

Elementos claves para la derivación y formulación de los objetivos de clases

Key elements for the derivation and formulation of class objectives

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Resumen

Dada la insuficiente preparación de los docentes en la derivación y formulación de los objetivos, la presente investigación tiene como objetivo diseñar un procedimiento para la derivación y formulación de los objetivos de clase y su demostración en un sistema de clases del tema V de la asignatura Gestión Económica Agropecuaria. En el tratamiento de los aspectos abordados se utilizaron métodos como el análisis-síntesis, inductivo-deductivo, revisión documental, entre otros. Los principales resultados obtenidos se enmarcan en la estructuración secuencial y lógica de acciones para la derivación y formulación de los objetivos que puede ser utilizado por los docentes.

Palabras clave: Procedimiento; Formulación de objetivos; Derivación de objetivos; Proceso docente educativo.

Abstract

Given the insufficient preparation of teachers in the derivation and formulation of the objectives, the present research aims to design a procedure for the derivation and formulation of class objectives and their demonstration in a system of classes of topic V of the subject Management Agricultural Economics. In the treatment of the aspects addressed, methods such as analysis-synthesis, inductive-deductive, documentary review, among others, were used. The main results obtained are framed in the sequential and logical structuring of actions for the derivation and formulation of the objectives that can be used by teachers.

Keywords: Process; Objectives formulation; Derivation of objectives; Educational teaching process.

Introduction

Today's accelerated scientific and technological advances are characterized by a rapid development of discoveries, rapid practical application and an increase in the volume of knowledge in any branch of science. These conditions demand from contemporary higher education the maintenance and development of the culture of humanity, through the training of competent human resources to act in a creative and innovative way in the current productive processes.

Cuban education is framed in this context, where the teaching-educational process, as a result of the relationships between the participating subjects, is directed, in a systemic and efficient way, to the formation of new generations with a view to the solution of the social problem.

Consequently, the objective, as a component or guiding category of this whole process and in relation to the rest, is the aspiration to be achieved in the formation of the country's citizens and in particular of the new generations, in order to solve the problem. Hence the importance of the adequate derivation and formulation of the same, taking into account its true guiding role, for the teacher and for the student, since the objective is the didactic element in which the educational intentionality is embodied and concretized.

The study and analysis of the normative documents for the development of the educational teaching process in the Agronomy career, the information obtained from the bank of problems of the University of Guantánamo and the results of the diagnosis made to the teachers of the discipline group of Socio-Economic and Administrative Management revealed the following problems in the methodological treatment to the derivation and formulation of the objectives:

- Insufficient theoretical-methodological preparation of the teachers in the determination and formulation of the objectives.
- Deficient treatment of the determination and formulation of the objectives in the methodological collective of the discipline.
- Limited derivation of the objectives of the discipline towards the objectives of the subjects that comprise it.

In the search for a solution to the identified insufficiencies, the objective of the present work is to design a procedure for the derivation and formulation of class objectives and their demonstration in a system of classes of subject V of the subject Agricultural Economic Management, for the increase of professional pedagogical skills.

Development

Several authors in the scientific production refer to the objectives as a component or category of the educational teaching process, Álvarez (1999), Fuentes (2000), Boada (2006), Horruitiner (2009), Rodríguez (2012), Salellas (2013); Fuentes (2015), among others. Currently, one of the most widespread approaches is the studies conducted by Álvarez de Zayas, on which the research is based.

When analyzing the teaching-educational process, Álvarez (1999), states that it is the "school formative process that in the most systemic way is directed to the social formation of the new generations and in it the student is instructed, developed and educated" (p.11). He also refers that it is made up of 8 components: the problem, the object, the objective, the content, the form of teaching, the means of teaching and the result. And he agrees on the importance of the objectives as a component or guiding category of the whole process.

In Cuban education, from the beginning of the 1970s and after a brief period of rejection, the use of objectives increased, appearing explicitly in the programs of the subjects. It is at the end of that period that the objectives are formulated in a more systematic way in the programs, being specified at the level of subject, subject and grade. The tendency to emphasize the role of the objectives as a fundamental element for the direction of the process is one of the fundamental features of recent times.

