

## CONTINUED RESEARCH TO ESTABLISH THE CRITERION FOR ASSESSING THE QUALITY OF EDUCATION IN VETERINARY MEDICINE

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### ABSTRACT

The quality of education is a problem that exists both in primary and secondary and higher education. Way to illustrate the utilization of relevant knowledge and skills by students remains evaluation system. By analyzing the results of the average grade of semester exams and that of final exams in graduating of the students of Faculty of Veterinary Medicine at the University of Forestry by the years for 20 years (1995–2015) and a total of 16 graduates, authors (Petrova, Kostadinov) aim to promote criterion assess the quality of training in order of following differences between the values of the average of semester exams and average of final examinations in graduation: 0.5 to 1.0 and 1.0 above.

**Key words:** education, average of semester exams, average of final examinations in graduation, examination commissions, veterinary medicine, quality of education.

### Introduction

The question of the quality of higher education, including veterinary medicine, is current and is placed not only on the state but also at European and global level. The problem itself "quality education" is a multifaceted and in veterinary medicine his study boils down basically to: aggregates the entrance of the training, examining the reasons for the selection of veterinary medicine as a profession, stages of development of veterinary education in Bulgaria, establishment of higher education in veterinary medicine in Europe and Bulgaria, analysis of contemporary student enrollment and the ratio of men to women, procedural indicators for the learning process output, etc. [1, 4, 5, 11, 13].

Despite the complexity of the problem of quality of education evaluation system (with numbers, letters, loans) remains an established and visual expression of the quality of the acquired knowledge and skills. Interest is sustainability, fairness and accuracy of this system, given that the final evaluation is somewhat subjective act. Moreover, a growing problem turns and rewriting, which could compromise the actual results.

The aim of the study was to determine the sustainability of the system of evaluation of students from the Faculty of Veterinary Medicine at the University of Forestry, as an analysis of the average grade of semester exams and the average grade from the state examinations of each class, to settle differences between their values and establish indicative criteria for the quality of education: a difference between less than 0.5 (half unit) to believe that the rating system works steadily; a difference of 0.5 to 1, to be considered as a basis for analysis of the causes of fluctuations without worrying trend; in contrast greater than 1 - it is imperative that is necessary a serious analysis of the evaluation system and the organization of learning and eventually take appropriate corrective measures.

In the event of trends difference in success for only a semester learning or that of state exams, they can be clarified and analyzed.

These criteria could be used by other schools as though they are based on the success of students in Faculty of veterinary medicine at University of Forestry, they are made according to the requirements and the model of universal training in all educational institutions evaluation system.

The laying of semester exams of students of veterinary medicine going to different teachers (relevant specialists) in a given department. Examinations are in a greater percentage oral test and less writing (or written with oral discussion). Conducting the tests are conducted in the presence of a conservator must (assistant professor).

Training of Veterinary Medicine concludes with state examinations before the Examining Board Ordinance according with the State requirements for acquiring higher education in veterinary medicine. The commissions also include professors who are both researchers at institutes of the Bulgarian Academy of Sciences, National Diagnostic Veterinary Research Institute "Prof. G. Pavlov", Sofia and in this sense we can assume that the commissions at the state exams are elements of external evaluation, which increases the objectivity and reliability of the assessment of knowledge and skills of graduate training in veterinary medicine students.

This way of organizing the system of assessment (semester and final state exams) allows us to accept the results of the average grade of the semester tuition and that of state exams sufficiently objective criterion the analysis of which gives information about the quality of training expressed in aspects of the evaluation system.

### Methods and materials

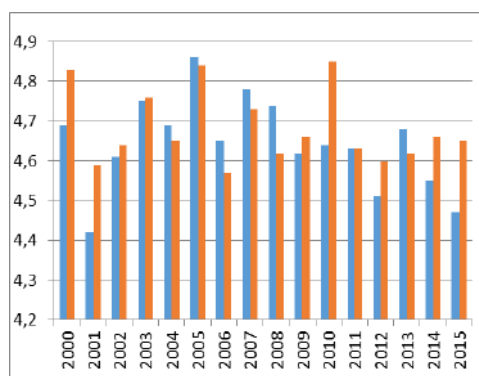
For the study were used documents whit the remarks of the exams of the students in Faculty of veterinary medicine at the University of Forestry (protocols and legal books of semestrial and state exams) for all graduate classes from 2000 year (the first class) to 2015 year inclusive (till now).

