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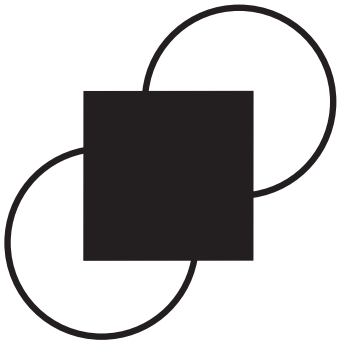
12TH INTERNATIONAL CONFERENCE OF EDUCATION, RESEARCH AND INNOVATION

CONFERENCE PROCEEDINGS

SEVILLE (SPAIN)
11-13 NOVEMBER 2019



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MODEL FOR TRAINING IN VISUAL LITERACY IN UNIVERSITY ENVIRONMENT

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Abstract

The purpose of this publication is to present a model of learning content for the development of visual literacy consistent with the needs and the professional competencies of students trained in the professional field of “Public Communications and Information Sciences”. The creation of specialized educational content to the needs of students and businesses contributes to conducting effective training, resulting in theory that will be put into practice. The peculiarities of the educational content allow to organize and plan two modules - both theoretical and practical. In terms of theoretical training, it is necessary to enrich the knowledge in terms of art history, styles in fine arts as well as specific means of expression used for creating visual images. Learning visual literacy can be differentiated as a fundamental discipline that aims to form an initial competence with respect to visual literacy, and from the practical point of view - the ability to create visual content through different means. Visual literacy training is a necessary resource in the educational plans of students specializing in humanities such as media, journalism, advertising, archives, library and informing activities, press communications, book publishing, cultural heritage, tourism, etc. because after their training, they become content authors - textual, graphic, audiovisual, and multimedia content.

Keywords: visual literacy, fine art, photography, education.

1 INTRODUCTION

Thanks to digital technologies, visual materials are very quickly created and promoted, becoming an integral part of every person's daily life. Apart from a purely practical point of view, aesthetic or amateur, digital images such as photographs, reproductions and more, are increasingly entering science, education, and the media. “Our societal challenge is to start working systematically and actively on the quality of knowledge and the productivity of knowledge” [1].

Digital resources are created in the institutions where cultural heritage is preserved, protected and promoted – libraries, archives, and museums. In these institutions, in addition to specialized scanning devices, very often photo cameras / cameras are used to create images that can display the original object in much better quality, overexpose or illuminate some elements and details that might otherwise remain hidden for the viewer. To create a quality visual product, the author needs to be able to create good quality images from a technical point of view. In addition, there is a need for good visual literacy and culture to be able to present the visual product as accurately as possible for its specific goal and purpose.

Visual culture is an interdisciplinary concept and is particularly important for future-oriented transcultural thinking. Providing a positive educational environment, stimulating individual interests, the opportunities for high qualification and effective career development of students, PhD students and young scientists who are trained in the professional field 3.5 "Public communications and information sciences" are prerequisites for successful realization. Increasing the scientific culture of society is related to the overcoming of technical, cultural, social and other challenges. One of the thematic areas that support the Innovation Strategy for the Development of Smart Specialization 2014-2020 (ISIS) is New Technologies in Creative and Recreational Industries.

The European Union aims to offer greater support to artists and creators in Europe, thus helping to further develop European culture and identity. “The Creative Europe” program, covering the 202-2027 realization period, implies the following: good education and learning, the importance of culture and creativity, and not least, the need to develop competences according to the needs of young people. The development of digital technologies has changed the creation, production, distribution, transmission and consumption of cultural and creative works, facilitating the achievement of these works anywhere in the world. Young people need new skills. The development of artistic and creative skills and the stimulation of talent are at the heart of the cultural and creative sectors and are the engine of innovation, including social innovation, for smart, sustainable and inclusive growth. Steps in

this direction are to foster the emergence of new talents, improve digital and media literacy, and not least visual competence.

