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KEY COMPETENCES DEVELOPMENT BY THE TEACHING TECHNOLOGIES OF NON-FORMAL AND INFORMAL LEARNING

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Setting of the scientific problem. With the rapid changes in the socio-economic landscape national labor markets needs skilled workers and professionals that can meet the needs of the economy of accelerated innovation. The obvious is the need to complement traditional approaches and teaching technologies that give the possibility to provide students not only with relevant knowledge and skills of the profession, but also shape their attitudes, and values that determine the effectiveness of future professional activities. In European countries the response to globalization and the shift to knowledge-based economies was in exploring, creating the framework for implementation the set of key competences to European educational space, which enables to keep the high level of professionalism, motivation and involvement through professional life. The development of key competences (communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and technology, digital competence, learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression) is important both during the initial and continuous vocational educational and training.

However, if the first four competences can be successfully formed and developed during traditional lectures and practical classes in secondary and vocational schools, the last four (learning to learn, social and civic competences,

sense of initiative and entrepreneurship, cultural awareness and expression) is quite complicated for development, as they relate not with knowledge and skills but with attitude, values and personal vision. So important is the search and analysis of practical experience of using of teaching technologies that enable to develop these set of competencies.

Analysis of recent research. The scientific problem of key competencies' development was presented in scientific papers of such scientists and practicians as Z. Arsal, V.Bortkevičienė, S.D. Broek, B.J. Buiskool, J.Figel, G. Gedvilienė, D.Hozjan , J.A. van Lakerveld, Y.Ohana, M. Osborne, H.Otten, G.K. Zarifis. But there are few research dedicated to key competencies' development by the teaching technologies of non-formal and informal learning.

A study by the European Centre for the Development of Vocational Training, which aimed to identify effective forms of competencies development (studied the development of professional competency of employees of companies during their participation in programs of on the job training form and off the job training form and the impact of learning outcomes on innovative thinking and level of creativeness of personnel) showed that the lowest correlation is between the factors "participation in external training programs (training courses organized by external providers) and "innovation thinking" (0.28). The average level of correlation (0.49) exists between the factors "participation in internal training programs" (trainings and workshops organized within the enterprise) and "innovation thinking". The highest level of correlation (0.68) exists between the factors "participation in various forms non-formal and informal training" (learning in the workplace, planned training during the rotation, exchanges and study visits, self-education, participation in conferences, workshops, etc.) and " innovation thinking" (European Centre for the Development of Vocational Training, 2012).

As the present and future professional activity require increased team-work (especially in project teams), flattening of hierarchies, devolved

responsibilities and a greater need for multi-tasking it is crucial to develop those competences that lead to these abilities. Our hypothesis was that using specific teaching technologies of non-formal and informal learning would lead to the development of specific set of key competences (learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression).

Non-formal education (or learning) became part of the wide international debate among educators in 1960-70-ies. due to the crisis in education: non relevant of market requirements and technological progress curricula and programs; awareness that education trends do not correspond to trends in the economy; recognition of the fact that the competitiveness of graduate on the labor market is a derivative of his education and academic excellence; statement that formal education is by nature not able to respond flexibly to changing conditions; instead of executing the vanguard of technological change formal education instead was inertia and long adapted to new challenges; initiative to reform in education increasingly came from NGOs and not from classic educational institutions; the realization that professional success is derived from the so-called social competence a much greater extent than obtained professional knowledge (a traditional education had limited potential for the social competence' development of students) (Faure E., Herrera F., Kaddoura A-R., 1972). The existence of the urgent need to supplement the traditional system of alternative training programs crystallized in the phenomenon of non-formal and informal learning.

Researchers (Fordham, P., 1979) noted that non-formal learning as education that is acquired outside recognized educational institutions - schools, institutes, universities, colleges - and its main features distinguish: the relevance of actual needs; focus on teaching of specific population groups; focus on clearly defined learning goals; organization and flexibility in the choice of forms and methods which used. Informal learning is defined as the way to learn takes place outside the curricula provided by formal and non-formal educational

institutions and programs and becomes a residual category of a residual category (anything that it is neither formal nor non-formal) (Schugurensky, 2000. The author also says that by informal learning it is possible to develop a taxonomy which identifies three forms (or types) of informal learning: self-directed learning, incidental learning and socialization (Schugurensky, 2000. Another factor that significantly influenced the popularization of non-formal and informal learning, was the work of UNESCO and disclosure in the annual report of the organization in 1972, the concept of long life learning - lifelong learning (Faure E., Herrera F., Kaddoura A-R., 1972).

The range of types of non-formal learning is quite diverse: overcoming of illiteracy among the adult population; education in the framework of political parties and public organizations; programs for students expelled for academic failure; pre-school education for children; training within popularization initiatives (civil society, healthy lifestyle, lean and energy saving, etc.). The recommendations of the General Assembly of the Council of Europe "Non-formal Learning" (Parliamentary Assembly of Council of Europe, 2000) states that through non-formal learning young people and adults acquire competencies, vision and values that are essential for the rapid changes in the social landscape.

