ABOUT BIOLOGY LESSON MANAGEMENT IN TERMS OF ENSURING THE QUALITY OF LEARNING

Narcisa Georgeta CRISTA, Iasmina Cecilia SAVESCU

Banat s University of Agricultural Sciences and Veterinary Medicine King Michael I of Romania from Timisoara
narcisa.crista@gmail.com

***Abstract*:** *In this research paper we elicit some aspects regarding the role of communication in the biology class management. From the point of view of its specificity, the biology class presents the advantage of varied activity organisation within teacher-student, student-teacher, and student-student communication which becomes essential. Any obstacle that occurs in the communication can render the teaching-learning process difficult or even impossible, thus, knowing the rules of a good communication as well as the factors that hinder communication becomes important to the formation of future biology teachers. The research carried out focused on identifying the obstacles that occur in communication during scientific classes as perceived by students majoring in Biology, as well as identifying the context in which they occur and finding solutions to overcome them. In order to conduct this research, we have chosen the methods of interview and questionnaire in order to collect information. We have analysed the students' opinions regarding the obstacles that contribute to the decline or feeble involvement in the science class activities or debates in a twofold manner: the management of the didactic process and the management of the interpersonal relationships. The information rendered by the students were discussed during the seminar of specialised didactics as they constituted the basis for debates regarding possible solutions and recommendations for improving the communication skills of students to be future teachers. The conclusions drawn from this study confirm the importance of communication skill development of the teacher, the efficiency in communication being identifiable with pedagogic efficiency from the perspective of the influence the teacher may have on the students and on the didactic approach orientation.*

***Key words*:** *class management, didactic communication, didactic quality process*

INTRODUCTION

Didactic communication is the basis of the entire training-teaching activity organization and development process, *the teacher's efficiency in communication being identified as pedagogical efficiency.* SORIN CRISTEA (Pedagogy Dictionary, 1998), defines didactic communication as an "axiomatic principle of teaching activity which includes an educational message elaborated by the educational subject (teacher), capable of triggering a formative reaction in the educational objective (learner), to be evaluated in terms of internal and external reversed connexion". Understood as a process, communication implies operations of coding, recoding and decoding of messages which, in a didactic context, through the continuous interaction between educator and educated (educable), leads the cognitive content of the teaching-learning process, to influencing educables under a formative aspect (forming of intellectual and motric abilities), as well as their moral formation. Didactic communication implies a *feed-back* type interaction, through which the sender (educator) is permanently informed about the effects of the communication upon the receiver (educable), both adapting their ulterior communicational behaviour depending on what they receive. Inter-human communication, in general, and didactic communication, in particular, becomes more and more the focus of communication science specialists, sociologists, educators and psychologists.

Because of its specifics, the biology lesson presents the advantage of organizing diverse activities during which the teacher-student, student-teacher and student-student communication is an essential one. Any barrier that comes in between teacher-student (of

internal or external nature) can hinder the act of teaching-learning, or make it impossible, thus, knowing the rules of a good communication as well as the barriers in didactic communication becomes important for the formation of scientific and communication competencies of the future biology teachers .

In approaching certain aspects of the communication which hinder the communication process, searching for solutions to neutralize generating factors or, at least, reducing their influences, a series of taxonomies which refer to the human personality, as a whole. An elaborated analysis and a rigorous systemization is offered by DORINA SĂLĂVĂSTRU (2004), as follows:

- blocks determined by the characteristics of the person engaged in didactic communication (teacher on the one hand, student on the other);
- blocks determined by social-value relations existing between participants to the didactic communication relation;
- blocks determined by the particularities of the didactic communication field.

METHODS

Starting from the fact that learning is done through didactic communication and that the teacher communication efficiency during the training-teaching process is identifiable with pedagogic efficiency, the research was focused on identifying communication barriers occurring during speciality classes, perceived by biology students, identifying the conditions in which these appear, as well as identifying solutions to overcome them.

The sample in our study consisted of 32 students (1^{st}, 2^{nd} and 3^{rd} year) from the Faculty of Agriculture – Timişoara, specialization Biology, in the academic year 2013-2014

For the research at hand we chose, in order to collect information, the questionnaire inquiry. The questionnaire applied to the participant students contains 17 questions, calibrated as a measure instrument on a five level Likert scale (from strong agreement to total disagreement). Beside the 17 questions, the questionnaire includes an open item which allows students to express their own opinions regarding main interferences in didactic communication. We analyzed the students' opinions regarding the factors which contribute to their refusal or reduced involvement during activities or debates during speciality classes, on two main directions: teaching process management and interpersonal relation management, with a negative effect on the learning quality.

