VISUALIZATION AND CREATIVITY IN THE PROFESSIONAL TRAINING OF COMMUNICATION-ORIENTED EXPERTS

VISUALIZAÇÃO E CRIATIVIDADE NA FORMAÇÃO PROFISSIONAL DE ESPECIALISTAS EM COMUNICAÇÃO

VISUALIZACIÓN Y CREATIVIDAD EN LA FORMACIÓN PROFESIONAL DE EXPERTOS ORIENTADOS A LA COMUNICACIÓN

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ABSTRACT: The article is devoted to studying the application of visualization in teaching students the disciplines "Mass Communication Psychology", "Creative Design in Advertising and Public Relations" and training "Methods for Activating Creative Abilities" in preparing specialists in public relations, advertising, and media communications at Kazan (Volga Region) Federal University. The main purpose of this study is to introduce visualization as a methodological support tool in the educational process for forming a creative environment among students. The method of included observation in the educational process was used in the research, and examples of tasks for group and creative classroom work were developed. The results showed that most students use familiar, structural-logical schemes when visualizing the answer and rarely apply non-standard forms of information reflection. This served as a trigger for us to develop tasks and techniques stimulating figurative thinking in students. The data obtained can help in further study of the introduction of visualization in the educational process and lead to the revision or reformatting of curricula and an increase in creative assignments.

KEYWORDS: Creativity. Visualization. Creative activities. Higher education.

RESUMO*: O artigo é dedicado ao estudo da aplicação da visualização no ensino aos estudantes das disciplinas "Psicologia da Comunicação de Massa", "Design Criativo em Publicidade e Relações Públicas" e treinamento "Métodos para Ativação de Habilidades Criativas" na preparação de especialistas em relações públicas, publicidade e comunicação de mídia na Universidade Federal de Kazan (Região do Volga). O objetivo principal deste estudo é introduzir a visualização como uma ferramenta de apoio metodológico no processo educacional para a formação de um ambiente criativo entre os estudantes. O método de observação incluído no processo educacional foi utilizado na pesquisa, e exemplos de tarefas para trabalhos em grupo e em sala de aula criativa foram desenvolvidos. Os resultados mostraram que a maioria dos estudantes usa esquemas familiares, estruturais e lógicos ao visualizar a resposta e raramente aplica formas não padronizadas de reflexão de informação. Isto serviu como um gatilho para desenvolvermos tarefas e técnicas estimulando o pensamento figurativo nos alunos. Os dados obtidos podem ajudar no estudo posterior da introdução da visualização no processo educacional e levar à revisão ou reformatação dos currículos e a um aumento das tarefas criativas.*

PALAVRAS-CHAVE*: Criatividade. Visualização. Atividades criativas. Ensino superior.*

RESUMEN*: El artículo está dedicado a estudiar la aplicación de la visualización en la enseñanza a los estudiantes de las disciplinas "Psicología de la Comunicación de Masas", "Diseño Creativo en Publicidad y Relaciones Públicas" y la formación "Métodos para Activar las Capacidades Creativas" en la preparación de especialistas en relaciones públicas, publicidad y medios de comunicación en la Universidad Federal de Kazán (Región del Volga). El objetivo principal de este estudio es introducir la visualización como herramienta de apoyo metodológico en el proceso educativo para formar un entorno creativo entre los estudiantes. En la investigación se utilizó el método de observación incluida en el proceso educativo y se elaboraron ejemplos de tareas para el trabajo en grupo y creativo en el aula. Los resultados mostraron que la mayoría de los alumnos utilizan esquemas estructurales-lógicos conocidos al visualizar la respuesta y rara vez aplican formas no estándar de reflexión de la información. Esto nos sirvió de detonante para desarrollar tareas y técnicas que estimularan el pensamiento figurativo en los alumnos. Los datos obtenidos pueden ayudar a profundizar en el estudio de la introducción de la visualización en el proceso educativo y conducir a la revisión o reformulación de los planes de estudio y al aumento de las tareas creativas.*

PALABRAS CLAVE*: Creatividad. Visualización. Actividades creativas. Educación más alta.*

Introduction

Creative activities are central to personal well-being and in global social and economic innovation and must manifest themselves primarily as changes directly in higher education (DONSKIKH, 2020). Currently, proposing new ideas and putting them into practice is important because the social, economic and technological environment encourages "innovation", "entrepreneurship", "differentiation", "individualization," "innovation," etc. These concepts mainly focus on creativity and creative thinking, have many personal, cognitive, behavioral and cultural aspects, as they themselves act as a multidimensional phenomenon (KIM, 2022; MCLEAN *et al.,* 2021; SAID-METWALY; VAN DEN NOORTGATE; KYNDT, 2017).

