

Aarhus University

Aarhus BSS 4-years journey with joint digitized course evaluations, and where we are heading now

Presentation *at Bluenotes Europe 2019*

London March 21-22, 2019



THE TEAM

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DISPOSITION

1. Presentation and institutional context
2. Implementation, data collection and reporting – an overview
3. Usefulness and validity of course evaluation results
4. Using data in developing and improving the teaching and learning process
5. Questions and discussion



PRESENTATION AND INSTITUTIONAL CONTEXT



AU LOCATIONS

- RESEARCH AND EDUCATION
- RESEARCH ACTIVITIES
- OTHER LOCATIONS



AARHUS UNIVERSITY (AU)

[HTTP://WWW.AU.DK/EN/](http://www.au.dk/en/)

8.000 employés

4.300 int. students

12,000 publications

40.000 students

1.800 Ph.D. students

DKK 6.2 bill in turnover (0,9 bill \$)



1. Faculty of Science and Technology
2. Faculty of Health
3. Aarhus School of Business and Social Sciences
4. Faculty of Arts



AARHUS SCHOOL OF BUSINESS AND SOCIAL SCIENCES (BSS)

[HTTP://BSS.AU.DK/EN/](http://bss.au.dk/en/)

1,200 teachers at 6 departments spread out on the following categories:

- Student teachers: 280
- PhD students: 236
- Postdocs: 38
- Assistant professors: 90
- Part time teachers: 140
- Associate professors: 255
- Professors: 139

Aarhus BSS consists of the following departments:

1. [Department of Management](#)
2. [Department of Economics and Business Economics](#)
3. [Department of Law](#)
4. [Department of Political Science](#)
5. [Department of Psychology and Behavioral Sciences](#)
6. [Department of Business Development and Technology](#)

14,000 full-time- + approx. 3,000 part-time students



CENTER FOR TEACHING AND LEARNING (CTL)

[HTTP://CUL.AU.DK/EN/](http://cul.au.dk/en/)

20 employee

1. Teaching

- ▶ Courses for teachers at all career levels (mandatory)

2. Development

- ▶ Development projects at different levels: teachers, courses, programs, departments, faculty

3. Research

- ▶ Practice-oriented research,

4. Digitizing

- > LMS (blackboard)
- > Digital exam
- > Teaching, assessment and evaluation (BLUE)



IMPLEMENTATION, DATA COLLECTION AND REPORTING - AN OVERVIEW



DIGITIZING COURSE EVALUATION, AARHUS BSS

2014: Negotiations and primary tests

2015: Course evaluation, *Blue*

2015 (Autumn): Large scale

2016 (Spring): Full scale + added functionalities + DIG

... Consolidation ...

2018 (Autumn): Revised questionnaire + added functionalities

Multirater functionality

Relationship demographics

2019 : Evaluations data in action – Database, Analysis, ... Research +

Instructor Feedback Dashboard



COURSE EVALUATION AT BSS IN NUMBERS

Ca. 430 courses – about 27.000 invitations

Ca. 900 teachers and student teachers involved

Ca. 2.300 individual supervision processes (Bachelor's projects and Master's theses)

Ca. 780 individual reports send to teachers and to their boards of study (directors of study)

Ca. 370 individual reports send to student teachers and their coordinating teacher

Ca. 10 reports with aggregated data/key figures send to:

directors of studies and dean of education



PURPOSE OF THE EVALUATION PROCEDURE

The purpose of the joint procedure for the evaluation of courses at Aarhus BSS is:

- ▶ to create a development tool for lecturers and other teaching staff,
- ▶ which will increase shared knowledge and awareness of what best supports student learning at Aarhus BSS.
- ▶ involves students, lecturers, ~~course coordinators, directors of studies~~ and programme boards of studies etc. in an ongoing and institutionalised dialogue on student learning and the learning outcome of individual courses.
- ▶ and to provide an empirical basis for the quality assurance of courses carried out by the programme boards of studies ~~and the directors of studies~~.



