

METHODS OF ASSESSMENT USED IN THE AGRONOMIC HIGHER EDUCATION

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Abstract: *The educational assessment represents the process of measuring the quality of educational processes or products. In the higher education space, the assessment process of students' achievement holds a central role, as it is a guide for the students' and teachers' future activity. In this respect, our study aims to determine the most commonly used assessment methods at an agronomic faculty and to identify the students' perspective concerning the most appropriate assessment methods. This study was accomplished during the second semester of the university year 2015-2016, on a sample of 64 pre-service teachers attending the first year of study at the Faculty of Agriculture of a Romanian university. The data was collected using a questionnaire of opinion as a tool, which contained a total number of 6 items, 4 items with closed, pre-coded answers and 2 items with open answers. The data analyses revealed the fact that most of the assessment methods in use are traditional (oral, write, practice examinations) and from the category of alternative methods only the portfolio and the project, and rarely, the investigation are used. The students think that it would be very useful for them to use more investigations, case studies and cognitive maps in order to assess their capacities and competencies. The results bring some openings to the theoreticians and practitioners involved in university education, and meet the need for an assessment methods diversification in tertiary education.*

Key words: *assessment methods; pre-service teachers; higher education*

INTRODUCTION

It has become notorious the fact that assessment stands among the major preoccupations of the specialists in the area of education and school in our country. We have been witnessing more and more frequently, within the frame of the instructive-educational activities which take place in classrooms, some consistent changes regarding the way of conceiving and actual accomplishment of this process. CUCOȘ(2002, APUD. MANOLESCU, M., 2010) considers that „, the modern thinking shouldn't understand the assessment as a extra added or superposed stage of the learning process, but as an integrated act which has to be integrated in the pedagogical activity”. We observe that the perspective over this evaluative work has evolved because of several ideas (CARDINET, LEVEAULT): „, the triumph of cognitivism over behaviorism”, „, co awareness rising in the evaluative process of the learner, namely the student”, „,the introduction of a metacognitive perspective in the evaluative process”. Consequently, the student is requested to become aware of what he or she learns and the way he or she learns and to try to own real mechanisms, which will be necessary in order to facilitate self adjustment. The significance of self-assessment itself, noticed by BOCOȘ, M., AND JUCAN, D. (2008) as a „, psycho-pedagogical and complex act of establishing the relevance and value of labor conscriptions, performances, behaviors, processes etc., by comparing those with a system of indicators of performance, pre-established criteria and standards respectively” is meant to raise our awareness of the importance and major role of assessment, namely the adjustment and optimization of instruction, by supporting the learners' learning activities and the progress registered by those. This way, the assessment strategies have to be conceived so that they call for the students' intellectual capacities and practical-actional abilities, the result of these efforts being a real cognitive, psycho-motory and emotional-motivational shaping. Thus, within the horizon of the actual assessment action, there also enter the „,cognitive

processes of the learner” (PERENOUD, 1998, DEPOVER, NOEL, 2002, APUD. MANOLESCU, M., PANȚURU S., IN POTOLEA D. ET ALL., 2008). It is worth mentioning here an investigation made among pupils (D. VRABIE, 1975 APUD. IONESCU M., RADU I., 2001) which aimed at making those evaluated aware of the significance of their grades; grades represented for them: „a basis of prediction, „a guarantee for future success”, „ a measure of one’s own potential, indirectly, a measure of intelligence”, „a form of reward and punishment” and „an indication for efforts dosage”, and thus an accurate self-assessment or self-evaluation raises the level of school success.

A concise classification of the assessment methods, meaning those modalities by which the educable is evaluated, and which outlines the way walked by the educable and his or her teacher in the evaluative process reflects the presence of two large categories: traditional assessment methods – oral and written examinations, evaluation by practical examinations and modern, alternative methods – the systemic observation, the investigation, the project, the portfolio, the self-evaluation etc.