Since university education for most students is the final stage in the educational process, it is crucial for career development (MOSKOVKIN, 2020). The ability to think creatively is assumed to be a necessary skill for a future expert, so this study is aimed at studying the development of creative abilities, as such abilities allow solving non-standard professional tasks (STOPPEL; CZARNOCHA, 2017). The research is based on the culturological approach to professional culture, which includes the ability to comprehend and create in accordance with objective artistic and imaginative requirements. Only active teaching methods working as means of reflection can raise an expert, preparing him to solve a complex problem and search for a new one (VINCENT-LANCRIN, 2017; PATSTON *et al.,* 2021).

The main objectives of this study are: 1) to study the principles of formation of a creative environment among students studying advertising and media communications; 2) to find ways to implementing these principles. Visualization allows to achieve an integral understanding of the processes under study and to highlight the main components of the learning process, logical chains of its organization to obtain the following results:

- improving the learning process;
- managing students' creative activities and results;
- assessing, forecasting, and improving the quality of education.

The resulting model was tested and validated during the staging and shaping of the pedagogical experiment.

Literature Review

To visualize the assignment given by the teacher of social science disciplines is a more understandable and simple study of the subject, especially in the presence of a large amount of contradictory information. The content of traditionally designed lessons usually contains verbal or symbolic codes, so the information received in this way always worsens the work of cognitive processes: attention is not focused, the perception is less accurate, and the information read or heard gets remembered worse (ACAR; BURNETT; CABRA, 2017). Studies confirm that the information flows received by students grow and rapidly transform, so it becomes more and increasingly difficult for students to filter out the necessary material and link it to the object of study, as well as to apply the obtained knowledge in practice (VINCENT-LANCRIN *et al*., 2019). Whereas the visual representation of the learning object is easier to perceive, remember and retain (GILSON; LITCHFIELD, 2017). Numerous scientists have stated that visualization and creativity have a positive effect on human perception (PATSTON *et al.,* 2021).

Visualization together with the creative process during learning additionally stimulates the processes responsible for information perception. When elements of verbal codes dominate the educational reality, the management of concepts depends not only on the ability to memorize them accurately, but also on the depth of their assimilation, which is assessed after successful completion of practical tasks (TELFER; OLIVER, 2018). Visual materialization of lesson content enhances the ability to retain the image in memory for a long time and, therefore, to present it in another form in any context or situation, for example, when solving problems or learning a new topic (SCHEJBAL, 2019; RICHARDSON; MISHRA, 2018; ZHOU; TIAN, 2019). The actualization of imagination is related to the processes of visual thinking, which are also activated because, visual perception and imagination are its integral parts (CHAN *et al*., 2019). Additionally, multidimensional visualization enhances the possibilities of attention activation, as more sensual stimuli are included, which affect the centers of concentration (WALES, 2017; UCUS, 2017; LUBART, 2018). The above psychological processes can be identified as cognitive processes, the application of which affects the construction of more universal mental models in memory combining verbal and visual schematic sets of codes, affecting the more effective assimilation of information of educational purpose, as well as the formation of the correct models in the field of scientific education (JAHNKE; HAERTEL; WILDT, 2017).

Although there is a significant amount of research on creativity in education, most of the initiatives on its development and evaluation refer to the school context and much less

attention is paid to creativity in higher education, where creative tasks in individual programs are often missing. Theoretical factors are well known, but still, within the framework of changing educational paradigm, students' attitudes toward visualization and its effects are unclear, as the gradual introduction of technology into the educational process changes the understanding of the concept (BEGHETTO, 2020; GROMAN, 2022). The transformation of culture brings about new experiences; there is a gradual transition to visual spaces, and therefore, the assessment of the possible effect of the visual object from the viewpoint of the subjects is not analyzed, yet it is relevant (KATZ-BUONINCONTRO; PERIGNAT; HASS, 2020; PEAIRS *et al.,* 2019).

