ID2222 - 2020-01-23

Antal respondenter: 90
Antal svar: 21
Svarsfrekvens: 23,33 %

GROUP MEMBERSHIP

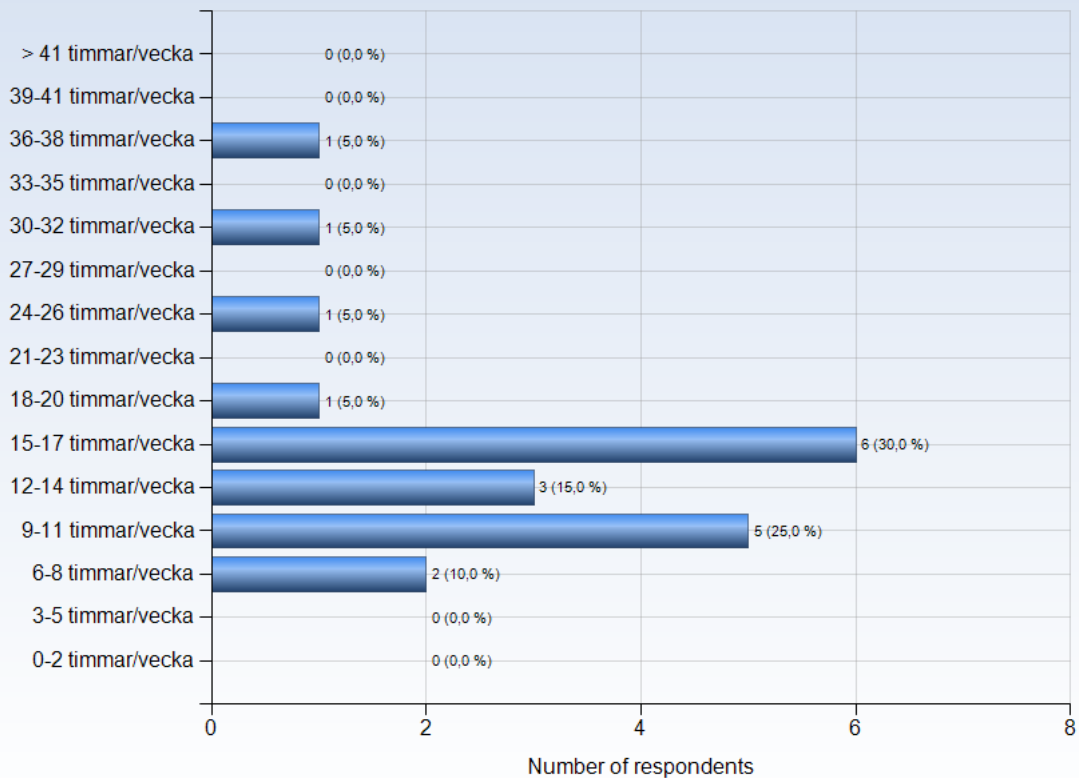## Number of respondents from each group
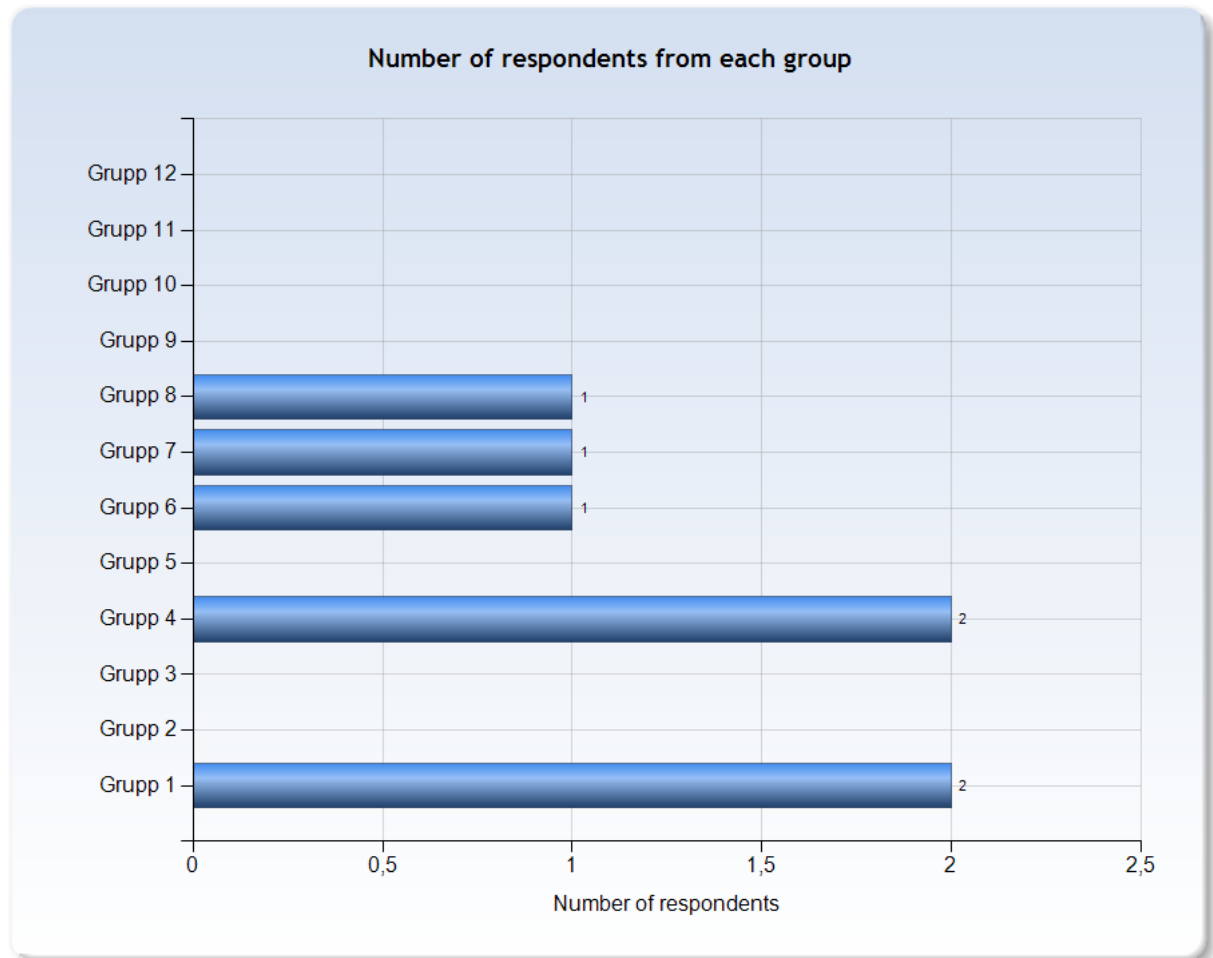
Comments