The main hypothesis and ideas about the potential of use of non-formal and informal teaching technologies for the development of key competences was implemented in the project "Joker - my business, my identity" (Joker - moja firma, moje ja)», which held the auspices of the program Erasmus + by the Institute of Vocational Education and Training of the National academy of educational sciences of Ukraine and Free Enterprise and Entrepreneurship Foundation, Poland.

The project aimed to develop such competencies as: learning to learn (the ability to pursue and persist in learning, to organize one's own learning, including through effective management of time and information, both individually and in groups; awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in

order to learn successfully) (Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, 2006), social and civic competences (personal, interpersonal and intercultural competence and cover all forms of behavior that equip individuals to participate in an effective and constructive way in social and working life, and particularly in increasingly diverse societies, and to resolve conflict where necessary) (Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, 2006), sense of initiative and entrepreneurship (individual's ability to turn ideas into action; includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives) (Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, 2006), cultural expression and awareness (appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, performing arts, literature, and the visual arts) (Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, 2006).

The Project was held in July 2015 in Warsaw. There were the equal number of Ukrainian and Polish participants (with gender parity), students of vocational and higher educational institutions. Together they develop the ability to intercultural communication, tolerance, negotiation, transformation of business ideas into a business project. By the end of the project participants created and presented projects that had or commercial or social orientation.

By the end of the project participants also received Youthpass certificate - a certificate attesting their participation in the program of international student exchange, describes the project activity and personal involvement of each of them, as well as personal training achievements described in 8 key competences - communication in the mother tongue, communication in a foreign language, mathematical competence and basic skills in science and technology, digital literacy, ability to learn, social and civic competence, entrepreneurial

competence, cultural identity and expression. Youthpass certificate is proof in Europe a participation in international student exchange programs and evidence of competence. It is important in finding employment, further education and development.

Follow the training program that aimed to achieve objectives of the project students were offered the following tasks: presentation of themselves; division into small groups with defined tasks and responsibilities of each group for the project; identifying their strengths in the process of team coaching; keeping a diary of the project and received inventory values and outcomes; work with metaphors and visual images; collaborate on projects; quests in places of business to identify business models; team coaching to stimulate their awareness; work on individual project to formulate of business ideas; understanding received values to generate Youthpass certificate.

For the development of part components of key competencies during the Project there were applied specific teaching technologies, in particular: to identify the individual strengths - the methods of self-assessment, coaching, visualization; for the development of entrepreneurial competence, the ability to transform a business idea into a business model - benchmarking, analysis methods of customer preferences, analysis of best practices in creating business models; to develop the ability to work in project teams - identification the team roles, definition of responsibilities in the team; to develop presentation skills - drafting, visualization of presentations, simulations of investment voting; to develop analytical skills – creating individual project diaries and analyzing project outcomes, self-evaluation, generating the YouthPath Certificate, discussion.

Let us stop on the spesific of teaching technologies that were used for the development of key competencies of students during the project.

1. Entrepreneurial competence. For the development of this competence, from our point of view, it is necessary the following components: personal awareness of their own capacity to the doing of business (their strengths,

intellectual and emotional resources, incentives to specific activities), the availability of business ideas (according to our plan, it should be based on the phenomenon that detects the presence of a high degree of personal interest - passion), awareness of factors that can attract potential customers. Regarding the last part, the world scientific opinion firmly established the idea that one of the most productive methods of predicting customer behavior is to analyze someone's' customer experiences and preferences and extrapolate them to experience and preferences of potential customers. American researcher D.Garvin (Garvin, D., 1984) reached conclusions about the factors that determine the level of customer satisfaction. Analyzing large amounts of empirical data, he grouped the factors in 8 categories: quality of product (including the quality of basic product specifications), quality of secondary characteristics of the product (which, however, form consumer value), product reliability (defined probability of failures for a specified period of time), compliance (compliance with certain standards of product quality), duration of use, quality of service, quality of product design (which corresponds in minds of consumers with its quality), customer perception of service quality. The last two criteria D.Garvin finds the one hand, the most important and those that determine the competitive advantages of the product and on the other - such that the least amenable to formalization, measurement and analysis. Further studies (Tsiotsou, R., 2005) have shown that there is a close relationship between the following phenomena: "customer perception of service quality", "quality of service satisfaction", "intent on further purchases", "high customer loyalty."

