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On Communicative Competences as a Satisfactory Solution for Masters in Engineering

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ABSTRACT. The paper provides the analytical observe of the Ukrainian educational process and its problems, occurred while integrating into European educational environment. Several challenges, which has been illustrated in the paper shoe, that a new approach for Masters trainee is necessary. The first one in the remote access to scientific databases and educational services and the second is the necessity to teach the Maters communication technologies. The second challenge is a great gap in today's education in Ukraine amongst the majority of educational fields.

Introduction. Ukraine's integration into European and world educational area sets a new task for domestic institution, which will allow their graduates being competitive in the international labour market. The transition to a two-tier system of training (Bachelor, Master) sets a number of challenges to the universities to develop not only the appropriate legal guarantees to ensure employment, but also the need to introduce the educational process, trainee, first of all for Masters. For example, disciplines, which allowing students successfully integrate into the modern labor market. The problem of demand for masters in the domestic labor market is now becoming increasingly important. This problem is caused by a lack of understanding by employers of a qualification that can be expected from graduates with Master's degrees.

As others, National Mining University tends to take into account employers' interest. There is also the participation of domestic companies and institutions in organizing and conducting practices, as well as the formation of the target subjects of Master's theses, according to the latest objectives of employers' organizations.

Working closely with representatives of potential employers both in the preparation and employability of graduates, as well as the implementation of continuous feedback was the basis for the successful solution of numbers of important tasks. The main of them is the quality of training of graduates and the demand of the labor market.

To assess the quality of training at the University of fundamentally important point necessary to have feedback from employers and graduates.

One of the main criteria for the quality of education at the university and an indicator of professional formation of students are respective competences.

The survey of graduates and employers led to the conclusion that now among the key competencies employers and graduates isolated along with the specialist skills of engineering profile, the ability to build a psychologically comfortable relationship with different people regardless of their social or ethnic background.

The purpose of the article – to substantiate the necessity and opportunity to improve the quality of training of masters of technical specialties, through the acquisition of communication skills with the use of modern technical means.

Employers are increasingly using new forms of communication with the applicant – remote, through social networks, etc. The trends of the modern world are forced to take another look at the degree of importance of the information flow in both its traditional and new computer form. New developments require from the applicant in addition to the ability to present themselves, the ability to use information technology to the full range of possibilities.

Often the employer's requirements include the skills in development and presentation of the project (fig. 1), and for this you must have the ability not only to use information technology, but also the ability to convey information in a way that positively affect the employer's decision.

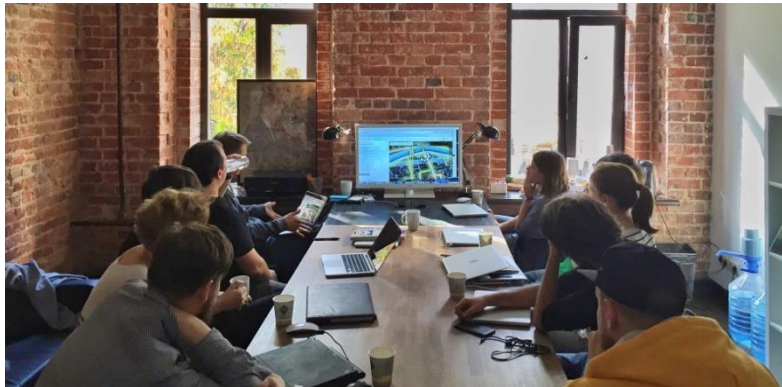


Fig. 1. Presentation of the project by means of electronic communication.

When remote communicating is a primary function of providing information - informing, no longer crucial. The problem of choice shifts to the aesthetic categories, feelings, emotions [1].

The structure of communicative competences includes a certain set of knowledge and skills to ensure the effective flow of communication process. Communicative competence determines the level of training of the interaction with others, which requires the individual successfully operating in a given society.

Analysis of the literature shows that communicative competence – is a generalized communicative properties of the person, which includes the development of communicative abilities formed skills and interpersonal skills, knowledge of the basic rules and its laws.

According to researchers, communicative competence should be divided into levels. The first of them – strategic – is a set of orientations, expressing attitude towards dialogue: as an end or as a means; focus on the dialogue or monologue, to intimate personal or functional role relationships. At the tactical level of communicative competence – the knowledge of the rules of organization of communication. Finally, on the technical – techniques that allow to implement the planned strategic line.

Under the communicative competence is understood as a system of knowledge about themselves and others; skills, skills in communication, behavior strategies in social situations, allowing to build interpersonal communication in accordance with the purposes and conditions of cooperation.

