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DEVELOPMENT OF TECHNOLOGY OF CORRECTION OF STUDENTS' PSYCHO-EMOTIONAL STATE BASED ON THE POLYGRAPH EXAMINATION

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Abstract. Study of students' psycho-emotional state has shown that learning foreign languages at Ukrainian non – linguistic tertiary schools may be accompanied by adverse emotional and activity states: emotional stress, apathy and frustration. The technology of correction of psycho-emotional state of students of not language high schools by means of emotional support is presented. Technology of emotional support of students based on the computer polygraph examination contains differentiated techniques used with the background state of the user.

Keywords: technology of emotional support, polygraph examination.

Introduction. The choice of the Ukrainian course towards European integration in the field of economy, education and culture increases the demand for university graduates that have fluent in foreign languages and foreign language communication.

In Ukraine, the higher education recognized as one of the leading spheres of social development. Prior to the educational sphere of Ukraine opened the following perspectives [4]:

- global accessible education systems that allow different groups of the population of Ukraine access to a variety of global educational resources are created;
- quality of education by introduction of new educational technologies and teaching strategies in the educational process is improved;
- use of information technologies enable individuals to self-actualization and self-identification on a higher intellectual level;
- export of educational services by countries with developed distance learning technologies is increased.

The main directions of the state educational policy made it necessary to reform the system of teaching foreign languages. Modern specialist for professional mobility and competitiveness in the labor market is not enough just to own professional knowledge and skills. He should know English for professional orientation at a level that will allow obtaining the necessary

information on the specialty, as well as handling this information to solution specific communicative tasks while performing their official and professional duties.

Currently, use of Web-based technologies in the classroom and in extracurricular work are tended in the methods of teaching foreign languages.

Despite the fact that modern Web technologies have great potential didactic, they are used haphazardly, without regard to the specific and general didactic principles of training.

The high intensity of modern classes, excessive nervous and emotional stress, inadequate accounting for individual characteristics of students by teachers, the use of tasks, inappropriate level of students' knowledge lead to the formation of high anxiety. The above problems lead to a decrease in motivation training, lost activity, reduced academic performance, which negatively affects the motivation and learning.

The aim of this paper is the development of technology of correction of students' psycho-emotional state in Web-based learning foreign languages by creating a comfortable learning environment, the use of psycho-physiological characteristics of students, prevention of excessive mental and emotional stress.

The system of correction consists of a combination of traditional and innovative educational technologies that help to implement personality-centered approach to learning, provide individualization and differentiation of learning abilities of students based on their level of training, interests and aptitudes, forms stable cognitive interests, thereby increasing motivation, creative activity and at the same time improve the health of students.

Technology of emotional support

Study of students' psycho-emotional state in Web-based learning has shown that learning foreign languages at Ukrainian non – linguistic tertiary schools may be accompanied by adverse emotional and activity states: emotional stress, apathy and frustration.

The study of student's learning activities is allowed us to identify number of organizational, technical and personal features that reduce the emotional background of computer-based training.

We use the technology of user emotional support as a way of neutralizing destructive students' emotional states, development their internal means of correction, self-development and self-healing, improvement their own professional competence and professional skills in experimental education.

Technology of students' emotional support contains differentiated techniques used with the background state of the user.

Achieving of the described effects is obtained by:

- presentation of new teaching material, taking into account the dominant channel of perception;
- use a computer polygraph for control of students' psycho-emotional state;

- presentation of learning activities appropriate to the level of students' knowledge;
- the use of incentive remarks that accompany the implementation of the progress and final computer tests;
- music and functional communication by means of relaxing instrumental music posted on specifiable sites;
- the color of communication, based on the requirements for design of multimedia presentations;
- confidential talks with students about the benefits of using Web - technologies in foreign languages leaning;
- switching attention to an emotionally positive thoughts and images.

