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### **SCIENCE IN MOTION: CLASSIC AND MODERN TOOLS AND METHODS IN SCIENTIFIC INVESTIGATIONS**

held on January 19<sup>th</sup>, 2024 by

NGO European Scientific Platform (Vinnytsia, Ukraine)

LLC International Centre Corporate Management (Vienna, Austria)

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# GRAIL OF SCIENCE

№ **35** | January, 2024

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МІЖНАРОДНИЙ НАУКОВИЙ ЖУРНАЛ

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# DESIGN THINKING IN THE DEVELOPMENT OF THE ABILITY TO MANAGE THE ENVIRONMENT OF LIFE ACTIVITIES AS A COMPONENT OF PERSONAL PSYCHOLOGICAL WELL-BEING

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**Summary.** The article deals with a description of the results of a theoretical analysis and an empirical study of Ukrainian youth's experience of their own ability to manage their living environment as part of holistic psychological well-being. Through the disclosure of the innovative Design Thinking method use specifics, an effective strategy of constructive interaction of the educational process participants is highlighted on the example of the training of future specialists in the field of tourism, business and management, aimed at the development of the specified ability to manage the living environment in conditions of digitalization. The results of the approbation of effective resources for the use of Design Thinking tools for the creation of informational tourism products and the activation of geo-

informational services and technologies aimed at service consumers and supporting their psychological well-being in the conditions of the modern market are described.

**Key words:** *Design Thinking, personality, environment, environmental management, psychological well-being.*

Education of youth as a humanitarian component of the national security of the state appears as a real productive force in the conditions of war and the modern European integration progress of Ukraine as it involves the constant development and self-development of a person's adaptability as a subject of their own life successful in personal and professional development, maximally adapted and resilient to overcoming problematic maladaptive and deprivation situations in the living environment.

Therefore, the scientific study of the psychological well-being of young people, who are an active social stratum and constitute almost the greatest potential for the development of society in complex modern conditions is an urgent public demand on the way to further substantiated support and improvement of the quality of life, multifaceted well-being of the population, and therefore, recovery, post-war development of the Ukrainian state in the community of European nations.

That is why the main task of innovative education of the 21st century is the problem of harmonizing the relations of "man-nature-society" and the personal-activity mastery of future specialists with the humanistic methodology of creative transformation of education. The strategic directions of educating the young generation in the conditions of digital reality were reflected in the creation and implementation in Ukraine of the "Concept of educating children and youth in the digital space" [1].

Modern psychology focuses on the development of the individual in the system of self-building and self-realization processes, the correlation of the individual's internal world with the external in the conditions of social and cultural diversity, which is activated by the development of information systems and the latest practices.

The complexity and multifaceted nature of the given problem becomes the subject of scientific interest in various fields of science which have an anthropological and educational direction. In national psychology, increasing interest in the problem of the subjectivity of choice, self-expression and self-realization of the individual, in our opinion, is most clearly represented within the boundaries of human-centered, humanistic, phenomenological, eco-psychological environmental and subject-behavioral approaches.

The scientific literature presents various research theories of the issue of psychological well-being as a socio-psychological phenomenon. In some studies, in the general theoretical framework of the hedonistic approach, it is defined as the ratio of "positive and negative affects", as the absence of "financial and family anxiety", "health anxiety", etc.; in others, in the context of the eudaemonistic approach, it is more multifaceted: as a combination of a number of factors ("Satisfaction", "Emotional stability", "Optimism", "Competence", "Meaning", "Positive relationships", "Resilience", "Self-esteem", "Assertiveness", "Vitality", etc.)

This approach remains one of the main in modern world psychology. In the "Psychological Dictionary of the American Psychological Association", well-being is



defined as "a state of happiness and contentment with a low level of distress, general good physical and mental health, outlook, or a good quality of life in general." [2].

The six-factor model of psychological well-being developed in the 1990s by K. Riff and his colleagues became the most famous and popular. It covers the following dimensions as "Autonomy", "Management of the environment", "Personal growth", "Positive relations with others", "Purpose in life" and "Self-acceptance". Scientists have empirically proven that their model is the most adequate among all theories of health and well-being. As noted by K. Riff and B. Singer, this is a "model of positive personal functioning", which is substantiated by various fields of science and philosophy [3]. In particular, Factor 3. "Management of the environment." "High management of the environment" means that a person has a sense of mastery and competence in managing the environment, complex self-control of external activities, effective use of environmental opportunities, readiness to choose or create contexts that meet personal needs and values. "Low control of the environment" means that a person feels difficulty in managing everyday affairs, experiences the inability to change or improve the surrounding contexts, is not aware or little aware of the surrounding possibilities, lacks a sense of control over the external world.