Creativity in university education is directly related to the development of this quality, as well as methods of creative learning (SAWYER, 2018). Creative learning is recognized as a form of learning that develops young students' own creative thinking or behavior, and creative learning considers "the use of creative approaches and applications to make learning more interesting and effective". Creative learning must include creative teaching methods (SPOON; RUBENSTEIN; TERWILLEGAR, 2021; RUBENSTEIN *et al.,* 2018). In this study, we discuss the current situation related to university education and creativity at Kazan Federal University through groups of junior students (1st and 2nd years) and determine in detail what number of students will choose the creative way in the proposed task. Second-year students are considered in this study because they are more experienced compared to the students of the previous year and more motivated than older students. The latter circumstance is related to the shift in senior students' focus on employment and real-world work against the backdrop of academic classes.

We would like to emphasize the proximity of the notions of creative activity and creativity used in this paper. It is generally recognized that creativity is a complex, multidimensional concept for which there is no single definition (DOYLE, 2019; GLĂVEANU *et al.,* 2020). We consider creativity as a characteristic, the quality of the person, not separated from the creative activity as a process of creating new, original ideas, knowledge, etc., which can lead to a change of social or technological value: "achievement of something outstanding and new, something that essentially transforms and changes a field of activity. Here, creativity acts as a process, which is exactly what the creative person provides. The kinds of people do that change the world," and "an individual's ability to produce new or original ideas, insights, restructurings, inventions, or artistic objects that are accepted by experts as having scientific, aesthetic, social, or technological value" (GRUSZKA; TANG, 2017; HARMS; KENNEL; REITER-PALMON, 2017).

Simultaneously, we should emphasize that creative potential is quite dependent on environmental factors. It can be maintained, encouraged and cultivated and weakened or suppressed (RUNCO; ACAR; CAYIRDAG, 2017). The traditional higher education system might lead students mostly to basic memorization or reflection, the student can repeat what someone else has already done, which does not require creativity (LEE; MEYER; CRUTCHFIELD, 2021). The existing higher education system is a powerful "knowledge factory," but it is possible to use it as an "open zone" in which social transformation and equally powerful cultural creativity can occur. We are convinced that higher education should prepare young people first for a rapidly changing work environment, turning "knowledge factories" into "thought factories."

Materials and methods

Students studying at the High School of Journalism and Media Communications of Kazan Federal University during the 2022–2022 academic year took part in this study. Nine groups of students (209 in total) of Advertising and Public Relations and Media Communications were involved in collecting the experimental material. The students' visualization ability was analyzed by sorting the answers to the creative tasks given during the "Psychology of Mass Communications," "Creative Design in Advertising and Public Relations" and "Methods of Activation of Creative Abilities" classes. The study used the method of overt observation in the learning process. Examples of carefully designed creative format assignments for group classroom work are provided. It is the students and, of course, the teachers as knowledge producers in this study that offer insight into the scope, value, and domains of creativity. Drawing on theories of creativity and sociology, we connect the contexts of disciplinary knowledge to perceptions of creativity, trying to better understand its nature and, in turn, how best to encourage and develop it.

Results

The results of the study show that most students, when visualizing the answer, opted for familiar, structurally logical schemes, presenting levels through a triangle, at best, through a pyramid. Only 21%, (44 students) used a non-standard form of reflection of the information, having connected imagination and refused from straightforwardness in its presentation (Table 1).

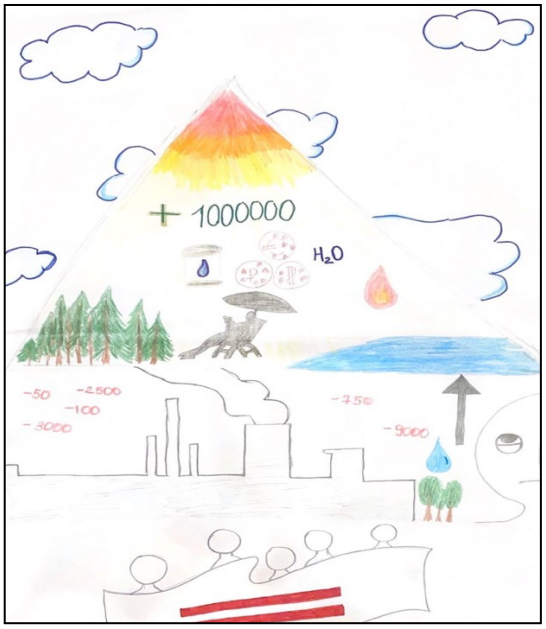
Table 1 – Forms of visualization

Number of students	Pyramidal form of the social structure	Non-standard form of presenting the social structure
209 (100 %)	165 (79 %)	44 (21%)

