Course Analysis for IV1351, Data Storage Paradigms, Period 2 2021

April 29, 2022

1 Notes from course evaluation board

Unfortunately no one wanted to participate in the course evaluation board.

2 Course evaluation

The LEQ questionnaire unfortunately only got 8 answers, which corresponds to just 6% of the participants. It's therefore hardly meaningful to draw conclusions based on the evaluation. What can be said, is that the few who answered appreciated the course. All of the 22 evaluated points got five or higher on the seven-graded scale, and 14 points got six or higher. The complete results of the evaluation can be found in appendix 1.

The "best aspects" of the course mentioned in the evaluation are the project, the recorded lectures, and the interaction with the teachers. The suggested improvements are to emphasize the amount of work required for the project, to require more from students attending seminars, and to better explain how the lectures are relevant for the project.

3 Changes since previous course round

The main differences concern the project. First, it was a bit simplified since the workload was very high last year. Second, there were help sessions and seminars where the students could get help and feedback from teachers, and also discuss their solutions with other students. Third, it was allowed to work in pairs. All of this was appreciated and will be kept.

4 Pass Rate

- 124 participants were registered for the first time and 33 participants were re-registered, which makes a total of 157 participants.

- 139 of the 157 registered participants actually participated, the remaining 18 didn't submit anything at all during the entire course.

- 95 participants (68% of the 139 participants) passed the TEN1 subcourse.

- 57 participants (41% of the 139 participants) passed the LAB1 subcourse.

- 58 participants (42% of the 139 participants) completed the course.

- The final grades were distributed as follows.

Betyg	Antal	Percentage of the 139 participants
A	10	7%
B	18	13%
C	19	13%
D	8	6%
E	3	3%
F/not done	81	58%

The pass rate is very low, which is mainly because too few pass the LAB1 subcourse, which in turn is because too few pass the project. It's also quite remarkable that fewer passed the LAB1 subcourse this course round than the previous course round, when the changes were to reduce the LAB1 subcourse and to provide more help to the participants.

5 Improvements for next course round

Something must be done to improve the pass rate. One possibility is to reduce the project even further, or maybe to completely remove it. Another possibility is to give students the opportunity, or even make it mandatory, to report the project tasks one by one, during the course, as they are completed. Now the entire project is reported at the end of the course, which leads to many participants starting project work too late. It must be noted, however, that also last course round the project was reported only at the end, and that time the pass rate was about ten percent higher. Another complicating factor is that there must be more teachers to give time for continuous examination of the project.

A third possibility to improve the pass rate is to provide more tutorials or help sessions. It's however very uncertain if that would help, since there was very low attendance on help sessions this course round. Also, the pass rate was higher last course round when there were no help sessions at all.

Perhaps the truth is that the course has low pass rate since many students take another, very demanding, course in parallel. That was at least suggested by course participants. If that's the case there isn't much to do about the pass rate, except to reduce course content even further.
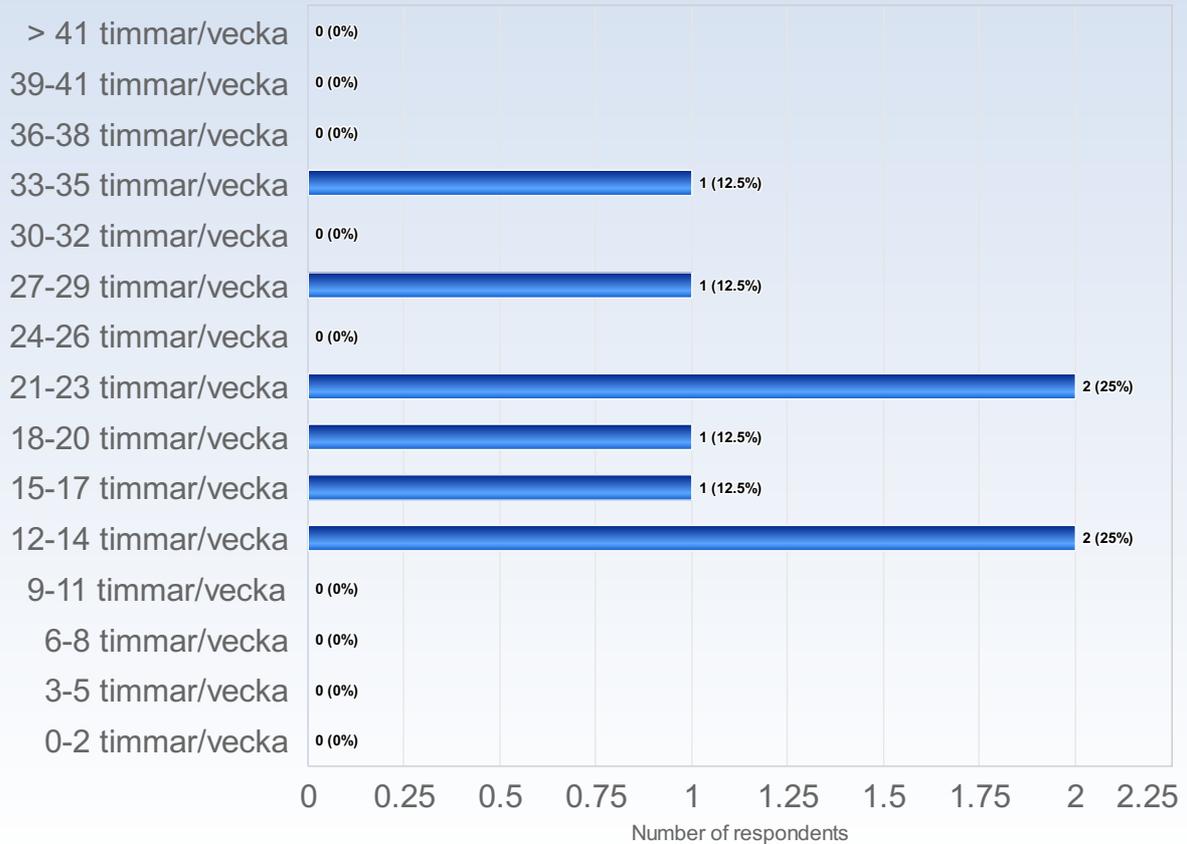
Appendix 1, Result of LEQ questionnaire

IV1351 - 2022-02-03

ESTIMATED WORKLOAD

On average, how many hours/week did you work with the course (including scheduled hours)?

Category	Value
> 41 timmar/vecka	0 (0%)
39-41 timmar/vecka	0 (0%)
36-38 timmar/vecka	0 (0%)
33-35 timmar/vecka	1 (12.5%)
30-32 timmar/vecka	0 (0%)
27-29 timmar/vecka	1 (12.5%)
24-26 timmar/vecka	0 (0%)
21-23 timmar/vecka	2 (25%)
18-20 timmar/vecka	1 (12.5%)
15-17 timmar/vecka	1 (12.5%)
12-14 timmar/vecka	2 (25%)
9-11 timmar/vecka	0 (0%)
6-8 timmar/vecka	0 (0%)
3-5 timmar/vecka	0 (0%)
0-2 timmar/vecka	0 (0%)

Number of respondents

Comments

Comments (I worked: 12-14 timmar/vecka)

Varierade kraftigt, sista veckorna med projektet väldigt mycket mer.

LEARNING EXPERIENCE

The polar diagrams below show the average response to the LEQ statements for different groups of respondents (only valid responses are included). The scale that is used in the diagrams is defined by:

1 = No, I strongly disagree with the statement
4 = I am neutral to the statement
7 = Yes, I strongly agree with the statement

Note! A group has to include at least 3 respondents in order to appear in a diagram.

Average response to LEQ statements - all respondents
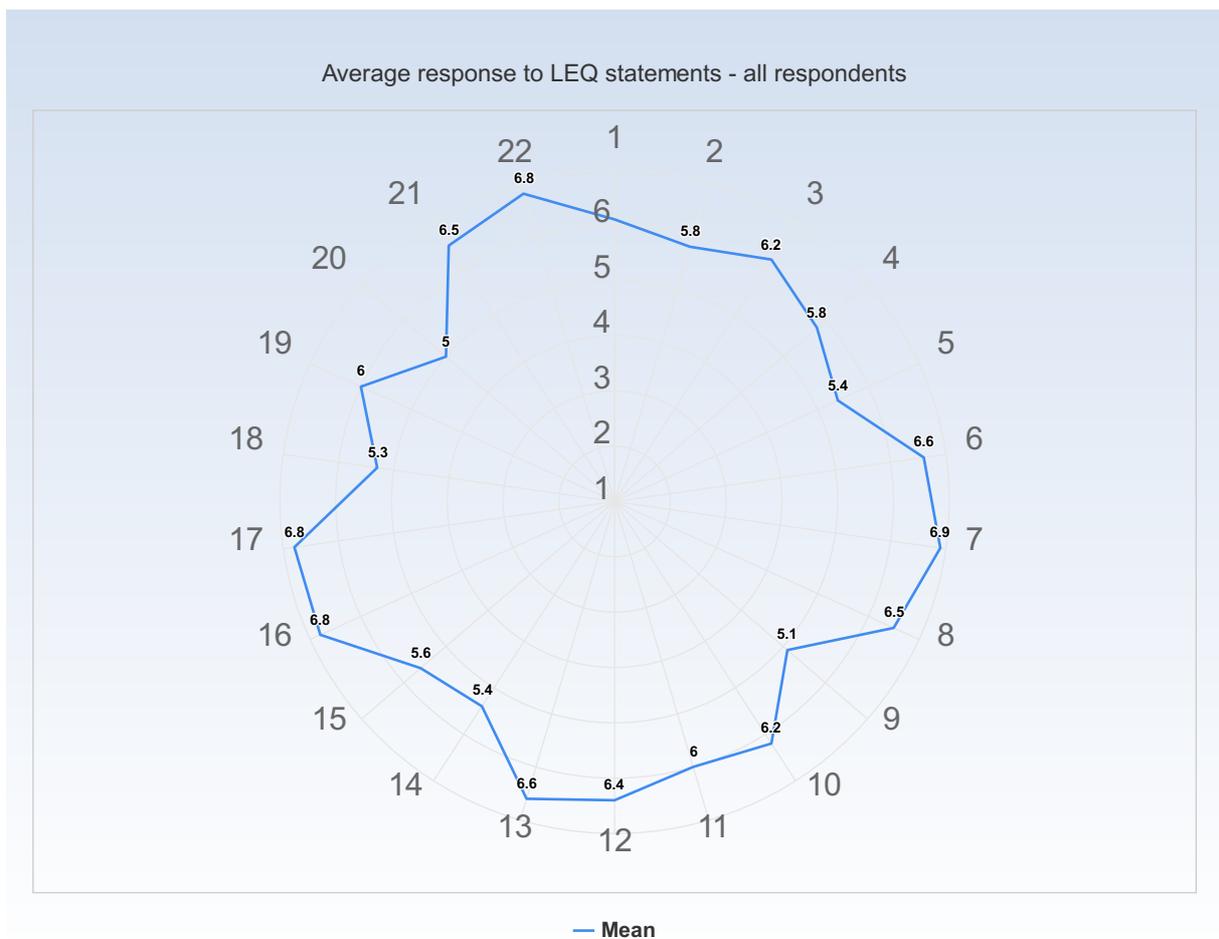
KTH Learning Experience Questionnaire v3.1.4

Meaningfulness - emotional level

Stimulating tasks

1. I worked with interesting issues (a)

Exploration and own experience

2. I explored parts of the subject on my own (a)
3. I was able to learn by trying out my own ideas (b)

Challenge

4. The course was challenging in a stimulating way (c)

Belonging

5. I felt togetherness with others on the course (d)
6. The atmosphere on the course was open and inclusive (d)

Comprehensibility - cognitive level

Clear goals and organization

7. The intended learning outcomes helped me to understand what I was expected to achieve (e)
8. The course was organized in a way that supported my learning (e)

Understanding of subject matter

9. I understood what the teachers were talking about (f)
10. I was able to learn from concrete examples that I could relate to (g)
11. Understanding of key concepts had high priority (h)

Constructive alignment

12. The course activities helped me to achieve the intended learning outcomes efficiently (i)
13. I understood what I was expected to learn in order to obtain a certain grade (i)