As didactics has evolved over the years, the concept of objective has also been enriched. In this sense, it must be defined on the basis of its link with the whole, with the process and with the rest of the components, as an essential characteristic.

What is an objective?

There are multiple definitions offered in the pedagogical literature, but we assume that of Álvarez (1999), offered in "The school in life", as we consider it coherent with the historical-cultural conception that sustains the current Cuban school.

The objective is the state component that the teaching-educational process possesses as a result of the configuration it adopts on the basis of the process-social context relationship and which is manifested in the precision of the desired or aspired state to be reached in the development of said process in order to solve the problem. (Alvarez, 1999, p.60).

There are different classifications of objectives, among which we can mention:

According to the level of generality, systematicity: general, particular and specific objectives.

- General objectives express the educational intentions of a curricular project, of a study plan.
- The particular objectives correspond to the objectives of the subjects or units of the analytical program.
- And the specific ones are the objectives of a class of a didactic unit or subject.

The objectives are projected, according to the degree of transcendence in the transformation expected to be achieved in the students, in three dimensions: instructive, developmental and educational. This classification is a consequence of the functions (dimensions) of the teaching-educational process. (Alvarez, 1999, p. 60).

The instructive, refers to the assimilation by the student of a knowledge and the mastery of a skill; the developmental, to the transformations that in the potentialities of the way of acting we want to achieve in the students; and the educational, to the transformations to be achieved in the feelings, convictions and other traits of the personality of the students.

The analysis of the objectives in these three dimensions makes it possible to reach the conclusion that the objectives: instructive, educational and of development of creative capacities, have their own characteristics that identify them, but their achievement is only possible in a process in which they occur in dialectic unity. (Fuentes, 2000, p. 72).

Methodological procedure for the derivation and formulation of objectives

It is necessary to emphasize that the derivation of objectives cannot be separated from the formulation because one process leads to the other as inseparable entities. Both terms are part of the same phenomenon, which are only separated at the theoretical level for a better understanding of them. The derivation of objectives is made from the first level, that of the career, then to those of the discipline,

the year, the subjects, the topic and from these to the class. To formulate means to write, to express literally what we have set out to achieve in the student through the process of determination or definition.

1. After a thorough analysis of the specialized bibliography on the subject, referred to above, the following is a summary of actions and suggestions for the determination and formulation of the objectives of a class.
2. Methodological procedure for the determination and formulation of the objectives of a class:
 1. Thoroughly study the functions that the graduate must perform in order to solve the general and basic problems that arise in production and services, considering the requirements and orientations of the study plan and program.
 2. To analyze the initial conception of the objectives of the immediate superior level:
 - General career objectives
 - General objectives of the discipline
 - General objectives of the year
 - General objectives of the subject, topic
 3. Analyze the professional skills to be developed:
 - General
 - Specific
 4. Establish the systemic relationship between the components of the immediate superior level and of these with the objectives in process of determination.
 - The gradual derivation of the objectives is reflected in a system in which each level is subordinate to the previous one and this in turn subordinates the one immediately below.
 - The systemic relationship between all these components provides a necessary level of information by gradually deriving the objectives from the level immediately below and

expressing with a greater degree of concreteness the aspirations proposed in the unit to which the reference class corresponds.

5. Think about the objective in correspondence with the degree of transcendence in the transformation expected to be achieved, with an instructive (what?), educational (what for?) and developmental (how?) perspective.

- Given the selection of the skill and the knowledge that responds to the scope of such skill, the characteristics that they should reach according to the level of systematization, depth and systematization are specified.
- From the diagnosis and characterization of the group, the objectives for teaching, discipline or career and years. The political and ideological formation of the subject through the teaching and extra-teaching activities, the educational intentionality is determined (effect to be achieved in the political and ideological formation of the student through the teaching activity).
- Identify the mode of action, i.e., the methods, means and other resources that the student will use to appropriate the knowledge, achieve the skill and the educational intentionality.