Currently, there is a tendency regarding assessment to move from its function predominantly *formative* to another one which is predominantly *forming*, the latter being considered the „ideal” form of the first one (MANOLESCU M., 2010). The same author, together with other remarkable specialists in the field (A. DE PERETTI, CHARLES HADJI, DE KETELE, AND Y. ABERNOT) claims the necessity of a new mentality regarding the assessment in school. Starting from here, the teacher’s role changes from the classic examiner to a „conductor of learning, who provides feedback and communication”. In this context, both on a national and international level, there is a „transition from the classic docimology to the modern theory of school assessment” (MANOLESCU M., 2010). Thus, the assessment, assimilated within some active and inter-active pedagogy elements aims at analyzing the progression of learning and knowledge accomplished by students and also at signaling both the success and the difficulties faced by those, and everything culminates with the increase in efficiency of the help provided (BOCOȘ, M., CIASCAI L., DULAMĂ M.E., 2009).

MATERIAL AND METHODS

The research aims at 2 essential aspects:

- Identify the most frequently used assessment methods at the level of the agronomic higher education;
- Consider the students’ opinions regarding the most effective assessment methods, from the perspective of their learning activity and results.

From a procedural point of view, the research was organized during the second semester of the academic year 2015-2016, and it was a quantitative research of a transversal type. A questionnaire of opinion was applied to each student belonging to the target group, with the guarantee of confidentiality of answers. The results were processed using the statistical program SPSS 17.0.

The target population included in the study represents a natural group including 64 students from the Faculty of Agriculture of a Romanian university with agronomic profile. The 64 students are pre-service teachers attending the courses of the 1st academic year organized by the Teacher Training Department. Out of the total number, 27% are male subjects (N=17), and 73% are feminine subjects (N=47). The age average was almost 20 years (M=19.67; SD=1.11), the minimum age being 19 years old, and the maximum age 23 years old.

In order to identify the assessment methods and students’ opinion regarding the efficiency of those methods, a method based on a questionnaire was used. The investigation

tool was based on a questionnaire of opinion with 6 items, meaning 4 closed questions and two open questions.

RESULTS AND DISCUSSION

The frequency of usage of the assessment methods

The first direction of research had in view the identification of the frequency with which teachers make use of certain assessment methods in their activities with students. The degree of usage of each assessment method is presented in Table no.1.

Table 1

Assessment methods	Frequency of usage of the assessment methods									
	<i>Degree of using each method</i>									
	Weekly		Bimonthly		Monthly		Once per semester		Never	
	N	%	N	%	N	%	N	%	N	%
Oral examination	48	75%	6	9%	7	11%	3	5%	0	0%
Written examination	0	0%	12	19%	17	27%	35	54%	0	0%
Assessment by practical examinations	29	45%	34	53%	1	2%	0	0%	0	0%
Investigation	0	0%	5	8%	36	56%	16	25%	7	11%
Project	0	0%	0	0%	24	37%	40	63%	0	0%
Portfolio	0	0%	0	0%	0	0%	52	81%	12	19%
Self-assessment	0	0%	0	0%	0	0%	0	0%	64	100%
Case study	0	0%	0	0%	0	0%	0	0%	64	100%
Cognitive map	0	0%	0	0%	0	0%	0	0%	64	100%
Paper/Essay	0	0%	0	0%	17	27%	47	73%	0	0%

When we analyze the results, we notice that 75% of the students affirm that the assessment by oral examination is used weekly by teachers, a fact that reflects a good integration of continual assessment in the didactic process. The students have remarked that the questions asked by teachers during courses and seminars have a strong evaluative character, and hold the role of an on-the-fly adjustment of the didactic process. As for the written assessment, the students underline the fact that it is generally used once per semester, at most once a month. It follows, from here, the cumulative role of the written examination; this assessment method is used mostly in exams, as a summative evaluation version. Another method which proves to be frequently used is the method of assessment by practical examinations; most students (53%) affirm that the method is used at least twice a month. As the students' specialties belong to the agronomic field of study, the method of assessment by practical examinations is especially opportune and useful, and it comes to support the development and assessment of students' professional competences.

