of generalisation of educational information, comparison of approaches to the classification of lectures, generalisation of theoretical provisions of the topic) were used to solve the research problems, as well as statistical research methods.

To test the feasibility of using multimedia tools in lectures in these disciplines, a survey of teachers who conduct classes with students of philology on the use of multimedia of different types at certain stages of classes was conducted, as well as a pedagogical experiment involving students of two groups (36 persons) of the second year, who obtain a bachelor's degree in the educational program "Ukrainian language and literature. World Literature".

Teachers (48 in total) were asked to answer the questions of the questionnaire on the use of multimedia tools in classes in philology. The questionnaire consisted of two parts. The first concerned the definition of among the various purpose of multimedia tools (demonstration, information, training, control) [2, 20], those that the teacher uses most often. The questions of the second part were to find out during which classes and at which stages of studying the topic (updating of basic concepts, acquaintance with new material, skills development, generalisation and systematisation) and which materials (video, presentations, audio) should be used.

Answers to the question “Which of the proposed types of multimedia tools do you use most often when teaching philology students?” and the question “In what classes do you use multimedia?” can be grouped as shown in Table 1:

Table 1: Practical use of multimedia tools

Multimedia types	The number of respondents
demonstration	35
consulting	3
training	4
monitoring	4

Forms of teaching and learning	The number of respondents
lectures	36
practical classes	4
test papers	3
supervised independent learning	5

Answers to the questions "At what stages of studying the topic it is advisable to use multimedia tools?", "What materials should be used?" reproduced in Table 2:

Table 2: The use of multimedia tools at different stages of the lesson

Stages of classes	The number of respondents
engagement activity	4
study	32
practice	2
warm down	10

Multimedia tools	The number of respondents
video	5
audio	5
visual aids	28
Moodle tools	10

The results of the survey show that most often teachers of philology use demonstration multimedia tools and use them during lectures. The analysis of the second part of the questionnaire revealed that respondents prefer to use multimedia in the stages of acquaintance with the material, to summarise and systematise the study, and use mostly presentations, less often - test tasks Moodle platform (training and control), video and audio.

To study the feasibility of using demonstration multimedia as a social object, a pedagogical experiment was conducted, which was based on the definition of the latter as an independent variable (experimental impulse) and student performance as a dependent variable. Academic group Ukr-21 – experimental, Ukr-2.2O – control. They are the same quantitatively and homogeneous in the level of perception of educational material and the level of basic knowledge of morphemes, word formation, morphology of the Ukrainian language learned in school, which was confirmed by tests at the beginning of the semester (Table 3).

Table 3: The results of the control test of basic knowledge of morphemes, word formation, morphology of the Ukrainian language

Levels of student performance	Ukr-21		Ukr-2.2O	
	The number of students	The percentage number	The number of students	The percentage number
High	5	27.78 %	5	27.78 %
Average	7	38.89 %	7	38.89 %
Low	6	33.33 %	6	33.33 %

The experiment involved proving the hypothesis that the use of an independent variable (multimedia as a social object) in the learning process of students has a positive effect on the dependent variable – their success. During the fourth semester of the 2018-2019 academic year, lectures in this discipline in the Ukr-21 group practised the use of multimedia demonstration tools, while in the Ukr-2.2O group, the same topics were taught without the use of multimedia.

Confirmation of the expediency of using multimedia tools in lectures to improve the assimilation of theoretical material were the results of the final test, which was performed by students of these study groups (18 students from each). The tasks of the test were identical and included testing the linguistic competence of students: working with theoretical material from the discipline "Morphemics, word formation, the morphology of the Ukrainian language", as well as the ability to perform various types of linguistic analysis of language units based on acquired theoretical information. For this purpose, the following tasks were used: open-ended, aimed at disclosing certain theoretical positions; formulation of the definition of certain linguistic terms; problematic, involving the ability to compare, compare language units, summarise scientific information; practical tasks were related to different types of linguistic analysis; test tasks are designed to test the ability to operate on the main provisions of the topics.