Feedback and security

14. I received regular feedback that helped me to see my progress (j)
15. I could practice and receive feedback without being graded (j)
16. The assessment on the course was fair and honest (k)

Manageability - instrumental level

Sufficient background knowledge

17. My background knowledge was sufficient to follow the course (f)

Time to reflect

18. I regularly spent time to reflect on what I learned (l)

Variation and participation

19. The course activities enabled me to learn in different ways (m)
20. I had opportunities to influence the course activities (m)

Collaboration

21. I was able to learn by collaborating and discussing with others (n)

Support

22. I was able to get support if I needed it (c)

Learning factors from the literature that LEQ intends to examine

We tend to learn most effectively (in ways that make a sustained, substantial, and positive influence on the way we think, reflect, act or feel) when:

a) We are trying to answer questions, solve problems or acquire skills that we find interesting, exciting or important

b) We are able to speculate, test ideas (intellectually or practically) and learn from experience, even before we know much about the subject

c) We are able to do so in a challenging and at the same time supportive environment

d) We feel that we are part of a community and believe that other people have confidence in our ability to learn

e) We understand the meaning of the intended learning outcomes, how the environment is organized, and what is expected of us

f) We have adequate prior knowledge to deal with the current learning situation

g) We are able to learn inductively by moving from concrete examples and experiences to general principles, rather than the reverse

h) We are challenged to develop a true understanding of key concepts and gradually create a coherent whole from the content

i) We believe that the work we are expected to do will help us to achieve the intended learning outcomes

j) We are able to try, fail, and receive feedback before, and separate from, each summative assessment of our efforts

k) We believe that our work will be considered in an honest and fair way

l) We have sufficient time for learning and devote the time needed to do so

m) We believe that we have control over our own learning, and not that we are being manipulated

n) We are able to collaborate with other learners struggling with the same problems

Literature

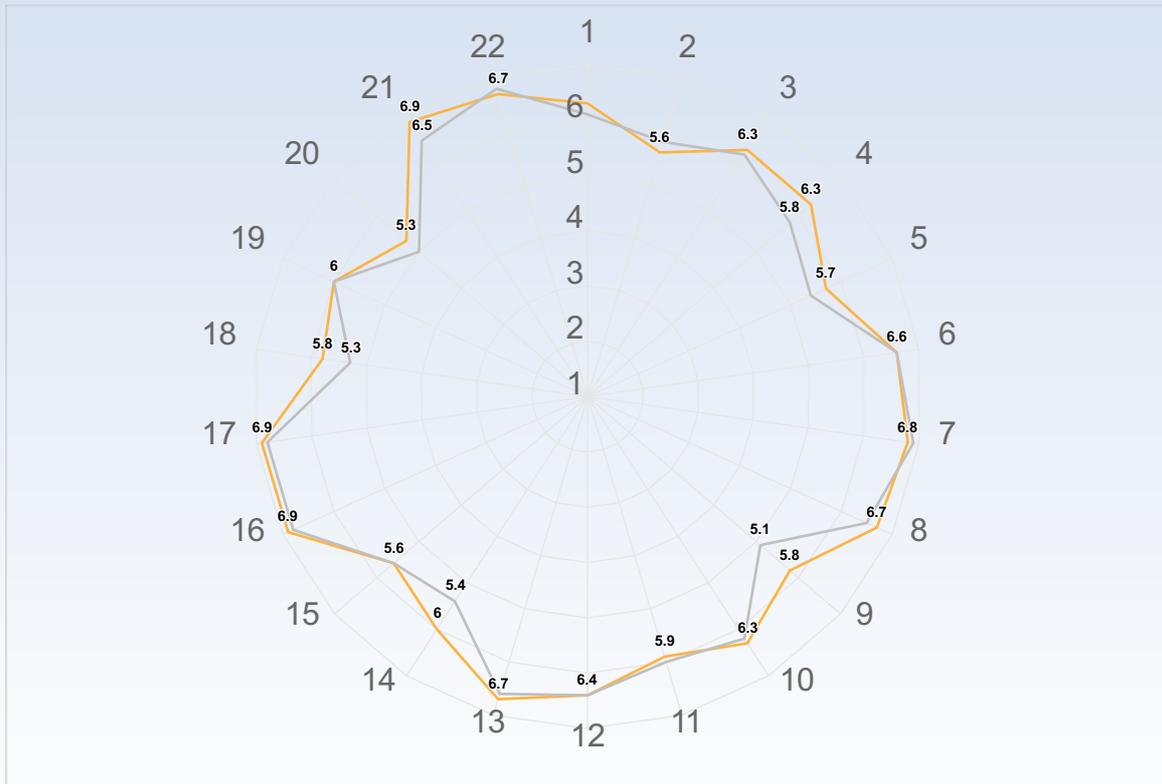Bain, K. (2004). *What the Best College Teachers Do*, Chapter 5, pp. 98-134. Cambridge: Harvard University Press.

Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

Elmgren, M. & Henriksson, A-S. (2014). *Academic Teaching*, Chapter 3, pp. 57-72. Lund: Studentlitteratur.

Kember, K. & McNaught, C. (2007). *Enhancing University Teaching: Lessons from Research into Award-Winning Teachers*, Chapter 5, pp. 31-40. Abingdon: Routledge.

Ramsden, P. (2003). *Learning to Teach in Higher Education*, Chapter 6, pp. 84-105. New York: RoutledgeFalmer.

Average response to LEQ statements - per gender

Chart legend: Kvinna, Man, Annat, Vill ej uppge, (Answered)

Axis values (1–22):
- 1: 6.7
- 2: 5.6
- 3: 6.3
- 4: 6.3 / 5.8
- 5: 5.7
- 6: 6.6
- 7: 6.8
- 8: 6.7
- 9: 5.1 / 5.8
- 10: 6.3
- 11: 5.9
- 12: 6.4
- 13: 6.7
- 14: 6 / 5.4
- 15: 5.6
- 16: 6.9
- 17: 6.9
- 18: 5.8 / 5.3
- 19: 6
- 20: 5.3
- 21: 6.9 / 6.5

Comments

Average response to LEQ statements - per type of student
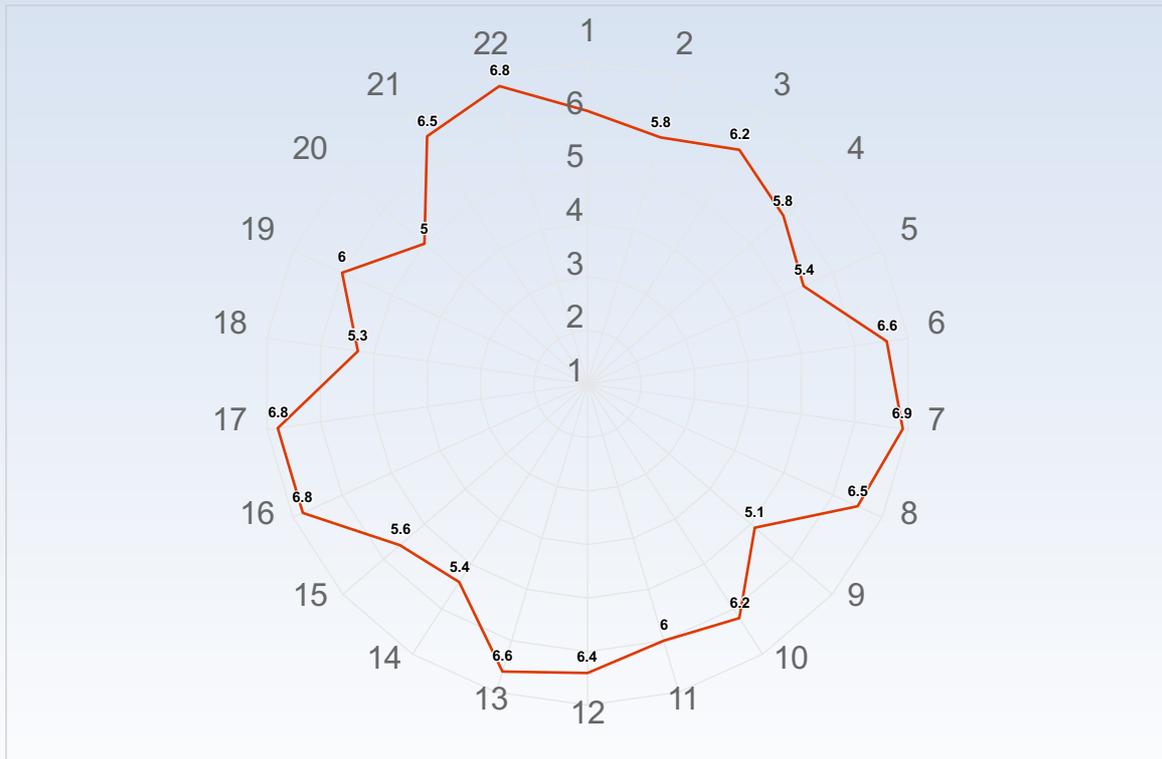
Legend:
— Internationell masterstudent
— Internationell utbytesstudent
— Svensk student i årskurs 1-3
— Svensk student i årskurs 4-5
— Annan typ av student
— Vill ej uppge

Comments

Average response to LEQ statements - per disability
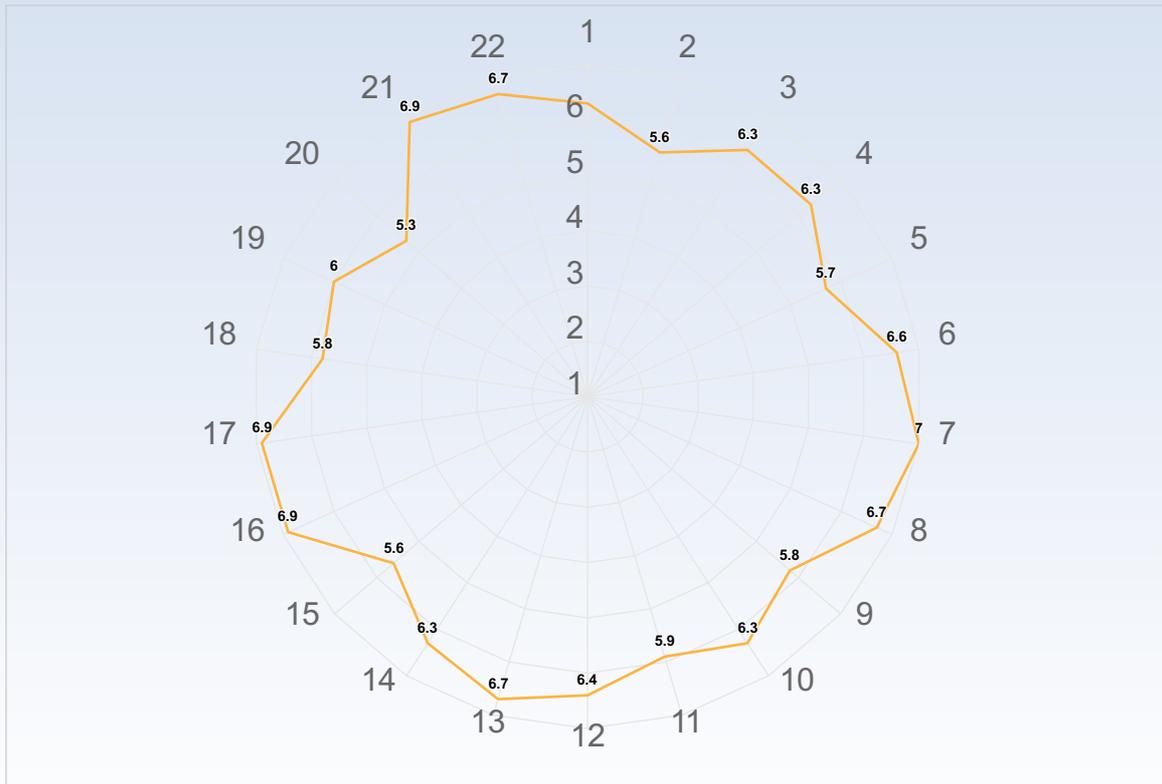
Legend: — Ja — Nej — Vill ej uppge

GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I worked: 12-14 timmar/vecka)
Projektet var väldigt lärorikt

What was the best aspect of the course? (I worked: 15-17 timmar/vecka)
Blank

What was the best aspect of the course? (I worked: 18-20 timmar/vecka)
Projektet. Det var riktigt bra för att få en djupare förståelse för hur databaser fungerar och hur ett program som interagerar med dessa fungerar.

