

тока – для исследования эффекта Пельтье. Величина тока регулируется компьютерной мышью. Результаты измерений передаются в компьютер, где отображаются на мониторе и могут быть отмечены точкой на графике и записаны в файл. Исследуемый образец - термоэлемент С5-1 доступен для визуального изучения. Эффект Зеебека обнаруживается учащимися путем нагревания собственным пальцем свободной поверхности термоэлемента.

Лабораторное задание включает в себя изучение конструкции термоэлемента по прилагаемому образцу (с зарисовкой), исследование эффекта Зеебека, исследование эффекта Пельтье. Для фиксации данных при проведении опытов вкладка на экране монитора имеет кнопку «запомнить». На сжатие этой кнопки приводит к записи всех текущих данных: ток элемента, напряжение на нем, значение термоэдс в файл в виде текстовой строки. В результате происходит накопление таблицы данных значительного объема (около сотни строк). Одновременно каждое нажатие кнопки добавляет точки в два графика, которые строятся на мониторе. Это графики зависимости термоэдс и напряжения на элементе от тока через него.

После окончания опытов и закрытия файла данных наступает этап его обработки. Обработка осуществляется учащимися с помощью стандартных программ обработки табличных данных. Необходимо определить коэффициент термоэдс и термоэлектрическую эффективность исследуемого элемента.

Таким образом, в ходе выполнения данной работы, учащиеся прорабатывают типичную последовательность действий, характерную для современной исследовательской или производственной лаборатории, использующей т.н. компьютерные технологии.

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## THE ROLE OF MODERN TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES

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Nowadays different modern technologies have entered our life. The purpose of higher education is to respond to this situation and to use all possible opportunities to the best. The faculty of marketing, management, entrepreneurship has facilities to incorporate modern technologies into the process of teaching. The teachers of foreign languages use computer, Internet resources to develop writing, reading, listening, but also speaking skills.

**KEY WORDS:** computer training programs, combined e-learning tools, information technologies, Internet resources, information and reference materials

### **Introduction**

Currently more and more the issue of use of innovative technologies often raised in the classroom on a foreign language. Penetration of innovation in all spheres of human activity is becoming increasingly clear that greatly simplifies the process of interpersonal and busi-

ness communication. Because of its powerful intellectual potential, the education system is a source of development and creation of new technologies. Use of modern technologies in teaching business foreign language allows you to open huge opportunities for both students and teachers. In the first place - from the point of view of the possibility of bilateral cooperation with individual resources on the Internet, in the second - on the basis of the ability to access a diverse and constantly updated global foreign-language professionally-oriented information resources.

A specific feature of mastering a foreign language is its duality: language development, based on the account of psychological factors of communication.

Turning on the computer as an assistant teacher in the learning process allows to optimize the development of both aspects transmitted from the computer routine work on mastering skills and leaving the main task of the teacher - the organization of personal communication in class. Considering computer technologies as a source of increasing the efficiency of teaching business foreign language, it should be noted that these technologies can transform learning a foreign language into highly productive, motivated and innovative process.

### **1. Comparative characteristics of computer training programs**

Modern conditions require not only the use of new technologies in teaching foreign languages, but also changes in methods of teaching and the ability to introduce the latest innovative technologies in the process of learning foreign languages on the part of the teacher.

The main objective of the teaching process is the formation of a creative personality, where the teacher must constantly think through and develop aesthetic and value-oriented transformative activities [1, p.21].

Such visual training aids as films, videos and television programs, as well as slides, pictures, posters, drawings have been successfully used in the educational process of teaching business foreign language, representing the most accessible form of presentation for the perception of educational material. They create such a detail-motivational environment that due to its nature of content contributes to the development of cognitive activity, creative abilities of students [1].

Knowledge of foreign languages and computer technologies is essential for a successful development of professional activity in modern society. Each discipline is to use computer technologies, thereby it increases the level of students' knowledge, accelerates and improves the supply of material just to strengthen education.

