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Functional illiteracy as a problem of modern education

“...Approximation took hold
hurrying people.
They teach something, they know something,
sow in general, shear on average,
explain nearly,
take care moderately”.

*R.I. Rozhdestvensky (1932–1994), Soviet,
Russian poet*

Modern society has achieved amazing successes in exploration of the world: the breakthrough into space, cognition of the microcosm secrets, development of new (vanguard, high) technologies, invention of materials unknown in the nature, the use of artificial intelligence and robotics, and many other achievements indicating opportunities of intellectual capacity.

Along with science, these successes were largely facilitated by education, with its development and improvement, and huge number of people to be involved in the sphere of its influence. If we give data on education in modern Russia, they are impressive: 32.4 % of the adult population (25–64 years old) has higher education, and among people aged 25–34 years – 39.5 % (Education in numbers: 2023)

However, at present, in this way of massing both higher and, to a certain extent, other levels of education, ***the paradox has formed: along with the increase in the number of educated population, a specific problem – functional illiteracy***, i.e. the number of people who do not have literacy in the modern sense of the word, – ***has arisen***.

This was once noticed by A. Solzhenitsin in his essay “Obrazovanshchina”, which, in his opinion, means nothing more than the appearance of education, the appearance of culture without internal content, i.e. without internal culture, as well as false education, false culture, false intelligence.

The vivid, figurative words in the epigraph express both pain, anxiety, and the warning: a poorly realized threat of possible loss of viability of the society and its prospects to withstand the challenges of modernity is coming at us. And this threat is unprofessionalism, ignorance and half-knowledge, knowledge without morality, knowledge without general culture.

Statistical and sociological data, numerous examples, statements by the best minds of the country and the world, and historical experience can be cited to prove this thesis. But, in my opinion, in this case the poetic image looks clearer, more convincing, more evidential. In the poet’s words, there is both his warning against indifference, and his passionate persuasion that all the affairs in the world, all our errors and shortcomings depend not on some evil, sometimes mythical forces, but first

and foremost on ourselves, our position, our attitude, our skill (no wonder the poet called his poem “About Masters”) and on our attitude to do good or evil, or to heed them indifferently and aloof.

However, we cannot turn a blind eye to the increasingly widespread lifestyle, when its goal was to satisfy utilitarian rather than spiritual needs, associated with external, often false brilliance of opportunities to have prestigious goods at our personal disposal, to possess tinsel household utensils and furnishings, to be proud of achieving primitive goals.

One of the reasons for these flaws and trials is not so much in the outwardly impressive changes that occur in education, but in those shifts that have led to changes in people’s positions in relation to education, its social functions, and emergence of a new class of contradictions that call into question achievements of modern society as a whole. In fact, ***in the era of the ongoing industrial and information revolutions society faced a tremendous paradox: growth in the number of people who received education was simultaneously accompanied by the process of increasing professional illiteracy (but one of a special kind) and occupational incompetence, lack of ability to think and combine scientific knowledge and practical experience.***

It should be recalled that for a long time literacy and education were interpreted as a composition of the arts of writing and reading. Anyone who did not meet this requirement was considered illiterate. This interpretation of illiteracy lasted not only the 19th, but almost the entire 20th century. Even in 1958, UNESCO defined the illiterate as “a person who does not know how to read and write enough to understand simple and concise utterances concerning his/her daily life”. But gradually the interpretation of literacy (illiteracy) expanded, clarified and began including the extent of assimilation of speech and audiovisual culture. Under the influence of new technological and technical transformations *in the late 1970s and early 1980s, a new concept has come into use – functional illiteracy as inability to perform actions not only in reading, writing and counting, necessary for appropriate life activities and development of both the person himself and his entire social environment, but also in applying instructions, finding and using the information necessary in the activity.* The concept appeared in the 90s of the 20th century. According to T.D. Zhukova, President of the Association of School Libraries of Russia, functional illiteracy is the cause of many technogenic disasters (Zhukova, 2006). In other words, the modern concept of illiteracy includes not only inability in reading (perceiving information), writing (conveying one’s thoughts, expanding the range of communicative interaction), speaking (ability to communicate and express oneself in speech), but, most importantly, in providing the ability to social orientation and social self-regulation. In this regard, it became necessary to talk not just about literacy/illiteracy, but about functional illiteracy, *which implies semi-knowledge, ersatz knowledge, false knowledge or knowledge-phantom.*

What exactly does it reveal itself in?