The maximum score for the test is 60. Evaluation criteria are divided into levels of academic achievement that correspond to the levels of linguistic competence of students: primary, secondary and high. The initial level (1-20 points) is characterised by the following criteria for assessing student achievement: lack of awareness of most of the material, the inability to systematise it; errors in formulating definitions, inability to give examples and perform practical tasks or partially perform them. The average level (21-40 points) of academic achievement is correlated with the following assessment criteria: the student knows and understands the basic educational material, teaches it correctly, but inconsistently, makes mistakes in speech and formulation of definitions; can analyse, compare linguistic phenomena, applies theoretical knowledge to perform simple practical tasks. Criteria for assessing high academic achievement (41-60 points) are student knowledge of the system, they are fluent in theoretical material, can analyse and systematise information, summarise, draw conclusions, establish links between language phenomena, correctly defines language concepts, understand them, are guided in traditional and non-traditional interpretations of the analysed linguistic phenomena; can perform problematic and creative tasks; apply the acquired knowledge while performing practical tasks, properly make a complete analysis of language units.

3 Results and Discussion

Lecture on philological discipline is an organisational form of learning, and a kind of oral monologue, and a genre of academic eloquence, and a universal source of linguistic information at the same time [23, p. 99]. As a communicative social system, the lecture involves interaction between the subjects of the educational process, aimed at achieving understanding, i.e. has a communicative idea. Its structure corresponds to the laws of classical rhetoric: conceptual, audience modelling, strategic, tactical, speech, the law of effective communication [21, p. 15-16].

The lecture is a process of language communication taking into account various components of communication: physical, psychological, physiological, contextual, situational, etc. As a communicative social system, the university lecture functions in the coordinate system of the laws of classical rhetoric, which determine the effectiveness of thinking and speech activities of the lecturer and help achieve the communicative goal of mastering scientific information and forming students' conceptual understanding of the basic principles of the discipline.

The monograph "Pedagogical rhetoric: history, theory, practice" highlights the main requirements for the lecture, which provide for the presentation of educational material with clarity and modern TTA (Technical Teaching Aids) [23, p. 101]. One of the ways to illustrate the theoretical material is presentations. D. Shumakov characterises them as "presentations of support for the educational process", he singles out their structural elements [32, p. 31-32]. Some researchers analyse the features of presentation as a type of professionally oriented monologue speech (Yu. Avsyukevich, O. Tarnopolsky [34]). Several works are devoted to a detailed description of the skill of structuring presentations and their demonstration (A. Kapterev [17], R. Mayer [27], G. Reynolds [28], D. Roam [29], etc.).

The functioning of communication and communicative social system is made possible by its interdependent components: information, communication and understanding [25, p.16]. When explaining a scientific topic in a lecture, the teacher uses such tactical methods of communication that would provide an understanding of the information. According to the results of the survey, most often teachers of philology use demonstration multimedia tools, including presentations, to express clearly the educational material.

The use of multimedia tools is appropriate when they help to explain what the word cannot achieve. “Demonstrating literally to the audience an instant vision of the object, the slide” saves “precious lecture time” [20, p. 35]. At the same time, the use of demonstration tools requires a skilful combination of words and images, so that information is not duplicated, but contributes to the understanding of theoretical positions through their visualisation. In this case, according to G. Klochek, the lecturer achieves a synergistic effect of the interaction of word and slide, in which rhetorical art is combined with the ability to create and demonstrate high-quality content and pictorial properties of slides [20, p. 37].

Teachers of philology use multimedia tools to visualise theoretical scientific information in the process of oral presentation. This form of presentation of the material has several advantages: information capacity, compactness, emotional appeal, clarity, mobility, versatility.

For example, the course “Morphemics, word formation, the morphology of the Ukrainian language” is aimed at a detailed, comprehensive study of morphemes and word formation as the main and important tiers of language structure; parts of speech as lexical and grammatical classes of words that structure the morphological tier of the language system, their categorical essence, semantic manifestations, communicative and pragmatic features, specialised and non-specialised means of implementation.

The task of the discipline is to synthesise knowledge about morpheme, word-formation, grammatical levels of the language system, to provide deep mastering of theoretical information about morphemes, word-formation units, parts of speech, to form a creative approach to future philologists' analysis of language units, to develop skills of independent linguistic research.

A detailed study of these sections involves the assimilation of a significant amount of theoretical material in each lecture.

