



ANALYSIS REPORT OF THE BASELINE QUESTIONNAIRE

Project	585603-EPP-1-2017-1-DE-EPPKA2-CBHE-JP / TOPAS From theoretical-oriented to practical education in agrarian studies
Editor(s):	Oleh Pasko
Responsible Partner:	Sumy National Agrarian University (SNAU), Sumy, Ukraine
Status-Version:	FINAL VERSION
Date:	10/07/2018
Dissemination Level	Restricted to other program participants (including the Commission Services)

Version	Date	Revision Description	Responsible Partner
v.01	25/06/2018	Creation of document	SNAU (Oleh Pasko)
final	10/07/2018	final	SNAU (Oleh Pasko)



2018



TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
1. SURVEY METHOD	7
2. OVERVIEW	12
3. STUDENTS SURVEY	
3.1. teach - Teachers use frontal teaching.....	22
3.2. WG - Classes are held in working groups.....	23
3.3. Tech - Teachers use Internet-technologies for teaching.....	24
3.4. Pquest - Teachers ask thought-provoking questions.....	25
3.5. material - Teachers explain materials clearly.....	26
3.6. interest - Teachers show genuine interest in students.....	27
3.7. comments - Teachers provide helpful comments on written work.....	28
3.8. discuss - Teachers effectively direct and stimulate discussions.....	29
3.9. oclass - Teachers are available outside of class.....	30
3.10. prep - Teachers seem well prepared.....	31
3.11. learnhelp - Teacher are effective in helping you learn.....	32
3.12. oevents - How often did you attend teaching events (labs, seminars etc.) aside of lectures?.....	33
3.13. ohours - How often did you take advantage of teachers' office hours.....	34
3.14. relate - Teachers are effective in relating lecture material to discussions and questions on observations in practice.....	35
3.15. profco - Teaching contents improved my professional competences significantly....	36
3.16. profkno - Teaching contents improved my professional knowledge more than my readings from publications (books, articles, Internet).....	37
3.17. AAI - Students responses at a glance.....	38
3.18. ANAU - Students responses at a glance.....	39
3.19. HSWT - Students responses at a glance.....	40
3.20. NULES - Students responses at a glance.....	41
3.21. SAI - Students responses at a glance.....	42
3.22. SNAU - Students responses at a glance.....	43
3.23. WUC - Students responses at a glance.....	44
3.24. WUELS - Students responses at a glance.....	45
3.25. UAVM - Students responses at a glance.....	46
3.26. YSU - Students responses at a glance.....	47
4. TEACHERS SURVEY	
4.1. ft - My courses rely on frontal teaching.....	48



4.2. wg - My courses are based on students' working groups.....	49
4.3. itt - I use Internet-technologies for teaching.....	50
4.4. squest - My students pose questions during my courses	51
4.5. th - The number of teaching hours is sufficient to cover all required learning contents	52
4.6. hf - The university provides all required hardware facilities for using Internet technologies for teaching.....	53
4.7. sf - The university provides all required software access for using Internet technologies for teaching.....	54
4.8. pmaterial - My university provides all materials that I would like to have for teaching.....	55
4.9. oh - I offer office hours for students.....	56
4.10. ats - I hold additional teaching sessions (seminars etc.) beside my lectures	57
4.11. data - I have access to actual empirical examples and data from my country for the contents of my courses.....	58
4.12. datause - My lectures are based on actual empirical examples from my country.....	59
4.13. did - My knowledge on didactics is satisfactory for my position.....	60
4.14. tddid - More training in didactics for teachers would be required at my university .	61
4.15. pt - I am actively involved in the practical training of my students in farms and/or agricultural enterprises.....	62
4.16. mooc - I am familiar with the concept and use of MOOCs.....	63
4.17. cmooc - I created or participated already in the creation of a MOOC.....	64
4.18. imooc - I am actively involved in creation of MOOC's.....	65
4.19. AAI - Teachers survey at a glance.....	66
4.20. ANAU - Teachers survey at a glance.....	67
4.21. HSWT - Teachers survey at a glance.....	68
4.22. NULES - Teachers survey at a glance.....	69
4.23. SAI - Teachers survey at a glance.....	70
4.24. SNAU - Teachers survey at a glance.....	71
4.25. WUC - Teachers survey at a glance.....	72
4.26. WUELS - Teachers survey at a glance.....	73
4.27. UAVM - Teachers survey at a glance.....	74
4.28. YSU- Teachers survey at a glance.....	75
5. EMPLOYERS SURVEY	
5.1. know - New employees from the university are up to their tasks in my enterprise right from the start.....	76
5.2. train - New employees from the university require an intensive training on the job, before they are up to their tasks.....	77



5.3. theory - The theoretical background of new employees from the university is sufficient.....	78
5.4. pract - The practical background of new employees from the university is sufficient .	79
5.5. iknow - Which improvements of theoretical knowledge of new employees would you propose for the future?.....	80
5.6. ipract - Which improvements of practical knowledge of new employees would you propose for the future?.....	81
5.7. lack - What are the major lacks in the professional knowledge (skills) of new employees according to your experience?.....	82
5.8. AAI - Employers survey at a glance.....	83
5.9. ANAU - Employers survey at a glance.....	84
5.10. NULES - Employers survey at a glance.....	85
5.11. SAI - Employers survey at a glance.....	86
5.12. SNAU - Employers survey at a glance.....	87
5.13. UAVM - Employers survey at a glance.....	88
5.14. YSU - Employers survey at a glance.....	89
ANNEXES	90
ANNEX 1. QUESTIONNAIRE FOR STUDENTS.....	91
ANNEX 2. QUESTIONNAIRE FOR TEACHERS.....	92
ANNEX 3. QUESTIONNAIRE FOR EMPLOYERS.....	93
ANNEX 4. AAI SURVEY: DESCRIPTIVE STATISTICS.....	94
ANNEX 5. ANAU SURVEY: DESCRIPTIVE STATISTICS.....	96
ANNEX 6. HSWT SURVEY: DESCRIPTIVE STATISTICS.....	98
ANNEX 7. NULES SURVEY: DESCRIPTIVE STATISTICS.....	100
ANNEX 8. SAI SURVEY: DESCRIPTIVE STATISTICS.....	102
ANNEX 9. SNAU SURVEY: DESCRIPTIVE STATISTICS.....	104
ANNEX 10. WUC SURVEY: DESCRIPTIVE STATISTICS.....	106
ANNEX 11. WUELS SURVEY: DESCRIPTIVE STATISTICS.....	108
ANNEX 12. UAVM SURVEY: DESCRIPTIVE STATISTICS.....	110
ANNEX 13. YSU SURVEY: DESCRIPTIVE STATISTICS.....	112



EXECUTIVE SUMMARY

The TOPAS project aims at filling the gap within a common former soviet inherited agricultural sciences higher education system in Ukraine, Armenia and Uzbekistan, introducing and improving vocationally oriented practical programs based on a learning outcomes and competencies approach, targeting new and old graduates, with flexible learning pathways and permeability among the different agrarian management programs, while fostering partnership between universities and stakeholders (farm industry and associations), and practical training in real working environment to provide a better match between job market needs and the qualifications offered. Thus, a wide-range of activities will facilitate the transition from teacher centred knowledge-based form of education to student-centred practice based education in Agrarian studies and hence employability in Ukraine, Armenia and Uzbekistan by enhancing the cooperation between university and agriculture enterprises through adequate internship schemes with government support to recognize formal and informal learning and endorse ECQIP.

Progress and performance must be measured to attest a development in the project. With few, but carefully selected indicators, it is possible to get a good overview on the progress and performance. Among those indicators there are several indicators dealing with satisfaction of key stakeholders – students, teachers and employers. Those indicators of satisfaction are: 1) % of satisfaction from employers and educators with content of new curricula and new key qualifications; 2) % of students' satisfaction with teaching competences; 3) % of students' satisfaction with competences acquired; 4) % of teacher's satisfaction with resources available. The Consortium believed that the best way to gauge how much those stakeholders are content with situation as of today was to resort to qualitative research methods, e. g. surveys.



Before embarking on the survey, the consortium has earmarked three focus groups among stakeholders who have keen interests in internships, namely students, teachers and employers. Those three groups being, prospectively subject, coordinator and venue of the internship and representing at the same time a ‘resource pool’ for internships.

This report contains a detailed analysis of the results to the baseline survey of TOPAS. The results analysis includes answers from all respondents who took survey in the first quarter of 2018.

The Consortium found that it was useful to have some insight into the research questions, ideas, and general concerns of the respondents groups, but this was not a systematic survey. The input collected was not used in a deep statistical or quantitative analysis. Rather, the comments provided insights into whether the Consortium had overlooked some aspects of problem. The individual responses are available in QMT and EMU at request.

The following figures show that there was a range of response types, but this should not be viewed as a systematic survey of the matter at hand. The Consortium did not consider the responses to be a complete or official statement and generalizing based on the responses received should be avoided. The following figures just show the starting position, a ‘snapshot’ regarding internship at HEIs at the beginning of the project and designed to be used as the background for further surveys.



1. SURVEY METHOD

This questionnaire is the first in series of the questionnaires devoted to gauging the level of satisfaction by three groups of stakeholders (students, teachers and employers) respectively with teaching competences and competences acquired (students), resources available (teachers), competences acquired by students and key qualifications (employers). The questionnaire is based on the logical framework matrix of the project.

The proceeding of survey.

The partner universities have received questionnaire items in English and have been asked:

- ✓ translate them in their teaching language;
- ✓ it was leave up to the partner universities to decide, how they will run the survey (on paper, electronic form via Internet or Intranet, etc.) on the level of the 3 groups of participants;
- ✓ it was up to the universities, if they run the survey anonymously (preferable for the students and teachers groups) or if they ask for the names on the questionnaire (preferable for the employer group);
- ✓ collect the results until end of summer semester 2018 (deadline has been set at the 8th of June 2018)
- ✓ the universities were asked to put the obtained information in the attached EXCEL sheet and send a copy of this sheet to the QMT (copy to EMU).
- ✓ EU-universities included: Although the focal point of expected improvements through the TOPAS is on the Non-EU-partners, but it might be interesting to get comparable information from the EU-partners, too. The questionnaires, in this vein, were relevant for all TOPAS universities irrespective of their EU or NON-EU status.



There are three groups that should have been covered through survey: students, teachers and employers.

Student group: Partners were asked to distribute questionnaires and collect responses from current students in the courses (and study years), which **are designated to be subject to changes in syllabi and/or teaching approaches under the umbrella of TOPAS**. Example: course: production economics in agriculture, 4th year, 7th semester)

Teacher group: Partners were asked to distribute questionnaires and collect responses from teachers on courses (and study years), which **are designated to be subject to changes in syllabi and/or teaching approaches** under the umbrella of TOPAS. Example: Teachers in courses on Agricultural management

Employer group: Partners were asked to distribute questionnaires and collect responses from farms and/or enterprises, **which employed students from your universities in the not so distant past**. It is evident that not all employers are known or accessible, so a survey on the level of employers, who are in contact with the university, would be sufficient.

The number of participants in each survey was up to the individual universities. However, the motto was: **the more, the better**.

There are abbreviations used for convenience and brevity of report throughout questionnaire whose should be understood as follows (table 1).

Table 1: The abbreviations used in the questionnaire

Group		
	abbreviation	Full question
	teach	Teachers use frontal teaching
	WG	Classes are held in working groups
	Tech	Teachers use Internet-technologies for teaching
	Pquest	Teachers ask thought-provoking questions



	material	Teachers explain materials clearly
	interest	Teachers show genuine interest in students
	comments	Teachers provide helpful comments on written work
	discuss	Teachers effectively direct and stimulate discussions
	oclass	Teachers are available outside of class
	prep	Teachers seem well prepared
	learnhelp	Teacher are effective in helping you learn
	oevents	How often did you attend teaching events (labs, seminars etc.) aside of lectures?
	ohours	How often did you take advantage of teachers' office hours
	relate	Teachers are effective in relating lecture material to discussions and questions on observations in practice
	profco	Teaching contents improved my professional competences significantly
	profkno	Teaching contents improved my professional knowledge more than my readings from publications (books, articles, Internet)
TEACHERS	ft	My courses rely on frontal teaching
	wg	My courses are based on students' working groups
	itt	I use Internet-technologies for teaching
	squest	My students pose questions during my courses
	th	The number of teaching hours is sufficient to cover all required learning contents
	hf	The university provides all required hardware facilities for using Internet technologies for teaching
	sf	The university provides all required software access for using Internet technologies for teaching
	pmaterial	My university provides all materials that I would like to have for teaching
	oh	I offer office hours for students
	ats	I hold additional teaching sessions (seminars etc.) beside my lectures



	data	I have access to actual empirical examples and data from my country for the contents of my courses
	datause	My lectures are based on actual empirical examples from my country
	did	My knowledge on didactics is satisfactory for my position
	tdid	More training in didactics for teachers would be required at my university
	pt	I am actively involved in the practical training of my students in farms and/or agricultural enterprises
	mooc	I am familiar with the concept and use of MOOCs
	cmooc	I created or participated already in the creation of a MOOC
	imooc	I am actively involved
EMPLOYERS	know	New employees from the university are up to their tasks in my enterprise right from the start
	train	New employees from the university require an intensive training on the job, before they are up to their tasks
	theory	The theoretical background of new employees from the university is sufficient
	pract	The practical background of new employees from the university is sufficient
	iknow	Which improvements of theoretical knowledge of new employees would you propose for the future?
	ipract	Which improvements of practical knowledge of new employees would you propose for the future?
	lack	What are the major lacks in the professional knowledge (skills) of new employees according to your experience?

The following types of questions were used:

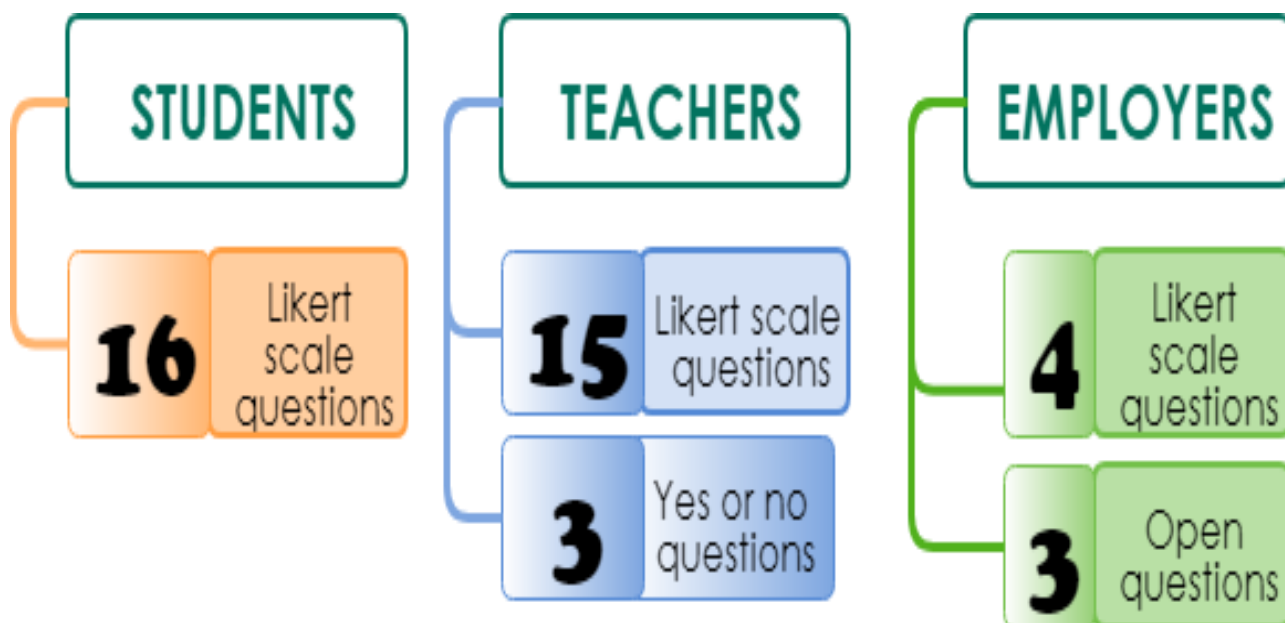


Figure 1: Questions types used.

The following Likert scale was used:

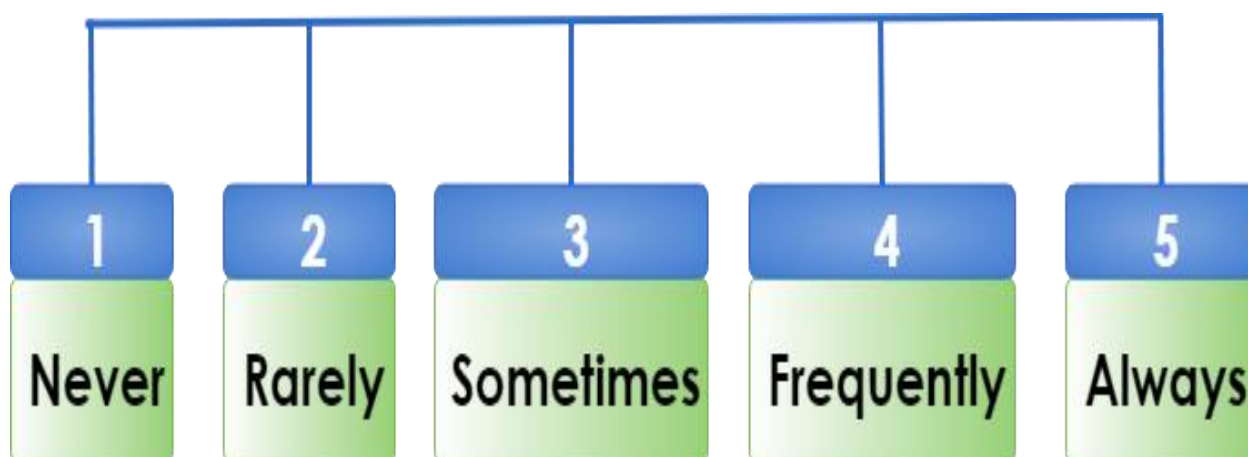


Figure 2: Likert scale used.

Examples of a questionnaire for all three groups are provided in the annexes 1, 2 and 3.



2. OVERVIEW

This overview was designed to serve as a convenient reference guide for individuals who eager to form their opinion on synopsis and eschew diving in the details data.

All universities have submitted the results of the baseline questionnaire on a timely basis. The overall numbers of responses by HEI and respondents groups were as follows:

Table 2: The overall numbers of responses by HEI and respondents groups

Nº	HEI	Students	Teachers	Employers
1	AAI	158	18	12
2	ANAU	42	19	9
3	HSWT	7	10	0
4	NULES	216	50	11
5	SAI	100	50	50
6	SNAU	77	70	12
7	WUC	26	3	0
8	WUELS	94	24	0
9	UAVM	60	20	25
10	YSU	140	50	10
	Σ	920	314	129

The following pages show the mean values of responses for each survey questions by each university in terms of three stakeholder groups. The **red** colour of font designates a minimum value for question, the **green** – the highest one. Please, note that the lower values do not always denote the inferior quality and vice versa.



Table 3: Students survey overview, mean

	AAI	ANAU	HSWT	NULES	SAI	SNAU	WUC	WUELS	UAVM	YSU
Teachers use frontal teaching	4,10	3,90	3,82	4,08	3,93	4,18	5,00	3,44	3,95	3,55
Classes are held in working groups	5,00	3,47	2,24	3,85	2,94	4,10	4,11	3,11	1,98	4,77
Teachers use Internet-technologies for teaching	2,25	3,28	4,01	3,91	3,24	3,72	4,50	3,51	2,93	2,24
Teachers ask thought-provoking questions	4,00	3,23	3,52	3,83	3,52	4,05	3,88	3,26	1,5	2,21
Teachers explain materials clearly	3,86	3,85	3,95	3,80	3,91	4,10	3,96	3,57	3,96	3,47
Teachers show genuine interest in students	3,99	3,90	3,64	3,41	3,67	3,76	4,34	3,38	3,88	3,15
Teachers provide helpful comments on written work	4,49	3,64	3,02	3,50	3,84	3,77	4,46	3,18	3,81	3,26
Teachers effectively direct and stimulate discussions	3,89	3,59	3,37	3,56	3,53	3,77	4,46	2,92	3,78	3,54
Teachers are available outside of class	3,86	3,64	3,61	3,56	3,20	3,85	4,34	3,92	1,80	3,09
Teachers seem well prepared	3,79	4,04	4,28	4,02	3,88	4,28	4,23	4,27	4,53	3,99
Teacher are effective in helping you learn	3,80	4,11	3,54	3,64	3,58	4,11	4,03	3,48	3,91	3,79
How often did you attend teaching events (labs, seminars etc.) aside of lectures?	4,74	3,59	2,98	2,65	3,11	3,02	2,61	3,07	1,90	2,60
How often did you take advantage of teachers' office hours	3,80	3,73	1,90	2,76	3,54	3,20	2,65	2,40	1,45	2,68
Teachers are effective in relating lecture material to discussions and questions on observations in practice	4,12	3,90	3,58	3,73	3,73	4,09	4,03	3,40	3,95	3,47
Teaching contents improved my professional competences significantly	4,04	3,76	4,04	3,52	3,62	3,92	4,57	3,54	3,55	3,57
Teaching contents improved my professional knowledge more than my readings from publications (books, articles, Internet)	4,06	3,78	3,95	3,39	3,63	3,76	4,53	3,35	4,11	2,93



Table 4: Teachers survey overview, mean

	AAI	ANAU	HSWT	NULES	SAI	SNAU	WUC	WUELS	UAVM	YSU
My courses rely on frontal teaching	4,22	2,42	2,90	4,08	3,80	4,05	5,00	3,95	4,10	3,26
My courses are based on students' working groups	5,00	3,78	3,20	3,76	3,36	3,65	4,00	3,62	2,50	2,92
I use Internet-technologies for teaching	2,33	2,89	3,80	4,36	3,76	4,22	5,00	4,20	2,95	3,32
My students pose questions during my courses	4,22	4,52	4,70	4,08	4,62	4,01	5,00	4,08	3,05	3,04
The number of teaching hours is sufficient to cover all required learning contents	3,22	4,10	4,30	3,06	4,14	2,81	4,66	3,08	3,00	3,14
The university provides all required hardware facilities for using Internet technologies for teaching	3,11	2,63	4,50	3,46	3,36	2,78	4,00	3,91	4,40	3,20
The university provides all required software access for using Internet technologies for teaching	4,44	2,42	4,50	3,64	3,30	2,91	4,33	3,75	2,45	3,20
My university provides all materials that I would like to have for teaching	3,72	2,68	4,30	3,36	2,98	2,70	3,00	3,45	2,00	2,94
I offer office hours for students	4,55	3,94	4,00	4,02	4,00	3,48	4,33	4,91	1,85	2,74
I hold additional teaching sessions (seminars etc.) beside my lectures	4,83	3,68	3,50	3,48	3,06	3,21	4,00	2,95	2,80	2,94
I have access to actual empirical examples and data from my country for the contents of my courses	3,61	3,52	4,40	3,88	3,72	3,90	4,00	4,70	3,85	2,92
My lectures are based on actual empirical examples from my country	3,94	3,89	4,30	4,28	3,78	4,10	4,00	4,62	3,05	3,02
My knowledge on didactics is satisfactory for my position	4,33	4,21	4,20	4,16	3,96	4,15	3,66	4,33	4,20	3,58
More training in didactics for teachers would be required at my university	3,83	3,94	3,00	3,92	3,46	3,75	1,66	3,16	2,25	3,28
I am actively involved in the practical training of my students in farms and/or agricultural enterprises	3,50	3,89	3,40	3,04	3,04	3,07	3,66	2,16	3,35	2,78
I am familiar with the concept and use of MOOCs	1,00	1,21	1,70	1,12	1,26	1,12	1,00	1,62	1,30	1,48
I created or participated already in the creation of a MOOC	1,00	1,63	1,80	1,22	1,70	1,25	1,00	1,75	1,70	1,64
I am actively involved in MOOC creating	1,77	1,68	1,80	1,26	1,64	1,28	1,00	1,83	1,80	1,68



Table 5: Employers survey overview, mean

	AAI	ANAU	NULES	SAI	SNAU	UAVM	YSU
New employees from the university are up to their tasks in my enterprise right from the start	3,75	3,11	3,18	3,06	3,33	2,20	2,30
New employees from the university require an intensive training on the job, before they are up to their tasks	2,25	3,88	3,00	3,40	3,00	4,52	2,50
The theoretical background of new employees from the university is sufficient	3,66	3,66	4,09	3,40	3,58	3,20	2,40
The practical background of new employees from the university is sufficient	3,00	2,66	3,273	2,72	2,66	2,04	3,80

Given the fact that we included in the polling EU universities it would be inexcusable not to take advantage of the opportunity and compare the EU and Non-EU universities.

As evident from the figure 1 there is no yawning gap between experiences and assessment of it by students in EU as oppose to Non-Eu universities.

Table 6: Students survey's questions responses which resulted in superior values for non-EU universities

n	Questions	difference
1	How often did you take advantage of teachers' office hours	1,19
2	Classes are held in working groups	1,16
3	How often did you attend teaching events (labs, seminars etc.,) aside of lectures	0,65
4	Teachers ask thought-provoking questions	0,43
5	Teachers provide helpful comments on written work	0,13
6	Teachers are available outside of class	0,12
7	Teachers are effective in relating lecture material to discussions and questions	0,10
8	Teacher are effective in helping you learn	0,10
9	Teachers effectively direct and stimulate discussions	0,01

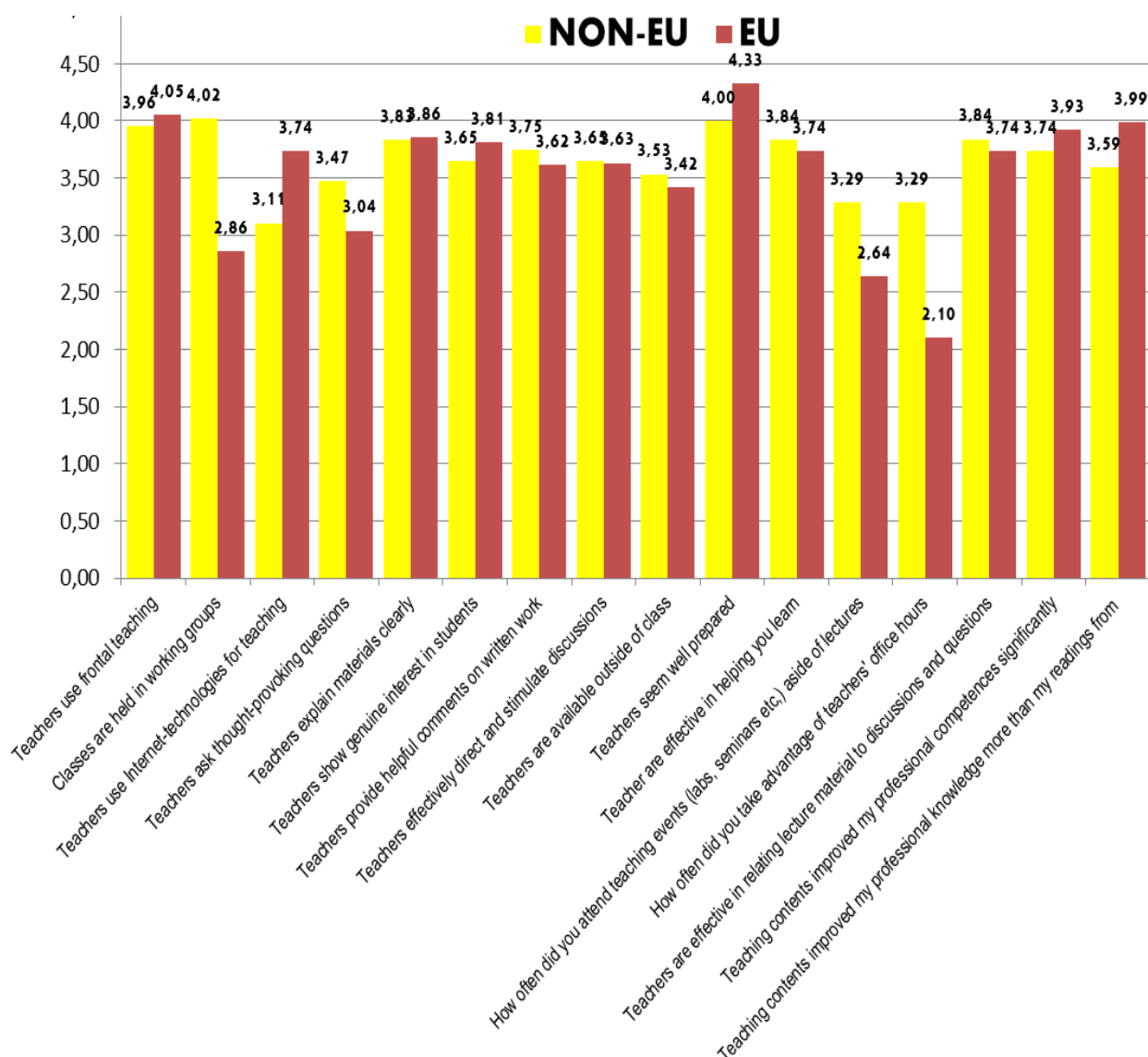


Figure 3: Students survey distinction between EU and non-EU universities.

As illustrated in tables 6 and 7 out of the 16 questions included in the questionnaire for students in 9 questions, the advantage is on side of non-European universities, and only in seven questions - on the side of European universities.

Non-EU universities' student more often take advantage of teachers' office hours (1,19), in those universities classes are held in working groups (1,16) and students more often attend teaching events aside of lectures (0,65).



Table 7: Students survey's questions responses which resulted in superior values for EU universities

n	Questions	difference
1	Teachers use Internet-technologies for teaching	0,63
2	Teaching contents improved my professional knowledge more than my readings from publications (books, articles, Internet)	0,39
3	Teachers seem well prepared	0,33
4	Teaching contents improved my professional competences significantly	0,19
5	Teachers show genuine interest in students	0,16
6	Teachers use frontal teaching	0,10
7	Teachers explain materials clearly	0,03

EU universities excel in use Internet-technologies for teaching (0,63), teaching contents there improves students' professional knowledge more than readings from publications (0,39) and teachers seem well prepared (0,33).

As for the survey of teachers, the advantage overall is on the side of European universities (tables 8, 9, fig. 4).

The teachers of Non-EU universities believe that more training in didactics for teachers would be required at their university (1,18), their courses are based on students' working groups (0,42) and they more often hold additional teaching sessions (seminars etc.) beside lectures (0,22).

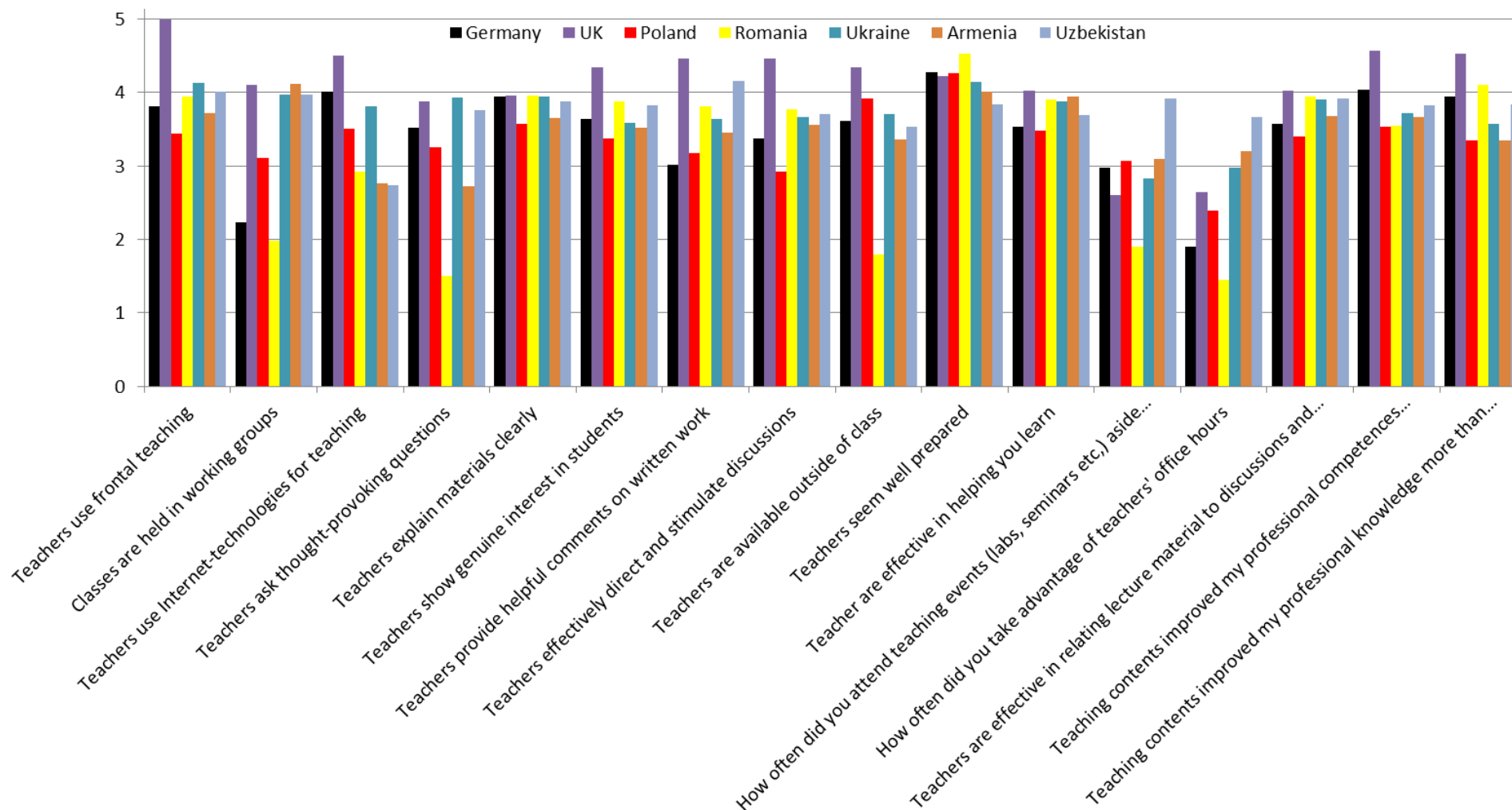


Figure 4: Students survey by countries



Figure 5: Teachers survey: how EU and Non-EU universities differ.



Table 8: Teachers survey's questions responses which resulted in superior values for Non-EU universities

n	Questions	difference
1	More training in didactics for teachers would be required at my university	1,18
2	My courses are based on students' working groups	0,42
3	I hold additional teaching sessions (seminars etc.) beside my lectures	0,22
4	I am actively involved in the practical training of my students in farms and/or agricultural enterprises	0,08
5	I offer office hours for students	0,02

Four distinctive traits which according to teacher's survey are prevalent in EU universities are 1) all required hardware facilities for using Internet technologies for teaching are provided by universities (1,11), 2) teachers have access to actual empirical examples and data from their country for the contents of courses (0,65), 3) teachers use Internet-technologies for teaching (0,51) and, 4) the university provides all required software access for using Internet technologies for teaching (0,44).

Table 9: Teachers survey's questions responses which resulted in superior values for EU universities

n	Questions	difference
1	The university provides all required hardware facilities for using Internet technologies for teaching	1,11
2	I have access to actual empirical examples and data from my country for the contents of my courses	0,65
3	I use Internet-technologies for teaching	0,51
4	The university provides all required software access for using Internet technologies for teaching	0,44
5	My courses rely on frontal teaching	0,35
6	The number of teaching hours is sufficient to cover all required learning contents	0,35
7	I am familiar with the concept and use of MOOCs	0,21



n	Questions	difference
8	My lectures are based on actual empirical examples from my country	0,16
9	I created or participated already in the creation of a MOOC	0,16
10	My students pose questions during my courses	0,13
11	My university provides all materials that I would like to have for teaching	0,12
12	I am actively involved in MOOC creating	0,06
13	My knowledge on didactics is satisfactory for my position	0,03

Surprisingly the concept of MOOC are more known and utilized frequently in Non-EU universities (figure 6).

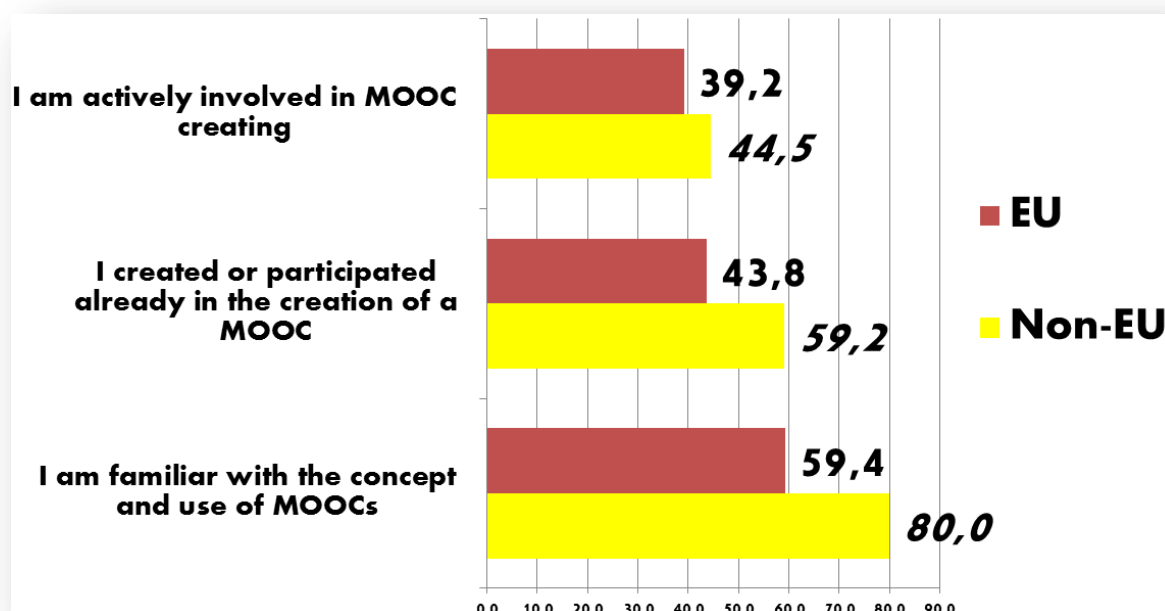


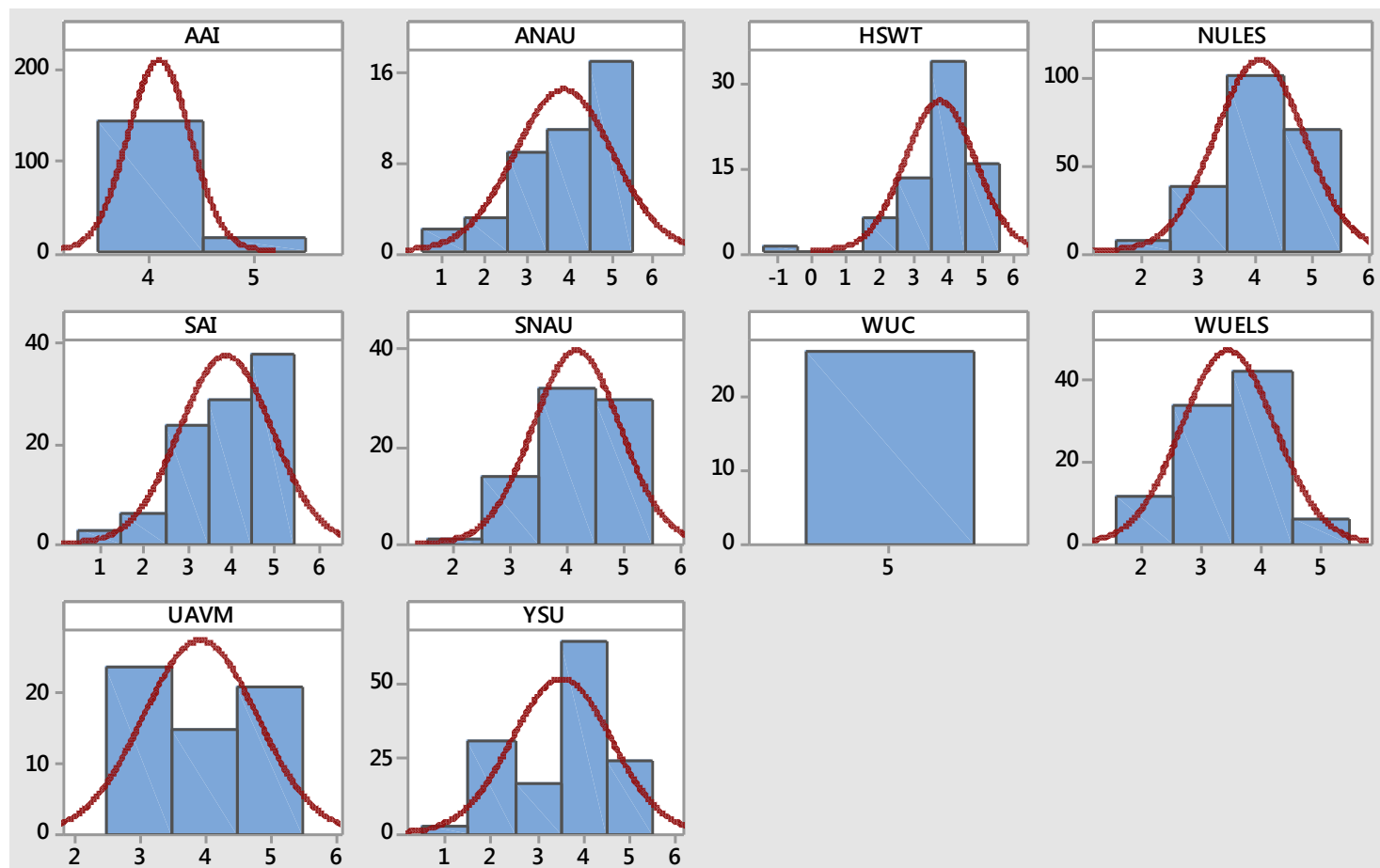
Figure 6: Percentage of teachers answering in the affirmative on questions stated, %

Although such an analysis with the division into European and non-European, of course, is useful, however, the main task of the survey was to elucidate the starting situation at the universities. The following sections provide detailed information about current state of affairs in each university.