Formulate the objectives.

The level of assimilation means the level of mastery the student should have of the content. The following table shows the levels of assimilation:

Levels of assimilation	Content	Situation presented
Reproductive	New	Known
Productive	Known	New
Creative	Partially known	New

Table 1: Assimilation levels

Source: Own elaboration, adapted from Zayas, 1999.

The reproductive level is that level of assimilation that requires the student to be able to repeat the content he has been informed about, either in declarative form or by solving problems that are the same or very similar to those already solved.

The productive level is that level of assimilation that requires the student to be able to apply the content in situations that are new to the student. Thus, when the student solves problems whose situation is unknown to him and that require him to conceive the way to solve them, this is a productive level. Problematic, heuristic, investigative teaching is a consequence of having objectives at a productive level.

The highest level of the productive is the creative. At this creative level, the student has to make qualitatively novel contributions for him, using the logic of scientific research.

The level of depth refers to the degree of essence of the content to be assimilated.

The level of systematicity is in correspondence with the instance in which the objectives are being elaborated. It refers to their general, particular or specific character.

For the formulation of the objectives we should consider the following suggestions:

1. The objective must be written in terms of learning, that is to say, for both the teacher and the student, the objective is the same and is a function of the latter. The fact that the objective is formulated in terms of learning refers to the fact that the ability, which is the first term expressed in its wording, determines what the student should do with this knowledge.
2. The formulation of the objective should begin with the most integrative general skill, unique and in the infinitive. Subsequently, the knowledge necessary to achieve the skill, the mode of action, and ending with the educational intentionality will appear.

Whenever possible, formulate only one objective.

4. It is valid to suggest to the teacher, before formulating the objective, to state the time in which the objective will be achieved.

The proposed procedure does not mean a unique and rigid scheme to be followed, but suggestions that serve as a guide to organize the information to be presented.

The following are examples that illustrate to the teacher how to formulate the objectives of a class according to the components and procedures discussed above.

Determination and formulation of the objectives of a class system of the subject V of the Agricultural Economic Management course.

Characterization of the program of the subject Agricultural Economic Management in the Agronomy degree program.

The subject selected for the proposed analysis is Agricultural Economic Management, corresponding to the basic curriculum of the Socio-Economic and Administrative Management discipline, which is taught in the seventh semester of the day course of the Agronomy career, study plan E. This subject has 80 teaching hours, distributed in seven fundamental topics as shown in Table 2. It is the second and last subject of the discipline, which provides the basic knowledge to assess the status, use and efficiency of the factors of production in the agricultural organization and to interpret the economic and financial information of the results of the production process. It also develops the ability to manage creatively and provides basic knowledge to develop market analysis.

General objective

To result in the economic-financial management, the administrative cycle, the marketing activity and the agricultural extension programs, from the use of indicators, methods and techniques, communication and problem solving for decision making that favor their formation according to the ethical, political and moral principles of the socialist society in the use of resources, science and technology.

No	Theme	Total	Conference	Practical class	Workshop

I	The agricultural sector in the national economy	6	2		4
II	Agricultural production factors	18	8	10	
III	Production, costs and agricultural prices	6	2	4	
IV	Marketing of agricultural production	8	2	2	4
V	Financial economic analysis	12	4	8	
VI	Agricultural project	4	2	2	
VII	Agricultural management	22	8	6	8
Partial evaluation		4			
Total		80	28	32	16

Table 2: Distribution by subject of the subject Agricultural Economic Management

Source: Taken from Programa analítico de Gestión Económica Agropecuaria.

The topic chosen for the demonstration is five: economic-financial analysis.

Objective of Topic V

To evaluate the economic-financial situation in the agricultural activity, through the use of indicators and techniques with a view to making accurate decisions for social benefit.

Contents:

Economic and financial analysis. Techniques for economic-financial analysis. Analysis of production factors and their efficiency.