What was the best aspect of the course? (I worked: 21-23 timmar/vecka)
- Pre-recorded lectures (Both Leif and Paris)
- Supervision of Leif Lindbäck during seminars and Q&A:s
- Good balance between programming and theory

What was the best aspect of the course? (I worked: 33-35 timmar/vecka)
Seminarien var ett jättebra tillfälle att se hur man ligger till jämfört med andra och om det är något man missuppfattat

What would you suggest to improve?

What would you suggest to improve? (I worked: 12-14 timmar/vecka)

Tyckte det kändes som föreläsningarna var väldigt långdragna och gick igenom mycket som egentligen inte är så relevant. Kunde varit mer fokus på dem centrala delarna i kursen.

What would you suggest to improve? (I worked: 15-17 timmar/vecka)

Blank

What would you suggest to improve? (I worked: 21-23 timmar/vecka)

- Lock theory and its relevance to the project could be explained even further
- Seminars can be improved. The greatest benefit at this point is the help from Leif. Many students had not (as it seems) done what they should have.
- After researching on my own, I found a good structure for setting up an SQL query, this (or a general methodology at least) could have been explained better in the course

What would you suggest to improve? (I worked: 33-35 timmar/vecka)

Det kändes som att projektet(sista uppgiften med JDBC) krävde mycket mer tid än de andra uppgifterna vi fick och att det blev lite överväldigande. Kan vara bra att lägga mer tyngd på hur mycket tid som behöver läggas på just den uppgiften.

What advice would you like to give to future participants?

What advice would you like to give to future participants? (I worked: 12-14 timmar/vecka)

Börja med projektet i tid.

What advice would you like to give to future participants? (I worked: 15-17 timmar/vecka)

Blank

What advice would you like to give to future participants? (I worked: 18-20 timmar/vecka)

Börja tidigt med projektet då man lär skapa flera iterationer av diagrammen osv innan man är helt nöjd med arbetet.

What advice would you like to give to future participants? (I worked: 33-35 timmar/vecka)

Börja med sista uppgiften tidigt, gå på seminarien.

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 15-17 timmar/vecka)

Blank

Is there anything else you would like to add? (I worked: 33-35 timmar/vecka)

allmänt bra kurs.

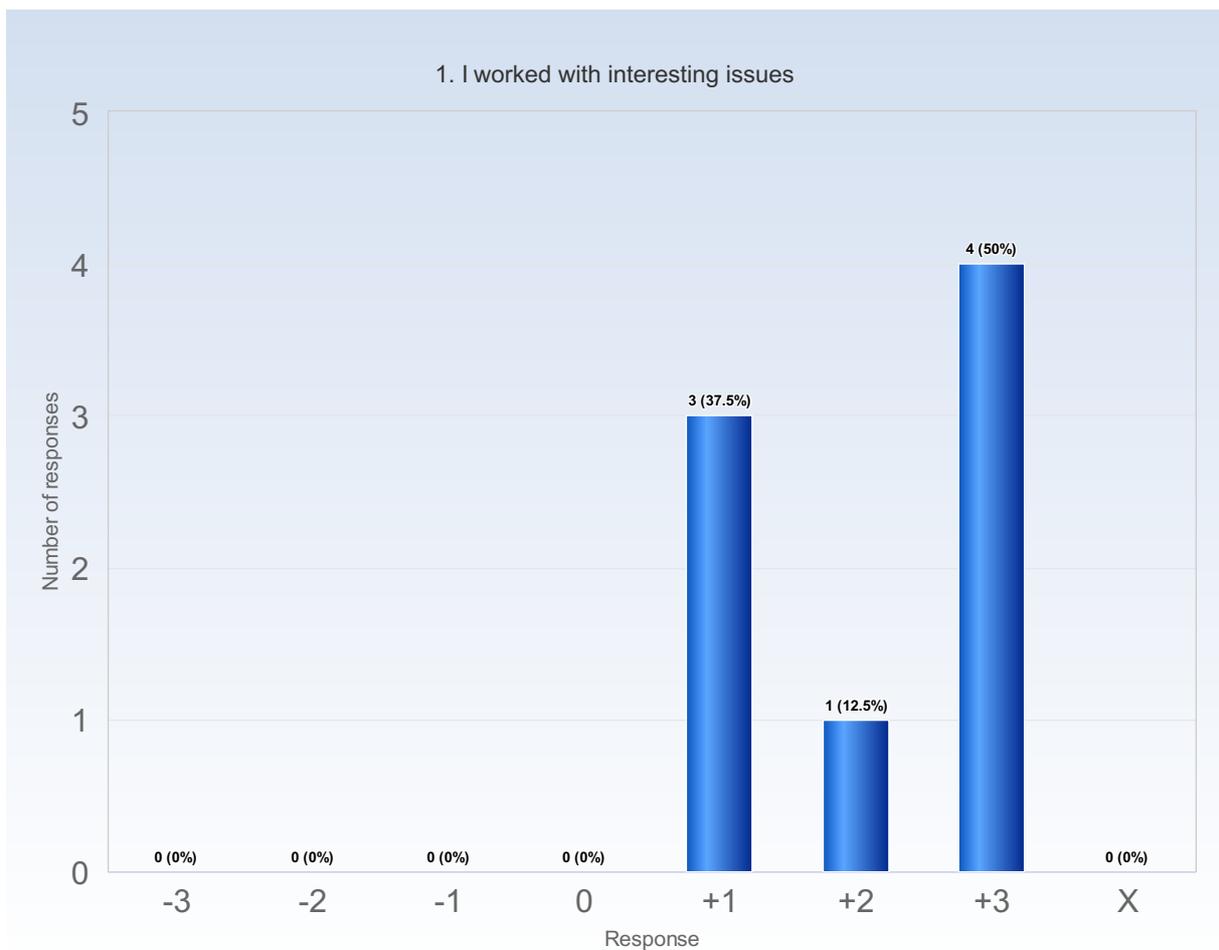# SPECIFIC QUESTIONS

RESPONSE DATA

The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-3 = No, I strongly disagree with the statement
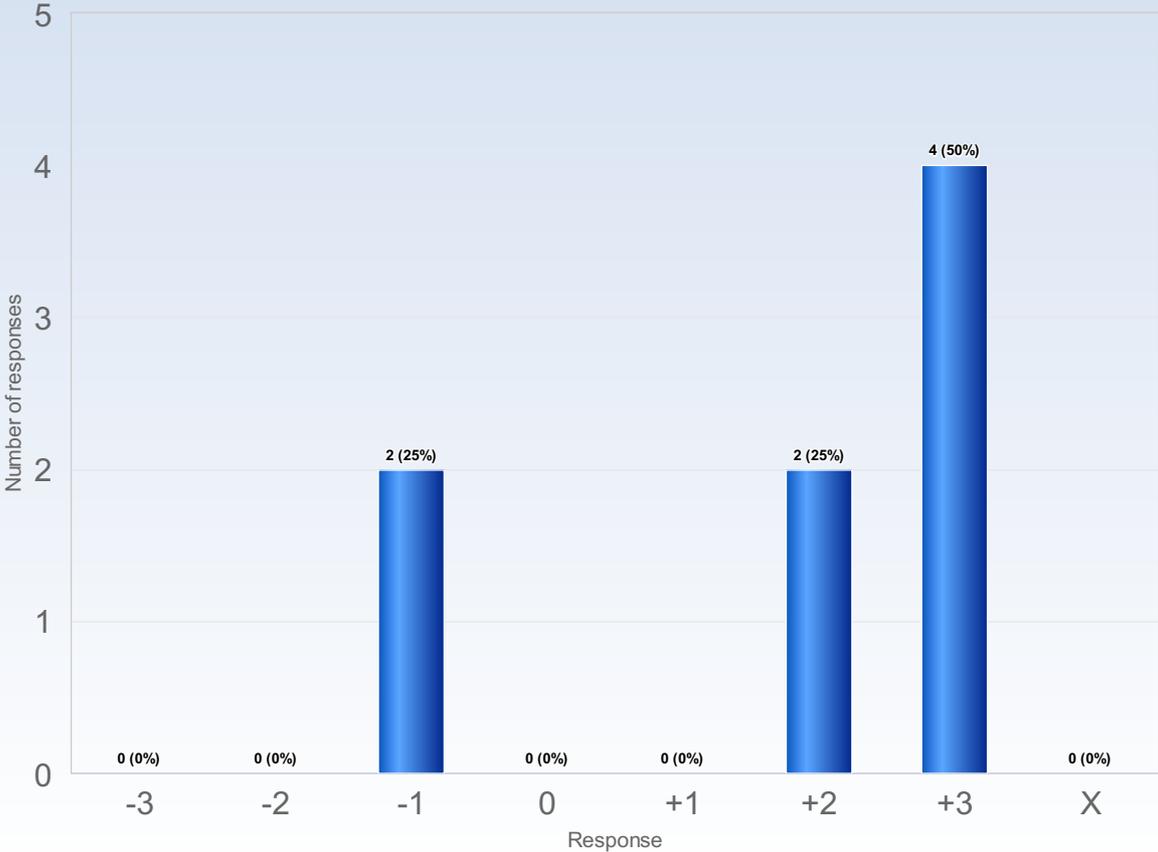0 = I am neutral to the statement
+3 = Yes, I strongly agree with the statement

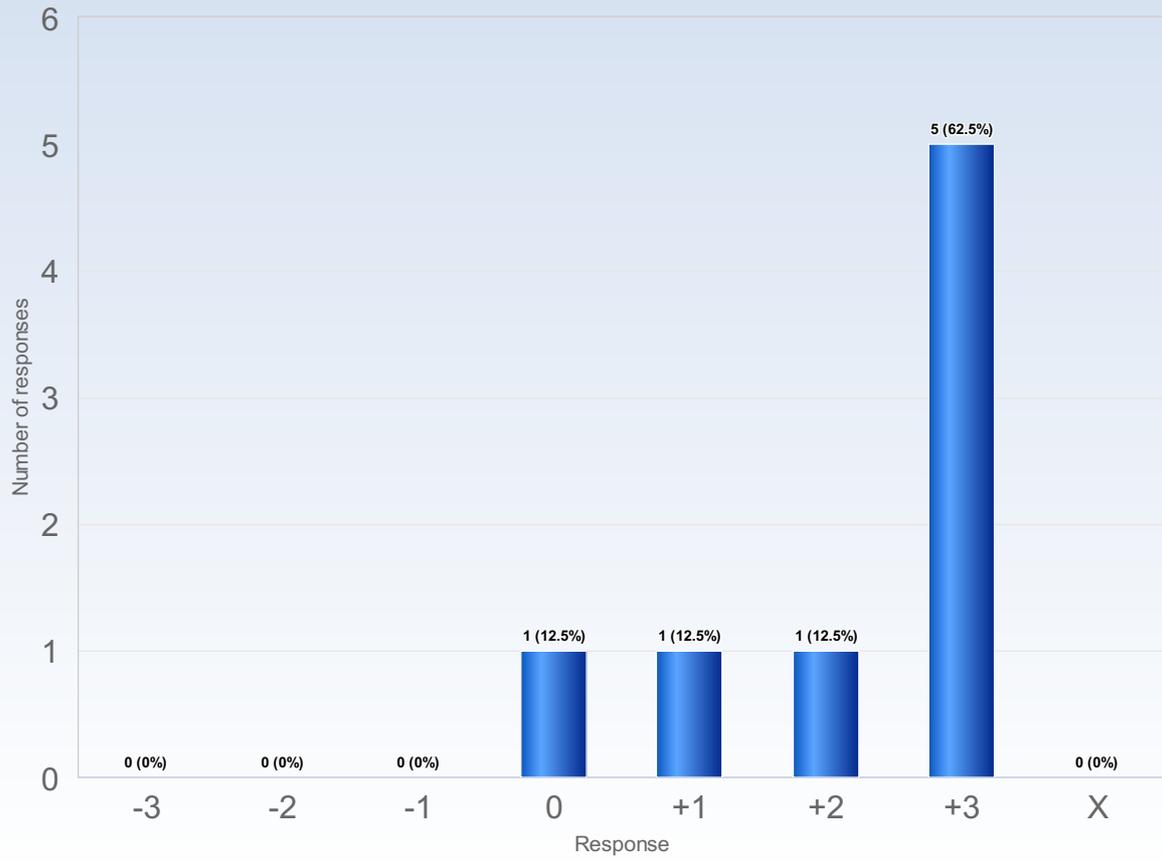X = I decline to take a position on the statement

