

PRIPAJANJE INTEGRISANOG PRISTUPA SREDNJIM ŠKOLAMA

INCORPORATING INTEGRATED APPROACH IN SECONDARY SCHOOL

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Summary

We determine the integrated approach in education as a way for mutual consideration of interdisciplinary topic via application of several methods that pursuit many-folded educational goal. Any particular methodology acts in its own domain and uses its own standards and evaluation. Students are urged to apply their knowledge and skills in new context and as a result they are expected to build a competence of synthetic type. We consider the integrated education as a teaching-learning process in which the integrated approach is the main didactical tool. The integrated approach in education stands on agenda every time when the educational goals include transfer of knowledge from the learning context to applications. We believe that the secondary school should provide opportunities for the students to check their knowledge and skills outward the particular subject context in mixed type activities. However, the Bulgarian (and perhaps not only the Bulgarian) secondary school does not face the social demand on applicable knowledge. The status quo is subject partition of the curriculum which produces analytical knowledge and specific skills with no connections between subjects or real-life situations.

The knowledge partition in secondary school causes complex problem in knowledge transfer, which includes the classroom organization, teachers' qualification, system of evaluation etc. This is why this problem requires complex solution. The new trends in Bulgarian secondary school education are focused on building competences. The transferability and multifunctionality of the package knowledge, skills and attitude (KSA) is difficult and even impossible to accomplish outward the context of learning. Hence a new context should be designed to provide opportunity for the students to check and to upgrade their KSA. Platforms for new educational context could be the extracurricular activities as circles, competitions, contests etc. As a rule these activities are in the scope of a particular teacher who uses didactical resources close to her/his routine teaching which causes reinforcement of the desired transferability and multifunctionality of KSA. Our

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standing point is that a more effective way to build student's competence is to implement some interdisciplinary activities as a part of the entire educational process. This means to build a system of bridges between subjects, coherent with the curriculum, but going in areas which are close to some real life situations. Thus the integral approach appears to be the methodology for putting into practice our ideas.

The method we use is based on a model proposed by Altschuler in 1964. We follow the description of this method given in (Geneva, 1992). The teaching-learning process in primary schools is implicitly organized as integrated education – one teacher teaches all subjects using similar methodology in different branches. Often the teacher refers to examples from one area to support her/his teaching in topics of another area. It is only a small step needed to go from this teaching style to the integrated approach. The picture dramatically changes in the first grade of the secondary school (in Bulgaria – the 5th grade). The apple which was just a fruit in primary school becomes a shape in geometry, a body in physics, organic conglomerate in chemistry etc. Such defragmentation of the objects goes along with considerable increase of the number of concepts: the total number of mathematical objects that appear in the entire primary school curriculum does not exceed two dozen but only the ones in fifth grade are more than hundred. Often students cannot recognize the same characteristics or models in different subjects. The necessity of applying KSA from one context to another is obvious. However, it is risky for a single teacher to take the whole responsibility of organizing interdisciplinary education. For instance, the attempt to study the calendars during the lessons in history presented a narrow view on the topic and deprived the students to go deeper in the matter because of mathematics and astronomy which lay in the ground of any calendar design. On the contrary, the teams of teachers manage to connect successfully quite distant topics as usage of letters in some alphabets for writing numbers. Summarizing this section we point out two important needs to be satisfied in the beginning of the secondary school:

- to keep the big picture of the world as united as possible;
- to form the groups of professionals who can carry out the interdisciplinary education.

Our point of view is that if these two needs are met successfully, then the educational process will be continuous and the KSA can more smoothly turn into a competence. The third stage of the Altschuler's model is Analysis. The desired output should be determined in this stage, as well as the factors which stand on the way this output to be obtained in full scale. Our new paradigm locates the integrated education as an upgrade to the traditional classroom style, i.e. the project-oriented forms are auxiliary to traditional ones. However, our expectations are bigger. We see the outcome decomposed in three directions.

For the teachers: to encourage their aspiration for innovative teaching and to support their professional growth. Also teachers are given chance to participate in conferences, they are urged to write articles being part of a team.

For the administration: to have a closer look at the school problems and to be engaged in solving cases. This includes sharing the success but also the responsibility. The original Altschuler's model includes a matrix of antinomies where the key factors are combined in pairs and the possible contradictions are described between elements of a pair. Our experience shows that as a rule several factors are involved in a contradiction and the solution needs simultaneous consideration of all relations between them.



The management of incorporating innovative approaches we apply is based on the Altschuler's model which is oriented originally to technical and technological matter and the solution of a problem is supposed to be long lasting. We clearly understand that the solutions we find are specific for the parameters of a particular class, period, staff etc. A very important factor is the ICT support of all initiatives we realized. Perhaps the next leap in the IT development will make another sense of the integrated approach. However, the experience we capture today is very helpful to manage similar practice in the near future – this is the cure but also the advantage of the educational management. Thus we believe that our strategy has its place in the modern education.

Keywords: education, knowledge, process, innovative, strategy