Skills:

- Evaluate and interpret, through a system of indicators, the economic efficiency of the productive organization.
- Use economic-financial analysis techniques in the study of the agricultural activity and in the decision-making process.

When analyzing the initial conception of the objectives at each level, it was found that the objective of the discipline and that of the subject were the same, so that they had not been derived, and the objective of the subject was reformulated, resulting in the following:

Objective of the subject: To manage the economic-financial resources of agricultural organizations through the correct application of methods, techniques and work styles that allow the change and increase of the desired levels of efficiency, taking into account the social, economic and ecological impact in the solution of problems, for which the use of collective intelligence, the creative capacity and the development of values of the revolutionary professional are promoted.

Determination and formulation of the objectives of the subject "Agricultural Economic Management in Topic V".

The determination of the objectives is made to a system of classes, specifically to the 6 activities of Topic V, Financial Economic Analysis of the subject Economic-Financial Management, which has the following thematic plan (table 3).

of Topic V, the economic-financial analysis of the subject Economic-Financial Management, which has the following thematic plan (table 3)

Teaching activity	Content	Type of classes			Total hours
		C	CP	S	
41-42	Economic and financial analysis. Objectives and importance. Techniques for economic and financial analysis.	2			2

43-44	Economic-financial analysis (technique for reducing financial statements to percentages)		2		2
45-46	Economic and financial analysis (Financial ratios)		2		2
47-48	Economic-financial analysis (Increase and Decrease Technique)		2		
49-50	Analysis of the production, cost and overall efficiency of the agricultural organization.	2			2
51-52	Analysis of the production, cost and overall efficiency of the agricultural organization.		2		2
Total		4	8		12

Table 3: Distribution of content by type of activity. Topic V

Source: Agricultural Economic Management Program.

Specific objectives of each activity

Teaching Activity No. 41-42: Lecture

Contenido: El análisis económico financiero. Objetivos e importancia. Técnicas para el análisis económico financiero.

Objective: To explain the importance of economic and financial analysis in the agricultural enterprise, through the study of decision-making techniques.

Teaching activity No. 43-44: Practical class

Content: Economic-financial analysis (technique for reducing financial statements to percentages).

Objective: To analyze the economic-financial situation of the agricultural enterprise through the application of the technique of percentage reduction of financial statements in order to make accurate decisions for the benefit of society.

Teaching Activity No. 45-46: Practical Class

Content: Economic and financial analysis (financial ratios).

Objective: To analyze the economic-financial situation of the agricultural enterprise by calculating the financial ratios for accurate decision making in the interest of social benefit.

Teaching activity No. 47-48: Practical class

Content: Economic-financial analysis (Increases and Decreases Technique).

Objective: To analyze the economic-financial situation of the agricultural enterprise, through the application of the technique of Increases and Decreases for making accurate decisions in the interest of social benefit.

Teaching activity No. 49-50: Lecture

Content: Analysis of production, cost and general efficiency of the agricultural organization.

Objective: To identify the appropriate indicators and techniques for the analysis of production, cost and overall efficiency of the agricultural enterprise through a case study for making accurate decisions for social benefit.

Teaching Activity No. 51-52: Practical Class

Content: Analysis of production, cost and general efficiency of the agricultural organization.

Objective: To analyze the production, cost and general efficiency of the agricultural organization through the use of indicators and techniques for making accurate decisions in the interest of social benefit.

Conclusions

The objectives constitute the expression of the purposes and aspirations that, during the process of training professionals, are formed in the students. Although the instructive, educational and

developmental objectives have their own characteristics that identify them, their achievement is only possible in a process in which they occur in dialectical unity. The derivation of objectives cannot be separated from their formulation, because one process leads to the other as inseparable entities. Hence, their determination has a systemic character, based on the social needs and the characteristics of the students. The design of a procedure and its demonstration in a class system of topic V of the subject Agricultural Economic Management, corresponding to the discipline Socio-Economic and Administrative Management, contributes to improve the work of teachers in terms of the derivation and formulation of class objectives on scientific-methodological bases.

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