METHODOLOGICAL ASPECTS REGARDING INTERDISCIPLINARY TEACHING IN THE AGRICULTURAL HIGHER EDUCATION

Viorica BOACĂ, Codruţa GAVRILĂ

Banat's University Of Agricultural Sciences And Veterinary Medicine „King Michael I Of Romania" Timişoara
Faculty of Agriculture,Department of Teacher Training, Aradului Boulevard,Nr.119,
vioricaboaca@gmail.com
Codruța Gavrilă
BUASVM of Timișoara, Romania
gavrila_codruta@yahoo.com

Abstract. The present paper aims to give arguments for the necessity of integrated teaching, in other words of interdisciplinary teaching of contents, in order to help the students in agricultural higher education reach professional and transversal skills. In this sense, the paper describes a strategy that allows a subject to be approached from several points of view, for the purpose of deeper understanding.

Key words: *interdisciplinary teaching, transversal skills, teaching strategy.*

INTRODUCTION

In the current educational system, ***interdisciplinarity*** makes one of the most important and complex theoretical and practical theme for the development of science, for a new Pedagogy of Unity. It appears as a solution for the challenges people face nowadays, a principle that needs to be applied, a way of thinking and acting that springs from the evolution of science and of the socio-economic life.

"In the larger sense, ***interdisciplinarity*** involves a certain degree of integration of various fields of knowledge and various approaches, as well as the use of a common language, allowing changes at a conceptual and methodological level". (D'HAinaut, 1981, p. 346).

In addition, CUCOȘ, C. (1996) states that ***interdisciplinarity*** is a type of cooperation among various fields, regarding such a complex problem that it can only be properly discussed through convergence and careful combination of several points of view.

In the field of agricultural sciences, students' knowledge of various specialized subjects is integrated, thus illustrating the principle of interdisciplinarity. The use of interdisciplinary links makes it possible to understand the essence of the scientific conception about the world, to perceive it as a whole and to establish the causes of different connexions that exist in nature. Thus, it becomes easier to study the new material based on the already-known one, to enrich and consolidate it. Moreover, it facilitates the process of raising interest or increase interest for assimilating the new. At the same time, integration of contents targets the action of establishing close, convergent ties between elements such as: concepts, skills and values belonging to distinct school subjects (GILBERT DE Landsheere, 1992).

The interdisciplinary perspective makes it easier for the student to "form a unitary image of reality" and to develop "integrated thinking" (STANCIU, M., 1999, p. 165).

To achieve this goal, in terms of teaching and training activities, it is imperative that teachers get to know their students better, so that they can identify their needs, as well as their learning interests. At the same time, teachers must be trained to customize the learning situations, teaching contents and educational materials to each student's individual

characteristics, while involving students in the teaching-learning activity by creating a learning environment that reflects everyday life.

The integrated approach to contents must come together with the modernization of the other aspects of the educational process, such as: finalities, types of organizing the teaching-learning process, teaching – learning – assessing strategies, methods and means used, etc.

MATERIALS AND METHOD

The aim of the paper is to present an interactive teaching strategy which puts into practice the principle of interdisciplinarity in teaching – learning – assessing contents from the field of agricultural sciences.

The paper is the result of a study that used an investigation-based strategy – ***interdisciplinary exploration***, during the seminars of the course named The Didactics of agricultural specialities, included in the curriculum of the psycho-pedagogical module.

The sophomore students in Agriculture from the Faculty of Agriculture were involved in the study.

Interdisciplinary exploration, described by ELIZA DULAMĂ (*Metodologii didactice activizante – teorie și practică*, Clusium Publishing House, 2008, p. 302) is a strategy that refers to the schematic approach of a subject from several points of view or on several plans, for better understanding it. Depending on the nature of the subject, the analysis can be made from different perspectives: geographical, biological, agronomical, economic, historical, ecological, medical, etc.

When designing the activity, the teacher can follow two ***work methods***:

- The students who approach the subject from a certain point of view make one single group; in this case, the students cooperate for selecting the information, and at the end they present their result to the class;
- Groups are formed in which each student approaches the subject from a different perspective; in this case, the students work individually within the group, and the result is presented only to their group.

RESULTS AND DISCUSSION

The interdisciplinary teaching – learning process is an important condition in modern education. The correlation of the knowledge from different school subjects plays a substantial role in the formation and development of flexible thinking, of the ability to apply theoretical knowledge into practice. At the same time, correlation of knowledge helps that knowledge to settle and to be better assimilated by students: one school subject helps in better mastering of the other

The link between school subjects can be made at the level of contents and objectives, with the creation of the proper environment where every student has freedom of expression and can choose the best way to work: in a team or individually.