Firstly, functional illiteracy often appears in the form of *educational agnosia*, which means violation of the mechanisms of perception associated with displacement of direct, “naive” knowledge about the subject by a certain set of learned concepts. This term was introduced in 1994 by M. Lynch and D. Bogen, and was partly used by H. Sacks (Lynch, Bogen, 1994: 70–71; Sacks, 1992: 83). In their opinion, students represent only the environment for its dissemination. The high-risk group is teachers of disciplines, who do not have an explicit scientific specialization. Brought up on poorly translated foreign sources, obtaining information from compiled textbooks, they undertake to read any courses offered, which leads to absolute disorientation in the professional environment (For more information, see: Toshchenko, 2008: 41–44). This neglected form of the “disease” is accompanied by creation of a certain general worldview, which is in no way correlated with reality. And the attempt to specify the proposed schemes, structures, models and other “inventions” and make them reality ends as in the funny story about an owl and a mouse, to which the owl advised to protect itself from troubles and threats by turning into a hedgehog, and the question of how to do this was answered, “I deal with strategic issues, not all sorts of little things” (see, for example, Semashko, 2001: 20–28).

If educational agnosia completely ignores direct, empirical, everyday knowledge, then there is another extreme of it – *inability to link with real life*. My practice of long-term teaching allows asserting that the considerable number of students who have conscientiously studied textbooks, reference books, encyclopedias, and currently information from the Internet, sufficiently and/or relatively fully reproduce the general features of their or somebody else’s theories, processes and phenomena, but completely freeze when trying to answer the question: how does it reveal itself in real life, in the surrounding reality, which they live in? In other words, there is a complete or almost complete gap between the information read and the ability to fix it in the mind for possible further use. This situation creates *the effect of short-term memory*, which is more or less convenient for answering during the study process or for passing an exam or a test. In future, this information is not fixed in the human mind, it is forgotten, eroded, leaving no traces and without enriching the person’s cultural and cognitive capacity.

In Russia as a whole, the share of students who do not achieve the required minimum of functional literacy is growing. Experts agree that in future, it will be difficult for such teenagers to adapt to life in the modern world. In 2018, almost a third of all students did not reach the minimum threshold for at least one type of literacy in reading, mathematics or science. The illiterate in all three subject areas amounted to 12 %. (Main results : 2019:10).

Functional illiteracy also manifests itself in so-called *clip consciousness* (Eng. clip, “fragment of text”, “cutting”). The term originates from the concept “clip culture”, which was introduced by sociologist E. Toffler in his work “The Third Wave” in 1980. Initially, the term “clip thinking” meant a person’s ability to perceive the world through short vivid images and messages of TV news or video clips. In its modern meaning, this is a type of thinking, when a person perceives information

piecemeal, in short chunks and vivid images, cannot concentrate and constantly skips from one question to another. It is extremely difficult for these people to read or work on large texts, especially books, watch long videos and movies. Clip thinking is contrasted with systemic thinking: one that helps immerse deep and comprehensively analyze information, performing all operations consistently. It creates inability to logically set out what has been read, heard, and even seen.

Socio-psychological studies show that about 10 % of young people have specific problems with reading comprehension. Many of them have problems with reading for the first time around the age of 7–8, sometimes later, when they are expected to analyze more complex texts. They have impaired reading comprehension if there are any of the following signs: problems with basic reading skills, such as word recognition; difficulties with understanding important ideas contained in the text read; difficulty and/or misunderstanding of the algorithm when performing tasks and even problems with remembering essential details of what was read.

In the century of the huge information flow, complications and difficulties arise in *identifying the meaning, and understanding the content* of what has been read and heard. As a result, there is inability to highlight the main thing in this flow, understand it and then present it in the learning process or apply it in professional activities at your workplace. If earlier it was possible to weaken this misunderstanding through classical bibliographic assistance, then in modern conditions, this type of work can compensate for such a shortcoming just insignificantly.

