

Универзитет „Св. Кирил и Методиј“
Педагошки факултет „Св. Климент Охридски“ – Скопје
Република Македонија

Ss. Cyril and Methodius University
Faculty of Pedagogy “St. Kliment Ohridski” – Skopje
Republic of Macedonia

**VI меѓународен балкански конгрес за образование и наука:
СОВРЕМЕНОТО ОПШТЕСТВО И ОБРАЗОВАНИЕТО**

(Охрид, 29. IX - 1. X 2011г.)
Зборник на трудови

**VI International Balkan Congress for Education and Science:
THE MODERN SOCIETY AND EDUCATION**

(Ohrid, 29. IX - 1. X 2011.)
Book of proceedings

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BLOOM'S TAXONOMY (CLASSIFICATION OF COGNITIVE AREAS – ANALYZING, CREATING, EVALUATING)

Abstract

Students who use higher levels of thinking can better apply what they have learnt than can those who stayed only at the levels of recognition and reproduction.

Unlike students in traditional teaching who only learn information passively, students who think critically connect what they have learnt through their own experience, they compare it with the results of other author, they imply, construct new examples, think of new solutions of problems, ask questions and require answers, they examine causes and consequences, in one word – they CREATE.

Key words: *education, bloom s taxonomy, teachers.*

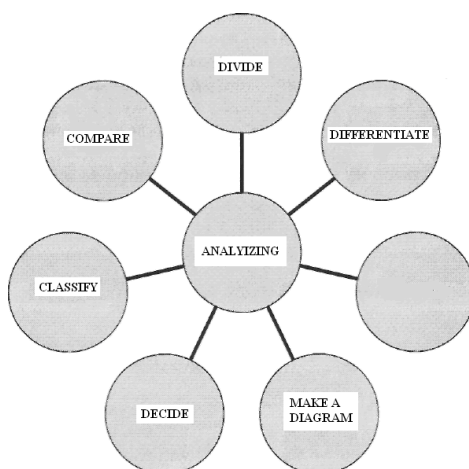
Analyzing

At the analytical level the pupil should be able to divide the learnt contents into its constituent parts and to understand the organizational structure. During this, the pupil must know the respective constituent parts and their mutual relations, as well as the organizational principles. This educational level is higher than the level of understanding and the level of application as for this level of knowledge a total understanding of contents and organizational structure of the material is needed. For example, at this level the pupil should be able to compare, oppose, recognize unuttered hypotheses, distinguish facts from conclusions, distinguish cause and effect, and determine the data relevance, analyze the organizational structure of some work (artistic, literary, musical, etc.).

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ANALYZING

Roles for analyzing in the classroom

Teacher's roles

Researches
 Guides
 Observes
 Evaluates
 Serves as a source
 Asks
 Organizes
 Dissects

Pupil's roles

Discusses
 Discovers
 Defends claims
 Debates
 Thinks deeply
 Tests
 Examines
 Asks
 Calculates
 Researches
 Is an active participant

Analyzing: Possible activities and products

Use the Venn's diagram to show where the similarities and differences of the two themes are.

Make a questionnaire for collecting information.

Poll the classmates in order to find out what they think about a respective theme.

Analyze the results.

Make a diagram showing the most important phases.

Classify the activities of the characters from a book.

Make a sociogram from the text.

Create a graph illustrating the chosen information.

Make a family tree showing relationships.

Invent a short play about the researched area.

Write a biography of the researched person.

Perform a research in order to gain information supporting your view.
 Observe a work of art concerning its form, colour and texture.
 Draw a graph.
 Fill in a matrix for making decisions so that it could help you decide which cereal to buy for breakfast.

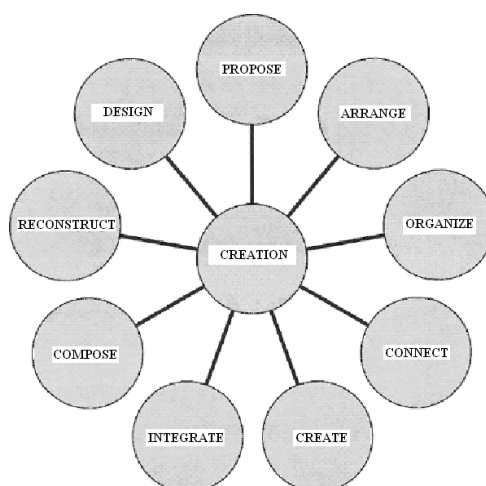
Questions for analysis

Which events would not happen?
 If it had happened . . . what would have the end been like/
 How is . . . similar to . . . ?
 What else could happen?
 Why did the changes take place?
 Can you explain what happened when . . . ?
 Which are some of the problems of . . . ?
 Can you discriminate between . . . ?
 Which are some of the motives for . . . ?
 Where is the turnover?
 What is the problem with . . . ?

