Research of Functional Literacy as a New Concept in the Scientific Knowledge

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Abstract: In this article is previewed functional literacy as one new concept for the science. The concept “functional literacy” is characterized by a fundamental approach for developing democratic societies. It is presented as complex of other types literacy as: Technological literacy, Economical literacy, Civil-legal literacy, Political literacy, Social-communicative literacy, General-cultural literacy, Behavioral literacy and Methodological literacy. Functional literacy can to separate as property necessity for people to do adapting toward their society.

Key Words: functional literacy, education

Scientific knowledge expressed as the process develops dynamically. It continues to expand its borders with the accumulation of new teaching material, respecting the rapid changes in technology, determined by community needs and desires for improvement of the human person. As a result of these factors, scientific knowledge changes its forms of expression and storage of information utilized. This means that the emergence of new aspects of existing concepts that change their shapes and formed as new concepts in science. This is typical and scientific fields, explore, predict and manage social and technologies after which we can put pedagogical techniques.

One of these new concepts of science is the concept of "functional literacy", which is characterized by a fundamental approach for developing democratic societies. Educational category as it is widely used in a number of scientific and practical areas such as: Technology; Mathematics; Cybernetics; Informatics and so on.

Depending on the science, functional literacy is interpreted from different perspectives. The area in which it is too much emphasis on the formation and development of functional literacy is the technological education.

The purpose of this article is to present a study of functional literacy as scientific knowledge in the educational process.

To achieve the objective solve merged tasks:

- studied and systematization of the theoretical formulation of the concept of functional literacy and
Based on theoretical basis to make a summary and a definition of functional literacy as an educational category.

It necessary to make a number of researches in the field of technology education within general education, how it builds functional literacy among adolescents, which is an important element of the further functioning and development of individuals in a society.

Construction of functional literacy is socially meaningful activity, of its successful implementation requires the establishment of a comprehensive system of technological training, covering all schools and all aspects of the educational process, as a major result of increasing technological change is the difference in the levels of technological capabilities and understanding.

The phrase "functional literacy" as a term considered the technological learning can be defined as the quality of the individual, need to solve life problems in different spheres of public life [5].

The etymology of the term of two concepts: function and literacy. The term "function" means:

- "Act, work, office, function;
- Consequence of a certain reason;
- Magnitude, which changes depending on the change of another magnitude;
- Specific role carried out by the authorities of a living organism" [1, 1015].

In turn, the term "literacy" means:

- "Quality and ability of literate;
- Education" [1, 126].

From the analysis of the two concepts can be done summary of the concept of "functional literacy" and can be defined as:

1) Level of competence held by a relatively independent body to be able to function in a given area;
2) A system of competencies that interact;
3) System components forming a certain level of education.

The term is defined in 1956 for the purpose of UNESCO and is associated with the name of William S. Gray. He first used it in preparation for the elderly "... to meet the requirements for independent reading and writing placed before them" [10, 21].

In the 60 years of the XX century UNESCO developed Universal experimental program to spread literacy. This program has great presence functional literacy, the concept of which boils down to building links between the process of mastery of reading and writing and the acquisition of general and practical knowledge and readiness for work, which enhances both productivity and improve the living conditions of people.

The World Congress of Ministers of Education in 1965 on the problems of eradicating illiteracy creates and adopts the concept of "functional literacy" as a key element of the overall development, which is closely linked with economic and social priorities of society, characterized by the need for labor today and in the future.

Two decades later was offered a new enhanced understanding of functional literacy, implying the "carrying capacity reading, writing and arithmetic" [1, 151] necessary for the activity and development of both the man himself and the social environment. "In fact,
functional literacy stage and aspect of continuing education and essentially merged with it ... One can be functionally literate in a certain period in your life, but remaining at this level of education without it increases updated without to improve their knowledge and personal qualities may be that in a few years is not able to meet the requirements to its level of literacy and education, due to its unpredictable conditions. So he has functionally illiterate. "[7, 32]

For this reason there are many researches in the field andragogy for "functional literacy" that in the beginning they were for fundamental knowledge, which are needed to be a man (reading and writing). [8] [9] [11] Gradually expand the meaning of the term and it is within the curriculum as an educational core, which integrates knowledge, skills, attitudes and ways of adapting to changes in adolescents of the world in which they live, obtained in different subjects at school.

"In the most general socio-philosophical meanings, literacy is the result of systematization of activities consisting in actively mastering the symbolic systems of natural and artificial languages and abilities using a system in purpose of knowledge of the surrounding reality and solutions to problems arising in practical activity" [2]. This definition of literacy can be considered fundamentally as it fixes the common characteristics of all types of skills, including functional literacy.