Comments (I belonged to: Grupp 1)

The use of questionnaires are a good approach it refreshes your memory and makes the concepts studied persist

ESTIMATED WORKLOAD

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

Hours/week	Respondents
> 41 timmar/vecka	0 (0,0 %)
39-41 timmar/vecka	0 (0,0 %)
36-38 timmar/vecka	1 (5,0 %)
33-35 timmar/vecka	0 (0,0 %)
30-32 timmar/vecka	1 (5,0 %)
27-29 timmar/vecka	0 (0,0 %)
24-26 timmar/vecka	1 (5,0 %)
21-23 timmar/vecka	0 (0,0 %)
18-20 timmar/vecka	1 (5,0 %)
15-17 timmar/vecka	6 (30,0 %)
12-14 timmar/vecka	3 (15,0 %)
9-11 timmar/vecka	5 (25,0 %)
6-8 timmar/vecka	2 (10,0 %)
3-5 timmar/vecka	0 (0,0 %)
0-2 timmar/vecka	0 (0,0 %)

Number of respondents

Comments

Comments (I belonged to: Grupp 1)

I found the course quite complicated especially the second part of it, as I don't have a decent mathematical background, but as I have been following the videos of the lectures I had to do more of research in some concepts as they weren't detailed, just to get a proper understanding and for the labs I found them hard and also likable because they are not only plain and simple they give you reflexive time also the time given for the labs which was one week I think it was not sufficient, I would propose to give it like two weeks as you have to fully understand the algorithms and try to apply them

Comments (I belonged to: Grupp 6)

With the homeworks the time spent weekly is more than a usual course. But the homeworks were useful to improve the knowledge of the topic and get our hands dirty, so the time spent is worth it.