Knowledge is one of the objects of the social world, and the attitude to such an object – a special form of sociality, which is based on understanding it as a sequence of absences [9, p. 116]. In other words, objects of knowledge are constantly changing their properties or acquiring new ones and at the same time articulated by the subject. Objects of knowledge exist simultaneously in different forms [9, p. 115]. For the subject and the object of cognition to communicate with each other communicatively, it is expedient to use a combination of different forms of the latter, including verbal and visual.

To increase the effectiveness of the perception of individual topics, teachers combine oral presentation with a visual demonstration of certain linguistic concepts, with the help of Microsoft PowerPoint in particular. In this way, multimedia becomes a social object of knowledge that unites the team in the desire to know it. For example, in the oral presentation of information about the specifics of chain and radial word formation, we use multi-component units that contain creative and derived words.

Visual perception in combination with the dynamics of the image provided by animation effects has advantages over oral enumeration of related words, as the location of the components reflects the specifics of the relationship between them (Figure 1), helps to understand and remember information presented at learning stage new material. This combination of word and slide creates their synergy.

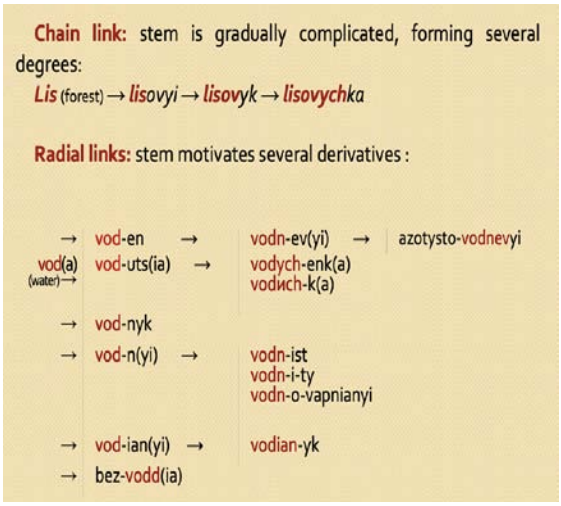

Figure 1 – Presenting multi-component units

The generalisation of scientific information in the form of diagrams, tables, sequential logic circuits, algorithms of linguistic analysis allows teachers to compactly combine a significant amount of textual and graphical information. Such tools should be used at different stages of the lesson: actualisation of basic concepts, learning new material, consolidation and systematisation of the study.

Generalising tables, schemes, algorithms of actions help students to understand the laws of functioning of certain linguistic phenomena, to understand their common and distinctive features, to systematise and generalise theoretical material.

When studying parts of speech, teachers practice after explaining the theoretical material to demonstrate schemes (structural, functional, generalising) at the stage of consolidation and systematisation of the study to illustrate the system-structural relationships between language units and levels, their structure. For example, information about groups of collective nouns by semantic-word-forming features can be supplemented by a block diagram (Figure 2):

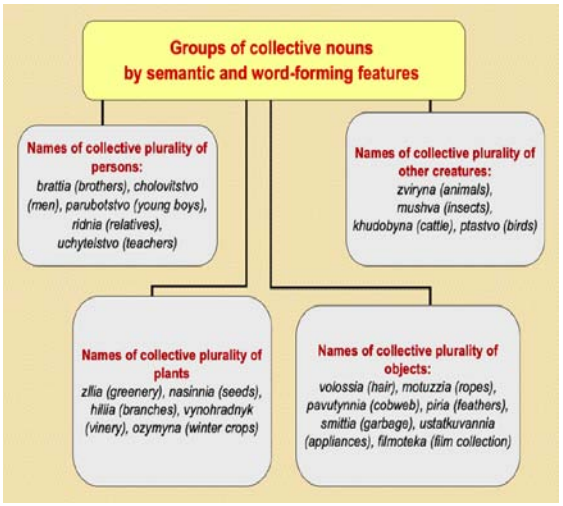

Figure 2 – Classification scheme

In the final stage of the lesson to summarise information using the functions of Microsoft PowerPoint, we reproduce the logical connections between certain linguistic concepts, compare them, depicting them as a combination of textual and graphical elements. Comparison of language units activates mental activity, requires students to solve cognitive problems. For example, the following slide shows the systematisation and comparison of theoretical material about nouns with a specific meaning (Figure 3):