3. STUDENTS SURVEY ANALYSIS

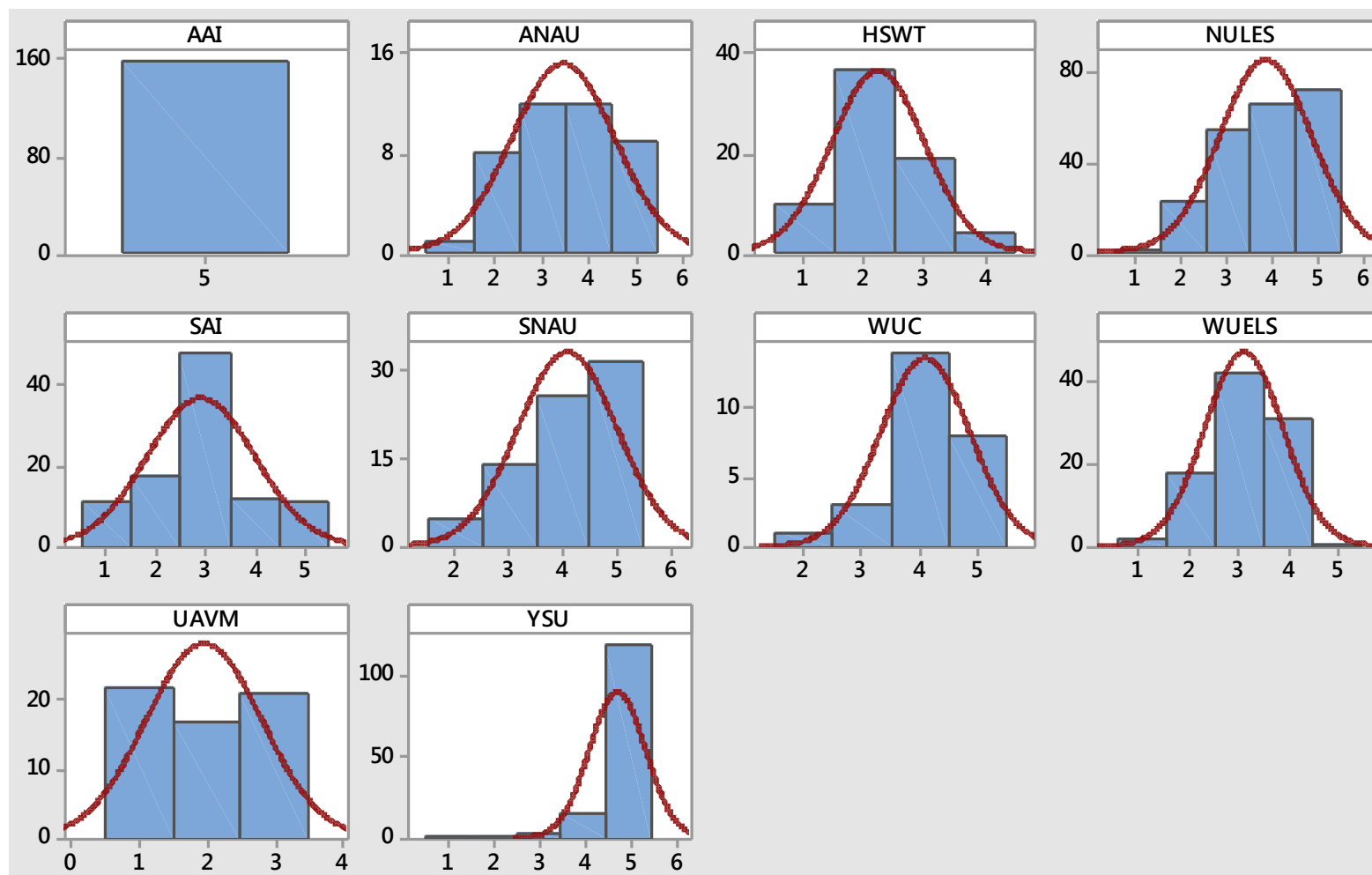
3.1. **STUDENTS SURVEY**. teach - TEACHERS USE FRONTAL TEACHING



AAI
Mean 4.101
StDev 0.3026
N 158
ANAU
Mean 3.905
StDev 1.165
N 42
HSWT
Mean 3.8
StDev 1.044
N 70
NULES
Mean 4.083
StDev 0.7909
N 216
SAI
Mean 3.93
StDev 1.066
N 100
SNAU
Mean 4.182
StDev 0.7734
N 77
WUELS
Mean 3.447
StDev 0.7981
N 94
UAVM
Mean 3.95
StDev 0.8719
N 60
YSU
Mean 3.55
StDev 1.088
N 140



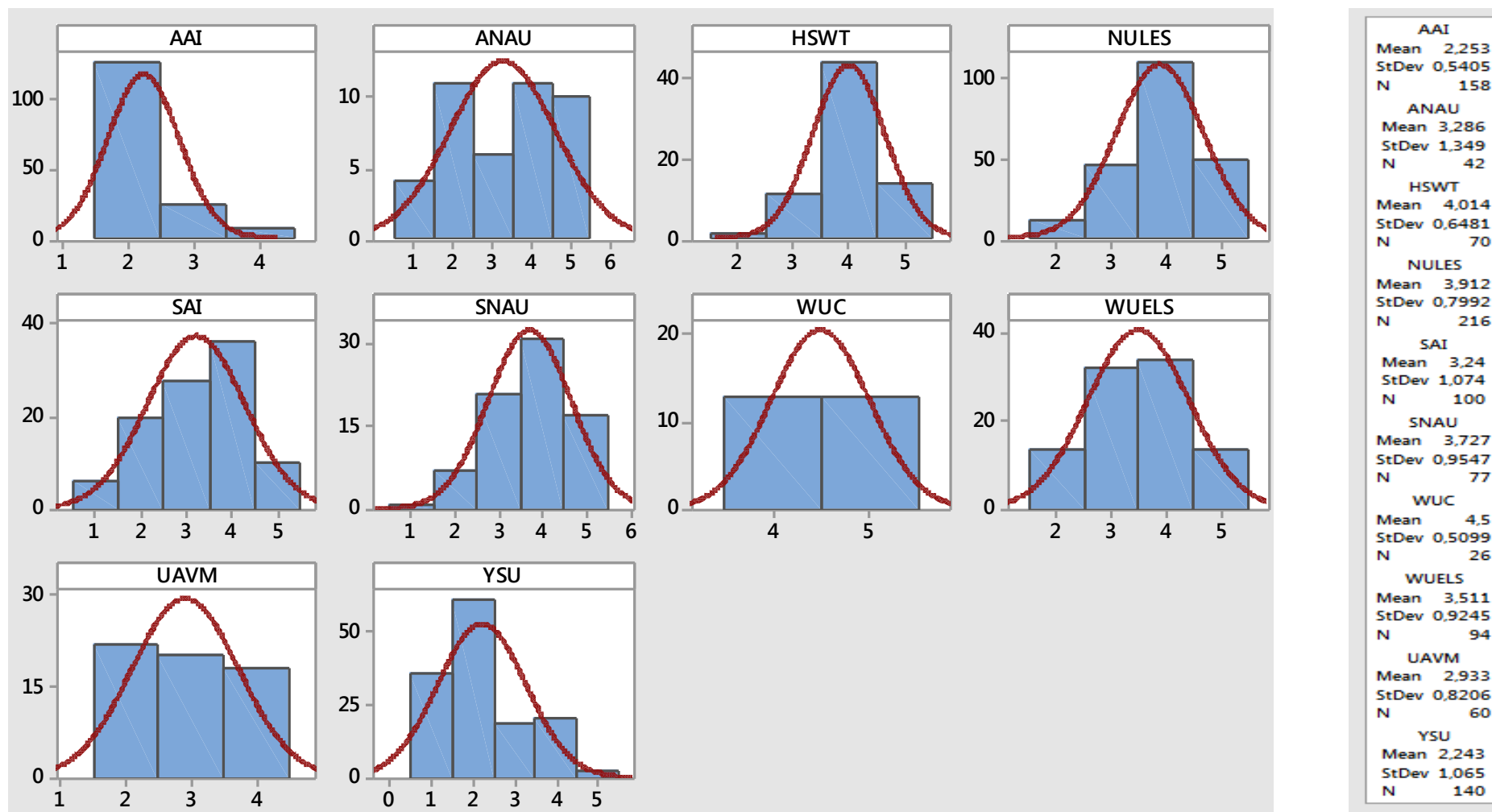
3.2. STUDENTS SURVEY. WG - CLASSES ARE HELD IN WORKING GROUPS



AAI
Mean *
StDev *
N 158
ANAU
Mean 3,476
StDev 1,110
N 42
HSWT
Mean 2,243
StDev 0,7696
N 70
NULES
Mean 3,856
StDev 1,017
N 216
SAI
Mean 2,94
StDev 1,090
N 100
SNAU
Mean 4,104
StDev 0,9260
N 77
WUC
Mean 4,115
StDev 0,7656
N 26
WUELS
Mean 3,117
StDev 0,8013
N 94
UAVM
Mean 1,983
StDev 0,8535
N 60
YSU
Mean 4,779
StDev 0,6241
N 140

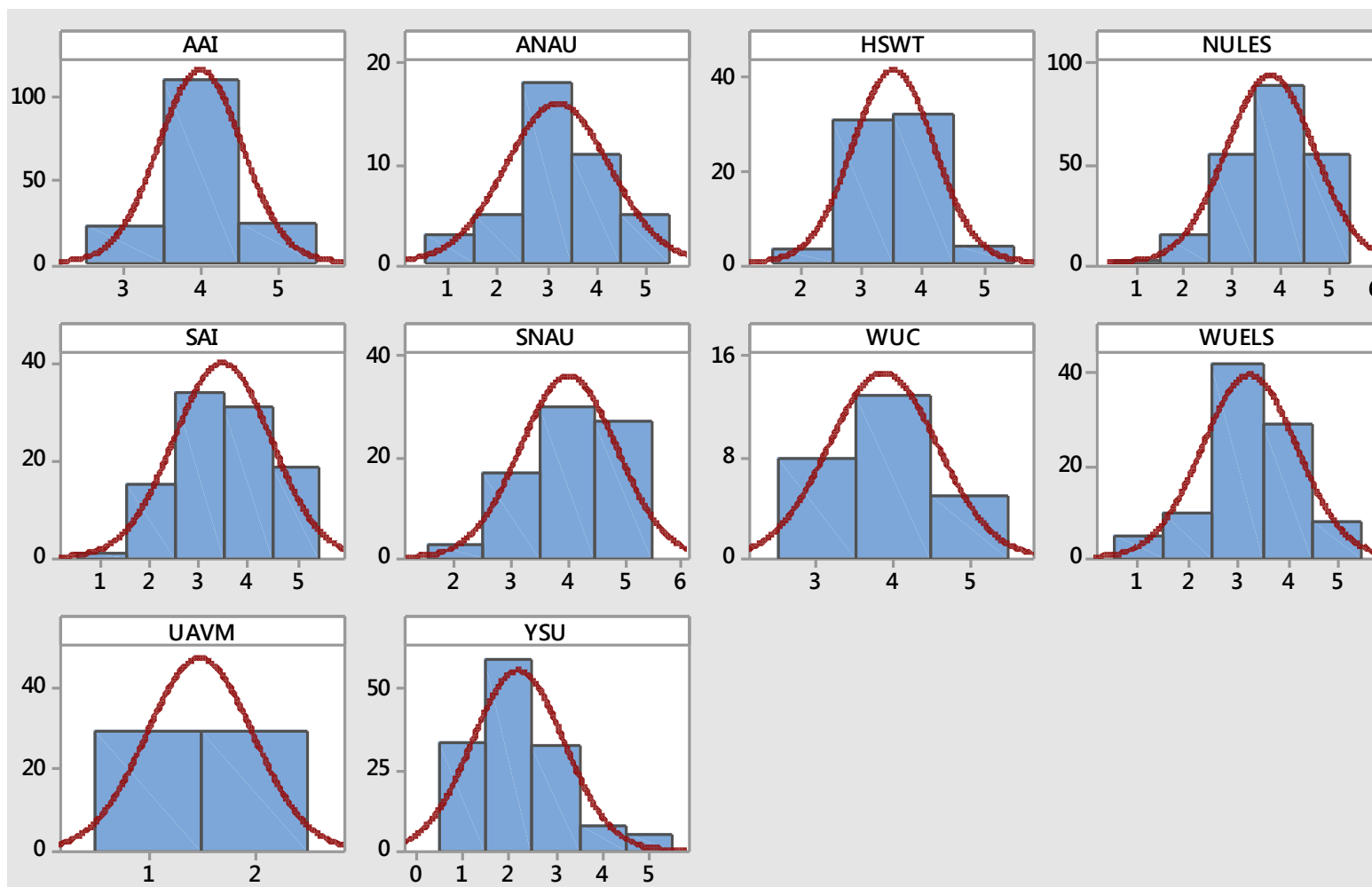


3.3. **STUDENTS SURVEY.** Tech - TEACHERS USE INTERNET-TECHNOLOGIES FOR TEACHING





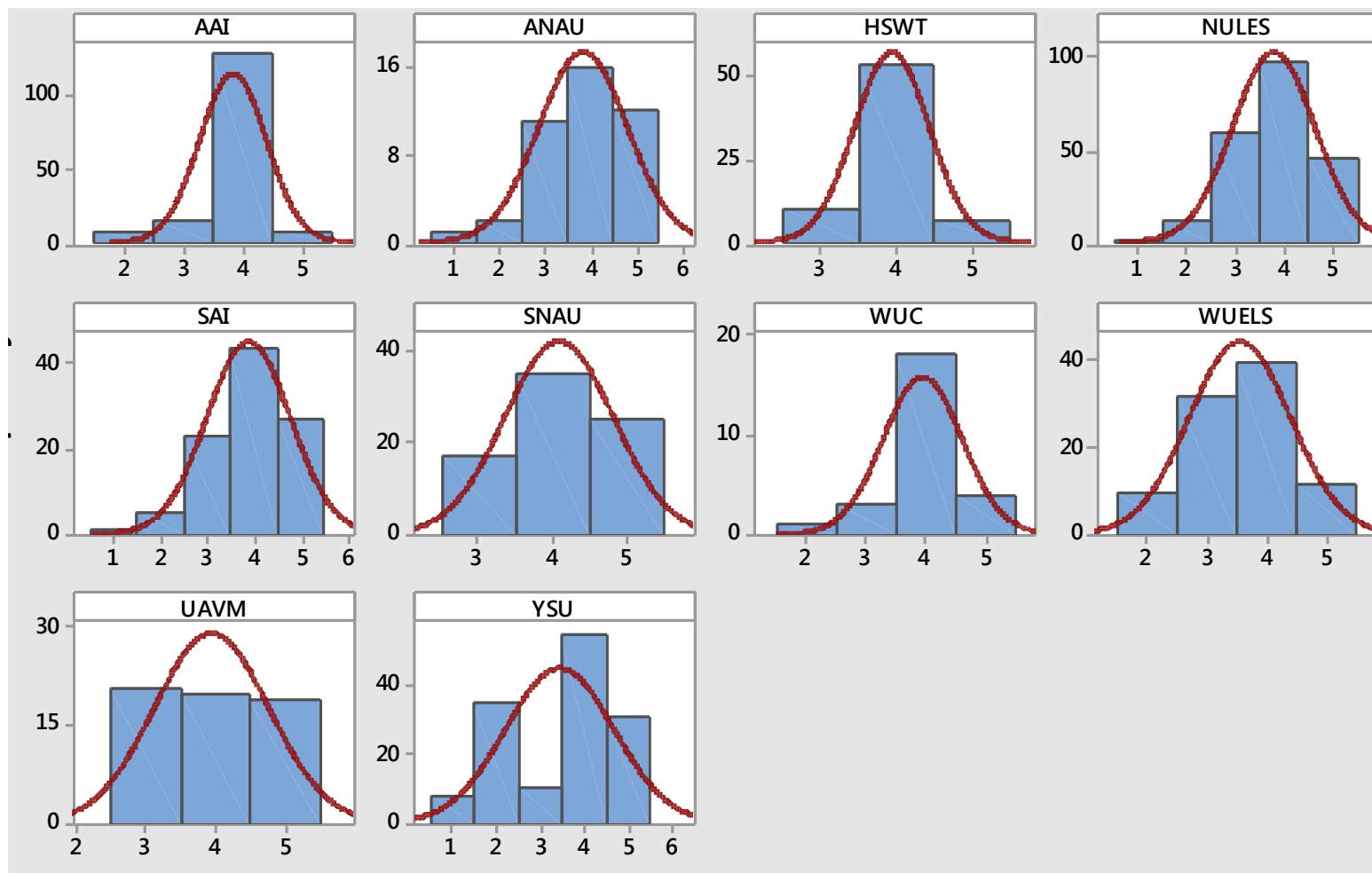
3.4. **STUDENTS SURVEY**. Pquest - TEACHERS ASK THOUGHT-PROVOKING QUESTIONS



AAI
Mean 4,006
StDev 0,5471
N 158
ANAU
Mean 3,238
StDev 1,055
N 42
HSWT
Mean 3,529
StDev 0,6751
N 70
NULES
Mean 3,833
StDev 0,9201
N 216
SAI
Mean 3,52
StDev 0,9998
N 100
SNAU
Mean 4,052
StDev 0,8568
N 77
WUC
Mean 3,885
StDev 0,7114
N 26
WUELS
Mean 3,266
StDev 0,9524
N 94
UAVM
Mean 1,5
StDev 0,5042
N 60
YSU
Mean 2,214
StDev 0,9948
N 140



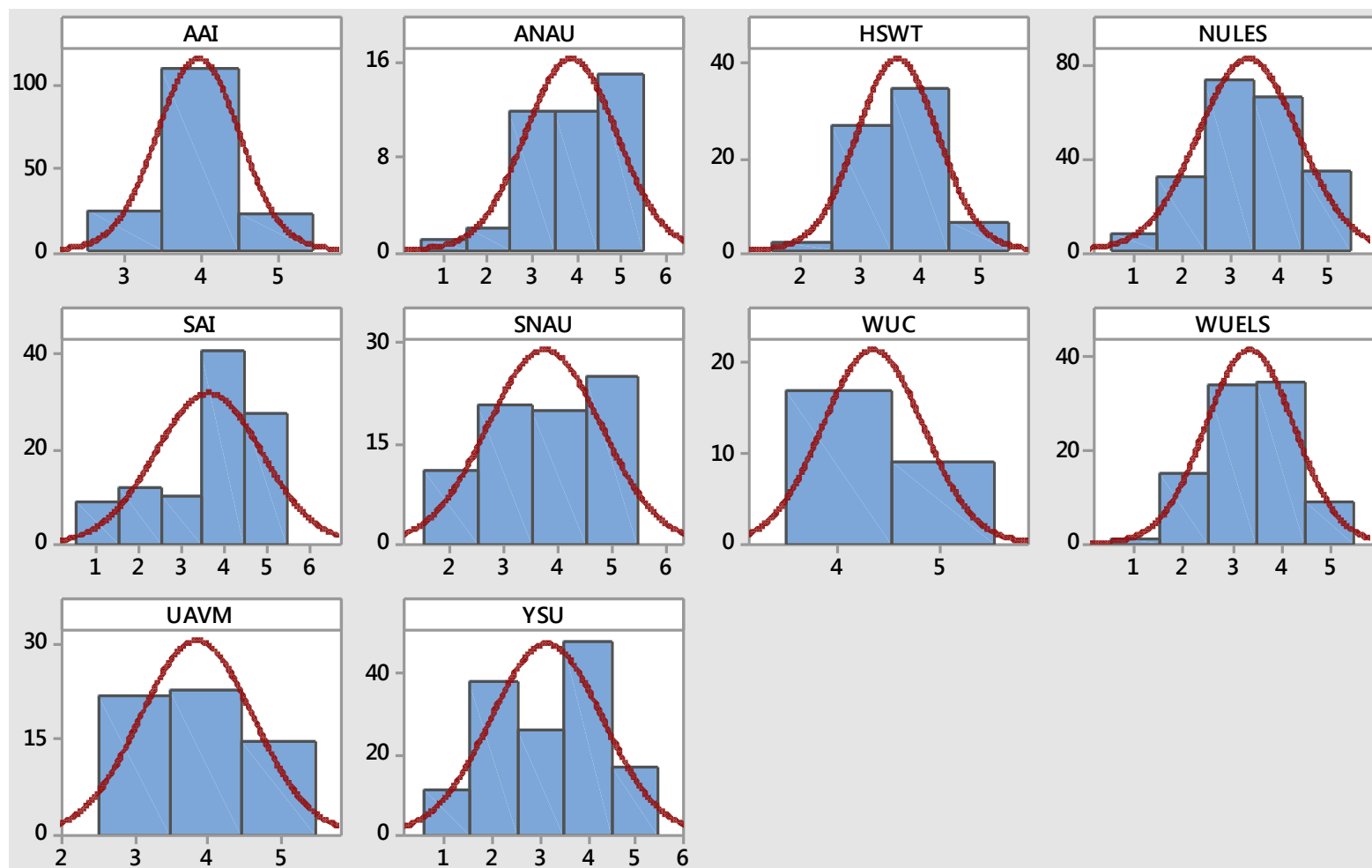
3.5. **STUDENTS SURVEY**. Material - TEACHERS EXPLAIN MATERIALS CLEARLY



AAI
Mean 3.861
StDev 0.5583
N 158
ANAU
Mean 3.857
StDev 0.9771
N 42
HSWT
Mean 3.957
StDev 0.4945
N 70
NULES
Mean 3.806
StDev 0.8459
N 216
SAI
Mean 3.91
StDev 0.8887
N 100
SNAU
Mean 4.104
StDev 0.7360
N 77
WUC
Mean 3.962
StDev 0.6622
N 26
WUELS
Mean 3.574
StDev 0.8486
N 94
UAVM
Mean 3.967
StDev 0.8227
N 60
YSU
Mean 3.471
StDev 1.243
N 140



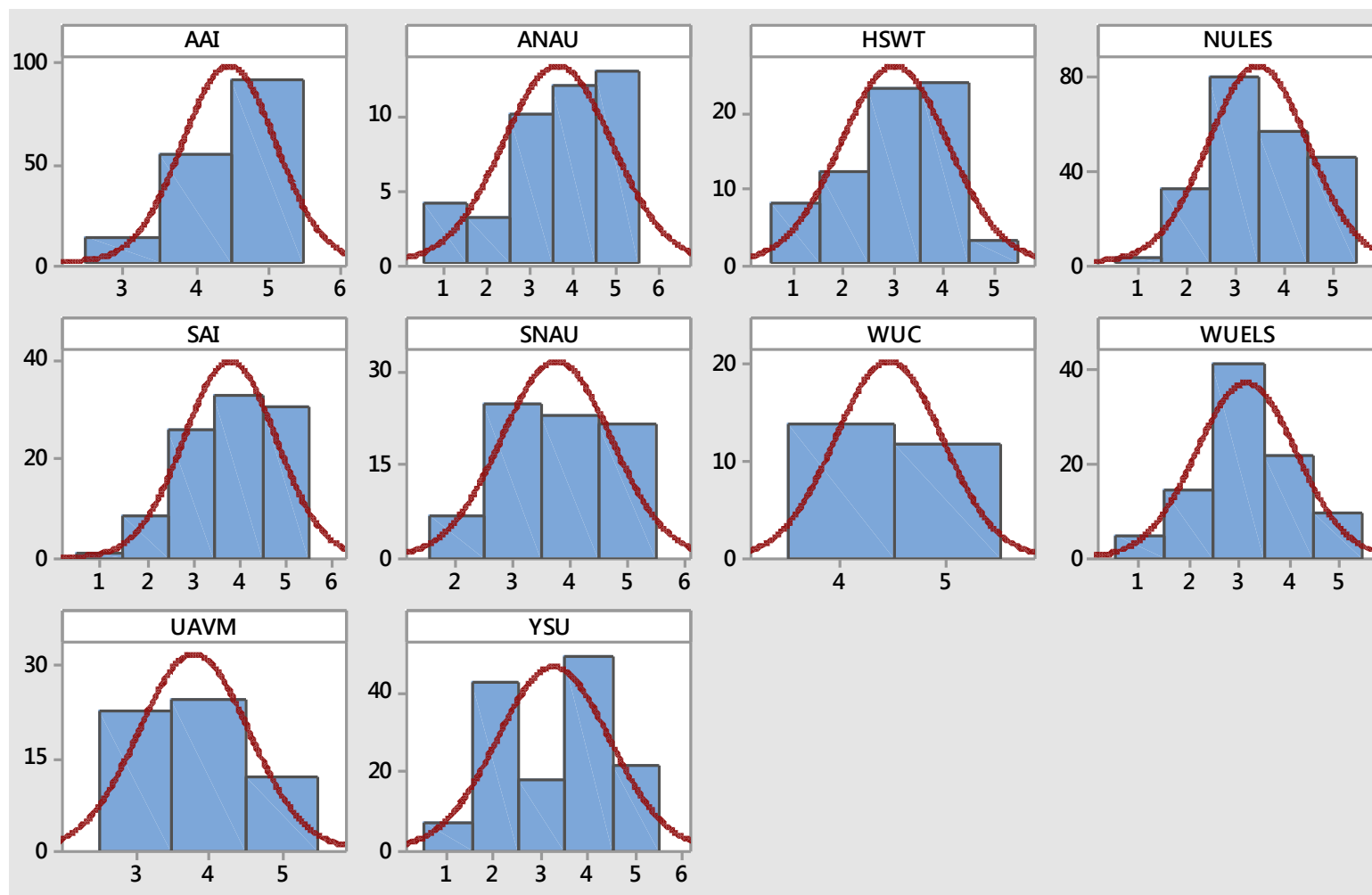
3.6. **STUDENTS SURVEY**. interest - TEACHERS SHOW GENUINE INTEREST IN STUDENTS



AAI
Mean 3,994
StDev 0,5471
N 158
ANAU
Mean 3,905
StDev 1,031
N 42
HSWT
Mean 3,643
StDev 0,6818
N 70
NULES
Mean 3,412
StDev 1,044
N 216
SAI
Mean 3,67
StDev 1,256
N 100
SNAU
Mean 3,766
StDev 1,062
N 77
WUC
Mean 4,346
StDev 0,4852
N 26
WUELS
Mean 3,383
StDev 0,9053
N 94
UAVM
Mean 3,883
StDev 0,7831
N 60
YSU
Mean 3,157
StDev 1,183
N 140



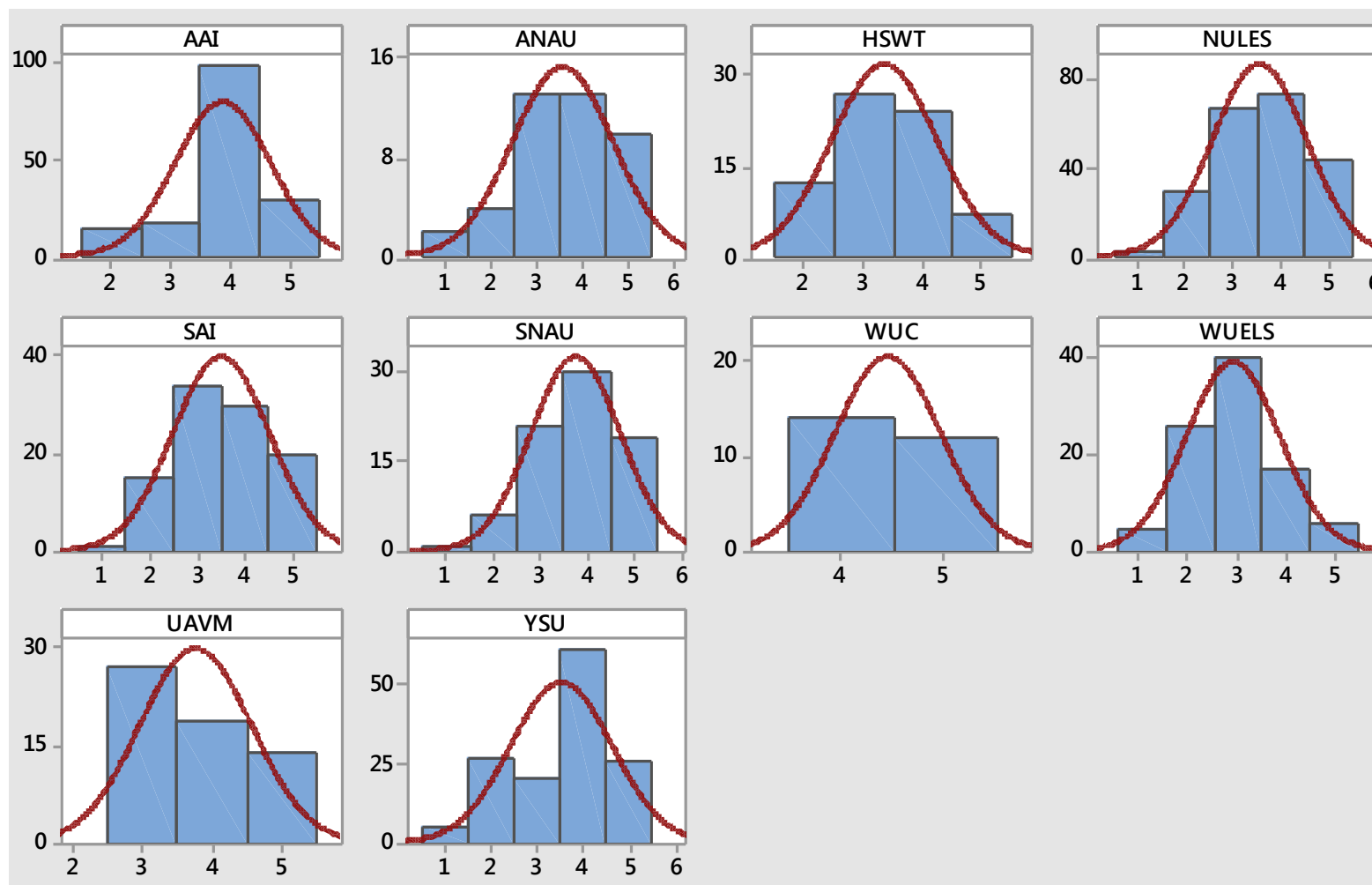
3.7. **STUDENTS SURVEY**. comments - TEACHERS PROVIDE HELPFUL COMMENTS ON WRITTEN WORK



AAI	
Mean	4,494
StDev	0,6459
N	158
ANAU	
Mean	3,643
StDev	1,265
N	42
HSWT	
Mean	3,029
StDev	1,076
N	70
NULES	
Mean	3,5
StDev	1,025
N	216
SAI	
Mean	3,84
StDev	1,002
N	100
SNAU	
Mean	3,779
StDev	0,9682
N	77
WUC	
Mean	4,462
StDev	0,5084
N	26
WUELS	
Mean	3,181
StDev	1,005
N	94
UAVM	
Mean	3,817
StDev	0,7477
N	60
YSU	
Mean	3,264
StDev	1,197
N	140



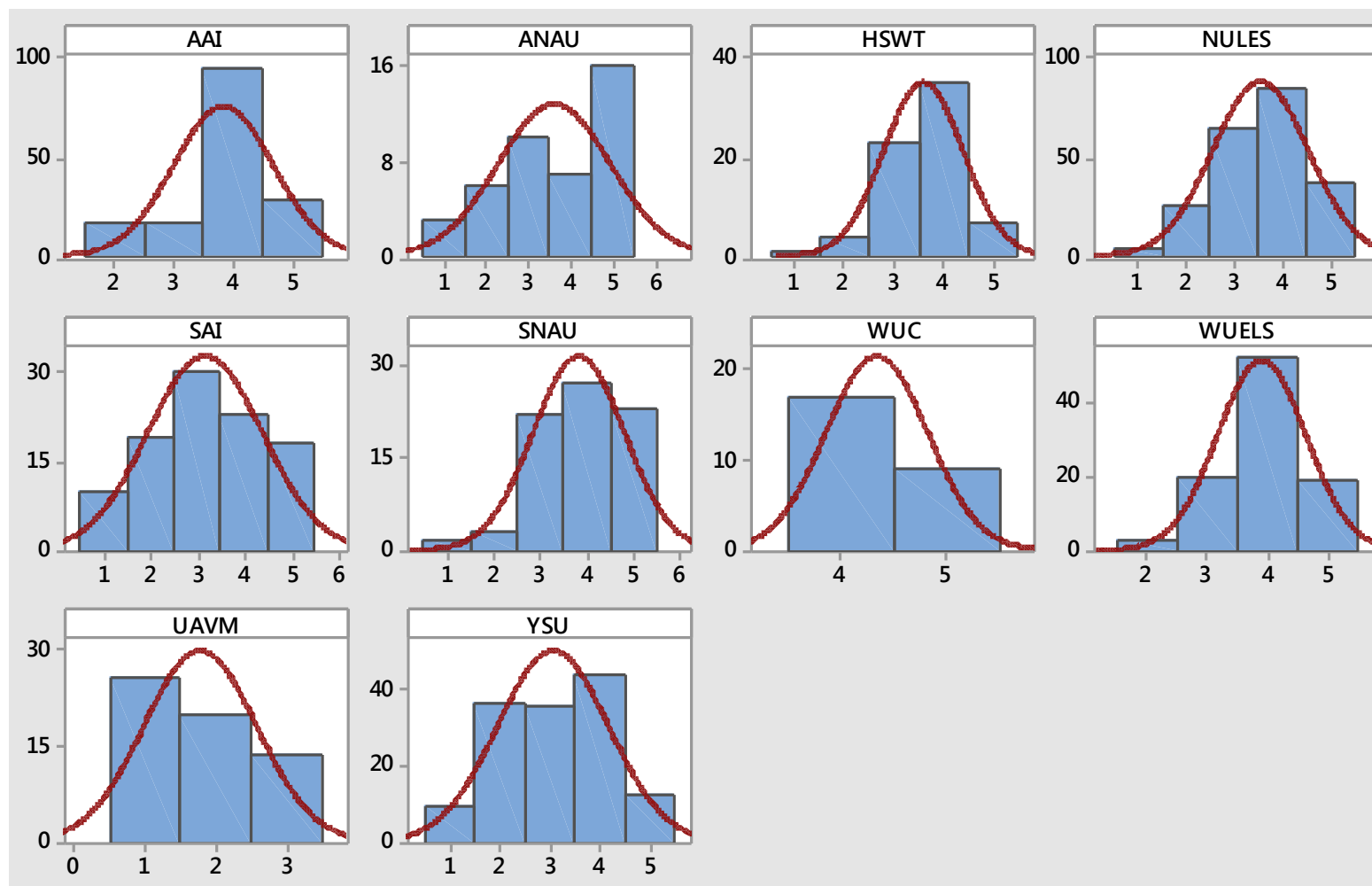
3.8. STUDENTS SURVEY. discuss - TEACHERS EFFECTIVELY DIRECT AND STIMULATE DISCUSSIONS



AAI
Mean 3,899
StDev 0,7996
N 158
ANAU
Mean 3,595
StDev 1,106
N 42
HSWT
Mean 3,371
StDev 0,8875
N 70
NULES
Mean 3,569
StDev 1,005
N 216
SAI
Mean 3,53
StDev 1,010
N 100
SNAU
Mean 3,779
StDev 0,9545
N 77
WUC
Mean 4,462
StDev 0,5084
N 26
WUELS
Mean 2,926
StDev 0,9643
N 94
UAVM
Mean 3,783
StDev 0,8045
N 60
YSU
Mean 3,543
StDev 1,108
N 140



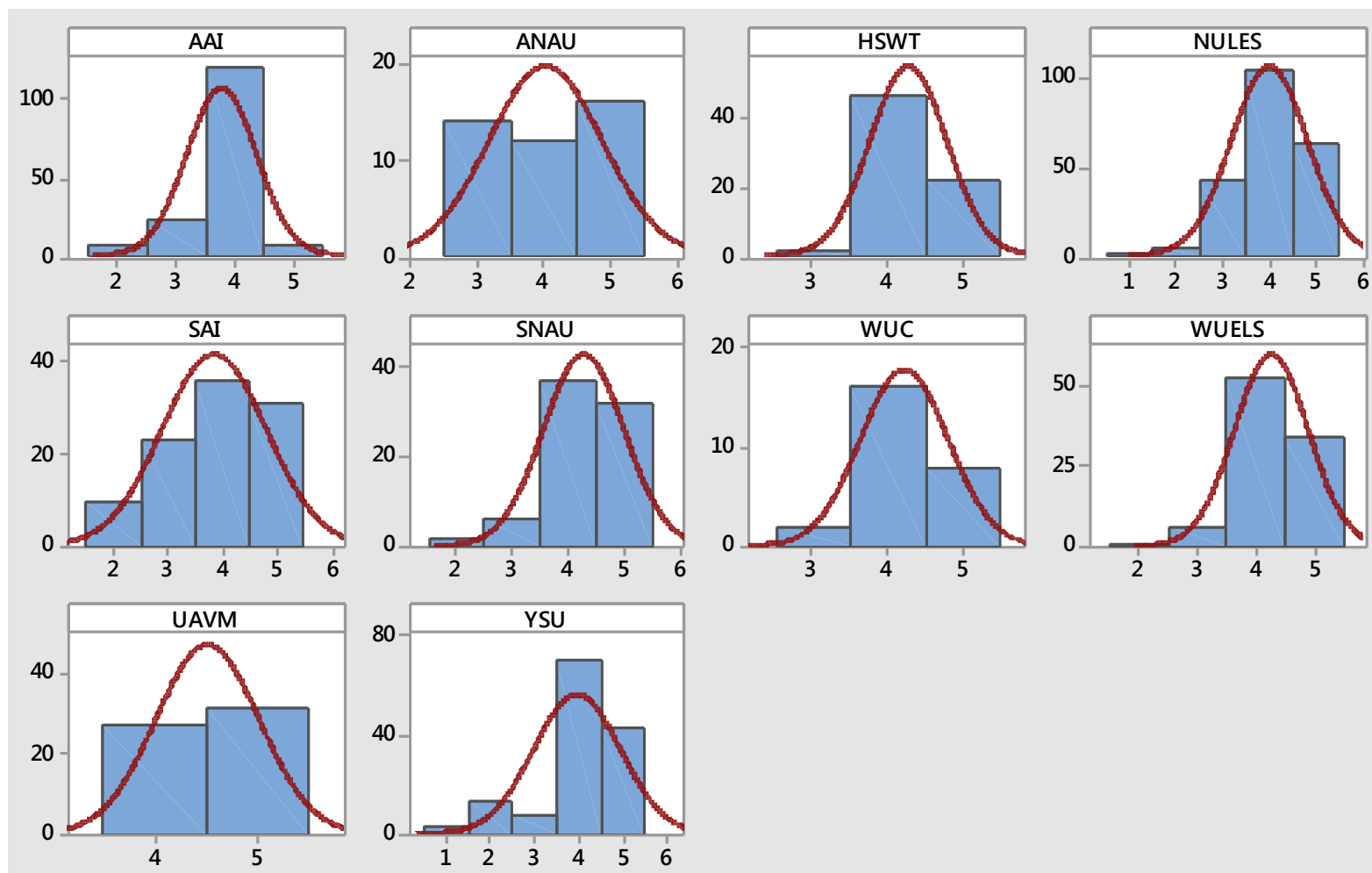
3.9. STUDENTS SURVEY. oclass - TEACHERS ARE AVAILABLE OUTSIDE OF CLASS



AAI	
Mean	3.861
StDev	0.8406
N	158
ANAU	
Mean	3.643
StDev	1.322
N	42
HSWT	
Mean	3.614
StDev	0.8038
N	70
NULES	
Mean	3.565
StDev	0.9862
N	216
SAI	
Mean	3.2
StDev	1.231
N	100
SNAU	
Mean	3.857
StDev	0.9829
N	77
WUC	
Mean	4.346
StDev	0.4852
N	26
WUELS	
Mean	3.926
StDev	0.7367
N	94
UAVM	
Mean	1.8
StDev	0.7983
N	60
YSU	
Mean	3.093
StDev	1.112
N	140



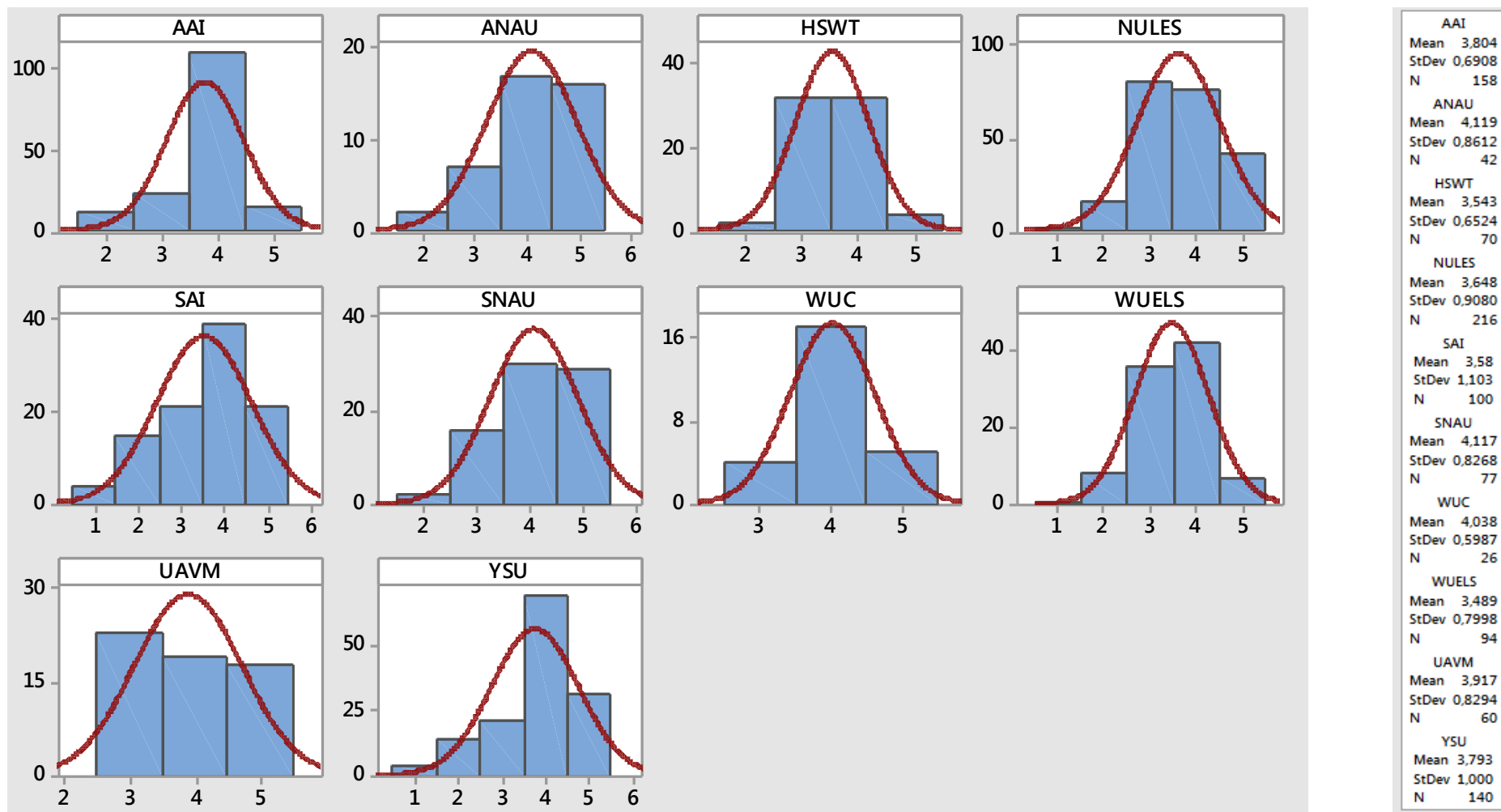
3.10. STUDENTS SURVEY. prep - TEACHERS SEEM WELL PREPARED



AAI
Mean 3,797
StDev 0,5947
N 158
ANAU
Mean 4,048
StDev 0,8540
N 42
HSWT
Mean 4,286
StDev 0,5148
N 70
NULES
Mean 4,023
StDev 0,8152
N 216
SAI
Mean 3,88
StDev 0,9669
N 100
SNAU
Mean 4,286
StDev 0,7229
N 77
WUC
Mean 4,231
StDev 0,5870
N 26
WUELS
Mean 4,277
StDev 0,6291
N 94
UAVM
Mean 4,533
StDev 0,5031
N 60
YSU
Mean 3,993
StDev 0,9855
N 140

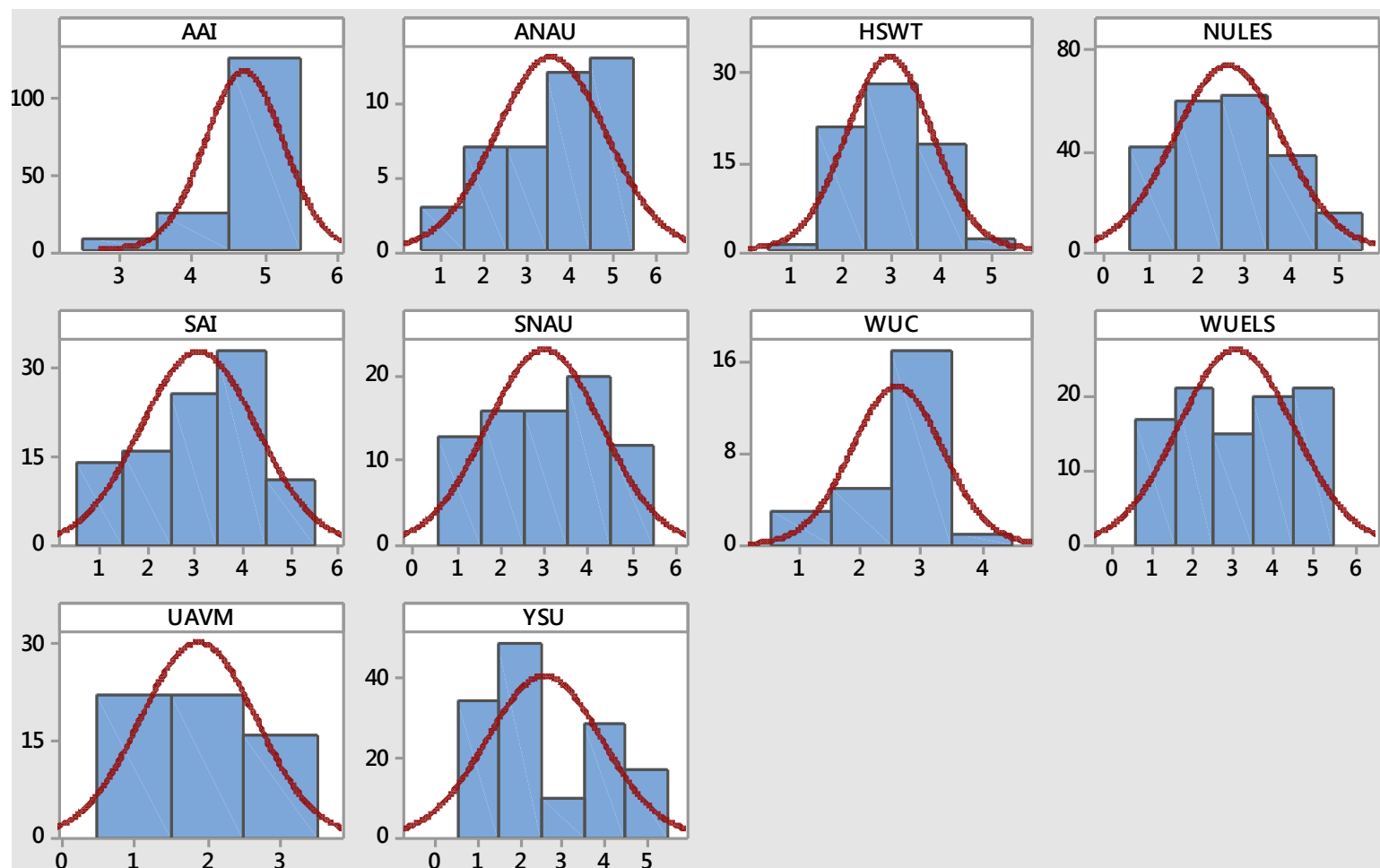


3.11. **STUDENTS SURVEY**. learnhelp - TEACHER ARE EFFECTIVE IN HELPING YOU LEARN





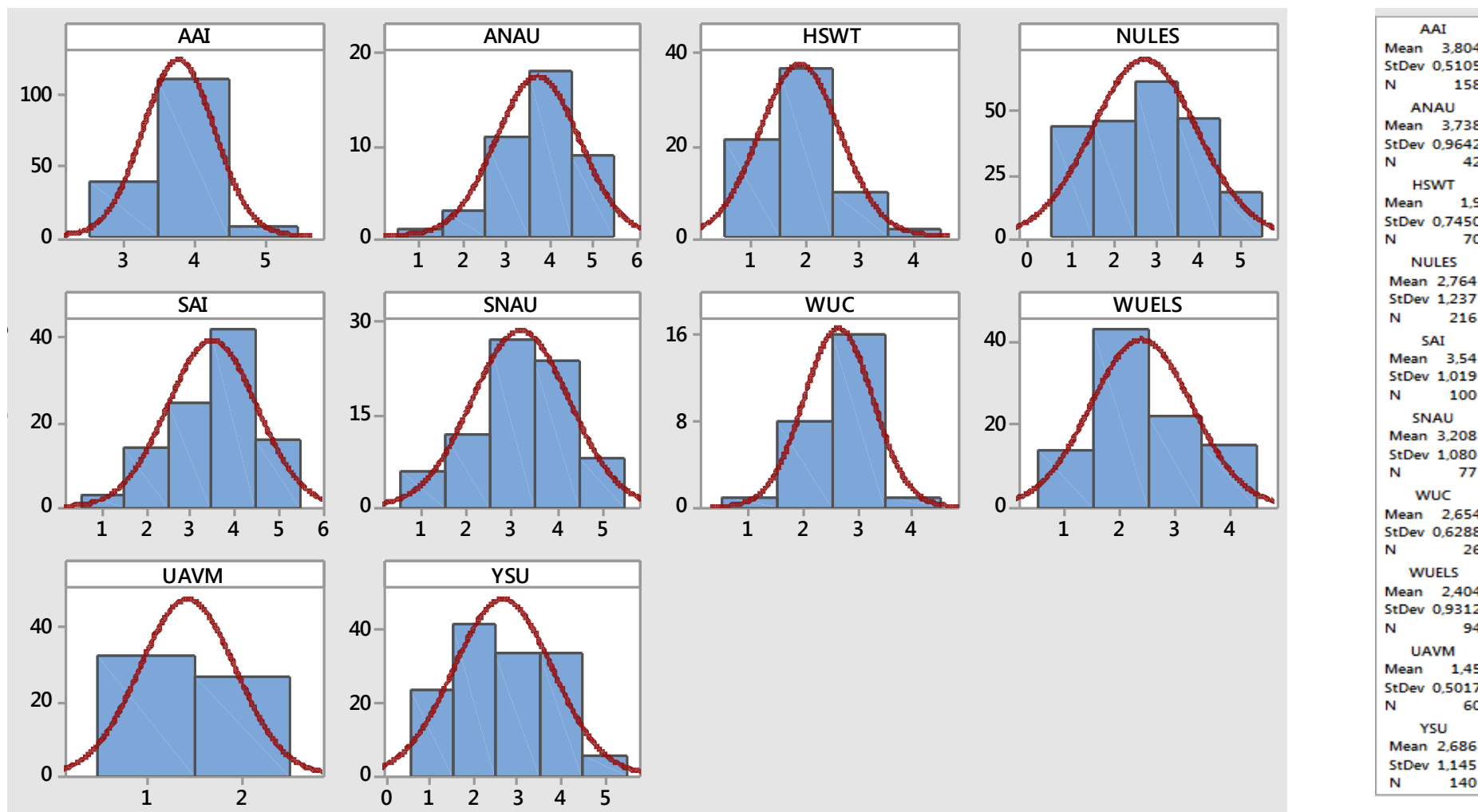
3.12. **STUDENTS SURVEY**. oevents - HOW OFTEN DID YOU ATTEND TEACHING EVENTS (LABS, SEMINARS ETC.) ASIDE OF LECTURES?



AAI
Mean 4,747
StDev 0,5405
N 158
ANAU
Mean 3,595
StDev 1,289
N 42
HSWT
Mean 2,986
StDev 0,8596
N 70
NULES
Mean 2,657
StDev 1,175
N 216
SAI
Mean 3,11
StDev 1,222
N 100
SNAU
Mean 3,026
StDev 1,337
N 77
WUC
Mean 2,615
StDev 0,7524
N 26
WUELS
Mean 3,074
StDev 1,439
N 94
UAVM
Mean 1,9
StDev 0,7962
N 60
YSU
Mean 2,6
StDev 1,377
N 140

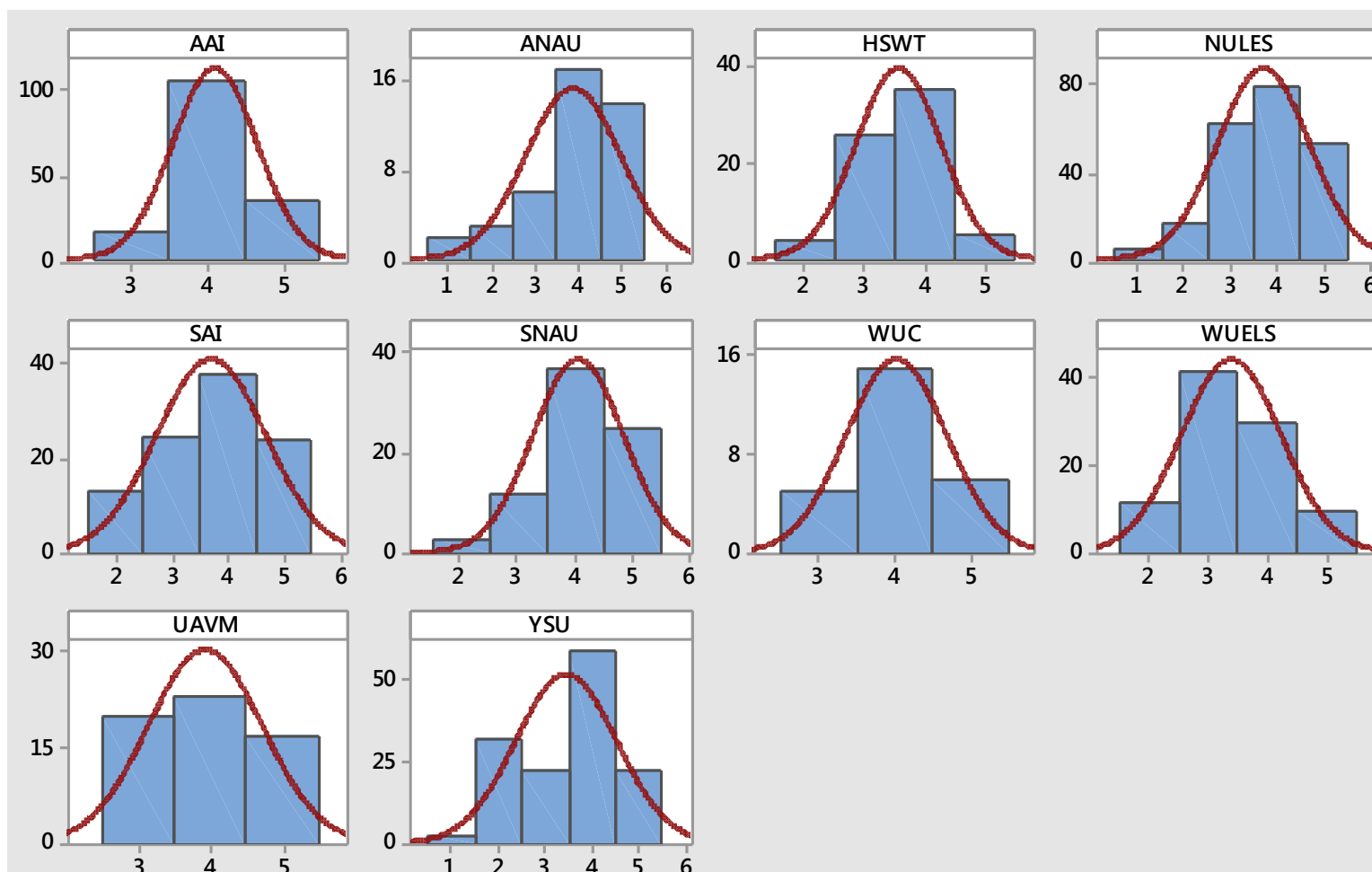


3.13. **STUDENTS SURVEY**. ohours - HOW OFTEN DID YOU TAKE ADVANTAGE OF TEACHERS' OFFICE HOURS?





