ON THE DIFFICULTY OF ESTABLISHING A LESSON'S OBJECTIVES

STABILIREA OBIECTIVELOR LECȚIEI – DE CE O ACTIVITATE DIFICILĂ UNEORI?

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Abstract: *In this paper we present a few aspects concerning teaching design, its issues, frequent questions, and difficulties future teachers and debutant teachers are faced with in establishing the objectives of a biology class, as well as the importance of knowing the factors that generate them in pedagogy practice.*

Rezumat: *În lucrarea de față prezentăm câteva aspecte privind activitatea de proiectare didactică, probleme, întrebări frecvente, dificultăți pe care le întâmpină studenții practicanți şi profesorii debutanți în stabilirea obiectivelor lecțiilor la biologie, precum şi importanța cunoaşterii factorilor care le generează pentru practica pedagogică.*

Key words**:** *teaching design, operational objectives, and operationalising techniques*
Cuvinte cheie**:** *proiectare didactică, obiective operaționale, tehnici de operaționalizare*

INTODUCTION

In order to prepare his biology lessons, the teacher should ask himself and answer a series of questions, such as "What should I teach my students?", "What is it worth to teach them?", "What are their interests?", "On which of their previous knowledge should I rely in my teaching?", "On which of their current experiences should I rely in my teaching?", "In what order?", "In what conditions?", "How could I know if I have reached what I aimed at?"

Planning the teaching process in time and space anticipates the teaching approach both before the school year starts and during the school year, "sine qua non" conditions for success in our teaching activity. In sequence design, designing a lesson as an important step means establishing clearly the objectives of the lesson and turning them into operations. In order to establish the objectives of a lesson, the teacher should take into account both the objectives stipulated by curricula (administrative documents with compulsory character) and the real situation of the class, i.e. the expertise, the level of knowledge, the intellectual abilities, and the age of the schoolchildren.

Since curricula objectives are compulsory for all the schoolchildren, the teacher should find a way to make them reach these objectives, which in practice proved more difficult to achieve; each schoolchild has his own rhythm of working and learning, so that the teacher faces some issues difficult to deal with: establishing the lesson's objectives, organising the teaching activity so that all the children manage to reach these objectives, and checking if these objectives are reached or not.

In designing biology classes and in establishing a teaching scenario, establishing the objectives is therefore essential, since this is the starting point in analysing and choosing his teaching methods, the proper teaching aids, and the proper evaluation methods. Undergraduates practicing teaching and debutant teachers frequently face difficulties in establishing properly the objectives of a lesson.

In this paper, we aim at analysing the most frequent errors in making a lesson's objectives operational and the causes of it.

MATERIAL AND METHOD

In carrying out this study, we analysed the papers of 75 undergraduates of the Faculty of Agriculture, whose majors are Biology, Agriculture, and Environmental engineering, and who attend the courses of the teaching module.

The undergraduates were asked to identify and design the operational objectives of a biology class, in accordance with Landsheere's objective operationalising technique. We then identified and analysed the most frequent errors and the difficulties the undergraduates claimed to face in their approach.

RESULTS AND DISCUSSIONS

In designing operational objectives, the undergraduates had in mind the requirements of both content and form, and applied Landsheere's objective operationalising model containing 5 elements:

1. What will result in the wanted behaviour?
2. What observable behaviour will prove that the objective has been reached?
3. What will be the result of this behaviour (the performance)?
4. In what conditions should the behaviour occur?
5. On what ground can we conclude that the product is satisfactory?

In the analysis of the 340 examples of operational objectives designed by the undergraduates, we aimed at checking if the 5 elements above are also correctly formulated (Table 1).