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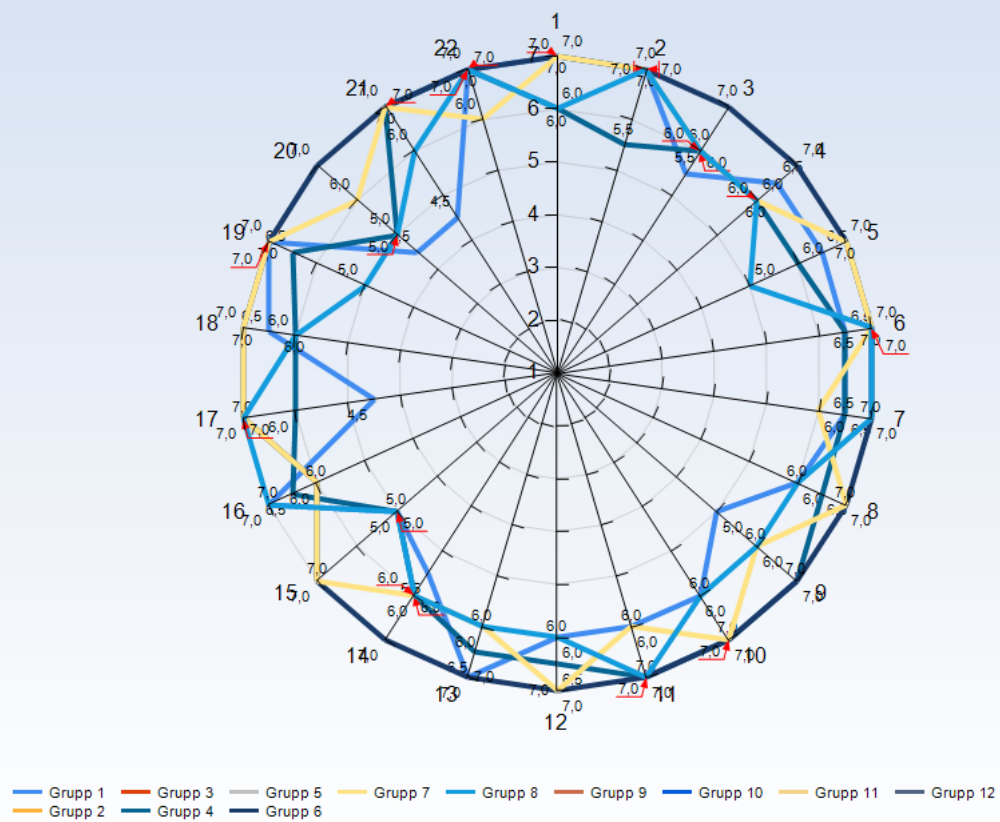
1 = No, I strongly disagree with the statement
4 = I am neutral to the statement
7 = Yes, I strongly agree with the statement

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

Average response to LEQ statements - per group

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 - all respondents

Legend: — Medelvärde
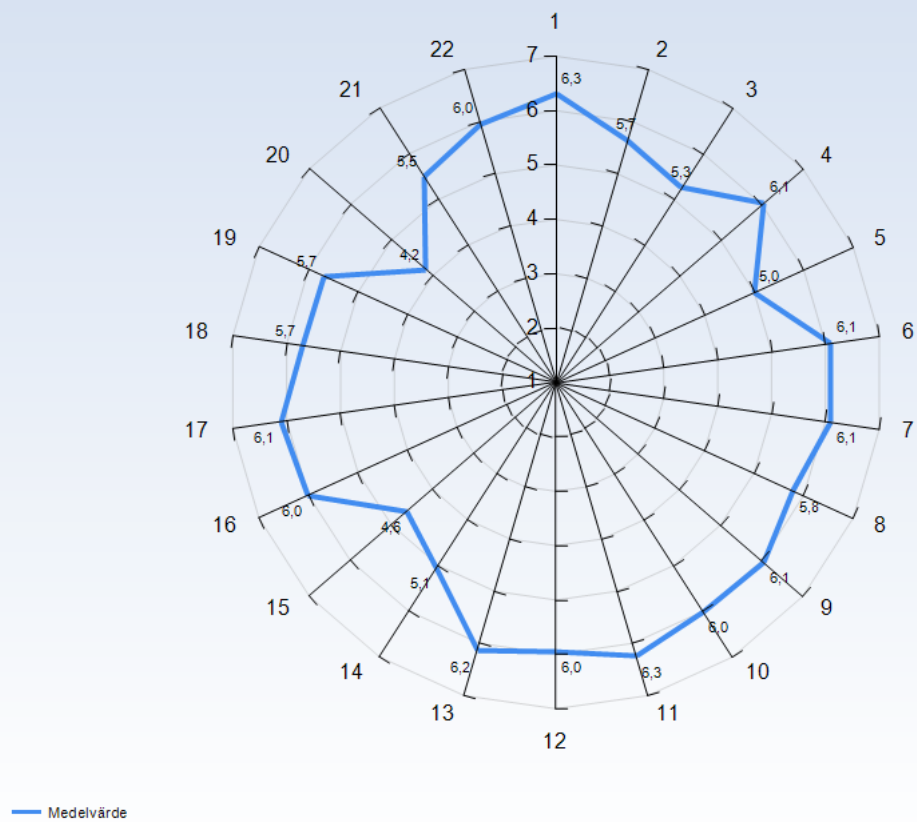
Average response to LEQ statements - all respondents per gender