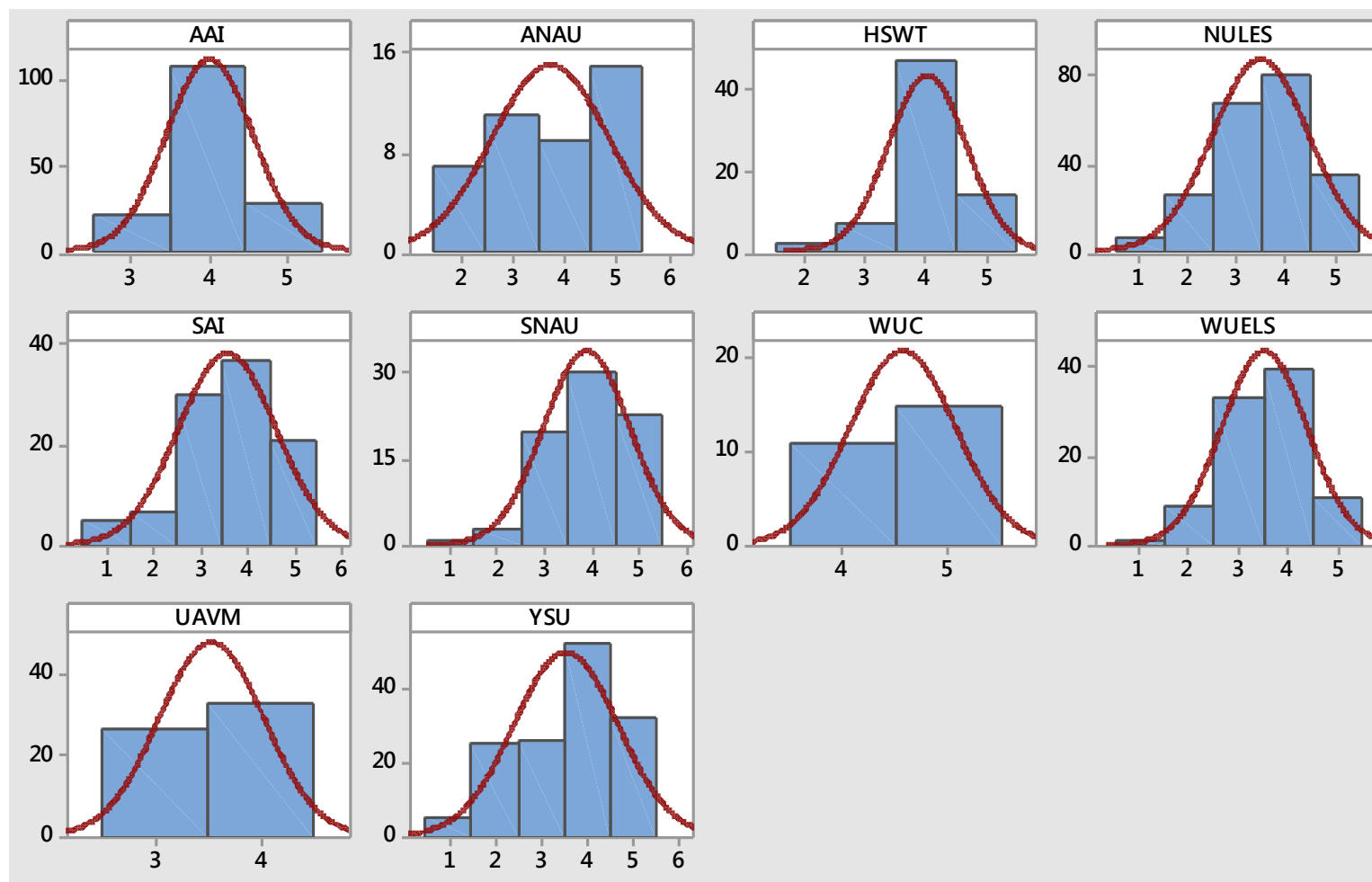
3.14. **STUDENTS SURVEY.** Relate - TEACHERS ARE EFFECTIVE IN RELATING LECTURE MATERIAL TO DISCUSSIONS AND QUESTIONS ON OBSERVATIONS IN PRACTICE.



AAI
Mean 4.127
StDev 0.5613
N 158
ANAU
Mean 3.905
StDev 1.100
N 42
HSWT
Mean 3.586
StDev 0.7121
N 70
NULES
Mean 3.731
StDev 0.9940
N 216
SAI
Mean 3.73
StDev 0.9729
N 100
SNAU
Mean 4.091
StDev 0.7977
N 77
WUC
Mean 4.038
StDev 0.6622
N 26
WUELS
Mean 3.404
StDev 0.8465
N 94
UAVM
Mean 3.95
StDev 0.7903
N 60
YSU
Mean 3.479
StDev 1.083
N 140



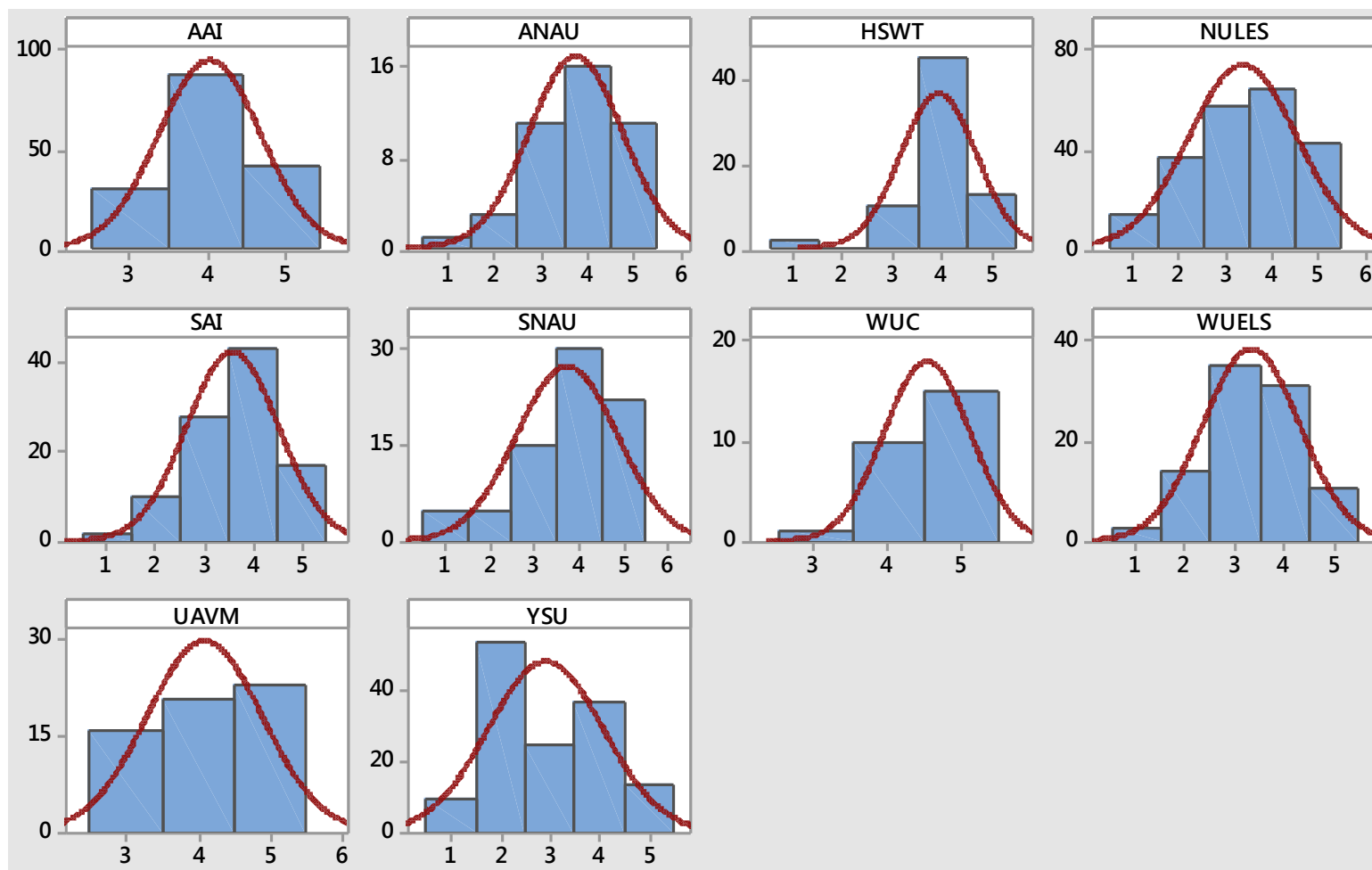
3.15. **STUDENTS SURVEY.** profco - TEACHING CONTENTS IMPROVED MY PROFESSIONAL COMPETENCES SIGNIFICANTLY



AAI	
Mean	4,044
StDev	0,5682
N	158
ANAU	
Mean	3,762
StDev	1,122
N	42
HSWT	
Mean	4,043
StDev	0,6469
N	70
NULES	
Mean	3,523
StDev	0,9927
N	216
SAI	
Mean	3,62
StDev	1,052
N	100
SNAU	
Mean	3,922
StDev	0,9143
N	77
WUC	
Mean	4,577
StDev	0,5038
N	26
WUELS	
Mean	3,543
StDev	0,8634
N	94
UAVM	
Mean	3,55
StDev	0,5017
N	60
YSU	
Mean	3,579
StDev	1,132
N	140



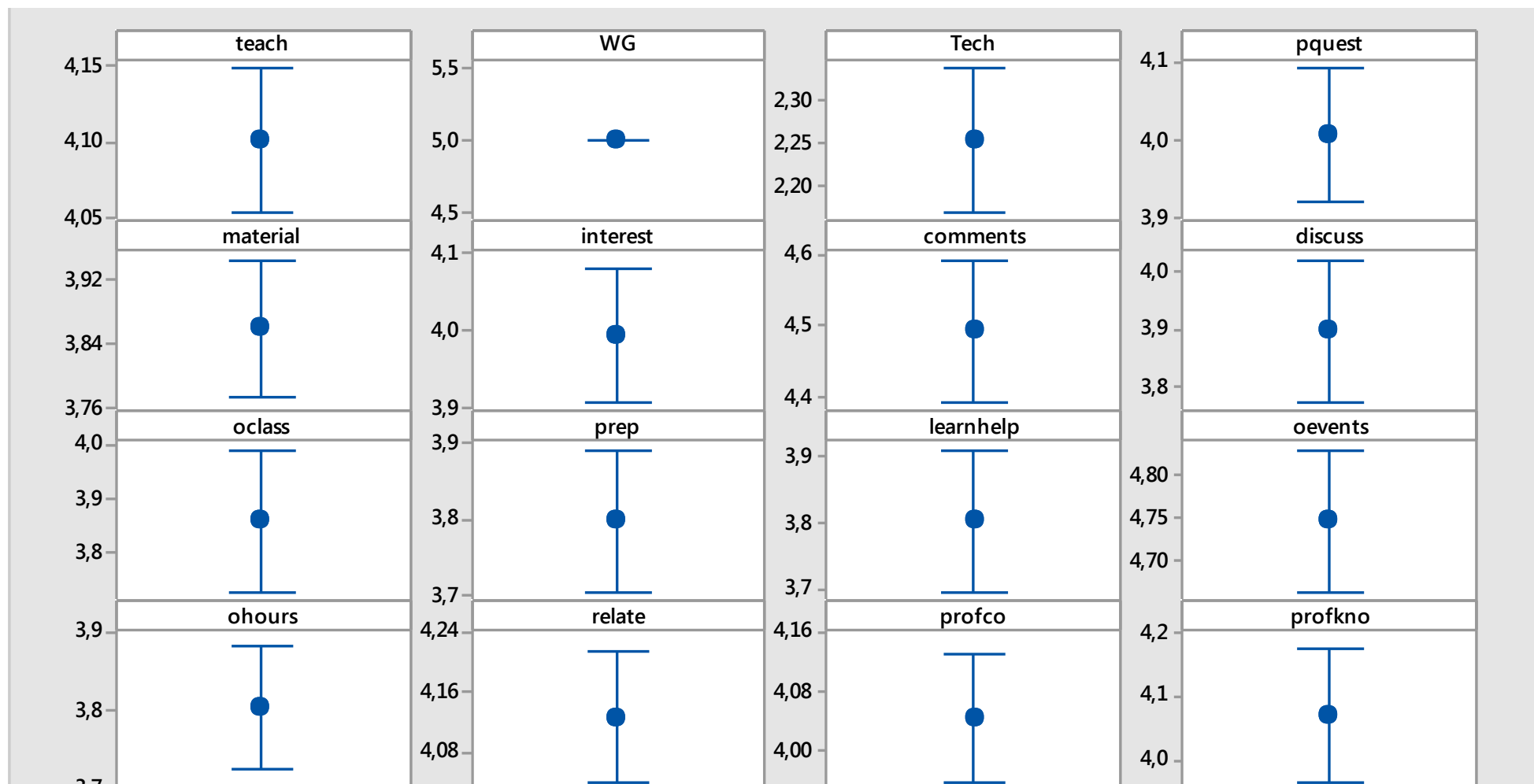
3.16. **STUDENTS SURVEY**. profkno - TEACHING CONTENTS IMPROVED MY PROFESSIONAL KNOWLEDGE MORE THAN MY READINGS FROM PUBLICATIONS (BOOKS, ARTICLES, INTERNET)



AAI
Mean 4,070
StDev 0,6688
N 158
ANAU
Mean 3,786
StDev 1,001
N 42
HSWT
Mean 3,957
StDev 0,7696
N 70
NULES
Mean 3,394
StDev 1,172
N 216
SAI
Mean 3,63
StDev 0,9498
N 100
SNAU
Mean 3,766
StDev 1,134
N 77
WUC
Mean 4,538
StDev 0,5818
N 26
WUELS
Mean 3,351
StDev 0,9805
N 94
UAVM
Mean 4,117
StDev 0,8045
N 60
YSU
Mean 2,936
StDev 1,158
N 140

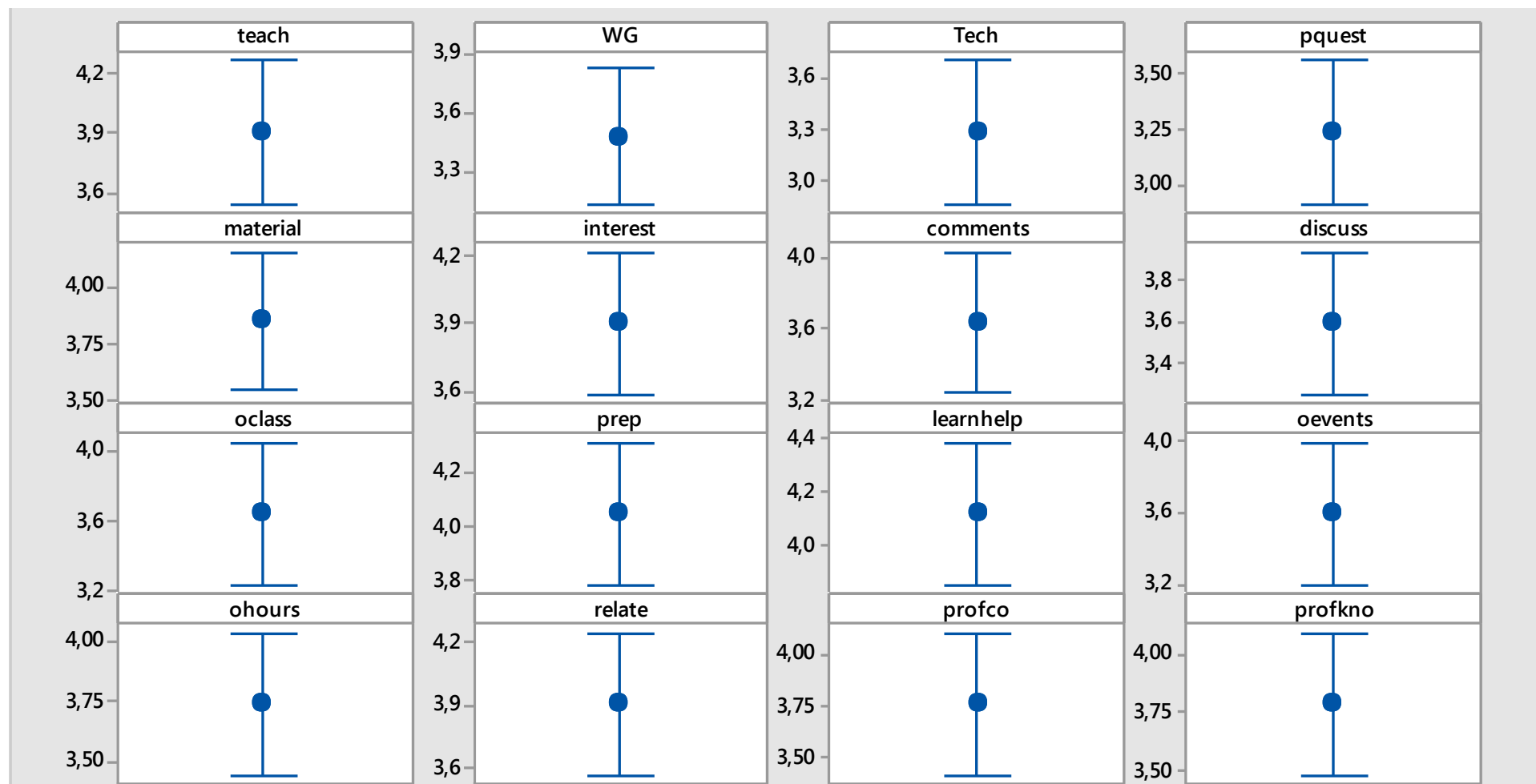


3.17. 1_AAI - STUDENTS RESPONSES AT A GLANCE



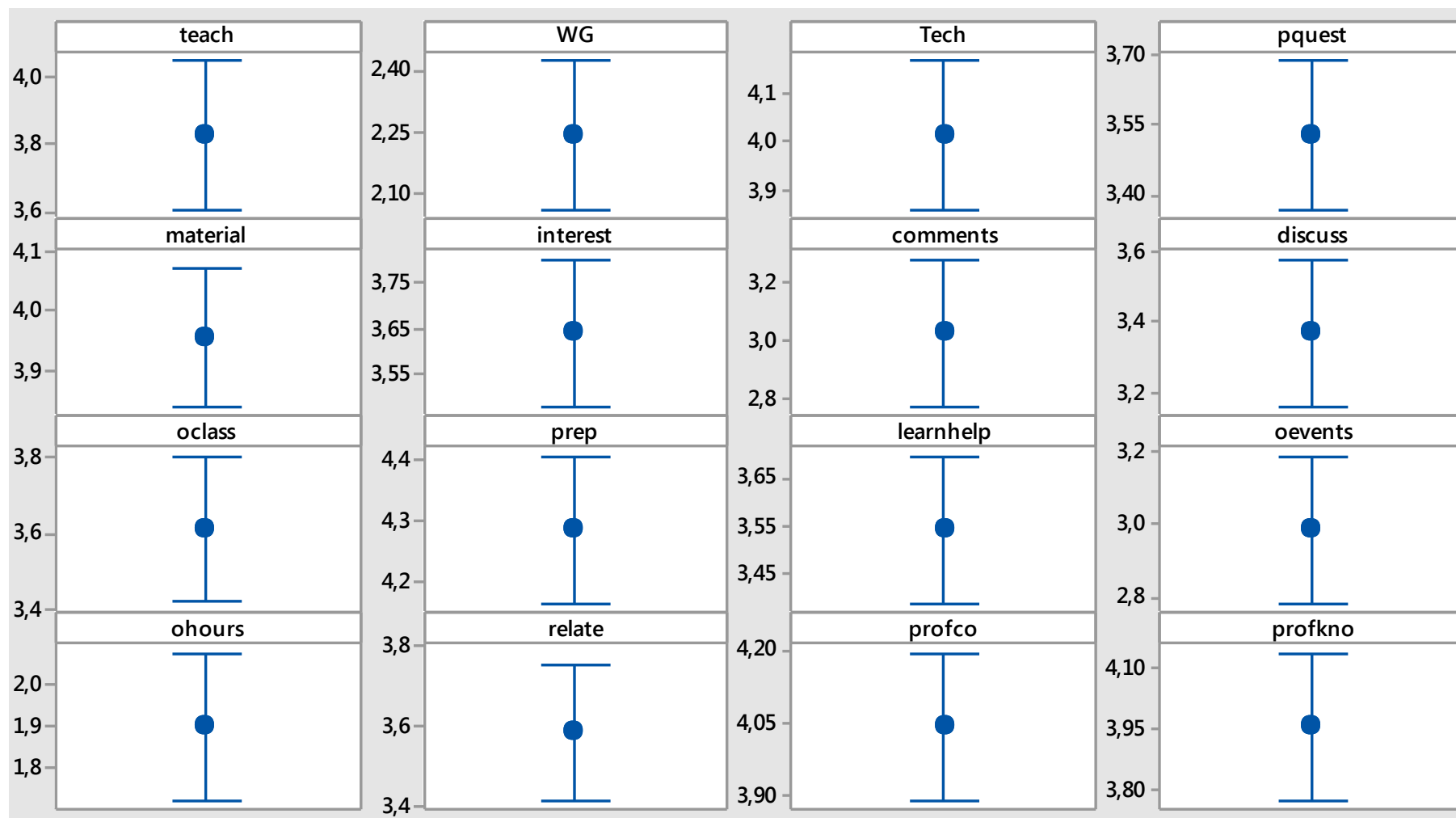


3.18. 2_ANAU - STUDENTS RESPONSES AT A GLANCE



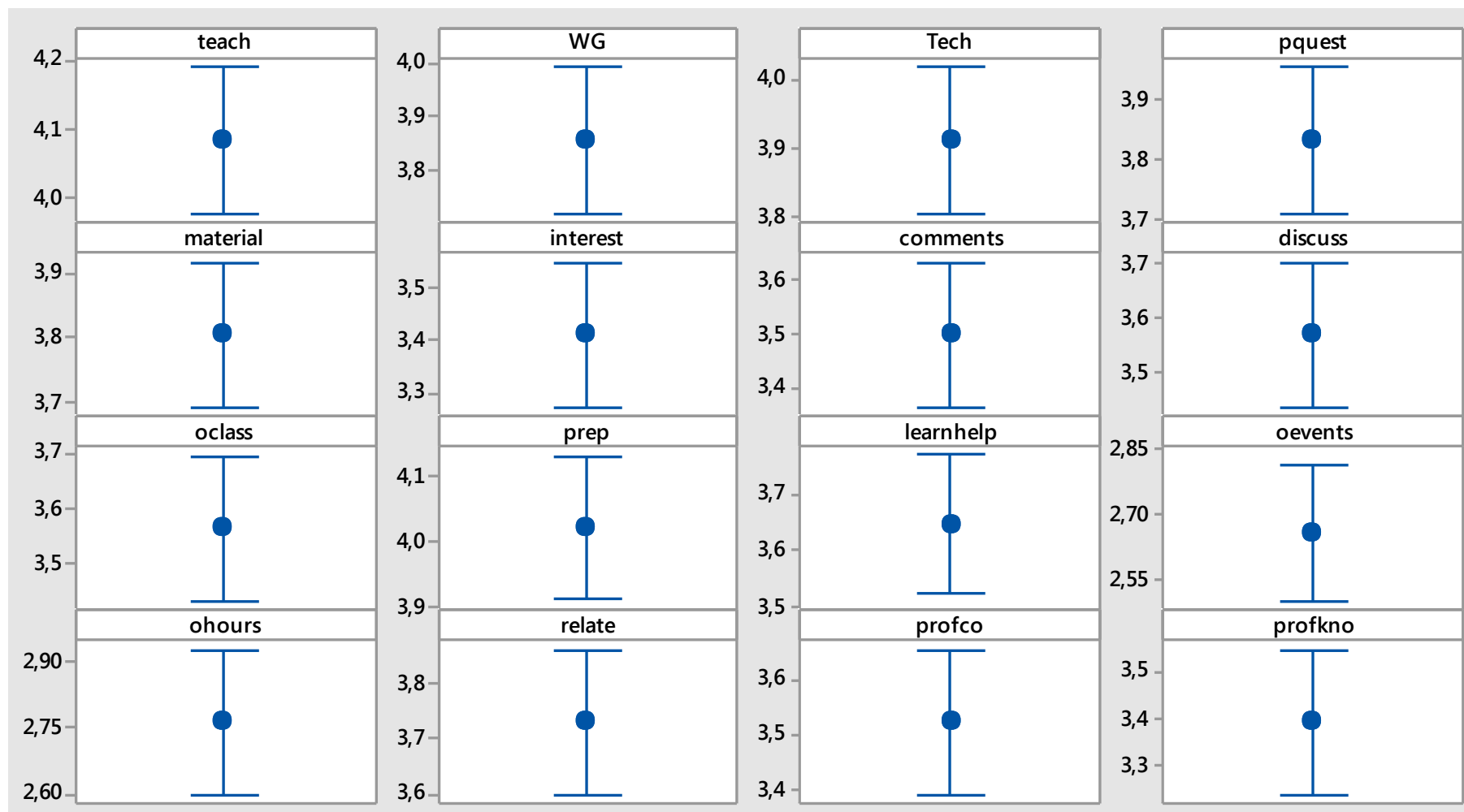


3.19. 3_HSWT - STUDENTS RESPONSES AT A GLANCE



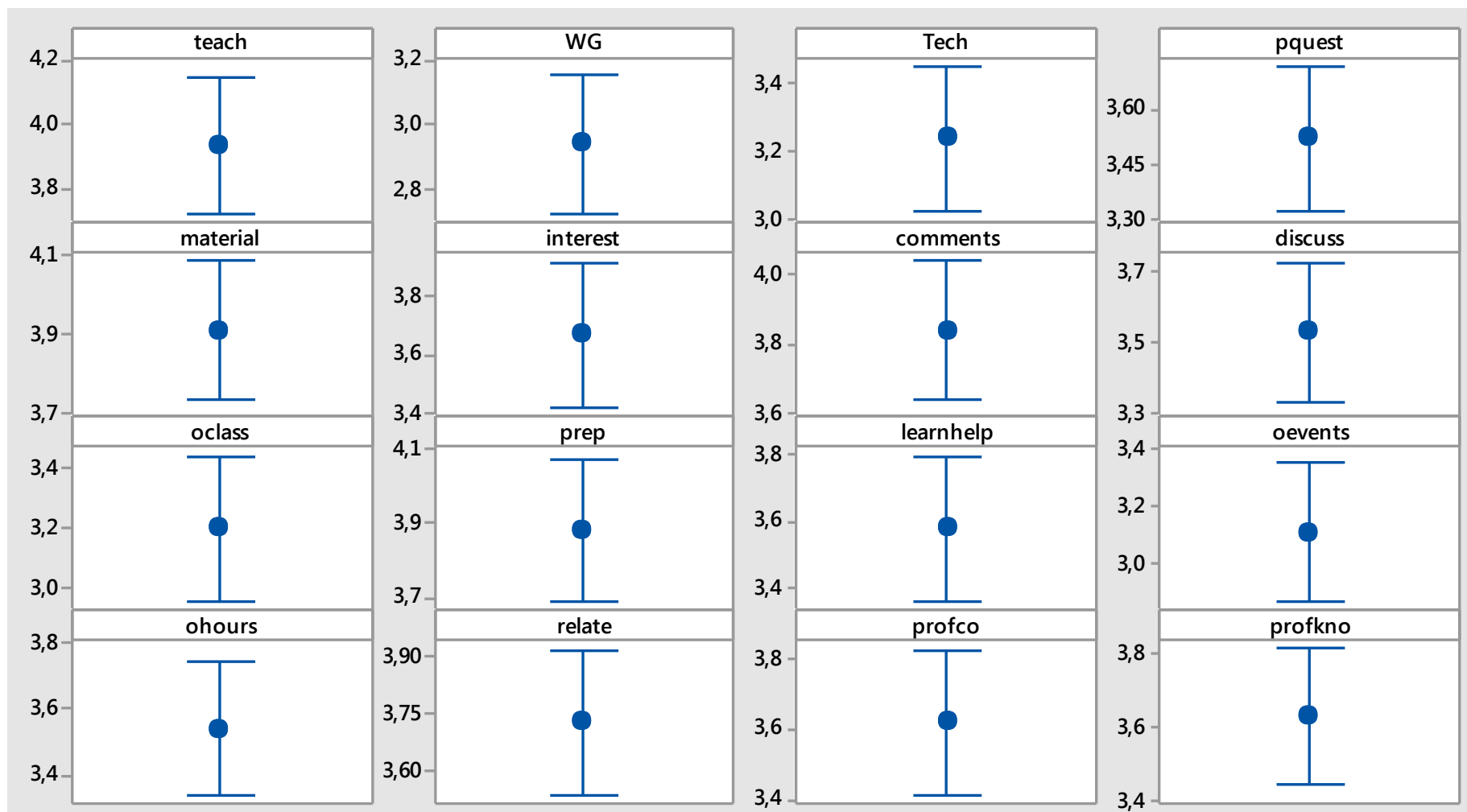


3.20. 4_NULES - STUDENTS RESPONSES AT A GLANCE



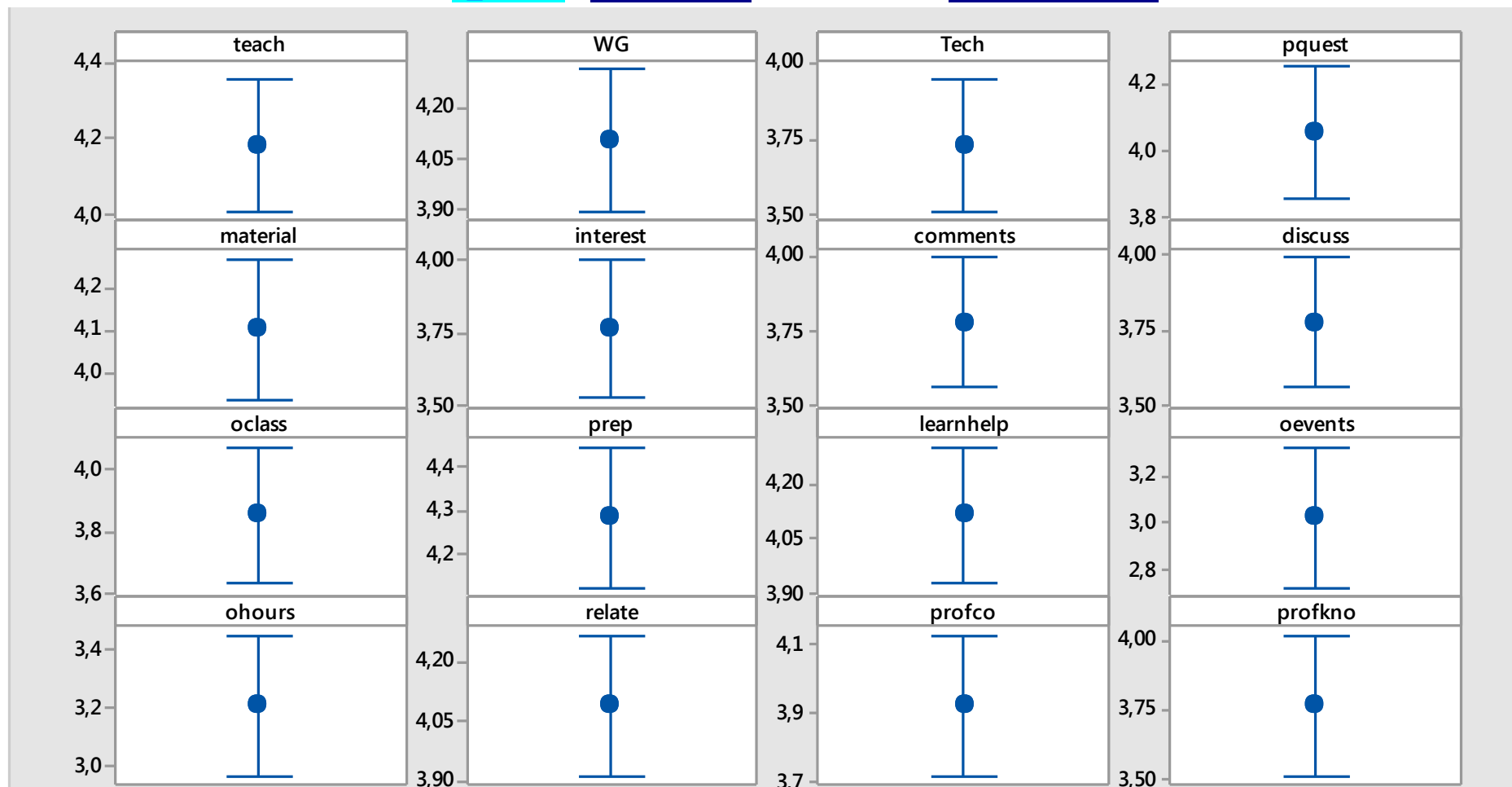


3.21. 5_SAI - STUDENTS RESPONSES AT A GLANCE



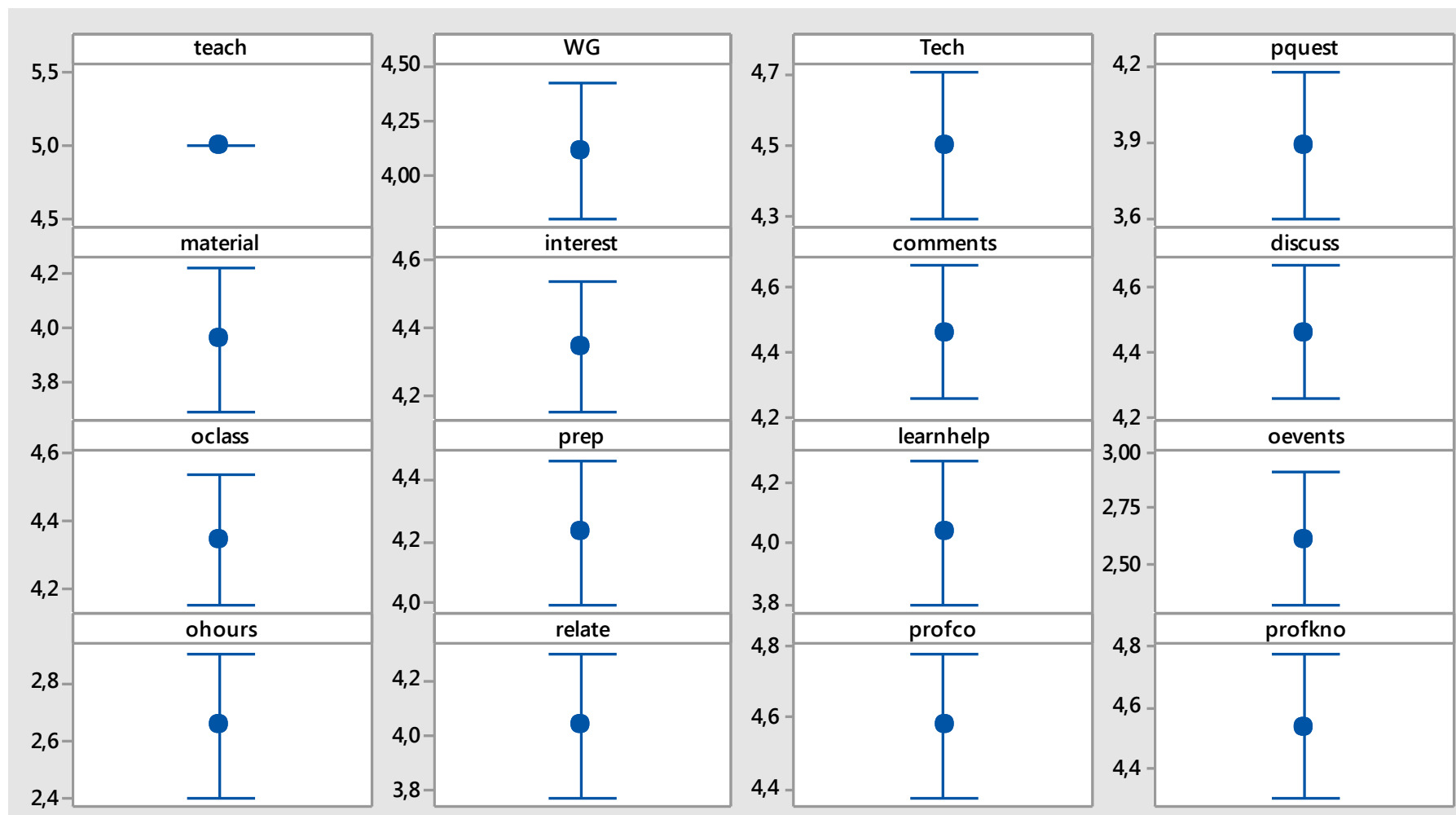


3.22. 6_SNAU - STUDENTS RESPONSES AT A GLANCE



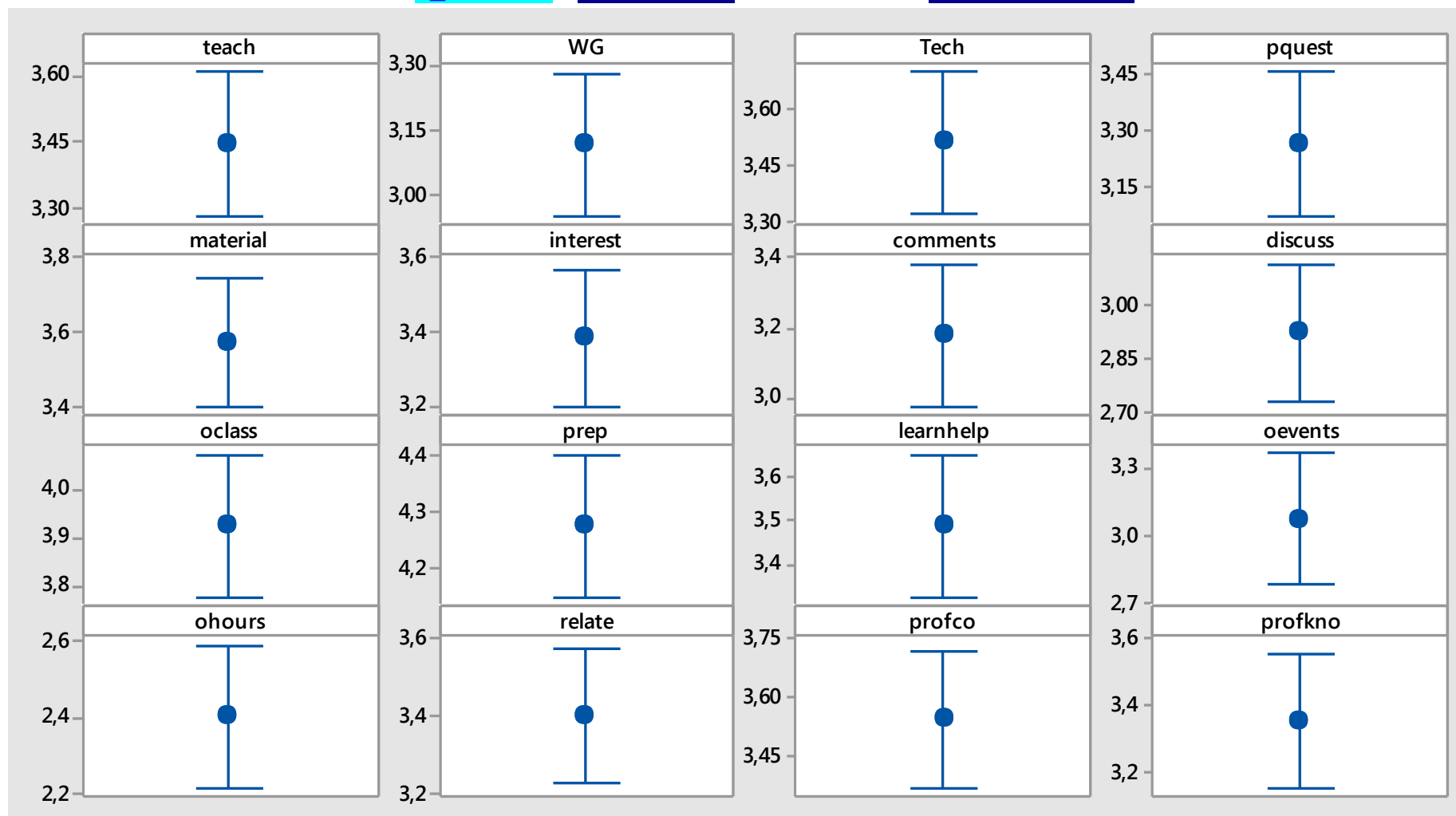


3.23. 7_WUC - STUDENTS RESPONSES AT A GLANCE



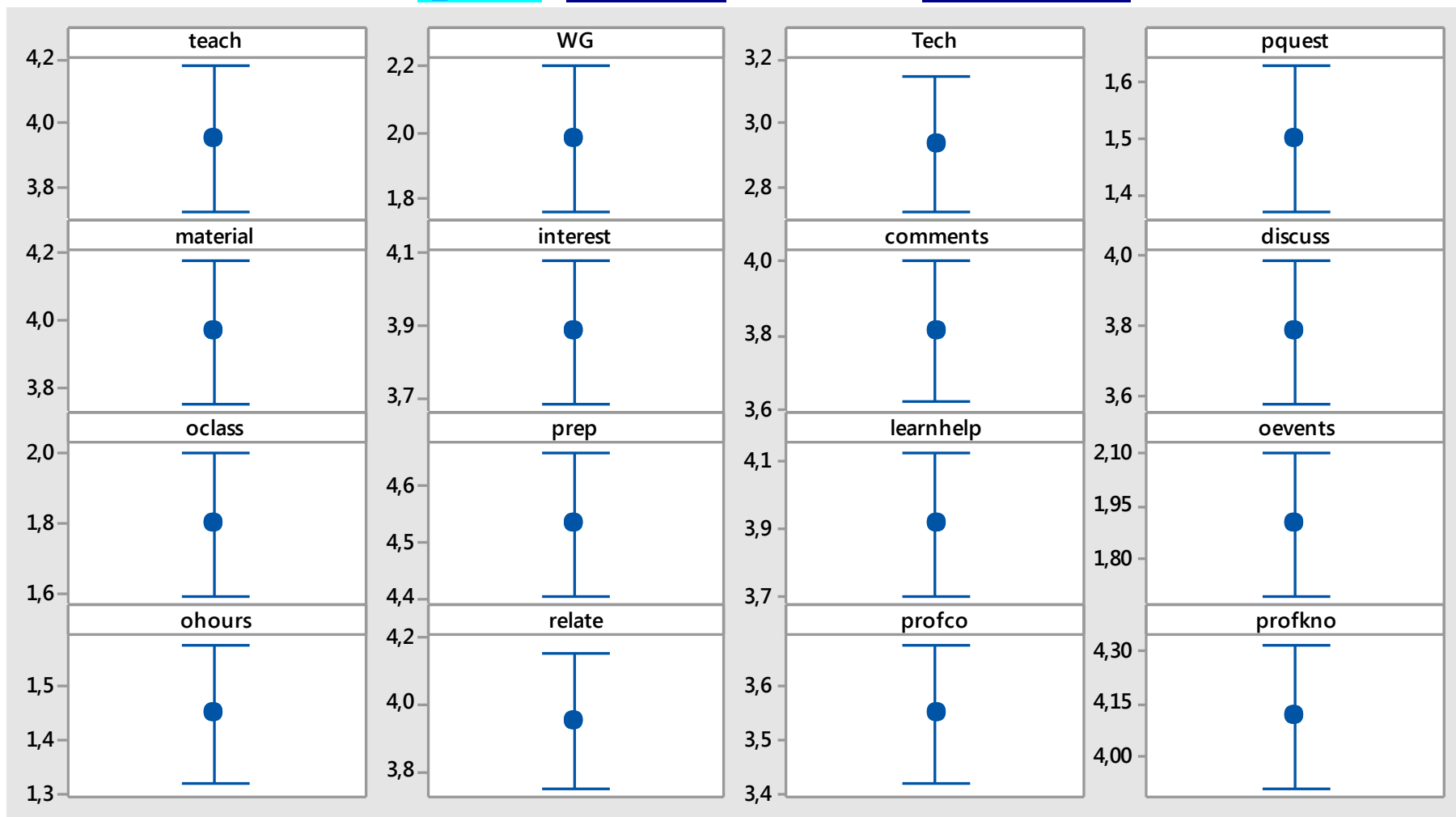


3.24. **8_WUELS** - **STUDENTS** RESPONSES **AT A GLANCE**



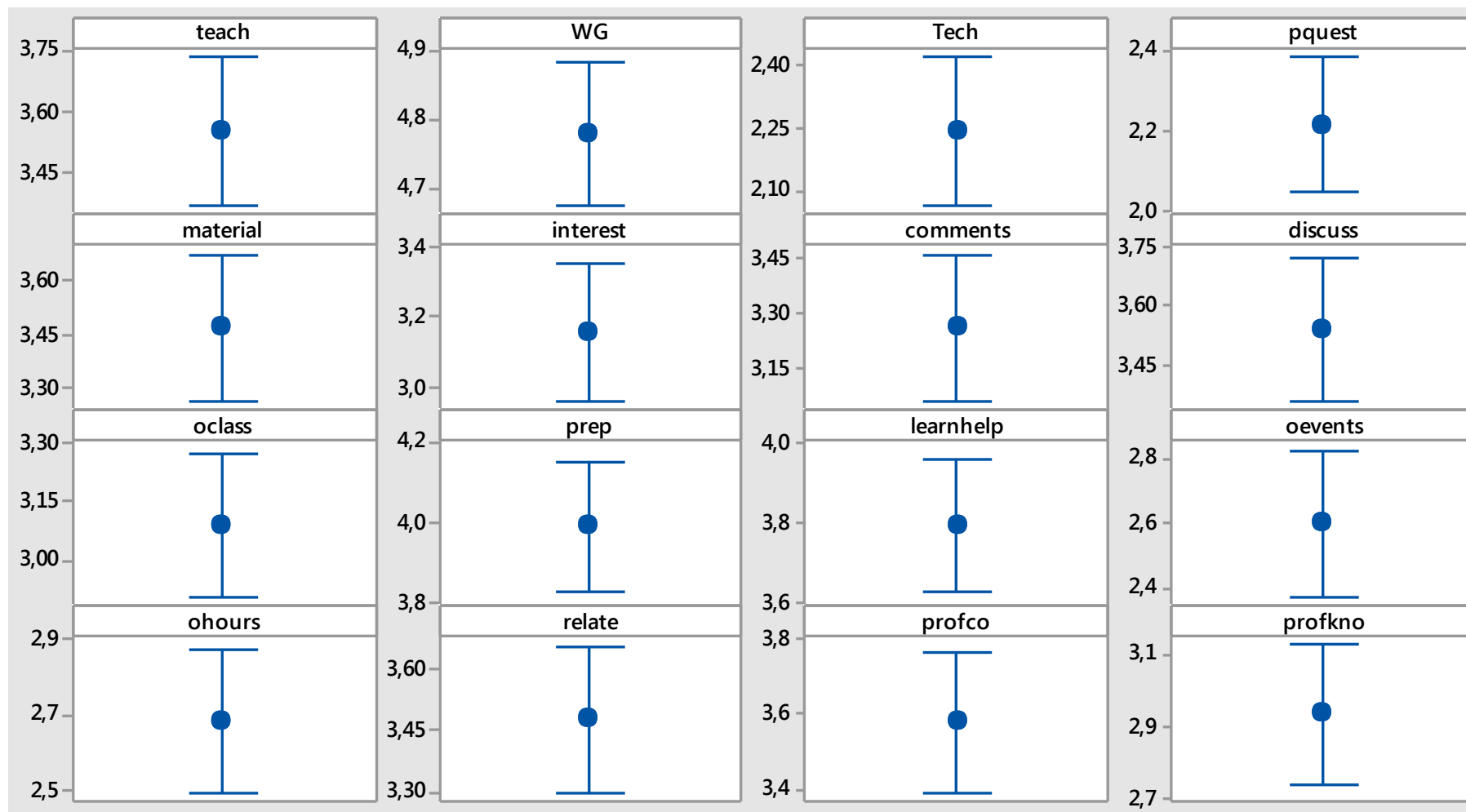


3.25. 9_UAVM - STUDENTS RESPONSES AT A GLANCE





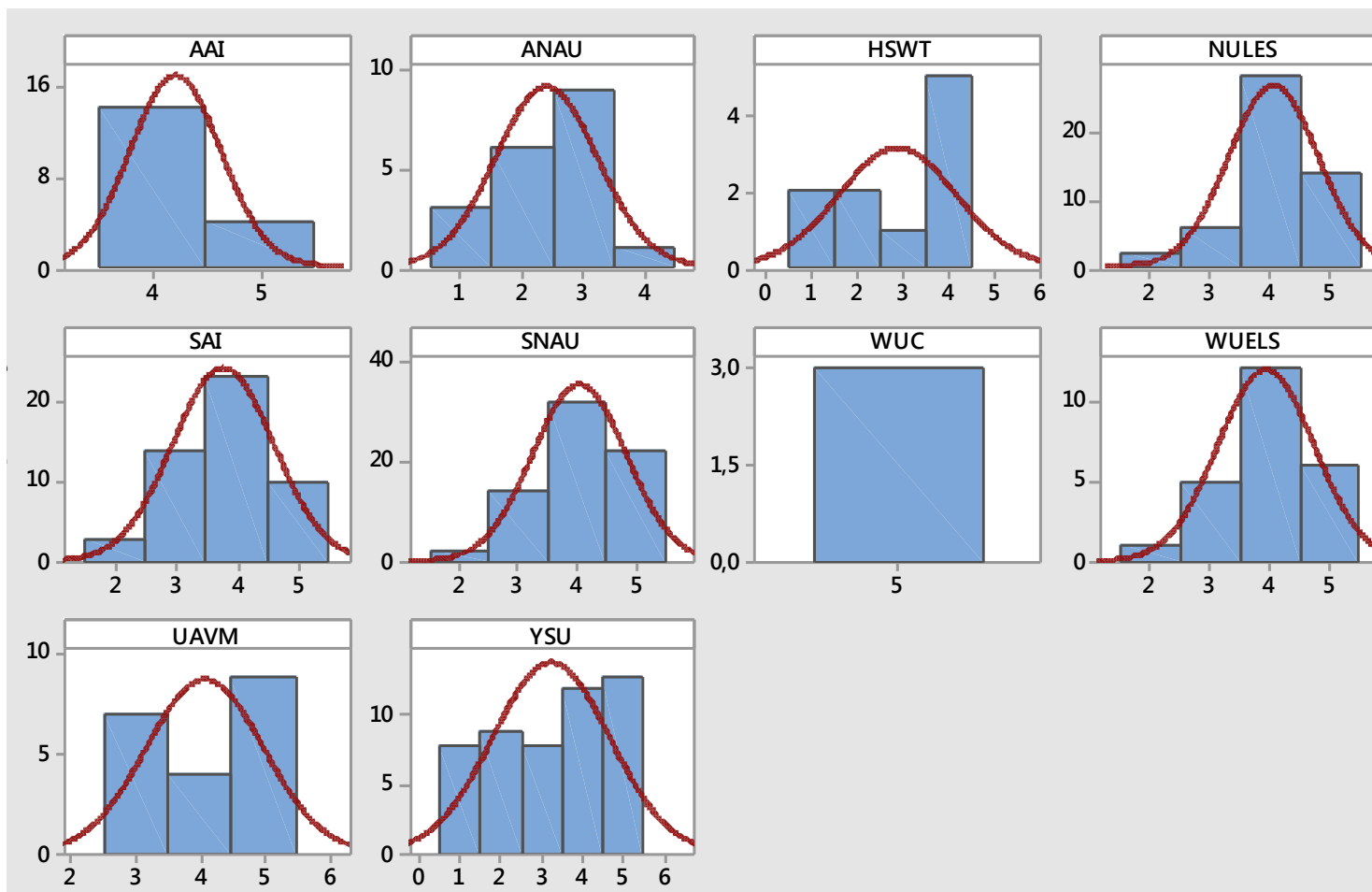
3.26. 10_YSU - STUDENTS RESPONSES AT A GLANCE