Today man is facing an hourly basis with the various information streams. In many cases, it seems that the facts speak for themselves, and that they almost do not need a graphical aid for the faithful interpretation and understanding. However, this is one of the most common misconceptions. The facts as presented bad for perception, automatically entail the wrong conclusions. If we are generally aware that a lot depends on how the information is presented, the graphic component would demand a greater extent.

application of the results; the ability to see the problem as a whole, all aspects and stages of its decision, and in the collective work – to determine the measure of personal involvement in solving the problem.

Obviously, for the preparation of the expert in charge of the labor market, it must take place on the training curricula and programs focused on the practical needs of the real economy.

The trends of the modern world are forced to take a different view on the degree of importance of the information flow in both conventional and new computer form.

To this end, the Department of the machinery design fundamentals developed and implemented in the curricula of masters of engineering specialties the discipline «Communication Design» [1, 3].

Discipline "Communication Design" aims to provide masters engineering disciplines specific knowledge and advice on the procedure and practice of the transfer of technical information (fig. 3.).

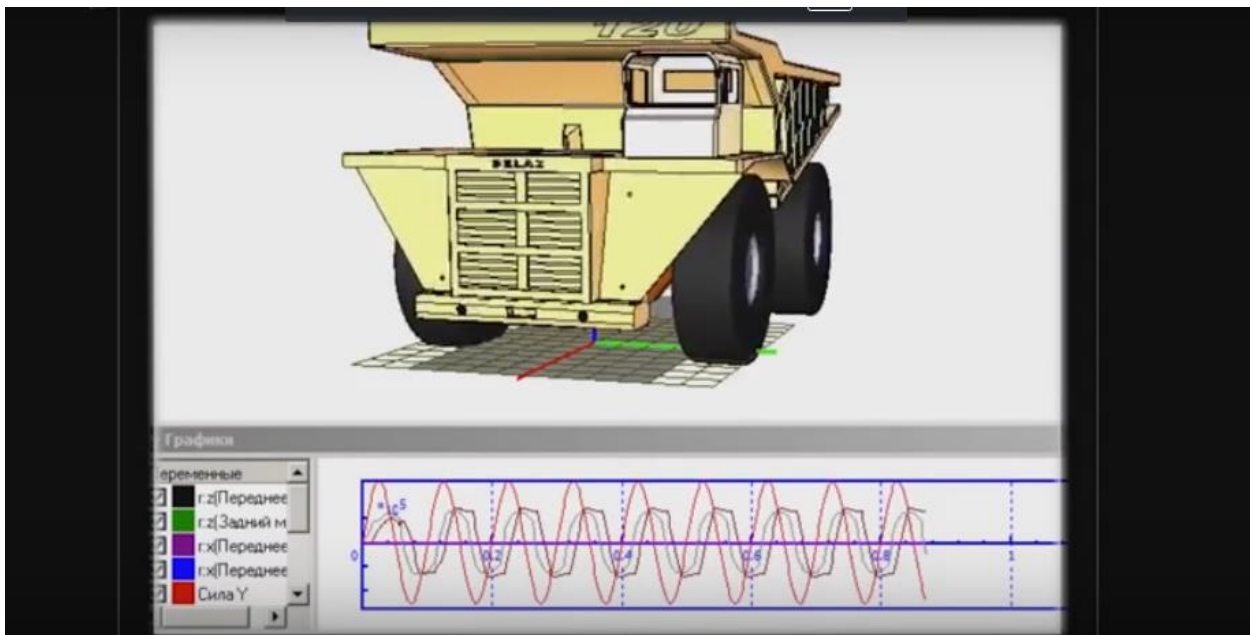


Fig. 3. Technical information in graphical form.

Communication Design is a significant part of the functional area of design where objects are designed, intended mainly for the transmission of messages.

Communicative correlate well with media design, both in practical terms and in the ontological, where from it has historically been considered a separate sphere, alternative classical object-spatial environment, electronic design environment.

We have found that ideally corresponds to the transformation of the instrumental function of objects, while communication - communicative. Accordingly, the ultimate goal of communication design is not the creation of the product, goods, and the creation of some "community" – the environment in which the creator and the consumer, the seller and the buyer, addresser and the addressee find each other and "speak" the same language on the "general" theme.

This function is on the one hand a practical and other on another – mainly art. Depending on this information is transmitted spectrum by utilitarian and objective knowledge to subjective attitude, expressing someone else's aesthetic position, evaluation, reflection.

Closest to the objectivity of the area is practical communication design information, aimed at the organization and presentation of data and to transform them, in the value and meaningful information. This chain of N. Shedrof is provided on the following scheme of information process (fig. 4) [4].