Among the alternative assessment methods, the investigation, the project, the paper and the essay, along with the method of portfolio are most frequently used. The project and the investigation are used almost every month; they reflect the applicative character of the disciplines studied at the Faculty of Agriculture. The written paper and the essay are methods used once a semester on average, to evaluate the seminar and laboratory activities. There come also the socio-human disciplines (psychology, pedagogy, communication etc.) where the students have to prepare portfolios, especially for the assessment of seminar activities. On the whole, during the instructive-educational activities, the traditional assessment methods predominate, meanwhile the alternative ones are used rather seldom, as students underline.

Surprisingly, there are other alternative assessment methods which are not known by students (e.g. the cognitive map), and some of them are not at all used in the university instructive-educational process. Thus, methods as self-evaluation, the case study and the

cognitive map are completely absent from the palette of the assessment methods students came in contact with after almost one university year. We consider that the usage of these methods would contribute to the improvement of students' academic performances and would ensure a more accurate radiography of their acquisitions.

Students' opinions regarding the efficiency of assessment methods

The second direction of research aimed at identifying the students' opinions regarding the efficiency of assessment methods used in the didactic process. The results concerning this objective are synthesized in Table no. 2.

Table 2

The degree of efficiency of the assessment methods in students' opinions

	Mean	SD
Oral examination	2.7	1.12
Written examination	3.43	0.95
Assessment by practical examinations	3.93	1.03
Investigation	3.92	1.01
Project	3.82	1.21
Portfolio	2.39	0.86
Self-assessment	2.37	0.80
Case study	3.07	1.17
Cognitive map	3.65	0.96
Paper/Essay	2.43	1.03

We find that in students' vision, among the top most effective assessment methods there stand a traditional method– the assessment by practical examinations – and a modern one – the investigation. The students claim that their acquisitions are best reevaluated by these two methods which have a pronounced applicative character. We think that students also like these methods because they take place during the instructive-educational process, in the seminar/ laboratory space or on the field, under the careful surveillance and in the presence of the teacher. Thus, the students have the opportunity to show what they know and are able to do, by taking advantage of their teachers' guidance and making use of the material resources provided mainly by teachers.

Other two modern methods of assessment are also considered to be highly effective: the project and the cognitive map. Students wish to involve in individual or group projects, in order to demonstrate their capacities and competencies, and mainly to relate the theory to the practice, and to apply the theoretical knowledge acquired during the teaching-learning activity. We consider that the cognitive or conceptual maps would support the students to logically acquire the concepts, and prepare some synthesis which could emphasize the relationships between the main notions, theories and paradigms.

Among the traditional methods, the assessment by written examination is considered to be very effective, and the students think it reflects accurately enough the level of learning results. The students probably like this method also because they are extremely familiarized with it, both with the formative and the summative assessment method.

In the category of less effective methods we could mention: the assessment by oral examinations, the self-evaluation, and the methods of portfolio, paper and essay. We consider that the students haven't managed so far to experience these methods and haven't got enough

occasions to acknowledge their formative value. Another possible explanation refer to the students' training in agronomic disciplines, which are studies with a pronounced scientific character, where these methods are used more restrictively and with certain categories of disciplines only.

CONCLUSIONS

The reform of assessment in the Romanian higher education is present more theoretically than practically in the instructive-educational process. Although teachers know the methods of assessments and admit the importance of their usage, students claim that the range of assessment methods they are used to is rather limited. We continue to build competencies and capacities, yet we evaluate knowledge and skills. We build and transmit attitudes and values, but we hardly evaluate them. We reevaluate and support the team work and the development of abilities of interpersonal relationship, but we don't verify if these capacities are formed or they still need to be strengthened. The study reflects an existing reality within the pedagogy of the Romanian higher education and invites to reflection and constructive attitude. We consider as necessary a diversification of the university teacher training programs, towards the development of assessment competencies. We think that the enlargement of the assessment methods would outline a more accurate image of the students' level of training and would bring a better support for a higher degree of efficiency and effectiveness in learning.

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