Functional illiteracy manifests itself in the amazing fact of replacing by people the search for solutions to a problem not by comparing real opportunities for achieving a desired or recommended goal, but by a random set of wishes, even sincere ones, but often unrelated to the current reality. Then there is misuse of words, such as “must”, “need”, “should”, which emerge from the world of directive thinking or illusions and dreams, and not because they are wrong, but because there is no answer to them: how to implement it, who will implement it, at the expense of what it will be achieved. As a result, the effect of small or large Oblomov manifests itself. Operating with categories of obligation often makes a person useless for understanding and applying proposed ways and means of solving specific problems in close relation to available area of freedom, technical, financial, economic and human resources.

It is worth adding such a judgment.

Functional illiteracy is not so much absence of any general education training, as *inability to solve everyday practical tasks* – to write an application, fill out documents related to everyday life, explain to another person the essence of the desired or the recommended. According to sociological studies, in Russia, there are a lot of functionally illiterate people. Among older people, there are 15–33 % of them, depending on their profession, place of residence and some other life circumstances. But a new wave of complete functional illiteracy awaits the country: now, according to expert data,

up to 2 million children do not attend school, do not study. Let's add to this the fact that since the 90s, literacy has been declining in Russia. According to PIRLS (Progress in International Reading Literature Study) data for 2021, 22% of 15-year-old Russian schoolchildren did not achieve the second-level threshold of reading literacy.

And some experiments show that even university students have troubles with understanding the texts read, that, besides to the above, it should be recognized that there are learning-disabled persons, which the group of students unable (or unwilling) to study refers to. Using materials of interviews with teachers, personnel and students of universities, the following groups of "learning disability" were identified. The first group consists of those who are unable to master university programs because of their low-quality school education. Already in the mid-2000s, the contingent of students, who did not care how and where to study, was formed. According to rough estimates, in those years, the share of the students reached 15 %. The second group includes those who use their universities as a platform for realization of other goals. Many applicants who are successful, for example, in sports, are immediately enrolled in the university, but not for the purpose of studying. Their task is to win competitions and creative contests, participate in the World Student Games and KVN, improve their university's reputation and its recognition, popularize the brand, advertise it. Under conditions of fierce competition and university ranking, this function is very important for the university. But what is the value of these students for future work? The question remains open. The third group includes not only intellectually, but also mentally limited and even mentally unstable students who cannot master and accept university-level rules and requirements. Depending on the university, the number of this group varies, but the fact of their increasing presence among students is indicative (Denisova-Schmidt, Leontyeva, 2015: 86–93).

It is these three groups that form the indicator leading to the conclusion obtained by sociologists of the Russian State University for the Humanities (RGGU): having analyzed 118 universities in Russia, it was found that only 65–75 % of those who enrolled in studies graduate from the university (depending on its profile).

To this, it is worth adding the following fact. According to a number of studies, about a quarter of Russian residents – from 22 to 25 % – have no functional reading skills. The loss of these skills begins in childhood, then accumulates in middle age, when it is almost impossible to solve this problem.

In 2003, the International Reading Institute researched quality of reading and functional literacy, in which Russian students ranked 32nd out of 40 countries. Today in Russia, only one of three 11th grade graduates understands the content of scientific and literary texts. This phenomenon is caused by organization of education and educational programs aimed not at reading comprehension, but at sound or visual reproduction (Yasyukova, 2015: 79–80).

And finally, illiteracy is one of indicators of a person's lack of freedom in his interaction with the surrounding world. And here we face one of the most amazing paradoxes: the desire to know means willingness to accept freedom "with open eyes", which results in parting with inner harmony. It is the modern world that questions N.G. Chernyshevsky's motto for his novel "What to Do": "we will learn, and knowledge will set us free".

Functional illiteracy of people who have higher education is especially disturbing, although, among them, this phenomenon has, of course, its own features, its own special forms of appearance. Illiteracy of this category of people manifests itself in their inability to communicate with the outer world through written (and sometimes oral) speech, they do not know how to express their thoughts and ideas in an article, in a scientific report, in a review, in a review, to make an official document.

All this allows considering functional illiteracy as a symptom of a social crisis, as a sign of an imminent disaster comparable to environmental and technogenic shocks, in the epicenter of which a person is.

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