Also were calculated the average success of semester tuition and the average grade from the state examinations for each class of students for every year.

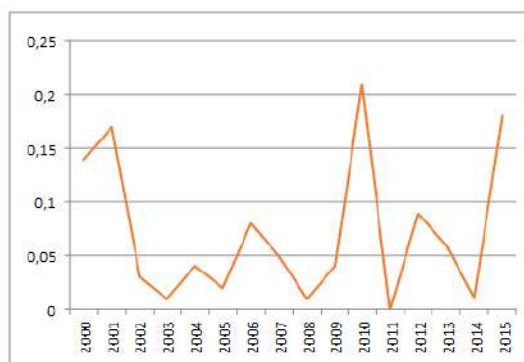
The obtained results are presented in the Table 1 and also are compared graphically (Fig. 1, Fig. 2).

**Table 1: Table of the average results from state and semestrial exams per year.**

Year	Graduates / Year	Average performance of the semester exams	Average performance of state exams	Difference between averages of semesters and state exams
2000	40	4,69	4,83	0,14
2001	63	4,42	4,59	0,17
2002	59	4,61	4,64	0,03
2003	53	4,75	4,76	0,01
2004	55	4,69	4,65	0,04
2005	58	4,86	4,84	0,02
2006	42	4,65	4,57	0,08
2007	48	4,78	4,73	0,05
2008	33	4,74	4,62	0,01
2009	38	4,62	4,66	0,04
2010	58	4,64	4,85	0,21
2011	52	4,63	4,63	0,00
2012	44	4,51	4,60	0,09
2013	49	4,68	4,62	0,06
2014	38	4,55	4,66	0,11
2015	40	4,47	4,65	0,18
Total number of students: 720		Average graduates per year:48 students/ year		



**Figure 1: Diagram of the average success of semester and state exams per year for each class of graduates.**



**Figure 2: Diagram of the differences between the average success of semester and state exams per year for each class of students.**

## Results and discussion

In the Faculty of Veterinary Medicine at the University of Forestry from 2000 year to 2015 year they have graduated 16 graduates and totally 720 students, as per class graduate average of 48 students. The largest number of students have graduated in 2001 – 63, and at least in 2008 – 33.

The lowest average grade of semester exams is in 2001 - Good 4.42, the highest is in 2005. - Very good 4.86.

For the average grade from the state examinations highest performance is in 2010 – Very good 4.85, and the lowest it is in 2006 – Very good 4.57.

The table shows that the average success respectively semester exams and state exams tends to "very good", and the differences between them for the year is in the range from 0 to 0.2, all differences are less than 0.2, with the exception of this in 2010. When the difference is 0.21. Eleven of the 16 graduates have a difference of less than 0.1, and in 2011 year the difference is 0. This analysis shows that the differences between the average grade of semester exams and the average grade from the state examinations of the respective grade levels per year are below 0.5 (half unit), which convincingly shows that during its 20-years history the Faculty of Veterinary Medicine, Sofia has established mechanisms for the maximum objective assessment of students' knowledge. Permanently sustainable trend of similar scores on the success of the semester and that of state exams, give reason to believe that the criteria for evaluation and rigor of teachers in various disciplines as well as those of the commissions in the final state exams are objective, stable and optimized.

Since at this point in the literature is not found such a study and we could not draw an analogy.

## Conclusion

1. The study gives rise to the following conclusions and recommendations: tracking the success of students the opportunity to validate proposed the following criteria:
  - in contrast to the average success of graduates of the semestrial and the state exams less than 0.5 (half unit) can be considered that the evaluation system works steadily;
  - a difference of 0.5 to 1.0 means that there is reason to analyze the causes of fluctuations without being considered a disturbing trend;

- with a difference greater than 1.0 means that it is necessary to seriously analyze the situation of the evaluation system and the organization of educational process and to take appropriate decisions on adjustments.
- 2. The annual monitoring of the success of students by semester and state exams will enable to be managed the system for evaluating the quality of the learning process.
- 3. Such a study could be done and with the success of students in veterinary medicine at the Veterinary Medicine Faculty in Stara Zagora to collate the obtained results, as well as other faculties at the University of Forestry in which students put the state examination before examination boards. A similarly study could be done also with the success of foreign students (in English language education) at the Faculty of veterinary medicine in the University of Forestry.

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