In educational research papers has repeatedly stated that the trainees learn the same course material at different speeds and with different quality [1, pp. 30-35]. The reason is that pupils / students belong to different psychological types of personality. The difference in speed and quality of the assimilation of information channels is determined by the perception (visual, auditory, kinesthetic) [3, pp. 47-51;4, 5].

Application of the above personality typology in teaching promotes the assimilation of educational material, as student perceives information in a convenient form. Specificity of foreign language teaching is that teaching is conducted in small groups, which increases the likelihood of effective use of personality typology for the diagnosis of psychological types of students, formation of small groups in order to establish effective communication between teachers and students.

In this paper, we propose a patented approach for the determining the dominant channel of perception of students on the basis of the analysis of psycho-physiological reactions of students in the learning process. [6]

Developed methods based on the use of methods of computer polygraph examination, allowing to obtain objective results with the help of control of psycho-emotional students' state.

On the basis of the functional purpose of the polygraph, under the term of polygraph examination we understand the psycho-emotional reaction of the trainee's organism to the proposed information (text, graphics, audio), followed by the presentation of results registration of these parameters in an analog or digital form, designed to assess the reliability of reported information [2]

Depending on the degree of emotional stress the following physiological parameters of the examined student: cardiovascular activity, the electrical resistance of the skin, the type of breathing; changes in respiratory parameters, the electrical activity of cortical areas of the brain are measured. The above-listed changes in the neuro-physiological states of the body are the basis of estimation methods of psycho-emotional states: computer electroencephalogram and computer polygraph examination.

A method for determining the dominant channel of perception of students includes analyze the reactions of students to a polygraph keywords characteristic of groups of people (audiles, visuals, kinesthetics).

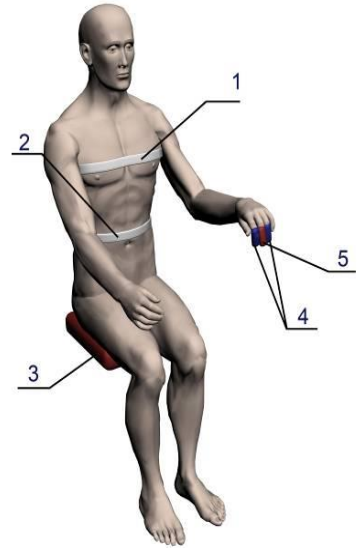


Fig. 1. Sensor arrangement during the polygraph examination
The results of all tests are summarized. The students are divided into three groups: audiles, visuals, and kinesthetics on the basis of the results of all tests.

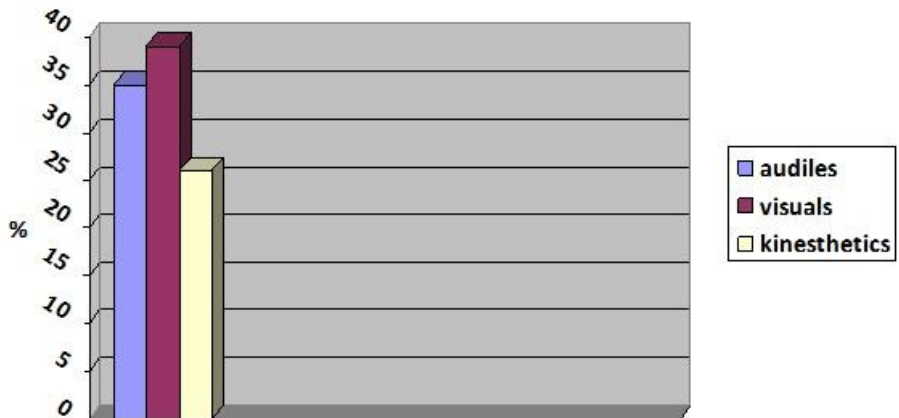


Fig. 2. Distribution of students of the experimental group, depending on the dominant channel of perception information

Learning material is presented in an appropriate form to the dominant channels of perception of information. For audile group material is presented mainly in the audio form, visual in the form of visual aids (tables, charts or mind-maps). So far as kinesthetics better perceive the material through the

senses, then contact face to face with real person will be most effective. Therefore, they are encouraged to work in the mode T (Teacher) → S (Student), or teacher's / tutor's consultation by means of program for online communication (such as Skype, Net meeting or other).

