

Psychological and Acmeological Aspect of Educational Cognitive Competence Development

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Abstract—This article examines the problem of improving the methodic and didactic organization of technical college students' professionally oriented foreign language teaching. The authors emphasize the role of such acmeological characteristics of personal and professional specialists' formation as self-organization and self-control in the process of educational and cognitive competence development. The basic features of these key concepts are described, the possible methods of their development in the process of students' independent work during foreign language learning are defined, and some tasks developing the ability to self-organization and formation of readiness for self-control in learning and future careers are proposed. It has been concluded that the independent work rational organization is an active tool for the individual qualities of self-organization and self-control development. The concept of professionally oriented foreign language teaching combining a number of motivational features has been proposed for introduction into the educational practice. It will allow resolving the contradiction between the theoretical subject nature of teaching and practical nature of upcoming professional activity.

Keywords—*professionally oriented education, educational cognitive competence, independent work, self-control, self-organization*

I. INTRODUCTION

The issue of professional skills and competence development as an integral part of educational activity at a higher educational institution is an actual topic in the modern world. Over the past decades social changes have created the prerequisites for a new type of personality formation. This is a specialist in the process of continuous independent improvement of the educational level, striving for professional self-development, capable of solving tasks related to the direct contents of his activities, possessing social and professional mobility. The goal of education is to fundamentally change the

organization of pedagogical practice, introduce new methods for teaching specialists in the field of higher education.

The combination of student's competences in the sphere of independent cognitive activity, consisting of logical, methodological, educational activity elements, correlated with real cognizable objects, is defined as "educational and cognitive competence", which includes knowledge and skills of goal setting, planning, analysis, reflection, self-assessment of educational and cognitive activity [11].

A future university graduate acquires the creative skills of efficient activity: obtaining knowledge directly from reality, mastering the methods of action in non-standard situations, heuristic methods of problem solving.

In a broad sense, the educational and cognitive competence is understood as the individual ability to implement a certain type of activity. It is based on knowledge, intellectual and personal experience conditioned by the social and professional life, which includes reflection, analysis, synthesis and practical application of the theoretical knowledge obtained. With regard to the process of studying foreign languages, the set of special linguistic knowledge required for a university graduate to carry out the forthcoming professional activity forms an integral part of this competence.

High requirements for the specialists' quality of training determine the special importance of such teaching methods development which will give the opportunity to train students to the level of compliance with the qualification requirements for the specialty studied. Quality of foreign language teaching has an important role to play in that regard. This activity dictates the necessity of creating technologies to improve the methodological and didactic organization of professionally oriented language teaching at a technical university.

Continuous development of educational and cognitive competence forms the basis for solving these theoretical and practical issues accordingly [5, 7, 10, 12-16, 19-20].

II. METHODOLOGY

The object of study in this paper is the process of professionally oriented foreign language learning at a higher educational institution. The study focuses on such acmeological characteristics of future graduates' personal and professional formation as self-organization and self-control. The research task include defining the role, place of the concepts "self-control" and "self-organization" in the system of educational and cognitive competence development tools, considering possible ways of developing self-organization and self-control skills in the process of students' independent work on foreign languages teaching. Competence, personality-oriented, activity-based approaches, contextual approach (organization of education in the context of professional activity), general principles of the psychological and acmeological approach, as well as methods of observation, analysis and generalization are used in the work [1].

III. RESULTS AND DISCUSSION

A person in a professional context is regarded as an active subject of activity from the viewpoint of the psychological and acmeological approach. In this field, rational planning and activity organization can be formed by studying the possibilities of mastering, managing and controlling individual educational and cognitive activity [3]. The means of the students' activity optimization is self-organization and self-control skills development.

In the scientific literature, the concept of self-organization is considered in close connection with the purposeful activity, consciously formed and regulated by the individual. According to the definition of the psychological terms dictionary, self-organization is the ability to integrate the regulation of natural, mental, personal qualities, carried out by intellectual-volitional mechanisms of consciousness, manifested in behavior motives and realized in the activity and behavior orderliness [4]. In this paper, self-organization is considered from the standpoint of the psychological and acmeological, personality-oriented approach in contextual training of professional activity. Self-organization is a complex personality creation, including a complex of different skills and practices, as well as a combination of various psychological characteristics influencing the effectiveness of independent educational activities.