NEW, COMMON, DIGITIZED EVALUATION SYSTEM

- From 15 questionnaires to 1
- From 7 procedures to 1
- (1 common database)
- From digitized and paper forms to digitized forms alone

During the course, I have continuously had the opportunity to test my understanding of what I have learnt

During the course I continuously had the opportunity to clarify my understanding of what I had learnt and in that connection solve uncertainties and misunderstandings

Drivers:

- Institution accreditation
- More systematic local knowledge
- Cost effectiveness



One Questionnaire almost fits all

Core questions

- Student commitment and participation(2)
- Balancing expectation (1)
- Feedback(2)
- Structure of the course(1)
- The lecturer's communication skills(1) + (1) open ended
- Inspiration(1)
- Overall outcome (1)
- Open ended (2)

Student teacher's /tutor questions

- The student teacher's /tutor teacher's communication skills(4)
- Open ended (1)

Supervision questions

- Supervision/Consulting(7)



DATA COLLECTION AND REPORTING - AN OVERVIEW



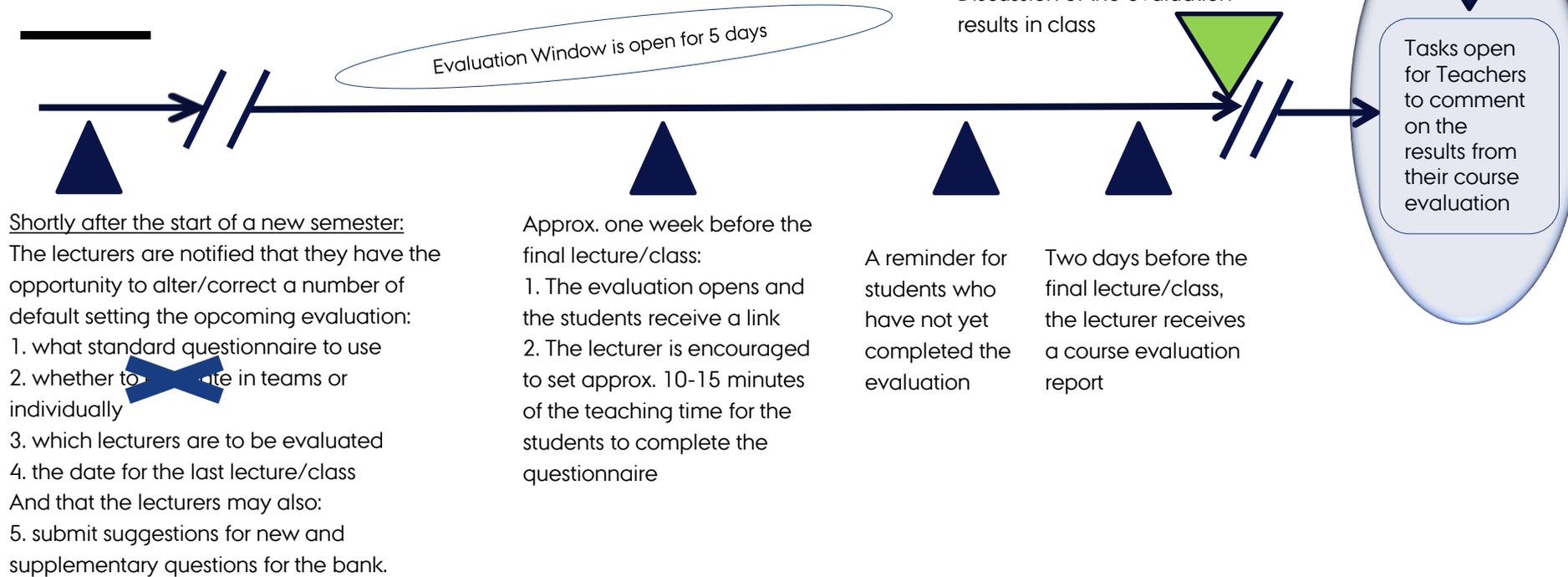
CENTRE FOR TEACHING AND LEARNING (CUL)
SCHOOL OF BUSINESS AND SOCIAL SCIENCES
AARHUS UNIVERSITY

DIGITAL COURSE EVALUATION

BLUENOTES EUROPE 2019

21 MARCH 2019

DATA COLLECTION AND REPORTING - AN OVERVIEW



Resources to run the evaluations



DATA SOURCES

- ▶ LMS (Blackboard)
- ▶ The Universitys Timeplaner
- ▶ AU COURSE CATALOGUE
- ▶ STADS(STudents ADministrations System)
- ▶ WISE-FLOW (DIGITAL EXAM)
- ▶ Others