All software products that are used in the education sector can be divided into the following groups according to their functional purpose and content:

- 1) films on DVD;
- 2) electronic books to read;
- 3) information and reference materials (manuals, newspapers, magazines, dictionaries);
- 4) electronic library of visual aids and databases;
- 5) training materials on electronic media (development workshops, guidance on training aspects of language and types of speech activities, tests and other measurement and control materials);
- 6) Internet resources;
- 7) combined e-learning tools (training programs, electronic textbooks, exercise books and educational games);
- 8) training software for support of activities on foreign language (demos, presentations, projects, computer design, etc.) by the teacher for specific classes in a foreign language [2], [9].

Information and reference materials for the teacher and student on DVD or CD contain a large number of educational illustrative material, which is usually presented in more attrac-

tiveformthan on paper. Due to the animation, various sound effects, search engine, video sequences, tests, quizzes and other forms of knowledge control – all these electronic resources can compete with multimedia teaching aids. They are generally not used separately, and play a supporting role as a source of information to work on presentations and projects [2, p.7].

The training software for teaching business foreign language, which creates a teacher, have another huge advantage: they are not debarred the teacher from the students, but rather contribute to their creative union. This is because by virtue of their functions, software-support (shown by the teacher) that createssuch kind of information environment - "teacher - students - teaching material on the screen transferred from the computer through the projector" in teaching businessforeign language. Therefore, that the development of their own presentation materialis a hard process that consumes and requires special skills. Working with a computer, especially at the early stages of learning, enhances the role ofteacher and, consequently, the workload on him or her, where the last must be taken into account when organizing classes [4. p.28].

## **2. The role and practical use of information technologies in teaching business foreign language**

Everybody knows that teacher is more active on the lesson, while in teachingforeign languages is very important that students do not just passively absorb information, but actively go to new knowledge, skills and abilities. This greatly contributes to the organization of classes on business foreign languagewith the help of computer programs. At this lesson, each student works on a personal computer at their own pace. Moreover, learners are under emotional comfort, as there is no negative impact from possible negative emotions from the teacher or other students. In order to achieve active position of students in the classroom it is important that computer programs were not abstract and logically included in the overall process of teaching foreign languages [1, p.14].

Different types of computer testing can be used to controlformation of lexical and grammatical skills. This type of control has such advantages as speed, a large amount of material, the rapid identification of "gaps" in knowledge and objectivity. On the one hand, testing with the help of computer as maximum activates students, on the other hand simplifies the task of the teacher when checking [2. p.36].

Technical development of both software and hardware provides ample opportunities using computers for learning linguistic structures. There are special programs for the development of grammatical and lexical skills, and to develop skills in spelling, translation and work with text.

It should be noted, that the computer program to the textbook Eastwood Oxford Practice Grammar, is widely used inpractice of teaching business foreign language at the faculty of marketing, management and entrepreneurship. This program allows you to choose a particular grammar topic, based on the goals and objectives of a particular class. Choosing a theme, students are offered a number of suggestions with multiple choice answers from which they are to choose the only one answer which is correct. If a student chooses the correct option from the first attempt, he is charged two points if the second - one point. The advantage of this program is the ability to listen to the correct option by native speakers, as well as reference to those items and rules in the book, where mistakes have been made.

## **3. The use of Internet resources in teaching foreign languages**

Nowadays for the majority of actively working people life and full activity without access to the computer, e-mail and the Internet at work and at home is very problematic. Traditional TV and newspaper news is clearly inferior to the speed, conciseness and veracity of information provided by the Internet. Using ordinary mail correspondence with located on the other side of the globe friends and business partners seems ridiculous - e-mail allows you to communicate practically interactively and during one evening to share dozens of messages.

Today the main e-learning of business foreign language is the Internet. Internet resources combine the properties of all the above software products, representing the most powerful to date means of obtaining information, the decision of educational tasks and electronic business communication. In our opinion, its attractiveness related to the fact that it creates such an environment that fosters the development of cognitive and creative abilities of students in the conditions of a lot variance and unregulated teaching, formation and development of divergence (non-stereotypical) thinking, at the same time which is characterized by the ability to put forward a lot of right ideas, flexibility, speed, accuracy and originality.

It should be noted that at the faculty of marketing, management, entrepreneurship there is an opportunity to conduct classes in foreign language in computer classroom, where all the computers connected to the Internet. The spectrum of Internet resources is quite wide. Furthermore, Internet makes it possible to teach all kinds of reading: the student, study, browse and search. In order to use more efficient modern technologies in learning and teaching it is necessary for teachers to have unlimited access to the Internet resources, thus it will be easier to conduct video conferences if they are thoroughly planned and also provide students with the equipment. Accordingly, competent training and professional development of teachers leads to an effective and innovative use of modern technologies in teaching business foreign languages [4, p.10].