The following ***stages*** were part of the teaching activity:

- ***setting the task****:*
- the students were separated in groups of four;
- each group studied ***the potato*** for five minutes, from different perspectives: group 1 – BIOLOGY; group 2 – ECOLOGY; group 3 – AGRONOMY; group 4 – GEOGRAPHY AND HISTORY; group 5 – ECONOMY and group 6 – MEDICINE. The students could study the text offered by the teacher, as well as the one in the specialized textbook.

- Each group named a representative who would put the main ideas on the board.

- ***Group activity***: the students discussed the texts in their respective groups, extracted the essential information and then wrote it on the board.
- ***Class activity***: one representative from each group made a short presentation of the potato from the perspective they were given. The information was presented in the form of a poster. The students could ask questions for each group or for the teacher.

The figure below presents the poster used in the final stage of the activity to synthesize the information about the potato appears. The students filled in the information corresponding to the secondary concepts around the key-concept.

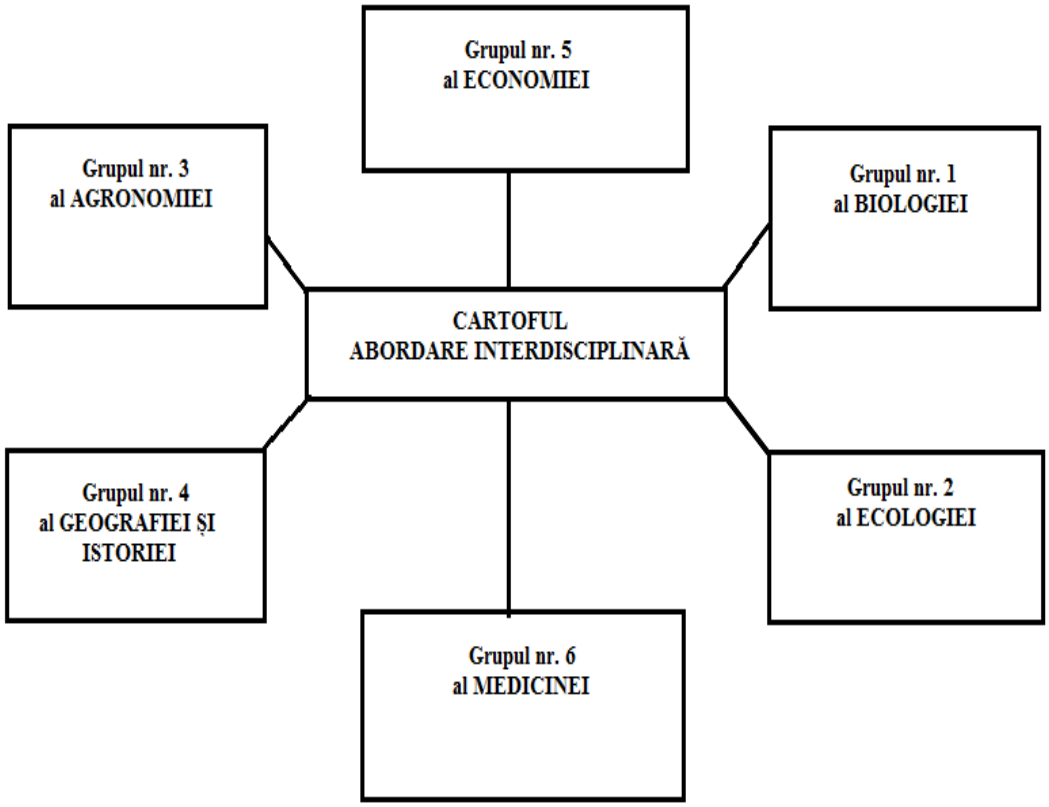

Figure 1. The potato. Interdisciplinary approach.

CONCLUSIONS

Among the advantages of interdisciplinary approach of agronomical contents, we can list the following:

- the interaction between two or among several school subjects for exploring a theme or for forming skills;

- sustainable learning, the stability and durability of the knowledge and abilities gained through this process;
- the organization and restructuring of the contents and of the teaching - learning process;
- the formation of a unitary view of the processes and phenomena studied in university;
- the formation of skills, attitudes, transversal and transferrable values which will prove extremely useful in the personal development of students;
- overcoming the boundaries of one discipline and applying the knowledge gained in one school subject to others, as well.

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