Ukrainian psychological science is characterized by the analysis of psychological well-being in a more general theoretical and methodological framework of the concepts of life activity, life-making, life-creation. In particular, T. Tytarenko understands psychological well-being as experiencing the ability to responsibly change and create one's own life on a daily basis, to gain experience in the areas of the unpredictable and unexpected [4].

The study of the current state of the anthropological problem "man-nature-society", consideration of the concepts of the interaction of environmental factors and human activity in the society, the mutual influence of the geosystem and the psychosystem of a human, psychological analysis of various aspects of the organization of their life and personal space is a socially demanded problem of today.

**The purpose** of the article is a theoretical analysis and empirical study of design thinking tools as a factor in Ukrainian youth's experience of their own ability to manage their living environment as part of their overall psychological well-being.

The research tasks are: 1) theoretical analysis of the specified problem; 2) the results of an empirical study of the psychological well-being of young people description and interpretation; 3) justification and approval of the design thinking method in building an effective strategy of constructive interaction of participants in the educational process aimed at developing the ability to manage the environment of life in the conditions of digitalization as a component of their psychological well-being.

Research methods and procedure. At the first and second stages of the research, the questionnaire "Psychological well-being scale" by K. Riff [3].

The first confirmatory empirical cut was carried out in February and March 2021, the second in March and April 2022, and the third in May and June 2023. The sample consisted of 501 students of higher education, among whom 118 (students of Ternopil Volodymyr Hnatiuk National Pedagogical University) were examined at the first stage; 86 (students of Ternopil Volodymyr Hnatiuk National Pedagogical University) were on the second.

After mathematical and statistical processing of quantitative data (factor analysis of the main components) in the first two subgroups, averaged indicators were obtained according to six scales of the K. Riff questionnaire (table. 1).

Table 1

**Arithmetic Average and rank indicators of the degree of experience of the main factors of psychological well-being in two subgroups of respondents**

№	The name of the scale	Average score / rank	
		1 subgroup	2 subgroup
1.	"Positive relations with those around"	$\bar{x}_1 = 4,37 / 3$	$\bar{x}_2 = 4,29 / 3$
2.	"Autonomy"	$\bar{x}_1 = 4,06 / 4$	$\bar{x}_2 = 4,22 / 4$
3.	"Environment Management"	$\bar{x}_1 = 4,02 / 5$	$\bar{x}_2 = 4,10 / 6$
4.	"Personal growth"	$\bar{x}_1 = 4,69 / 1$	$\bar{x}_2 = 4,66 / 1$
5.	"Aim in life"	$\bar{x}_1 = 4,51 / 2$	$\bar{x}_2 = 4,45 / 2$
6.	"Self-acceptance"	$\bar{x}_1 = 4,00 / 6$	$\bar{x}_2 = 4,11 / 5$

According to the results of two empirical sections conducted on samples of students using the standardized "Scale" by K. Riff before and during the full-scale war in Ukraine, we ascertain both positive and negative changes in the experience of psychological well-being. Some positive transformations are mostly related to "Autonomy", negative related to "Environment Management". In particular, III. "Management of the environment": growth for "The demands of everyday life rarely make me nervous" ( $\bar{x}_1 = 3.22$  and  $\bar{x}_2 = 3.74$  at  $p = 0.005$ ) and "My attempts to find activities and relationships that are suitable for me have been very successful" ( $\bar{x}_1 = 4.06$  and  $\bar{x}_2 = 4.55$  with  $p = 0.003$ ); relaxation according to "I rarely feel overwhelmed by my responsibilities" ( $\bar{x}_1 = 3.62$  and  $\bar{x}_2 = 3.07$  at  $p = 0.004$ ), "I do not experience stress because I cannot cope with all the things that forced to do every day" ( $\bar{x}_1 = 3.81$  and  $\bar{x}_2 = 3.16$  at  $p = 0.006$ ), "I was able to create my own system and lifestyle, which best suits my preferences" ( $\bar{x}_1 = 4.09$  and  $\bar{x}_2 = 3.73$  with  $p = 0.05$ ).

In general, the hierarchy of the main dimensions of psychological well-being in the self-assessment of higher education students in the context of both periods remains virtually unchanged. His greatest resource is formed by "Personal growth" as a permanent desire for self-development, openness to new experiences, experiencing the realization of one's own potential, self-improvement, self-knowledge and self-efficacy.

The accelerated dynamics of modern social and cultural educational processes is marked by the intensive introduction of innovations into the circulation as potential sources of the individual development, social groups, improvement of their adaptive capabilities to the changed conditions of the environment, which contains a large set of substantive and virtual content that makes up the structure of human life and psychological well-being.