Therefore, I would like to emphasize that technological progress improves tools that can be used in teaching business foreign language. One can not deny the role of modern technology in the educational process, and the possibility of using Internet resources are in demand on the labor market. Internet resources are means which should be used properly according to the educational environment, but that by no means should not replace the process of learning and teaching. Influence of Internet resources on the educational process is becoming more and more obvious and also allows students to obtain that knowledge and skills which they will need in their future career.

### Conclusion

Use of modern technologies, particularly computers, Internet - resources, special educational multimedia programs, as well as modern technical equipment (DVD, video cameras, tape recorders) allows to optimize the teaching process in the following areas:

- increasing motivation and enthusiasm of students and teachers through active involvement in the process of live communication, possibilities of language acquisition are increasing thanks to the cooperation, interaction and communication in learning language;
- there is a potential for a variety of teaching methods and teaching to the needs of each student; job satisfaction, where the result is visible after each session;
- self-education of student's personality through the skills to locate, retrieve, evaluate and analyze relevant information.

Thus, the use of a complex of innovative technologies and their elements can more effectively solve the problem of low motivation, low level of general language proficiency, more effectively form mental abilities and cognitive skills of students.

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## ПОВЫШЕНИЕ КАЧЕСТВА ОБРАЗОВАНИЯ ПРИ УСКОРЕННОМ ОБУЧЕНИИ СТУДЕНТОВ

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Проведен статистический анализ результатов контроля знаний студентов. Предложены оптимальные критерии качества образования при ускоренном обучении студентов. Рассмотрены влияния на качество образования компетентности преподавателя, информационной ёмкости лекционного материала и самостоятельной подготовки студентов.

*Ключевые слова:* Математическая модель накопления знаний. Оптимальный средний балл. Оптимальная скорость обучения. Выборочный контроль знаний.

В настоящее время качество подготовки специалистов определяется в основном по среднему баллу экзаменационных оценок. Однако экзаменационные ведомости содержат статистические данные, позволяющие осуществить более полную оценку качества обучения студентов. Дело в том, что на процессы обучения и контроля знаний воздействует множество равновероятных случайных факторов. В результате композиции данных факторов экзаменационные оценки должны быть распределены по симметричному закону близкому к нормальному.

На практике встречаются отклонения от данной закономерности. Это прежде всего, вызванная ошибками контроля знаний асимметрия (усечённость) нормального закона распределения экзаменационных оценок. К таким ошибкам следует отнести занижения или завышения экзаменационных оценок.

Очевидно, степень согласованности распределения экзаменационных оценок нормальному закону может служить одним из критериев качества образования и достоверности контроля знаний. К этому следует добавить, что в большинстве случаев при нормальном законе распределения экзаменационных оценок существует возможность повысить достоверность определения количества студентов с оценками 2,3,4,9,10 по сравнительно достоверной информации распределения оценок 5,6,7,8 [1]. Для этого необходимо воспользоваться отображением распределения экзаменационных оценок в специальной системе координат (нормальная бумага). В данной системе координат распределение оценок 5,6,7,8, соответствующее нормальному закону будет представлено прямой линией. Если эту прямую продлить на оценки 2,3,4,9,10, то возможно путём обратного преобразования (возвращения к обычной системе координат) восстановить истинное распределение экзаменационных оценок. Используя стандартные процедуры математической статистики представляется возможным по восстановленной кривой нормального распределения определить уточнённое количество студентов с оценками 2,3,4,9,10.

Основными характеристиками нормального закона распределения являются его математическое ожидание и дисперсия. В случае симметричного закона распределения математическое ожидание совпадает со средне арифметическим значением. Используя экспоненциальную модель процесса накопления знаний во времени можно определить оптимальное значение математического ожидания (средний балл) экзаменационных оценок при ускоренном обучении студентов (ограниченном времени обучении). Для десятибалльной системы оценок знаний за оптимальную оценку можно принять точку перегиба экспоненты со значением 6.5 [1]. Дело в том, что эта точка разделяет значения