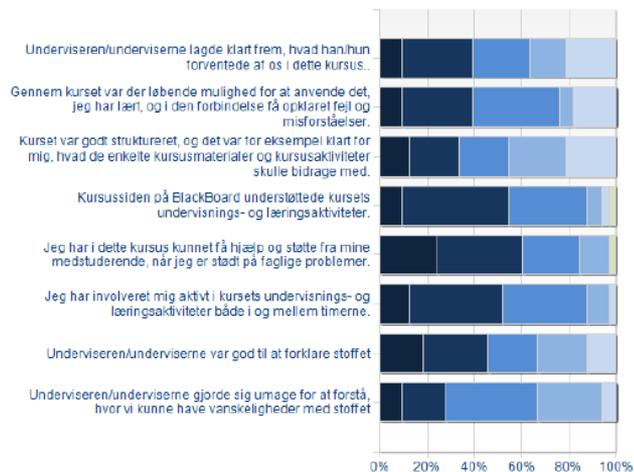
We need more/to verify the information:

- ▶ Form
- ▶ Start & EndDate
- ▶ Add/remove Teachers

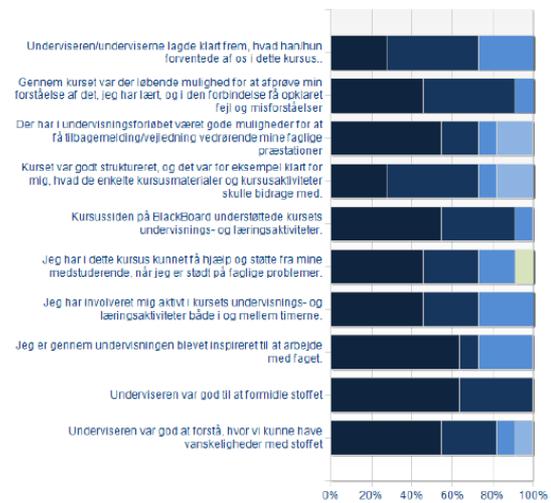


REPORT EXAMPLE

Enig
 Hverken/eller
 Overvejende uenig
 Uenig
 Ikke relevant
 Overvejende enig



Enig
 Overvejende enig
 Hverken/eller
 Overvejende uenig
 Uenig
 Ikke relevant



AGGREGATED REPORTS

Key figures are provided to the study boards, heads of studies and Associate Dean

Fagstudie	Inviterede	Besvarede	Svarprc	Udbytte	Udbytte	S2	S3_1	S3_2	S5	s6	S7	S8_1	s8_2	s10_1	s10_2	s12_1	s12_2	s12_3	s12_4
Det	6.494	1.147	18%	3,8	70%	3,9	3,8	3,2	3,8	3,9	3,8	4,0	3,8	4,2	4,1	4,0	4,0	4,0	3,9
Fag	14.004	5.345	38%	3,8	70%	3,8	3,9	3,6	3,8	4,1	4,0	4,1	3,7	4,1	3,9	4,0	4,0	4,0	3,9
Fag	1.157	375	32%	3,9	72%	3,9	4,2	3,8	3,9	4,0	4,3	4,1	3,9	4,2	4,0	4,2	4,1	4,1	3,9
Fag	2.398	961	40%	3,9	77%	3,9	4,0	3,5	3,9	4,2	4,2	4,2	3,9	4,1	3,9	4,2	4,2	4,1	4,0
Fag	2.384	1.001	42%	3,8	71%	3,9	3,7	3,0	3,9	4,2	4,3	4,2	3,9	4,3	4,1	4,4	4,5	4,4	4,3
Fag	3.075	2.047	67%	3,9	75%	3,8	4,0	3,6	3,9	4,1	4,2	4,1	3,8	4,2	4,0	4,3	4,2	4,1	4,1
Fags	4.193	1.220	29%	3,8	68%	3,8	3,8	3,6	3,7	4,1	4,0	4,1	3,8	3,9	3,8	4,0	4,0	3,9	3,8
I alt	33.705	12.096	36%	3,8	71%	3,8	3,9	3,5	3,8	4,1	4,0	4,1	3,8	4,1	3,9	4,1	4,1	4,1	4,0



Usefulness and validity of course evaluation results



Many concerns

- ▶ Response rates
- ▶ Representativeness
- ▶ Validity
- ▶ Reliability
- ▶ And many other issues



Response rates

The adequacy of response rates to online and paper surveys: what can be done?