Legend: Kvinna, Man, Annat, Vill ej uppge
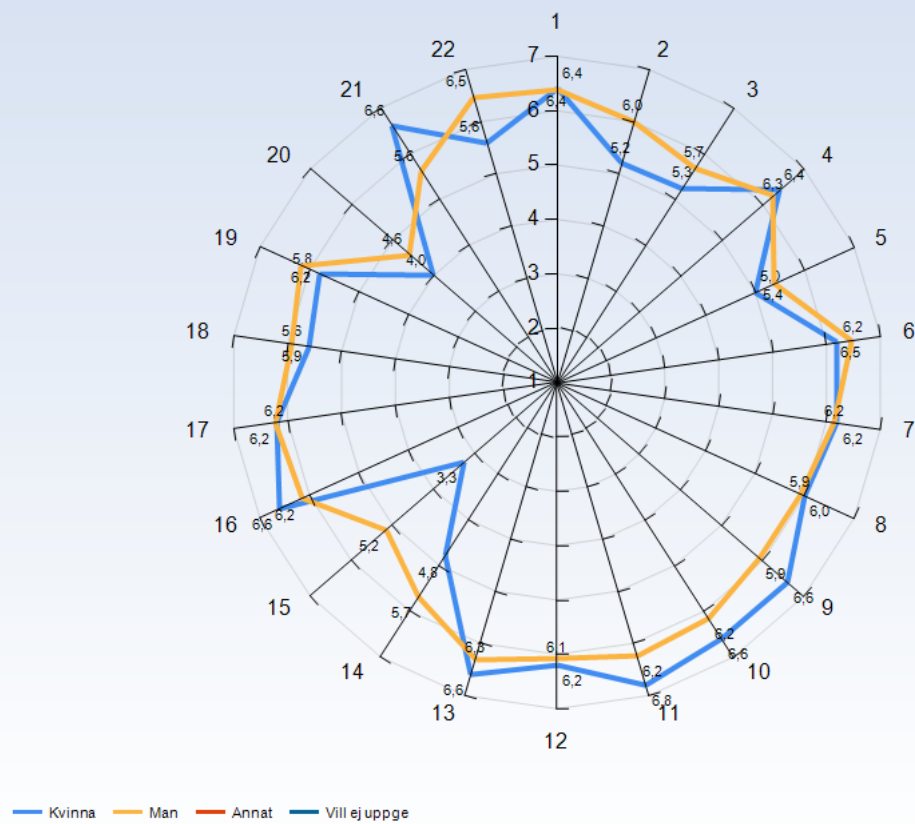
Comments

Average response to LEQ statements - all respondents per type of student
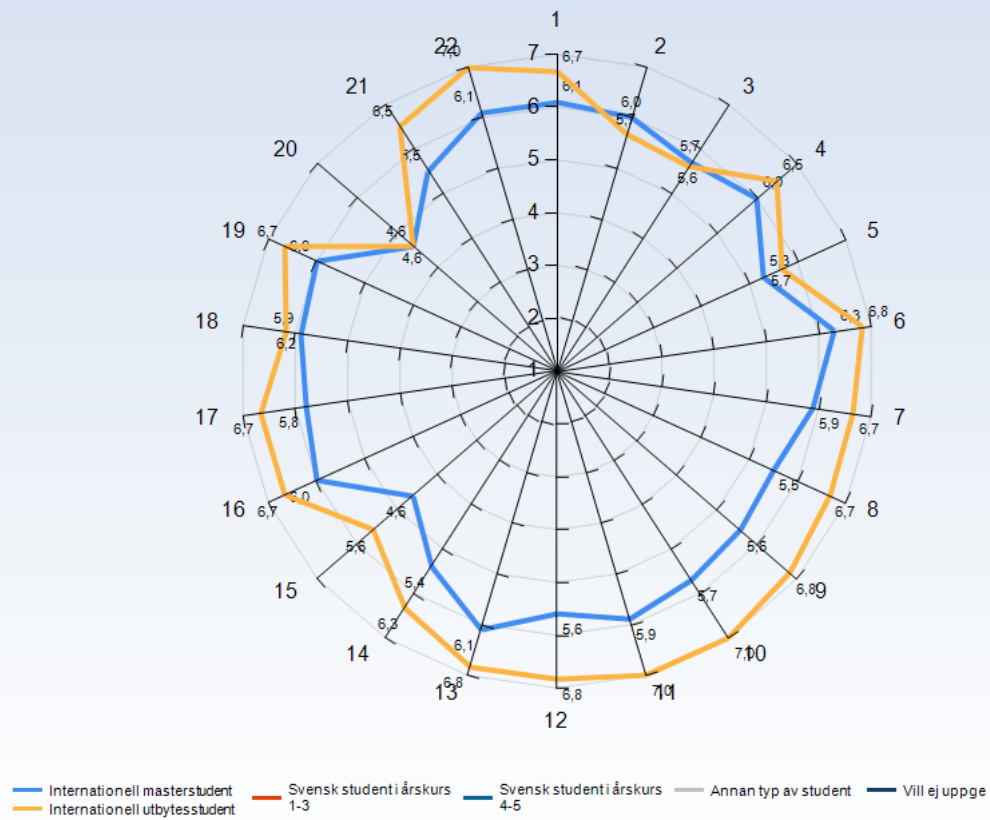
Comments