4. TEACHERS SURVEY

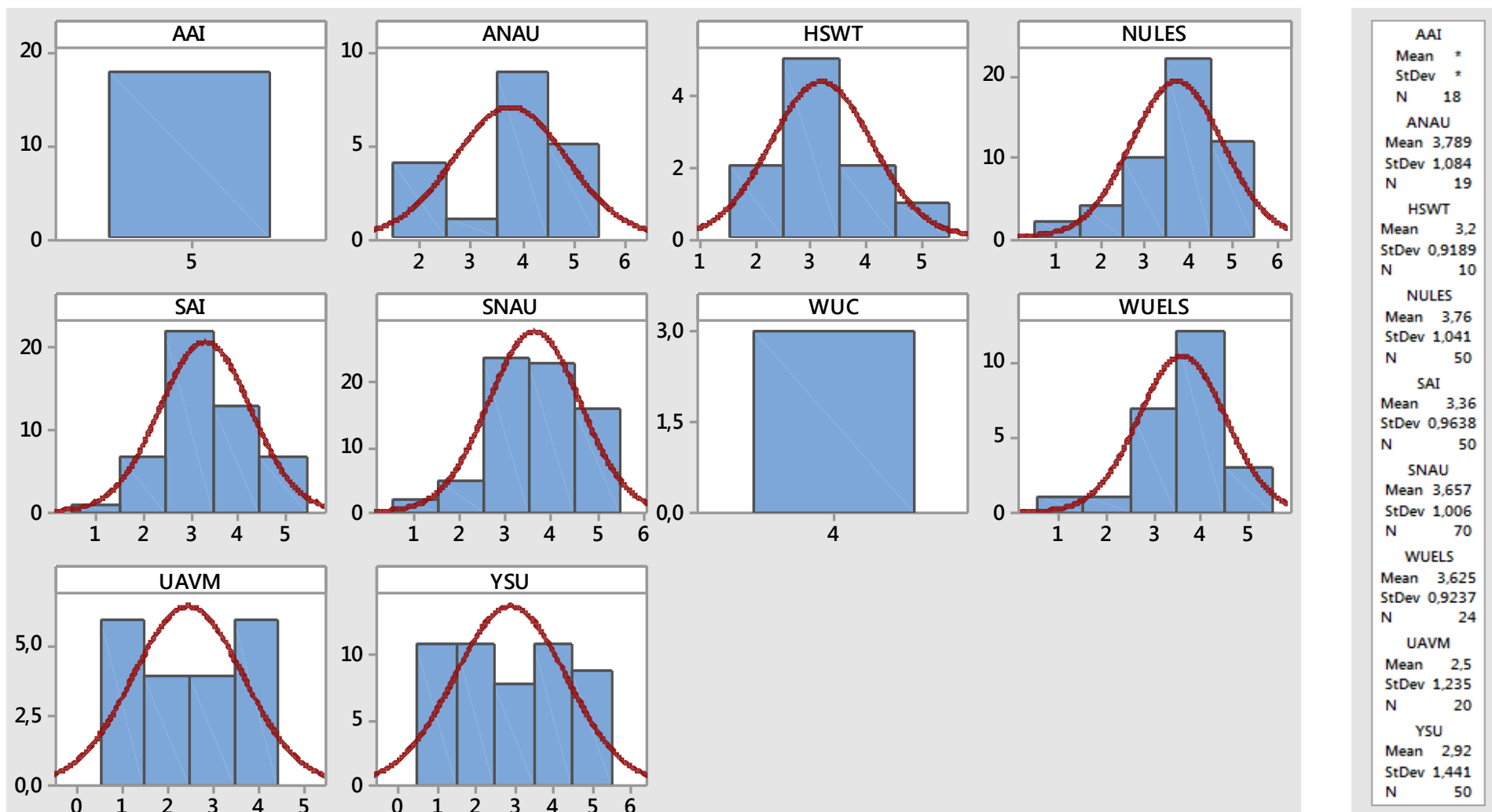
4.1. **TEACHERS SURVEY** - Ft - MY COURSES RELY ON FRONTAL TEACHING



AAI
Mean 4,222
StDev 0,4278
N 18
ANAU
Mean 2,421
StDev 0,8377
N 19
HSWT
Mean 2,9
StDev 1,287
N 10
NULES
Mean 4,08
StDev 0,7516
N 50
SAI
Mean 3,8
StDev 0,8330
N 50
SNAU
Mean 4,057
StDev 0,7965
N 70
WUELS
Mean 3,958
StDev 0,8065
N 24
UAVM
Mean 4,1
StDev 0,9119
N 20
YSU
Mean 3,26
StDev 1,440
N 50

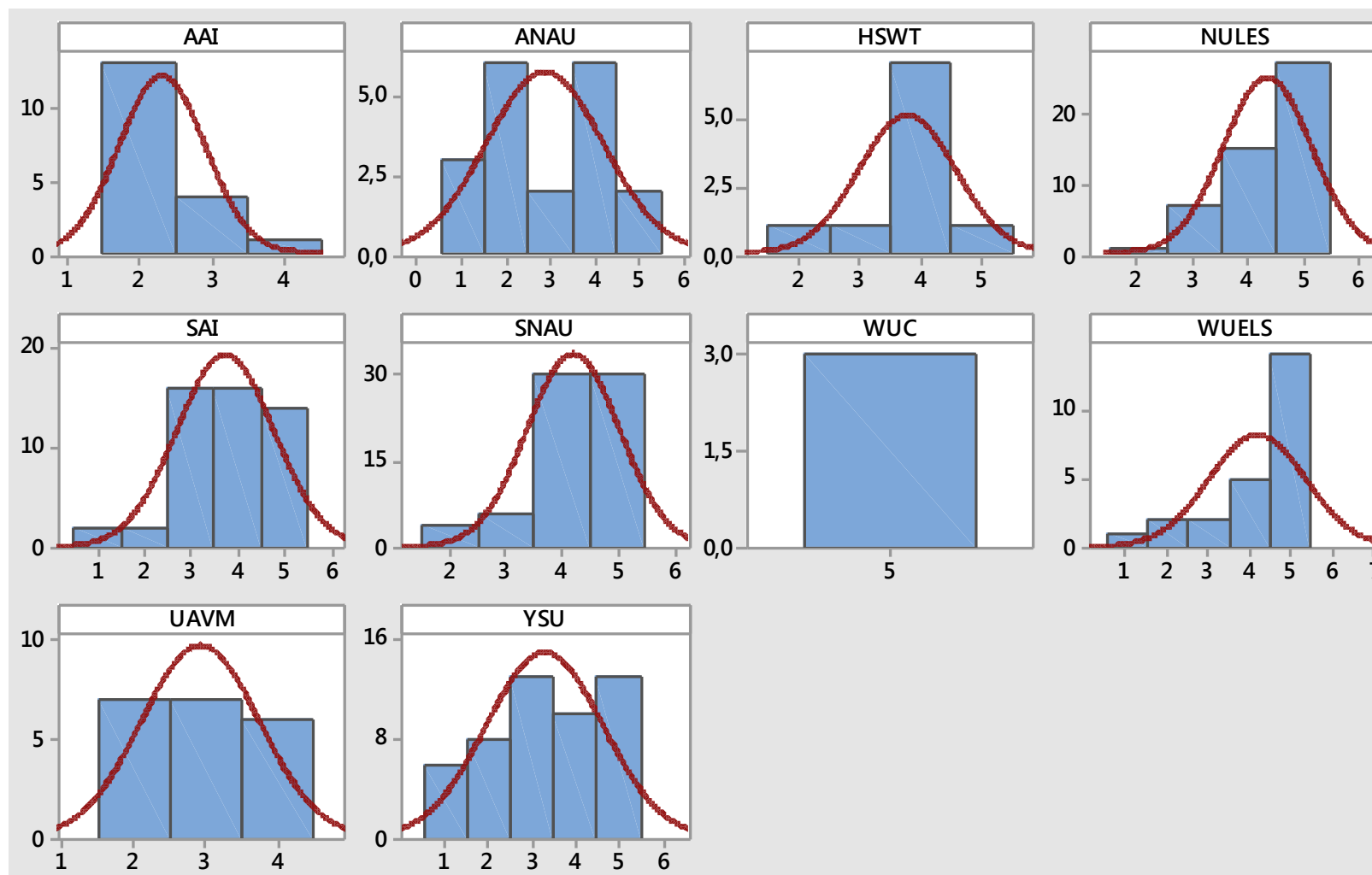


4.2. **TEACHERS SURVEY** - wg - MY COURSES ARE BASED ON STUDENTS' WORKING GROUPS





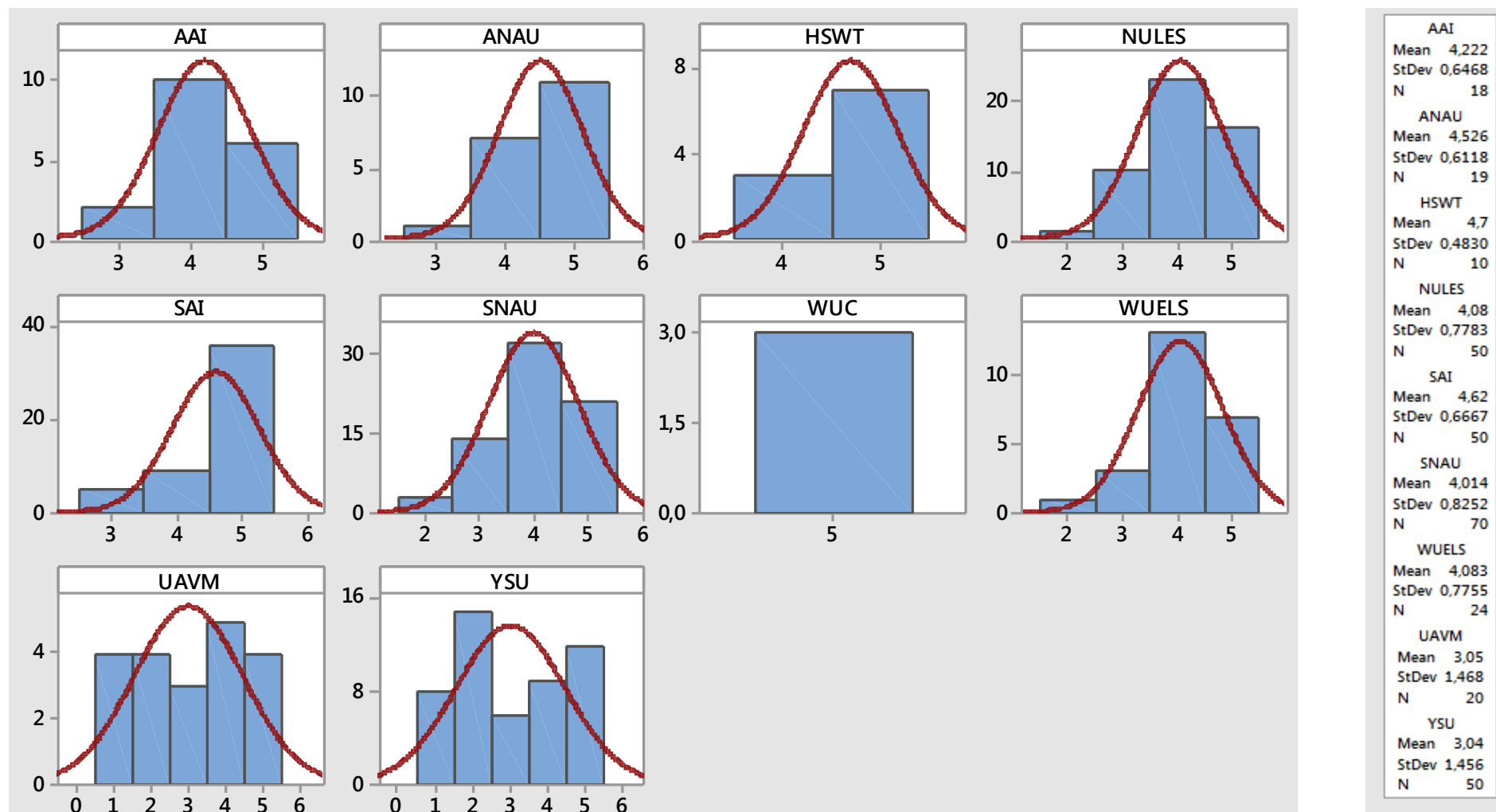
4.3. **TEACHERS SURVEY** - itt - I USE INTERNET-TECHNOLOGIES FOR TEACHING



AAI	
Mean	2,333
StDev	0,5941
N	18
ANAU	
Mean	2,895
StDev	1,329
N	19
HSWT	
Mean	3,8
StDev	0,7888
N	10
NULES	
Mean	4,36
StDev	0,8020
N	50
SAI	
Mean	3,76
StDev	1,041
N	50
SNAU	
Mean	4,229
StDev	0,8370
N	70
WUELS	
Mean	4,208
StDev	1,179
N	24
UAVM	
Mean	2,95
StDev	0,8256
N	20
YSU	
Mean	3,32
StDev	1,347
N	50

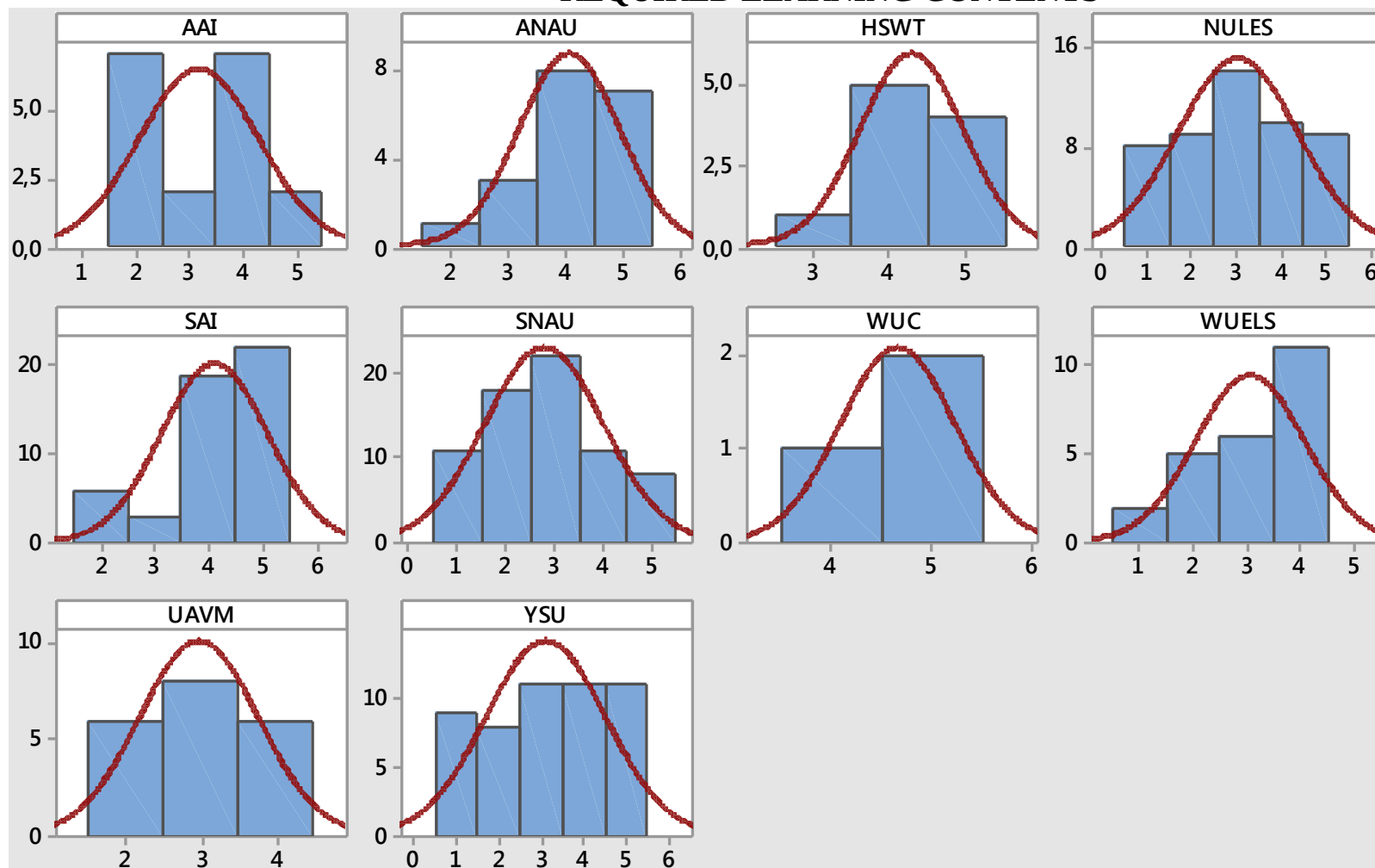


4.4. **TEACHERS SURVEY** - squest - MY STUDENTS POSE QUESTIONS DURING MY COURSES





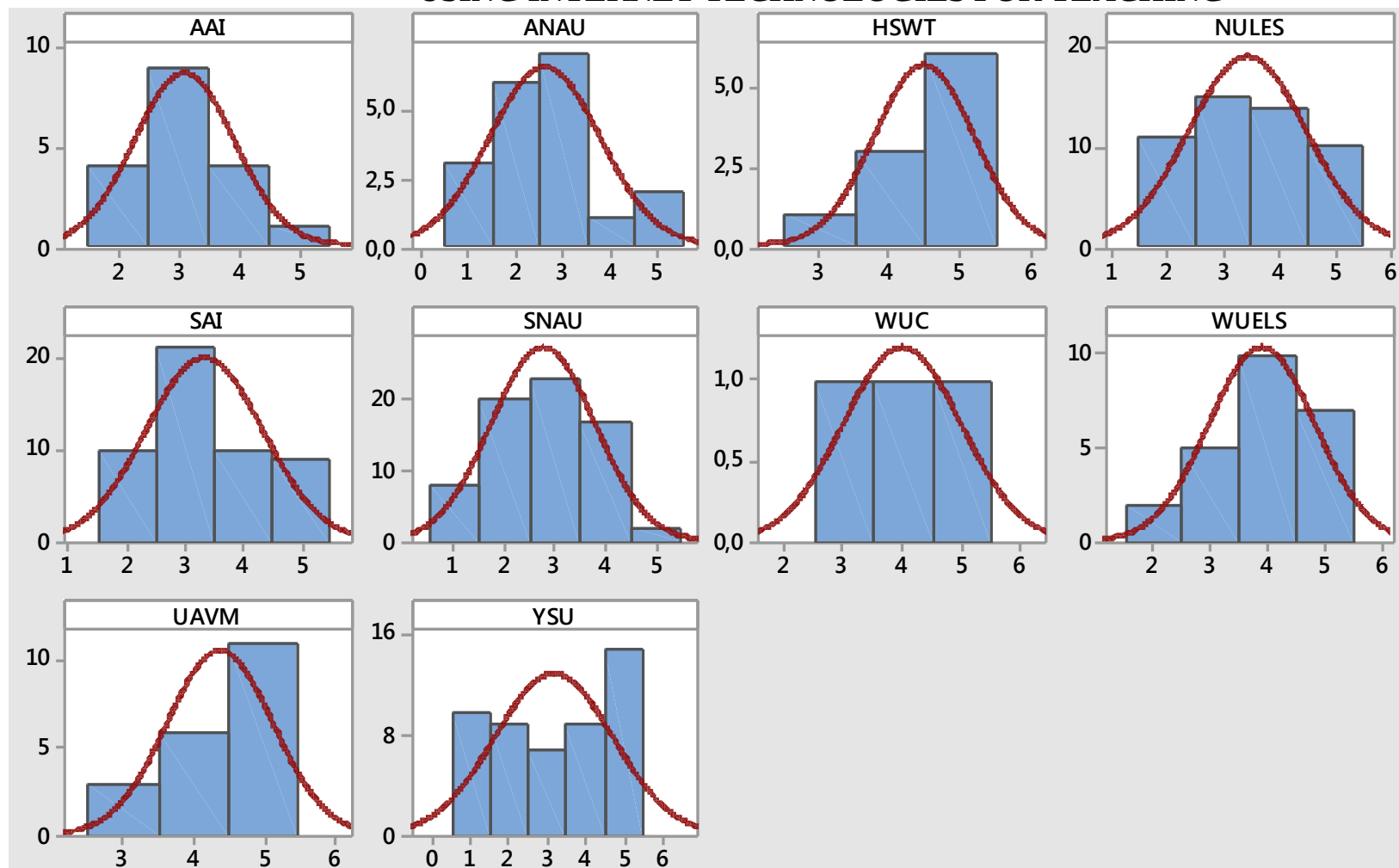
4.5. **TEACHERS SURVEY** - th - THE NUMBER OF TEACHING HOURS IS SUFFICIENT TO COVER ALL REQUIRED LEARNING CONTENTS



AAI
Mean 3,222
StDev 1,114
N 18
ANAU
Mean 4,105
StDev 0,8753
N 19
HSWT
Mean 4,3
StDev 0,6749
N 10
NULES
Mean 3,06
StDev 1,331
N 50
SAI
Mean 4,14
StDev 0,9899
N 50
SNAU
Mean 2,814
StDev 1,219
N 70
WUC
Mean 4,667
StDev 0,5774
N 3
WUELS
Mean 3,083
StDev 1,018
N 24
UAVM
Mean 3
StDev 0,7947
N 20
YSU
Mean 3,14
StDev 1,414
N 50



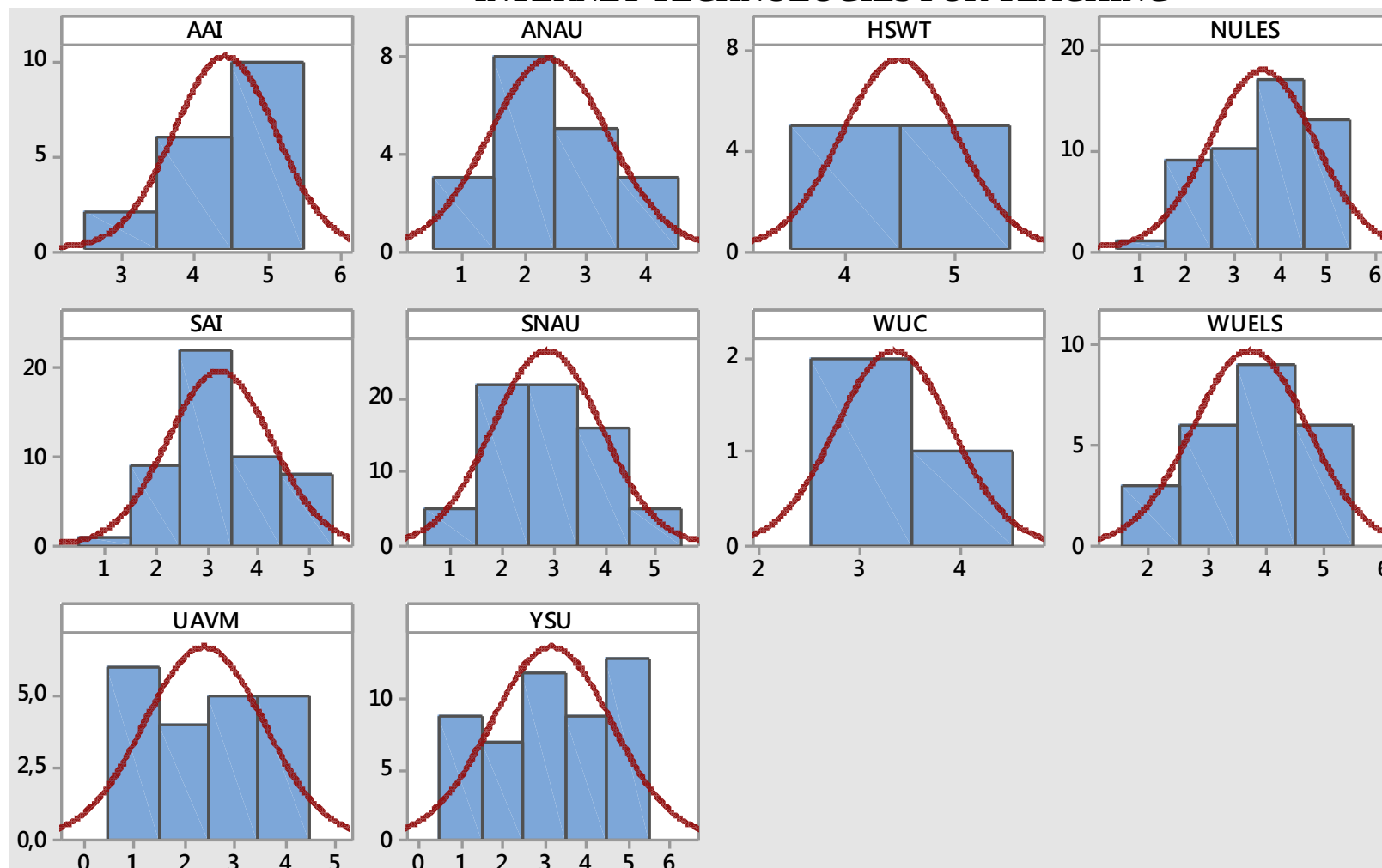
4.6. **TEACHERS SURVEY** - hf - THE UNIVERSITY PROVIDES ALL REQUIRED HARDWARE FACILITIES FOR USING INTERNET TECHNOLOGIES FOR TEACHING



AAI
Mean 3,111
StDev 0,8324
N 18
ANAU
Mean 2,632
StDev 1,165
N 19
HSWT
Mean 4,5
StDev 0,7071
N 10
NULES
Mean 3,46
StDev 1,054
N 50
SAI
Mean 3,36
StDev 1,005
N 50
SNAU
Mean 2,786
StDev 1,034
N 70
WUC
Mean 4
StDev 1
N 3
WUELS
Mean 3,917
StDev 0,9286
N 24
UAVM
Mean 4,4
StDev 0,7539
N 20
YSU
Mean 3,2
StDev 1,539
N 50



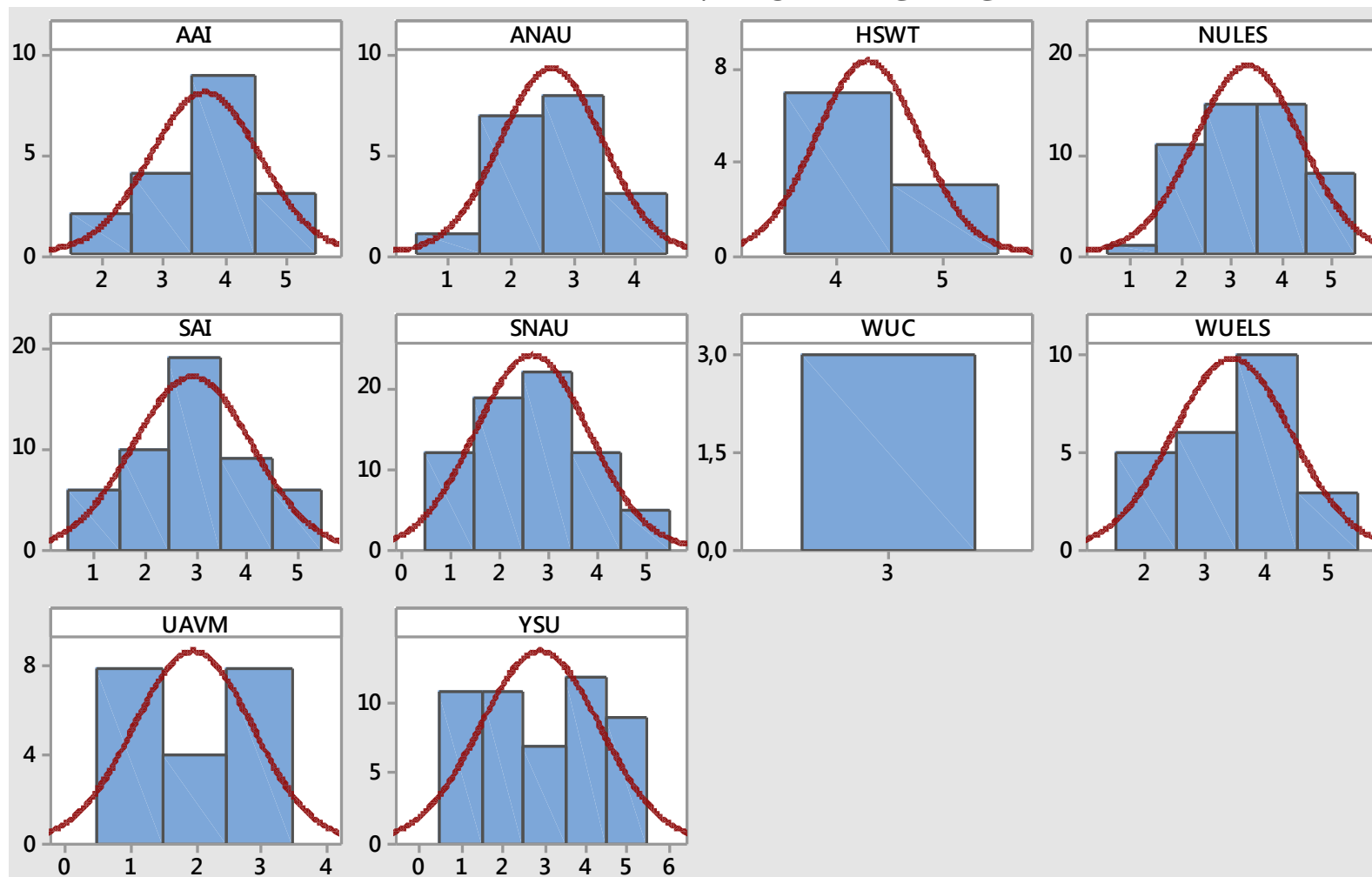
4.7. **TEACHERS SURVEY** - sf - THE UNIVERSITY PROVIDES ALL REQUIRED SOFTWARE ACCESS FOR USING INTERNET TECHNOLOGIES FOR TEACHING



AAI	
Mean	4,444
StDev	0,7048
N	18
ANAU	
Mean	2,421
StDev	0,9612
N	19
HSWT	
Mean	4,5
StDev	0,5270
N	10
NULES	
Mean	3,64
StDev	1,120
N	50
SAI	
Mean	3,3
StDev	1,015
N	50
SNAU	
Mean	2,914
StDev	1,060
N	70
WUC	
Mean	3,333
StDev	0,5774
N	3
WUELS	
Mean	3,75
StDev	0,9891
N	24
UAVM	
Mean	2,45
StDev	1,191
N	20
YSU	
Mean	3,2
StDev	1,443
N	50



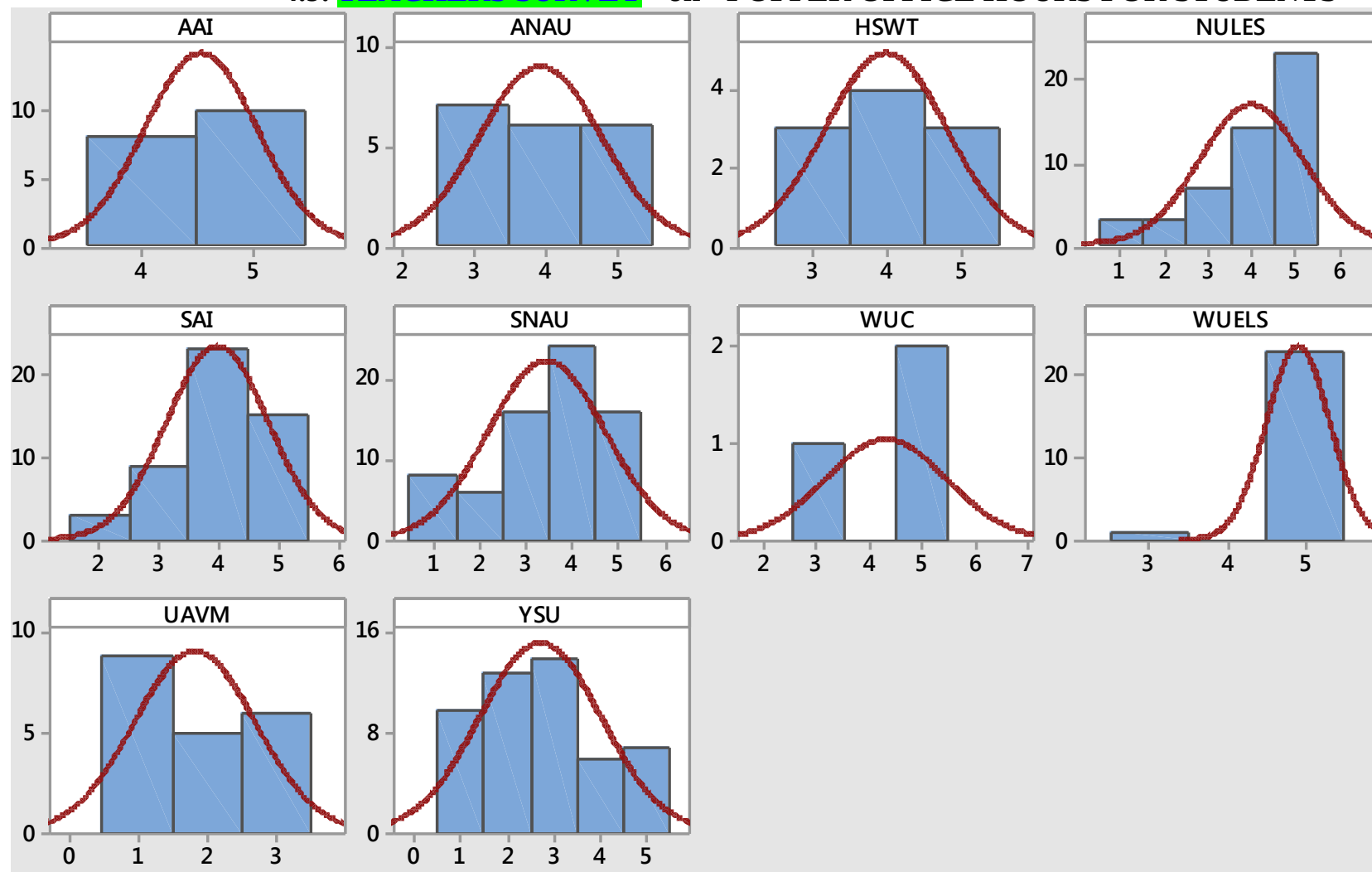
4.8. **TEACHERS SURVEY** - pmaterial - MY UNIVERSITY PROVIDES ALL MATERIALS THAT I WOULD LIKE TO HAVE FOR TEACHING



AAI	
Mean	3,722
StDev	0,8948
N	18
ANAU	
Mean	2,684
StDev	0,8201
N	19
HSWT	
Mean	4,3
StDev	0,4830
N	10
NULES	
Mean	3,36
StDev	1,064
N	50
SAI	
Mean	2,98
StDev	1,169
N	50
SNAU	
Mean	2,7
StDev	1,159
N	70
WUELS	
Mean	3,458
StDev	0,9771
N	24
UAVM	
Mean	2
StDev	0,9177
N	20
YSU	
Mean	2,94
StDev	1,449
N	50



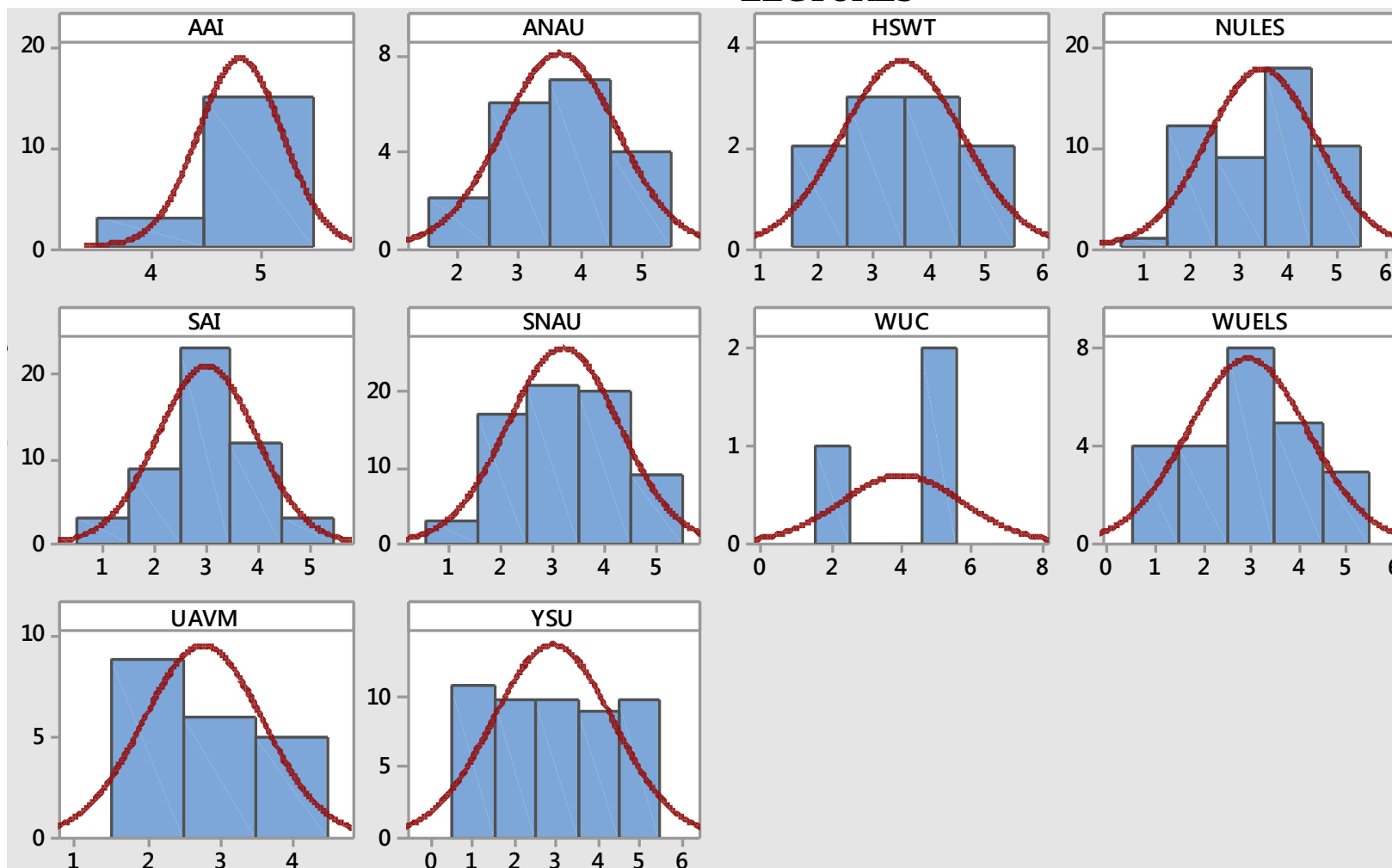
4.9. **TEACHERS SURVEY** - oh - I OFFER OFFICE HOURS FOR STUDENTS



AAI	
Mean	4,556
StDev	0,5113
N	18
ANAU	
Mean	3,947
StDev	0,8481
N	19
HSWT	
Mean	4
StDev	0,8165
N	10
NULES	
Mean	4,02
StDev	1,186
N	50
SAI	
Mean	4
StDev	0,8571
N	50
SNAU	
Mean	3,486
StDev	1,260
N	70
WUC	
Mean	4,333
StDev	1,155
N	3
WUELS	
Mean	4,917
StDev	0,4082
N	24
UAVM	
Mean	1,85
StDev	0,8751
N	20
YSU	
Mean	2,74
StDev	1,306
N	50



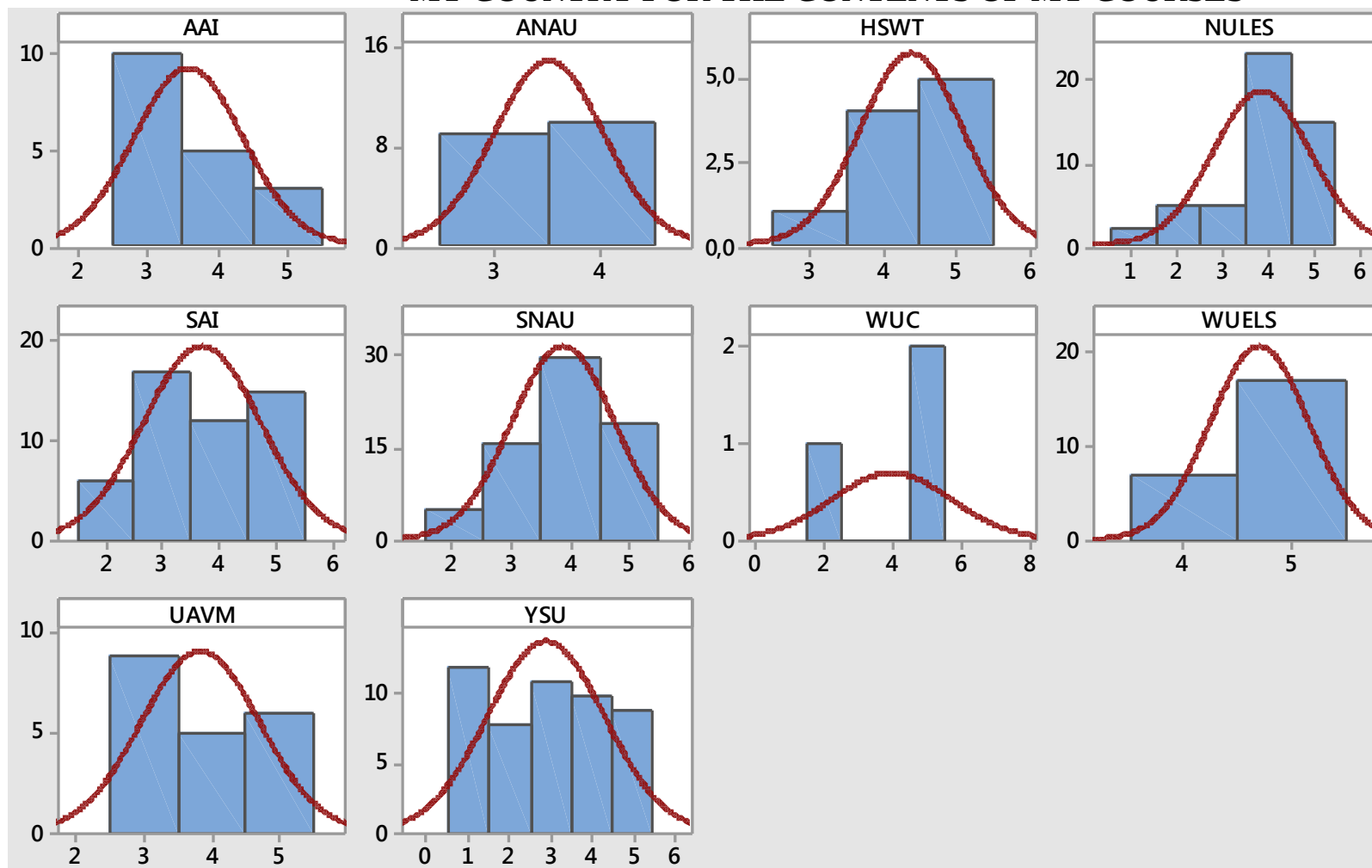
4.10. **TEACHERS SURVEY** - ats - I HOLD ADDITIONAL TEACHING SESSIONS (SEMINARS ETC.) BESIDE MY LECTURES



