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INK AND THINK TEACHING METHOD AS A WAY TO ACTIVATE THINKING AT OXFORD

The article describes the 'Ink and Think' teaching method as a way to activate thinking in English universities and discusses its connection with heuristic learning used at BSU
***Keywords**: 'Ink and Think' teaching method, heuristic education*

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МЕТОД ОБУЧЕНИЯ INK AND THINK КАК СПОСОБ АКТИВИЗАЦИИ МЫШЛЕНИЯ В ОКСФОРДЕ

В статье описывается метод обучения "Ink and Think" как способ активизации мышления в английских университетах и обсуждается его связь с эвристическим обучением, используемым в БГУ.
***Ключевые слова**: метод обучения «Ink and Think», эвристическое обучение, активизация мышления*

Activation of internal educational processes creates favorable conditions for students to perceive external knowledge, which is not stored passively in the compartments of his memory, but becomes part of his internal personal content.

The German philosopher M. Scheler defined such knowledge as "educational knowledge", "which no longer remains in us as if undigested, knowledge that we do not think about, how it appeared and where it came from. Goethe described this wittily and truly when, in one charming poem, he says about the "originals" that now he no longer knows what kind of roast geese and ducks he fattened his tummy with!... Completely digested and completely assimilated knowledge, which has become life and function ...which they don't think about, how it appeared and where it came from... this is knowledge that is completely ready in every life situation (always available at the ready), which has become "second nature", completely suitable for a specific task and the requirement of the moment, enveloping us like natural skin, and not as a ready-made suit. Therefore, educational knowledge is so unobtrusive, simple, humble, non-sensational, quiet, discreet, it is something self-evident and constantly aware of its limits. Pride in education, arrogance of knowledge is a priori lack of education." [1].

It is precisely this "codified theoretical knowledge" (i.e., summarized in a fundamental theoretical body), according to the American philosopher D. Bell, that becomes "an indispensable condition for entering the elite" in the information society. [2], because can serve as the basis for the creation and application of technological innovations, become a guiding force of social change, "in its systematic form, it is involved in practical processing (in the form of an invention or organizational improvement)" [2].

In order to enhance internal educational processes in English universities - for example, Oxford and Cambridge - it is recommended to take notes during lectures as a very good idea.

This is how Prof. describes this method. Matthias Winkel:

«What I'd like you to do or recommend you to do is to respond by something, you might call “ink and think“

ink because it's a very good idea to take notes

“Think“ of course because there's a little more than getting what's on the board onto your piece of paper.

But the important process of getting it through your head and out at the other end is already a first way of processing. and you may well find that what you write with your own hand you feel more committed to, when you're are trying to fully understand it and if you've written something that you're not quite sure about, you can leave a trace and say "oh I want to get back to this".

So I really hope you can do that.

Mathematics is a very active discipline you really have to do it yourself you can't rely on what you see in front of your eyes.

So make sure, you get the most out of lectures by doing something such as taking notes if you can.

If you feel you're falling behind and you can't listen very well are other ways that you can try such as having printed lecture notes.

I mean anything be done with a tablet or a style and a stylus, but you can annotate things usefully as well as long as you stay active.

That's the best way of making use of the lectures that we offer.

Not very good way - purchase the transcript of today’s lection» [3]

Thus, the “ink and think” method is a little more than just transferring what is written on the board onto paper. This is an important process of passing information through the head and fixing it on paper – this is the first level of intellectual processing of lecture material. When you write, you try to comprehend what you are writing and comprehend it completely.

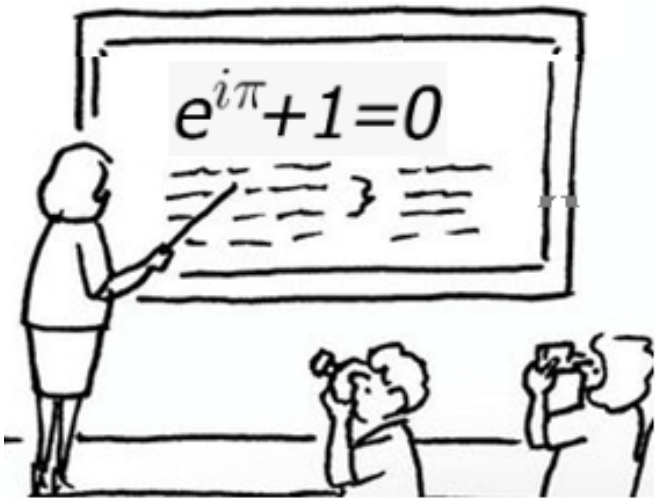

Fig. 1. Taking photographs of the lecture

When a student takes a photograph of a board on which formulas are written or buys a transcript of a lecture, he receives only raw information that has yet to be comprehended and digested (Figure 1).