Creating conditions for effective learning in a creative environment in which theory and practice interact, leads to the acquisition of both theoretical knowledge and practical. In the 1980s, a framework was based on Wendy Ewald's literacy through photography study (LTP). Currently, visual literacy education in secondary education uses photography as a pedagogical tool, but in the creation and analysis of copyrighted texts. Students can express their own beliefs, interests, feelings and culture through reading photographs. Using photographs as a visual literacy tool is not a definitive answer for resolving all difficulties in reading and written development. However, they are a very interesting option, since they involve learners' interests and needs, engage technology, and encourage cognitive processes. Ranco and Gorman (1980) affirmed that images could stimulate interest and could serve as a focal point in developing the ability to observe, analyse in detail, test ideas, and provide items for writing texts. Reading photographs or taking them is a social and intellectual activity and is a visual literacy tool for interpreting the world. Through photographs, learners can have a new and a better experience when they face literacy processes. [2]

International universities such as: University of Auckland (New Zealand), Pennsylvania University, Pittsburgh University, University of Victoria, University of California offer visual literacy training in various arts, media and libraries. An example of the introduction of visual literacy education in the professional field "Public Communications and Information Sciences" in Bulgaria is the implementation of the PhD Program in Visual Communication at Sofia University "St. Kliment Ohridski ", bachelor's program "Advertising" at New Bulgarian University, bachelor's program "Journalism and Mass Communication" at American University in Bulgaria (discipline "Visual Communication Theory / Practice").

A preliminary study was carried out of the universities in Bulgaria offering education in visual competence, on the one hand, and on the other, a study was conducted regarding the presence of specialized photography laboratories. There are specialized photo laboratories at the University of Veliko Tarnovo – Faculty of Fine Arts and New Bulgarian University. The material base at the University of Veliko Tarnovo is used by the Department of Graphic Design and Visual Communications. The Laboratory of Photography at New Bulgarian University was established in 1998 for the needs of the Bachelor program in Photography. As of 2019, in ULSIT also starts operating within the framework of a research project a documentary and applied photography educational and scientific base, which will offer experimental education of bachelors and masters studying in the professional field "Public Communications and Information Sciences".

An example of a project focused on the introduction of visual literacy education in the specialties of the professional field "Public Communications and Information Sciences" is the project of young scientists from the University of Library Studies and Information Technologies in Bulgaria. The project is called „Creation and development of educational and scientific facilities for documentary and applied photography as part of the training of students in the professional field 3.5 "Public communications and information sciences". The main goal of the project is the formation of the visual literacy of students learning in the specialties in the professional field "Public communications and information sciences" at ULSIT in documentary and applied photography classes. The project develops theoretical content and seminars in a specialized educational and scientific base for documentary and artistic photography at ULSIT. [3]

2 METHODOLOGY

This paper aims to present a project of a model of visual literacy education in university environment. For the preparation of the project, curricula in the field of visual competence have been studied, which are largely oriented towards the education of students in the specialties of visual arts. The specificity of the specialties in the professional field "Public Communications and Information Sciences" comes from the fact that it is not particularly advocated in the education of visual literacy. The need for students to acquire such knowledge is great, because in their future professional realization they will need these competencies in basically two directions: to create and / or critically be able to appreciate the merits or weaknesses of visual content. The model, which is prepared, aims to give a basic knowledge of the visual arts and the opportunity to acquire practical skills for creating visual content in several directions.

Visual literacy allows the trainee to learn to interpret different concepts in visual communication through the means of arts (visual arts, photography, illustration, graphics, graphic design) or visual media. At present, all visual information that is shared via the internet assumes that the user has visual literacy – the ability and capability to decipher images. Visual literacy education itself is a process that engenders interest and curiosity about the concept in a visual message, i.e. trainees are part of a creative workshop.

In terms of the functionality of photography, it is a very good pedagogical tool in teaching visual literacy, as it functions in at least three primary ways: (1) representational, (2) mediational, and (3) epistemological. These three functions often complement one another through the mechanical (taking photographs), the metacognitive (studying photographs), and the communicative (systematically using photographs) aspects of photography as a language of teacher inquiry. These functions act in concert with one another sometimes at the same time and sometimes across time. [4] Photographs hold potential for eliciting language across all four domains: listening, speaking, reading, and writing. Communicative language classrooms are an ideal location to cultivate the visual literacy skills involved in viewing and creating images. [5]

3 RESULTS

Education requires continuous innovations in its paradigms and teaching approaches. The creation of standards in visual literacy education is the result of the development of technologies. An approach for enhancing learners' competences is to establish a link between learning, motivation and interaction between trainees. It is of utmost importance for students learning in the professional field "Public communications and information sciences", in specialties preparing library and information specialists, archivists, specialists in the field of print communications and publishing, media information and advertising, etc., is that their knowledge and skills are relevant to the present. The integration of web-based courses, graphic design training, photography training are all examples of experience learning, resulting in more effective learning. The use of such approaches in the educational process is an example of cultural education.