AAI	
Mean	4.833
StDev	0.3835
N	18
ANAU	
Mean	3.684
StDev	0.9459
N	19
HSWT	
Mean	3.5
StDev	1.080
N	10
NULES	
Mean	3.48
StDev	1.129
N	50
SAI	
Mean	3.06
StDev	0.9564
N	50
SNAU	
Mean	3.214
StDev	1.089
N	70
WUC	
Mean	4
StDev	1.732
N	3
WUELS	
Mean	2.958
StDev	1.268
N	24
UAVM	
Mean	2.8
StDev	0.8335
N	20
YSU	
Mean	2.94
StDev	1.449
N	50



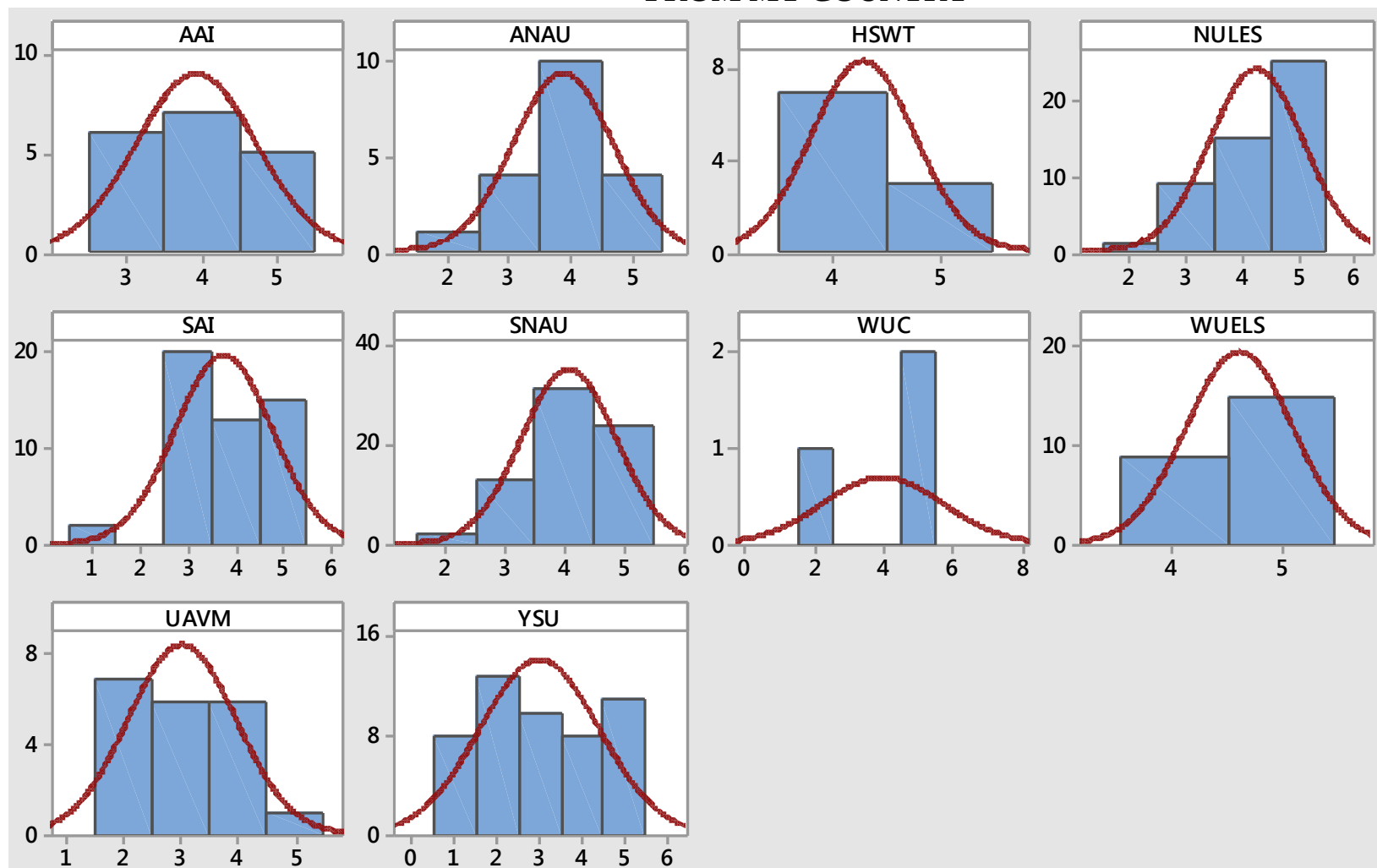
4.11. **TEACHERS SURVEY** – data - I HAVE ACCESS TO ACTUAL EMPIRICAL EXAMPLES AND DATA FROM MY COUNTRY FOR THE CONTENTS OF MY COURSES



AAI
Mean 3,611
StDev 0,7775
N 18
ANAU
Mean 3,526
StDev 0,5130
N 19
HSWT
Mean 4,4
StDev 0,6992
N 10
NULES
Mean 3,88
StDev 1,081
N 50
SAI
Mean 3,72
StDev 1,031
N 50
SNAU
Mean 3,9
StDev 0,8871
N 70
WUC
Mean 4
StDev 1,732
N 3
WUELS
Mean 4,708
StDev 0,4643
N 24
UAVM
Mean 3,85
StDev 0,8751
N 20
YSU
Mean 2,92
StDev 1,441
N 50



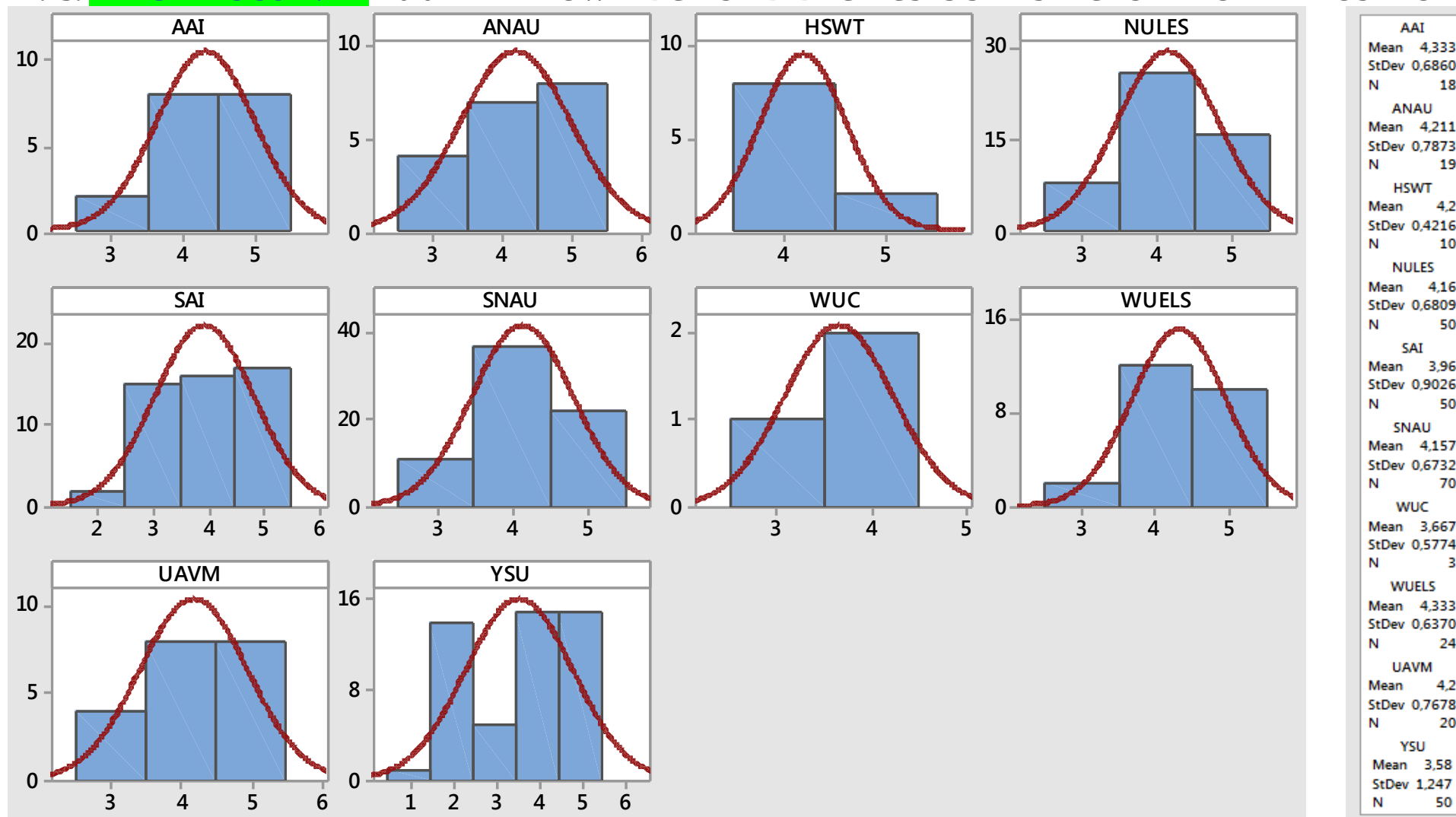
4.12. **TEACHERS SURVEY** – datause - MY LECTURES ARE BASED ON ACTUAL EMPIRICAL EXAMPLES FROM MY COUNTRY



AAI
Mean 3,944
StDev 0,8024
N 18
ANAU
Mean 3,895
StDev 0,8093
N 19
HSWT
Mean 4,3
StDev 0,4830
N 10
NULES
Mean 4,28
StDev 0,8340
N 50
SAI
Mean 3,78
StDev 1,016
N 50
SNAU
Mean 4,1
StDev 0,8013
N 70
WUC
Mean 4
StDev 1,732
N 3
WUELS
Mean 4,625
StDev 0,4945
N 24
UAVM
Mean 3,05
StDev 0,9445
N 20
YSU
Mean 3,02
StDev 1,407
N 50

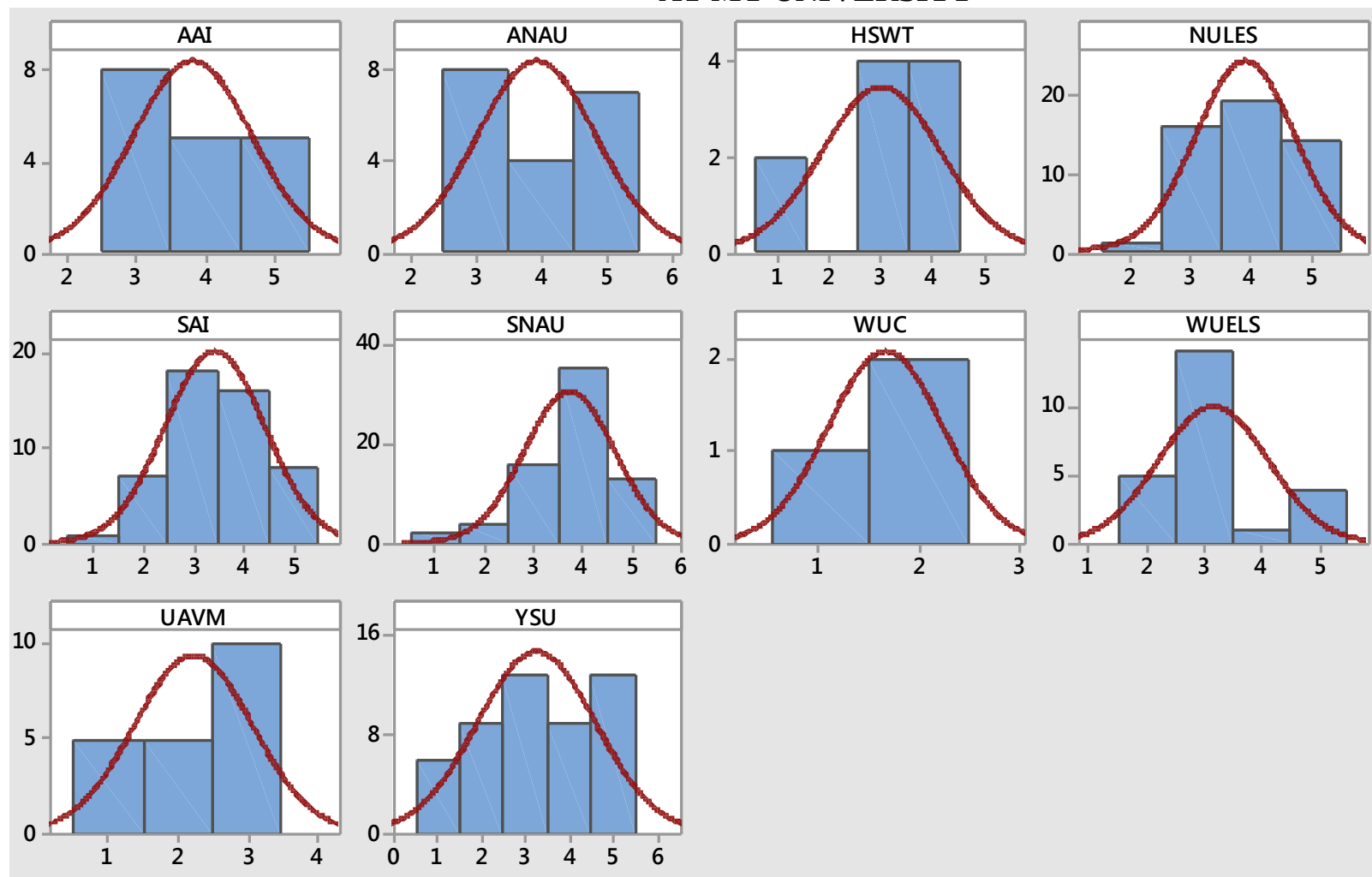


4.13. **TEACHERS SURVEY** – did - MY KNOWLEDGE ON DIDACTICS IS SATISFACTORY FOR MY POSITION





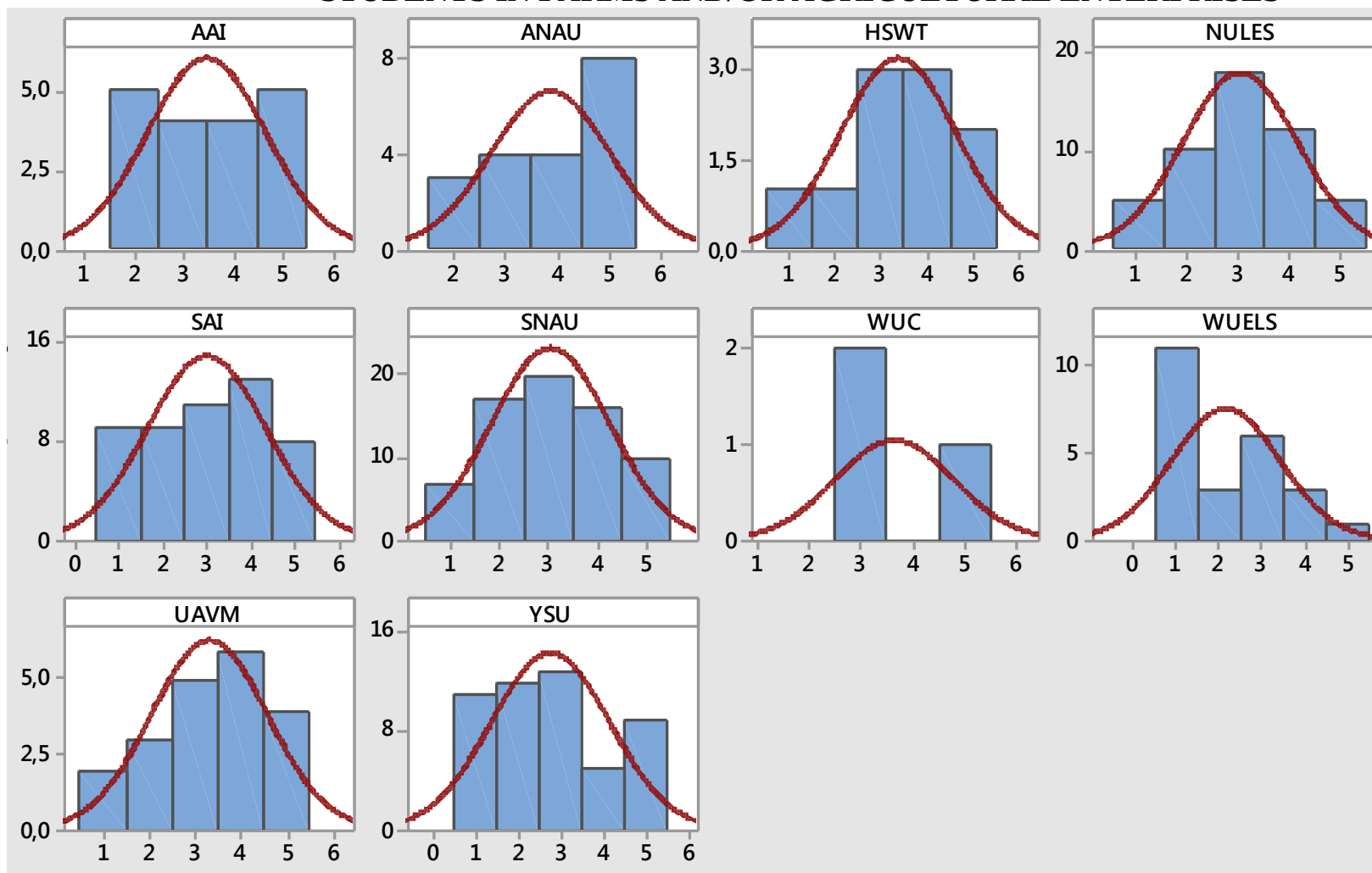
4.14. **TEACHERS SURVEY** – tdid - MORE TRAINING IN DIDACTICS FOR TEACHERS WOULD BE REQUIRED AT MY UNIVERSITY



AAI	
Mean	3,833
StDev	0,8575
N	18
ANAU	
Mean	3,947
StDev	0,9113
N	19
HSWT	
Mean	3
StDev	1,155
N	10
NULES	
Mean	3,92
StDev	0,8291
N	50
SAI	
Mean	3,46
StDev	0,9941
N	50
SNAU	
Mean	3,757
StDev	0,9237
N	70
WUC	
Mean	1,667
StDev	0,5774
N	3
WUELS	
Mean	3,167
StDev	0,9631
N	24
UAVM	
Mean	2,25
StDev	0,8507
N	20
YSU	
Mean	3,28
StDev	1,356
N	50



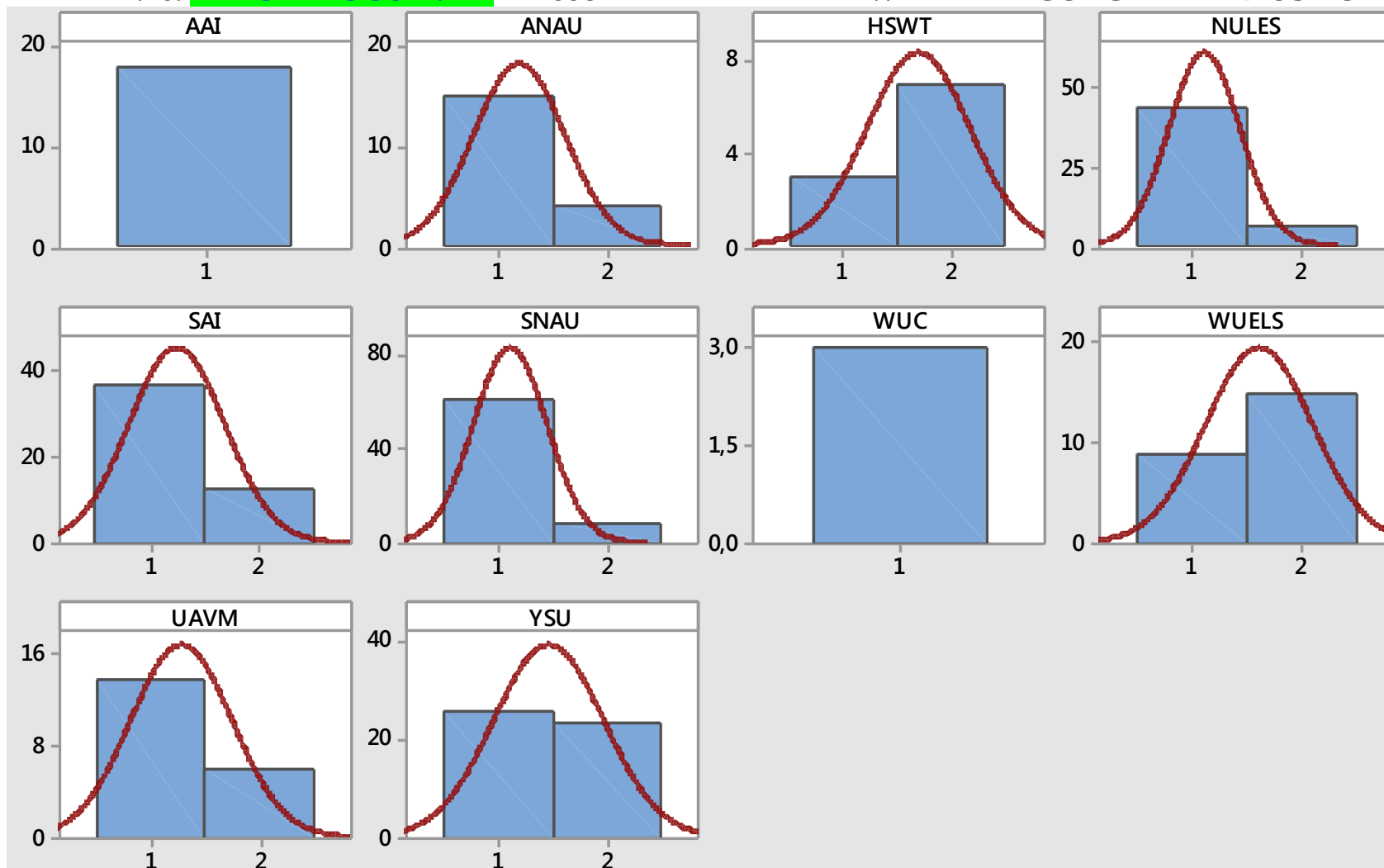
4.15. **TEACHERS SURVEY** – pt - I AM ACTIVELY INVOLVED IN THE PRACTICAL TRAINING OF MY STUDENTS IN FARMS AND/OR AGRICULTURAL ENTERPRISES



AAI
Mean 3,5
StDev 1,200
N 18
ANAU
Mean 3,895
StDev 1,150
N 19
HSWT
Mean 3,4
StDev 1,265
N 10
NULES
Mean 3,04
StDev 1,124
N 50
SAI
Mean 3,04
StDev 1,355
N 50
SNAU
Mean 3,071
StDev 1,208
N 70
WUC
Mean 3,667
StDev 1,155
N 3
WUELS
Mean 2,167
StDev 1,274
N 24
UAVM
Mean 3,35
StDev 1,268
N 20
YSU
Mean 2,78
StDev 1,389
N 50



4.16. **TEACHERS SURVEY** – mooc - I AM FAMILIAR WITH THE CONCEPT AND USE OF MOOCs

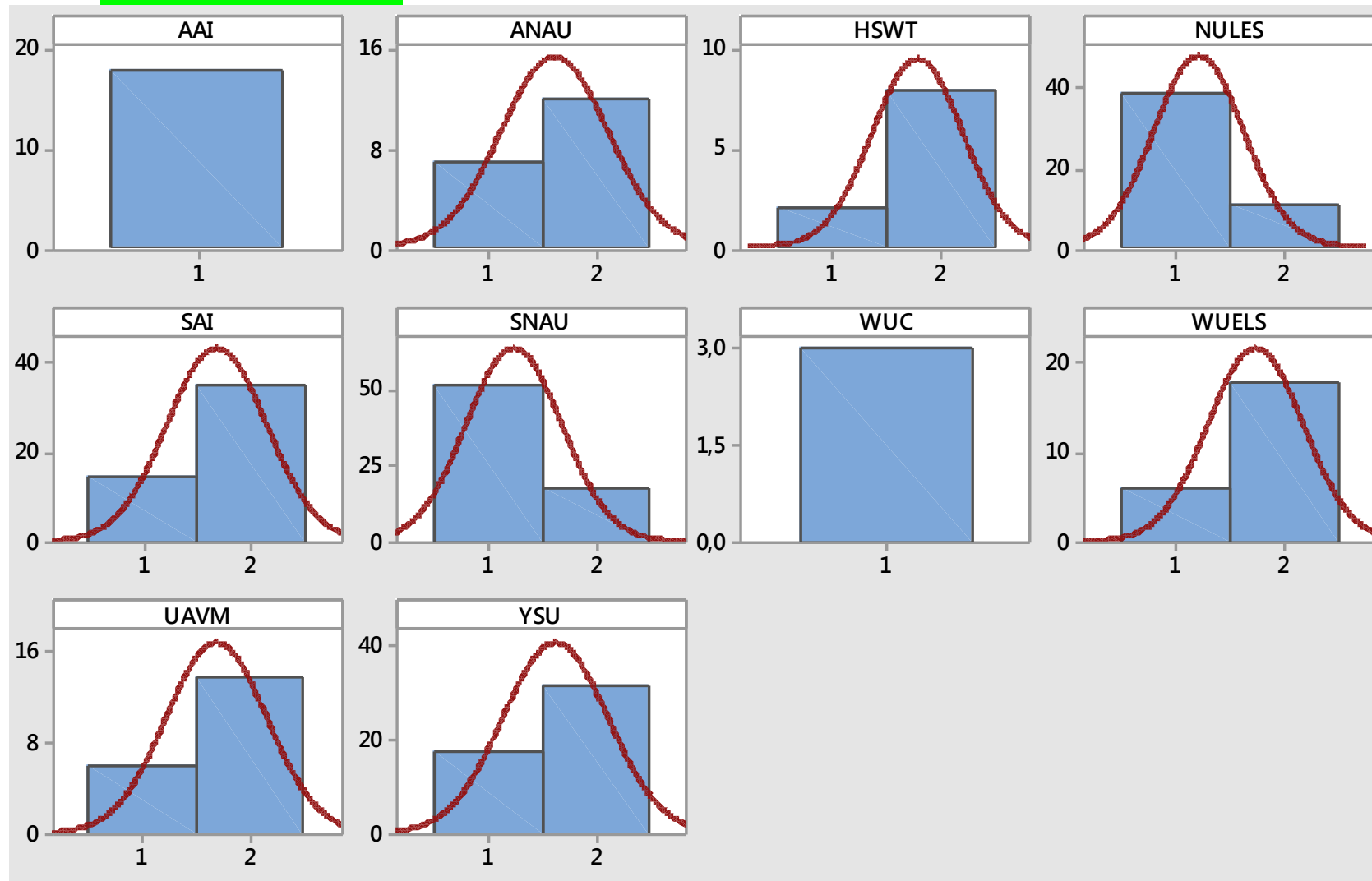


1 – yes;
2 – no;

AAI
Mean *
StDev *
N 18
ANAU
Mean 1,211
StDev 0,4189
N 19
HSWT
Mean 1,7
StDev 0,4830
N 10
NULES
Mean 1,12
StDev 0,3283
N 50
SAI
Mean 1,26
StDev 0,4431
N 50
SNAU
Mean 1,129
StDev 0,3371
N 70
WUELS
Mean 1,625
StDev 0,4945
N 24
UAVM
Mean 1,3
StDev 0,4702
N 20
YSU
Mean 1,48
StDev 0,5047
N 50



4.17. **TEACHERS SURVEY** – cm00c - I CREATED OR PARTICIPATED ALREADY IN THE CREATION OF A MOOC

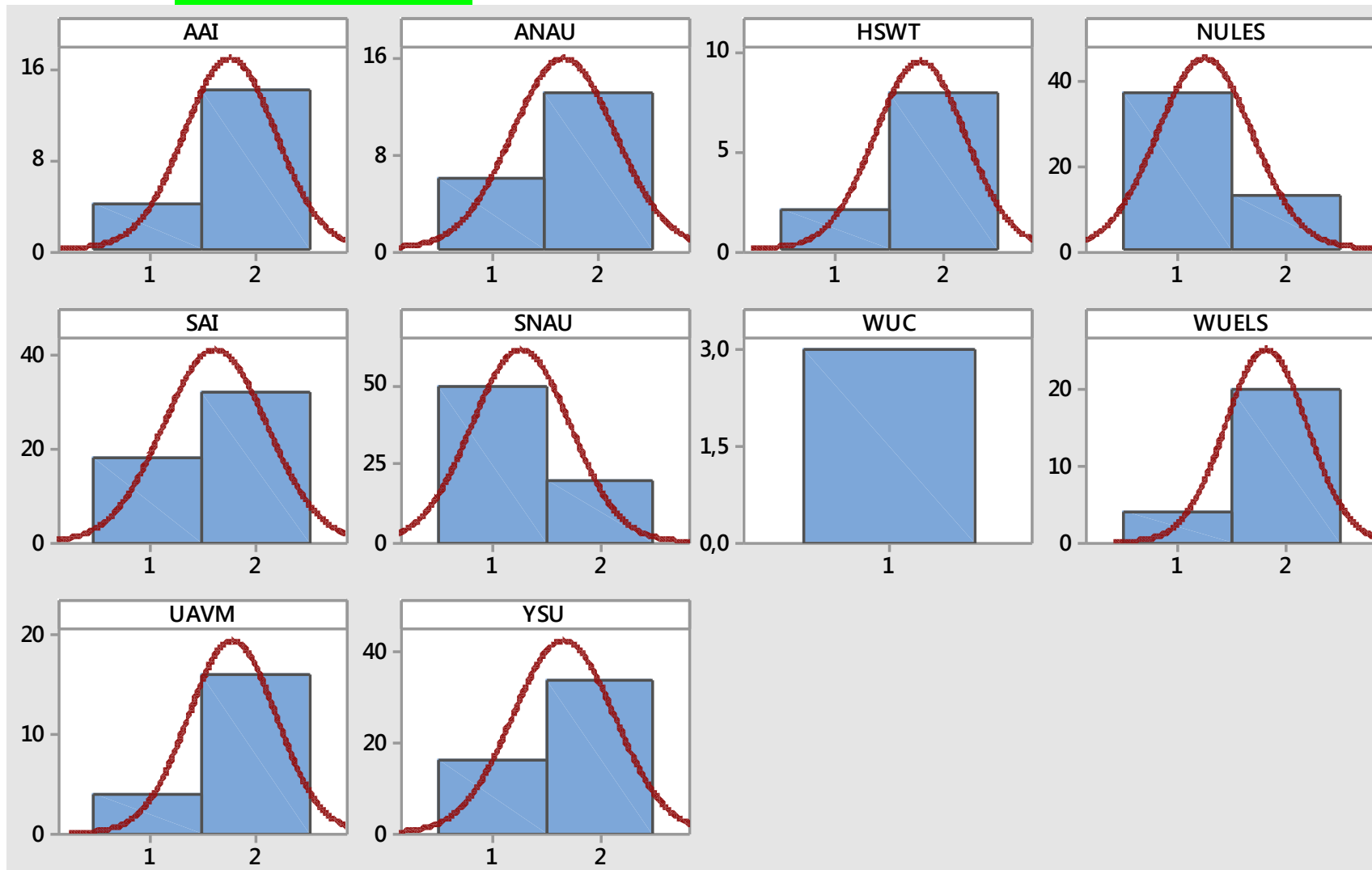


1 – yes;
2 – no;

AAI	
Mean	*
StDev	*
N	18
ANAU	
Mean	1,632
StDev	0,4956
N	19
HSWT	
Mean	1,8
StDev	0,4216
N	10
NULES	
Mean	1,22
StDev	0,4185
N	50
SAI	
Mean	1,7
StDev	0,4629
N	50
SNAU	
Mean	1,257
StDev	0,4402
N	70
WUELS	
Mean	1,75
StDev	0,4423
N	24
UAVM	
Mean	1,7
StDev	0,4702
N	20
YSU	
Mean	1,64
StDev	0,4849
N	50



4.18. **TEACHERS SURVEY** – im00c - I AM ACTIVELY INVOLVED IN THE CREATION OF A MOOC

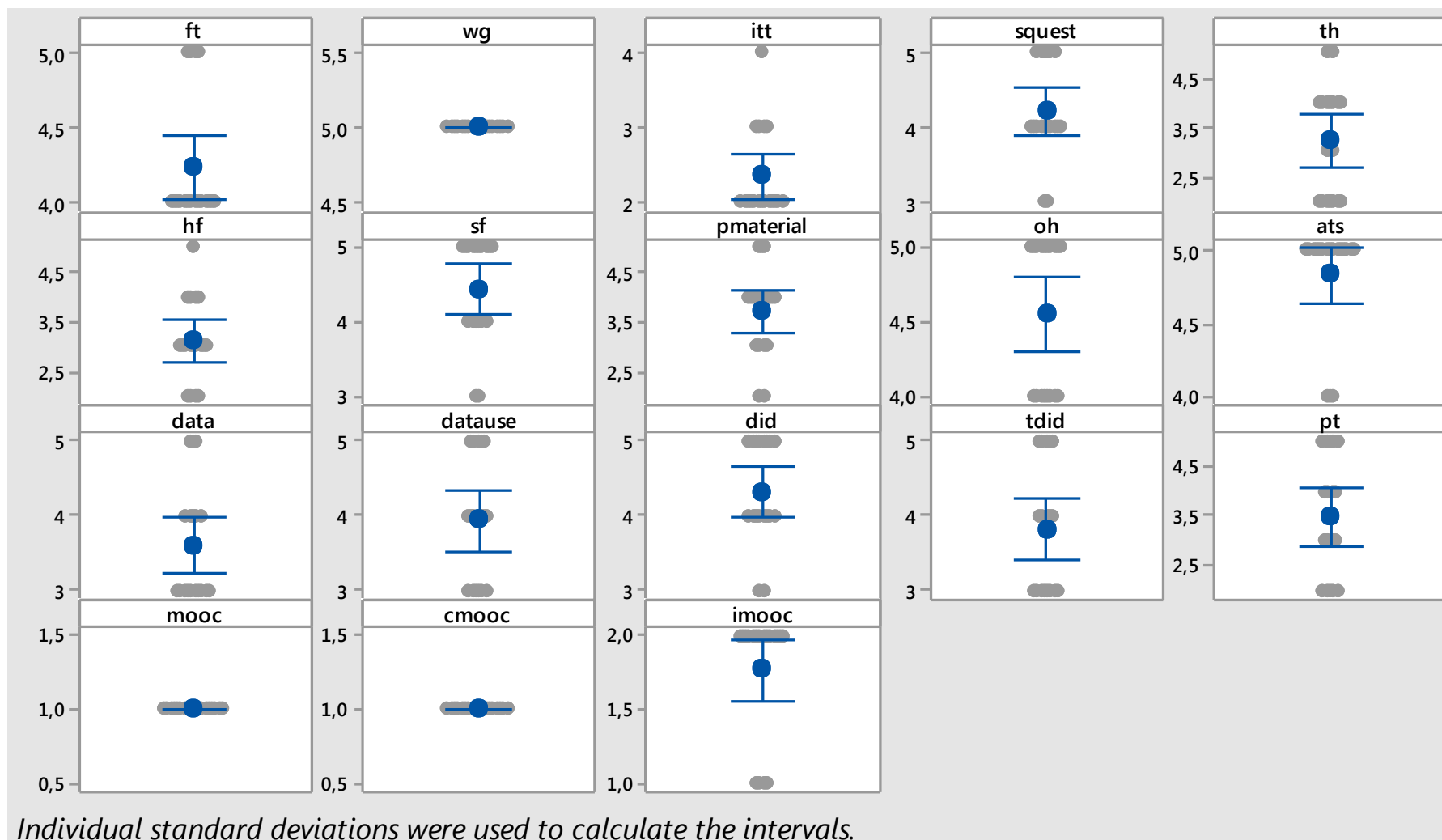


1 – yes;
2 – no;

AAI	
Mean	1,778
StDev	0,4278
N	18
ANAU	
Mean	1,684
StDev	0,4776
N	19
HSWT	
Mean	1,8
StDev	0,4216
N	10
NULES	
Mean	1,26
StDev	0,4431
N	50
SAI	
Mean	1,64
StDev	0,4849
N	50
SNAU	
Mean	1,286
StDev	0,4550
N	70
WUELS	
Mean	1,833
StDev	0,3807
N	24
UAVM	
Mean	1,8
StDev	0,4104
N	20
YSU	
Mean	1,68
StDev	0,4712
N	50