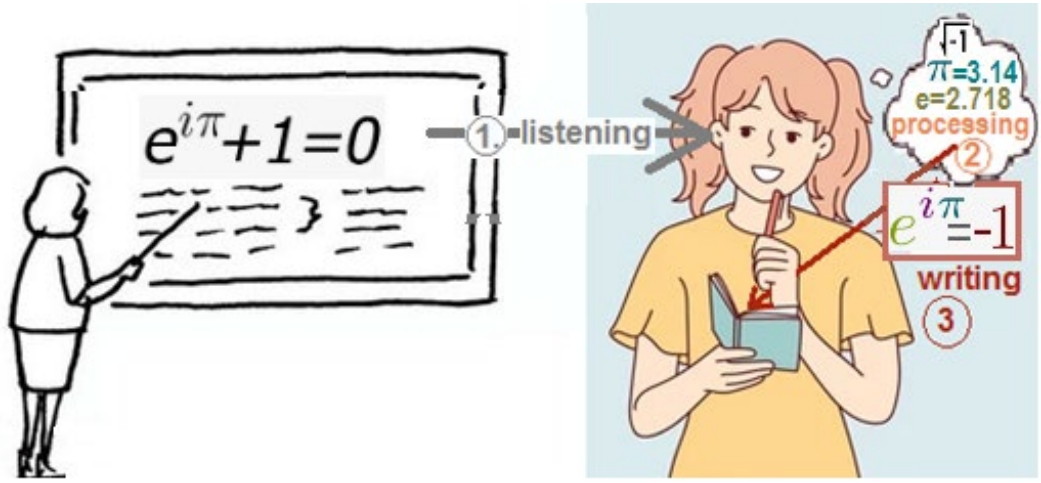

Fig. 2. Recording a lecture (taking notes)

When a student records a lecture (Figure 2), he processes raw information into initial knowledge (information and data compiled into a single theoretical body).

If you don't understand something right away, you can mark this place and say, "I want to come back to this later" (see Figure 3).

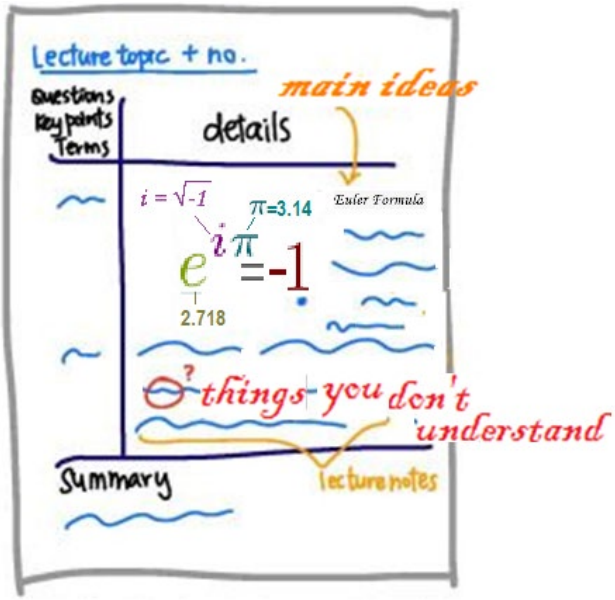

Fig. 3. Heuristic summary

Knowledge is remembered much better than raw information. Therefore, it is possible to obtain educational knowledge - this is the only way to master the material being studied for a long time.

To take notes on a lecture, it is convenient to use a tablet and a stylus, which allow you to store notes in digital form - for example, as a PDF file. It's easy to lose a paper outline, but a pdf outline will last a long time, especially if you store it in several places at once - for example, on a hard drive, on a USB flash drive, and on the Internet (for example, in git).

It is easy to return to electronic copies later if the knowledge is needed in the future - after 3, 5 or ten years.

It is almost impossible to save a paper note for such a long time. And it is completely unrealistic to retain knowledge in memory.