In the 21st century, with the advent of digital photography and other technologies that provide a quick opportunity to create visual content, it is necessary to refine the creation of quality products. Images combined with text in the contemporary media are an increasingly dominant part, so specialties in media studies need to be given special attention. The modern digital photography, combined with appropriate graphic programs, opens up unlimited opportunities for professionals and non-professionals graphic designers and illustrators, and not only. It enables them to combine techniques and to use photographic images in a multidimensional way. [6]

Edgar Dale's model of learning pyramid shows that education using active forms of learning is most effective: discussion, practice, teaching others [7] (See Fig. 1)

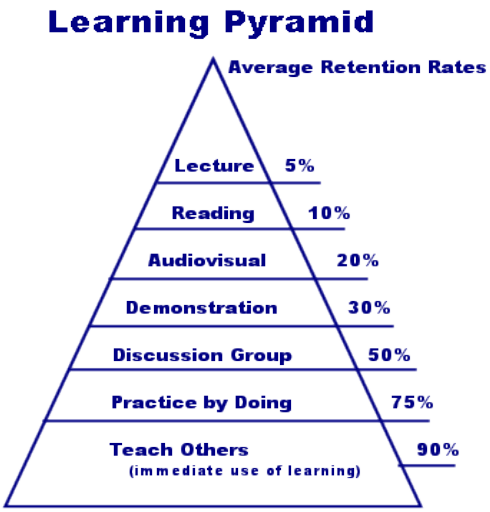

Figure. 1 Learning Pyramid
Sources: National Training Laboratories, Bethel, Maine.
Lee L. Lowery. Use of Teams in Classes. Texas A & M University. May 14, 1998.

In another research, the following concept was introduced – visual literacy is the ability to understand and read images, to comprehend and study them. Visual literacy is associated with: visual language, visual thinking, visual education, visual communication, visual perception. The influence of Howard Gardner's (1993) theory of multiple intelligences (MI theory) has led to the recognition that instructional material should cater to different modalities, and should provide a variety of input in order to maximize learning. In the present, in addition to the traditional teachings that are developed during education both at the school and at the university, it is necessary to develop the multimodal literacy. [8]

According to research by Avgerinou (2007), who is the editor of the Journal Visual Literacy, eleven visual literacy abilities have been identified:

- Visualization;
- Critical Viewing;
- Visual Reasoning;
- Visual Discrimination;
- Visual Thinking;
- Visual Association;
- Visual Reconstruction;
- Constructing Meaning;
- Re-Constructing Meaning;
- Knowledge of Visual Vocabulary & Definitions;
- Knowledge of Visual Conventions. [8]

Therefore, the experimental approaches in education (artistic and cultural education) play an important role in creating additional opportunities, promoting personal development, autonomy, cultural understanding. Visual literacy is a key competence that should be possessed by professionals working not only in the media sector, but also those working in the publishing business, museum and art management, graphic design, photography, advertising, and more. Part of the skills that the generations need to possess nowadays are: to receive education related to creativity and innovation, critical thinking, communication and collaboration. Last but not least, professional skills are the result of flexibility, adaptability, initiative, autonomy, social and intercultural skills, leadership and responsibility.

The methods that are applicable to the learning process may be the following

- Communication-based: interaction, dialogue, teacher-student mediation;
- Activity based: experience, practice, experimentation, with each other cooperating, and there is respect, trust, understanding, equality;
- Social environment based: partnership and teamwork.
- Methods focused on the individual: creativity, discovery, responsibility.

Pedagogical approaches to visual literacy education include:

- Choosing a variety of methods through which to develop certain competencies – the cognitive, emotional and practical dimensions of learning.
- Participation in individual and group practical tasks – education through social interaction and socially focused methods and learning from one another, including teamwork, partnerships and networks.
- Learning through experience.

These methods can provoke trainees to be more focused on learning new visual literacy skills.

3.1 Model for Visual Literacy Education for Students Learning in the Professional Field "Public Communication and Information Sciences" in Documentary and Applied Photography educational and scientific base at ULSIT

As a result of the conducted studies presented in the previous sections, a model for education in visual literacy in university environment can be created. The model proposes that education should consist of theoretical training and seminar exercises. In this initial phase of the course, students are required not only to acquire basic knowledge of visual culture but also to acquire critical skills to evaluate the content and meaning of the images, on the one hand, and to evaluate the emotional impact that the illustrative material has on the viewer, on the other hand.