One of the functional elements in the structure of self-organization is self-control. It can be defined as independent regulation of individual behavior, its motives, including the axiological component (emotional characteristics of the individual, moral and ethical, spiritual culture, general and private assessments of actions, self-rating) [6]. In accordance with its place and role in the process of foreign languages teaching, self-control is understood as an integral part of the individual professional development process aimed at educational process productivity increasing by updating the students' independent aspirations. The fulfillment of two pedagogical conditions is of the most crucial importance for

the effective development of self-organization and self-control skills according to our observations. They refer to the creation of a positive motivation for learning a foreign language and the rational organization of independent work.

To date the task of foreign language practical acquisition is complicated by a number of reasons. The reduction in the number of class hours, the weak motivation of the educational process, the lack of effective teaching methods create difficulties for a foreign language study in the amount corresponding to the tasks of professional activity. Therefore, the actualization of the principle of conscious and motivated linguistic material mastering should become a decisive factor in teaching a foreign language for professional communication. It is the question of the development of cognitive and professional motives as constituting factors for the educational process effectiveness ensuring [2].

The search for ways of improving the educational process quality makes the fulfillment of the second pedagogical condition important. Development of a rational approach to the form and contents of independent work on a foreign language is directed to learning the lexical and grammatical aspects of professional communication, the rules of oral and written translation. In this case, great attention is paid to the forms of educational work focused on mastering the subject and social role contents of professional activity that is organized independent work, teaching and research work. Independent work with information on a foreign language develops self-organization skills. It increases responsibility, provides the most convenient style and pace of work, corresponding to the students' individual qualities, allows independent assessing the level of their knowledge and the end result, stimulates the analysis of emerging difficulties and the search for ways of their overcoming.

The organization of students' independent work on a foreign language under the instructor's supervision is an important part of the educational process, the pedagogical support for the development of targeted readiness for professional self-education and a didactic tool of the educational process, the pedagogical design of the students' activities organization and management [8].

Independent work on a foreign language can be structured into two parts: class work organized by the teacher and independent work without the direct control of the teacher (preparation for practical classes, tests, etc.). It should be emphasized in this regard that managing students' independent work is the ability to optimize the process of these two parts correlation.

The goal of an out-of-class independent work is to master the basic knowledge and skills in a foreign language at a profile level, the experience of creative, research activities. The main types of work are independent preparation of tasks for class practices in the discipline, writing term papers, computer self-control of academic progress on the basis of electronic training and measuring tests. Development of independent work skills with electronic resources, organized search, analysis and transformation of information, use of the Internet is of paramount importance in this kind of activity. [3].

The Internet applicability in the educational process, in the authors' opinion, is attractive because it creates the environment contributing to students' creative and cognitive abilities development in the situations of unregulated and multivariate learning, formation of divergent thinking, characterized by the ability to put forward simultaneously a lot of correct ideas, quickness, flexibility, originality, accuracy. The Internet creates a unique opportunity for foreign languages learners to use authentic texts, listen to and communicate with native speakers, creates a natural language environment. Modern means of communication with partners, access to the Internet information resources presuppose not only good computer skills, but also the elementary level of proficiency in a foreign language [17; 18].

Electronic dictionaries and encyclopedias, multimedia courses, including audio and video materials, electronic editions of books, newspapers and magazines in the original language, educational sites, give an opportunity to see the sociocultural features of the studied subject in details and get comprehensive information on the issues.

A number of the Internet technologies for foreign languages independent study were examined and analyzed. The most effective, to our mind, is the project of a language Tandem - partnership ("Tandem Europe"), chats and youth forums.

The project of the language Tandem partnership was created with the financial support from the European Commission in the framework of the European Year of Languages 2001. Its aim is to attract the attention of as many European citizens as possible to the study of foreign languages and facilitate their participation in the training system. The coordinator of the project is the University of Ruhr Bochum (DE) in cooperation with the "International Tandem Network". The Internet community users' participation in the project offers an opportunity of distant communication with the help of electronic communication equipment. On the site of this project everybody can select a partner who will give a hand in:

- 1) better understanding of the language, expressing ideas in the authentic situations of written or oral communication;
- 2) refreshing previously acquired linguistic knowledge;
- 3) practical application of the material learned at classes in a foreign language;
- 4) improving and developing the acquired linguistic knowledge.

The language Tandem partnership is characterized by the fact that participants in the project pursue their own goals and help their partner at the same time. The project proposes to focus on certain aspects of language skills and train them with a partner. It can be better understanding of texts in a foreign language, foreign speech, speaking practice, acquisition of writing and translation skills.