1. I worked with interesting issues

Comments

2. I explored parts of the subject on my own

Number of responses

Response	
-3	0 (0%)
-2	0 (0%)
-1	2 (25%)
0	0 (0%)
+1	0 (0%)
+2	2 (25%)
+3	4 (50%)
X	0 (0%)

Comments

3. I was able to learn by trying out my own ideas

Comments

4. The course was challenging in a stimulating way
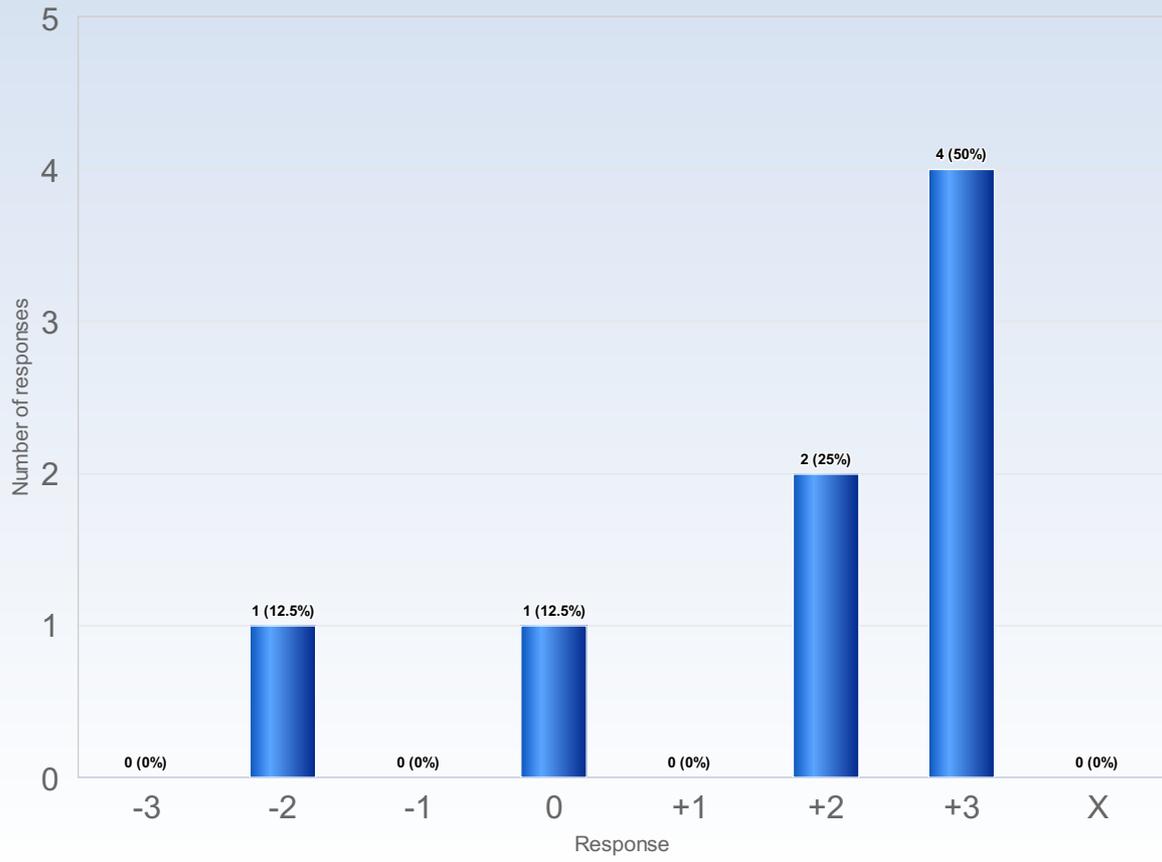
Comments

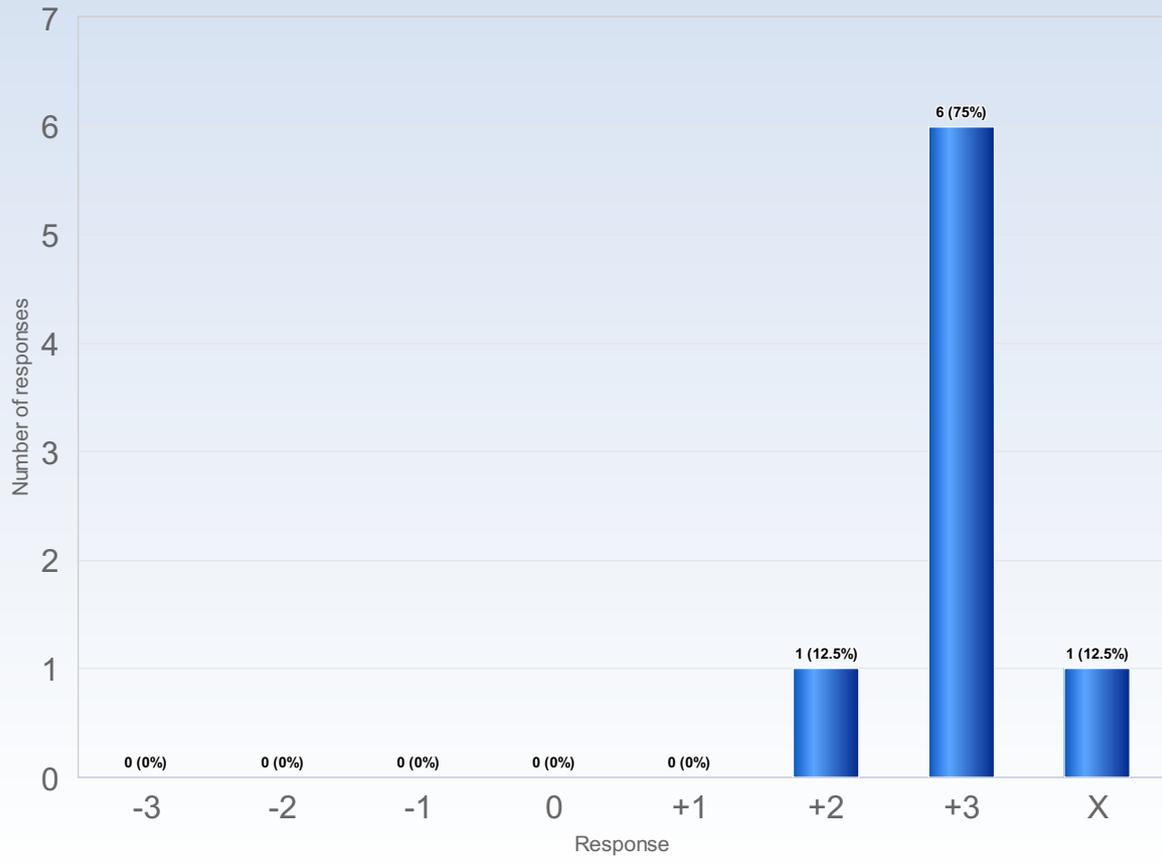## 5. I felt togetherness with others on the course
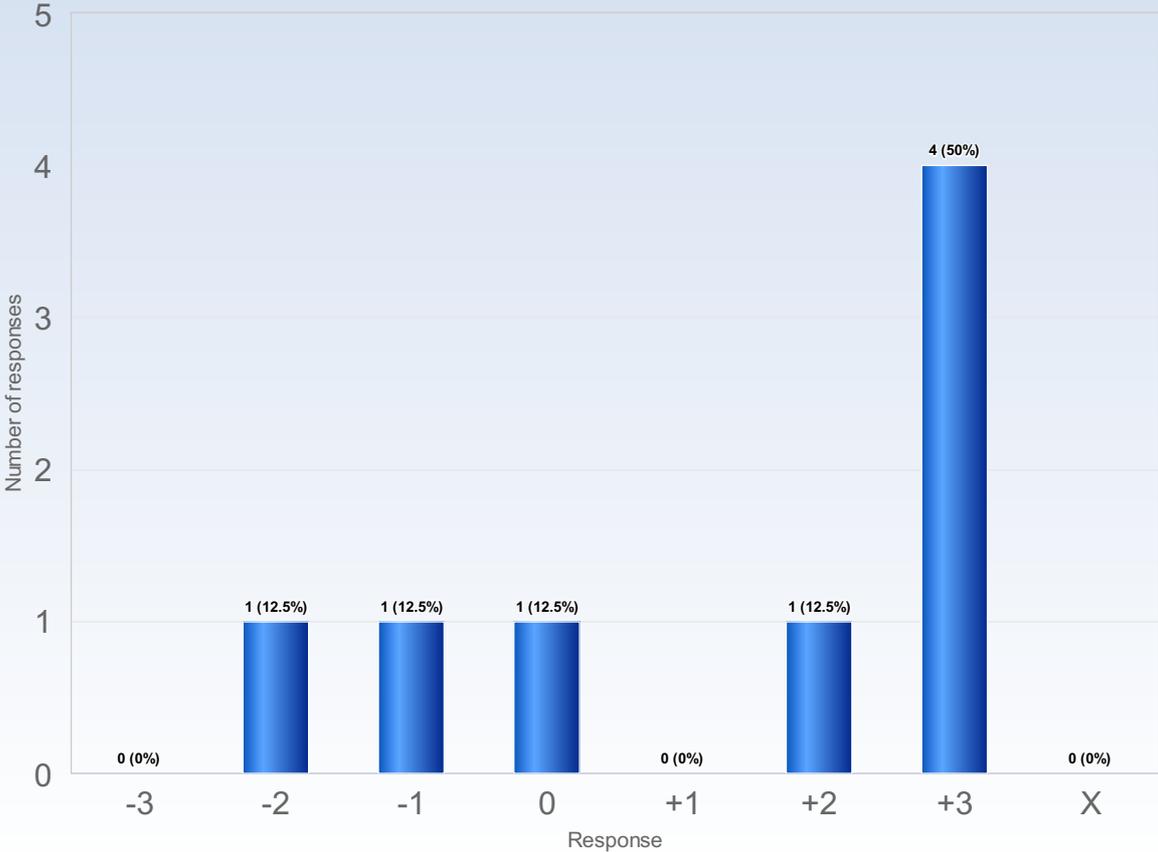
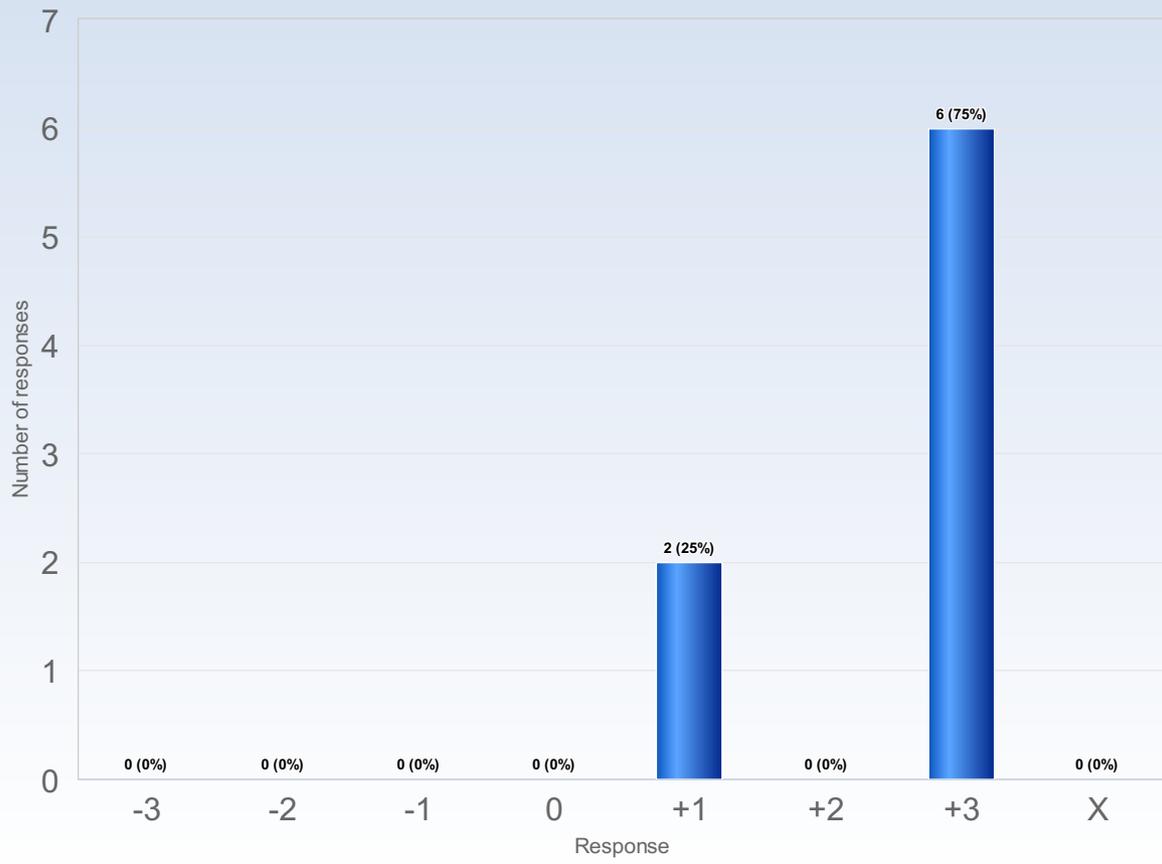**Comments**