3.1.1 Theoretical education in Visual Literacy

As an introduction to the discipline, students need to be familiar with the nature and conceptual apparatus of visual competence, art history, changes in art from the late 19th and 20th centuries, drawing a parallel between classical and avant-garde art [9]. Emphasis is placed on styles, directions and trends in the visual arts, which are gaining popularity in many countries [6]. Some of them are influential in different areas of design, in particular graphic, which is also a tool for increasing visual literacy. Attention is drawn to the emergence of photography and other technologies that have influenced the development of fine arts and applied arts. The basic concepts and theories of visual communication are studied: behaviourist theory, cognitive psychology, constructivism, social constructivism, the Huxley-Leicester model: "the more we know, the more we see"; the Omniphasism of Rick Williams. Attention is drawn to non-verbal communication through visual messaging. Examples are given of the use of photography as illustrative material, as a standalone image, and in a combination of mixed techniques in various print media, such as posters, periodicals, reference books, fiction books, and other fields of knowledge. It also looks at the impact that styles of fine art have on photography. Visual art uses photography as a means of reproduction, its genres – documentary and artistic photography, illustration and more. It is compulsory for students to be familiar with compositional principles, typography, colour science. Emphasis is also placed on the role and importance of modern art and photography in terms of visual competence, as well as on the practical application of traditional and modern media in contemporary visual arts. (See Table 1).

Table 1. Model of Visual Literacy education for students learning in the professional field "Public Communications and Information Sciences". Theoretical training.

№	Theme	A brief annotation of the course educational content
1.	Essence of visual competence	Clarification of concepts: visual competence visual communication visual literacy visual language visual thinking visual training visual message visual perception
2.	Art as an artistic reflection of reality. Visual communication in works of art and written documents	History of Art. Traditional, modern and postmodern styles of fine arts (Middle Ages, Renaissance, Baroque, Modernism, Postmodernism)
3.	Theories of visual communication	Gestalt: organizing the parts in a meaningful way. Semiotics. Constructivism. Ecological theory: lights, environment, action. Cognitive theory: we are all thinking beings. Huxley-Leicester Model: "The more we know, the more we see". The Omniphasism of Rick Williams.
4.	Non-verbal communication through visual messages	Structure of communication – communicative, interactive, perceptive. Application of illustrative materials in various media. Infographics, illustration, photography, and more.
5.	Visual Literacy	Form, content, idea.

6.	Compositional principles	Rule of thirds Golden ratio The Rule of Odds Rule of Space Rules in composition.
7.	Fundamentals of colour science. Psychological aspects of colours. Functionality and aesthetics of colour	Colour Theory. Colour models. Colour harmonies
8.	Typography – nature and application	The nature and scope of the term. Characteristic nature of the system of visual representations of the written word. Aesthetics, functionality, ergonomics of font reproduction.
9.	The image in graphical communication. The role and importance of modern art and photography in terms of visual competence	Practical application of traditional and modern media in contemporary visual arts. Application of photography and illustration in today's digital environment
10.	Fantasy and visual thinking. Design and create your own visual messages	Observation, study, interpretation, communication, awareness. (Sensory perception, mental choice, choice of form and means for presentation of visual message, iconographic analysis of semantic content)

Source: Prepared by the authors

3.1.2 Practical education in Visual Literacy

In the second module of the course, students will gain the ability to create visual content through the technical base provided. The use of digital cameras (camera model) enables trainees to develop skills for the creation of visual products for various purposes, which can generally be divided into documentary and artistic.

Documentary tasks include the creation of photographic images in a suitable format, taking into account the capabilities of the end product:

- reproduction of an original two-dimensional work for a print edition;
- reproduction of an original three-dimensional work for a print edition;
- reproduction of an original two-dimensional work for an electronic resource;
- reproduction of an original three-dimensional work for an electronic resource
- capture of a written document to create a photo typical document;
- capture of a written document for the creation of an electronic resource;
- capture analogue photography to create a photo typical document;
- capture analogue photography to create an electronic resource.

To create a digital archive of contemporary events:

- capture an indoor event;
- capture an outdoor event and more.