Information supplied by the students was discussed during the speciality didactics seminar, building the basis for debates concerning possible solutions and recommendation for the improvement of student communication competencies, as they are future teachers.

RESULTS AND DISCUSSIONS

The data obtained after applying the questionnaire were processed statistically, by analyzing the results for each item separately.

The teaching process management was evaluated through questions referring to applied teaching methodology, thus, students state that they understand better what is taught when they are involved in practical activities (64.06% total agreement and 18.75% partial agreement) and just one student states that he does not understand batter what is taught during practical activity hours; 59.37% (total agreement) and 20.41% (partial agreement) of the students claim they understand better when the teacher lectures and the explanations are accompanied by schemas, images, graphs etc., while 1.85% (total disagreement) and 3.71 (partial disagreement) consider that during the lecture they do not always best understand the teachers explanations. Regarding the understanding of knowledge through direct involvement,

59.37% of the students (total disagreement) and 33.39% (partial disagreement) claim to better understand what is taught if they are actively involved in class debates or in larger group debates. Relative to this student option, 7.40% (total agreement) and 33.30 % (partial agreement) of the students consider that they are not directly involved during course/laboratory/seminar activities; 22.20% of the students answers (total agreement) and 25.90% (partial agreement) indicate the fact that students prefer to listen to the teacher's lecture than to intervene in debates, unlike 14.80% (total disagreement) and 18.50% (partial disagreement) of the answers, which indicate the fact that these students prefer to participate in discussions, while 18.50% (total agreement) and 31.45% (partial agreement) of the students state that sometimes they would like to intervene with questions during the course but they do not dare to interrupt the teacher, 35.15% (total disagreement) and 11.10% (partial disagreement) of the answers indicating the opposite.

Interpersonal relation management was evaluated through questions focusing on the educational climate in which the didactic process is occurring, thus, 74.10% (total agreement) and 18.50% (partial agreement) of the students indicating the fact that an educational climate based on mutual trust and respect stimulates them and they are learning better. The necessity to create an appropiate educational climate was mentioned in the pedagogical literature (ȚOCA, I. (2007); IUCU, R. (2008); BÂRZEA, C. (1995), IANCU MARIANA, (2011), CUCOȘ, C., COORD. (1998), PĂUN, E. (1999).).

Relative to this, 1.85% (total disagreement) and 5.55% (partial disagreement) of the students do not consider that a climate based on trust/respect helps them.

Regarding the way in which the group the student is part of is organized, during the teaching activity (study year during frontal teaching activity, laboratory/seminar group, small study groups or during pair learning) 65.88% of the students (total agreement) and 19.52% (partial agreement) consider the student group important for the success or non-success of the learning activities.

Another aspect of interpersonal relation management, thought of as important for the learning activity, is the teacher's capacity to not generate educational crises, to manage the ones that may occur and to solve them. Thus, 48.88% (total agreement) of the answers and 41.48% (partial agreement) indicate the fact that students consider important the way in which the teacher leads the activities during classes and manages to reduced and solve various educational crises occurring during teaching activities so that these may facilitate the learning. Regarding this aspect, we found the students' opinion relative to the measure in which the teacher shows them empathy, 61.00% (total agreement) and 21.96 (partial agreement) while 4.885 of the students indicate that they do not find this aspect important.

Analyzing the mentions of students regarding factors which they consider to disrupt the communication and/or the understanding/learning of knowledge, we identified three groups:

i) factors depending on the teacher's way of teaching, of which we remind: the way in which information is sent by the teacher – clarity, systematization, objectivity; questions addressed to the teacher by students – built with clarity, simple, addressed one by one, accompanied by additional questions /information if there be the case; the main communication way during the lesson - auditive (oral, verbal), visual (written, visual material), nonverbal (gesticulation, pantomime). Previous studies showed that teacher's competencies in the field of class management (GRZEGA, J.; MARION SCHONER (2008), TANNER, KIMBERLY D; (2003, 2009), WALLACE, L. R. (1997) are very important to develop a real active classroom.