Average response to LEQ statements - all respondents per disability
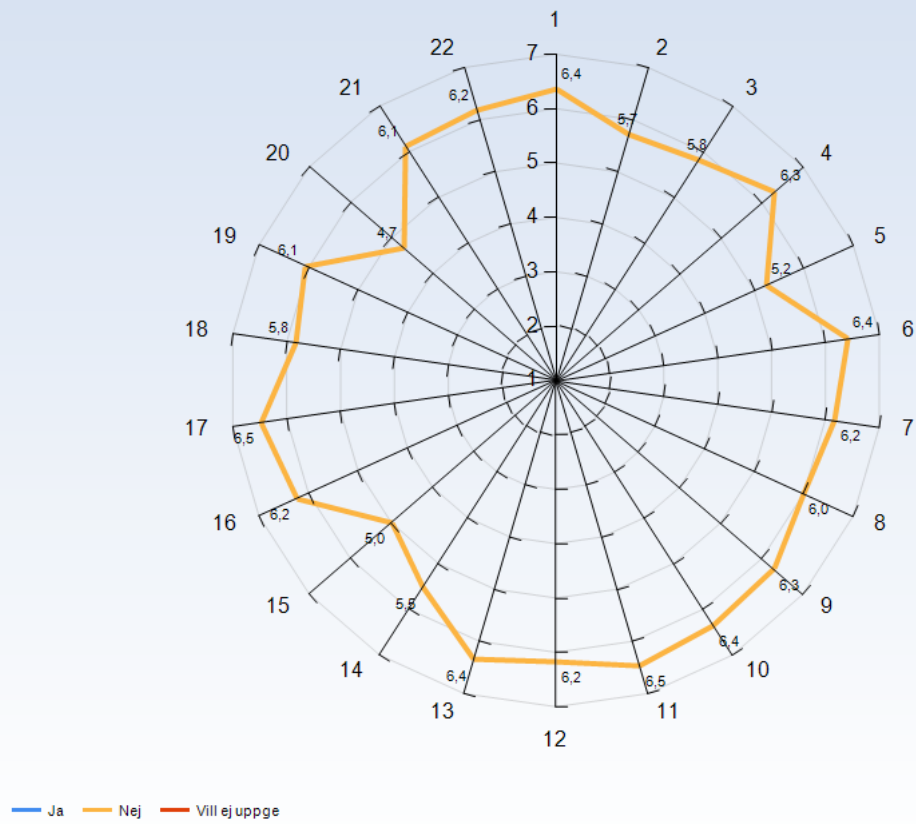
Comments

GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I belonged to: Grupp 1)

The best aspect of the course was its application, according to my research I saw that most of the concept studied are still applicable and needed in the professional orld

What was the best aspect of the course? (I belonged to: Grupp 4)

Programming exercises, which help us understand the material better

I really liked the assignments. Even though they most often come with a high workload, those are the main parts that I remembered best in the exam and will take out of the course. I liked that some assignments offered different options for implementations (e.g. various papers, programming language). I think that it would be benefitial for most students to have the presentation slots on lecture days since I often had to take the metro to Kista only for the assignment presentation which is time consuming. However, I can understand that the TAs are not always avaliable either.

I also really liked the small quizzes in class. It was a good way to test the knowledge of the students without grading them. Additionally it was fun to compete with your classmates in the ranking.

What was the best aspect of the course? (I belonged to: Grupp 8)

The real-world utility of the concepts explained in the course.

What would you suggest to improve?

What would you suggest to improve? (I belonged to: Grupp 1)

I would suggest giving a tutorial in the first labs just to get familiar in the way we should work and solve the problems given to us

What would you suggest to improve? (I belonged to: Grupp 4)

The deadline of the last programming exercise should be longer cause students tend to have more assignments towards the end of the semester. Further, the answers on Canvas should be more regular

While the course had some assignments on the first and the middle part, the last part of the course was not covered by any assignment. A small exercise would help to also understand this better.