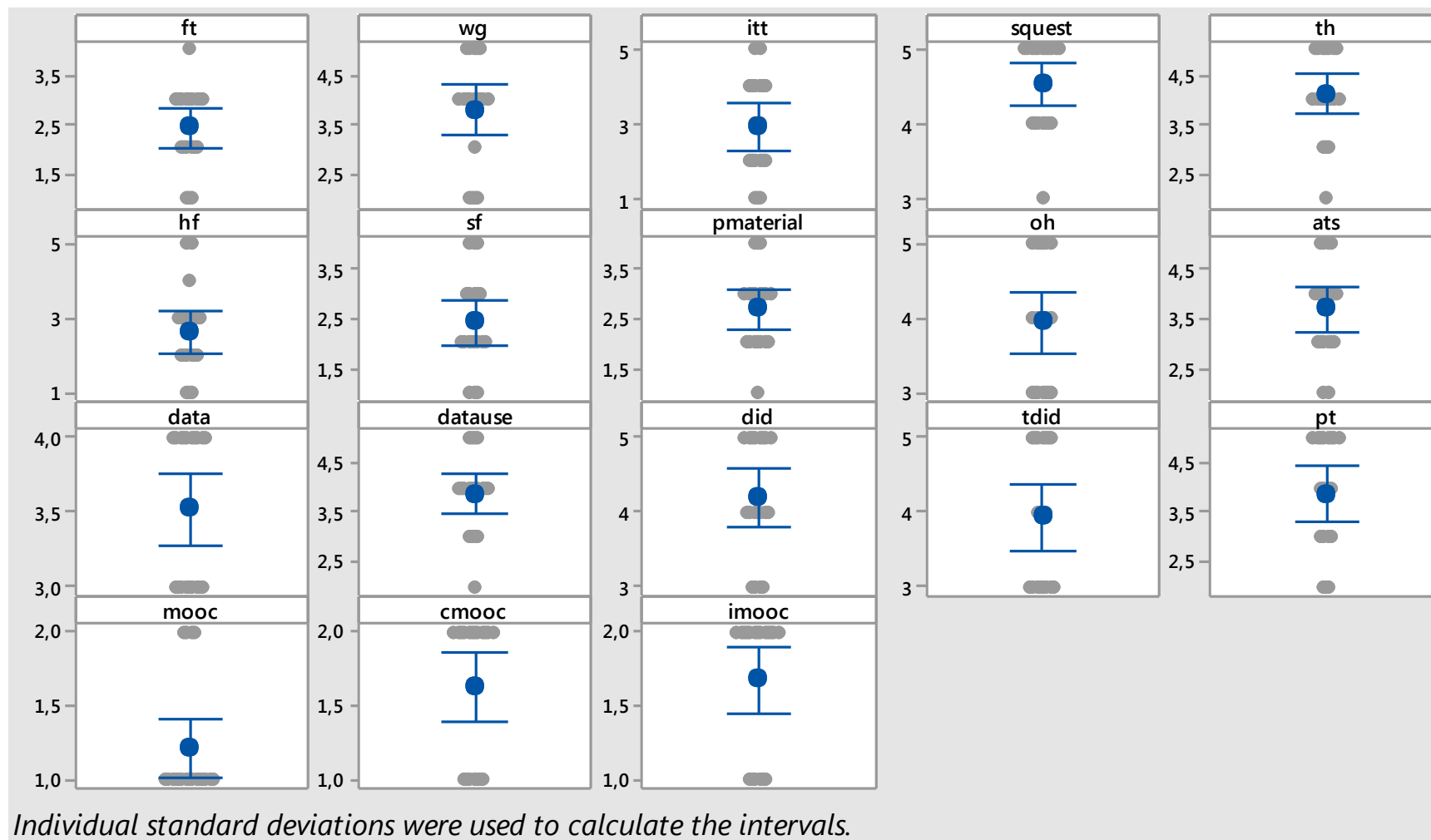


4.19. 1_AAI - TEACHERS SURVEY AT A GLANCE



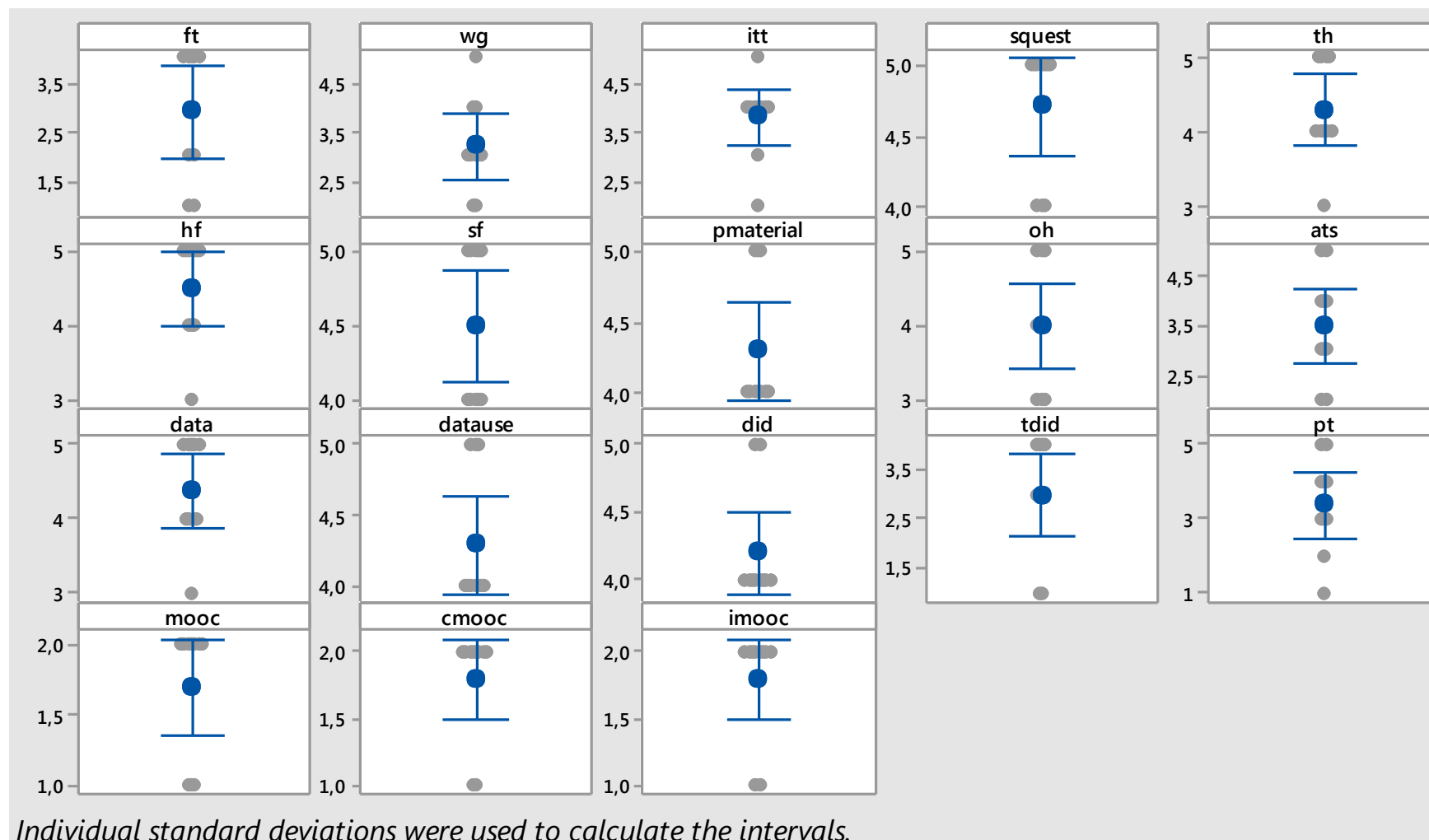


4.20. 2_ANAU - TEACHERS SURVEY AT A GLANCE



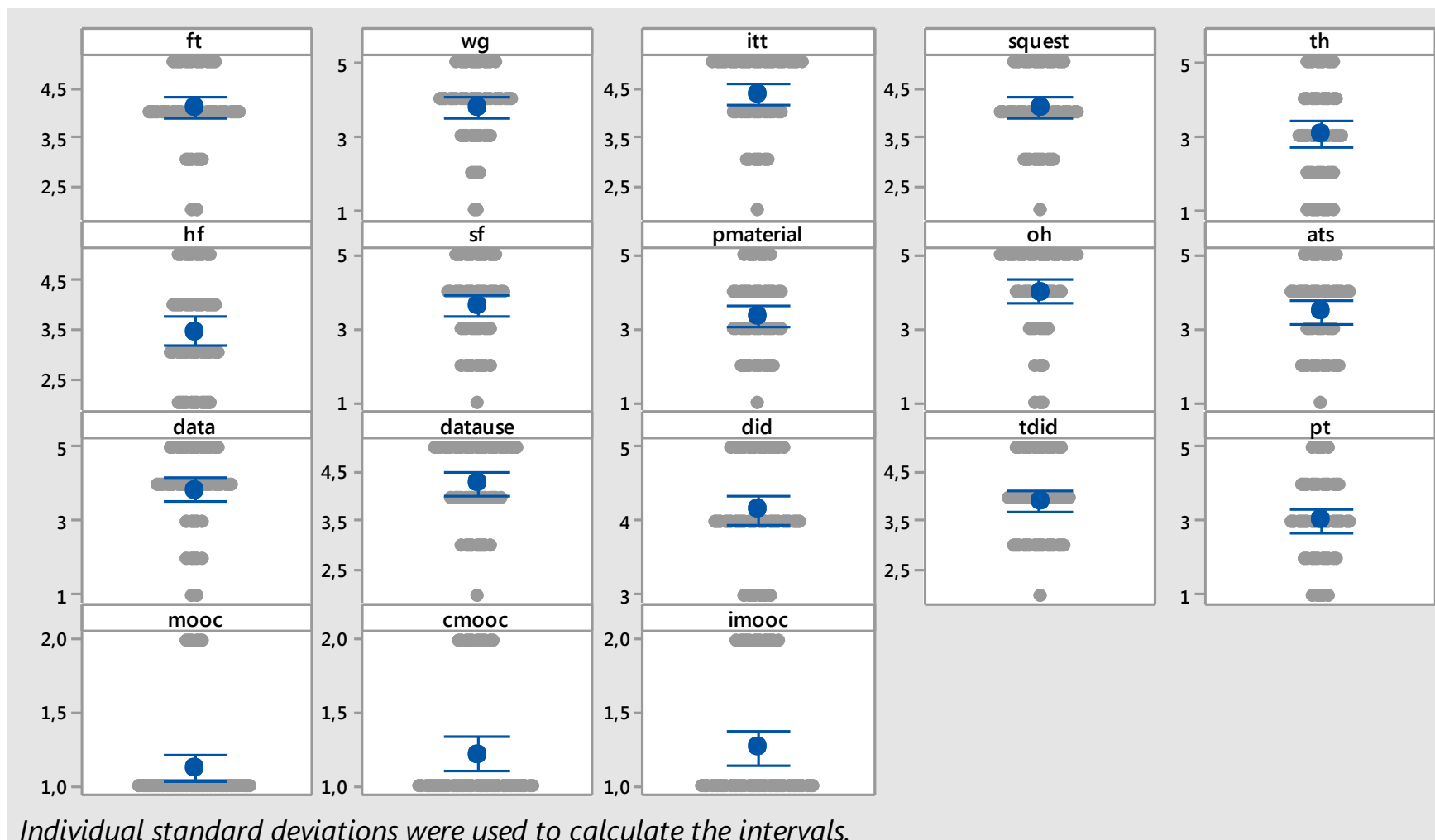


4.21. 3_HSWT - TEACHERS SURVEY AT A GLANCE



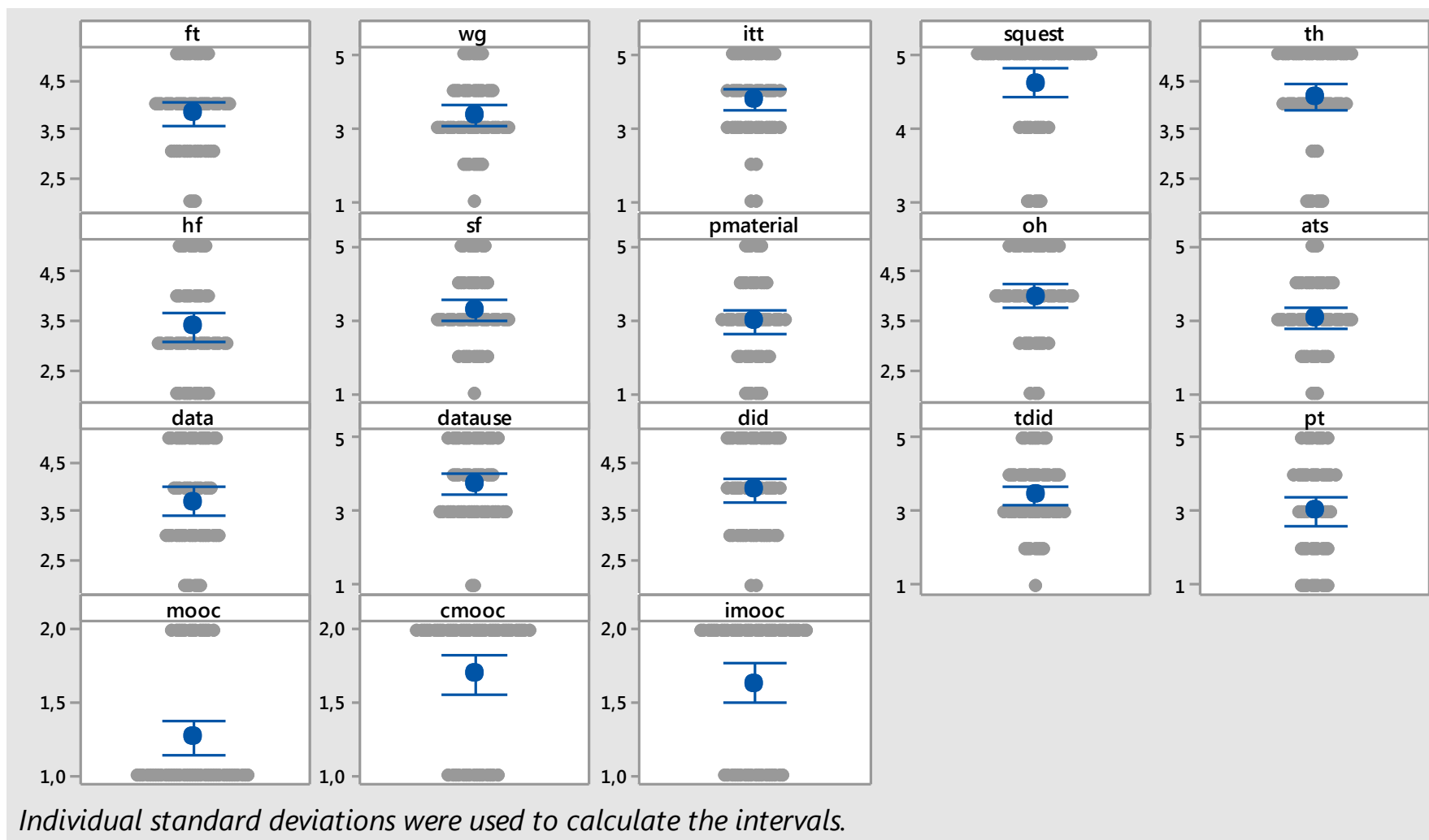


4.22. 4_NULES - TEACHERS SURVEY AT A GLANCE



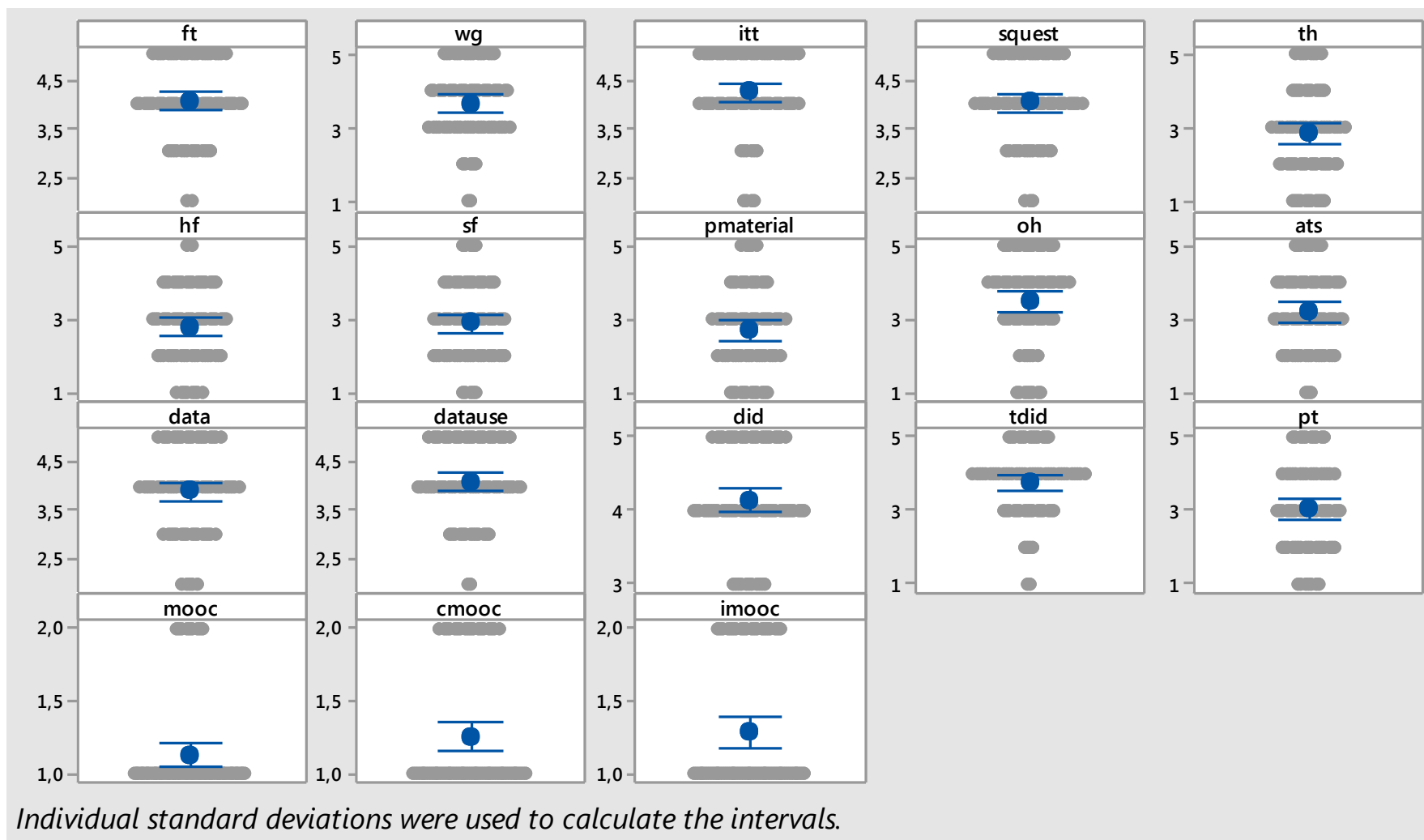


4.23. 5_SAI - TEACHERS SURVEY AT A GLANCE



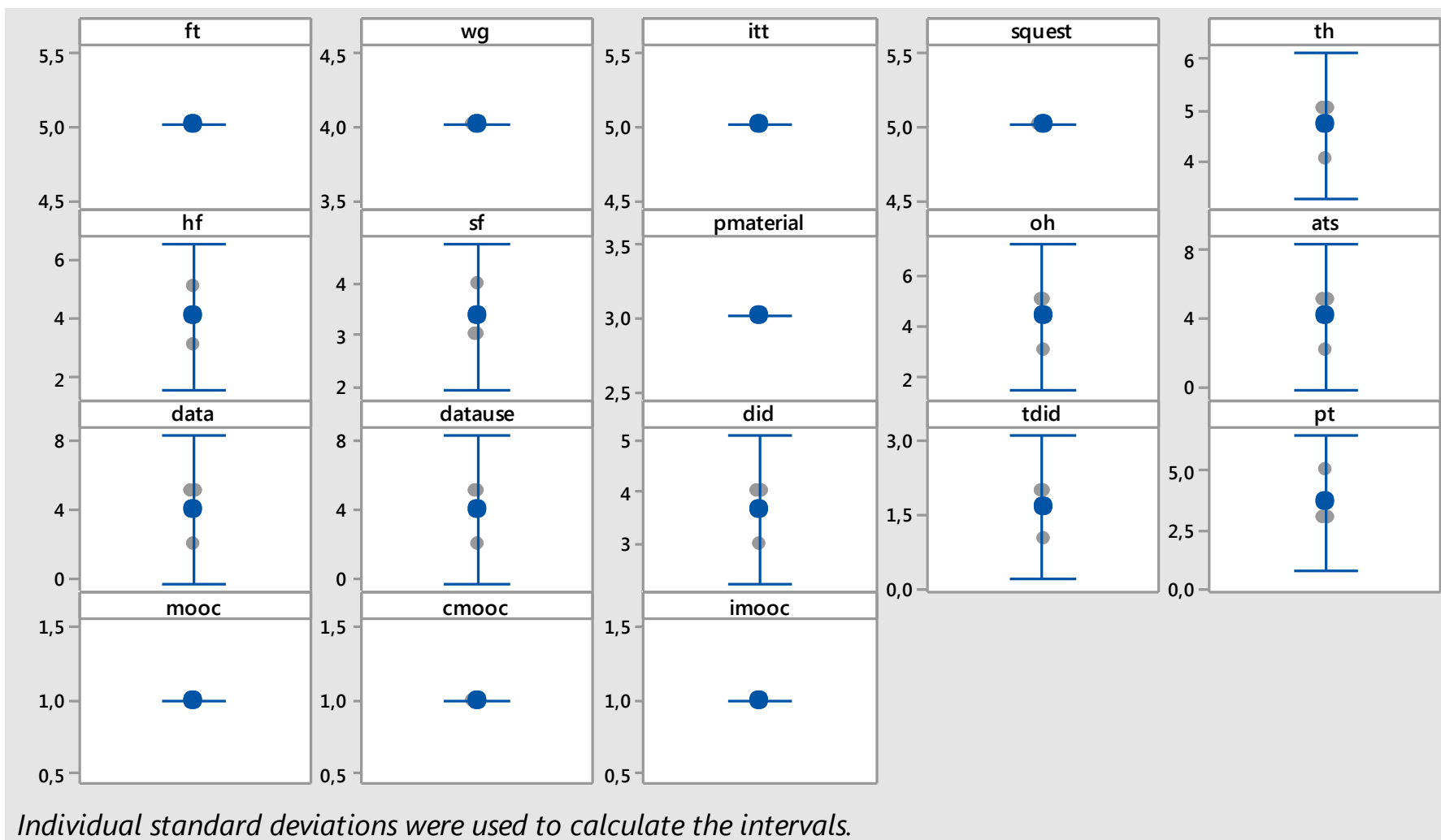


4.24. 6_SNAU - TEACHERS SURVEY AT A GLANCE



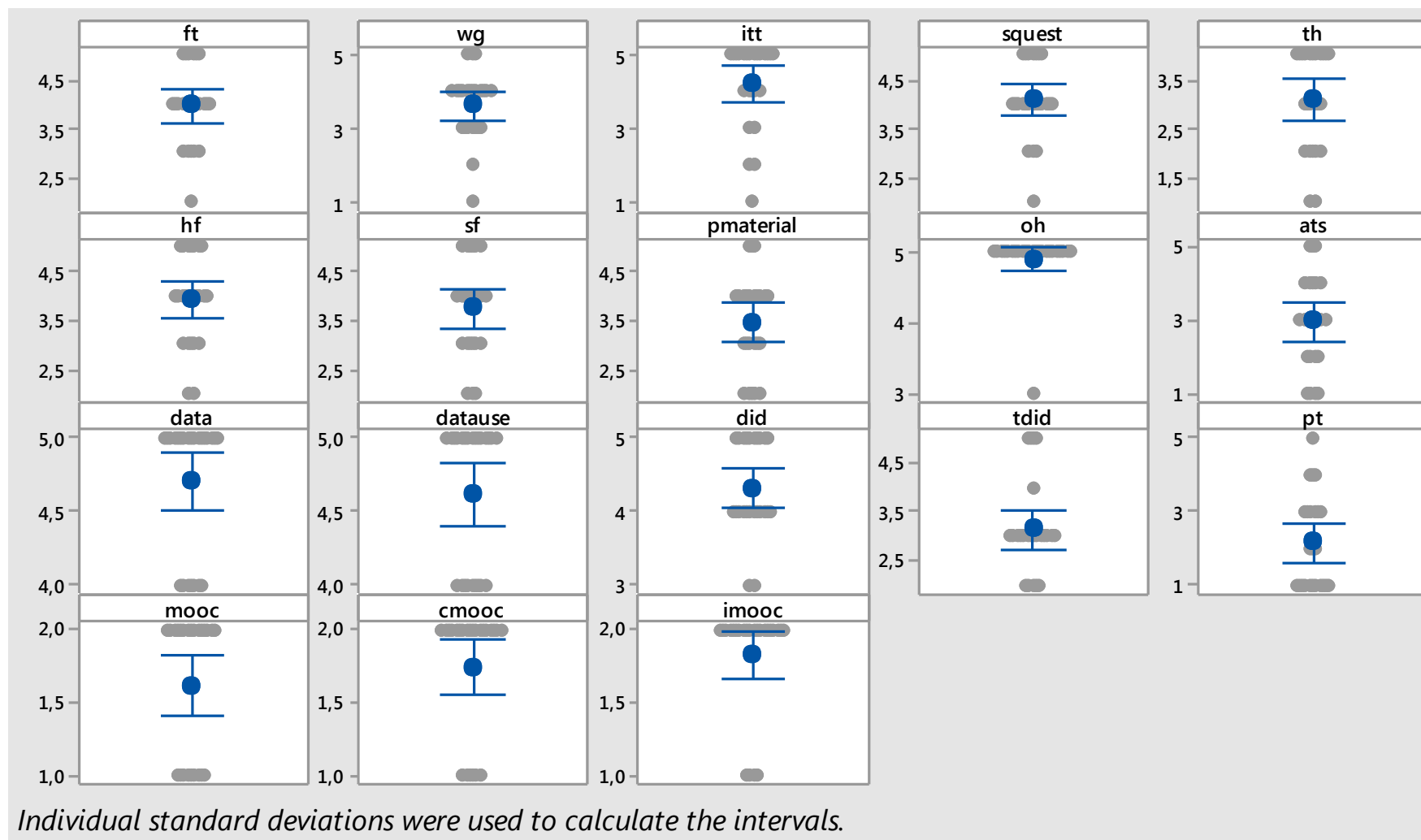


4.25. 7_WUC - TEACHERS SURVEY AT A GLANCE



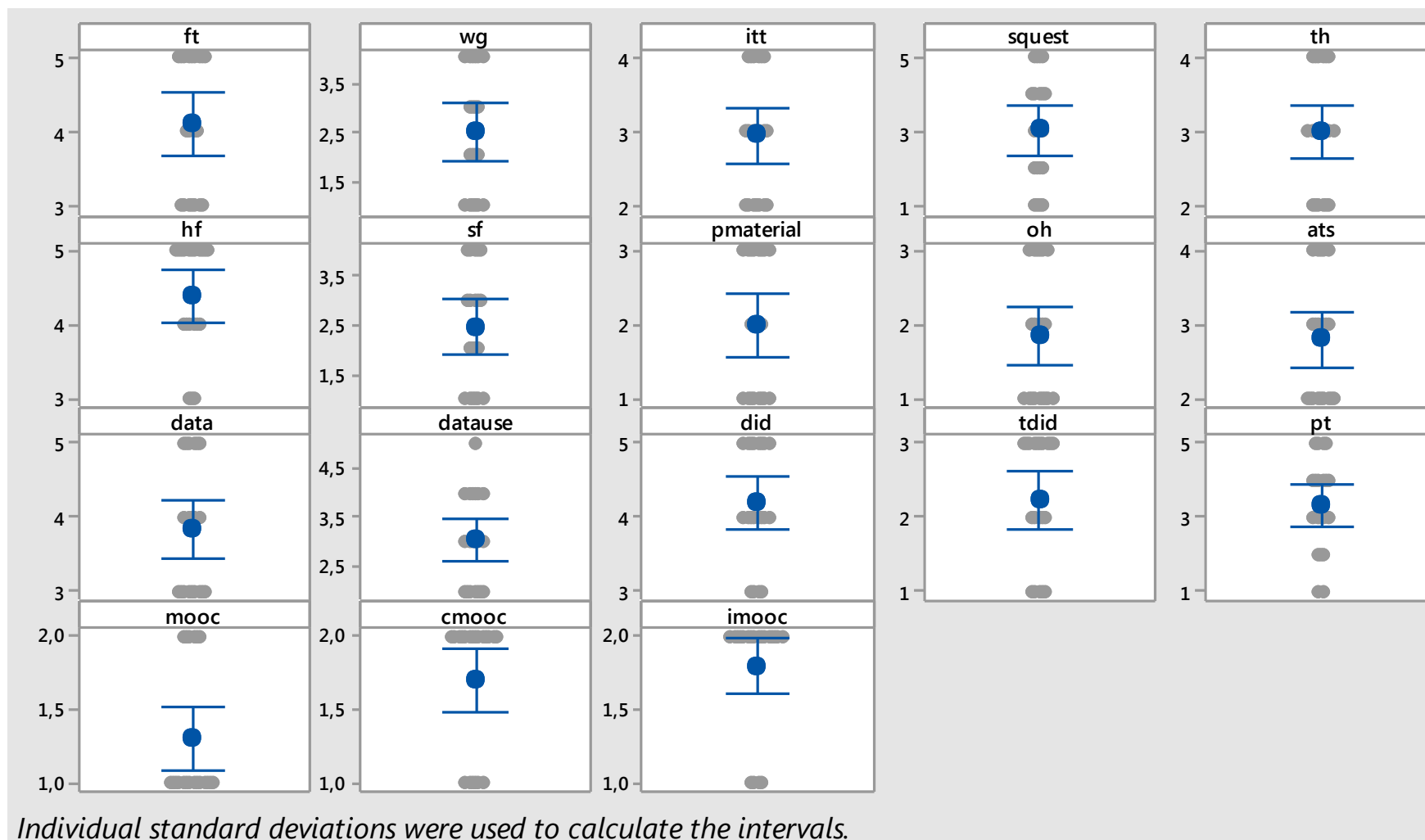


4.26. 8_WUELS - TEACHERS SURVEY AT A GLANCE



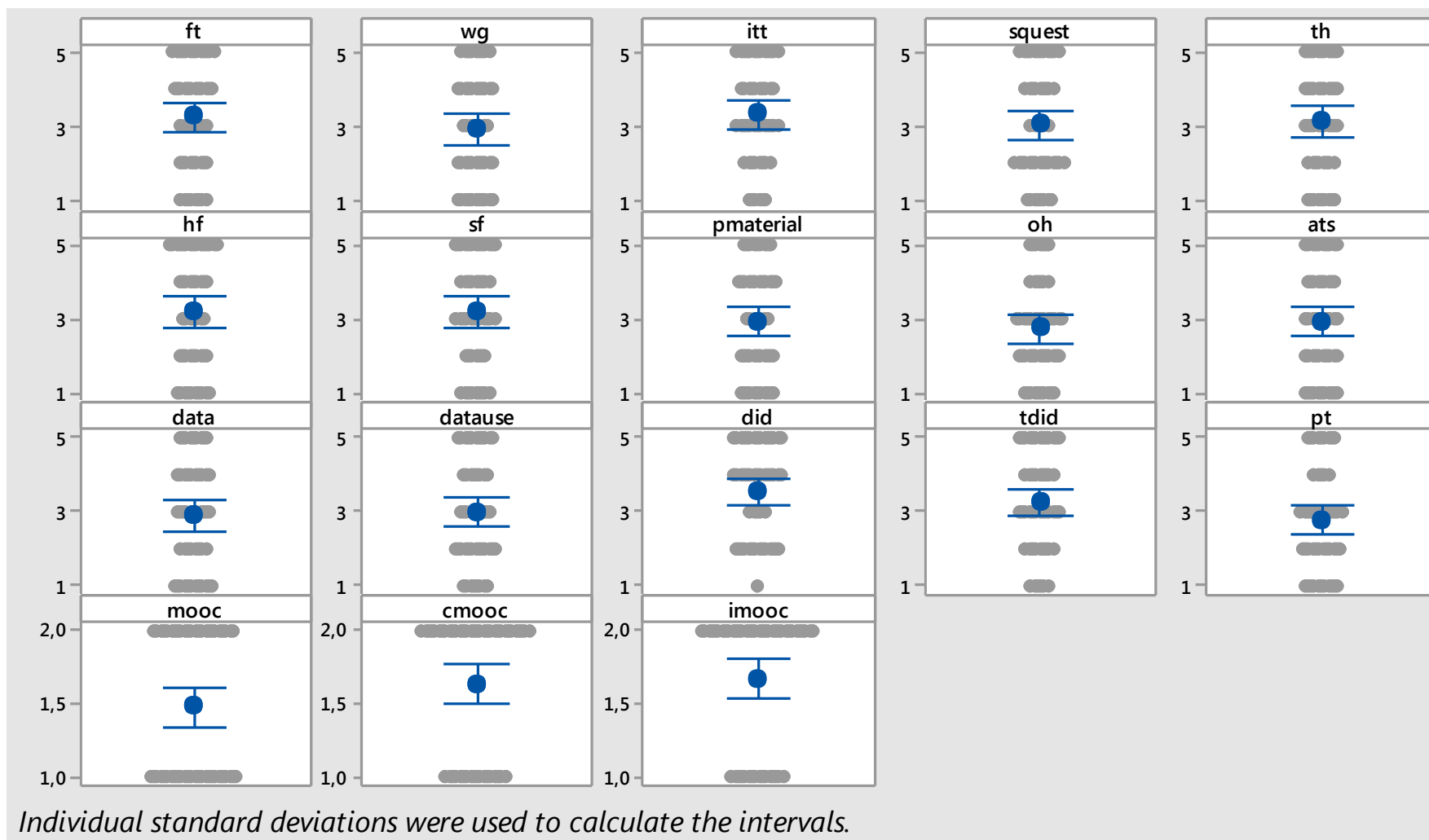


4.27. 9_UAVM - TEACHERS SURVEY AT A GLANCE





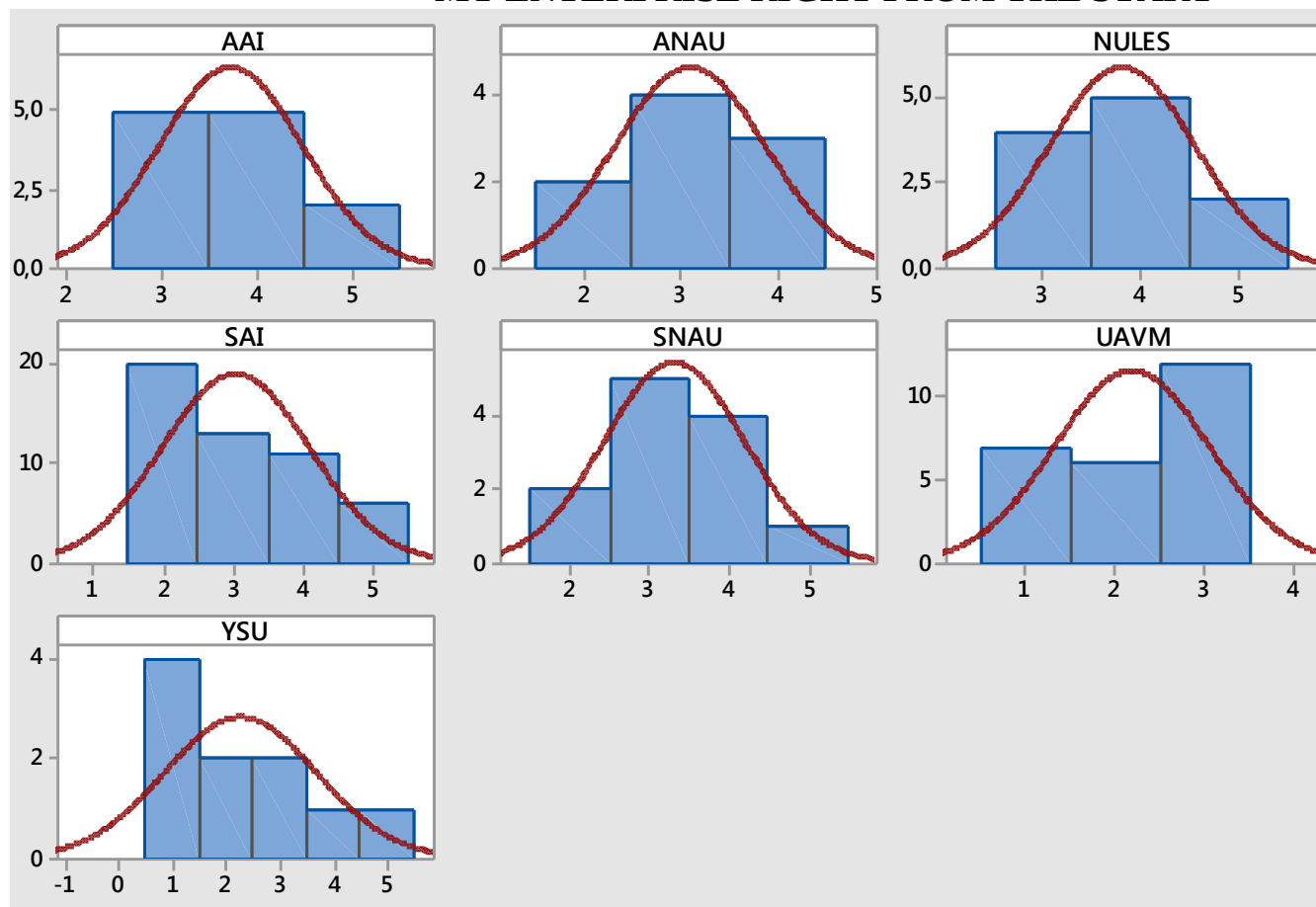
4.28. 10_YSU - TEACHERS SURVEY AT A GLANCE





5. EMPLOYERS SURVEY

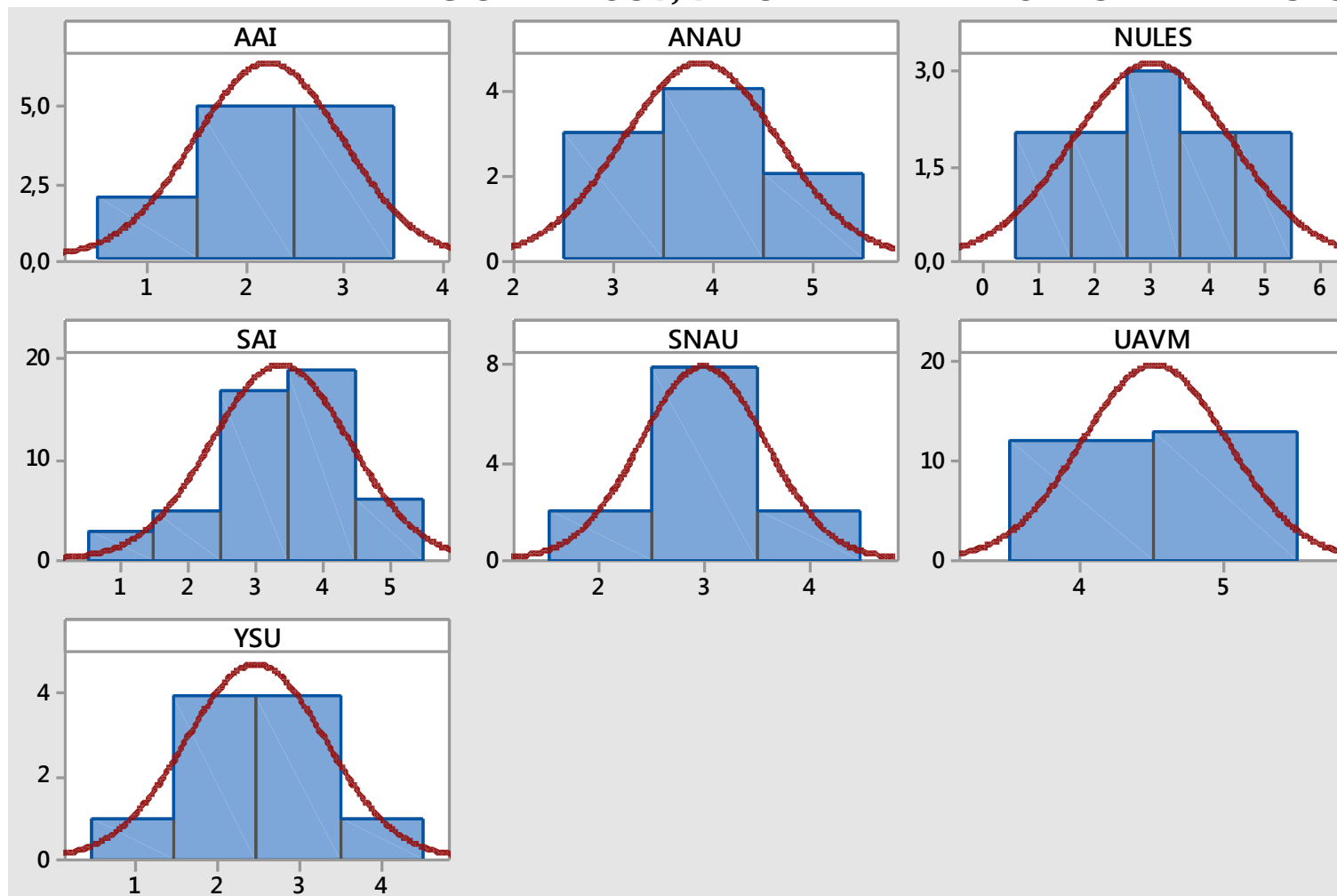
5.1. **EMPLOYERS SURVEY** – know - NEW EMPLOYEES FROM THE UNIVERSITY ARE UP TO THEIR TASKS IN MY ENTERPRISE RIGHT FROM THE START



AAI	
Mean	3,75
StDev	0,7538
N	12
ANAU	
Mean	3,111
StDev	0,7817
N	9
NULES	
Mean	3,818
StDev	0,7508
N	11
SAI	
Mean	3,06
StDev	1,058
N	50
SNAU	
Mean	3,333
StDev	0,8876
N	12
UAVM	
Mean	2,2
StDev	0,8660
N	25
YSU	
Mean	2,3
StDev	1,418
N	10



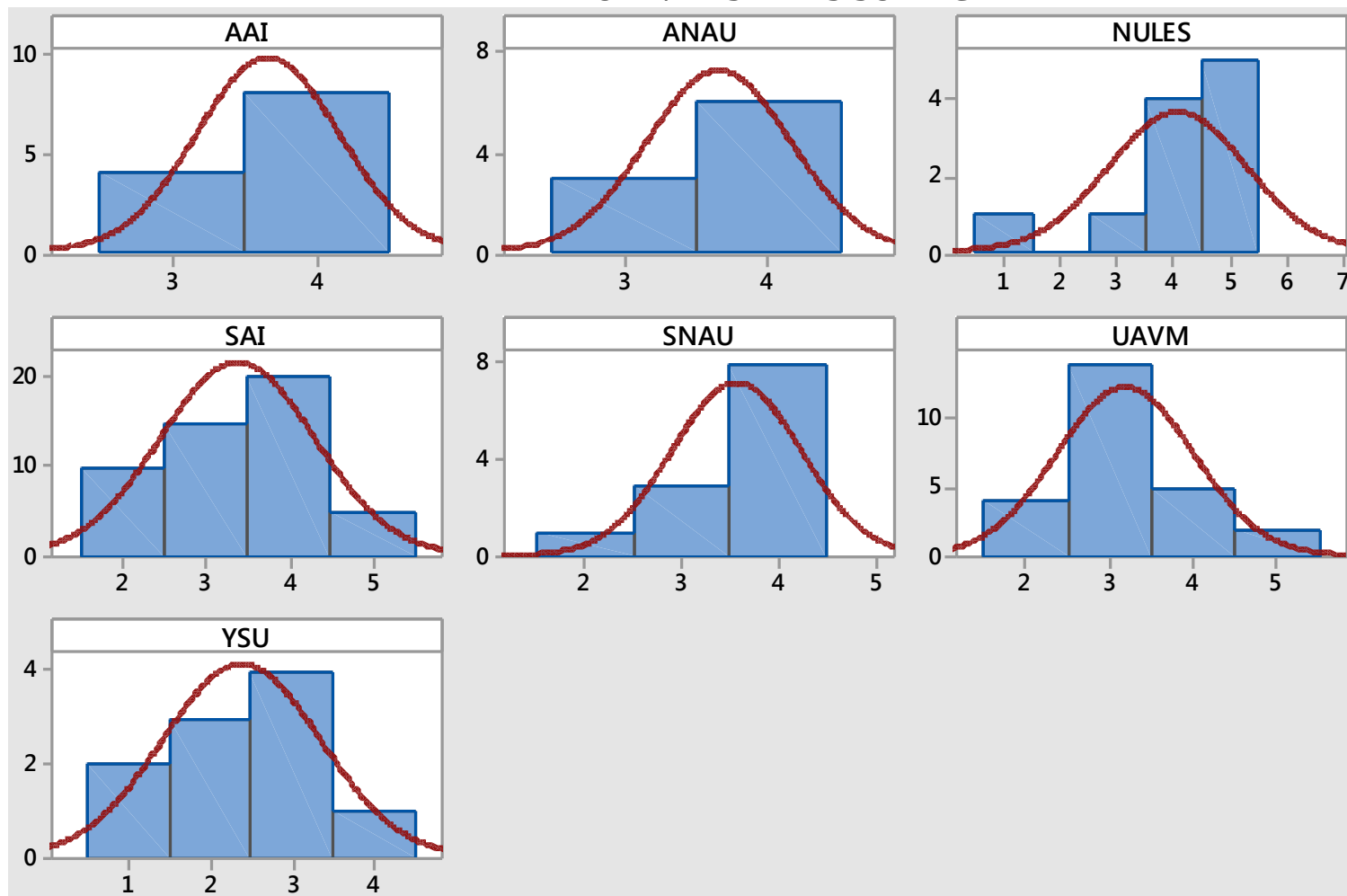
5.2. **EMPLOYERS SURVEY** – train - NEW EMPLOYEES FROM THE UNIVERSITY REQUIRE AN INTENSIVE TRAINING ON THE JOB, BEFORE THEY ARE UP TO THEIR TASKS



AAI	
Mean	2,25
StDev	0,7538
N	12
ANAU	
Mean	3,889
StDev	0,7817
N	9
NULES	
Mean	3
StDev	1,414
N	11
SAI	
Mean	3,4
StDev	1,030
N	50
SNAU	
Mean	3
StDev	0,6030
N	12
UAVM	
Mean	4,52
StDev	0,5099
N	25
YSU	
Mean	2,5
StDev	0,8498
N	10



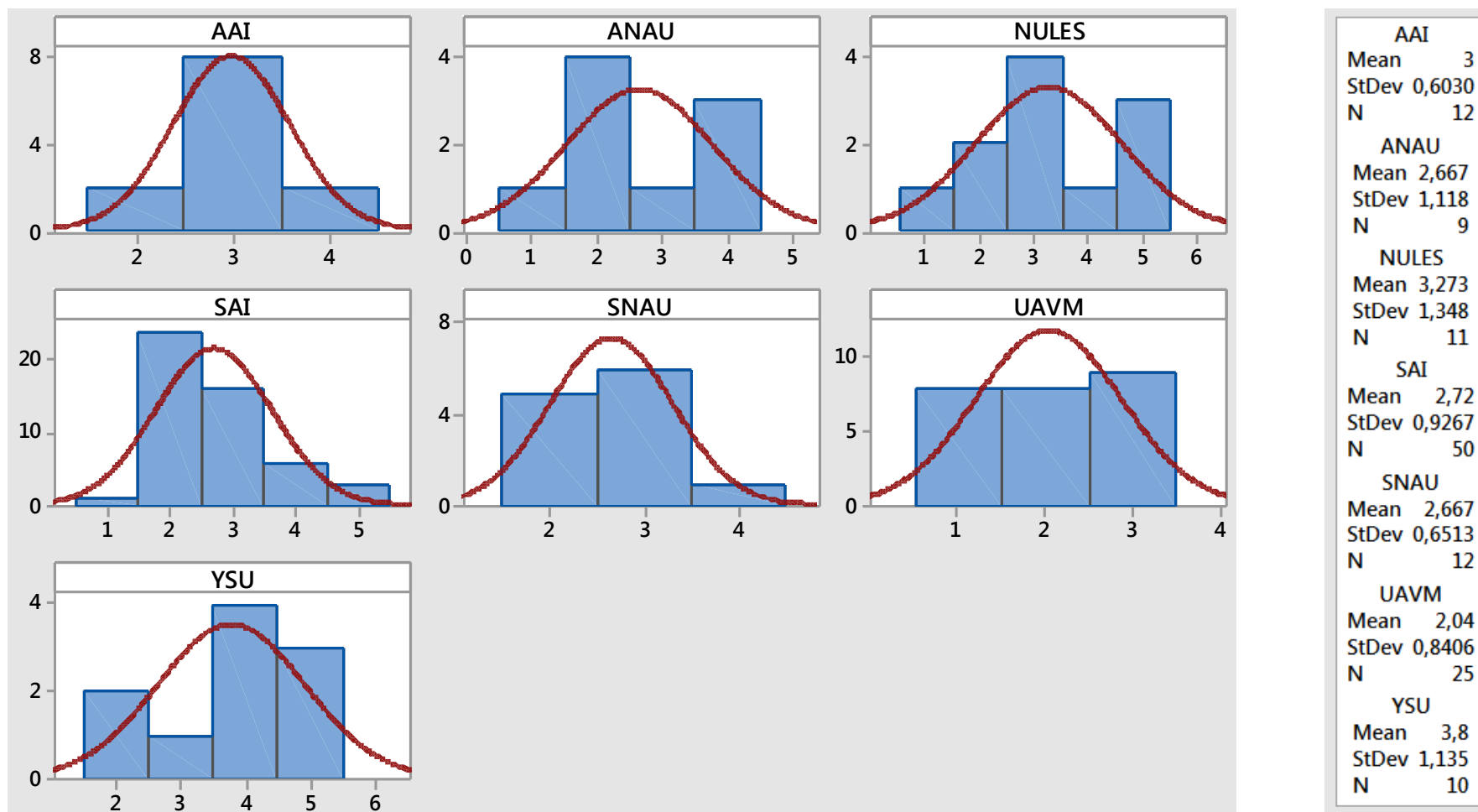
5.3. **EMPLOYERS SURVEY** – theory - THE THEORETICAL BACKGROUND OF NEW EMPLOYEES FROM THE UNIVERSITY IS SUFFICIENT



AAI	
Mean	3,667
StDev	0,4924
N	12
ANAU	
Mean	3,667
StDev	0,5
N	9
NULES	
Mean	4,091
StDev	1,221
N	11
SAI	
Mean	3,4
StDev	0,9258
N	50
SNAU	
Mean	3,583
StDev	0,6686
N	12
UAVM	
Mean	3,2
StDev	0,8165
N	25
YSU	
Mean	2,4
StDev	0,9661
N	10



5.4. **EMPLOYERS SURVEY** – pract - THE PRACTICAL BACKGROUND OF NEW EMPLOYEES FROM THE UNIVERSITY IS SUFFICIENT





5.5. **EMPLOYERS SURVEY** – iknow - WHICH IMPROVEMENTS OF THEORETICAL KNOWLEDGE OF NEW EMPLOYEES WOULD YOU PROPOSE FOR THE FUTURE?

AAI	ANAU	NULES	SAI	SNAU	UAVM	YSU
- practical application of theoretical concepts - 12 - knowledge on the use of software and computers - 12 - knowledge on methods of production- 12 - knowledge on labour organization - 12	- lack of knowledge of innovation technologies – 4 - deep professional knowledge - 2 - lack of knowledge about modern literature – 3 - lack of the legal acts/rules - 2	- practical application of theoretical concepts * 3; - knowledge of students is enough – 2; - knowledge on lows of farming – 2; - knowledge on the use of software and computers – 2; - knowledge on farm economics -1; - knowledge on methods of production – 1;	- practical application of theoretical concepts – 26; - knowledge on farm economics – 10; - knowledge of innovations – 4; - mentoring is needed – 4; - knowledge on the use of software and computers – 3; - knowledge of practical skills – 3;	- modern technologies of growing animals and plants as well as information technologies -4; - knowledge on farm economics – 3; - knowledge of legislation, especially tax – 1; - knowledge at the intersection of agrarian and economic science – 1; - knowledge of modern theories of competitive advantages at the micro level – 1; - knowledge of the biology of animals and plants in conjunction with economic indicators - poultry production 1;	- knowledge on farm economics – 13; - knowledge on labour organization – 7; - knowledge on methods of production – 5;	- Knowledge on the use of software and computers – 5. - practical application of theoretical concepts – 4; - knowledge on farm economics- 1;



5.6. **EMPLOYERS SURVEY** – ipract - WHICH IMPROVEMENTS OF PRACTICAL KNOWLEDGE OF NEW EMPLOYEES WOULD YOU PROPOSE FOR THE FUTURE?

AAI	ANAU	NULES	SAI	SNAU	UAVM	YSU
• knowledge on the use of software and computers – 12; • knowledge on methods of production – 12; • knowledge on labour organization – 12; • knowledge on irrigation – 12;	• individual participation in economical processes – 4; • usage of theoretical skills – 2; • skills of accounting programs – 1; • computers programs – 1; • foreign language skills – 1; •	• practical application of theoretical concepts – 8; • knowledge of the use of up-to-date machinery – 2; • Knowledge on lows of farming – 1.	• knowledge of practical skills – 31; • mentoring is needed – 9; • knowledge of innovations – 6; • practical application of theoretical concepts – 2; • knowledge on the use of software and computers – 2;	• work with modern equipment, machines and apparatus - 4; • use of IT solutions in economics and accounting – 3; • modern technologies of growing animals and plants as well as information technologies – 2; • knowledge of technological cards and the ability to apply them in practice, and, sometimes, to create them – 1; • precision farming systems – 1; • interaction in the team, team work – 1;	• practical knowledge of investments – 9; • practical knowledge of agricultural; machines – 6; • farm management – 4; • practical application of theoretical concepts – 5; • knowledge on farm economics – 1;	• knowledge on the use of software and computers – 6; • practical application of theoretical concepts – 4;

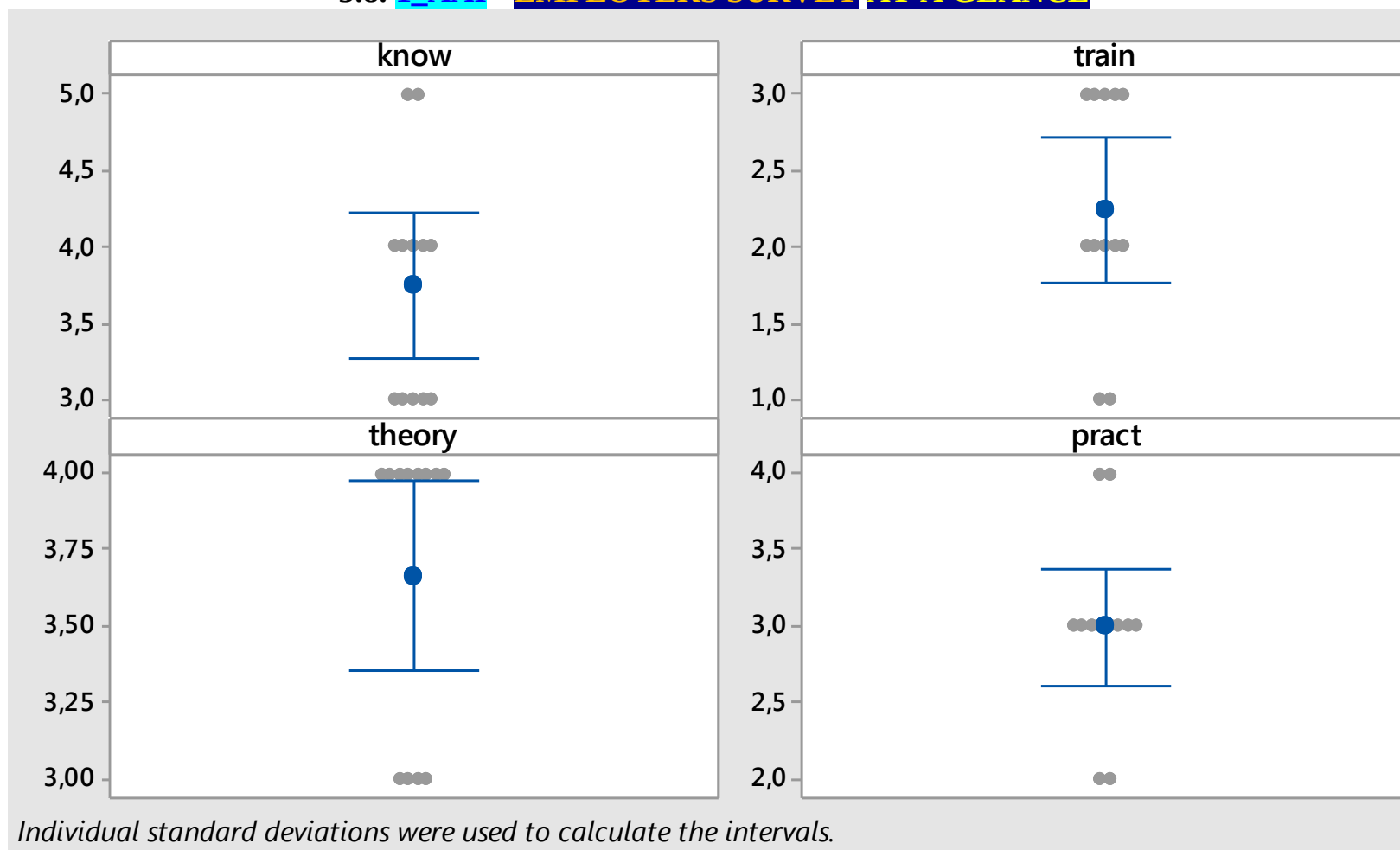


5.7. **EMPLOYERS SURVEY** – lack - WHAT ARE THE MAJOR LACKS IN THE PROFESSIONAL KNOWLEDGE (SKILLS) OF NEW EMPLOYEES ACCORDING TO YOUR EXPERIENCE?

AAI	ANAU	NULES	SAI	SNAU	UAVM	YSU
• practical application of theoretical concepts – 12; • Knowledge on methods of production – 12.	• practical skills – 7; • self-confidence – 1; • international methods in agrarian management -1;	• practical application of theoretical concepts – 4; • knowledge of students is enough – 2; • all of mentioned above – 2; • knowledge on the use of software and computers – 1; • knowledge on methods of production – 1; • knowledge on labour organization – 1;	• knowledge of practical skills – 15; • knowledge on the use of software and computers – 13; • knowledge of innovations – 13; • knowledge on farm economics – 3; • practical application of theoretical concepts - 1; • knowledge on methods of production -1; • knowledge on labour organization – 2; • knowledge on irrigation – 1; • Mentoring is needed – 1.	• use of IT solutions in economics and accounting – 3; • knowledge on farm economics - 2; • management of people -2; • modern technologies of growing animals and plants as well as information technologies - 1; • poultry production – 1; • interaction in the team, team work – 1; • make decisions on their own - 1 • responsibility, purposefulness and a sense of the absence of unbreakable obstacles for the proper desire -1;	• learning by heart – 11; • low practical knowledge – 8; • pleasure to work – 3; • logical correlations between facts – 3;	• practical application of theoretical concepts – 6; • knowledge on farm economics – 2; • Knowledge on the use of software and computers -2.