Duncan D. Nulty*

Griffith University, Queensland, Australia

Assessment & Evaluation in Higher Education 303

Table 3. Required response rates by class size.

Total no. of students on the course	'Liberal conditions' 10% sampling error; 80% confidence level; 70:30 split responses 4 or 5 compared with 1, 2, 3		'Stringent conditions' 3% sampling error; 95% confidence level; 70:30 split responses 4 or 5 compared with 1, 2, 3	
	Required no. of respondents	Response rate required (%)	Required no. of respondents	Response rate required (%)
10	7	75%	10	100%
20	12	58	19	97
30	14	48	29	96
40	16	40	38	95
50	17	35	47	93
60	18	31	55	92
70	19	28	64	91
80	20	25	72	90
90	21	23	80	88
100	21	21	87	87
150	23	15	123	82
200	23	12	155	77
250	24	10	183	73
300	24	8	209	70
500	25	5	289	58
750	25	3	358	48
1000	26	3	406	41
2000	26	1	509	25

Table 1. Comparisons of response rates to paper-based and online surveys.

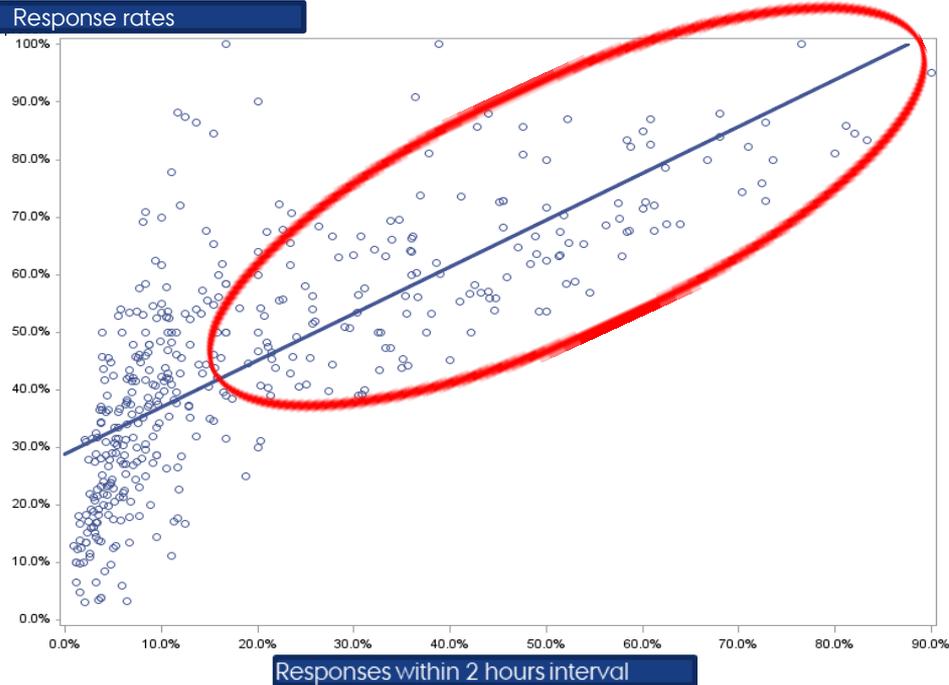
Who	Paper-based response rate (%)	Online response rate (%)	Difference (%)
Cook et al. (2000)	55.6	–	–16
Baruch (1999)	–	39.6	–
Dommeier et al. (2004)	75	43	–32
Ballantyne (2005)	55	47	–8
Ogier (2005)	65	30	–35
Nair et al. (2005)	56	31	–31
Griffith University (2005)	57	20	–37
Sweep (2006)*	56	23	–33
Watt et al. (2002)	32.6	33	1
Overall	56	33	–23

*(T. Sweep, pers. comm.)