What would you suggest to improve? (I belonged to: Grupp 8)

More cohesion between the professor's sections.

What advice would you like to give to future participants?

What advice would you like to give to future participants? (I belonged to: Grupp 1)

The advice is that they should have a good mathematical background and to remeber all the functions given in the course

What advice would you like to give to future participants? (I belonged to: Grupp 4)

Do the programming exercise, they are worth it. Scroll through the given readings if you don't understand a specific concept

Do the assignments and try to understand them. It helps a lot

What advice would you like to give to future participants? (I belonged to: Grupp 8)

Focus on internalizing the motivation and general logic of the concepts presented, not so much on the math. It's much easier to understand the math after understanding the logic.

Is there anything else you would like to add?

Is there anything else you would like to add? (I belonged to: Grupp 6)

I would suggest the organizers to require the development of the homeworks by the students on GitHub, asking them to be included as collaborators in their repository. In this way you could be able to see what is the effort put in the work by both the students (e.g. number of commits etc.) and in case of inequalities check the preparation of the student who apparently worked less during the presentation. This would motivate both the students to work equally, avoiding troubles in the group.

Is there anything else you would like to add? (I belonged to: Grupp 8)

The slides and presenter for the streaming processing lessons were not good, they can be much better and need to be prepared in a pedagogic way beforehand.

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

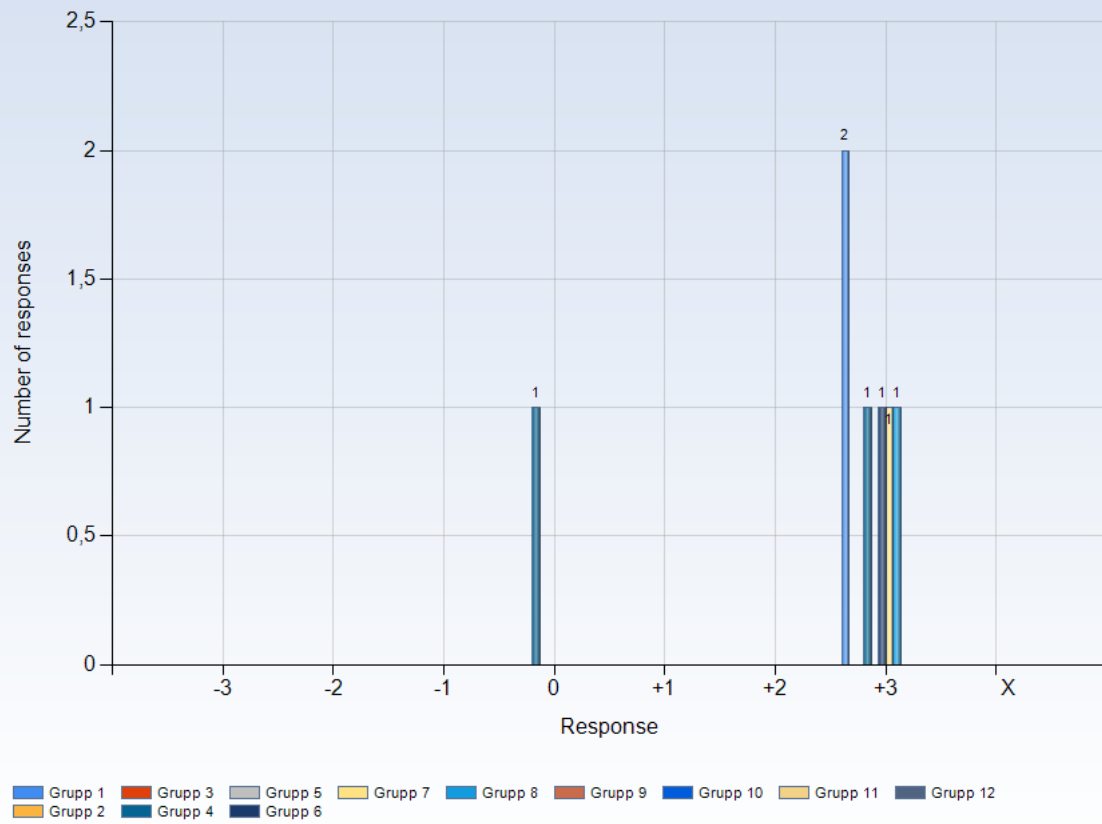X = I decline to take a position on the statement

Note! If you want to compare the results between different groups on equal terms, you must normalize the number of responses with the size of the corresponding group. The size of each group is found in the first diagram in this report.