Source: Prepared by the authors

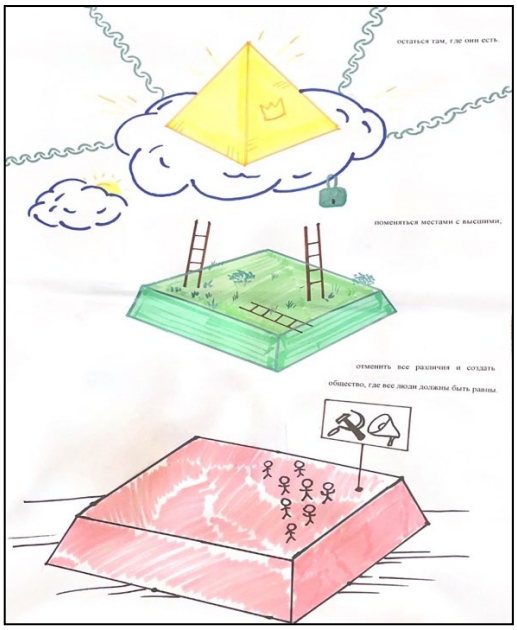
Figures 1–2 show several non-standard responses to the proposed task.

Figure 1



Source: Authors' collection

Figure 2



Source: Authors' collection

Figure 2. Examples of non-standard representation of the pyramidal form of social structure.

Figure 3 – An example of a non-standard presentation of the social structure

Source: Authors' collection

This served as a trigger for the active and constant use of techniques that stimulate imaginative thinking, developing such parameters of creativity as fluency (ability to generate many ideas), flexibility (ability to produce a large variety of ideas), elaboration (ability to

develop, embellish or complement an idea), and distinctiveness (ability to generate unusual, statistically infrequent, non-trivial or obvious ideas). Master-class "Creative design in advertising and public relations" and a training course “Techniques of activating creative abilities of experts in advertising, public relations, and media communications” were the means of achieving such results, which were also provided by the related handbook “Here's an idea!” (SIDELNIKOVA, 2009, 2022).

Discussion

This study considers the groups of students at Kazan Federal University as an interactive social and learning space. There have been many studies related to elementary schools and creativity in Russia and in the world practice. However, there is a lack of data on the analysis of creativity and creative approaches in higher education among students.

Particular attention in the study of creativity resources in independent work and practical classes must be paid to the potential of visualization as a both traditional and at the same time extremely modern means of its methodological support, and assessment of both personal independence and group performance, below we will confirm it with examples. First, let us dwell on what "visualization" is and why it naturally not isolated from other techniques, can create comfortable conditions for both individual and team creative work. Visualization used in the educational process is based on the procedures of schematization and creation of associative rows, free images. They can be subordinated to some general idea, performed in a certain format, or can represent a game of individual imagination, but in both cases have a sign, symbolic character.

This approach to the definition of visualization was used in the collection of experimental material. 9 groups of students (209 in total) of "Advertising and Public Relations" and "Media Communications" programs at Kazan Federal University took part in it. The class lasted 120 min and the students were asked to divide into groups of 3–5 people and perform the following task:

Step 1: Read a fragment of George Orwell's 1984:

Throughout recorded time, and probably since the end of the Neolithic Age, there have been three kinds of people in the world, the High, the Middle, and the Low. They have been subdivided in many ways, they have borne countless different names, and their relative numbers, as well as their attitude toward one another, have varied from age to age; but the

essential structure of society has never altered... Even after enormous upheavals and seemingly irrevocable changes, the same pattern always reasserts itself…

The aims of these three groups are entirely irreconcilable. The aim of the High is to remain where they are. The aim of the Middle is to change places with the High. The aim of the Low, when they have an aim—for it is an abiding characteristic of the Low that they are too much crushed by drudgery to be more than intermittently conscious of anything outside their daily lives—is to abolish all distinctions and create a society in which all men shall be equal.

Step 2. Discussion: If this outline is correct and the goals of the groups are opposite, then why is the structure of society so essential?

Step 3. Visualization: Create an associate and imaginary sequence by answering a question about the essential structure of society with a drawing and by presenting the mechanism of interaction between the three levels of people described.

Step 4. The presentation of the resulting visualization. General group discussion.

Here are examples of tasks that, supported by visualization, stimulate the development of students' creativity.