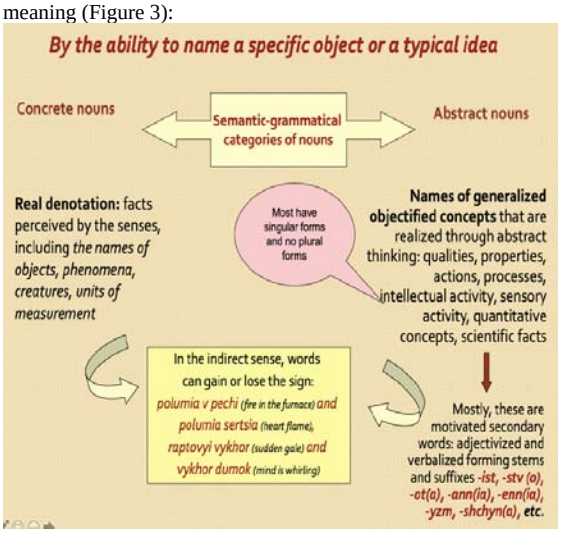

Figure 3 – Theoretical material arranged using Microsoft PowerPoint graphics

During the Ukrainian Language Workshop, students improve their spelling and punctuation skills by working with Ukrainian Spelling. It is also planned to acquaint them with the changes made to the "Ukrainian spelling" in 2019. These innovations can be grouped by two features: changes in spelling rules (i.e., uniquely new spelling) and spelling variants of words (there are alternative units). To increase the perception of this information by students, the teacher uses slides-summaries at the end of the lesson. On several of them demonstrates new spelling rules. On other slides, it provides changes that provide spelling options (Figure 4).

Figure 4 – New spelling of the Ukrainian language (in Ukrainian)

Another form of visualisation of theoretical material used by teachers of philology – tables. They are most often used to summarise a large amount of information that needs to be grouped by certain properties, functions or characteristics; for visual comparison and comparison of information that reflects different scientific approaches to understanding a particular topic; to demonstrate the structural hierarchy between certain linguistic units. Teachers also use such demonstration tools as material for students' independent work, as well-structured tables are a selection of the most essential theoretical material. They can replace part of the textbook, which is important in modern conditions of implementation of the "principle of educational savings" [20, p. 31].

For example, the slide below has two tables. The first contains the classification of word-forming units by function (change the partial linguistic affiliation of words), the second - by properties (motivation in one or two words) (Figure 5).

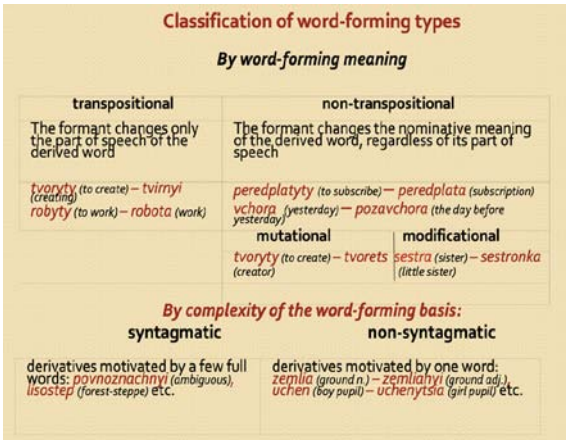

Figure 5 – Information in tables

While studying the Ukrainian Language Workshop, teachers use built-in interactive tests as one of the ways to control, and supplement the content of the presentation with hyperlinks to additional Internet resources, including the text of "Ukrainian spelling" 2019. This helps to partially replace the manual and illustrate a significant amount of illustrative material. Such hyperlinks were used, for example, when studying the topic "Spelling of nouns" to demonstrate a significant number of case forms (Figure 6).

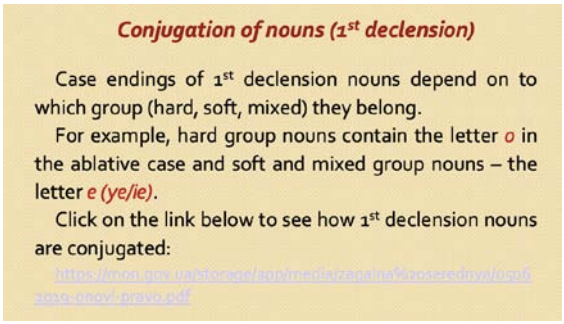

Figure 6 – Using hyperlinks

The main form of work in lectures is an oral presentation of theoretical material. The information on the presentation slides illustrates what has been said and should be well organised and logically organised. Undoubtedly, the functions of Microsoft PowerPoint (a set of graphics, etc.) provide ample opportunities to structure the theoretical material and provide a synergistic effect of the use of words and slides.