One of the methods by which you can explore the level of customer satisfaction is SERVQUAL method, which is scientifically justified and has extensive practical testing (Parasuraman, A., Zeithaml, Valarie A., Berry, Leonard L.) (1988). Scientists say that traditional approaches to assessing the quality of services is insufficient to control improvements since not include such important criteria as the perception of quality - customer perception of service quality. Therefore, as a result of the research was established methodology that

provides a valid assessment of perceived quality of customers. It allows to assess key components that generate their level of satisfaction. Research carried out by the survey (this survey form can be as interviewing and filling in the questionnaire). The basis of the questionnaire is two options - customer expectations regarding service quality and the actual perception of the level of service in the service center. It should be analyzed and interpreted the difference between the level of expectations and perceived quality level of service. To predict the possible components of customer satisfaction project participants were invited to visit various business places (restaurants, hotels, banks). The aim was to assess the level of customer service by methodology of SERVQUAL. Analysis of gaps between expectations of service and actual level of service enabled the Project participants to make a correction of their own business model to focus on the real needs of customers.

2. Ability to work in project teams. Trend of recent years is that the company give part of their business processes to outsourcing in an effort to reduce the cost of doing business. Thus, one of the core competencies of personnel is the ability to work in project teams. Such interaction is fundamentally different than interaction in the constant teams and requires the ability to quickly adapt to new teams, awareness of their team role, primarily use their strengths in team interactions.

Some researches (Belbin, 1993) revealed that the difference between success and failure for a team was not dependent on factors such as intellect, but more on behavior. The researcher identified separate clusters of behavior, each of which formed distinct team contributions or "Team Roles". A Team Role is defined as: "A tendency to behave, contribute and interrelate with others in a particular way" (Belbin, 1993). As it was found different people behave, contribute and interrelate with others in a particular way and different individuals displayed different Team Roles to varying degrees. If the person is aware about his or her Team Role, aware his strength, weaknesses, he or she can use it to make team work more effective.

To develop competence "ability to work in project teams" project participants were asked to identify their prevailing Team Roles, familiar with their characteristics, identify their strengths and limitations. Then the participants united in mini teams they analyzed the existing structure of team roles in the new team. It turned out that all mini teams had deficit of certain team roles and therefore some functions could not be performed. This analysis has led to the need to reach an agreement between the participants of the mini teams about who would take responsibility to perform deficit functions to complete the work in teams. This kind of research and analysis allowed mini teams to carry out effectively all the tasks that were set by the organizers (to prepare City Quest, Trip to Wilanow, to Provide Preparation Training to the Youth Pass Certificate).

3. Identification of Personal Strength. It is an important competency for personal and professional effectiveness which help to act based on personal strength and avoid goals and situations that could weak person's position. We believe that one of the most effective tools to identify strengths is coaching, which also allows to use personal potential of participants to form their willingness and ability to self-training and learning activities, generate the ability to use all possible resources to achieve the goals and the objectives, ability to independently carry out, adjust and monitor their activities.

We defined the basic philosophical principles of coaching:

-the best results are achieved when a person bases on his/her capacity and consciously make the choice, which allows a high level of motivation to educational and professional activities;

-person's performance is higher when there is continuous improvement of his/her own capacity and reduced restrictions (negative experiences, fears, uncertainty, perfectionism, etc.;

-trajectory of person's development is related to his/her ability to generate meaningful goals, achieve them and to realize, in this regard, its success;

-effectiveness of educational and professional activities will be greater if the person voluntarily sets goals, develops a plan for their implementation and take responsibility for achieving them.

Interacting with the participants of the project, we used and taught participants to use the coaching model GROW (acronym from the English. G - goal (target), R - reality (real state), O - options (possibilities), W - will to do (intend to work) ; model of interaction with the person as a result of which he/she determines the goal, finds his/her own level of motivation, resources and constraints on its achievements, realizes and analyzes available and potentially necessary competence to achieve goals, makes algorithms to implement goals and objectives); Model "T" (model of interaction with the person as a result of which there is deepening awareness of the phenomenon (aims, motives, objectives, algorithms) that allows the person to create professionally and personally meaningful goals and generate high levels of motivation to work); R. Dilt's logic levels Pyramid (interaction model that helps to avoid short-term effects of changes in behavior, attitude, motivation and provides long-term effect and, therefore, significant qualitative changes in the behavior of the subject); visualization (tools of individual and group coaching interaction, use of visual images to deepen understanding of their own abilities, resources, potential, personally meaningful goals); the technique of moderation (tools of group coaching interactions that are used to generate ideas, systemize them, make ranking of ideas, prioritize the purpose of collective decision making of issues under consideration); asking the "strong" questions (specific type of open-ended questions used in coaching interactions, aimed stimulating awareness of the subject of professionally and personally meaningful phenomena (goals, values, resources, capabilities, etc.) to their correction; scaling (work with arbitrary scale, in which the person evaluates the gap from the desired to current situation, which enables the algorithm to generate significant achievement goals).