In references the term "functional literacy" describes mostly as a summary structure that is a combination of different types of literacy that are building block in the development of a person. G. Klyucharev and E. Ogarev example shows that functional literacy consists of:

- **Technological literacy** is the ability for competent and effective solution to the problems in professional activities.
- **Economical literacy** is knowledge of the theoretical foundations of business, understanding the nature of economic ties and relations, ability to analyze specific financial economic situations.
- **Civil-legal literacy** is knowledge and understanding of their rights and obligations in the broader context of public life.
- **Political literacy** – it is understand of the social nature of power, ability to solve societal problems and defend common interests.
- **Social-communicative literacy** is the ability to understand the other members of society, mastering the "languages" of verbal and non-verbal communication, ability to mutual understanding and cooperation.
- **General-cultural literacy** is knowledge of natural sciences, social sciences and humanities, as well as historical and contemporary cultural values.
- **Behavioral literacy** is knowledge and understanding of moral norms, rules of official or other labels skills to behave in different situations
- **Methodological literacy** - knowledge of the correct approaches for acquiring new knowledge and enrich the outlook through the integration of theoretical knowledge and social experience. This type of literacy according to the authors is a prerequisite for obtaining all mentioned types literacy [2].
Technological literacy

Economical literacy

Civil-legal literacy

Political literacy

Social-communicative literacy

General cultural literacy

Behavioral literacy

Methodological literacy

**Fig. 1. Structural scheme of functional literacy education according Klyucharev D. and E. Ogarev**

Adopted as level of education, functional literacy implies "the ability of people to solve standard tasks of life in various areas of activity based on applied knowledge (as the simplest case is considered to act on algorithm)" [4, p. 28]. So become identified standard "functional literacy" includes various skills such as:

- General skills formed in the period of general education;
- Cross-curricular skills, leading to practical application of the system of knowledge to solve problems of life;
- Practical skills for interaction of students with different social institutions (skills for social technology and social communication) and
- Skills needed to build from general to vocational education.

The authors of these standards [4] examined the functional literacy of the two countries, which are interrelated and complementary:

- One side is content-activity-which is a "technological base" for human life in the future and
- Other side is need-motivation, which defines the inner attitude and mental preparedness of students to:
  - improving the level of education;
  - choice of profession;
  - guidance in the adult world;
  - cultural values of the society;
  - communicative activities in the new social environment.
This classification of literacy is not complete here can add other types of literacy. The purpose of classification is to display a kind of structure of functional literacy and the perception of the main components, which can be separated as a generic term.

As a concept, it is a combination of different types of literacy, "in functional literacy skills are understood to be competent and effective action, through which it is a social phenomenon, as far as it depends on conversion of vital interest to the human and the nature of its relations with society" [2].

The phrase "functional literacy" currently describes those roads literacy that emphasize the acquisition of appropriate language, cognitive and computational skills to achieve practical goals culturally distinct conditions. It can be differentiated as such quality that is necessary for people to adapt to their communities [9].

Functional literacy is interpreted as a term, which means "minimum volume competences", ensuring the proper functioning of the individual in the system of social relations. This can be summarized as the ability of people to interact with the external environment and the fastest to adapt to it [6].

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

- Ability for conscious choice of professional education and career development;
- Ability to independently solve family welfare problems, protection of personal rights and orientation in their duties;
- Preparation for living in the modern world, orientation problems and values, as well as in the moral norms of society;
- Awareness of the characteristics of community 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 [3].

Based on the rapid development of both industrial technology and social technology, the formation and development of functional literacy level of education is too complicated structure for general education. We therefore have to make a number of changes, not so much in upgrading the content of education, as in its dynamism.

Functional literacy is the result of systematization of learning activities, expressed in adequate management capability to use knowledge of the surrounding reality, and solutions to problems encountered in the practical activity.

Construction of functional literacy as quality of the individual in the complex structure of general education must be tailored to the specifics of training time as necessary preparation for the realization of students' social life is combined with solving life problems [5].

Finally, it may be concluded that functional literacy is a very important concept in scientific knowledge. Formation and development of which requires continuous improvement of the requirements to the level of general education in general, tends to create basic skills in man, by which he successfully carried out their professional activities and functions in everyday life. This increase is a result of the requirements of social development in its various dimensions.
The question of functional literacy level of education is very topical for the theory and practice, as it may be associated with continuing education aimed at enriching the creative potential of the individual.

Functional literacy is reasonable to accept as an educational concept in our country. Through it can be measured specific experience and a specific set of competencies that give important new shades of general education. The relationship between functional literacy and training can be sought to answer the questions "What?", "How?" And "Why?".

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