1. I worked with interesting issues
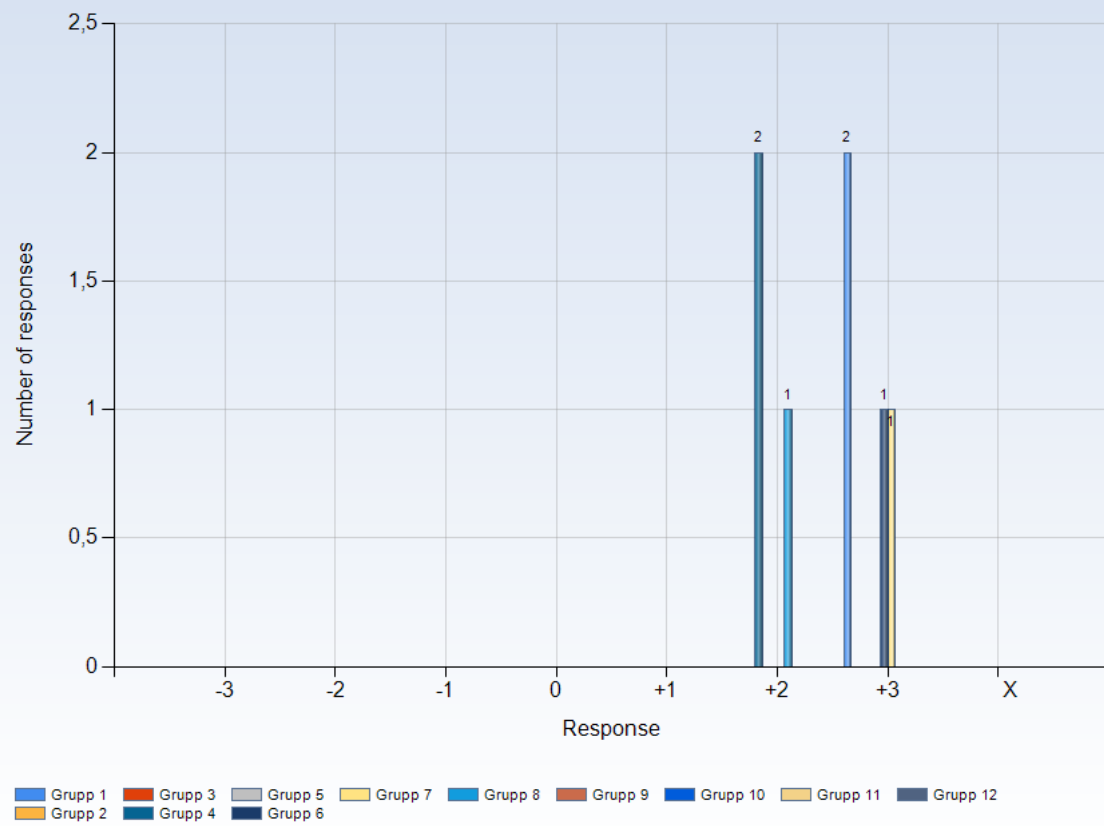
Comments

2. I explored parts of the subject on my own

Comments

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