Application of certain communication means depends on the chosen learning goal. It is possible to use such communication equipment to work in the project "International Tandem Network" as e-mail, telephone, videoconference, fax, letters, chat, mobile communication.

The choice of communication equipment determines the type of teamwork.

When using written communication means, there is enough time to read the partner's texts and training materials and use the dictionary to answer them. The essence of independent work with reference material lies in the fact that each partner gains new knowledge individually through thoughtful study of the reference book material and understands the facts, examples and theoretical conclusions arising from them. The main characteristics of such independent work are to master the educational material and form the ability to work with the dictionary.

To activate basic communication skills of speaking, writing, listening comprehension, students should also pay attention to the chat. The chat is an intermediate form of oral and written speech, the way for the communication participant to represent everyday speech in writing. The advantages of the chat include the possibility of live communication with real native speakers, acquisition of intercultural communication skills, improving reading skills, training of writing skills, overcoming fear of communication anonymity, mediated formation and development of monological and dialogical speech skills [18].

The process of forming the students' self-control experience can be productive if it is consistently implemented in the gradual change from doing standard training tasks to work on creative tasks with non-standard and multiple solutions [9]. In other words it is a step-by-step skills development to work on linguistic material with a gradual increase in the self-control amount in going from performing conventional linguistic actions to more complex tasks.

The mental maps used in teaching can help improve the efficiency in the process of self-control experience forming. Mind Mapping (from English "Mind Map") is an innovative technique to visualize thinking and for alternative recording. It can be used to analyze and organize information, fix or create new communicative ideas, images, solutions. This is unconventional, but very natural way to organize thinking. It has several undeniable advantages over conventional technologies.

The mental maps technique in teaching, from the point of view of psycholinguistics, is considered in connection with the issue of organization of external and internal factors of speech and mental process. This problem was investigated by leading domestic and foreign linguists. It was established that the datum of the speech and mental process is a certain starting point. It can be either external or internal, that is, caused by the individual needs.

It is recommended to use a radial map instead of linear recording when composing mental maps in a foreign language. This means that great attention will be paid to the main topic, which is placed in the center of the sheet. It is recommended to write only keywords down. The most characteristic, bright, memorable words are chosen as the key ones. They should be placed on multicolored branches diverging from the central theme. The links (branches) should be associative rather than hierarchical. Associations are known to facilitate

memorization greatly. They can be supported by symbolic drawings. The more personal the mental map is, the better it is. The innovative nature of the method, tested at foreign language classes during the experimental period, is aimed at creating a "carrying communicative construction" designed to help restore living thoughts behind boring text, to become a motivated impulse for foreign-language communication (see Fig. 1).

A reference should be made to the main characteristics of the self-control skills development process. The process is active in nature. It runs under constant control of the level of theoretical and practical knowledge mastering. This process is based on the conscious study of the material and focused on the development of self-assessment, self-planning and individual control of the actions performed. As the students learning the professional aspect of a foreign language should have basic language proficiency, self-control becomes especially important with such teaching process organization.

Let us examine in general terms the assignments for students' independent work, contributing to the development of self-organization ability and formation of readiness for self-control in the educational and future professional activities used in the process of learning a foreign language. The first stage of the work is to perform lexical and grammatical exercises on the knowledge of basic and highly specialized linguistic aspects. Doing the tasks is focused on the educational material knowledge, as well as on its repetition and retention. Such tasks allow monitoring the level of the student's preparation for the subject and assessing it, teach to think independently, analyze language phenomena, train observation and contextual guess. This way of checking the

language material knowledge stimulates attention and interest, increases the memory and thinking activity, makes it possible to determine the individual's level of knowledge and practical skills objectively.

The next, more complex stage, involves the implementation of creative tasks designed to enhance the theoretical and practical knowledge of the topic studied. All tasks are aimed at developing skills to plan, model, adjust, monitor personal actions, which develops the skills of individual work, self-organization and self-control. To prepare such tasks, good theoretical and practical language training is required. Tasks of a creative nature contribute to the formation of skills to compare, draw analogies, build and substantiate conclusions, express their own judgments, correctly use terms specific to the studied professional sphere, develop students' qualities indicating readiness for self-control such as attentiveness, observation, self-analysis, self-expression.

The students' actions in the implementation of the above forms of educational activity are reduced to active work with educational information, its critical analysis and comprehension of possible options for implementation. The acquired knowledge and skills are transferred to new pedagogical situations that model as closely as possible the conditions of future social and professional activities (role plays, preparation of presentations, creative assignments, research projects, forms of business correspondence, etc.).

