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THE RESULTS OF THE RESEARCH OF THE SCORE-RATING EDUCATIONAL RESULTS OF STUDENTS

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Abstract

The article presents an internal assessment of the quality of educational results of students, based on the ongoing psychological and pedagogical study of the score-rating system, its organization and analysis. As a result of the use of score-rating system in the same educational groups, it was possible to increase its efficiency from 44% successfully passed the session in the first semester, 57% in the second semester, to 64% in the third semester. When analysing the results of the questionnaire on the use of score-rating system in the educational process and summarizing the overall results for all five groups of questions, 68% of students perceive score-rating system as a means of internal assessment of the quality of educational results, consider it an element of training that allows to systematically adjust the individual educational trajectory through self-assessment of its results; consider as an organizational component of a comprehensive approach with clear requirements and a schedule regulating educational activities.

Keywords: Score-rating system, teaching staff, education.

1. Introduction

Organization of psychological and pedagogical research of the effectiveness of the score-rating system (SRS) as a method of internal evaluation of the quality of educational results of students consists of several stages:

1. Theoretical analysis of the SRS, Generalized methodology (Dill, D. D., & Soo, M. 2005; Hazelkorn, E. 2007; Stolen, J. D., & Gnuschke, J. E. 1977)
2. Selection of criteria for evaluating the use of score-rating system, the development of a questionnaire for students to assess their attitude to the SRS (Dill, D. D., & Soo, M. 2005; Hazelkorn, E. 2007; Stolen, J. D., & Gnuschke, J. E. 1977; Vyzhigin, 2017).
3. Processing and generalization of the results of psychological and pedagogical research of SRS (Vyzhigin, 2016; Vyzhigin, 2017).

2. Problem Statement

This article is a continuation of the study of motivation and cooperation of innovative activity of teachers through the introduction of the educational process developed score-rating system of knowledge assessment as well as the organization and analysis of psychological and pedagogical research, point-rating system as a means of internal evaluation of the quality of educational results of students of higher education institutions.

3. Research Questions

One of the tasks not yet considered was to carry out statistical analysis of the results of psychological and pedagogical research of the SRS.

4. Purpose of the Study

To analyse and interpret the results of research of the SRS.

5. Research Methods

All the generalized data of the rating systems in the period from spring 2006 to spring 2016 are presented in table 1.

Over the past decade, the average number of students admitted to the test or examination has become 45-55%, of which about 80% received a positive assessment. In the application of the standard system of training, the percentage of students who passed the exam or set-off in the main session of the jam was within 20-40% of the total number of students in the group or stream.

It is proposed to analyse the results of using different variants of SRS.

Table 01. Summary of the results of the sessions (autumn 2006-spring 2016)

Year, semester	Dial number	Course	Semester	All students in the group/thread	Number of students who passed the main session	The number of students who had passed perfectly	Number of students who have passed well	The number of students who have passed at a	Number of students who have passed unsatisfactory or no-show	% of students who passed	% of students who passed excellent marks	% of students passed on well.	% of students passed on well	Type SRS
2006 spring	1	1	2	91	41	9	7	25	50	45,05	9,89	7,69	27,47	1,0
2006 autumn	1	2	1	94	34			34	60	36,17	0,00	0,00	36,17	1,0
2006 autumn	2	1	1	55	15	3	8	4	40	27,27	5,45	14,55	7,27	1,0
2007 spring	2	1	2	52	16	3	5	8	36	30,77	5,77	9,62	15,38	1,0
2007 autumn	2	2	1	47	45			45	2	95,74	0,00	0,00	95,74	1,0
2007 autumn	3	1	1	62	22	3	4	15	40	35,48	4,84	6,45	24,19	1,0
2008 spring	3	1	2	52	22	5	5	12	30	42,31	9,62	9,62	23,08	1,0
2008 autumn	3	2	1	45	30			30	15	66,67	0,00	0,00	66,67	1,0
2008 autumn	4	1	1	83	25	6	6	13	58	30,12	7,23	7,23	15,66	2,0
2009 spring	4	1	2	61	44	5	12	27	17	72,13	8,20	19,67	44,26	2,0
2009 autumn	4	2	1	51	28			28	23	54,90	0,00	0,00	54,90	2,0
2009 autumn	5	1	1	46	30	6	10	14	16	65,22	13,04	21,74	30,43	2,0
2010 spring	5	1	2	35	27	9	8	10	8	77,14	25,71	22,86	28,57	2,0
2010 autumn	5	2	1	30	22			22	8	73,33	0,00	0,00	73,33	2,0
2010 autumn	6	1	1	28	17	3	4	10	11	60,71	10,71	14,29	35,71	2,1
2011 spring	6	1	2	26	21	5	6	в	10	80,77	19,23	23,08	38,46	2,1
2011 autumn	6	2	1	24	14			14	10	58,33	0,00	0,00	58,33	2,1
2011 autumn	7	1	1	29	15	4	9	2	14	51,72	13,79	31,03	6,90	2,1
2012 spring	7	1	2	29	16	0	0	16	13	55,17	0,00	0,00	55,17	2,1
2012 autumn	7	2	1	27	17			17	10	62,96	0,00	0,00	62,96	2,1
2012 autumn	8	1	1	27	7	2	3	2	20	25,93	7,41	11,11	7,41	2,1
2013 spring	8	1	2	27	17	3	9	5	10	62,96	11,11	33,33	18,52	2,1
2012 autumn	9	1	1	59	14	5	5	4	45	23,73	8,47	8,47	6,78	2,1
2013 spring	9	1	2	57	23	5	9	9	34	40,35	8,77	15,79	15,79	2,1
2013 autumn	10	1	1	30	15	4	7	4	15	50,00	13,33	23,33	13,33	2,1
2014 spring	10	1	2	28	15	1	8	6	13	53,57	3,57	28,57	21,43	2,1
2014 autumn	11	1	1	71	29	9	11	9	42	40,85	12,68	15,49	12,68	3,0
2015 spring	11	1	2	40	28	0	2	26	12	70,00	0,00	5,00	65,00	3,0
2015 autumn	12	1	1	53	39	8	11	20	14	73,58	15,09	20,75	37,74	3,1
2016 spring	12	1	2	53										