Creation

To synthesize means to make a whole out of individual parts. The educational goal at this level emphasizes creative behaviour with the accent on formulating new models or structures. Examples of educational goals at the level of synthesis are: ability to combine, hypothesizing, planning, reorganization, writing of a well organized paper, making a well organized speech (lecture), creative writing of a story (poem), making a plan for an experiment, etc.

CREATION



Roles for creation in the classroom

Teacher's roles

Facilitates
Expands
Turns back
Analyzes
Evaluates

Pupil's roles

Makes sense
Formulates
Plans
Risks
Modifies
Creates
Proposes
Is an active participant

Creation: Possible activities and products

Use the Scamper strategy (asking questions – even unusual – related to a certain topic) in order to invent a new brand of sneakers.

Invent a machine for performing a respective task.

Invent a robot that will write your homework.

Create a new product. Name it and plan an advertising campaign.

Write down your feelings about . . .

Write a TV play, a puppet play, a short play, a poem or a pantomime about . . .

Invent a new monetary system.

Develop a menu for a new restaurant by means of using various healthy food products.

Create a record wrapping, a book binding or a magazine title page.

Sell an idea.

Create a way to. . .

Create a new language and use it in some examples.

Write a text for an advertisement promoting a new product.

Questions for creating

Can you invent . . . to . . . ?

Can you see a possible solution to . . . ?

If you had access to all sources, how would you cope with . . . ?

Why don't you invent your own way of . . . ?

What would happen if . . . ?

In how many ways can you . . . ?

Can you create new and unusual applications of . . . ?

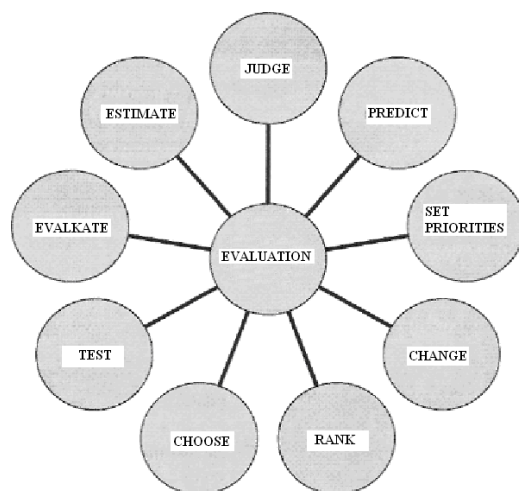
Can you develop a proposition that would . . . ?

Evaluation

Estimation means the ability to suitably evaluate the value of some material (poem, novel, speech, research report, and project) for a concrete goal. Estimations must be based on precisely defined criteria. Pupil's reasoning should be based on distinct criteria. The criteria can be either inner (structural, logical) or outer

(according to the defined goal). They can be determined by the pupils themselves, or they can be imposed by someone outside (e.g. teacher). Educational goals in this area are the highest in the cognitive hierarchy as they contain elements of all the previous levels and the ability to reason about the values based on precisely defined criteria. Examples of educational goals at this level are: estimation of conclusions got from some shown data, estimation of the value of some work (musical, artistic, literary) using external standards for evaluation, estimation of the logical consistency of the written material or lecture . . .

EVALUATION



Roles for evaluation in the classroom

Teacher's roles

Explains
Accepts
Guides

Pupil's roles

Judges
Disputes
Compares
Criticizes
Asks
Defends
an attitude
Estimates
Decides
Chooses
Justifies
Is an active
participant

Evaluation: Possible activities and products

Write a letter to the editor.
Prepare and perform a debate.
Prepare a list of criteria for evaluating . . .
Write a convincing speech for/against . . .
Create a book about five rules you think are important. Convince the others.
Prepare a round table to discuss attitudes related to . . .
Write a letter to . . . advising needed changes.
Write a semi-annual report.
Prepare a case to present your attitude towards . . .
Evaluate the acts of a character in a story.

Questions for evaluation

Is there a good solution to . . . ?
Estimate the value of . . . What do you think about . . . ?
Can you defend your attitude concerning . . . ?
Do you think that . . . is a good or a bad thing?
How would you have dealt with . . . ?
What kind of changes in . . . would you recommend?
Do you believe . . . ? How would you feel if . . . ?
How effective are . . . ?
What are the consequences . . . ?
How will . . . influence our lives?
What are the positive and negative sides of . . . ?
Why is . . . valuable?
What are the alternatives?
Who will win and who will lose?

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