6. The atmosphere on the course was open and inclusive

Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	0 (0%)
+1	1 (12.5%)
+2	1 (12.5%)
+3	6 (75%)
X	0 (0%)
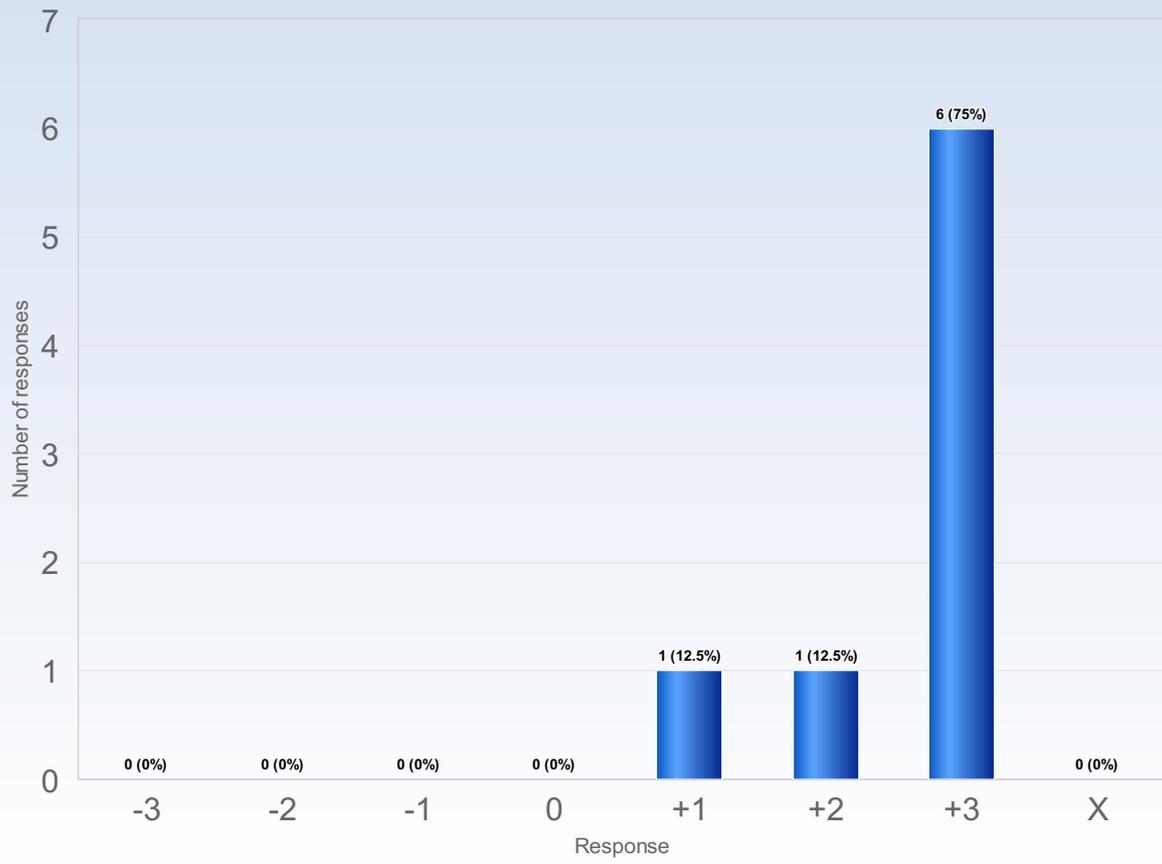
Comments

7. The intended learning outcomes helped me to understand what I was expected to achieve

Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	0 (0%)
+1	0 (0%)
+2	1 (12.5%)
+3	6 (75%)
X	1 (12.5%)

Comments

8. The course was organized in a way that supported my learning

Comments

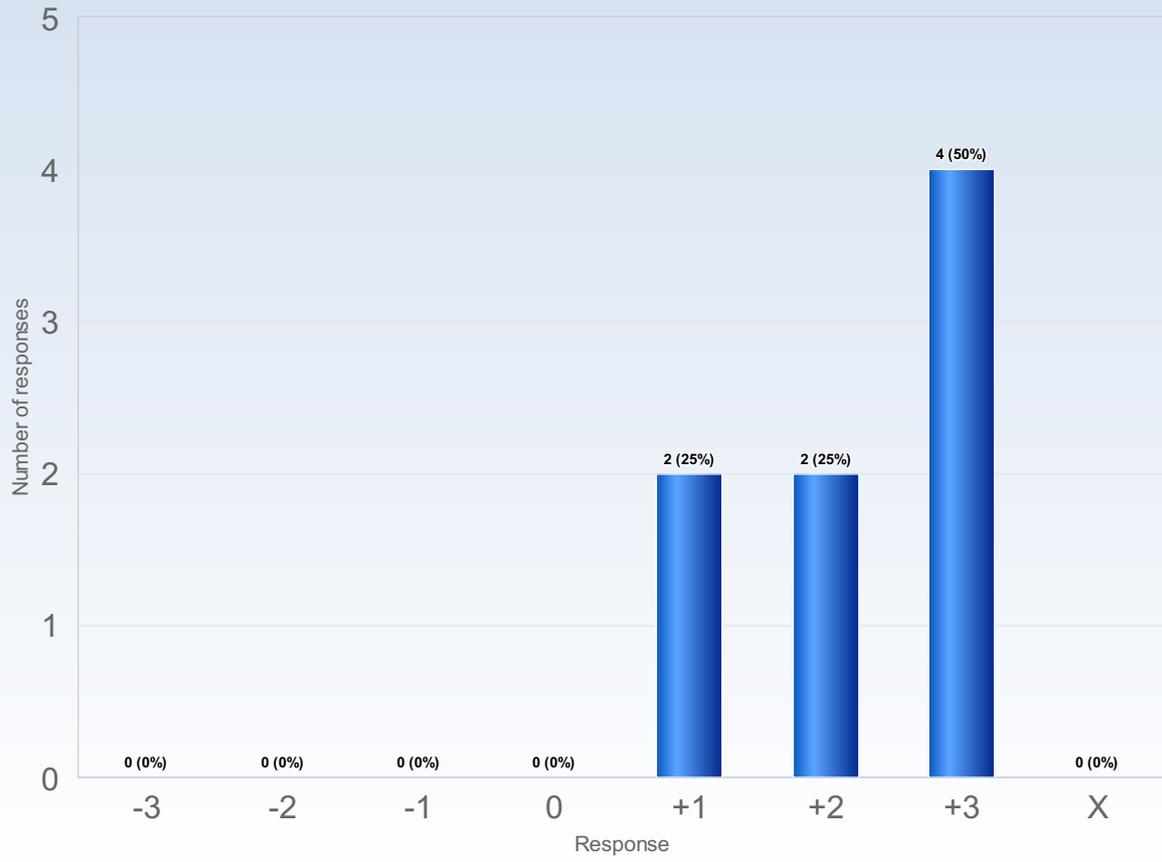## 9. I understood what the teachers were talking about
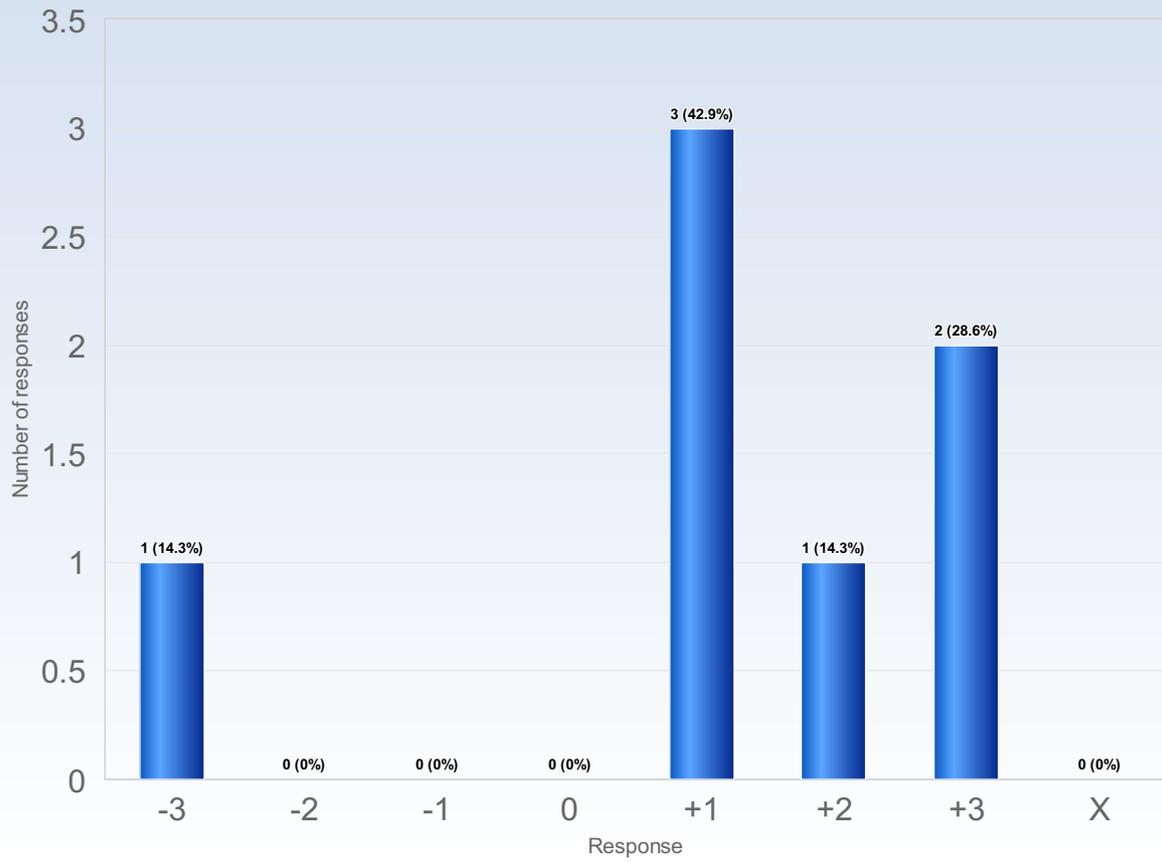
Comments