The active nature of independent learning involves acquisition of some skills required in practical professional activities. They include learning to deepen knowledge independently and use it, focusing on systematic independent analytical study of the educational material, forming a creative approach to solving professional problems, etc.

Linguistic practice methods implementation can be realized in the following types of modeling educational situations:

1) demonstrative and practical situation is focused on studying the mechanisms of social and communicative phenomena, the effectiveness of using verbal and non-verbal communication techniques as a concrete example from the practice of professional activity;

2) the appraisal and analytical situation assumes a critical evaluation of the communicative situation (for example, the actions of employees of a certain company), the search for a way to solve it by analyzing the actual verbal and non-verbal mechanisms, the most typical speech errors and the result obtained;

3) informative and research situation requires preliminary study of special sources of information, conducting research work, preparing problematic issues, developing an action plan and solutions, forecasting the final result;

4) the contents of illustrative and modeling situation represent a communicative problem, predictable or previously recorded, and can serve as a means of conveying verbal experience.

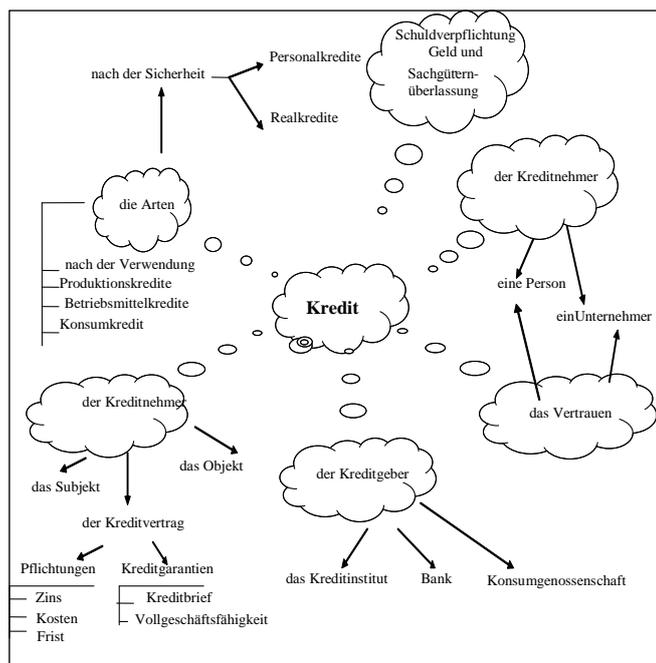


Fig.1. Example of a mental map design for linguistic and professional topic "Credit" at German lessons.

IV. CONCLUSION

The professional competence of a university graduate is determined not only by the set of general scientific and special knowledge, but also by the level of fluency in a foreign language sufficient for successful functioning in situations of professional foreign-language communication. The social maturity of specialists is manifested in the combination of the ability to use the acquired knowledge, skills actively and focus on continual education.

The modern specialists should have such level of proficiency in a foreign language that enables them to take part in the intercultural communication. It is important to mention that such language proficiency is formed on the basis of the professional and business component of foreign-language teaching.

Comparative analysis of the results of the summer examination session showed a positive trend. The average rating score in the above-mentioned subject was 84.8 out of 100 possible in the experimental groups participating in the approbation of the new course, and 75.8 out of 100 – in other unactivated academic groups, respectively (Fig. 2).

The introduced methodology showed that the students’ steady interests in their future professional activity and the subject, significantly increased in the process of educational and scientific studies, which means that their development, first of all, depended on the quality of the educational activity.

Creating an atmosphere of comprehensive interest in the subject of study greatly influences the educational goals and objectives, its contents and significance. At the same time, the teaching motive is combined with an active interest in the material studied. It has at its core the cognitive need and sense of responsibility for acquiring the knowledge and skills of a specialist.

Thus, the organization of independent work on a foreign language is an effective condition and active tool for the development of the individual quality of self-organization and readiness for self-control, which means understanding the immediate goals and objectives, analyzing the errors and difficulties that have arisen.