For implementation of the developed methodology of teaching foreign languages on the basis of accounting dominant channel of perception information worked out educational supplies based on Web technologies "Interactive English Grammar" and "Interactive German Grammar". Manuals were created by means of presentation software Power Point. The authors of manuals selected Internet sites for each of the grammatical topics as follows: "The theoretical material," "Exercises," "Test", "Video presentation of the topic". The student chooses the form of presentation (schematic, text and video) learning material on the basis of the dominant channel of perception of information. Student and / or the teacher can monitor mastering of learning material by means of online exercises and tests.

In order to reduce the level of anxiety of students during the computerized test used different remarks. The degree of influence of the computer remarks was created the following method: during the test performance, depending on the current result a student hears comments computers with different emotional coloring from utterly negative to encouraging (Get lost, Do not be silly, So far so good, You have a point there, Think it over, Do not worry. Relax, Calm down, You'll make it, Easy, Well down, Clever boy / girl).

Graphic representation of the computer's data allows us to trace the polygraph reaction of each student. Utterly negative remarks caused students palpitations and breathing, sweating, etc. Positive remarks were contributed to the normalization and improvement of students' psycho-emotional state, reducing the level of anxiety.

Disintegrating and statistical colors are used for design of test program interface. Disintegrating color (from purple to blue-green) soothe and relieve agitation of student nervous system. These colours reduce the emotional and applied to human behavior rationality, rationality.

The palette of static colors includes green, yellow-green, olive and other colors of the spectrum as a medium of light and dark shades. They promote peace, balance and stability.

Taking into account the impact of music on student's the emotional sphere, and the influence of the latter on his health and education, in our study we used the elements of music therapy. Test tasks were presented against the background of musical background. We use the music set for the regulation of emotional state [7].

Table 1.
Music set

Music	Psychological effect of music
Bach. Cantata number 2; Beethoven.	Reducing of irritability, frustration

Moonlight Sonata; Frank. Symphony in D Minor	
Chopin. Mazurka, Prelude. Strauss. waltzes; Rubinstein. melody	Reducing of feelings of anxiety, uncertainty in the successful end of what is happening
Beethoven. Sixth Symphony, ch. 2; Brahms. Lullaby; Schubert. Ave Maria; Chopin. Nocturne in G minor, Debussy. moon light	General calm, peace and harmony with real life and situation
Chopin. Prelude Op. 28, № 15; Prelude Op. 28, № 7; Prelude (transcription for piano trio), Op. 28, № 4; Sheet. Hungarian Rhapsody number 2	Improvement of mood

Observation for the students are showed that both groups of students experience negative emotions, which are based on unpleasant anxiety. Comparative analysis of the obtained results on the basis of Nemchin T. A. neuro-psychological strain test showed that the overwhelming majority of students observed a moderate anxiety 78% (control group (CG), 76 % (experimental group (EG) students, while weak anxiety showed 4% (CG), 5% (EG) students who had high anxiety 18% (CG), 19% (EG) students. After using emotional support of students in the Web-based language learning process in the experimental group showed a high level of anxiety reduction on 7%, the number of students with low levels of anxiety, increased on 15%.