Comments (My response was: -3)
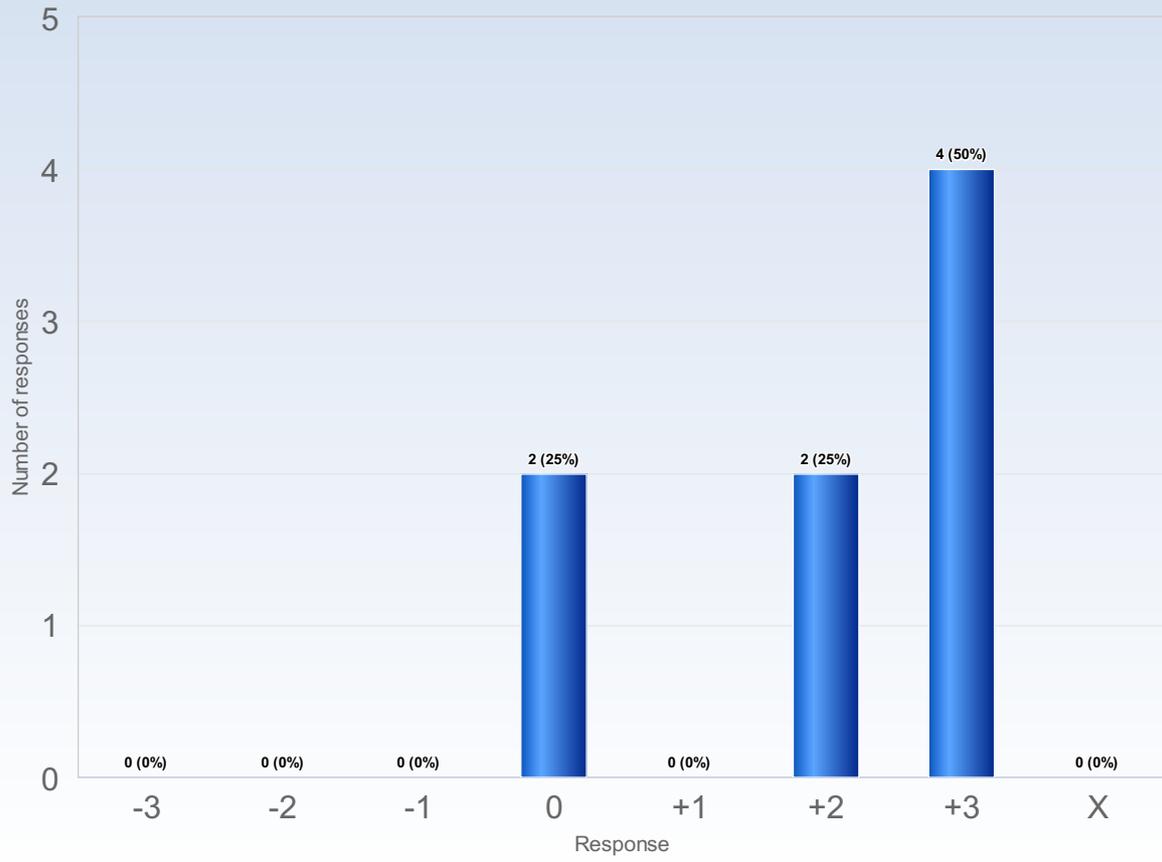It was hard to understand Paris

Comments (My response was: +1)
Teorin upplevdes stundvis stressad

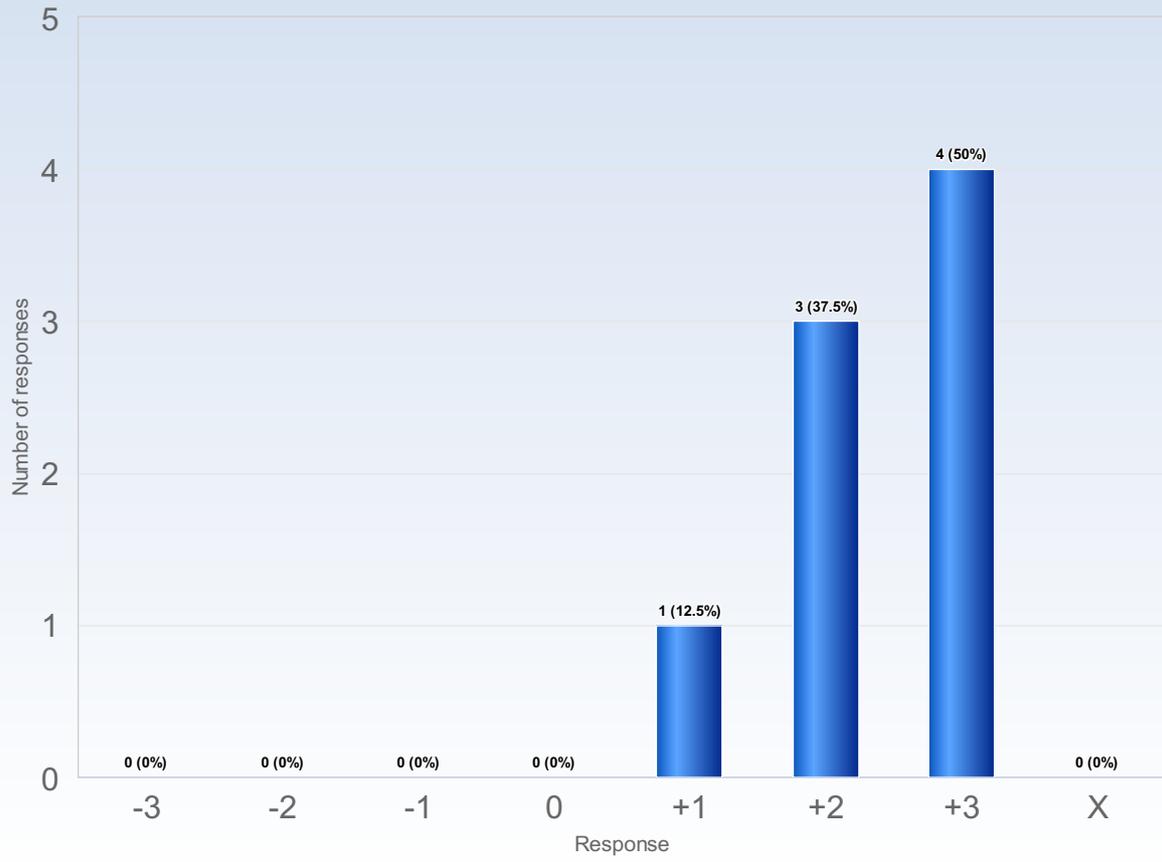## 10. I was able to learn from concrete examples that I could relate to

Comments

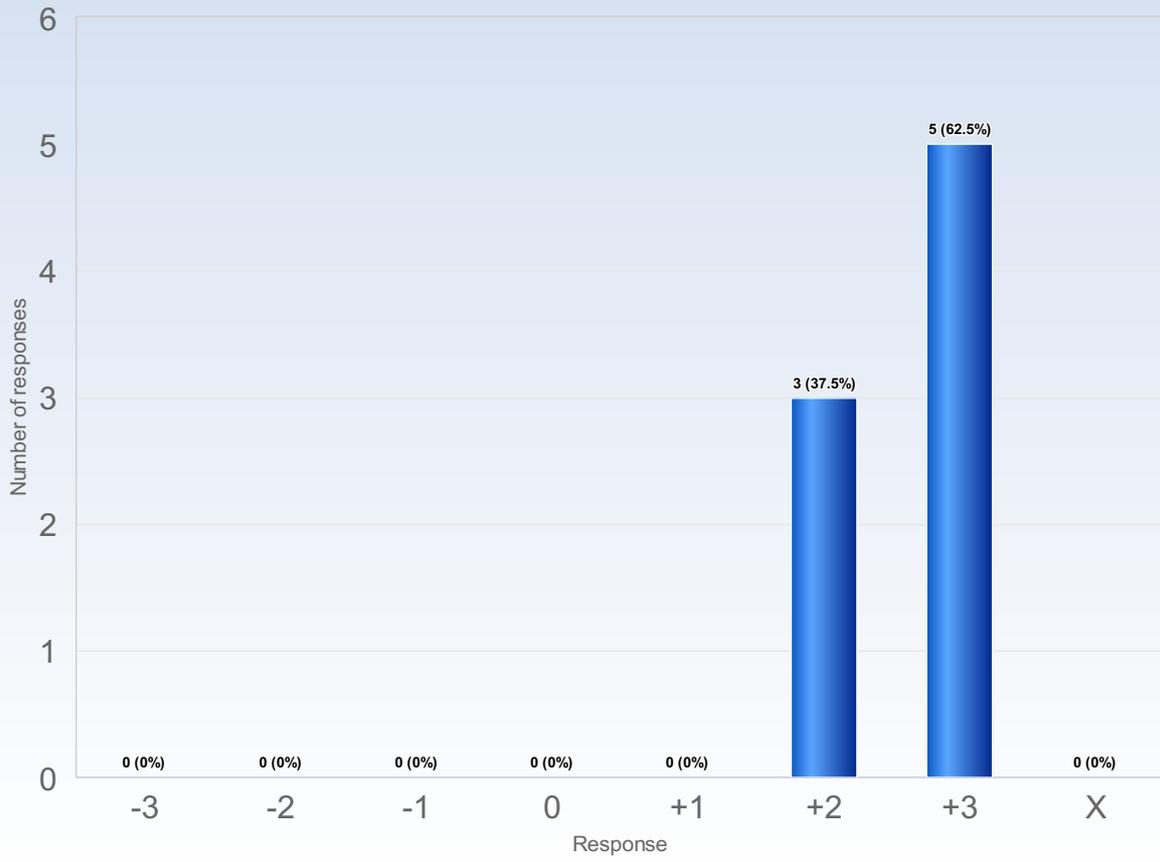## 11. Understanding of key concepts had high priority

Comments

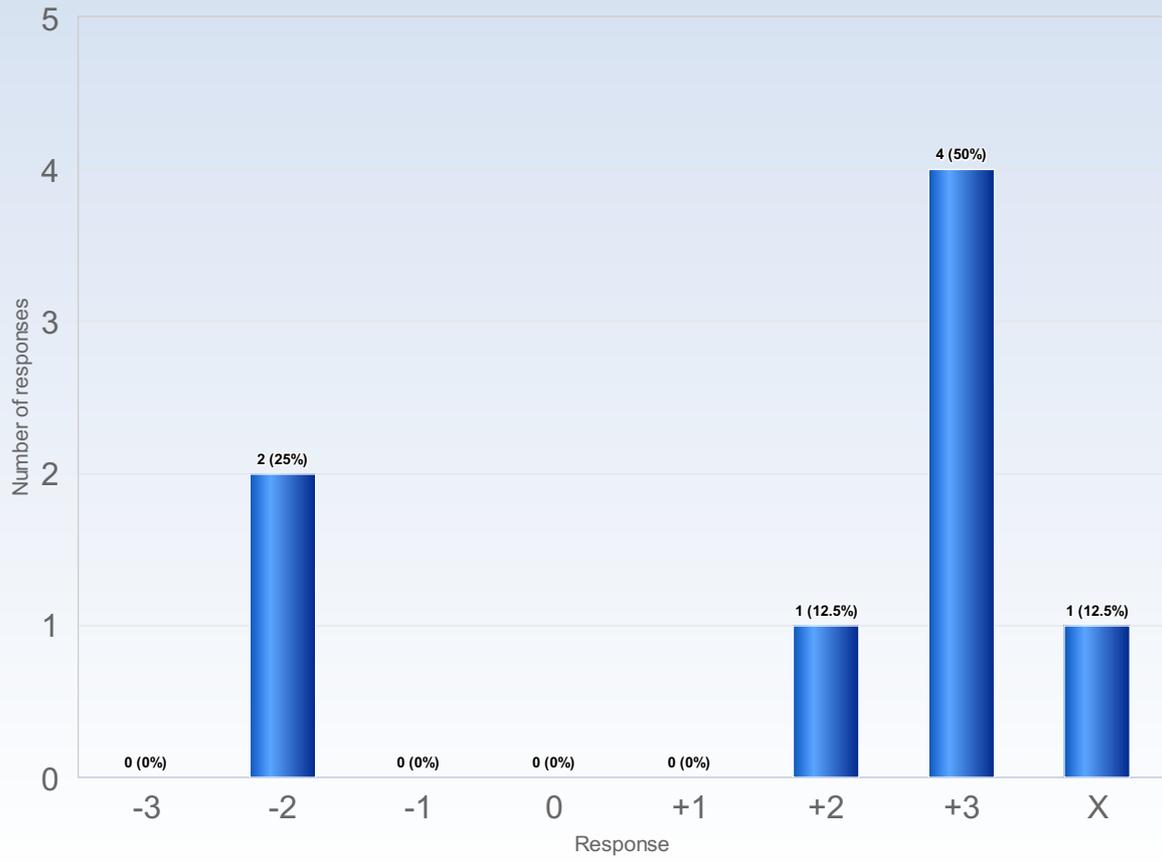## 12. The course activities helped me to achieve the intended learning outcomes efficiently