Fig. 2. Average credit score in academic groups

References

- [1] D.V. Abramov, “Psychological and acmeological modelling of representations responsible for the behavior strategy”, Ulyanovsk, 2003 (*The author’s abstract of the thesis of the candidate of psychological sciences*). (in Russian).
- [2] I.V. Aleshchanova, N.A Frolova, “Interdisciplinary links and educational process motivation at foreign language classes”. Actual issues of vocational education. vol. 8., 2006, pp. 86-87. (in Russian).
- [3] I.V. Aleshchanova, N.A Frolova, “Role of independent work in teaching professional foreign terminology at technical university”. News of VSTU. Series “Problems of social and humanitarian knowledge”. Is. 16. vol. 5, 2014.
- [4] Big psychological dictionary. – URL: <http://www.persev.ru/samoorganizaciya> (accessed date 01.01.16). (in Russian).
- [5] R. Dabylyayeva, N. Dabylyayeva, O. Kuratova, “The professionally-oriented foreign language teaching at non-linguistic faculties of universities”. Social Sciences (Pakistan), vol. 11 (4), 2016, pp. 513-522.
- [6] Encyclopedia of philosophic terms. URL: <http://www.onlinedics.ru/slovar/fil/s/samokontrol.html>. (accessed date 01.01.16). (in Russian).
- [7] A.M. Gazaliyev, V.V. Yegorov, Y.G. Ogotsova, I.I. Yerakhtina, “Methodological provision of technical students’ vocational education when studying humanities Mediterranean”. Journal of Social Sciences, vol. 6 (4S3), 2015, pp. 542-546.
- [8] S.I. Kakovihina, G.V. Chikonina, “Independent work and self-organization as didactic means of general cultural competences development” (*teaching-methodical manual*). Tomsk, Tomsk Polytechnic University, 2010.
- [9] D.F. Kayumova, I.A. Temirkaeva, “Self-organization and self-control skills formation in the process of students’ independent work in a foreign language”. II Interregional Scientific and Practical Conference «Problems and prospects for the development of multilevel language training in a multicultural society». Kazan, KazSIC, 2015. URL: http://kazgik.ru/conference_competition/electronic_conferences/.
- [10] A. Khaled, J. Gulikers, H. Biemans, M. Mulder, “How authenticity and self-directedness and student perceptions thereof predict competence development in hands-on simulations” British Educational Research Journal, vol. 41 (2), 2015, pp. 265-286.
- [11] A.V. Khutorskoy, “Technology for key and subject competences designing”. Internet-magazine “Eidos”, 2005. URL: <http://www.eidos.ru/journal/2005/1212.htm>. (accessed date 12.12.15).
- [12] D. Kirkpatrick, R. McLaughlan, “Flexible lifelong learning in professional education”. Educational Technology and Society, vol. 3 (1), 2000, pp. 24-31.
- [13] I.E. Kulikovskaya, L.V. Abdulmanova, A.V. Reznichenko, “Foreign languages in the educational space of Southern Federal University of Russia”. Review of European Studies, vol. 7 (6), 2015, pp.162-169.
- [14] D. Matukhin, G.A. Nizkodubov, V.Y. Zyubanov, Y.R. Khasanshin, A.V. Obskov, “Methodological basics of blended learning in teaching english for academic purposes to engineering students” Asian Social Science, vol. 10, 2014, pp. 97-102.
- [15] M. Somerville, J. Townsend, “A student-centered approach to designing teaming experiences”. Proceedings-Frontiers in Education Conference, FIE, 2015 (February), no. 7044403.
- [16] O. Zuber-Skerritt, R. Teare, “Lifelong action learning for community development: Learning and development for a better world”, 2013, pp. 1-250.
- [17] M.R. Zheltukhina, L.G. Vikulova, S.V. Mikhaylova, L.A. Borbotko & A.R. Masalimova, “Communicative Theatre Space in the Linguistic and Pragmatic Paradigm”. XLinguae Journal, Volume 10 Issue 2, April 2017, pp. 85-100. DOI: 10.18355/XL.2017.10.02.08.
- [18] M.R. Zheltukhina, V.L. Mouzykant, V.V. Barabash, E.B. Ponomarenko, E.V. Morozova, S. Mori, “Russian and Japanese Younger Generations in Search for a New Media Product”. Man In India, 97 (3), 2017, pp. 223-236.

[19] V.G. Lizunkov, M.G. Minin, E.Y. Malushko, V.E. Medvedev, "Developing economic and managerial competencies of bachelors in mechanical engineering". In: "SHS Web of Conferences", Vol. 28. 2016. Article #01063. DOI: <http://dx.doi.org/10.1051/shsconf/20162801063>

[20] E. Malushko, A. Novozhilova, Ye. Shovgenina, S. Korolkova, A. Shovgenin, "Developing professional competence of a translator: information retrieval and information technology constituents". In: "3rd international multidisciplinary scientific conference on social sciences & arts SGEM 2016: conference proceedings". Book 1. Vol. 1. 2016. pp. 669-676.