In the context of our research, the opinion of the developers of the ecological and psychological quality of life model under the leadership of Y. Shvalb regarding the determinability of the environmental ecopsychological approach is important, according to which human activity with the highest level of environmental friendliness is characterized by the interrelationship of the environmental elements development with the creation of a sphere for personal development [5].



According to our research a person's awareness of the life support system of the society as a significant condition of their own life is a determinant of the psychological well-being of the individual, the expansion of the cultural, eco-mental and safe space of all participants in educational interaction by means of ICT innovations, active social support of youth and their self-realization in today's challenges [6], [7].

One of the tasks of our research is the development of an effective strategy for the constructive interaction of participants in the educational process through the introduction of an innovative Design Thinking method into the educational process of training qualitatively motivated competitive future specialists in the field of tourism, business and management under conditions of digitalization.

The basis of the research concept was the idea of Design Thinking, which was proposed by Stanford University scientists, the founders of Stanford d.school. Scientists and practitioners consider Design Thinking as a tool for solving problematic tasks, generating new ideas, solutions, creating innovative products, as well as a necessary condition for designing a person's own successful life [8]; [9];[10].

In the context of the human-centered humanistic paradigm Human-centered design and Design Thinking have become popular and necessary methods in recent crisis years as innovation and creation of products that satisfy the needs of users are key success factors and indispensable tools for successful adaptation to new realities.

We will present a description of the developed Design Thinking strategy for high-quality constructive interaction with young people and the tools of the method in solving the problems of social adaptation of first-year students of higher and vocational education.

According to the Design Thinking methodology the five-step algorithm of the method, at the first stage of discovery, an Empathy Map was drawn up outlining the problem related to the navigation of education seekers; determination of their needs, interests, wishes and emotions in the process of conducting a survey on the topic "Strategy of landmarks: familiar-unfamiliar Ternopil".

The sample consisted of 290 users, of which 80.8% were female, 17.2% were male. The vast majority of respondents (79.3%) indicated that they had difficulties in using geoinformation tools, the need for new knowledge and skills in using web applications for a safe walk or finding the right place to stay, travel, etc.

At the second stage - focusing (focusing on the problem), the key problems of education seekers related to navigation landmarks in the city of Ternopil were singled out and a Customer Path Map was created as a unique scenario of optimal interaction with users which included: 1) information search; 2) choosing a convenient web service; 3) mastering the web resource; 4) transfer (walking around the city using online services and mobile applications for travel); 5) dissemination of information; 6) creating your own route.

The purpose of the third stage of Design Thinking – generation of ideas (brainstorming) – was to have the teacher-facilitator use the technique of "brainstorming" among the students in order to find as many different ideas as possible to solve the problem. The starting point for the ideas of the concept was

the class on "Modern cartographic sources and technologies for creating geoimages" with the use of geoinformation technologies in practical tourist activities.

At the fourth stage – Prototyping (prototype development), a concept prototype was created in the course of the master class for first-year students "Ternopil - friendly to guests", which allowed the team to develop, find and check the effectiveness of the implementation of their idea, to make appropriate predictions of future events. Participants recreate typical or possible navigation situations, download web applications and implement them in everyday life, followed by demonstrations of applications, travel routes and creation of new routes.

At the fifth stage of testing (approbation), the prototype is tested on users regarding the effectiveness of the design method. Young people familiarize themselves with web applications and try them out, work out the space in detail, putting on the user's "moccasins".

The practical construction of the research in accordance with the needs and requests of users was the creation of a tourist design product – creative geo-information maps "Ternopil on the waves of time" and "Ternopil in eco-format", their testing by the young people and their parents and the corresponding introduction of excursion routes.

The evaluation of the results at the stage of analysis (presentation) proved the creation of a high-quality tourist product with Design Thinking tools by the students, the solution of the problem of social adaptation of young people to the conditions of urban space and the development of the ability to manage their own life activities based on such qualities as competence, politeness, sympathy/empathy, which is the basis of constructive, welcoming, ecological interaction of the participants of the educational process and their psychological well-being.

Therefore, the use of Human-centered design and Design Thinking in the educational process of training future specialists in the field of tourism, business and management allows providing quality services to tourists, consumers, users, promotes the development of soft skills in the field of tourism, emotional and social intelligence, creative and critical personal thinking, creation of a positive image of the city of Ternopil as a youth capital of the European level, development of the city's social infrastructure, attractiveness of the community in the implementation of various investment projects.

The results of the approbation of effective resources for the use of Design Thinking tools for the creation of informational tourism products and the activation of geo-information services-technologies proved the orientation towards service consumers and the support of their psychological well-being under conditions of the modern market.

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