

Innovative approach to motor actions teaching in physical culture and sport with the help of teaching calligraphy methods

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Abstract: The article describes the results of a complex approach to teaching difficult motor actions in a new physical culture-sport movement ROLCROSS. **Materials.** By the example of “changing (shifting) platforms from the front to the back one and from the back to the front one” technique fulfillment we prove the effectiveness of a complex methodology of teaching difficult motor actions in practice. **Research methods.** Educational methodologies: methods of letters formation in calligraphy and methods of teaching motor actions in sport. **Results.** Two methodologies combination: teaching motor actions and the methodology of teaching calligraphy helped to master effectively the elements of a difficult coordinating action. **Conclusion.** The presented methodology would help to increase the degree of mastering technically difficult motor actions in sport and physical culture activity.

Keywords: methods of teaching calligraphy; teaching motor actions; rolcross; complex methods of teaching.

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Introduction

Education is a structured and systematized process of the base formation for the present knowledge gaining in order to solve different problems in the future.

In the textbook by L.Ya. Zheltovskaya “Methodology of teaching calligraphy at primary school” it is stated that “... *the reason for the methodology change depends on society needs change for thoughts formation in written form*” [2, page 120]. In the same work the author says, that in 1969 after another one school education reformation, calligraphy, or penmanship, was removed out of primary school program. There appear the questions concerning the reason for that decision. Who made that decision? What aims did the officials of education set? Nowadays the historians, political scientists and other specialists

in educational sphere analytics think out conspiracy explanation to historical facts and quotes of teachers from Soviet educational system and early post-Soviet period.

It’s not a secret any more that the world started into a “new future”. Standard education becomes more valuable in terms of distant, very often depersonalized technologies introduction into educational environment of secondary school and higher education [5,6,7].

“Practice is the truth criterion” [3]. These words are known for ages and could hardly be disputed nowadays and in the near future.

The article presents practical results. They prove the effectiveness of the methodology of teaching calligraphy, created in Soviet system of education, in the terms of teaching difficult technical actions in a new physical culture and sport

movement ROLCROSS [4].

Materials and methods

General principles of teaching calligraphy, which were used in teaching difficult techniques in ROLCROSS, are realized stage by stage (picture 1):

The 1st stage – the **intent** to do anything is formed, for example, to draw the line of the definite form.

During this stage the thought appears, which should materialize into the definite mark on paper. For example, when a student gets the task to draw a line of the definite size, form and construction with reference to the horizontal lines of the ruled

page, first of all, he visualizes his actions, creates the image of the line.

The 2nd stage – verbal characteristic of this image is given (utter). Before realizing the image into a motor action of the hand with the pencil or a pen, it is necessary to utter the future action, giving the action verbal precise characteristic. For example: “The inclined line to the right half the row height”.

The 3rd stage– the **motor action** is fulfilled. It realizes the intent uttered with the help of verbal characteristic.

If we present all three stages schematically, the scheme would be the following:

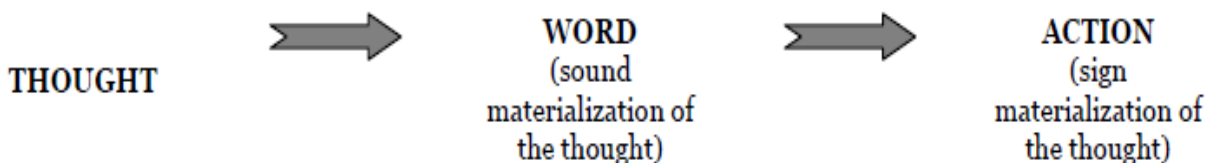


Fig. 1. Scheme of stages succession in teaching letters construction in calligraphy

Simple motor exercises of calligraphic orientation fulfillment according to this scheme helps to activate the zones of cerebrum. They control each stage of the received task realization. Such practice (training) creates neuronal connection between the cerebrum zones. They control the definite stage in achieving the aims of the task.

If we don't form the skill of the future action uttering, we won't provide the cerebrum zones. They control the motor process, accuracy, as exactly “sound materialization of the thought” (the author's remark) helps to characterize definitely the peculiarities of hand movements, after which a movement makes a mark on paper with the information from cerebrum.