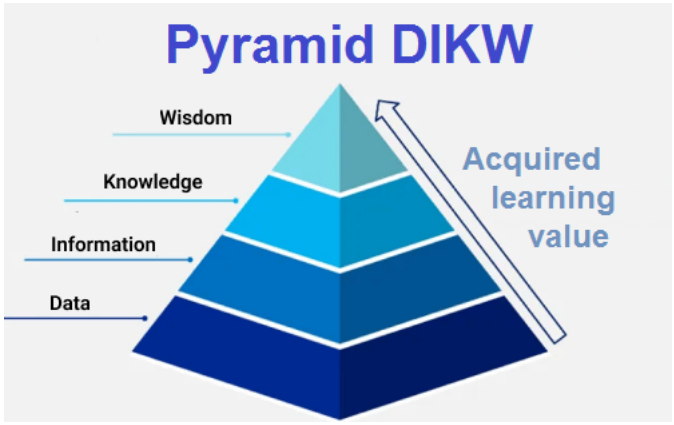

Fig. 4. Pyramid DIKW (Data, Information, Knowledge, Wisdom)

The “ink and think” method ensures the generation of knowledge by students in the course of specially organized lecture activities.

Educational standards, if they encourage reproductive activity, stimulate the appearance of ready-made essays, essays, “cheat sheets” on sale, the demand for which occurs precisely because this kind of “product” is in demand by the educational system. An educational standard set in the form of a known product leads to the fact that it becomes a product alienated from the student, which is used by him in order to “pass” it to the teacher. Computer technology makes this process even more accessible and variable. A constantly expanding bank of ready-made tests and similar materials, placed on CD-ROM and on the Internet, makes it easier for students to prepare and “pass” tests without doing the necessary work, which is indirectly related to education.

The study of created cultural analogues is most effective if it is carried out simultaneously with the creation of one’s own product in this area. So, according to V. Loch, a person “studies this implementation of culture only if he actively comprehends its structures, tries to implement them in activity, exercises, produces new structures ...” [4].

Working in the classroom using the “ink and think” method can be considered heuristic education [6], since it causes certain difficulties for the student and makes it necessary for him to master unknown methods and knowledge.

This heuristic activity is characterized by the following features:

1) it is carried out on the basis of the educational potential, goals and motives of the students themselves;

2) leads to the creation by students of their own educational products in the subject area being studied;

3) poses certain difficulties for students, caused by insufficient knowledge of methods and means of creatingж

4) the function of the teacher is not to transfer ready-made knowledge developed by humanity in a given subject area, but to transfer methods of activity to create educational products and independently become familiar with a given subject area.

This type of student training is more difficult because... requires the teacher to have knowledge and mastery of various educational technologies. Khutorskoy A.V. believes that the function of the teacher is to provide an individual zone for the student’s creative development, which will allow the latter to build his own educational trajectory [5].

The condition for a student to create an educational product (an ideal knowledge construct) is to provide him with the opportunity to directly learn about a real educational object, and only then become acquainted with the knowledge of mankind about it.

The inclusion of real objects in the content of education allows students to build a subjective system of ideal constructs, rather than taking them in ready-made form. This prevents the dogmatic transfer to students of ready-made ideal constructs that are not related to their activities, and allows them to build their own picture of the cognizable area, to form an individual trajectory of movement in it.

For a long time in pedagogy, two fundamentally different views on the student can be distinguished:

1) "Clay Man" in which the student represents raw material from which the teacher must create something useful for society and for the student himself.

2) "Man-seed", which already contains a program for one's own genetic development and the role of the teacher in creating conditions for students to realize the possibilities hidden within them.

The first view is characteristic of reproductive education, which aims at the systematic transfer of knowledge from teacher to student, arose in ancient times. It was developed by the German philosopher, psychologist and teacher I. F. Herbert and in the didactics he created, which had many supporters in government circles of many countries in XIX century In principle, this approach allows one to obtain fairly high results in studying the material, but it greatly limits the initiative of students and their creative self-realization.

With heuristic learning, the roots of which can be found in democratic Greece, where the creative inclinations of individuals and the comprehensive development of the individual are encouraged, even if this does not bring immediate benefits. The focus of the teacher's attention is not on the subject, but on the student, his personality and educational activities. The emphasis shifts from the question "what to teach?" to the question "how to teach?" For each subject, it is proposed to compile technological maps for constructing a system of classes that contain databases of technological and information tools and teaching methods. The technological line of training is built as follows. From the database of each block of the technological map, those methodological elements are selected with the help of which it is supposed to achieve the set goals: types of activities, forms, methods, techniques, teaching aids.

When teaching students, it is always necessary to keep in mind the final goals of the educational process, which helps to increase motivation, stabilize learning and reflectively evaluate the results obtained.

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