Consider figure 1, which presents data on the performance of students in the first semester of 2006-2015. It is possible to note insignificant figures for version 1.0 (27.7 and 35.48%). For version 2.0, these figures are much better (30,12 and 65.22 per cent). For option 2.1, the results were noticeably worse, from 60.71% in autumn 2010 to 23.73% in autumn 2012, with an increase of up to 50% in 2013. These results, including, led to a change in the structure of the discipline, the result was the development of variants of the BRS №№ 3.0 and 3.1. For these variants 3.0 and 3.1, a significant improvement is seen-from 40.85% to a maximum of 73.58%.
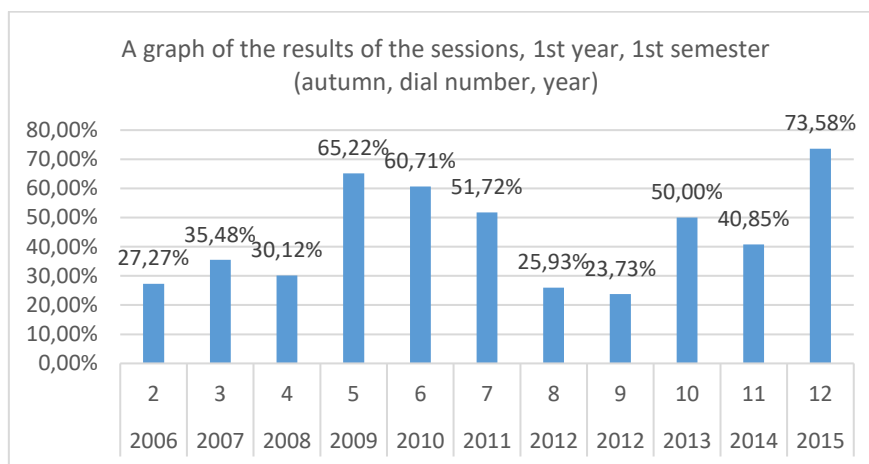
Figure 01.   A graph of the results of the sessions, 1st year, 1st semester (autumn, dial number, year)

Consider figure 2, which presents data on the performance of students in the second semester of 2006-2015. It is possible to note insignificant figures for version 1.0 (45.05, 30.77 and 42.31%). For option 2.0, these numbers are much better by almost 1.5-2 times (72.13 and 77.14 %). For VA-Riant 2.1 minor noticeable deterioration of the results (80,77, 55,17, 62,96, 40,35, 53,57 %). For version 3.0 are visible very decent figures-70% of successful students.
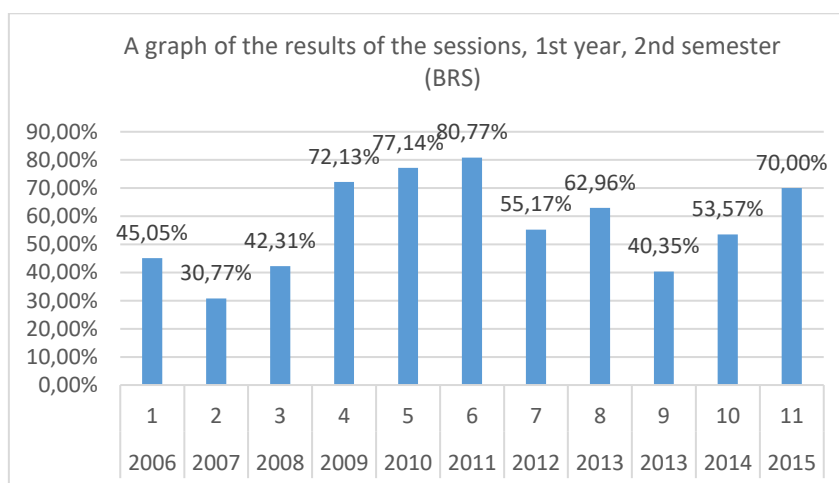

