



## Conference Paper

# Effective Realization of Interactive Educational Technologies By Cartographers and Geographers

**A V Molochko**

Geographical Faculty, Saratov State University, Russia

**Abstract**

The article is devoted to the issues of interactive educational technologies introduction and use in the process of teaching higher education in Russia on the example of geographical and cartographic education. The possibilities of a complex combination of coaching and scribing methods are revealed, the main tasks facing the modern teacher of the university are highlighted, as well as the main possible results of such implementations.

Corresponding Author:

A V Molochko  
farik26@yandex.ru

Received: 10 February 2018

Accepted: 14 April 2018

Published: 7 May 2018

Publishing services provided by  
Knowledge E

© A V Molochko. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the RFYS Conference Committee.

The modern system of higher professional education in the Russian Federation, for many years, has passed through significant qualitative and quantitative changes, which have affect not only on the heads of educational organizations, but, first of all, on the teachers and students. Generally, changes touched on the number of hours of contact and independent work, with a significant advantage in favor of the latter. In connection with aforementioned , it is very important to motivate students, to increase their interest and to show the importance and significance of the learning process.

The teacher now, as never before, has a difficult and sometimes not always achievable goal - not just to give knowledge, but to provide it in the most interesting and relevant form for the youth, with the maximum involvement of students in setting and solving educational problems through the use of non-standard interactive educational methods. This goal requires a radical review of the existing traditional technology of education and its adaptation to the latest trends and not only science influences, but also the society at large.

What tasks are facing to the active and modern teacher now when we have moved to qualitatively new standards of education?

1. Development of organization technology in the educational process with using interactive techniques.

**OPEN ACCESS**

2. To perform the tasks that assigned by the teacher as a student's motivation.
3. Popularization of the introduction of the educational interactive technologies in the training implementation.
4. Formation of students' professional competencies in easy and mainstream forms.
5. Work with the student group for creating the competitive and professional skilled workers.

The implementation of these tasks is a priority development of the modern education system in Russia. Especially acute is the disproportion of the possibility of using new technologies in replacing traditional ones for natural sciences (in particular, geographers and cartographers), where, in addition to the almost complete lecture classes reduction, most of the student work is done at the computer. The role of geographic education for many years was understated, but now the situation has changed, because according to the President of the Russian Federation V.V. Putin: "Along with the Fatherland history, the Russian language, literature, geography serves as the basis for the formation of patriotic values, cultural, national identity and consciousness."

Geoinformatics, geoinformation and automated mapping, thematic cartography, geoinformation systems design - all these and not only disciplines no less than humanitarian ones require the introduction of interactive educational approaches into the teaching process. It is practically impossible to implement technologies that traditionally applied for humanitarian disciplines (case studies, round tables, etc.) and coaching and dynamic scribing of the presentation come to the aid for the teachers of these directions [1].

Currently, coaching technology is at the height of popularity. Coaching - is a method of training aimed on a clearly defined goal achieving. In high school, coaching, maybe not in the form that now actively adapts to the masses, has been used for a long time. Each teacher, in one way or another, through the "question-answer" chain, motivates the student to activate the internal potential, to achieve independently to the task that set by the teacher, so-called, the form of "soft" management of the learning process. Why "soft"? Despite the fact that in classical coaching there are four basic steps that allow the student to come to the solution of this or that problem in the end, the role of the teacher as a regulator and an implicit motivator is still very high (Figure 1):

1. Setting a goal, the achievement of which is necessary within the framework of the specified tasks. The first step, prompts the student to find the answer to the question "What do you want?". The result can be very variable - from admission or

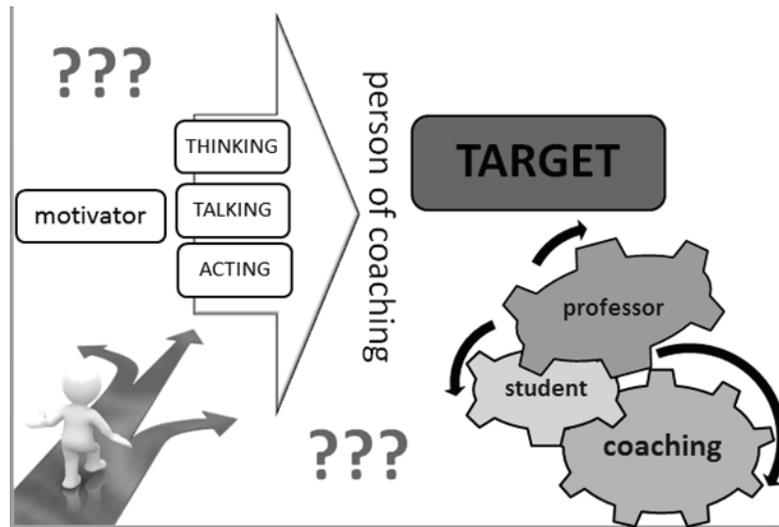


Figure 1: Coaching scheme.

successful passing of a test / examination, till the motivation to get a scholarship or a grant.