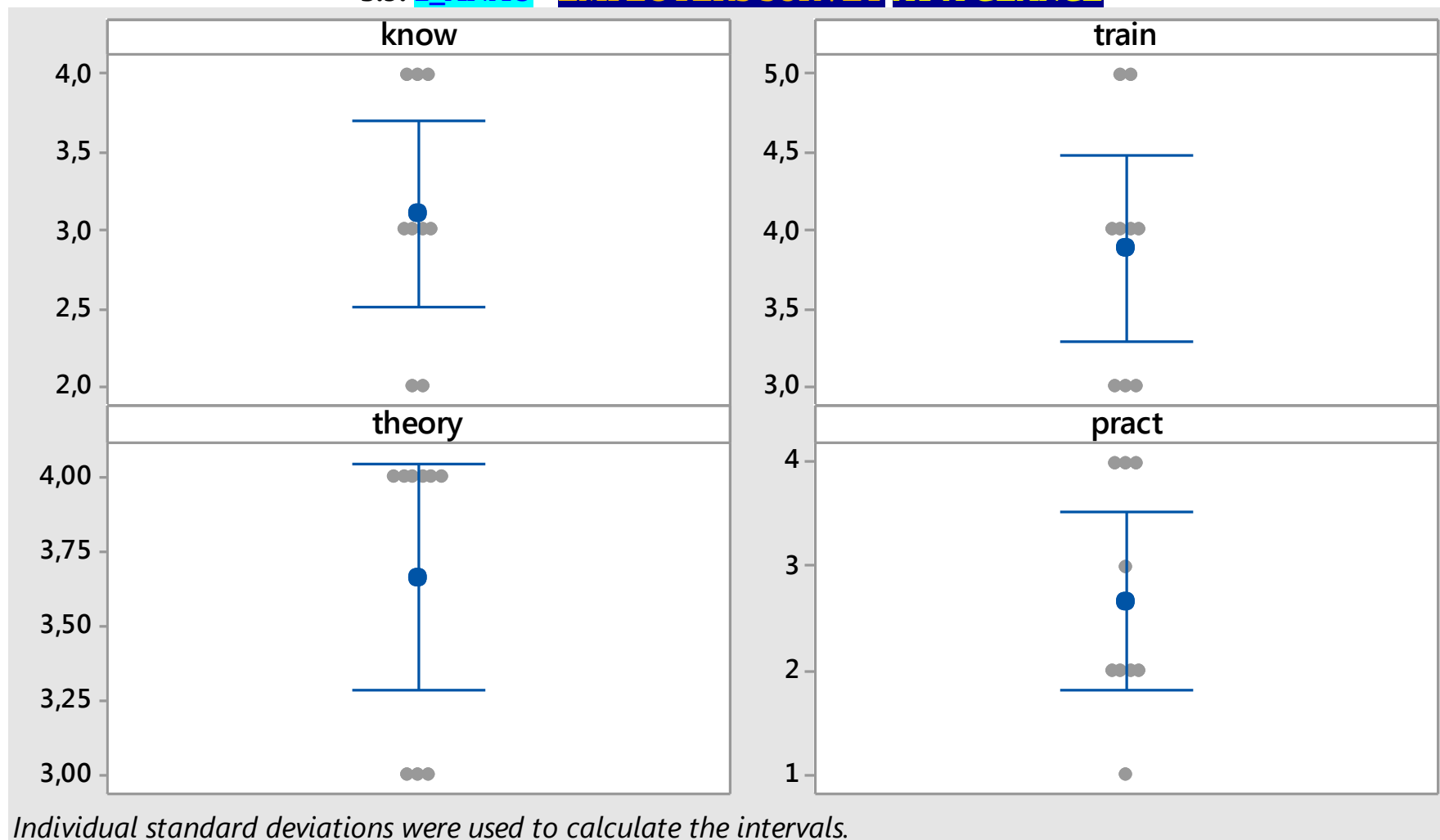


5.8. 1_AAI - EMPLOYERS SURVEY AT A GLANCE



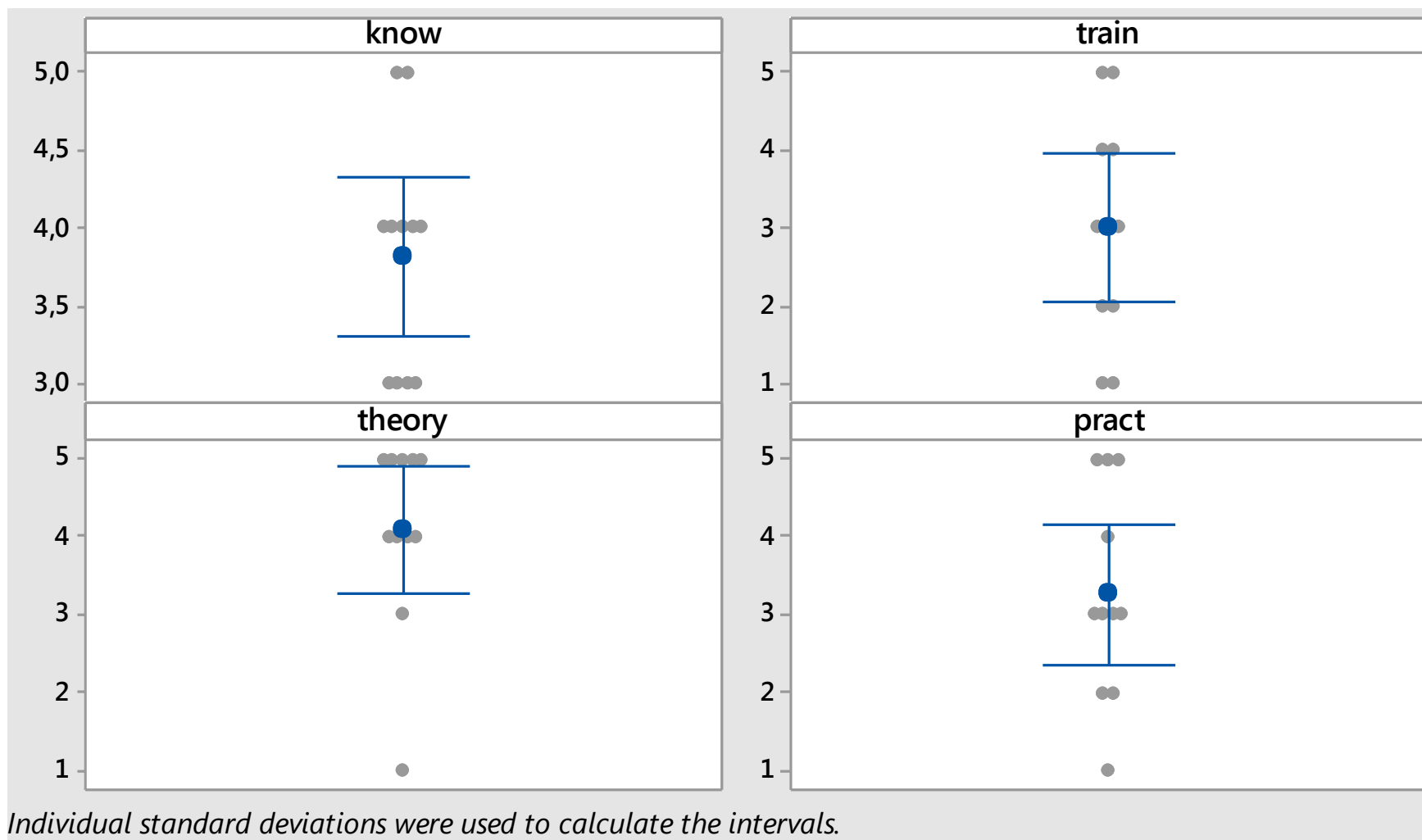


5.9. 2_ANAU - EMPLOYERS SURVEY AT A GLANCE



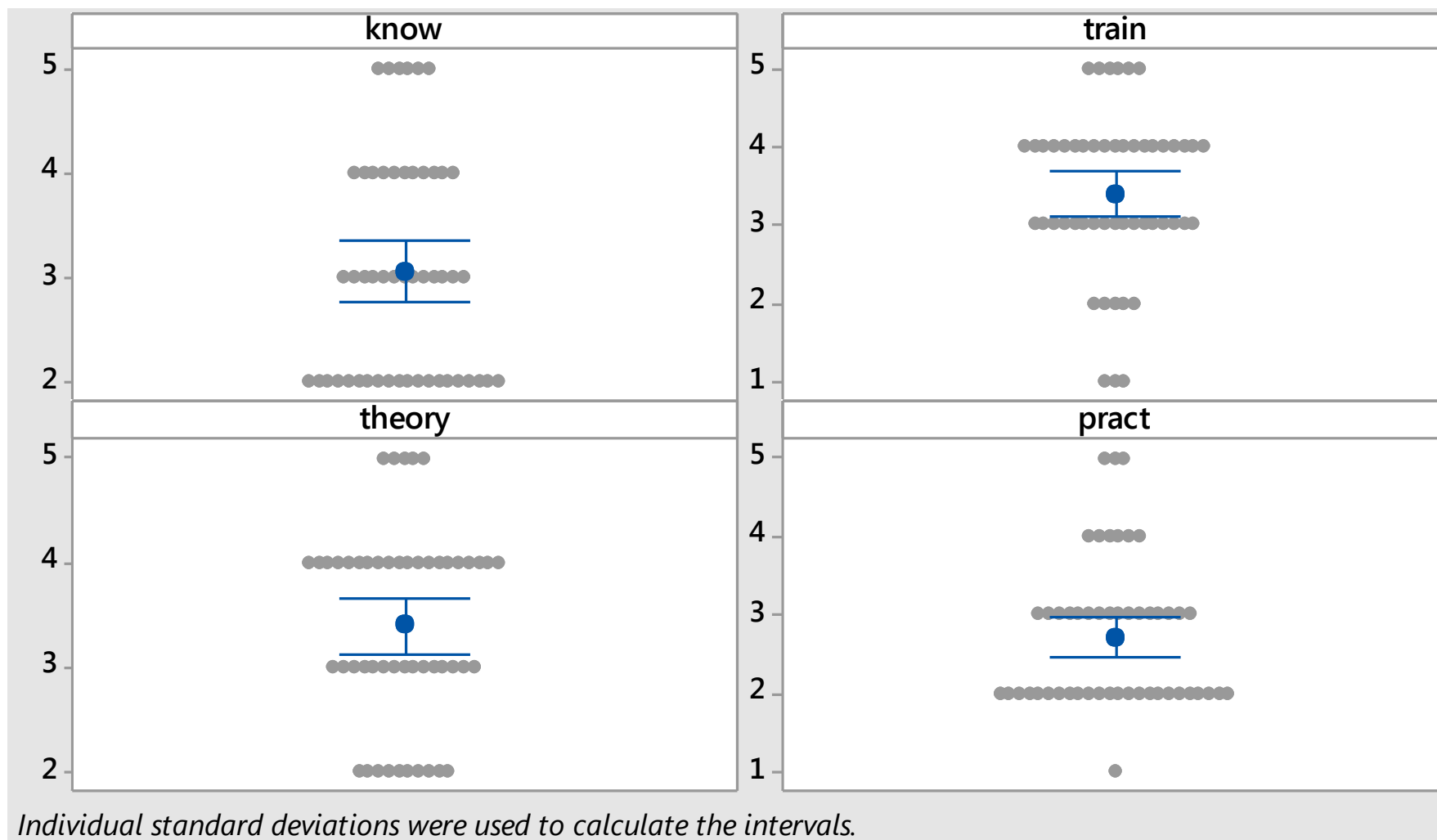


5.10. 4_NULES - EMPLOYERS SURVEY AT A GLANCE



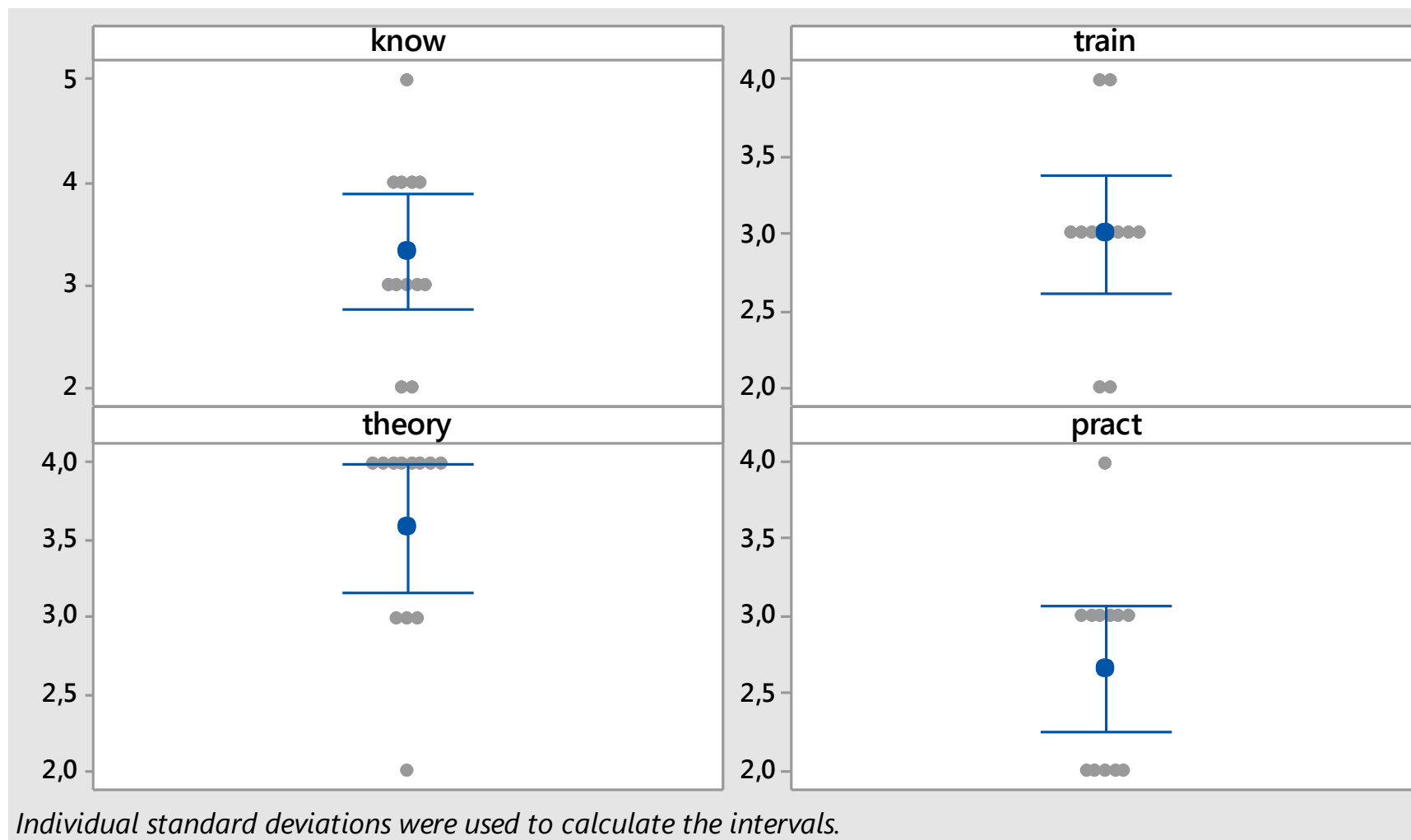


5.11. 5_SAI - EMPLOYERS SURVEY AT A GLANCE



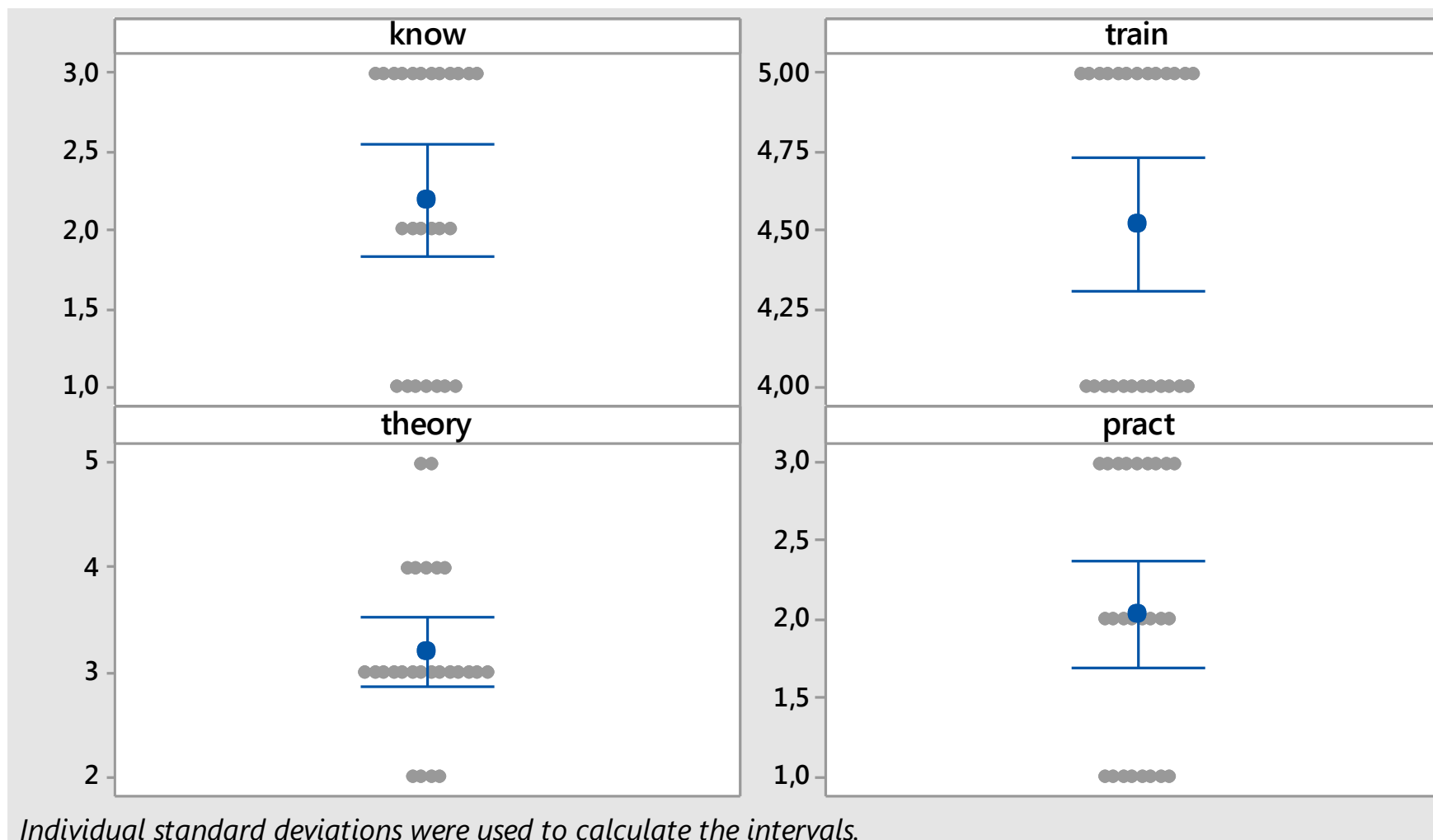


5.12. 6_SNAU - EMPLOYERS SURVEY AT A GLANCE



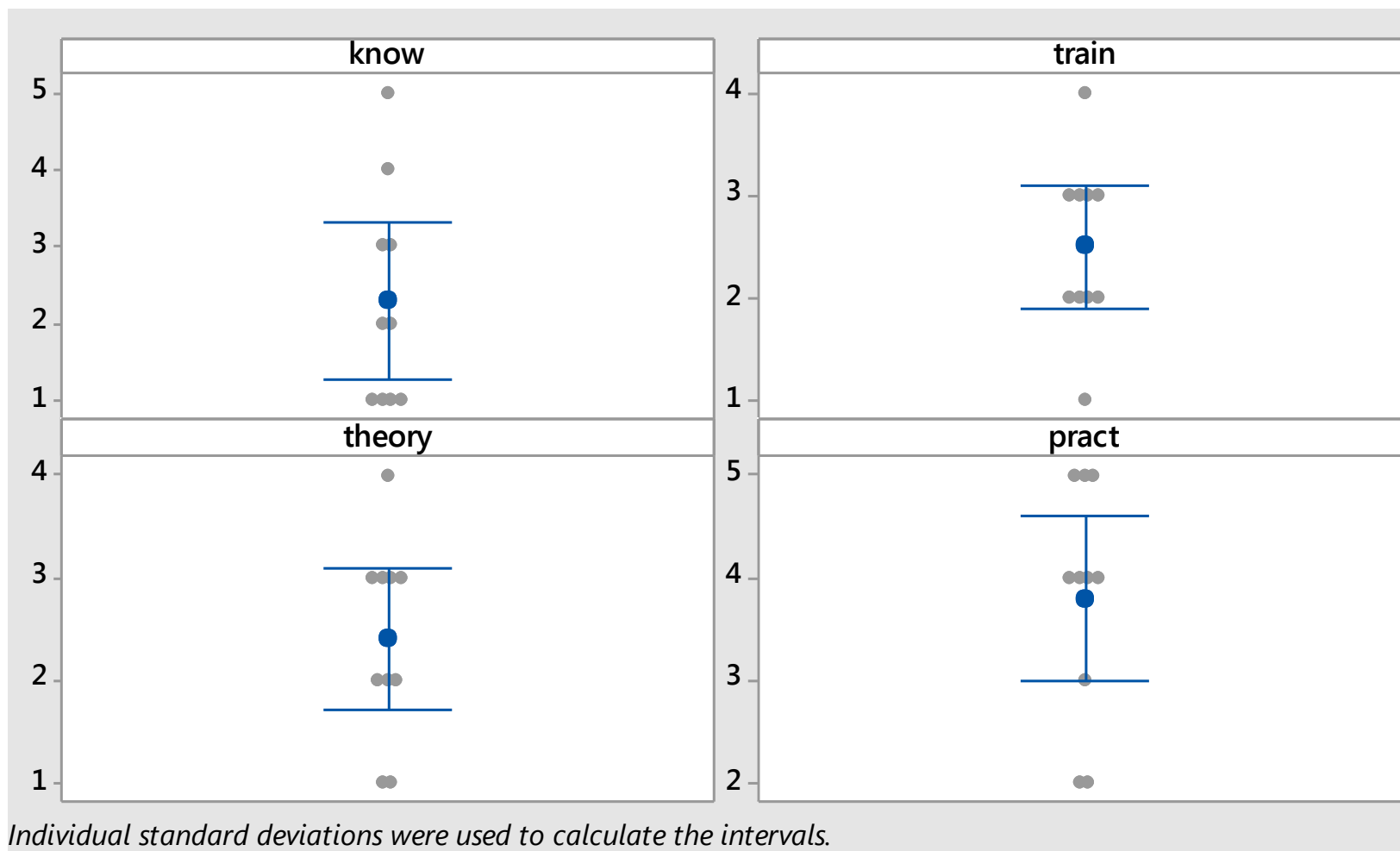


5.13. 9_UAVM - EMPLOYERS SURVEY AT A GLANCE





5.14. 10_YSU - EMPLOYERS SURVEY AT A GLANCE





ANNEXES

ANNEX 1	QUESTIONNAIRE FOR STUDENTS
ANNEX 2	QUESTIONNAIRE FOR TEACHERS
ANNEX 3	QUESTIONNAIRE FOR EMPLOYERS
ANNEX 4	AAI's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 5	ANAU's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 6	HSWT's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 7	NULES' SURVEY: DESCRIPTIVE STATISTICS
ANNEX 8	SAI's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 9	SNAU's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 10	WUC's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 11	WUELS' SURVEY: DESCRIPTIVE STATISTICS
ANNEX 12	UAVM's SURVEY: DESCRIPTIVE STATISTICS
ANNEX 13	YSU's SURVEY: DESCRIPTIVE STATISTICS



ANNEX 1

QUESTIONNAIRE FOR STUDENTS

	never	rarely	some- times	frequently	always
Teachers use frontal teaching					
Classes are held in working groups					
Teachers use Internet-technologies for teaching					
Teachers ask thought-provoking questions					
Teachers explain materials clearly					
Teachers show genuine interest in students					
Teachers provide helpful comments on written work					
Teachers effectively direct and stimulate discussions					
Teachers are available outside of class					
Teachers seem well prepared					
Teacher are effective in helping you learn					
How often did you attend teaching events (labs, seminars etc.) aside of lectures?					
How often did you take advantage of teachers' office hours					
Teachers are effective in relating lecture material to discussions and questions on observations in practice					
Teaching contents improved my professional competences significantly					
Teaching contents improved my professional knowledge more than my readings from publications (books, articles, Internet)					



ANNEX 2

QUESTIONNAIRE FOR TEACHERS

	never	rarely	some- times	frequently	always
My courses rely on frontal teaching					
My courses are based on students' working groups					
I use Internet-technologies for teaching					
My students pose questions during my courses					
The number of teaching hours is sufficient to cover all required learning contents					
The university provides all required hardware facilities for using Internet technologies for teaching					
The university provides all required software access for using Internet technologies for teaching					
My university provides all materials that I would like to have for teaching					
I offer office hours for students					
I hold additional teaching sessions (seminars etc.) beside my lectures					
I have access to actual empirical examples and data from my country for the contents of my courses					
My lectures are based on actual empirical examples from my country					
My knowledge on didactics is satisfactory for my position					
More training in didactics for teachers would be required at my university					
I am actively involved in the practical training of my students in farms and/or agricultural enterprises					

	Yes	No
I am familiar with the concept and use of MOOCs		
I created or participated already in the creation of a MOOC		
I am actively involved		



ANNEX 3

QUESTIONNAIRE FOR EMPLOYERS

Farm or Company: _____

	never	rarely	some- times	frequently	always
New employees from the university are up to their tasks in my enterprise right from the start					
New employees from the university require an intensive training on the job, before they are up to their tasks					
The theoretical background of new employees from the university is sufficient					
The practical background of new employees from the university is sufficient					

Open questions:

Which improvements of theoretical knowledge of new employees would you propose for the future?

Which improvements of practical knowledge of new employees would you propose for the future?

What are the major lacks in the professional knowledge (skills) of new employees according to your experience?



ANNEX 4

AAI's SURVEY: DESCRIPTIVE STATISTICS

Descriptive Statistics:

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	158	0	4,1013	0,0241	0,3026	4,0000	4,0000	4,0000	4,0000	5,0000
WG	158	0	5,0000	0,000000	0,000000	5,0000	5,0000	5,0000	5,0000	5,0000
Tech	158	0	2,2532	0,0430	0,5405	2,0000	2,0000	2,0000	2,0000	4,0000
pquest	158	0	4,0063	0,0435	0,5471	3,0000	4,0000	4,0000	4,0000	5,0000
material	158	0	3,8608	0,0444	0,5583	2,0000	4,0000	4,0000	4,0000	5,0000
interest	158	0	3,9937	0,0435	0,5471	3,0000	4,0000	4,0000	4,0000	5,0000
comments	158	0	4,4937	0,0514	0,6459	3,0000	4,0000	5,0000	5,0000	5,0000
discuss	158	0	3,8987	0,0636	0,7996	2,0000	4,0000	4,0000	4,0000	5,0000
oclass	158	0	3,8608	0,0669	0,8406	2,0000	4,0000	4,0000	4,0000	5,0000
prep	158	0	3,7975	0,0473	0,5947	2,0000	4,0000	4,0000	4,0000	5,0000
learnhelp	158	0	3,8038	0,0550	0,6908	2,0000	4,0000	4,0000	4,0000	5,0000
oevents	158	0	4,7468	0,0430	0,5405	3,0000	5,0000	5,0000	5,0000	5,0000
ohours	158	0	3,8038	0,0406	0,5105	3,0000	3,7500	4,0000	4,0000	5,0000
relate	158	0	4,1266	0,0447	0,5613	3,0000	4,0000	4,0000	4,0000	5,0000
profco	158	0	4,0443	0,0452	0,5682	3,0000	4,0000	4,0000	4,0000	5,0000
profkno	158	0	4,0696	0,0532	0,6688	3,0000	4,0000	4,0000	5,0000	5,0000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
4	142	89,87	5	158	100,00	2	126	79,75	3	23	14,56
5	16	10,13	N=	158		3	24	15,19	4	111	70,25
N=	158					4	8	5,06	5	24	15,19
						N=	158		N=	158	

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
2	7	4,43	3	24	15,19	3	13	8,23
3	16	10,13	4	111	70,25	4	54	34,18
4	127	80,38	5	23	14,56	5	91	57,59
5	8	5,06	N=	158		N=	158	
N=	158							

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
2	14	8,86	2	17	10,76	2	8	5,06
3	17	10,76	3	17	10,76	3	23	14,56
4	98	62,03	4	95	60,13	4	120	75,95
5	29	18,35	5	29	18,35	5	7	4,43
N=	158		N=	158		N=	158	

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
2	11	6,96	3	8	5,06	3	39	24,68
3	23	14,56	4	24	15,19	4	111	70,25
4	110	69,62	5	126	79,75	5	8	5,06
5	14	8,86	N=	158		N=	158	
N=	158							

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
3	16	10,13	3	22	13,92	3	30	18,99
4	106	67,09	4	107	67,72	4	87	55,06
5	36	22,78	5	29	18,35	5	41	25,95
N=	158		N=	158		N=	158	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	18	0	4,222	0,101	0,428	4,000	4,000	4,000	4,250	5,000
wg	18	0	5,0000	0,000000	0,000000	5,0000	5,0000	5,0000	5,0000	5,0000
itt	18	0	2,333	0,140	0,594	2,000	2,000	2,000	3,000	4,000
squest	18	0	4,222	0,152	0,647	3,000	4,000	4,000	5,000	5,000
th	18	0	3,222	0,263	1,114	2,000	2,000	3,500	4,000	5,000
hf	18	0	3,111	0,196	0,832	2,000	2,750	3,000	4,000	5,000
sf	18	0	4,444	0,166	0,705	3,000	4,000	5,000	5,000	5,000
pmaterial	18	0	3,722	0,211	0,895	2,000	3,000	4,000	4,000	5,000
oh	18	0	4,556	0,121	0,511	4,000	4,000	5,000	5,000	5,000
ats	18	0	4,8333	0,0904	0,3835	4,0000	5,0000	5,0000	5,0000	5,0000
data	18	0	3,611	0,183	0,778	3,000	3,000	3,000	4,000	5,000
datause	18	0	3,944	0,189	0,802	3,000	3,000	4,000	5,000	5,000
did	18	0	4,333	0,162	0,686	3,000	4,000	4,000	5,000	5,000
tdid	18	0	3,833	0,202	0,857	3,000	3,000	4,000	5,000	5,000
pt	18	0	3,500	0,283	1,200	2,000	2,000	3,500	5,000	5,000
mooc	18	0	1,0000	0,000000	0,000000	1,0000	1,0000	1,0000	1,0000	1,0000
cmooc	18	0	1,0000	0,000000	0,000000	1,0000	1,0000	1,0000	1,0000	1,0000
imooc	18	0	1,778	0,101	0,428	1,000	1,750	2,000	2,000	2,000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
4	14	77,78	5	18	100,00	2	13	72,22	3	2	11,11
5	4	22,22	N=	18		3	4	22,22	4	10	55,56
N=	18					4	1	5,56	5	6	33,33
						N=	18		N=	18	
th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
2	7	38,89	2	4	22,22	3	2	11,11	2	2	11,11
3	2	11,11	3	9	50,00	4	6	33,33	3	4	22,22
4	7	38,89	4	4	22,22	5	10	55,56	4	9	50,00
5	2	11,11	5	1	5,56	N=	18		5	3	16,67
N=	18		N=	18					N=	18	
oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
4	8	44,44	4	3	16,67	3	10	55,56	3	6	33,33
5	10	55,56	5	15	83,33	4	5	27,78	4	7	38,89
N=	18		N=	18		5	3	16,67	5	5	27,78
						N=	18		N=	18	
did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	2	11,11	3	8	44,44	2	5	27,78	1	18	100,00
4	8	44,44	4	5	27,78	3	4	22,22	N=	18	
5	8	44,44	5	5	27,78	4	4	22,22			
N=	18		N=	18		5	5	27,78			
						N=	18				
cmooc	Count	Percent	imooc	Count	Percent						
1	18	100,00	1	4	22,22						
N=	18		2	14	77,78						
			N=	18							

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	12	0	3,750	0,218	0,754	3,000	3,000	4,000	4,000	5,000
train	12	0	2,250	0,218	0,754	1,000	2,000	2,000	3,000	3,000
theory	12	0	3,667	0,142	0,492	3,000	3,000	4,000	4,000	4,000
pract	12	0	3,000	0,174	0,603	2,000	3,000	3,000	3,000	4,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
3	5	41,67	1	2	16,67	3	4	33,33
4	5	41,67	2	5	41,67	4	8	66,67
5	2	16,67	3	5	41,67	N=	12	
N=	12		N=	12				

pract	Count	Percent
2	2	16,67
3	8	66,67
4	2	16,67
N=	12	



ANNEX 5

ANAU's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	42	0	3,905	0,180	1,165	1,000	3,000	4,000	5,000	5,000
WG	42	0	3,476	0,171	1,110	1,000	3,000	3,500	4,000	5,000
Tech	42	0	3,286	0,208	1,349	1,000	2,000	3,500	4,250	5,000
pquest	42	0	3,238	0,163	1,055	1,000	3,000	3,000	4,000	5,000
material	42	0	3,857	0,151	0,977	1,000	3,000	4,000	5,000	5,000
interest	42	0	3,905	0,159	1,031	1,000	3,000	4,000	5,000	5,000
comments	42	0	3,643	0,195	1,265	1,000	3,000	4,000	5,000	5,000
discuss	42	0	3,595	0,171	1,106	1,000	3,000	4,000	4,250	5,000
oclass	42	0	3,643	0,204	1,322	1,000	3,000	4,000	5,000	5,000
prep	42	0	4,048	0,132	0,854	3,000	3,000	4,000	5,000	5,000
learnhelp	42	0	4,119	0,133	0,861	2,000	4,000	4,000	5,000	5,000
oevents	42	0	3,595	0,199	1,289	1,000	2,750	4,000	5,000	5,000
ohours	42	0	3,738	0,149	0,964	1,000	3,000	4,000	4,000	5,000
relate	42	0	3,905	0,170	1,100	1,000	3,000	4,000	5,000	5,000
profco	42	0	3,762	0,173	1,122	2,000	3,000	4,000	5,000	5,000
profkno	42	0	3,786	0,154	1,001	1,000	3,000	4,000	5,000	5,000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
1	2	4,76	1	1	2,38	1	4	9,52	1	3	7,14
2	3	7,14	2	8	19,05	2	11	26,19	2	5	11,90
3	9	21,43	3	12	28,57	3	6	14,29	3	18	42,86
4	11	26,19	4	12	28,57	4	11	26,19	4	11	26,19
5	17	40,48	5	9	21,43	5	10	23,81	5	5	11,90
N=	42		N=	42		N=	42		N=	42	

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
1	1	2,38	1	1	2,38	1	4	9,52
2	2	4,76	2	2	4,76	2	3	7,14
3	11	26,19	3	12	28,57	3	10	23,81
4	16	38,10	4	12	28,57	4	12	28,57
5	12	28,57	5	15	35,71	5	13	30,95
N=	42		N=	42		N=	42	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
1	2	4,76	1	3	7,14	3	14	33,33
2	4	9,52	2	6	14,29	4	12	28,57
3	13	30,95	3	10	23,81	5	16	38,10
4	13	30,95	4	7	16,67	N=	42	
5	10	23,81	5	16	38,10			
N=	42		N=	42				

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
2	2	4,76	1	3	7,14	1	1	2,38
3	7	16,67	2	7	16,67	2	3	7,14
4	17	40,48	3	7	16,67	3	11	26,19
5	16	38,10	4	12	28,57	4	18	42,86
N=	42		5	13	30,95	5	9	21,43
			N=	42		N=	42	

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
1	2	4,76	2	7	16,67	1	1	2,38
2	3	7,14	3	11	26,19	2	3	7,14
3	6	14,29	4	9	21,43	3	11	26,19
4	17	40,48	5	15	35,71	4	16	38,10
5	14	33,33	N=	42		5	11	26,19
N=	42					N=	42	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	19	0	2,421	0,192	0,838	1,000	2,000	3,000	3,000	4,000
wg	19	0	3,789	0,249	1,084	2,000	3,000	4,000	5,000	5,000
itt	19	0	2,895	0,305	1,329	1,000	2,000	3,000	4,000	5,000
squest	19	0	4,526	0,140	0,612	3,000	4,000	5,000	5,000	5,000
th	19	0	4,105	0,201	0,875	2,000	4,000	4,000	5,000	5,000
hf	19	0	2,632	0,267	1,165	1,000	2,000	3,000	3,000	5,000
sf	19	0	2,421	0,221	0,961	1,000	2,000	2,000	3,000	4,000
pmaterial	19	0	2,684	0,188	0,820	1,000	2,000	3,000	3,000	4,000
oh	19	0	3,947	0,195	0,848	3,000	3,000	4,000	5,000	5,000
ats	19	0	3,684	0,217	0,946	2,000	3,000	4,000	4,000	5,000
data	19	0	3,526	0,118	0,513	3,000	3,000	4,000	4,000	4,000
datause	19	0	3,895	0,186	0,809	2,000	3,000	4,000	4,000	5,000
did	19	0	4,211	0,181	0,787	3,000	4,000	4,000	5,000	5,000
tdid	19	0	3,947	0,209	0,911	3,000	3,000	4,000	5,000	5,000
pt	19	0	3,895	0,264	1,150	2,000	3,000	4,000	5,000	5,000
mooc	19	0	1,2105	0,0961	0,4189	1,0000	1,0000	1,0000	1,0000	2,0000
cmooc	19	0	1,632	0,114	0,496	1,000	1,000	2,000	2,000	2,000
imooc	19	0	1,684	0,110	0,478	1,000	1,000	2,000	2,000	2,000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
1	3	15,79	2	4	21,05	1	3	15,79	3	1	5,26
2	6	31,58	3	1	5,26	2	6	31,58	4	7	36,84
3	9	47,37	4	9	47,37	3	2	10,53	5	11	57,89
4	1	5,26	5	5	26,32	4	6	31,58	N=	19	
N=	19		N=	19		5	2	10,53			

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
2	1	5,26	1	3	15,79	1	3	15,79	1	1	5,26
3	3	15,79	2	6	31,58	2	8	42,11	2	7	36,84
4	8	42,11	3	7	36,84	3	5	26,32	3	8	42,11
5	7	36,84	4	1	5,26	4	3	15,79	4	3	15,79
N=	19		5	2	10,53	N=	19		N=	19	

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
3	7	36,84	2	2	10,53	3	9	47,37	2	1	5,26
4	6	31,58	3	6	31,58	4	10	52,63	3	4	21,05
5	6	31,58	4	7	36,84	N=	19		4	10	52,63
N=	19		5	4	21,05				5	4	21,05

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	4	21,05	3	8	42,11	2	3	15,79	1	15	78,95
4	7	36,84	4	4	21,05	3	4	21,05	2	4	21,05
5	8	42,11	5	7	36,84	4	4	21,05	N=	19	
N=	19		N=	19		5	8	42,11			

cmooc	Count	Percent	imooc	Count	Percent
1	7	36,84	1	6	31,58
2	12	63,16	2	13	68,42
N=	19		N=	19	

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	9	0	3,111	0,261	0,782	2,000	2,500	3,000	4,000	4,000
train	9	0	3,889	0,261	0,782	3,000	3,000	4,000	4,500	5,000
theory	9	0	3,667	0,167	0,500	3,000	3,000	4,000	4,000	4,000
pract	9	0	2,667	0,373	1,118	1,000	2,000	2,000	4,000	4,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
2	2	22,22	3	3	33,33	3	3	33,33
3	4	44,44	4	4	44,44	4	6	66,67
4	3	33,33	5	2	22,22	N=	9	
N=	9		N=	9				

pract	Count	Percent
1	1	11,11
2	4	44,44
3	1	11,11
4	3	33,33
N=	9	



ANNEX 6

HSWT's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	70	0	3,829	0,111	0,932	1,000	3,000	4,000	4,000	5,000
WG	70	0	2,2429	0,0920	0,7696	1,0000	2,0000	2,0000	3,0000	4,0000
Tech	70	0	4,0143	0,0775	0,6481	2,0000	4,0000	4,0000	4,0000	5,0000
pquest	70	0	3,5286	0,0807	0,6751	2,0000	3,0000	4,0000	4,0000	5,0000
material	70	0	3,9571	0,0591	0,4945	3,0000	4,0000	4,0000	4,0000	5,0000
interest	70	0	3,6429	0,0815	0,6818	2,0000	3,0000	4,0000	4,0000	5,0000
comments	70	0	3,029	0,129	1,076	1,000	2,000	3,000	4,000	5,000
discuss	70	0	3,371	0,106	0,887	2,000	3,000	3,000	4,000	5,000
oclass	70	0	3,6143	0,0961	0,8038	1,0000	3,0000	4,0000	4,0000	5,0000
prep	70	0	4,2857	0,0615	0,5148	3,0000	4,0000	4,0000	5,0000	5,0000
learnhelp	70	0	3,5429	0,0780	0,6524	2,0000	3,0000	4,0000	4,0000	5,0000
oevents	70	0	2,986	0,103	0,860	1,000	2,000	3,000	4,000	5,000
ohours	70	0	1,9000	0,0890	0,7450	1,0000	1,0000	2,0000	2,0000	4,0000
relate	70	0	3,5857	0,0851	0,7121	2,0000	3,0000	4,0000	4,0000	5,0000
profco	70	0	4,0429	0,0773	0,6469	2,0000	4,0000	4,0000	4,0000	5,0000
profkno	70	0	3,9571	0,0920	0,7696	1,0000	4,0000	4,0000	4,0000	5,0000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
1	1	1,43	1	10	14,29	2	1	1,43	2	3	4,29
2	6	8,57	2	37	52,86	3	11	15,71	3	31	44,29
3	13	18,57	3	19	27,14	4	44	62,86	4	32	45,71
4	34	48,57	4	4	5,71	5	14	20,00	5	4	5,71
5	16	22,86	N=	70		N=	70		N=	70	
N=	70										

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
3	10	14,29	2	2	2,86	1	8	11,43
4	53	75,71	3	27	38,57	2	12	17,14
5	7	10,00	4	35	50,00	3	23	32,86
N=	70		5	6	8,57	4	24	34,29
			N=	70		5	3	4,29
						N=	70	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
2	12	17,14	1	1	1,43	3	2	2,86
3	27	38,57	2	4	5,71	4	46	65,71
4	24	34,29	3	23	32,86	5	22	31,43
5	7	10,00	4	35	50,00	N=	70	
N=	70		5	7	10,00			
			N=	70				

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
2	2	2,86	1	1	1,43	1	21	30,00
3	32	45,71	2	21	30,00	2	37	52,86
4	32	45,71	3	28	40,00	3	10	14,29
5	4	5,71	4	18	25,71	4	2	2,86
N=	70		5	2	2,86	N=	70	
			N=	70				

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
2	4	5,71	2	2	2,86	1	2	2,86
3	26	37,14	3	7	10,00	3	10	14,29
4	35	50,00	4	47	67,14	4	45	64,29
5	5	7,14	5	14	20,00	5	13	18,57
N=	70		N=	70		N=	70	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	10	0	2,900	0,407	1,287	1,000	1,750	3,500	4,000	4,000
wg	10	0	3,200	0,291	0,919	2,000	2,750	3,000	4,000	5,000
itt	10	0	3,800	0,249	0,789	2,000	3,750	4,000	4,000	5,000
squest	10	0	4,700	0,153	0,483	4,000	4,000	5,000	5,000	5,000
th	10	0	4,300	0,213	0,675	3,000	4,000	4,000	5,000	5,000
hf	10	0	4,500	0,224	0,707	3,000	4,000	5,000	5,000	5,000
sf	10	0	4,500	0,167	0,527	4,000	4,000	4,500	5,000	5,000
pmaterial	10	0	4,300	0,153	0,483	4,000	4,000	4,000	5,000	5,000
oh	10	0	4,000	0,258	0,816	3,000	3,000	4,000	5,000	5,000
ats	10	0	3,500	0,342	1,080	2,000	2,750	3,500	4,250	5,000
data	10	0	4,400	0,221	0,699	3,000	4,000	4,500	5,000	5,000
datause	10	0	4,300	0,153	0,483	4,000	4,000	4,000	5,000	5,000
did	10	0	4,200	0,133	0,422	4,000	4,000	4,000	4,250	5,000
tdid	10	0	3,000	0,365	1,155	1,000	2,500	3,000	4,000	4,000
pt	10	0	3,400	0,400	1,265	1,000	2,750	3,500	4,250	5,000
mooc	10	0	1,700	0,153	0,483	1,000	1,000	2,000	2,000	2,000
cmooc	10	0	1,800	0,133	0,422	1,000	1,750	2,000	2,000	2,000
imooc	10	0	1,800	0,133	0,422	1,000	1,750	2,000	2,000	2,000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
1	2	20,00	2	2	20,00	2	1	10,00	4	3	30,00
2	2	20,00	3	5	50,00	3	1	10,00	5	7	70,00
3	1	10,00	4	2	20,00	4	7	70,00	N=	10	
4	5	50,00	5	1	10,00	5	1	10,00			
N=	10		N=	10		N=	10				
th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
3	1	10,00	3	1	10,00	4	5	50,00	4	7	70,00
4	5	50,00	4	3	30,00	5	5	50,00	5	3	30,00
5	4	40,00	5	6	60,00	N=	10		N=	10	
N=	10		N=	10							
oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
3	3	30,00	2	2	20,00	3	1	10,00	4	7	70,00
4	4	40,00	3	3	30,00	4	4	40,00	5	3	30,00
5	3	30,00	4	3	30,00	5	5	50,00	N=	10	
N=	10		5	2	20,00	N=	10				
			N=	10							
did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
4	8	80,00	1	2	20,00	1	1	10,00	1	3	30,00
5	2	20,00	3	4	40,00	2	1	10,00	2	7	70,00
N=	10		4	4	40,00	3	3	30,00	N=	10	
			N=	10		4	3	30,00			
						5	2	20,00			
						N=	10				
cmooc	Count	Percent	imooc	Count	Percent						
1	2	20,00	1	2	20,00						
2	8	80,00	2	8	80,00						
N=	10		N=	10							



ANNEX 7

NULES' SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	216	0	4,0833	0,0538	0,7909	2,0000	4,0000	4,0000	5,0000	5,0000
WG	216	0	3,8565	0,0692	1,0174	1,0000	3,0000	4,0000	5,0000	5,0000
Tech	216	0	3,9120	0,0544	0,7992	2,0000	3,0000	4,0000	4,0000	5,0000
pquest	216	0	3,8333	0,0626	0,9201	1,0000	3,0000	4,0000	5,0000	5,0000
material	216	0	3,8056	0,0576	0,8459	1,0000	3,0000	4,0000	4,0000	5,0000
interest	216	0	3,4120	0,0710	1,0440	1,0000	3,0000	3,0000	4,0000	5,0000
comments	216	0	3,5000	0,0698	1,0253	1,0000	3,0000	3,0000	4,0000	5,0000
discuss	216	0	3,5694	0,0684	1,0045	1,0000	3,0000	4,0000	4,0000	5,0000
oclass	216	0	3,5648	0,0671	0,9862	1,0000	3,0000	4,0000	4,0000	5,0000
prep	216	0	4,0231	0,0555	0,8152	1,0000	4,0000	4,0000	5,0000	5,0000
learnhelp	216	0	3,6481	0,0618	0,9080	1,0000	3,0000	4,0000	4,0000	5,0000
oevents	216	0	2,6574	0,0799	1,1746	1,0000	2,0000	3,0000	3,0000	5,0000
ohours	216	0	2,7639	0,0842	1,2369	1,0000	2,0000	3,0000	4,0000	5,0000
relate	216	0	3,7315	0,0676	0,9940	1,0000	3,0000	4,0000	4,0000	5,0000
profco	216	0	3,5231	0,0675	0,9927	1,0000	3,0000	4,0000	4,0000	5,0000
profkno	216	0	3,3935	0,0798	1,1725	1,0000	3,0000	3,0000	4,0000	5,0000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
2	7	3,24	1	1	0,46	2	11	5,09	1	2	0,93
3	38	17,59	2	23	10,65	3	46	21,30	2	15	6,94
4	101	46,76	3	54	25,00	4	110	50,93	3	55	25,46
5	70	32,41	4	66	30,56	5	49	22,69	4	89	41,20
N=	216		5	72	33,33	N=	216		5	55	25,46
			N=	216					N=	216	