Figure 02. A graph of the results of the sessions, 1st year, 2nd semester (BRS) (autumn, dial number, year)

Consider figure 3, which presents data on the performance of students in the third semester of 2006-2012. It can be noted Trejo-sonnet numerals version 1.0 (36.17, and 66.67 95.74%). For option 2.0, these numbers are better (54.90 and 73.33 %). For option 2.1, the results of practice are closer to 60% (58.33 and 62.96 %).
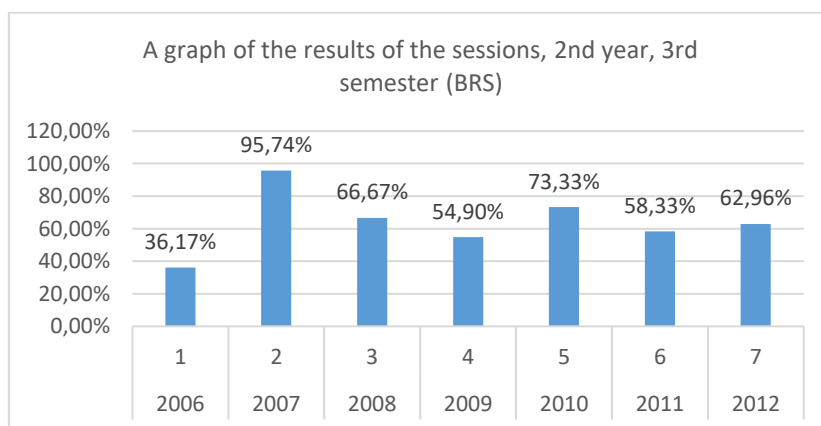

Figure 03. A graph of the results of the sessions, 2nd year, 3rd semester (BRS)

Generalized data on educational flows № № 1-12 the data of the score-rating system in the period from autumn 2006 to the present time are presented in table 1.

6. Findings

Generalized data on educational flows № № 1-12 the data of the score-rating system in the period from autumn 2006 to the present time are presented in table 1.

Analyzing table 1 on sets 1 and 2 it is seen that the percentage of students who passed the session at the beginning of the course (1 semester-autumn 2006) and at the end of the General course (3 semester - autumn 2008) increased from 30-45 to 95%.

To identify the significance of the results, the Student's t-test was applied. To calculate the t-criterion it was necessary to determine: n - the number of sample values (total number of groups in the sample), XSR the average number of students who passed the main session of students; S-standard deviation. Standard deviation is a measure of how widely data points are scattered about their mean; SSR is the standard deviation of the mean; t is the student's t-coefficient; and DI is the confidence interval calculated by multiplying the student's coefficient by the standard deviation of the mean; δ is the relative error of determination of *X*: *δ = DI / XSR*.(%).

The statistical analysis of the results of the use of score-rating systems, depending on all sets of students, the results of the use of variants of score-rating systems for the first, second and third semesters of training.

For all variants, the student's t - coefficient was negative, which led to the conclusion that the empirical value was below the standard value, which can be taken as 100 per cent achievement in each study group.

Additional computational experiment showed that for the growth of the empirical value it is necessary to consider the probability value to be equal to 0.5 when calculating the results of t-student coefficient. This suggests that the confidence interval is reduced from 95 to 50%.

7. Conclusion

As a result of the use of BRS in the same educational groups, it was possible to increase its efficiency from 44% successfully passed the session in the first semester, 57% in the second semester, to 64% in the third semester.

When analyzing the results of the questionnaire on the use of the score-rating system in the educational process and summarizing the overall results, 68% of students perceive BRS as a means of internal evaluation of the quality of educational results and as an element of professional training. The use of the PRS allows you to systematically adjust individual educational trajectory due to the self-evaluation of its results; to consider it as an organizational component of the competence-based approach with clear requirements, schedule, and regulatory training activities.

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