The data clearly show that face-to-face administration results in higher response rates. What is unknown is whether response rates to online surveys would rise to the same level if they were also conducted in a face-to-face way.



Response rates vs. highest portion of responses within 2-hours time interval



Using data in developing the teaching



What we have done so far and what we experience now?

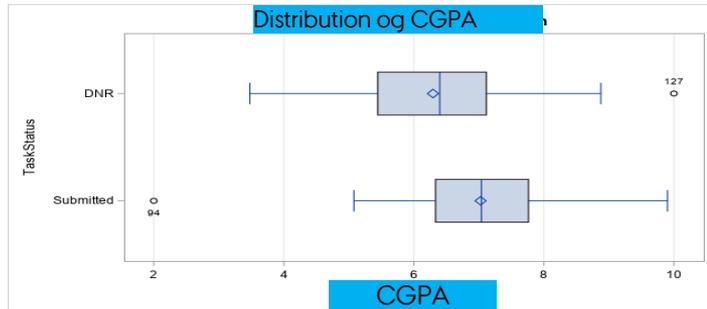
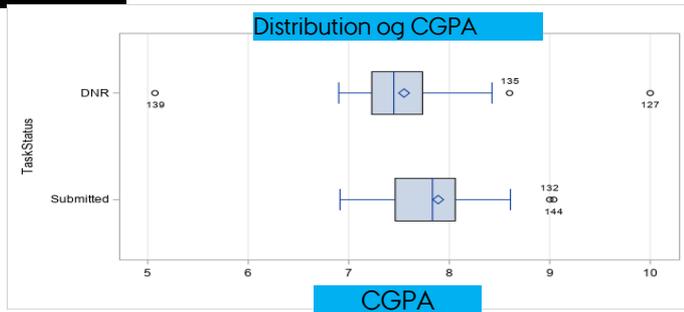
➤ Workshops (Inspiration day)

What can course evaluation data tell us about teaching at BSS?
Evaluation as a tool for development

- Quality of data : response rate (bias 1)
- Quality of data: Biased towards the most critical students (Bias 2)
- Factors affecting 'overall outcome'
- Numbers of students: Small group versus large group teaching
- 'hard' versus 'soft' subjects - Male/female
- Overall outcome vs. grade



Responses - Strong vs weak students (CGPA)



Overall outcome vs. cumulative average grades

	Overall outcome	TeacherScore
	Average	Average
01 Low	3.80	4.09
02 Middel	3.83	4.15
03 High	3.91	4.20

