

THE DESIGN AT THE TECHNOLOGY EDUCATION - IMMANENT COMPONENT OF FUNCTIONAL LITERACY

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ABSTRACT: FUNCTIONAL LITERACY IS ONE NEW CONCEPT FOR THE SCIENCE. IT IS CHARACTERIZE AS PROPERTY OF THE PERSONALITY, FORM OF THE TECHNOLOGY EDUCATION. ONE IS AT THE BASIC ACTIVITIES IN THIS EDUCATION IS DESIGNING. IT IS CHARACTERIZE AS PROCESS AT WHAT ARE THE FORM DIFFERENT ABILITIES.

KEY WORDS: DESIGN; TECHNOLOGY EDUCATION; FUNCTIONAL LITERACY.

New trends in society require modern approaches to learning and education of the younger generation.

The main role of the training institution is to offer a program that gives its students the basic concepts of the society in which they live. Introduction of new equipment and realization of the objectives of a democratic society require people knows, maybe, people with rich fantasy and imagination. The young generation must be loaded with creativity based on the technical and technological thinking. It does not arise spontaneously, but is formed and develops as a result of targeted training and education according to individual age and abilities of students through technological training. Therefore scientific knowledge expressed as the process develops dynamically, constantly expanding its range with the accumulation of new teaching material complying with rapid changes in technology, determined by community needs and desires to improve the human personality. As a result of these factors, scientific knowledge changes its expressions of this knowledge. This means that arise new aspects of existing concepts that change their shapes and detached as new concepts in science.

One of these new concepts of science is the concept of "functional literacy", which is characterized by fundamental importance in a democratic society. Educational category as it is widely used in a number of science: as technology training, mathematics, cybernetics, informatics and so on.

Depending on science functional literacy is interpreted from different perspectives. The area in which it is the strongest emphasis on formation and development of functional literacy is the technological training.

It necessary to make a number of studies in this area (technological training) in general education, how it builds functional literacy among adolescents, which is an important element of the operation and further development as individuals in society.

Construction of functional literacy is socially meaningful activity; successful implementation requires the establishment of a comprehensive system of technological training, covering all schools and all components of the educational process. As the main result of increasing technological change is the difference in levels of technological

capabilities and understanding. Workforce of the future must have the ability to use, manage and understand technology. Indeed, technological literacy is vital for the individual, social and national economic prosperity. Beyond economic vitality is the realization that how people develop and apply technology has become a critical factor for future generations, society, even how the Earth's ability to store life

The term "functional literacy" examined by the technological training describes those roads literacy that emphasize the acquisition of appropriate language, cognitive and computational skills to achieve practical purposes culturally distinct conditions [2, 3, 4].

It can be established as a quality that is needed for people to adapt to their communities.

This quality of personality is the level of education of learners, which is characterized by the following main features:

- preparedness and conscious choice of professional education and career development;
- preparedness to independently solve marital problems, domestic, protection of personal rights and orientation in their duties;
- preparation for living in the modern world, orientation problems and its values as well as ethical;
- understanding of the peculiarities of society, orientation in the opportunities offered by life satisfaction and development of their spiritual interests;
- ability to communicative activities in an unfamiliar environment;
- ability for orientation in the world of art and technology.

One of the most important values of technological learning is precisely the formation and development of functional literacy, which is done through the implementation and strengthening of knowledge in real work processes. It allows for the realization of the need for equal balance between technological achievements, process skills and critical competencies that students acquire in curriculum and the need for young people to develop as individuals. "We will we cover the students with skills that are critical of the technology and the products they consume every day" [5].

Technological learning can be called any training where there is teaching and mastery of technology. In other words - learning technology, which gives students the opportunity to study processes and gain knowledge related to technologies that are needed to solve problems and extend human capabilities.

In recent years, it takes on a whole new status in all economically developed countries. A number of elements of technological literacy enter the criteria for the general education and academic training. In the process of technological learning is formed **technological education**, which is a complex activity through which creates interest and positive attitude towards technique to trigger desire and develop skills in constructional-technical work, resulting in which develop mental processes and qualities needed to build creative directed personality.