Example of the assignment No. 1: Read the poem by A. Pushkin and use a drawing (infographic) to present the mechanism of "blissful revelations" described by the poet.

How many fresh and blissful revelations
Provides the genius of education,
As well as experience, the error's bitterfruit,
And reason, paradoxes' friend and root…

Example of the assignment No. 2:

Prepare a presentation that begins with the line "I am a creative person: I can be fruitful or I can be playful.

Example of the assignment No. 3:

Fill in the table and prepare a presentation that reveals your relationship to the phrases in it. Make a list of actions that reveal the collective concepts of "being fruitful" and "being playful." Find an image, an association, or an illustration reflecting the connection between the two.

Table 2 – Part of the assignment No. 3

I am fruitful	I am playful

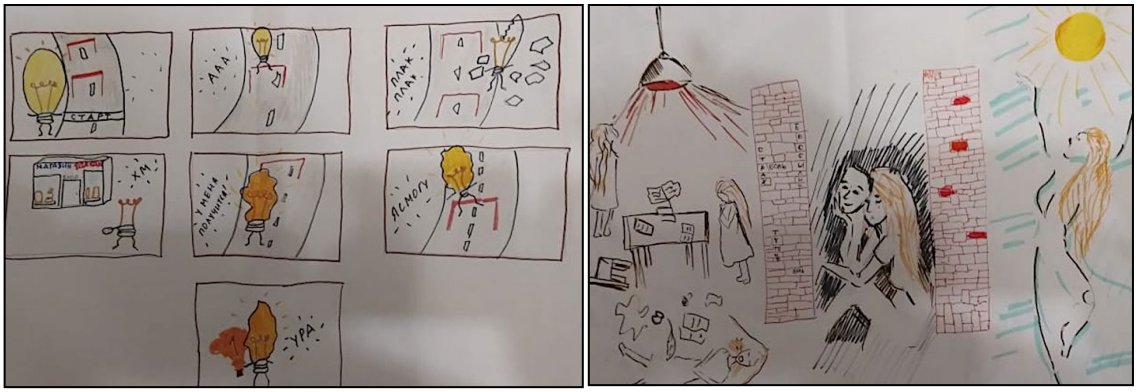
Source: Prepared by the authors

An example of the assignment No. 4: offers a list of actions that will reveal the essence of the heading "Learn to make mistakes". It is up to you to choose the sphere of activity in which the mistake was made and the particulars of the mistake. Find an image reflecting your response to the call "Learn to make mistakes".

An example of the assignment No. 5 "Dead ends are good for your creative work": Creating playgroups (4–5 people), read the poem by I. Guberman, analyze and accompany this with an infographic (Figure 5) the answer to the questions: What is the mechanism of creativity portrayed by the verse? Why is it "dead ends" that stimulates creative breakthroughs?

Dead ends are good for your creative work:
The pain and the burn wounds of impotence
Despite your fear and right-mindedness
Compel your soul to take a leap.

Figure 4 – Examples of work completed by students for task No. 5



Source: Authors' collection

Note that students look at non-standard tasks with distrust at first, and then with increasing interest, realizing that they have developed their creative and critical thinking skills. University education must be taught creatively, so creativity must replace rote learning. Additionally, students want to feel free and want to express themselves. Thus, the university's mission as a place for creating the intellectual potential of the people of the future in terms of creativity needs to be reconsidered. A systematic revision could reformat the curriculum, add

research ability, coordination with the productive sector, reduce the pressure on traditional methods of memorizing material and increase the freedom to create new ideas and projects.

Conclusions

This framework presents an understanding of creativity as a moment of imagination, reflection, or hypothesis-making. It includes "thinking outside the box" or seeing possibilities that may be unusual or unexpected and sometimes involves accepting alternative points of view and certainly visualizing an idea. Participants tended to define creativity as the need to "look at things from a different viewpoint" or discuss a "new" approach. The visualization is approved in practice and well-tested in the educational process. Within the organization of independent work during the study of different courses and topics it can also be both individual and group, supported by online interaction and acting as direct emotional contacts of the participants with each other.

Overt observation of the teacher carried out in the learning process, as well as thorough elaboration of tasks of different formats for individual and collective extracurricular and classroom independent work, the given data, the results of tests and examinations indicate that the visualization methods perform not only the practical function of increasing students' knowledge on a particular discipline, but also form creative thinking, the ethics of intellectual activity, and the social intelligence.

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