Table 1

Operational objective elements (%)

Element	Degree (%)
What will result in the wanted behaviour?	100
What observable behaviour will prove that the objective has been reached?	95.50
What will be the result of this behaviour (the performance)?	63.63
In what conditions should the behaviour occur?	47.72
On what ground can we conclude that the product is satisfactory?	54.55

Analysing the objectives designed by the undergraduates, we can see that in 95.50% of the cases the criterion concerning the establishment of the behaviour is correct. Among the main difficulties the undergraduates face in establishing the aimed behaviour, are the respect for the principle of knowledge accessibility and the trend to use some ambiguous verbs, such as "schoolchildren should be able *to know* the role of the eye". This way of putting things leads usually to an rather unclear vision on the display of a teaching scenario, to incoherence in teachers' expectations from the schoolchildren, and well as to major difficulties in evaluating educational activity. We have also identified difficulties in establishing a lesson's objectives from reference objectives in the curricula, and in correlating them with the product, i.e. the performance.

In most cases, disrespect for the principle of knowledge accessibility resulted in the design of objectives over the children's abilities and age level, both from the point of view of the learning task and of the conditions in which the schoolchild should reach the learning task, as it happens in the 5th grade: "On the ground of a diagram, schoolchildren should be able to

differentiate edible from poisonous mushrooms."

The criterion aiming at the performance to reach was clearly put in only 63.63% of the cases. The difficulties in these cases consisted in observing the requirements of the curricula, i.e. of the principle of accessibility. One of the issues frequently mentioned by the undergraduates in designing objectives is related to the identification of reference objectives and to the correlating them with contents. Thus, visual performance is vaguely put or it is absent from the objective, which later hardens the evaluation. Here is an example: "Schoolchildren should point out certain general features of the mushrooms."

As for the conditions in which behaviour occurs, we could see that in 47.72% of the cases it was properly put. The conditions should define clearly the situation in which the schoolchild is to be put. These conditions can be material ones, as 83.00% of the cases mentioned ("with the help of fresh biological material", "with the help of a diagram", "on the ground of a drawing"), and psychological ones concerning previous acquisitions of the schoolchild ("on the ground of previous knowledge concerning the structure of the digestive tract"), new situations for the schoolchild, motivations, stimuli, etc.

In 52.28% of the undergraduates' answers, the conditions in which behaviour occurs were not mentioned. Among the reasons mentioned are "I did not know what to write", "I though they are deducible", "they did not seem important to me", "I did not know whether they are well put or not".

According to the new National Curricula, teachers have more freedom in designing their teaching activities, in making decisions concerning their teaching approach, and in developing teaching strategies. But this liberty also involves a huge responsibility as far as school success is concerned. Thus, the evaluation activity becomes more and more important, representing an essential part of the teaching process. In these conditions, in designing operational objectives it is necessary to mention clearly success criteria. This element is strictly indispensable since it is the ground for evaluation but, at the same time, it is also the criterion on which the teacher gets his feedback, i.e. he assesses the efficiency of the teaching strategies, the appropriateness of his efforts and of his decisions. Performance criteria were correctly put in 54.55% of the cases analysed, being both quality and quantity criteria.

Asked about the difficulties in putting performance criteria, the undergraduates mentioned again the difficulty of observing the principle of knowledge accessibility.

Correctly putting operational objectives, which can result in observable behaviour in the schoolchildren has numerous advantages, such as facilitating the choice of teaching strategies, i.e. clearly knowing which way to go eases the choice of the proper means and the removal of improper ones, helps in selecting major objectives, in detecting minor ones and in ordering them; stimulates schoolchildren if they are informed from the beginning where they should get and guides schoolchildren's learning activity; contributes essentially to the ease of evaluation activity through established criteria and facilitating the choice of the evaluation tools; contributes to getting a clear and quick feedback and to improving learning quality.

CONCLUSIONS

As a result of the study, we can draw the following conclusions:

In order to establish operational objectives in a lesson, undergraduates should analyse in advance carefully curricula. A personalised reading of curricula allows teachers to adapt their teaching approach to the real conditions of the class they work with.

Correlating reference objectives with contents, defining target behaviours, establishing the conditions for behaviours, and observing the principle of accessibility are the main difficulties the undergraduates face in designing operational objectives.

Clearly designing performance criteria facilitate later the activity of designing evaluation by choosing the best evaluation tools, as well as the development of the schoolchildren's activity proper.

The teacher can also evaluate the efficiency of some strategies, methods, and evaluation techniques which sets the basis for permanent improvement and for the improvement of the teaching approach.

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