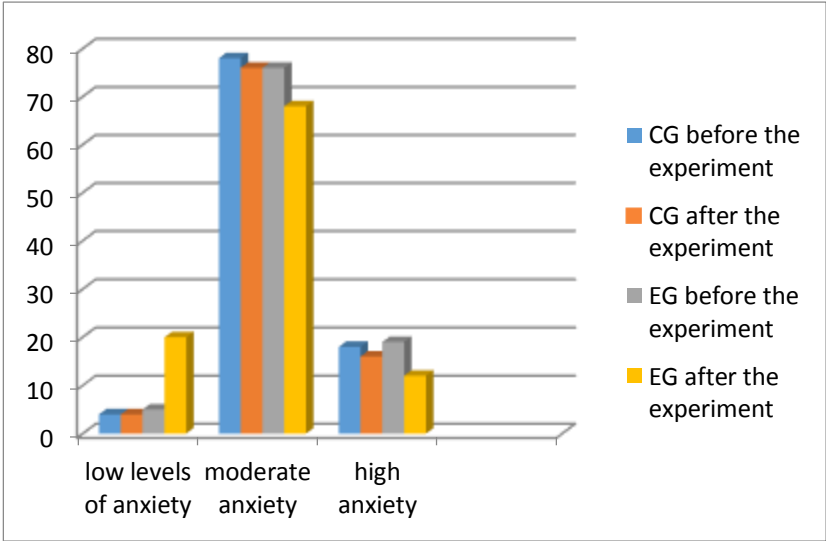


Fig. 3 Comparative characteristics of the degree of manifestation of mental stress in the studied groups

Based on non-parametric two-sample Kolmogorov - Smirnov criterion ($p < 0.05$), no statistically significant change of investigated parameters Str, SNS, and Exc for the two plans of improving foreign language training of students of non linguistic profile by means of information technology (see. Fig. 2 and 3) with and without feedback - supplying information to the teacher about students' psycho - emotional state in the Web-based language learning process.

Conclusions. In the course of research work aimed at improving foreign languages learning of students at Ukrainian non – linguistic tertiary schools:

1) method of reducing of level of anxiety and emotional support technology by neutralizing destructive emotional states of trainees are developed;

2) method of determining the dominant channel of perception by means of computer voice polygraph allows to divide the students in accordance with the channels of information perception groups audiles, visuals, kinesthetic is developed;

3) research on the evaluation of psycho - emotional state of students in the Web-based foreign languages process on the basis of a comprehensive methodology developed by means of the methods of electroencephalography, multi-level voice and computer polygraph examination is conducted;

4) adaptive information technologies based method of foreign languages learning taking into account the dominant channel of perception information permissive improving of perception learning material in accordance with the channels of information perception inherent to audiles, kinesthetics, visuals students' groups is developed;

5) findings suggest that the use of the obtained a teacher information about students' psycho - emotional state contributes statistically significant reduction of students' psycho – emotional state, and the magnitude of depression stress is reduced by 2.5 times;

6) during an experimental education, students have acquired internal resistance to stressful situations, self-appraisal is increased.

Future research. Our further scientific work is dealt with the problem of developing Web - based automatic adaptive systems capable of get customized into individual students' psycho - emotional characteristics of students and their level of knowledge.

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THE ROLE OF VITAGENE TECHNOLOGY IN FORMING OF PEDAGOGICAL ARTISTRY OF WOULD-BE TEACHERS

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Abstract. *There has been considered the necessity of a focused forming of pedagogical artistry, as an important component of pedagogical skills of future teachers. It has been determined that the current teacher should have a developed capacity for improvisation, empathy, tolerant relations etc. contributing to the establishment of subject-subject relationship between students and teachers, thus developing the creative power and abilities of future teachers. It has also been proved that vitagene technology with holographic projection method is the most effective in pedagogical artistry formation.*

Keywords: *pedagogical skills, pedagogical artistry, vitagene technology, holographic projection method.*

The entry of Ukraine into the European educational space increases the requirements for the individual teacher, his professional competence and pedagogical skills. Due to this the problem of deliberate forming of qualities that ensure the success of professional work of teachers, reaching the pedagogical skills as the highest form of professionalism of teachers is of special significance. Pedagogical artistry integrates personal and professional characteristics of teachers that ensure the success of their activity.

An important role among such qualities belongs to the pedagogical artistry; the phenomenon of its formation is unfortunately investigated insufficiently. However, the modern teacher should have a developed ability to improvise,