

The Role and Influence of “Clip Thinking” on the Educational Process in Medical Education

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Dear Editor

Information technology has strengthened the role of information, leading to the fact that modern society has reached a new stage of development – information. A fundamentally new way of communication and information broadcasting called the “screen culture” is emerging. The information society influences the society of people, their training and management processes. This influence is transforming our thinking, and therefore such concepts as “human-screen”, “clip thinking” and “clip consciousness” appear more often in the academic literature.

In connection with the informatization of education, there are risks of losing the creative culture-generating ability of entire generations. If the older generation still retains other forms of perceiving the information provided (comprehension, comparison, analysis, criticism, etc.), the younger generation, especially students, are rather inclined towards the dynamic and mosaic “clip”, and receiving, processing and

generating visual information, primarily educational.

“Clip thinking” as a phenomenon is a response to an increase in the amount of information. The media have developed a universal format for presenting information. Its essence is to submit a set of abstracts or clips without defining a context, since due to its relevance, the context for the thesis is objective reality. In other words, the universal format of the media makes audiences find some relevance in the events even if temporarily related, rather than factual. Society transforms into an “electronic society” or “global village” and defines a multidimensional perception of the world through electronic means of communication. The individual eliminates the need to remember information, take notes and comprehend it. He ceases to master the objects of knowledge, despite the fact that they are virtually accessible.

This specificity of memorizing an “electronic personality” entails parallel changes in thinking – the number of desired,

sought, significant and unknown objects is reduced. And the thought that has lost its problematic components ceases to generate thoughts, images, symbols, ideas.

The aim of the study is to analyze the role of "clip thinking" and its impact on the educational process in higher medical institutions.

First, we determine the positive and negative aspects of "clip thinking" and its impact on the learning process.

Positive aspects: 1) "clip" way of working with information adds dynamism to cognitive educational activity, and in dealing with a growing volume of educational material, it helps learners keep up with and complete the necessary tasks, at least formally; 2) "clip" behavior allows us to see the multidimensionality, multivariance and ambiguity of approaches to analysis, or to solve specific questions and tasks (such thinking helps audience to better understand the most diverse connections between phenomena and events); 3) "clip thinking" can be a protective mental reaction to information overload, enabling greater cognition and acceptance of a changing social reality.

Negative aspects: 1. The world around us turns into a mosaic of disparate, loosely connected facts, parts and pieces of information. Individuals become accustomed to the fact that they constantly replace each other, and are in constant need of new events (the need to listen to new music, chat, constantly "wander" the network, edit photos, watch movie clips, and play online with new participants). This significantly distracts them from the "core" occupation – learning. 2. The ability to analyze and build logical chains is lost, and the absorption of information resembles the consumption of fast food. 3. It is difficult for a clip-thinking individual to analyze the situation, since any information does not linger in his mind and is quickly replaced by new information. The success rate is falling and the level of knowledge assimilation declines. 4. For students "clip" is manifested more vividly. This is due, firstly, to the fact that they are in the "attention zone"

of teachers who require them to read the sources and take notes, and when they do not, the search for interactive teaching methods and influence begins. Secondly, with the global informatization of society over the past ten years, the rate of information exchange has rapidly grown. This gives the student confidence by providing him with quick and easy solution to a difficult task: why go to the library to find a monograph on a topic, when it's enough to google it, and download from the network the very first information? (which almost never meets modern requirements), or openly tell the teacher: "Why prepare at home if you explain everything to us anyway?" This is clearly the manifestation of a consumer approach to learning.

Therefore, one needs to introduce alternative educational programs with new means of structuring and providing information. The program could include digitized textbooks with a multi-level structure, where the first level allows learners to spend twenty minutes reading a couple of dozen "paragraphs-clips" to become acquainted with the general idea, and each new question goes deeper, systematizing previously acquired knowledge. Books in this organized system will be studied up to the last level and will also undergo mandatory changes in quality.

This problem has become the reason for the development and implementation of a process of teaching methodological materials in higher education that would help fulfill this social request. For example, one can point to the methodological manual "Pedagogy of Higher Education: In Schemes and Tables" for the preparation of masters, which is compiled according to the curriculum with details of all topics and questions in them in the form of diagrams, figures, tables (1).

The same approach underlies the methodological support of the preparation of interns for qualifying exams (2).

We assume that the problematic situation of the modern educational space is that the teachers are mostly "book people" and the students (interns) are mostly "screen people"

and they need to learn to talk to each other and understand each other. In some countries the danger of "clip thinking" has come to notice, and special trainings are being developed where lecturers are advised to concentrate on one subject and maintain a state of concentration for a long time.

The most accessible method to minimize the negative impact of "clip thinking" is to read "non-clip" literature

Student (intern) interest in the learning process is a critical factor in the formation of "clip thinking". In a study titled "Prospects for optimizing the training of interns" (3), some interesting observations were made when comparing the results of questionnaires on thematic improvement. The questionnaires were completed by anonymous interns and cadets of cycles of specialization and internship. When they reported the training material in the cycles as "interesting" and "useful," the difference between the percentages was minimal $1.6 \pm 0.2\%$. For a doctor with practical experience, these two concepts are almost identical. For interns, this difference was $39.2 \pm 0.7\%$. This proves that a medical intern's perception of "interesting material" is fundamentally different from their definition of "useful material". In this case, the word "interesting" more closely matches the term "exciting". The definition of "useful" for them is inevitably necessary for something that is labor and time-intensive. In analyzing the questionnaires of interns, each year we noted a progressive decrease in the percentage difference between these definitions. In the academic year 2011-2012 was $7.2 \pm 0.2\%$, and in 2016-2017 it was already $6.1 \pm 0.3\%$ (3).

It is advisable to make classes "outwardly attractive" by delivering courses in game forms, giving examples from own experiences, assigning engaging tasks with practical results, etc. A dialogue between the teacher and the interns should constantly take place. They should be given the opportunity to independently acquire (or consolidate) the necessary practical skills, master modern diagnostic research methods, as well as

prepare theoretical material in the form of a presentation on a highly specialized topic and report to all interns with subsequent discussion.

The efforts of all participants in the educational process are directed towards self-development and realization of their own positive "I" concept. The educational process is designed to ensure the integrity of the formation of the professional and civic status of young assistants while maintaining the personality of each intern. This requirement is one of the important aspects of the formation of a socially mature personality of a professional in postgraduate educational system (4, 5).

Applying methods to enhance the interns' activities is the most important principle of training at the postgraduate level. The solution of diagnostic and medical tasks, problem situations and participation in educational games secures a highly professional training. The modern educational process actualizes the leadership qualities of young people, instilling in them a taste for progress and encouraging the study of the latest medical technologies.

One of the most important methods for improving the effectiveness of higher education is to optimize the interns' independent work (the planned work of interns is carried out during the instructions and with the methodological guidance of the teacher, but without his direct participation). This type of work is intended not only for mastering the discipline, but for acquiring the ability to take responsibility, independently solve a problem, find constructive solutions, and handle a crisis situation.

Therefore, "clip thinking" reinforces clinical thinking, supports the principles of medical deontology, and promotes the development of paramedic skills. This phenomenon requires detailed social, andragogic and medical research, and the creation of new educational technologies based on "live" communication. "Clip thinking" is not only the development of some cognitive skills at the expense of others, it is

now also a “child in the cradle”, and the way it grows depends on ourselves.

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Ethical Approval

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Conflict of Interests

The authors declare that they have no conflict of interests.

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