2. Verification of the real state of things. At this stage, the student must answer the following question: "Why is this necessary?"
3. Determination of ways to achieve the goal. This is the most difficult stage, because not always the desired can be true. The question of this stage is aimed at activation the student's inner potential - "How do you understand that you have achieved your goal?"
4. Achieve the goal. The one step that will answer the question "What will you do to achieve your goal?"

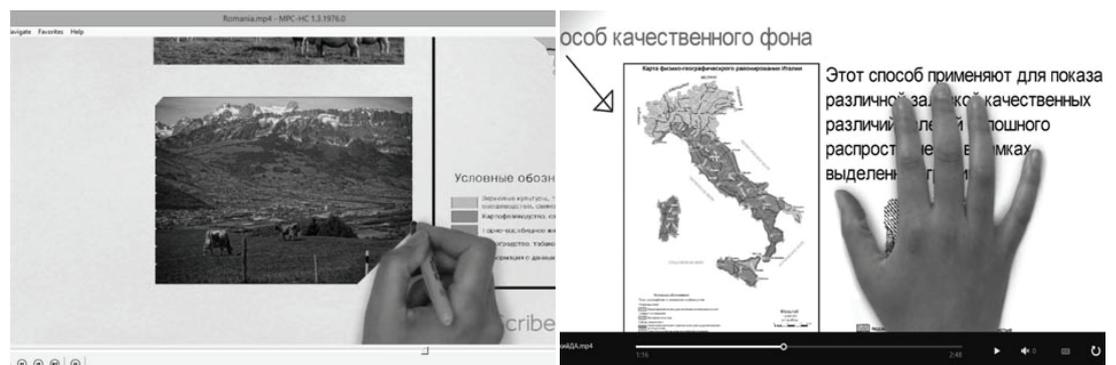
Each step that is leading to the goal achievement and the solution of the specific problem psychologically perceived for the students as an independent decision, which, however, is actually modeled and corrected by the teacher, by creating a comfortable condition in the student collective, and by skillful organization of the educational process.

It is well-known that motivation is the leading factor for regulating the activity, behavior, occupation of the learner. Coaching technology is precisely aimed at motivating independent thinking, towards achieving a goal, whatever it ultimately was, and a very important factor is that coaching is aimed at future victories. In other words, it does not matter whether or not the student has obtained something, it is important that he can do now what he is capable of, when his goals are activating. Another motivating component of coaching is to increase the effectiveness of group work, to

develop a “team spirit”, to identify and to develop the leadership qualities of students, which allow to create an atmosphere of “healthy” competition. Within the framework of the personality-oriented approach to learning and education in general, there is a requisite to implement group accomplishments of the tasks that set by the teacher, as it is necessary for the general cultural competence of all areas for both bachelor degree program and master programs, and allows students to develop further professional skills in the team, exclude the syndrome “Imposed introvert” [1].

An important role in the emergence, awareness and growth of motivation is played by the qualified and professional work of the teacher, which can increase interest in the subject.

The options for implementing coaching in the educational process of higher education are extensive. The experience of its use as a current work on an individual, multi-phase practical task is interesting. The main topic of the assignment, of course, is indicated by the teacher, thereby activating the scheme of “soft” management. For example, project creating in a non-standard form of the report. There are mass of opportunities in the modern information field, but for the sake of maximum visibility and presentation, it is most rational to use the technology of scribing (Figure 2).



**Figure 2:** An example of students' scribing presentation.

Scribing is the visualization of information using graphic symbols that clearly and visually reflect the main essence. The main difference between scribing and traditional presentation is action. The speech of the speaker is illustrated by the drawings with a felt-tip pen on the white board, thus the effect of “parallel following” is achieved, when we see and hear the same thing, while the graphic series is fixed on the key moments of the video sequence. Scribing is active, it's a small author's film, creative, competitive advantage, is the evolution of the presentation into a new form of the material presentation, because visually the person learns the information better [1].

The combination of "soft" management of the learning process through the application of coaching technologies, as well as the introduction of scribing visualization of the results of student work allows:

1. To improve professional skills.
2. To increase the growth of academic progress in the subjects that implement these technologies.
3. To form students' skills in creating non-standard visual projects.
4. To increase the growth of creative and competitive potential.
5. To consolidate the student group.
6. To motivate students to attend classes and organize independent work in an interesting and lively manner.
7. To implement effectively the current educational state standards.

In conclusion, I would like to note that the future of Russian science and society is not only the training of qualified personnel, but also the disclosure of their creative potential. Experts in all areas produced a huge amount, but in addition to knowledge, if students can think creatively - they will not have competitors.

## References

- [1] Molochko A, Kudravtseva M, Basamikin S 2015 The Experience of non-standard Form on monitoring Students-Geoinformatics' educational Progress Implementation (with a Complex using of Coachingtechnology, Scribing-technology and Business Game as an example). *Izv. Saratov Univ. (N. s.), Ser. Earth Sciences* vol 15 (Saratov) pp 9–16.