ii) factors depending on the relation/way of cooperating with other students during teaching activities – defective, disorganized horizontal communication,

iii) factors depending on the student – the impression that, compared to him/her, other students are better prepared, the desire not to embarrass themselves in case of a wrong opinion, the hesitation to participate in discussions/debates if they do not have something important to transmit or only when they are sure of their answer, the fear to make a mistake and to be criticised by their colleagues or teacher, the lack of speciality vocabulary, the lack of easy expression or shyness, factors who was also indentified and discussed by different authors (BOROȘ, M., (1994), PÂNIȘOARĂ, I. O., (2003), BEVAN, RUTH ET AL. (2008)).

CONCLUSIONS

Based on the result of our research, we may consider the fact that, as a whole, the students from the Faculty of Agriculture - specialization Biology are correctly informed regarding the role of didactic communication in the learning process, they positively appreciate the insurance of an educational climate facilitating learning, based on trust and respect, a good organization of the student group during learning activities so that each student may have the possibility to directly participate in the activities (either discussions, or practical activities). The accent is noticed, which the students place on the quality of exposition by the teacher regarding the scientific content structure and adopting a student friendly language, as well as the teacher's competencies in the field of teaching process and class management. Thus, a constant interest of the teachers for the development of their own communication skills, as well as those of the students, is required in order to insure an efficient didactic communication.

BIBLIOGRAFY

1. BÂRZEA, C. (1995) Arta şi ştiinţa educaţiei, *E.D.P., Bucureşti*
2. BOROȘ, M. (1994). Profesorul şi elevii, *Editura Gutinul, Baia Mare*
3. BEVAN, RUTH; BADGE, JOANNE; CANN, A.; WILLMOTT, C.; SCOTT, (2008). Seeing Eye-to-Eye? Staff and Student Views on Feedback Bioscience *Volume 12: December 2008*
4. CRISTEA, S. (1998). Dictionar De Termeni Pedagogici, *Editura Didactică şi Pedagogică, R.A-Bucureşti*
5. CUCOS, C., coord. (1998). Psihopedagogie pentru examenele de definitivare şi grade didactice, *Editura Polirom, Iaşi*
6. GRZEGA, J.; MARION SCHONER (2008). The didactic model LdL (Lernen durch Lehren) as a way of preparing students for communication in a knowledge society, *Journal of Education for Teaching, Vol. 34, No. 3, August 2008, 167–175*
7. IANCU MARIANA, (2011) Pedagogie aplicată. Domeniile de competenţe cheie europene în perspectiva disciplinei biologie, *Editura Didactică şi Pedagogică, R.A-Bucureşti*
8. IOAN ŢOCA (2007) Management educaţional, Ed. a 2-a, rev,*Editura Didactică şi Pedagogică, R.A-Bucureşti*
9. IUCU, ROMIŢĂ B. (2008) Managementul clasei de elevi: aplicaţii pentru gestionarea situaţiilor de criză educaţională, *Ed. a 2-a, rev. Polirom, laşi*
10. PANIŞOARĂ, I.O. (2004). Comunicarea eficientă, *Editura Polirom, Iaşi*
11. PÂNIŞOARĂ, ION-OVIDIU (2003). Comunicarea eficientă. Metode de interacţiune educaţională, *Editura Polirom, Iaşi*
12. PĂUN, E. (1999). Şcoala - abordare sociopedagogică, *Editura Polirom, Iaşi*
13. SĂLĂVĂSTRU, DORINA. (2004) Psihologia educaţiei, *Editura Polirom, Iaşi*
14. TANNER, KIMBERLY D.; CHATMAN, L.; DEBORAH ALLEN (2003). Divide—Cultivating Conversations through Scientist–Teacher Partnerships, *Cell Biology Education Vol. 2, 195–201, Winter 2003*
15. TANNER, KIMBERLY D. (2009). Talking to Learn: Why Biology Students Should Be Talking in Classrooms and How to Make It Happen, *CBE-Life Sciences Education Vol. 8, 89–94, Summer 2009*
16. WALLACE, L. R. (1997). Problems and Issues for the Classroom: What works in generating class discussions using the method o Shared Inquiry, *Bioscene, VOL 23(3): December 1997*