When in 1969 the technique of teaching with a ball pen was used instead of fountain pen, based on continuous writing technique, the second stage in thought-word-action row (word) was eliminated. Students moved to a motor action right after the “thought” stage (intent to make an action).

Such a progressive continuous writing technique deprived students of simple exercises. It helped to master basic principles of letters

construction in particular and handwriting in general.

For example, illustrating the process of students' handwriting degradation as a result of methods of calligraphy abolishment, we can compare the handwriting of Soviet school students (till 1969) with the handwriting of students of late Soviet period (till 1990) and post-Soviet period. This comparison shows the result of the methods of teaching writing abolishment.

In a new physical culture and sport movement ROLCROSS, which was created by the group of enthusiasts in Yekaterinburg, the following devices are used: a ripstik, a snakeboard, a waveboard, a rollersurfer, a casterboard and others. We will call them all “a sportboard” (picture 2).



a – bottom view b – top view

Fig. 2. Rollersurfer with pendular suspension of switch system

Constructively they have the same mechanism (transmission). It transfers vibrational-rotational body movements into forward movement of the device on the surface of movement (any solid and relatively even surface from asphalt, concrete, wood and other materials with the degree of roughness ± 5 mm, depending on the wheel diameter of the device).

Results and Discussion

The method of teaching calligraphy was used in teaching one the difficult techniques in ROLCROSS. It was not described in any sport methodical source. The technique is based on the fact that an athlete should fulfill an action, moving on the device with a pendular suspension of the wheels in a way that the platforms of the device exchange their places: the front platform becomes the back platform and the back platform becomes the front one. The difficulty of this technique fulfillment is in the fact that it is necessary to realize several conditions. They submit to the laws of mechanics (lever of the 1st and the 2nd type) and the conditions in terms of which pendular suspension of a sportboard wheels would work together with the efforts made by the athlete's body towards the spot of the wheel contact through the feet support on the platforms of the device.

If all these elements of a difficult technique are fulfilled correctly from the point of view of the laws of physics (elementary mechanics), after this technique fulfillment an athlete keeps the balance and moves with another side (the right(left) leg is on the front platform, if before the technique fulfillment

the right(left) leg was on it).

This kind of technique fulfillment estimation is the most objective, as the positive result would be obvious and would be taken into account only in case if there is "athlete-device" system steadiness after the platform change.

Evolutionary methodology of teaching this technique was formed gradually –starting from predictor-corrector method during one year, as there is no description of the methodology of this technique fulfillment in the world physical culture-sport practice because such devices are not used in the market for a long-term period.

As long as this methodology of teaching this technique was mastered only by one athlete. There appeared the necessity to develop it. However it was not reasonable to spend months for positive result achievement, especially in teaching children and teenagers, as the motivation for the result achievement was lost because of a long-term period of its realization.

In order to increase the effectiveness of teaching this technique (platforms switching) we combined two methods of Soviet educational system into one:

1. Teaching motor actions according to the methodology described by M.M. Bogen [1].
2. Teaching calligraphy uttering each element of a motor action (the main reference points according to M.M. Bogen [1]).

After these methods use we received the results. They prove these two methods successful combination into one complex methodology.

Table 1

The indices of effectiveness comparison of different teaching methods relative to one technique

Method of teaching	Time, spent for “platforms switching” technique mastering
Predictor-corrector method (without the main reference points specification [1])	6 months
Method of successive fulfillment according to the main reference points [1]	1 month
Method of teaching uttering the prepared verbal characteristics of the main reference points of an integral technique	1-2 lessons

By the example of mastering the technique of the platforms switching in ROLCROSS we received the results. They prove a positive effect. It combines two teaching methodologies: teaching motor actions according to M.M. Bogen [1] and the methodology of teaching calligraphy uttering the verbal characteristic of the future motor action.

Mastering the skill of letters construction with preliminary uttering verbal characteristic of the future motor action, creates strong neuronal connections between the separate zones of cerebrum. They control the definite stage of “thought-word-action” row and it has a positive influence on other motor actions mastering (authors’ hypothesis).

Conclusion

Such an approach would help to increase the motivation of students and teachers in mastering calligraphic techniques not only for the quality of writing improvement, but also for the perspective of these techniques use in mastering the technique of difficult motor actions in any spheres of activity. Especially in the spheres, which demand high degree of movements accuracy and consistency, for example in sport, medicine, transport control and others.

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