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
1	1	0,46	1	8	3,70	1	3	1,39
2	12	5,56	2	32	14,81	2	32	14,81
3	60	27,78	3	74	34,26	3	80	37,04
4	98	45,37	4	67	31,02	4	56	25,93
5	45	20,83	5	35	16,20	5	45	20,83
N=	216		N=	216		N=	216	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
1	3	1,39	1	5	2,31	1	2	0,93
2	30	13,89	2	26	12,04	2	5	2,31
3	67	31,02	3	64	29,63	3	42	19,44
4	73	33,80	4	84	38,89	4	104	48,15
5	43	19,91	5	37	17,13	5	63	29,17
N=	216		N=	216		N=	216	

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
1	2	0,93	1	41	18,98	1	44	20,37
2	16	7,41	2	60	27,78	2	46	21,30
3	80	37,04	3	62	28,70	3	61	28,24
4	76	35,19	4	38	17,59	4	47	21,76
5	42	19,44	5	15	6,94	5	18	8,33
N=	216		N=	216		N=	216	

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
1	5	2,31	1	6	2,78	1	14	6,48
2	17	7,87	2	26	12,04	2	37	17,13
3	62	28,70	3	68	31,48	3	58	26,85
4	79	36,57	4	81	37,50	4	64	29,63
5	53	24,54	5	35	16,20	5	43	19,91
N=	216		N=	216		N=	216	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	50	0	4,080	0,106	0,752	2,000	4,000	4,000	5,000	5,000
wg	50	0	3,760	0,147	1,041	1,000	3,000	4,000	4,250	5,000
itt	50	0	4,360	0,113	0,802	2,000	4,000	5,000	5,000	5,000
squest	50	0	4,080	0,110	0,778	2,000	4,000	4,000	5,000	5,000
th	50	0	3,060	0,188	1,331	1,000	2,000	3,000	4,000	5,000
hf	50	0	3,460	0,149	1,054	2,000	3,000	3,000	4,000	5,000
sf	50	0	3,640	0,158	1,120	1,000	3,000	4,000	5,000	5,000
pmaterial	50	0	3,360	0,151	1,064	1,000	2,750	3,000	4,000	5,000
oh	50	0	4,020	0,168	1,186	1,000	3,000	4,000	5,000	5,000
ats	50	0	3,480	0,160	1,129	1,000	2,000	4,000	4,000	5,000
data	50	0	3,880	0,153	1,081	1,000	3,750	4,000	5,000	5,000
datause	50	0	4,280	0,118	0,834	2,000	4,000	4,500	5,000	5,000
did	50	0	4,1600	0,0963	0,6809	3,0000	4,0000	4,0000	5,0000	5,0000
tdid	50	0	3,920	0,117	0,829	2,000	3,000	4,000	5,000	5,000
pt	50	0	3,040	0,159	1,124	1,000	2,000	3,000	4,000	5,000
mooc	50	0	1,1200	0,0464	0,3283	1,0000	1,0000	1,0000	1,0000	2,0000
cmooc	50	0	1,2200	0,0592	0,4185	1,0000	1,0000	1,0000	1,0000	2,0000
imooc	50	0	1,2600	0,0627	0,4431	1,0000	1,0000	1,0000	2,0000	2,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
2	2	4,00	1	2	4,00	2	1	2,00	2	1	2,00
3	6	12,00	2	4	8,00	3	7	14,00	3	10	20,00
4	28	56,00	3	10	20,00	4	15	30,00	4	23	46,00
5	14	28,00	4	22	44,00	5	27	54,00	5	16	32,00
N=	50		5	12	24,00	N=	50		N=	50	

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
1	8	16,00	2	11	22,00	1	1	2,00	1	1	2,00
2	9	18,00	3	15	30,00	2	9	18,00	2	11	22,00
3	14	28,00	4	14	28,00	3	10	20,00	3	15	30,00
4	10	20,00	5	10	20,00	4	17	34,00	4	15	30,00
5	9	18,00	N=	50		5	13	26,00	5	8	16,00
N=	50					N=	50		N=	50	

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
1	3	6,00	1	1	2,00	1	2	4,00	2	1	2,00
2	3	6,00	2	12	24,00	2	5	10,00	3	9	18,00
3	7	14,00	3	9	18,00	3	5	10,00	4	15	30,00
4	14	28,00	4	18	36,00	4	23	46,00	5	25	50,00
5	23	46,00	5	10	20,00	5	15	30,00	N=	50	
N=	50		N=	50		N=	50				

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	8	16,00	2	1	2,00	1	5	10,00	1	44	88,00
4	26	52,00	3	16	32,00	2	10	20,00	2	6	12,00
5	16	32,00	4	19	38,00	3	18	36,00	N=	50	
N=	50		5	14	28,00	4	12	24,00			
			N=	50		5	5	10,00			
						N=	50				

cmooc	Count	Percent	imooc	Count	Percent
1	39	78,00	1	37	74,00
2	11	22,00	2	13	26,00
N=	50		N=	50	

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	11	0	3,818	0,226	0,751	3,000	3,000	4,000	4,000	5,000
train	11	0	3,000	0,426	1,414	1,000	2,000	3,000	4,000	5,000
theory	11	0	4,091	0,368	1,221	1,000	4,000	4,000	5,000	5,000
pract	11	0	3,273	0,407	1,348	1,000	2,000	3,000	5,000	5,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
3	4	36,36	1	2	18,18	1	1	9,09
4	5	45,45	2	2	18,18	3	1	9,09
5	2	18,18	3	3	27,27	4	4	36,36
N=	11		4	2	18,18	5	5	45,45
			5	2	18,18	N=	11	
			N=	11				

pract	Count	Percent
1	1	9,09
2	2	18,18
3	4	36,36
4	1	9,09
5	3	27,27
N=	11	



ANNEX 8

SAI's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	100	0	3,930	0,107	1,066	1,000	3,000	4,000	5,000	5,000
WG	100	0	2,940	0,109	1,090	1,000	2,000	3,000	3,000	5,000
Tech	100	0	3,240	0,107	1,074	1,000	2,000	3,000	4,000	5,000
pquest	100	0	3,520	0,100	1,000	1,000	3,000	3,500	4,000	5,000
material	100	0	3,9100	0,0889	0,8887	1,0000	3,0000	4,0000	5,0000	5,0000
interest	100	0	3,670	0,126	1,256	1,000	3,000	4,000	5,000	5,000
comments	100	0	3,840	0,100	1,002	1,000	3,000	4,000	5,000	5,000
discuss	100	0	3,530	0,101	1,010	1,000	3,000	3,500	4,000	5,000
oclass	100	0	3,200	0,123	1,231	1,000	2,000	3,000	4,000	5,000
prep	100	0	3,8800	0,0967	0,9669	2,0000	3,0000	4,0000	5,0000	5,0000
learnhelp	100	0	3,580	0,110	1,103	1,000	3,000	4,000	4,000	5,000
oevents	100	0	3,110	0,122	1,222	1,000	2,000	3,000	4,000	5,000
ohours	100	0	3,540	0,102	1,019	1,000	3,000	4,000	4,000	5,000
relate	100	0	3,7300	0,0973	0,9729	2,0000	3,0000	4,0000	4,0000	5,0000
profco	100	0	3,620	0,105	1,052	1,000	3,000	4,000	4,000	5,000
profkno	100	0	3,6300	0,0950	0,9498	1,0000	3,0000	4,0000	4,0000	5,0000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
1	3	3,00	1	11	11,00	1	6	6,00	1	1	1,00
2	6	6,00	2	18	18,00	2	20	20,00	2	15	15,00
3	24	24,00	3	48	48,00	3	28	28,00	3	34	34,00
4	29	29,00	4	12	12,00	4	36	36,00	4	31	31,00
5	38	38,00	5	11	11,00	5	10	10,00	5	19	19,00
N=	100		N=	100		N=	100		N=	100	

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
1	1	1,00	1	9	9,00	1	1	1,00
2	5	5,00	2	12	12,00	2	9	9,00
3	23	23,00	3	10	10,00	3	26	26,00
4	44	44,00	4	41	41,00	4	33	33,00
5	27	27,00	5	28	28,00	5	31	31,00
N=	100		N=	100		N=	100	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
1	1	1,00	1	10	10,00	2	10	10,00
2	15	15,00	2	19	19,00	3	23	23,00
3	34	34,00	3	30	30,00	4	36	36,00
4	30	30,00	4	23	23,00	5	31	31,00
5	20	20,00	5	18	18,00	N=	100	
N=	100		N=	100				

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
1	4	4,00	1	14	14,00	1	3	3,00
2	15	15,00	2	16	16,00	2	14	14,00
3	21	21,00	3	26	26,00	3	25	25,00
4	39	39,00	4	33	33,00	4	42	42,00
5	21	21,00	5	11	11,00	5	16	16,00
N=	100		N=	100		N=	100	

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
2	13	13,00	1	5	5,00	1	2	2,00
3	25	25,00	2	7	7,00	2	10	10,00
4	38	38,00	3	30	30,00	3	28	28,00
5	24	24,00	4	37	37,00	4	43	43,00
N=	100		5	21	21,00	5	17	17,00
			N=	100		N=	100	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	50	0	3,800	0,118	0,833	2,000	3,000	4,000	4,000	5,000
wg	50	0	3,360	0,136	0,964	1,000	3,000	3,000	4,000	5,000
itt	50	0	3,760	0,147	1,041	1,000	3,000	4,000	5,000	5,000
squest	50	0	4,6200	0,0943	0,6667	3,0000	4,0000	5,0000	5,0000	5,0000
th	50	0	4,140	0,140	0,990	2,000	4,000	4,000	5,000	5,000
hf	50	0	3,360	0,142	1,005	2,000	3,000	3,000	4,000	5,000
sf	50	0	3,300	0,144	1,015	1,000	3,000	3,000	4,000	5,000
pmaterial	50	0	2,980	0,165	1,169	1,000	2,000	3,000	4,000	5,000
oh	50	0	4,000	0,121	0,857	2,000	3,750	4,000	5,000	5,000
ats	50	0	3,060	0,135	0,956	1,000	2,750	3,000	4,000	5,000
data	50	0	3,720	0,146	1,031	2,000	3,000	4,000	5,000	5,000
datause	50	0	3,780	0,144	1,016	1,000	3,000	4,000	5,000	5,000
did	50	0	3,960	0,128	0,903	2,000	3,000	4,000	5,000	5,000
tdid	50	0	3,460	0,141	0,994	1,000	3,000	3,000	4,000	5,000
pt	50	0	3,040	0,192	1,355	1,000	2,000	3,000	4,000	5,000
mooc	50	0	1,2600	0,0627	0,4431	1,0000	1,0000	1,0000	2,0000	2,0000
cmooc	50	0	1,7000	0,0655	0,4629	1,0000	1,0000	2,0000	2,0000	2,0000
imooc	50	0	1,6400	0,0686	0,4849	1,0000	1,0000	2,0000	2,0000	2,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
2	3	6,00	1	1	2,00	1	2	4,00	3	5	10,00
3	14	28,00	2	7	14,00	2	2	4,00	4	9	18,00
4	23	46,00	3	22	44,00	3	16	32,00	5	36	72,00
5	10	20,00	4	13	26,00	4	16	32,00	N=	50	
N=	50		5	7	14,00	5	14	28,00			

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
2	6	12,00	2	10	20,00	1	1	2,00	1	6	12,00
3	3	6,00	3	21	42,00	2	9	18,00	2	10	20,00
4	19	38,00	4	10	20,00	3	22	44,00	3	19	38,00
5	22	44,00	5	9	18,00	4	10	20,00	4	9	18,00
N=	50		N=	50		5	8	16,00	5	6	12,00

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
2	3	6,00	1	3	6,00	2	6	12,00	1	2	4,00
3	9	18,00	2	9	18,00	3	17	34,00	3	20	40,00
4	23	46,00	3	23	46,00	4	12	24,00	4	13	26,00
5	15	30,00	4	12	24,00	5	15	30,00	5	15	30,00
N=	50		5	3	6,00	N=	50		N=	50	

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
2	2	4,00	1	1	2,00	1	9	18,00	1	37	74,00
3	15	30,00	2	7	14,00	2	9	18,00	2	13	26,00
4	16	32,00	3	18	36,00	3	11	22,00	N=	50	
5	17	34,00	4	16	32,00	4	13	26,00			
N=	50		5	8	16,00	5	8	16,00			

cmooc	Count	Percent	imooc	Count	Percent
1	15	30,00	1	18	36,00
2	35	70,00	2	32	64,00
N=	50		N=	50	

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	50	0	3,060	0,150	1,058	2,000	2,000	3,000	4,000	5,000
train	50	0	3,400	0,146	1,030	1,000	3,000	3,500	4,000	5,000
theory	50	0	3,400	0,131	0,926	2,000	3,000	3,500	4,000	5,000
pract	50	0	2,720	0,131	0,927	1,000	2,000	2,500	3,000	5,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
2	20	40,00	1	3	6,00	2	10	20,00
3	13	26,00	2	5	10,00	3	15	30,00
4	11	22,00	3	17	34,00	4	20	40,00
5	6	12,00	4	19	38,00	5	5	10,00
N=	50		5	6	12,00	N=	50	

pract	Count	Percent
1	1	2,00
2	24	48,00
3	16	32,00
4	6	12,00
5	3	6,00
N=	50	



ANNEX 9

SNAU 's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	77	0	4,1818	0,0881	0,7734	2,0000	4,0000	4,0000	5,0000	5,0000
WG	77	0	4,104	0,106	0,926	2,000	3,500	4,000	5,000	5,000
Tech	77	0	3,727	0,109	0,955	1,000	3,000	4,000	4,000	5,000
pquest	77	0	4,0519	0,0976	0,8568	2,0000	3,0000	4,0000	5,0000	5,0000
material	77	0	4,1039	0,0839	0,7360	3,0000	4,0000	4,0000	5,0000	5,0000
interest	77	0	3,766	0,121	1,062	2,000	3,000	4,000	5,000	5,000
comments	77	0	3,779	0,110	0,968	2,000	3,000	4,000	5,000	5,000
discuss	77	0	3,779	0,109	0,955	1,000	3,000	4,000	4,500	5,000
oclass	77	0	3,857	0,112	0,983	1,000	3,000	4,000	5,000	5,000
prep	77	0	4,2857	0,0824	0,7229	2,0000	4,0000	4,0000	5,0000	5,0000
learnhelp	77	0	4,1169	0,0942	0,8268	2,0000	4,0000	4,0000	5,0000	5,0000
oevents	77	0	3,026	0,152	1,337	1,000	2,000	3,000	4,000	5,000
ohours	77	0	3,208	0,123	1,080	1,000	3,000	3,000	4,000	5,000
relate	77	0	4,0909	0,0909	0,7977	2,0000	4,0000	4,0000	5,0000	5,0000
profco	77	0	3,922	0,104	0,914	1,000	3,000	4,000	5,000	5,000
profkno	77	0	3,766	0,129	1,134	1,000	3,000	4,000	5,000	5,000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
2	1	1,30	2	5	6,49	1	1	1,30	2	3	3,90
3	14	18,18	3	14	18,18	2	7	9,09	3	17	22,08
4	32	41,56	4	26	33,77	3	21	27,27	4	30	38,96
5	30	38,96	5	32	41,56	4	31	40,26	5	27	35,06
N=	77		N=	77		5	17	22,08	N=	77	
						N=	77				

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
3	17	22,08	2	11	14,29	2	7	9,09
4	35	45,45	3	21	27,27	3	25	32,47
5	25	32,47	4	20	25,97	4	23	29,87
N=	77		5	25	32,47	5	22	28,57
			N=	77		N=	77	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
1	1	1,30	1	2	2,60	2	2	2,60
2	6	7,79	2	3	3,90	3	6	7,79
3	21	27,27	3	22	28,57	4	37	48,05
4	30	38,96	4	27	35,06	5	32	41,56
5	19	24,68	5	23	29,87	N=	77	
N=	77		N=	77				

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
2	2	2,60	1	13	16,88	1	6	7,79
3	16	20,78	2	16	20,78	2	12	15,58
4	30	38,96	3	16	20,78	3	27	35,06
5	29	37,66	4	20	25,97	4	24	31,17
N=	77		5	12	15,58	5	8	10,39
			N=	77		N=	77	

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
2	3	3,90	1	1	1,30	1	5	6,49
3	12	15,58	2	3	3,90	2	5	6,49
4	37	48,05	3	20	25,97	3	15	19,48
5	25	32,47	4	30	38,96	4	30	38,96
N=	77		5	23	29,87	5	22	28,57
			N=	77		N=	77	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	70	0	4,0571	0,0952	0,7965	2,0000	4,0000	4,0000	5,0000	5,0000
wg	70	0	3,657	0,120	1,006	1,000	3,000	4,000	4,000	5,000
itt	70	0	4,229	0,100	0,837	2,000	4,000	4,000	5,000	5,000
squest	70	0	4,0143	0,0986	0,8252	2,0000	3,7500	4,0000	5,0000	5,0000
th	70	0	2,814	0,146	1,219	1,000	2,000	3,000	4,000	5,000
hf	70	0	2,786	0,124	1,034	1,000	2,000	3,000	4,000	5,000
sf	70	0	2,914	0,127	1,060	1,000	2,000	3,000	4,000	5,000
pmaterial	70	0	2,700	0,139	1,159	1,000	2,000	3,000	3,250	5,000
oh	70	0	3,486	0,151	1,260	1,000	3,000	4,000	4,000	5,000
ats	70	0	3,214	0,130	1,089	1,000	2,000	3,000	4,000	5,000
data	70	0	3,900	0,106	0,887	2,000	3,000	4,000	5,000	5,000
datause	70	0	4,1000	0,0958	0,8013	2,0000	4,0000	4,0000	5,0000	5,0000
did	70	0	4,1571	0,0805	0,6732	3,0000	4,0000	4,0000	5,0000	5,0000
tdid	70	0	3,757	0,110	0,924	1,000	3,000	4,000	4,000	5,000
pt	70	0	3,071	0,144	1,208	1,000	2,000	3,000	4,000	5,000
mooc	70	0	1,1286	0,0403	0,3371	1,0000	1,0000	1,0000	1,0000	2,0000
cmooc	70	0	1,2571	0,0526	0,4402	1,0000	1,0000	1,0000	2,0000	2,0000
imooc	70	0	1,2857	0,0544	0,4550	1,0000	1,0000	1,0000	2,0000	2,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
2	2	2,86	1	2	2,86	2	4	5,71	2	3	4,29
3	14	20,00	2	5	7,14	3	6	8,57	3	14	20,00
4	32	45,71	3	24	34,29	4	30	42,86	4	32	45,71
5	22	31,43	4	23	32,86	5	30	42,86	5	21	30,00
N=	70		5	16	22,86	N=	70		N=	70	

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
1	11	15,71	1	8	11,43	1	5	7,14	1	12	17,14
2	18	25,71	2	20	28,57	2	22	31,43	2	19	27,14
3	22	31,43	3	23	32,86	3	22	31,43	3	22	31,43
4	11	15,71	4	17	24,29	4	16	22,86	4	12	17,14
5	8	11,43	5	2	2,86	5	5	7,14	5	5	7,14
N=	70		N=	70		N=	70		N=	70	

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
1	8	11,43	1	3	4,29	2	5	7,14	2	2	2,86
2	6	8,57	2	17	24,29	3	16	22,86	3	13	18,57
3	16	22,86	3	21	30,00	4	30	42,86	4	31	44,29
4	24	34,29	4	20	28,57	5	19	27,14	5	24	34,29
5	16	22,86	5	9	12,86	N=	70		N=	70	
N=	70		N=	70							

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	11	15,71	1	2	2,86	1	7	10,00	1	61	87,14
4	37	52,86	2	4	5,71	2	17	24,29	2	9	12,86
5	22	31,43	3	16	22,86	3	20	28,57	N=	70	
N=	70		4	35	50,00	4	16	22,86			
			5	13	18,57	5	10	14,29			
			N=	70		N=	70				

cmooc	Count	Percent	imooc	Count	Percent
1	52	74,29	1	50	71,43
2	18	25,71	2	20	28,57
N=	70		N=	70	

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	12	0	3,333	0,256	0,888	2,000	3,000	3,000	4,000	5,000
train	12	0	3,000	0,174	0,603	2,000	3,000	3,000	3,000	4,000
theory	12	0	3,583	0,193	0,669	2,000	3,000	4,000	4,000	4,000
pract	12	0	2,667	0,188	0,651	2,000	2,000	3,000	3,000	4,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
2	2	16,67	2	2	16,67	2	1	8,33
3	5	41,67	3	8	66,67	3	3	25,00
4	4	33,33	4	2	16,67	4	8	66,67
5	1	8,33	N=	12		N=	12	
N=	12							

pract	Count	Percent
2	5	41,67
3	6	50,00
4	1	8,33
N=	12	



ANNEX 10

WUC's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	26	0	5,0000	0,000000	0,000000	5,0000	5,0000	5,0000	5,0000	5,0000
WG	26	0	4,115	0,150	0,766	2,000	4,000	4,000	5,000	5,000
Tech	26	0	4,500	0,100	0,510	4,000	4,000	4,500	5,000	5,000
pquest	26	0	3,885	0,140	0,711	3,000	3,000	4,000	4,000	5,000
material	26	0	3,962	0,130	0,662	2,000	4,000	4,000	4,000	5,000
interest	26	0	4,3462	0,0951	0,4852	4,0000	4,0000	4,0000	5,0000	5,0000
comments	26	0	4,4615	0,0997	0,5084	4,0000	4,0000	4,0000	5,0000	5,0000
discuss	26	0	4,4615	0,0997	0,5084	4,0000	4,0000	4,0000	5,0000	5,0000
oclass	26	0	4,3462	0,0951	0,4852	4,0000	4,0000	4,0000	5,0000	5,0000
prep	26	0	4,231	0,115	0,587	3,000	4,000	4,000	5,000	5,000
learnhelp	26	0	4,038	0,117	0,599	3,000	4,000	4,000	4,000	5,000
oevents	26	0	2,615	0,148	0,752	1,000	2,000	3,000	3,000	4,000
ohours	26	0	2,654	0,123	0,629	1,000	2,000	3,000	3,000	4,000
relate	26	0	4,038	0,130	0,662	3,000	4,000	4,000	4,250	5,000
profco	26	0	4,5769	0,0988	0,5038	4,0000	4,0000	5,0000	5,0000	5,0000
profkno	26	0	4,538	0,114	0,582	3,000	4,000	5,000	5,000	5,000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
5	26	100,00	2	1	3,85	4	13	50,00	3	8	30,77
N=	26		3	3	11,54	5	13	50,00	4	13	50,00
			4	14	53,85	N=	26		5	5	19,23
			5	8	30,77				N=	26	
			N=	26							

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
2	1	3,85	4	17	65,38	4	14	53,85
3	3	11,54	5	9	34,62	5	12	46,15
4	18	69,23	N=	26		N=	26	
5	4	15,38						
N=	26							

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
4	14	53,85	4	17	65,38	3	2	7,69
5	12	46,15	5	9	34,62	4	16	61,54
N=	26		N=	26		5	8	30,77
						N=	26	

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
3	4	15,38	1	3	11,54	1	1	3,85
4	17	65,38	2	5	19,23	2	8	30,77
5	5	19,23	3	17	65,38	3	16	61,54
N=	26		4	1	3,85	4	1	3,85
			N=	26		N=	26	

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
3	5	19,23	4	11	42,31	3	1	3,85
4	15	57,69	5	15	57,69	4	10	38,46
5	6	23,08	N=	26		5	15	57,69
N=	26					N=	26	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	3	0	5,0000	0,000000	0,000000	5,0000	5,0000	5,0000	5,0000	5,0000
wg	3	0	4,0000	0,000000	0,000000	4,0000	4,0000	4,0000	4,0000	4,0000
itt	3	0	5,0000	0,000000	0,000000	5,0000	5,0000	5,0000	5,0000	5,0000
squest	3	0	5,0000	0,000000	0,000000	5,0000	5,0000	5,0000	5,0000	5,0000
th	3	0	4,667	0,333	0,577	4,000	4,000	5,000	5,000	5,000
hf	3	0	4,000	0,577	1,000	3,000	3,000	4,000	5,000	5,000
sf	3	0	3,333	0,333	0,577	3,000	3,000	3,000	4,000	4,000
pmaterial	3	0	3,0000	0,000000	0,000000	3,0000	3,0000	3,0000	3,0000	3,0000
oh	3	0	4,333	0,667	1,155	3,000	3,000	5,000	5,000	5,000
ats	3	0	4,00	1,00	1,73	2,00	2,00	5,00	5,00	5,00
data	3	0	4,00	1,00	1,73	2,00	2,00	5,00	5,00	5,00
datause	3	0	4,00	1,00	1,73	2,00	2,00	5,00	5,00	5,00
did	3	0	3,667	0,333	0,577	3,000	3,000	4,000	4,000	4,000
tdid	3	0	1,667	0,333	0,577	1,000	1,000	2,000	2,000	2,000
pt	3	0	3,667	0,667	1,155	3,000	3,000	3,000	5,000	5,000
mooc	3	0	1,0000	0,000000	0,000000	1,0000	1,0000	1,0000	1,0000	1,0000
cmooc	3	0	1,0000	0,000000	0,000000	1,0000	1,0000	1,0000	1,0000	1,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
5	3	100,00	4	3	100,00	5	3	100,00	5	3	100,00
N=	3		N=	3		N=	3		N=	3	

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
4	1	33,33	3	1	33,33	3	2	66,67	3	3	100,00
5	2	66,67	4	1	33,33	4	1	33,33	N=	3	
N=	3		5	1	33,33	N=	3				
			N=	3							

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
3	1	33,33	2	1	33,33	2	1	33,33	2	1	33,33
5	2	66,67	5	2	66,67	5	2	66,67	5	2	66,67
N=	3		N=	3		N=	3		N=	3	

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	1	33,33	1	1	33,33	3	2	66,67	1	3	100,00
4	2	66,67	2	2	66,67	5	1	33,33	N=	3	
N=	3		N=	3		N=	3				

cmooc	Count	Percent	imooc	Count	Percent
1	3	100,00	1	3	100,00
N=	3		N=	3	



ANNEX 11

WUELS' SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	94	0	3,4468	0,0823	0,7981	2,0000	3,0000	4,0000	4,0000	5,0000
WG	94	0	3,1170	0,0826	0,8013	1,0000	3,0000	3,0000	4,0000	5,0000
Tech	94	0	3,5106	0,0954	0,9245	2,0000	3,0000	4,0000	4,0000	5,0000
pquest	94	0	3,2660	0,0982	0,9524	1,0000	3,0000	3,0000	4,0000	5,0000
material	94	0	3,5745	0,0875	0,8486	2,0000	3,0000	4,0000	4,0000	5,0000
interest	94	0	3,3830	0,0934	0,9053	1,0000	3,0000	3,0000	4,0000	5,0000
comments	94	0	3,181	0,104	1,005	1,000	3,000	3,000	4,000	5,000
discuss	94	0	2,9255	0,0995	0,9643	1,0000	2,0000	3,0000	3,2500	5,0000
oclass	94	0	3,9255	0,0760	0,7367	2,0000	3,7500	4,0000	4,0000	5,0000
prep	94	0	4,2766	0,0649	0,6291	2,0000	4,0000	4,0000	5,0000	5,0000
learnhelp	94	0	3,4894	0,0825	0,7998	1,0000	3,0000	4,0000	4,0000	5,0000
oevents	94	0	3,074	0,148	1,439	1,000	2,000	3,000	4,000	5,000
ohours	94	0	2,4043	0,0960	0,9312	1,0000	2,0000	2,0000	3,0000	4,0000
relate	94	0	3,4043	0,0873	0,8465	2,0000	3,0000	3,0000	4,0000	5,0000
profco	94	0	3,5426	0,0891	0,8634	1,0000	3,0000	4,0000	4,0000	5,0000
profkno	94	0	3,351	0,101	0,981	1,000	3,000	3,000	4,000	5,000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
2	12	12,77	1	2	2,13	2	14	14,89	1	5	5,32
3	34	36,17	2	18	19,15	3	32	34,04	2	10	10,64
4	42	44,68	3	42	44,68	4	34	36,17	3	42	44,68
5	6	6,38	4	31	32,98	5	14	14,89	4	29	30,85
N=	94		5	1	1,06	N=	94		5	8	8,51
			N=	94					N=	94	

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
2	10	10,64	1	1	1,06	1	5	5,32
3	32	34,04	2	15	15,96	2	15	15,96
4	40	42,55	3	34	36,17	3	42	44,68
5	12	12,77	4	35	37,23	4	22	23,40
N=	94		5	9	9,57	5	10	10,64
			N=	94		N=	94	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
1	5	5,32	2	3	3,19	2	1	1,06
2	26	27,66	3	20	21,28	3	6	6,38
3	40	42,55	4	52	55,32	4	53	56,38
4	17	18,09	5	19	20,21	5	34	36,17
5	6	6,38	N=	94		N=	94	
N=	94							

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
1	1	1,06	1	17	18,09	1	14	14,89
2	8	8,51	2	21	22,34	2	43	45,74
3	36	38,30	3	15	15,96	3	22	23,40
4	42	44,68	4	20	21,28	4	15	15,96
5	7	7,45	5	21	22,34	N=	94	
N=	94		N=	94				

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
2	12	12,77	1	1	1,06	1	3	3,19
3	42	44,68	2	9	9,57	2	14	14,89
4	30	31,91	3	33	35,11	3	35	37,23
5	10	10,64	4	40	42,55	4	31	32,98
N=	94		5	11	11,70	5	11	11,70
			N=	94		N=	94	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	24	0	3,958	0,165	0,806	2,000	3,250	4,000	4,750	5,000
wg	24	0	3,625	0,189	0,924	1,000	3,000	4,000	4,000	5,000
itt	24	0	4,208	0,241	1,179	1,000	4,000	5,000	5,000	5,000
squest	24	0	4,083	0,158	0,776	2,000	4,000	4,000	5,000	5,000
th	24	0	3,083	0,208	1,018	1,000	2,000	3,000	4,000	4,000
hf	24	0	3,917	0,190	0,929	2,000	3,000	4,000	5,000	5,000
sf	24	0	3,750	0,202	0,989	2,000	3,000	4,000	4,750	5,000
pmaterial	24	0	3,458	0,199	0,977	2,000	3,000	4,000	4,000	5,000
oh	24	0	4,9167	0,0833	0,4082	3,0000	5,0000	5,0000	5,0000	5,0000
ats	24	0	2,958	0,259	1,268	1,000	2,000	3,000	4,000	5,000
data	24	0	4,7083	0,0948	0,4643	4,0000	4,0000	5,0000	5,0000	5,0000
datause	24	0	4,625	0,101	0,495	4,000	4,000	5,000	5,000	5,000
did	24	0	4,333	0,130	0,637	3,000	4,000	4,000	5,000	5,000
tdid	24	0	3,167	0,197	0,963	2,000	3,000	3,000	3,000	5,000
pt	24	0	2,167	0,260	1,274	1,000	1,000	2,000	3,000	5,000
mooc	24	0	1,625	0,101	0,495	1,000	1,000	2,000	2,000	2,000
cmooc	24	0	1,7500	0,0903	0,4423	1,0000	1,2500	2,0000	2,0000	2,0000
imooc	24	0	1,8333	0,0777	0,3807	1,0000	2,0000	2,0000	2,0000	2,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
2	1	4,17	1	1	4,17	1	1	4,17	2	1	4,17
3	5	20,83	2	1	4,17	2	2	8,33	3	3	12,50
4	12	50,00	3	7	29,17	3	2	8,33	4	13	54,17
5	6	25,00	4	12	50,00	4	5	20,83	5	7	29,17
N=	24		5	3	12,50	5	14	58,33	N=	24	
			N=	24		N=	24				

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
1	2	8,33	2	2	8,33	2	3	12,50	2	5	20,83
2	5	20,83	3	5	20,83	3	6	25,00	3	6	25,00
3	6	25,00	4	10	41,67	4	9	37,50	4	10	41,67
4	11	45,83	5	7	29,17	5	6	25,00	5	3	12,50
N=	24		N=	24		N=	24		N=	24	

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
3	1	4,17	1	4	16,67	4	7	29,17	4	9	37,50
5	23	95,83	2	4	16,67	5	17	70,83	5	15	62,50
N=	24		3	8	33,33	N=	24		N=	24	
			4	5	20,83						
			5	3	12,50						
			N=	24							

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	2	8,33	2	5	20,83	1	11	45,83	1	9	37,50
4	12	50,00	3	14	58,33	2	3	12,50	2	15	62,50
5	10	41,67	4	1	4,17	3	6	25,00	N=	24	
N=	24		5	4	16,67	4	3	12,50			
			N=	24		5	1	4,17			
						N=	24				

cmooc	Count	Percent	imooc	Count	Percent
1	6	25,00	1	4	16,67
2	18	75,00	2	20	83,33
N=	24		N=	24	



ANNEX 12

UAVM's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	60	0	3,950	0,113	0,872	3,000	3,000	4,000	5,000	5,000
WG	60	0	1,983	0,110	0,854	1,000	1,000	2,000	3,000	3,000
Tech	60	0	2,933	0,106	0,821	2,000	2,000	3,000	4,000	4,000
pquest	60	0	1,5000	0,0651	0,5042	1,0000	1,0000	1,5000	2,0000	2,0000
material	60	0	3,967	0,106	0,823	3,000	3,000	4,000	5,000	5,000
interest	60	0	3,883	0,101	0,783	3,000	3,000	4,000	4,750	5,000
comments	60	0	3,8167	0,0965	0,7477	3,0000	3,0000	4,0000	4,0000	5,0000
discuss	60	0	3,783	0,104	0,804	3,000	3,000	4,000	4,000	5,000
oclass	60	0	1,800	0,103	0,798	1,000	1,000	2,000	2,000	3,000
prep	60	0	4,5333	0,0649	0,5031	4,0000	4,0000	5,0000	5,0000	5,0000
learnhelp	60	0	3,917	0,107	0,829	3,000	3,000	4,000	5,000	5,000
oevents	60	0	1,900	0,103	0,796	1,000	1,000	2,000	3,000	3,000
ohours	60	0	1,4500	0,0648	0,5017	1,0000	1,0000	1,0000	2,0000	2,0000
relate	60	0	3,950	0,102	0,790	3,000	3,000	4,000	5,000	5,000
profco	60	0	3,5500	0,0648	0,5017	3,0000	3,0000	4,0000	4,0000	4,0000
profkno	60	0	4,117	0,104	0,804	3,000	3,000	4,000	5,000	5,000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
3	24	40,00	1	22	36,67	2	22	36,67	1	30	50,00
4	15	25,00	2	17	28,33	3	20	33,33	2	30	50,00
5	21	35,00	3	21	35,00	4	18	30,00	N=	60	
N=	60		N=	60		N=	60				

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
3	21	35,00	3	22	36,67	3	23	38,33
4	20	33,33	4	23	38,33	4	25	41,67
5	19	31,67	5	15	25,00	5	12	20,00
N=	60		N=	60		N=	60	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
3	27	45,00	1	26	43,33	4	28	46,67
4	19	31,67	2	20	33,33	5	32	53,33
5	14	23,33	3	14	23,33	N=	60	
N=	60		N=	60				

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
3	23	38,33	1	22	36,67	1	33	55,00
4	19	31,67	2	22	36,67	2	27	45,00
5	18	30,00	3	16	26,67	N=	60	
N=	60		N=	60				

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
3	20	33,33	3	27	45,00	3	16	26,67
4	23	38,33	4	33	55,00	4	21	35,00
5	17	28,33	N=	60		5	23	38,33
N=	60					N=	60	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	20	0	4,100	0,204	0,912	3,000	3,000	4,000	5,000	5,000
wg	20	0	2,500	0,276	1,235	1,000	1,000	2,500	4,000	4,000
itt	20	0	2,950	0,185	0,826	2,000	2,000	3,000	4,000	4,000
squest	20	0	3,050	0,328	1,468	1,000	2,000	3,000	4,000	5,000
th	20	0	3,000	0,178	0,795	2,000	2,000	3,000	4,000	4,000
hfd	20	0	4,400	0,169	0,754	3,000	4,000	5,000	5,000	5,000
sf	20	0	2,450	0,266	1,191	1,000	1,000	2,500	3,750	4,000
pmaterial	20	0	2,000	0,205	0,918	1,000	1,000	2,000	3,000	3,000
oh	20	0	1,850	0,196	0,875	1,000	1,000	2,000	3,000	3,000
ats	20	0	2,800	0,186	0,834	2,000	2,000	3,000	3,750	4,000
data	20	0	3,850	0,196	0,875	3,000	3,000	4,000	5,000	5,000
datause	20	0	3,050	0,211	0,945	2,000	2,000	3,000	4,000	5,000
did	20	0	4,200	0,172	0,768	3,000	4,000	4,000	5,000	5,000
tdid	20	0	2,250	0,190	0,851	1,000	1,250	2,500	3,000	3,000
pt	20	0	3,350	0,284	1,268	1,000	2,250	3,500	4,000	5,000
mooc	20	0	1,300	0,105	0,470	1,000	1,000	1,000	2,000	2,000
cmooc	20	0	1,700	0,105	0,470	1,000	1,000	2,000	2,000	2,000
imooc	20	0	1,8000	0,0918	0,4104	1,0000	2,0000	2,0000	2,0000	2,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
3	7	35,00	1	6	30,00	2	7	35,00	1	4	20,00
4	4	20,00	2	4	20,00	3	7	35,00	2	4	20,00
5	9	45,00	3	4	20,00	4	6	30,00	3	3	15,00
N=	20		4	6	30,00	N=	20		4	5	25,00
			N=	20					5	4	20,00
									N=	20	
th	Count	Percent	hfd	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
2	6	30,00	3	3	15,00	1	6	30,00	1	8	40,00
3	8	40,00	4	6	30,00	2	4	20,00	2	4	20,00
4	6	30,00	5	11	55,00	3	5	25,00	3	8	40,00
N=	20		N=	20		4	5	25,00	N=	20	
						N=	20				
oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
1	9	45,00	2	9	45,00	3	9	45,00	2	7	35,00
2	5	25,00	3	6	30,00	4	5	25,00	3	6	30,00
3	6	30,00	4	5	25,00	5	6	30,00	4	6	30,00
N=	20		N=	20		N=	20		5	1	5,00
									N=	20	
did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
3	4	20,00	1	5	25,00	1	2	10,00	1	14	70,00
4	8	40,00	2	5	25,00	2	3	15,00	2	6	30,00
5	8	40,00	3	10	50,00	3	5	25,00	N=	20	
N=	20		N=	20		4	6	30,00			
						5	4	20,00			
						N=	20				
cmooc	Count	Percent	imooc	Count	Percent						
1	6	30,00	1	4	20,00						
2	14	70,00	2	16	80,00						
N=	20		N=	20							

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	25	0	2,200	0,173	0,866	1,000	1,000	2,000	3,000	3,000
train	25	0	4,520	0,102	0,510	4,000	4,000	5,000	5,000	5,000
theory	25	0	3,200	0,163	0,816	2,000	3,000	3,000	4,000	5,000
pract	25	0	2,040	0,168	0,841	1,000	1,000	2,000	3,000	3,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
1	7	28,00	4	12	48,00	2	4	16,00
2	6	24,00	5	13	52,00	3	14	56,00
3	12	48,00	N=	25		4	5	20,00
N=	25					5	2	8,00
						N=	25	

pract	Count	Percent
1	8	32,00
2	8	32,00
3	9	36,00
N=	25	



ANNEX 13

YSU's SURVEY: DESCRIPTIVE STATISTICS

Students

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
teach	140	0	3,5500	0,0920	1,0884	1,0000	3,0000	4,0000	4,0000	5,0000
WG	140	0	4,7786	0,0527	0,6241	1,0000	5,0000	5,0000	5,0000	5,0000
Tech	140	0	2,2429	0,0900	1,0653	1,0000	1,0000	2,0000	3,0000	5,0000
pquest	140	0	2,2143	0,0841	0,9948	1,0000	2,0000	2,0000	3,0000	5,0000
material	140	0	3,471	0,105	1,243	1,000	2,000	4,000	4,000	5,000
interest	140	0	3,157	0,100	1,183	1,000	2,000	3,000	4,000	5,000
comments	140	0	3,264	0,101	1,197	1,000	2,000	4,000	4,000	5,000
discuss	140	0	3,5429	0,0937	1,1083	1,0000	3,0000	4,0000	4,0000	5,0000
oclass	140	0	3,0929	0,0940	1,1117	1,0000	2,0000	3,0000	4,0000	5,0000
prep	140	0	3,9929	0,0833	0,9855	1,0000	4,0000	4,0000	5,0000	5,0000
learnhelp	140	0	3,7929	0,0845	1,0000	1,0000	3,0000	4,0000	4,0000	5,0000
oevents	140	0	2,600	0,116	1,377	1,000	1,250	2,000	4,000	5,000
ohours	140	0	2,6857	0,0968	1,1448	1,0000	2,0000	3,0000	4,0000	5,0000
relate	140	0	3,4786	0,0915	1,0827	1,0000	2,2500	4,0000	4,0000	5,0000
profco	140	0	3,5786	0,0957	1,1321	1,0000	3,0000	4,0000	4,0000	5,0000
profkno	140	0	2,9357	0,0979	1,1581	1,0000	2,0000	3,0000	4,0000	5,0000

teach	Count	Percent	WG	Count	Percent	Tech	Count	Percent	pquest	Count	Percent
1	3	2,14	1	1	0,71	1	36	25,71	1	34	24,29
2	31	22,14	2	2	1,43	2	61	43,57	2	60	42,86
3	17	12,14	3	3	2,14	3	19	13,57	3	33	23,57
4	64	45,71	4	15	10,71	4	21	15,00	4	8	5,71
5	25	17,86	5	119	85,00	5	3	2,14	5	5	3,57
N=	140		N=	140		N=	140		N=	140	

material	Count	Percent	interest	Count	Percent	comments	Count	Percent
1	8	5,71	1	11	7,86	1	7	5,00
2	35	25,00	2	38	27,14	2	43	30,71
3	11	7,86	3	26	18,57	3	18	12,86
4	55	39,29	4	48	34,29	4	50	35,71
5	31	22,14	5	17	12,14	5	22	15,71
N=	140		N=	140		N=	140	

discuss	Count	Percent	oclass	Count	Percent	prep	Count	Percent
1	5	3,57	1	10	7,14	1	3	2,14
2	27	19,29	2	37	26,43	2	14	10,00
3	21	15,00	3	36	25,71	3	8	5,71
4	61	43,57	4	44	31,43	4	71	50,71
5	26	18,57	5	13	9,29	5	44	31,43
N=	140		N=	140		N=	140	

learnhelp	Count	Percent	oevents	Count	Percent	ohours	Count	Percent
1	4	2,86	1	35	25,00	1	24	17,14
2	14	10,00	2	49	35,00	2	42	30,00
3	21	15,00	3	10	7,14	3	34	24,29
4	69	49,29	4	29	20,71	4	34	24,29
5	32	22,86	5	17	12,14	5	6	4,29
N=	140		N=	140		N=	140	

relate	Count	Percent	profco	Count	Percent	profkno	Count	Percent
1	3	2,14	1	5	3,57	1	10	7,14
2	32	22,86	2	25	17,86	2	54	38,57
3	23	16,43	3	26	18,57	3	25	17,86
4	59	42,14	4	52	37,14	4	37	26,43
5	23	16,43	5	32	22,86	5	14	10,00
N=	140		N=	140		N=	140	



Teachers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ft	50	0	3,260	0,204	1,440	1,000	2,000	3,500	5,000	5,000
wg	50	0	2,920	0,204	1,441	1,000	2,000	3,000	4,000	5,000
itt	50	0	3,320	0,190	1,347	1,000	2,000	3,000	5,000	5,000
squest	50	0	3,040	0,206	1,456	1,000	2,000	3,000	4,250	5,000
th	50	0	3,140	0,200	1,414	1,000	2,000	3,000	4,000	5,000
hf	50	0	3,200	0,218	1,539	1,000	2,000	3,000	5,000	5,000
sf	50	0	3,200	0,204	1,443	1,000	2,000	3,000	5,000	5,000
pmaterial	50	0	2,940	0,205	1,449	1,000	2,000	3,000	4,000	5,000
oh	50	0	2,740	0,185	1,306	1,000	2,000	3,000	4,000	5,000
ats	50	0	2,940	0,205	1,449	1,000	2,000	3,000	4,000	5,000
data	50	0	2,920	0,204	1,441	1,000	1,750	3,000	4,000	5,000
datause	50	0	3,020	0,199	1,407	1,000	2,000	3,000	4,000	5,000
did	50	0	3,580	0,176	1,247	1,000	2,000	4,000	5,000	5,000
tdid	50	0	3,280	0,192	1,356	1,000	2,000	3,000	5,000	5,000
pt	50	0	2,780	0,196	1,389	1,000	2,000	3,000	4,000	5,000
mooc	50	0	1,4800	0,0714	0,5047	1,0000	1,0000	1,0000	2,0000	2,0000
cmooc	50	0	1,6400	0,0686	0,4849	1,0000	1,0000	2,0000	2,0000	2,0000
imooc	50	0	1,6800	0,0666	0,4712	1,0000	1,0000	2,0000	2,0000	2,0000

ft	Count	Percent	wg	Count	Percent	itt	Count	Percent	squest	Count	Percent
1	8	16,00	1	11	22,00	1	6	12,00	1	8	16,00
2	9	18,00	2	11	22,00	2	8	16,00	2	15	30,00
3	8	16,00	3	8	16,00	3	13	26,00	3	6	12,00
4	12	24,00	4	11	22,00	4	10	20,00	4	9	18,00
5	13	26,00	5	9	18,00	5	13	26,00	5	12	24,00
N=	50		N=	50		N=	50		N=	50	

th	Count	Percent	hf	Count	Percent	sf	Count	Percent	pmaterial	Count	Percent
1	9	18,00	1	10	20,00	1	9	18,00	1	11	22,00
2	8	16,00	2	9	18,00	2	7	14,00	2	11	22,00
3	11	22,00	3	7	14,00	3	12	24,00	3	7	14,00
4	11	22,00	4	9	18,00	4	9	18,00	4	12	24,00
5	11	22,00	5	15	30,00	5	13	26,00	5	9	18,00
N=	50		N=	50		N=	50		N=	50	

oh	Count	Percent	ats	Count	Percent	data	Count	Percent	datause	Count	Percent
1	10	20,00	1	11	22,00	1	12	24,00	1	8	16,00
2	13	26,00	2	10	20,00	2	8	16,00	2	13	26,00
3	14	28,00	3	10	20,00	3	11	22,00	3	10	20,00
4	6	12,00	4	9	18,00	4	10	20,00	4	8	16,00
5	7	14,00	5	10	20,00	5	9	18,00	5	11	22,00
N=	50		N=	50		N=	50		N=	50	

did	Count	Percent	tdid	Count	Percent	pt	Count	Percent	mooc	Count	Percent
1	1	2,00	1	6	12,00	1	11	22,00	1	26	52,00
2	14	28,00	2	9	18,00	2	12	24,00	2	24	48,00
3	5	10,00	3	13	26,00	3	13	26,00	N=	50	
4	15	30,00	4	9	18,00	4	5	10,00			
5	15	30,00	5	13	26,00	5	9	18,00			
N=	50		N=	50		N=	50				
cmooc	Count	Percent	imooc	Count	Percent						
1	18	36,00	1	16	32,00						
2	32	64,00	2	34	68,00						
N=	50		N=	50							

Employers

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
know	10	0	2,300	0,448	1,418	1,000	1,000	2,000	3,250	5,000
train	10	0	2,500	0,269	0,850	1,000	2,000	2,500	3,000	4,000
theory	10	0	2,400	0,306	0,966	1,000	1,750	2,500	3,000	4,000
pract	10	0	3,800	0,359	1,135	2,000	2,750	4,000	5,000	5,000

know	Count	Percent	train	Count	Percent	theory	Count	Percent
1	4	40,00	1	1	10,00	1	2	20,00
2	2	20,00	2	4	40,00	2	3	30,00
3	2	20,00	3	4	40,00	3	4	40,00
4	1	10,00	4	1	10,00	4	1	10,00
5	1	10,00	N=	10		N=	10	
N=	10							

pract	Count	Percent
2	2	20,00
3	1	10,00
4	4	40,00
5	3	30,00
N=	10	