Artistic tasks include creating images to illustrate fiction literature for children and adults, graphic design for print editions and web design, and will be familiar with contemporary trends in these areas of art.

In addition to photographic techniques, the education also involves working with a graphic tablet with the help of which an image can be created and mixed techniques can be applied to obtain the desired final visual product.

As the preparation of these images is more creative and students need to feel the freedom to make their own copyrighted product, they will be focused solely on the techniques and opportunities offered by digital photography and graphic technologies, such as:

- capture a picture from different perspectives in order to discover the potential of the drawing and to get the best out of it for a specific purpose;

- capture different textures for background, colour, and other, and how they are applied in illustration, graphic design and web design.
- capture art photography to illustrate a particular literary work;
- exploiting the benefits of digital photography for free cropping of images to obtain as many compositional solutions as possible to achieve the desired result, etc.

Table 2, modelled on Lottie Baker [5], proposes a concept for the practical exercises of students learning in the professional field "Public Communications and Information Sciences".

Table 2. Practical Exercises in Photography, in accordance with the Visual Literacy Training Model for Students Learning in the Professional Field "Public Communications and Information Sciences"

	Task	***Subtasks***
1.	Photo Analysis	- **Discuss the overall impression** - **Observe closely** (Divide the photograph into four quadrants) - **List** - Students use the three-column chart to list people, things, and actions they see in their quadrant. - **Share** - Students share the items on their list with their group members. Because each student observes a separate quadrant of the photograph, the lists will be different. - **Compare parts to the whole** - Students then return to their initial impressions. They discuss how their lists support (or do not support) these impressions. - **Make inferences** - Using the compiled lists and initial impressions, students in each group agree on three inferences they can make about the photograph. Each inference must include justification based on the people, things, or actions they observed in the photograph. - **Pose questions** - Lastly, students extend their thinking by listing open-ended questions that the photograph raises. These should be questions that are not easily answered by looking at the photograph, but instead require additional investigation about the context of the photograph. Such questions might begin with "Why …" or "What if …." For the photograph with the crowds of people, students might ask, "Why are they demonstrating?"
2.	Mystery Photo	- **Obscure the photograph** – Show students the photograph completely covered by pieces of paper, like puzzle pieces. - **Uncover the photograph** – Students gradually uncover the photograph by selecting pieces of paper to remove. You might number the pieces covering the photograph so that students can easily identify the pieces they want to remove. - **Make guesses** – As each section of the photograph is revealed, students describe what they see. Students then hypothesize about what the full image may entail. - **Debrief** – After the final reveal of the image, students talk about the process of guessing what the photograph might be. This kind of discussion involves metacognition, as students articulate how they were able to connect pieces of the image to form the full image.
3.	Collaborative Stories	- **Group students** - **Analysing three photos in different genres** - **Share completed stories** - photographers evoke different stories from everyone groups of students.
4.	Selfies	- Using selfies gives students a sense of ownership in their learning, as they are not only interpreting photographs, but also creating them.

3.2 Professional competences result from the education

- Acquiring basic knowledge of the theory and history of fine arts and aesthetics.
- Acquiring basic knowledge related to graphic communication and visual competence.
- Fundamental preparation for the design and realization of creative products such as photographic images and graphic design works of aesthetic and artistic value.

- Acquiring skills to structure visual content and use symbolic communication strategies in visual culture through to the digital age.
- Use of acquired knowledge in the analysis of author's (own and foreign) creative work;
- After their training, they become content authors – textual, graphic, audiovisual, and multimedia content.

4 CONCLUSIONS

Visual culture is an interdisciplinary concept and is of particular importance for future-oriented transcultural thinking. Over the last decade, it has been necessary to include in the educational system new educational programs that meet the needs of the generation and the need to create new capabilities that apply in the future. Young people need to be able to create, analyse and evaluate creative concepts with a variety of tools such as music, the performing arts, literature and the visual arts. Access to software products in a university environment provides students with the opportunity to in practice become authors of intellectual products, such as various graphic and photographic images.

In the course of education and work on the project, trainers will strive to have a direct dialogue with the trainees, which will raise questions and outline new topics that will be discussed and debated, against current trends in visual literacy and competence and students' personal views and expectations.

Along with the rules and recommendations that need to be followed to create professional and quality visual content, it is necessary to stimulate the students' authorial vision and creativity.

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