Technological education is characterized most often with three objectives: "1) to develop thinking, set favorable set to contemporary history, to entrepreneurship and modern technology; 2) to facilitate the educational and professional orientation through better knowledge of the economic reality and to ascertain the abilities and tastes of students; 3) to fight against the failure of students in schools with the help of the activities in which all students can achieve success". [1]

One of the main activities to achieve these objectives is the design, which is a creative process or series of actions in which resources are turned into products or systems to solve problems related to human needs and desires. [7]

For example, Miller defines design as a mental process that can be considered as "*insight*" or "*intuition*"; or a "*reason*" as a consequence of which is modified or created, generally speaking, objects or systems.

Viewed as such type of thinking called *insight*, it reflects the instantaneous realization of the possibility of the link between the problems and opportunities.

The design is also *intuition* as form of subconscious thinking leads us to knowledge, often in the notable absence of rational affirmations. Intuition is related mental state of the insight that lies at the heart of our efforts to reform rational analysis.

The design is also a consequence of some *reason* to be entirely conscious form of thinking as problem sets and analytical capabilities for decision. It is an analytical process.

Finally, in its document Miller concluded that the design is a synthesis of these three mental aspects that are "forms completed and verifiable conceptualization of opportunities." [6]

The design can be defined as activities create products of labor (objects).

As the realization of the creative process design includes:

- *Identification* of the set of public necessity;
- *Conceptualization* of the way to meeting these needs;
- The further *development* of the basic concepts and processes associated with it;
- Rational *analysis* required to make sure the actions at work;
- Comparison between *initially* of performs of the products and the design of the shapes after the design;
- *Implementation* of various quality control procedures;
- Receive *feedback* on the benefits and values of it.

Project development allows:

- to teach and learn, not only through traditional technologies but also in the way of transfer of practical activities in the accompanying learning;
- to integrate a large number of activities around an idea or a problem;
- transfer theoretical or modeled in real life situations;
- for the application of acquired knowledge in the later stages of learning in different contexts;
- to implement their own ideas;

The design is a process in which developed skills characteristic of functional literacy, formed by technological training as:

- *specific thinking* skills;
- *creative thinking* skills;
- *communication* skills and teamwork, if you work on a project a few people;
- skills for *organizational effectiveness*, including leadership skills;
- skills *self-assessment and introspection*.

Specific skills in the **design thinking** in technological training is expressed in terms of technical skills and technological thinking.

With the advent of scientific and technological revolution, the development of technological activities in training appears necessary **technological thinking**, dealing with technological mechanisms and solve two main tasks: detecting and solving of new technologies and transfer and application of modern technology in various sectors in the sphere of material production.

In the process of technological learning in students form both technological and **technical thinking**. They contain a number of features and properties, such as flexibility, alternativeness, sequence mnogovariativnost in assumptions in the analysis of the mechanisms that are important for development of the personality of the student. Technical thinking has the following structure (figure 1):



Fig. 1

In planning plays an important role in the ability of creative thinking, i. E. The skills to identify and solve problems, skills, decision making skills, systematic planning and so on..

In recent 10-15g. Focusing primarily on the personal development of students in the system of technological training for the formation of functional skills and knowledge related to the erudition of individuals (students).

A so important characteristics for determining personal development through technical training in the design is the ability for teamwork. These include skills for cooperation, negotiation, networking, skills to justify and define its own position, listening skills, overcoming the conflicts in the working group and others.

A very important criterion in the design as a skill characterized functional literacy, formed by technological education is the **organizational efficiency** of a personality. Covers all the skills that make up organizational culture - a sense of order, structure, planning, combining in time and space of objects and processes so on..

And last but not least are ameniyata the real **self-communion** and the ability to **self-assessment** – adequate self-assessment of their claims, the opportunities and possibilities of the situation, which include skills and career development.

These are the basic **functional skills** that are basic life skills in certain key activities that have a high degree of portability and are called modular activities (computer literacy skills; measuring skills; ability to work with tools, etc.) that characterize the nature of the design

In conclusion, we can summarize that the design criteria was to develop the intellect of a person. Modern civilization more deeply aware of the role of intellectual developments in human society and historical progress. Created new cultural and historical situation of personality development is straining its mental capacity and reserves. Society is becoming increasingly sensitive to the cognitive development of people to enable every person to rise to the highest stage of spiritual and material culture in which it lives, especially the ability to understand complex cognitive perspective of processes and problems.

Incredibly strong increased demand in highly developed mentally and creatively people face enormous educational practice with new problems and orientations. It becomes more obvious that today's young generations should be educated in a different way, through

systems and strategies that are developing character. This is necessary because only a society with such an intellectual and personal potential can solve their own problems, to improve the success of the productive forces, to allow creative experiments in each area.

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