ABOUT SAM

SAM was created by the development team led by Dr. Petr Nezhnov and Dr. Boris Elkonin in 2008-2014.

SAM theory stands on the psychological model of the educational process of Vigotsky’s sociocultural theory of cognitive growth and continued by his followers.

The key component of the SAM construct is three types of mastering of cultural model. Each of the types corresponds with the level of subject competence aka ability to solve a task:

<table>
<thead>
<tr>
<th>1. Procedural level</th>
<th>Action by sample; orientation to external characteristics of the task – ability to solve small number of typical tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Conceptual understanding level</td>
<td>Action with comprehension; orientation to substantial relationship – ability to solve all tasks in a given subject</td>
</tr>
<tr>
<td>3. Functional level</td>
<td>Competent action, orientation to field and limits of ability of the action – ability to see limits of general way of action and overcome them</td>
</tr>
</tbody>
</table>

FEATURES OF LESSON WITH IN-BUILT DIAGNOSTICS

Diagnosis is carried out in the course of the lesson, without creating a special procedure (test or exam).

The technology allows teachers to retain the diagnostic position, set educational goals and evaluate their achievement based on the strict SAM criteria, rather than on their own intuition.
ABOUT LESSON WITH IN-BUILT DIAGNOSTICS

A lesson with in-built diagnostics is a lesson design technology in which a three-level model of mastering subject content is used as a means of diagnosing academic subject competencies.

LESSON WITH IN-BUILT DIAGNOSTICS HELPS TO OVERCOME:

- Difficulties associated with setting goals (specification of the planned results, generated learning and subject competencies);
- The time lag between the formation process and the procedures for evaluating learning outcomes;
- Difficulties in the expert assessment of the level of development of academic and subject competencies among students;
- Lack of a “diagnostic position” for a teacher in a lesson.

USERS

Teachers that mastered SAM methodology.

SCHEME OF THE LESSON

Testing of the acquisition of this type of action

Yes

Testing of correlation of task with second level, correction

No solutions

Setting of the goal (task of the lesson) of the first level

Setting the task of the second level

Different solutions

Only right solutions

Setting of educational task

Setting a problem

Problem accepted by students

Problem is not accepted by students

Testing of correlation of task with second level, correction

No solutions

Methodological support

Approbation

The methodology was piloted on teachers that were undergoing further training in regions of Russia.