Comments

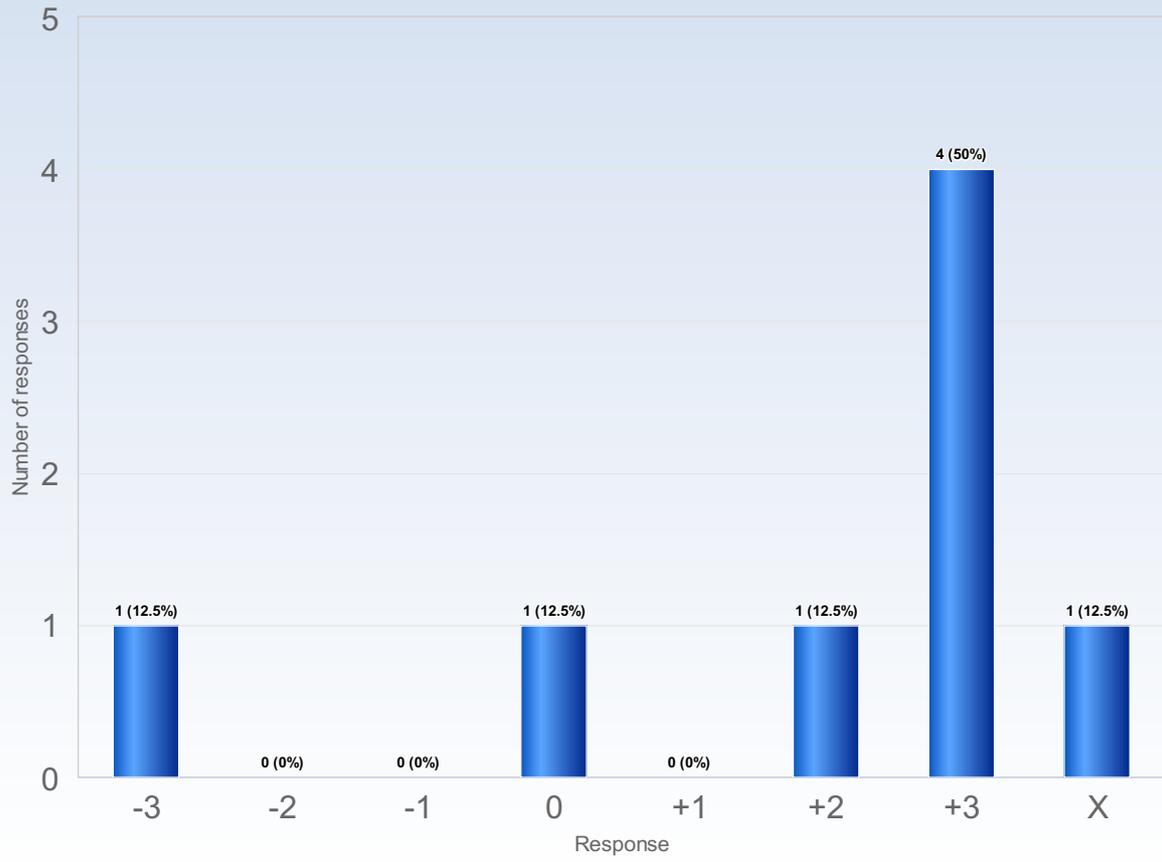## 13. I understood what I was expected to learn in order to obtain a certain grade

Response	-3	-2	-1	0	+1	+2	+3	X
	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (37.5%)	5 (62.5%)	0 (0%)

Comments

14. I received regular feedback that helped me to see my progress

Comments

15. I could practice and receive feedback without being graded
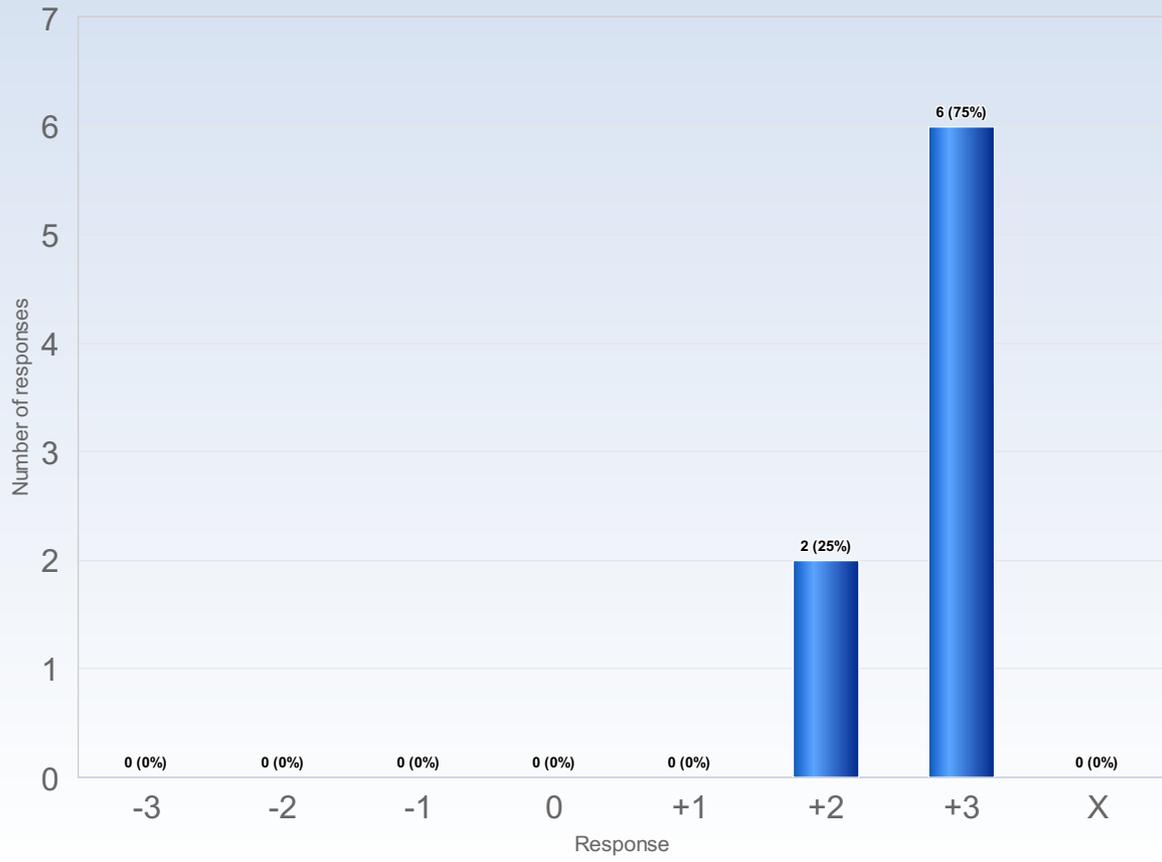

Response	Number of responses
-3	1 (12.5%)
-2	0 (0%)
-1	0 (0%)
0	1 (12.5%)
+1	0 (0%)
+2	1 (12.5%)
+3	4 (50%)
X	1 (12.5%)

Comments

16. The assessment on the course was fair and honest

Number of responses

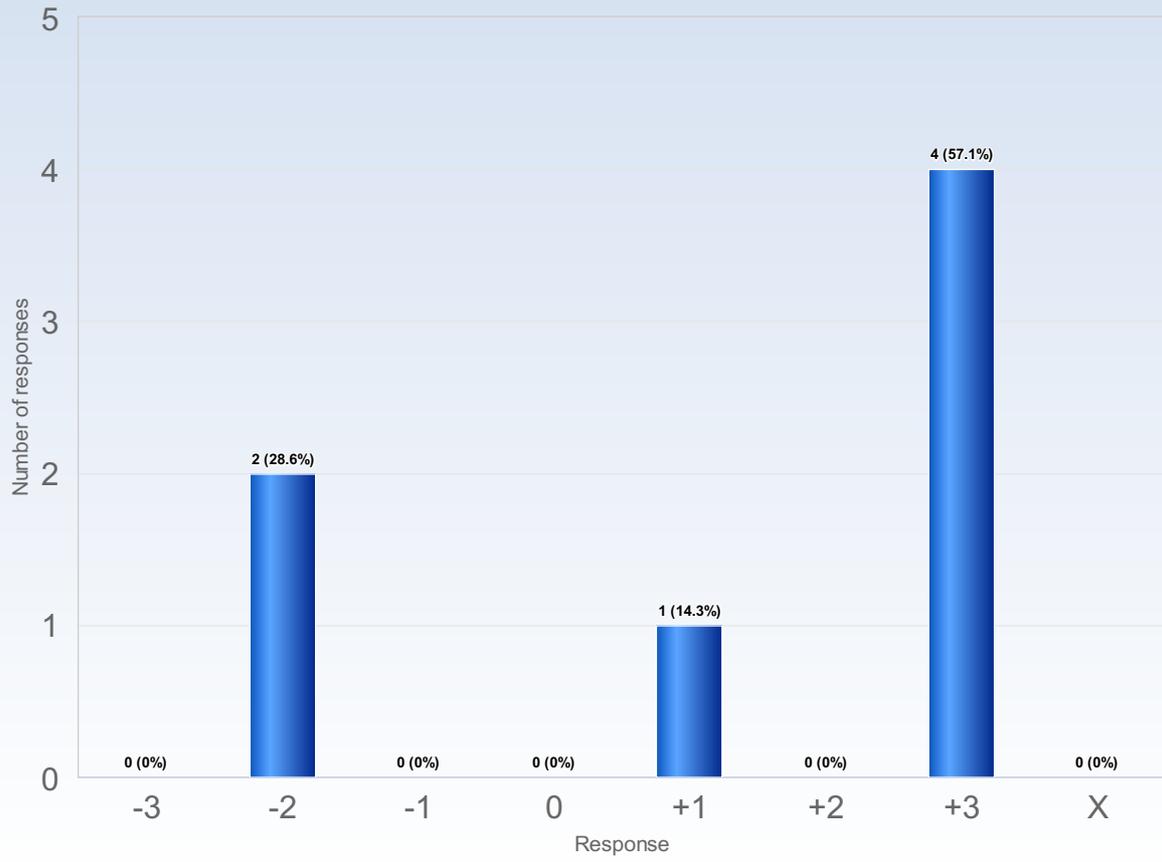|							
0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (25%)	6 (75%)	0 (0%)
-3	-2	-1	0	+1	+2	+3	X