4. Presentation Skills, important component of key competences, which allows a person to present successfully his/her idea to convince its priority. During the project to develop this competence the participants were asked to: develop the idea of presentation of their business idea, create the structure, visualization of the presentation, consider using audio tools, means and ways of interacting with the audience during the presentation. From our point of view, it was important for the participants to get feedback from two aspects - the value of their business ideas and adequacy of the proposed business model, and for the presentation skills. The format, which enabled the participants to get feedback, was simulation of presentation of business ideas to potential investors who voted for a particular business idea by a certain number of virtual investment resources. So after this phase the group received the rating of participants. Discussion of the voting, the criteria by which the participants made decisions on investing in a particular business idea, enabled each participant to reflect their business idea and presentation, and develop ways to improve them.

Conclusions. Teaching technologies of non-formal and informal learning (such as methods of self-assessment, coaching, visualization, benchmarking, methods of analysis of customer preferences, analysis of best practices in creating business models, identification the team roles, definition of responsibilities in the team, drafting, visualization of presentations, simulations of investment voting, creating individual project diaries and analyzing project outcomes, self-evaluation, generating the YouthPath Certificate, discussion) enables to develop effectively such components of key competences as learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression.

References

1. Belbin, M. (1993). *Team Roles at Work*, Butterworth/Heinemann.
2. Faure, E., Herrera, F., Kaddoura, A-R. and others. (1972). *Learning to be. The world of education today and tomorrow*/ UNESCO, http://unesdoc.unesco.org/images/0000/000018/001801e.pdf.

3.   Fordham, P. (1979). *Learning Networks in Adult Education. Non formal education on a housing estate*. London: Routledge and Kegan Paul.

4.   Garvin, D. (1987). *Competing on the Eight Dimensions of Quality. Harward Business Review.*

5.   Garvin, D. (1984). *What Does "Product Quality" Really Mean?* Sloan Management Review.

6.   *Learning and Innovation in Enterprises* (2012). European Centre for the Development of Vocational Training. Luxemburg. Publication Office of the European Union.

7.   Parasuraman, A., Zeithaml, Valarie A., Berry, Leonard L. (1988). *SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality.* Journal of Retailing. Vol. 64(1).

8.   *Recommendation 1437* (2000). Non formal education. Parliamentary Assembly of Council of Europe, http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=16762&lang=en

9.   *Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning*, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006H0962, 30.12.2006.

10.   Schugurensky, D. (2000). *The forms of informal learning: towards a conceptualization of the field*. Toronto: Centre for the Study of Education and Work.

11.   Tsiotsou, R. (2005). *Perceived Quality Levels and their Relation to Involvement, Satisfaction and Purchase Intentions*. Marketing Bulletin.

РОЗВИТОК КЛЮЧОВИХ КОМПЕТЕНЦІЙ ЗАСОБАМИ НЕФОРМАЛЬНОГО ТА ІНФОРМАЛЬНОГО НАВЧАННЯ

В статті аналізується ефективність використання засобів формального, неформального та інформального навчання в процесі розвитку ключових компетенцій. Запропоновано педагогічні технології неформального та інформального навчання, які уможливлюють розвиток таких компетенцій, як уміння вчитися, міжособистісна, міжкультурна, соціальна і громадянська компетенція, культурне самовираження, підприємницька ініціатива як у учнів професійно-технічних навчальних закладів, так і у персоналу підприємств в контексті освіти впродовж життя.

Ключові слова: неформальне навчання, інформальне навчання, ключові компетенції, педагогічна технологія, освіта впродовж життя.

РАЗВИТИЕ КЛЮЧЕВЫХ КОМПЕТЕНЦИЙ СРЕДСТВАМИ НЕФОРМАЛЬНОГО И ИНФОРМАЛЬНОГО ОБУЧЕНИЯ

В статье анализируется эффективность использования педагогических технологий формального, неформального и информального обучения в процессе развития ключевых компетенций. Предложены педагогические технологии неформального и информального обучения, позволяющие развивать такие компетенции, как умение учиться, межличностная, межкультурная, социальная и гражданская компетенция, культурное самовыражение, предпринимательская инициатива как у учащихся профессионально-технических учебных заведений, так и у персонала предприятий в контексте обучения на протяжении всей жизни.

Ключевые слова: неформальное обучение, информальное обучение, ключевые компетенции, педагогическая технология, обучение на протяжении всей жизни.

KEY COMPETENCES DEVELOPMENT BY THE TEACHING TECHNOLOGIES OF NON-FORMAL AND INFORMAL LEARNING

The article analyzes the effectiveness of the use of teaching technologies of formal, non-formal and informal learning for the development of key competencies. A teaching technologies of non-formal and informal learning, which enable the development of such competence as learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression both for students of vocational schools and personnel of enterprises in the context of long life learning are presented.

Keywords: non-formal learning, informal learning, key competencies, teaching technology, long life learning.