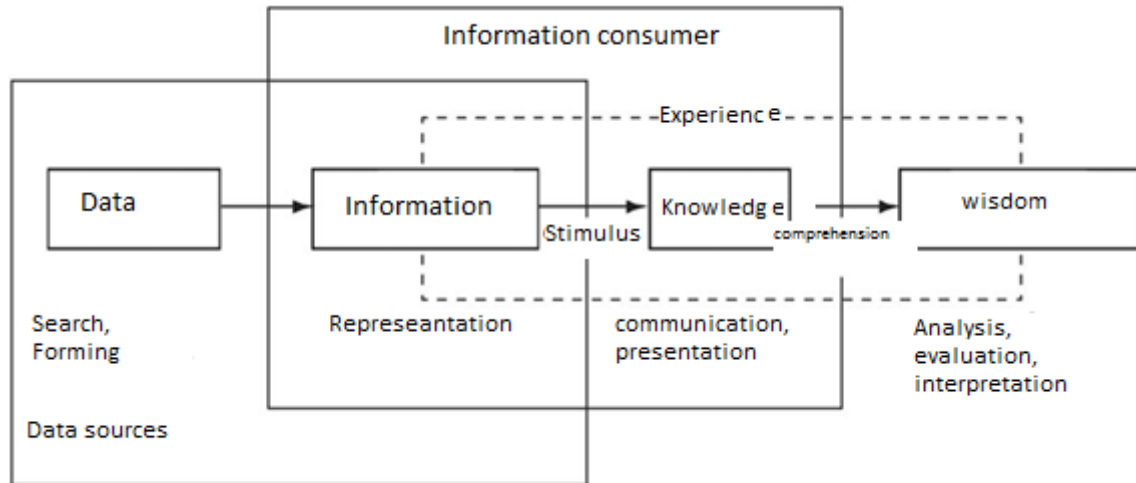


Fig. 4. Driving information process

An important role in the design plays a communicative advertising. Often, advertising design is in the middle. On the one hand, advertising informs, on the other – often carries an artistic image of the product and company.

Currently, communicative design is mainly focused on the objects of the graphical plan and electronic media according to the authors [4]. However, you can disagree. Communication design today is "engineering" planning processes in complex organizational structures. It brings in components such as visual design, advertising, illustration, font culture, printing processes, data objects in an urban environment, animation, performance (theatrical performance), branding, copywriting (texts compilation), TV and WEB-design, Internet, the psychology of personality and perception of information.

Summary. Now the situation has qualitatively changed, from university graduates appear fundamentally new challenges: along with the form supplied the information necessary to efficiently and effectively handle the available information. The quality of the playback information directly determines the level of the final communications products.

Therefore, an important part of the learning process is not only technical, but also methodological training, mastery of psychological methods of investigation of various phenomena of social life, including in the field of the psychology of art, the development of visual culture and visual perception skills, art therapy with visual painting.

Discipline "Communicative design" generates in students competencies to effectively design a variety of communication forms a system of knowledge about modern principles of design in communication design, communication design of the chain because of its connection with the marketing, sociology, psychology; generates skills and competencies with the research method of training as an effective means of enhancing creative abilities and formation skills.

References

- [1] V.V. Protsiv, K.A. Ziborov, T.S. Pismenkova, I.V. Verner. (UKR) Communicative design - Step to for employment realization, Contemporary Innovation Technique of the Engineering Personnel Training for the Mining and Transport Industry 2016
- [2] V.M. Prihodko. L.G. Petrova. Yu.P. Shkitsky. E.I. Makarenko. European program TEMPUS as a factor of innovative development of higher education system in Russia and Ukraine, Conference proceedings on Intern. innovation. development and innovation. cooperation: state, problems and

prospects, Materials conference "Problems and perspectives of innovation development of economy", 2006b S. 270-277.

[3] S. Felonenko, KA Ziborov, TS Pismenkova. On Students' Self-Learning Practice While Studying Knowledge-Based Courses, Contemporary Innovation Technique of the Engineering Personnel Training for the Mining and Transport Industry 2016

[4] AA Poleuhin The development of communication design, Proceedings of the Russian State Pedagogical University. AI Herzen. 2009. № 15.

[5] Biocca, F. (1993). Communication technology matrix. Chapel Hill: Center for Research in Journalism and Mass Communication, University of North Carolina at Chapel Hill.

[6] Biocca, F. (1992). Communication within virtual reality: Creating a space for research. Journal of Communication 4, 5-22.