During lectures with bachelor students majoring in "Secondary Education" educational program "Ukrainian Language and Literature. World Literature" philology teachers use multimedia demonstration tools to effectively assimilate scientific information.

To test the feasibility of using multimedia (including presentations) in classes on the subject "Morphemics, word formation, the morphology of the Ukrainian language" at the end of the semester students performed a test, the tasks of which covered the study material learned during the semester. Its results show that students in the experimental group have significantly higher scores ($P < 0.05$) than students in the control group. The difference between the mean score (calculated as the arithmetic mean) of the high-level results obtained in these groups is 6.96 points, medium-level – 7.25 points, low – 4.1 points.

The results of the test based on the comparison of the average scores of high, medium and low levels of academic achievement are presented in Table 4.

Table 4: The results of tests based on average scores of different levels educational achievements

Mid-points	EG (Ukr-21)	CG (Ukr-2.2O)	Probability of difference (p)
High level	50.13 ± 1.9	43.17 ± 2.2	$p< 0.05$
Average level	29.5 ± 1.7	22.25 ± 2.0	$p< 0.05$
Low level	18.6 ± 1.2	14.5 ± 1.5	$p< 0.05$

The probability of differences between the mean scores of students in the control and experimental groups was based on Student's t-test. The level of significance of the calculated values was determined with reliability of $P < 0.05$.

In percentage terms, the results of control work are presented in the diagram (Figure 7).

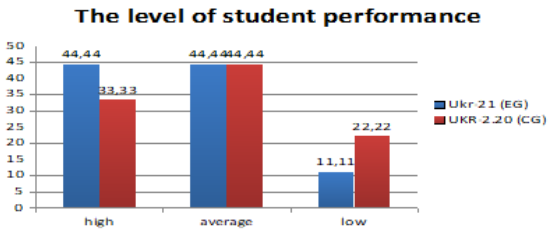

Figure 7 – The results of the final test

According to the results of the test, eight students of the experimental group (44.44% of the total number) and six students of the control group (33.33% of the total number) demonstrated a high level of academic achievement. This figure in the experimental group is higher by 11.11%. The average level of academic achievement in both groups is the same – 44.44% (eight students). The number of people who demonstrated the initial level of knowledge in the experimental group is 11.11% (two students), which is half less than in the control group (22.22% – four students).

4 Conclusion

Thus, the use of demonstration multimedia tools by teachers of philology is one of the rhetorical methods of lecture management as a social system that emerges based on the communication of reciprocal expectations and actions. It is expedient to apply multimedia technologies at different stages of learning material, as multimedia is a social object that provides interaction of scientific methodology of rational-logical thinking with emotional-image representation and perception of information and its further understanding. Visualisation of structured information helps to achieve a synergistic effect of word and slide; Speech and verbal-visual messages in pedagogical discourse make it possible to understand information, which is the purpose of the lecture as a communicative social system, and the use of multimedia provides a combination of speech and visual information under educational, up-bringing and developmental goals.

Multimedia helps to make theoretical material informative, compact, emotionally attractive, visual, multifunctional, and thus optimises the work of students in the classroom, improves the perception and memorisation of scientific information, increases the level of academic achievement. Multimedia tools, such as presentations with available hyperlinks to additional Internet resources, can be an electronic guide for the student, and built-in interactive tests – an electronic method of control, which makes such tools relevant and in demand.

According to the results of the test, we can state that in the experimental group compared to the control is a much higher percentage of students who have a high level of academic achievement, and less than those who have mastered the theoretical material at the elementary level. This proves the expediency of using multimedia as a social object during lectures provided by the curricula for bachelors in "Secondary Education" of the educational program “Ukrainian Language and Literature”. World Literature”.

The study does not claim to be a definitive solution to the problem of using multimedia tools during classes with students of philology in universities. We see the prospect of further research in the study of methods of using the capabilities of different types of multimedia technologies as a form of preparation for practical classes or independent extracurricular activities of students, as well as for binary classes.

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Primary Paper Section: A

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