Responses
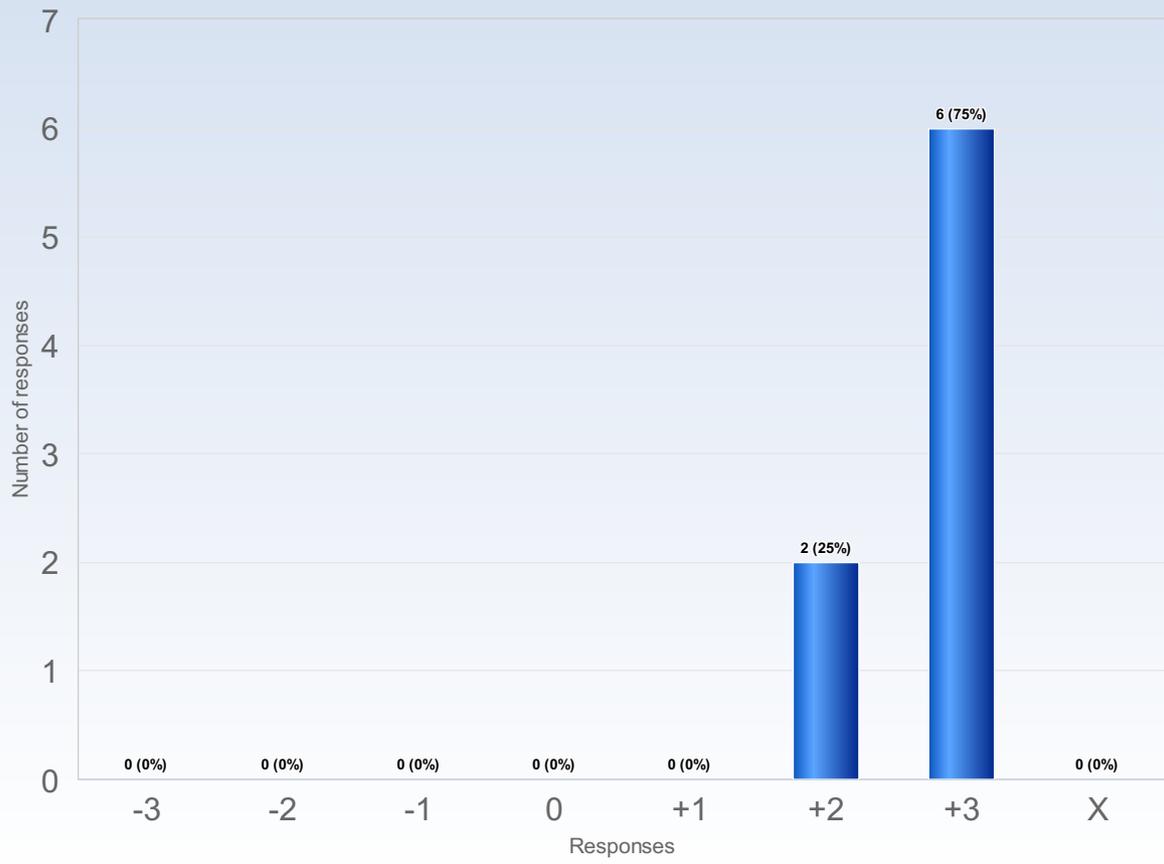
Comments

17. My background knowledge was sufficient to follow the course

Comments

18. I regularly spent time to reflect on what I learned

Number of responses

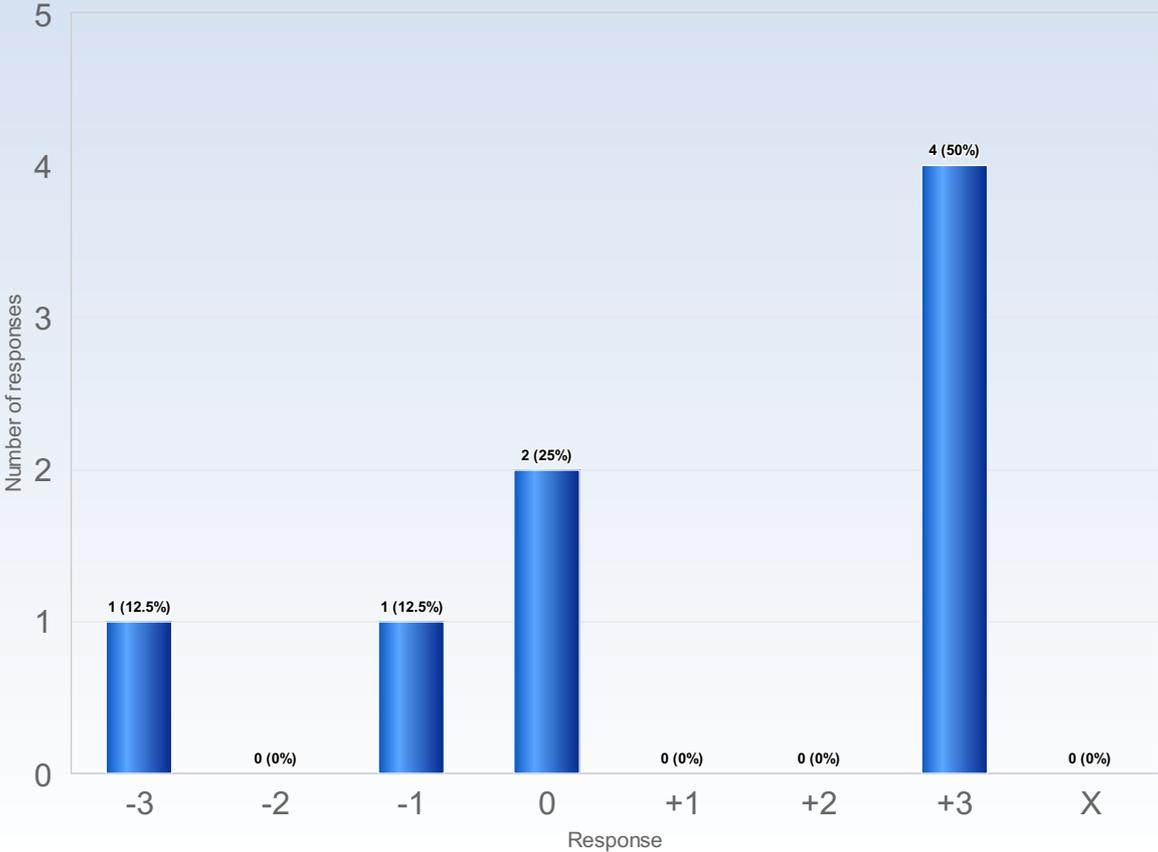| Response		
-3	0 (0%)	
-2	2 (28.6%)	
-1	0 (0%)	
0	0 (0%)	
+1	1 (14.3%)	
+2	0 (0%)	
+3	4 (57.1%)	
X	0 (0%)	

Comments

19. The course activities enabled me to learn in different ways

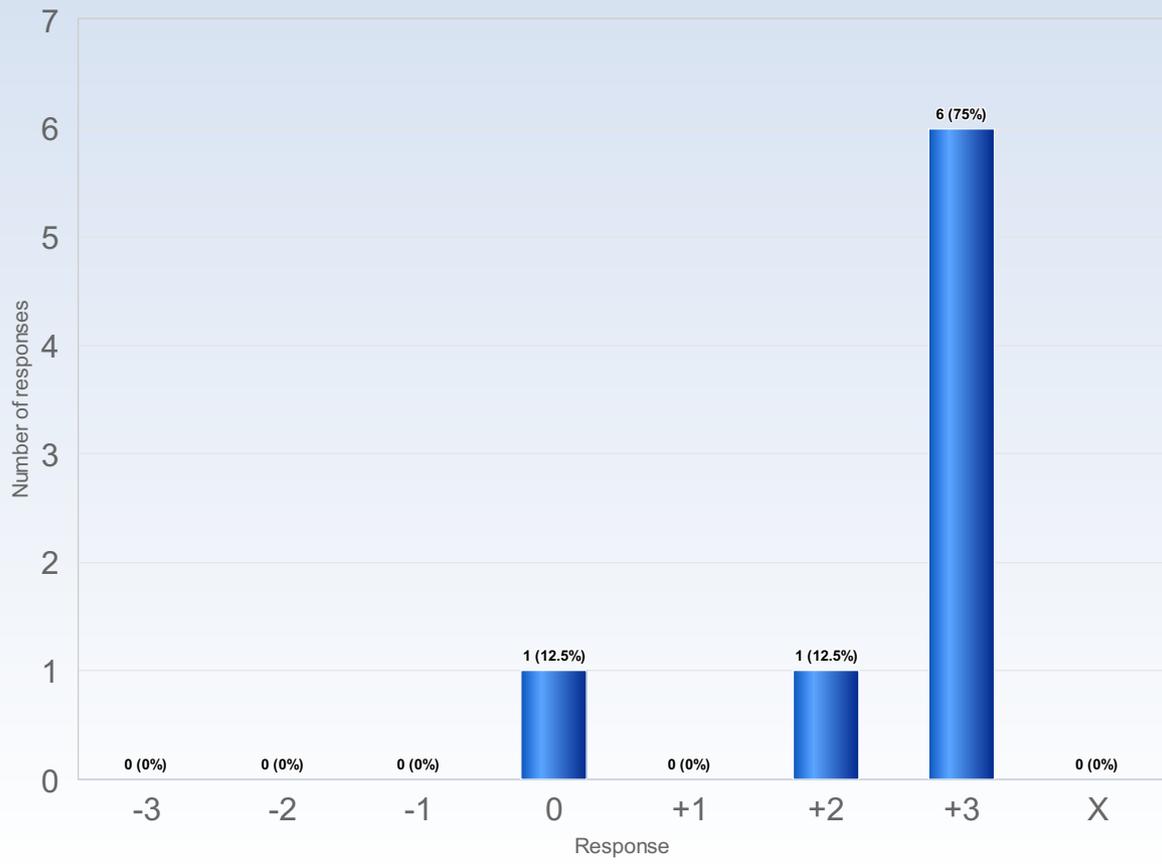| Response	Number of responses
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	0 (0%)
+1	3 (37.5%)
+2	2 (25%)
+3	3 (37.5%)
X	0 (0%)
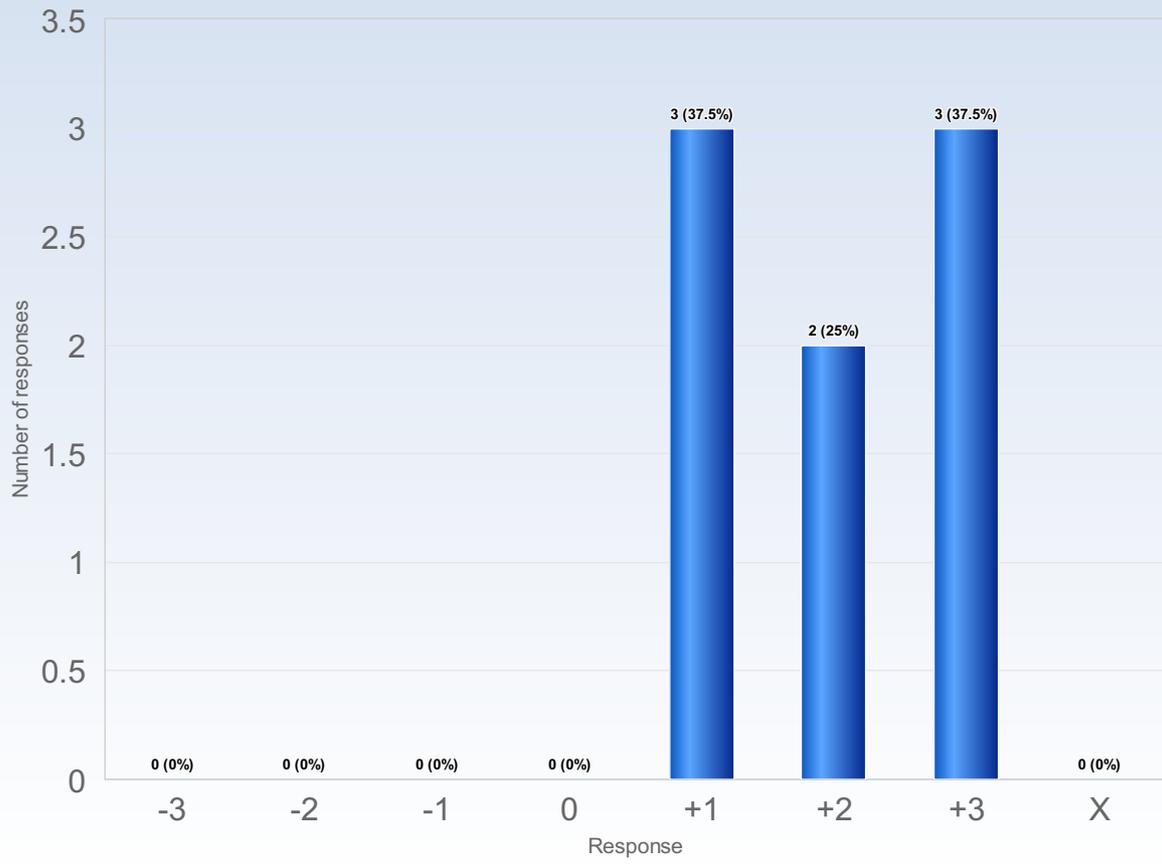
Comments

20. I had opportunities to influence the course activities

Comments

21. I was able to learn by collaborating and discussing with others

Number of responses

Response	Count
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	1 (12.5%)
+1	0 (0%)
+2	1 (12.5%)
+3	6 (75%)
X	0 (0%)

Response

Comments

22. I was able to get support if I needed it

Number of responses

Response	
-3	0 (0%)
-2	0 (0%)
-1	0 (0%)
0	0 (0%)
+1	1 (12.5%)
+2	0 (0%)
+3	7 (87.5%)
X	0 (0%)

Comments