Data Points



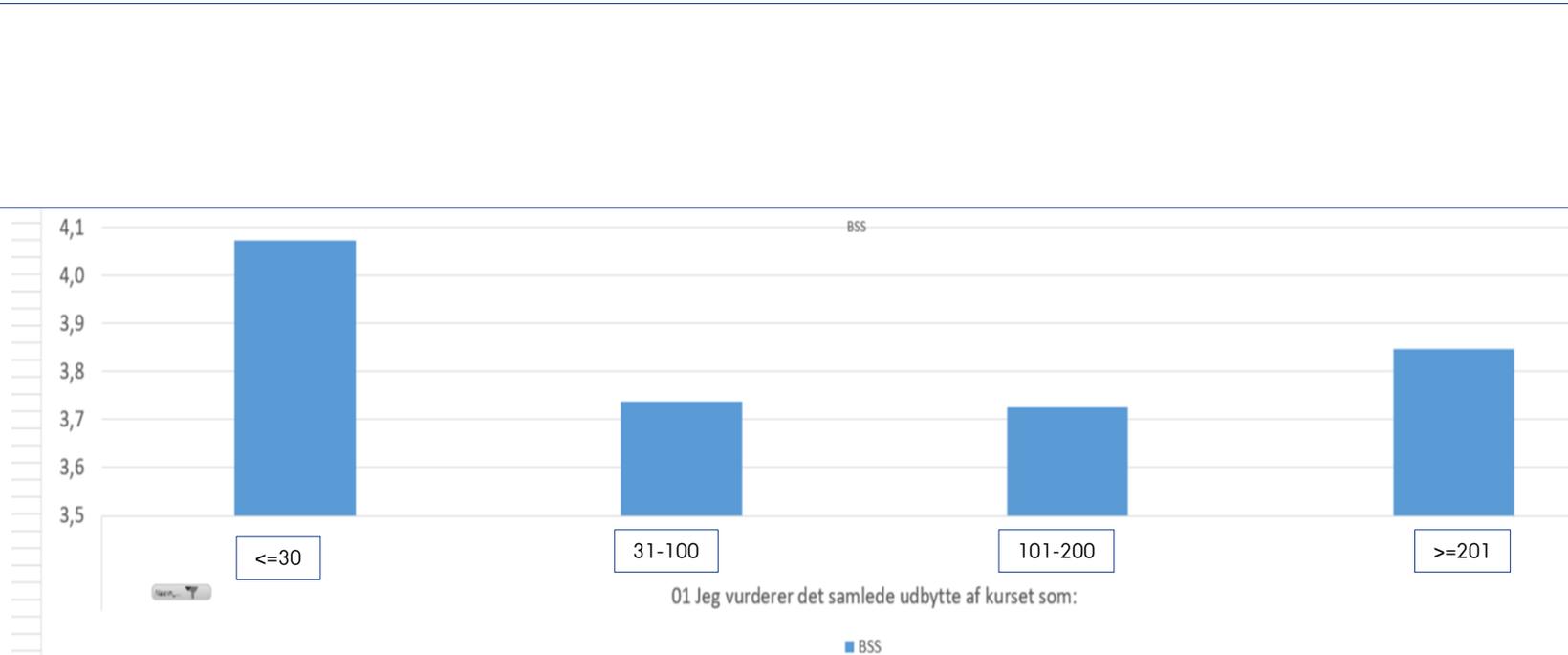
'Hard' subjects (research method and statistics) vs. 'soft' subjects

An example: 1. semester courses E2016 and E2017; one study program

		F	M	all
		Overall outcome		
"Soft" subjects		4	3,88	3,92
E16		3,98	4,03	4
E16		3,67	3,6	3,62
E16		3,43	3,59	3,49
E17		4,06	4,13	4,1
E17		3,96	3,8	3,89
E17		3,6	3,83	3,69
E17		3,71	3,77	3,74
alt		3,85	3,86	3,85
"Hard" subjects		4,38	4,27	4,34
E17		4,52	4,5	4,51
F16		4	4,17	4,09
F17		3,94	4,06	3,99
alt		4,21	4,26	4,24



'GENERAL OUTCOME VS. GROUP SIZE AT BSS



What items have strongest impact on self reported outcome

(Number of observations with missing values = 119)

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	5725.57380	817.93911	2822.20	<.0001
Error	14437	4184.18210	0.28982		
Corrected Total	14444	9909.75590			

Root MSE	0.53835	R-Square	0.5778
Dependent Mean	3.86944	Adj R-Sq	0.5776
Coeff Var	13.91295		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept		0.81279	0.02664	30.51	<.0001
Q1	Jeg har involveret mig aktivt i kurset		0.12414	0.00573	21.66	<.0001
Q2	Underviseren/undervisemejdet har været god til at gøre det klart, hvad jeg skal gøre		0.09174	0.00623	14.74	<.0001
	The course was well-structured (please consider whether the course was generally well-planned, and whether the contribution of the course activities and teaching material was clear to you)		0.14616	0.00606	24.12	<.0001
			0.05496	0.00585	9.40	<.0001
Q5	Der har i kursusforløbet været gode muligheder for at få tilbagemelding/vejledning vedrørende mine foranstaltninger	1	0.03332	0.00470	7.08	<.0001
Q6	The teacher [CSFN] [CSLN] was good at communicating the subject matter	1	0.04885	0.00508	9.61	<.0001
Q7	During the course, I have been inspired to work with the subject	1	0.28375	0.00493	57.51	<.0001

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What are our experience

- Increasing no. of inquires from Teachers and Study program directors for additional analysis
- Increasing research interests on evaluation data
- Teachers to asking for help to develop the courses based on evaluation results



In the pipeline

- Instructor Feedback dashboard (IFD)
- Database
- Developing dashboards for study program directors