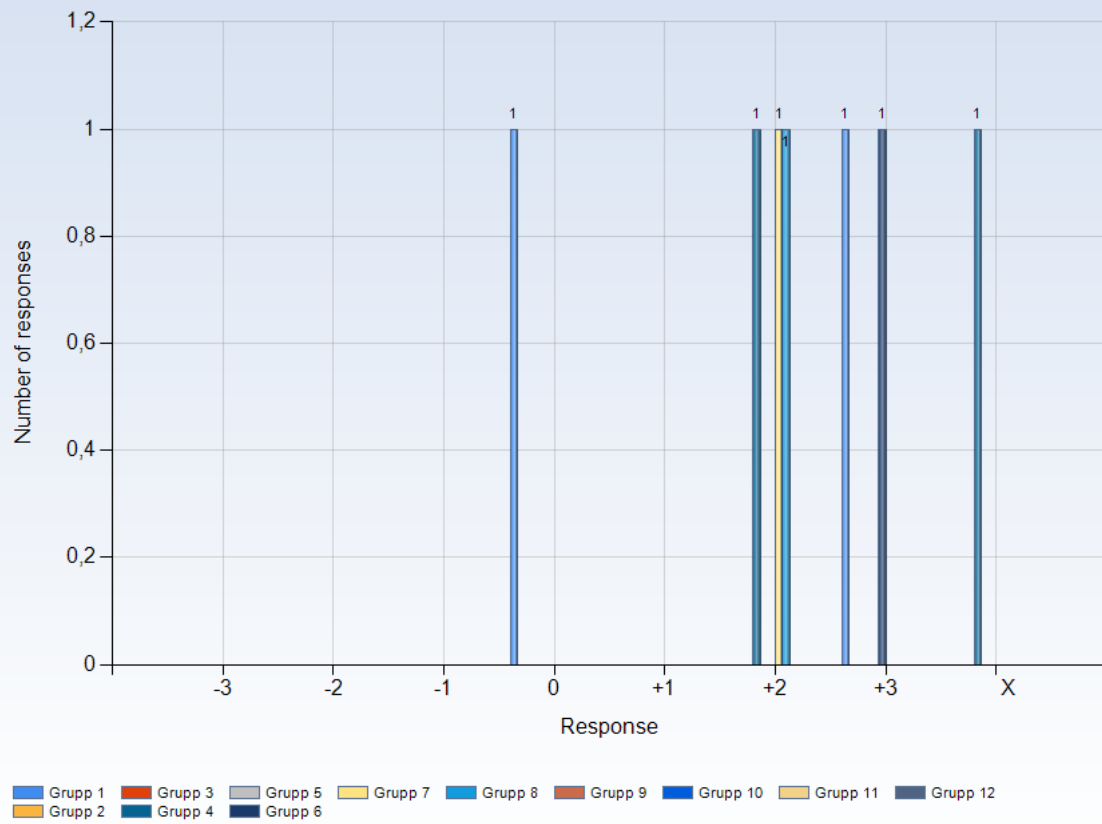
Comments

4. The course was challenging in a stimulating way
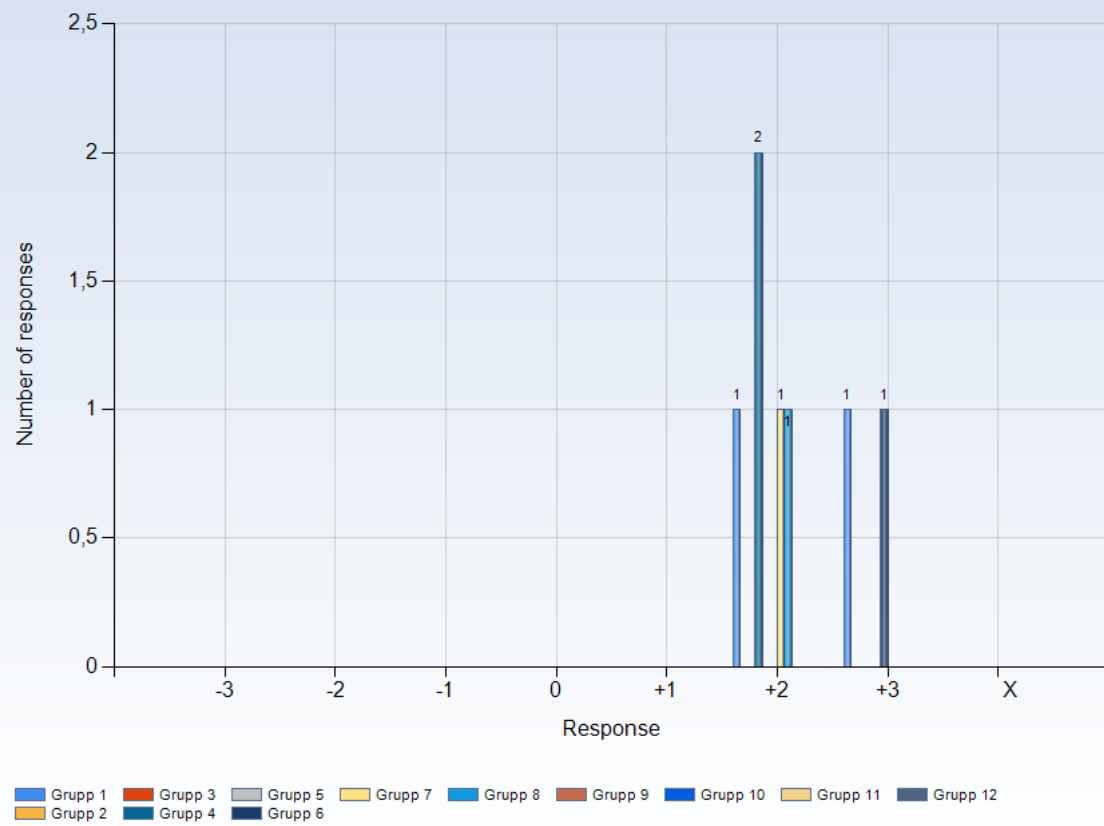
Comments

5. I felt togetherness with others on the course
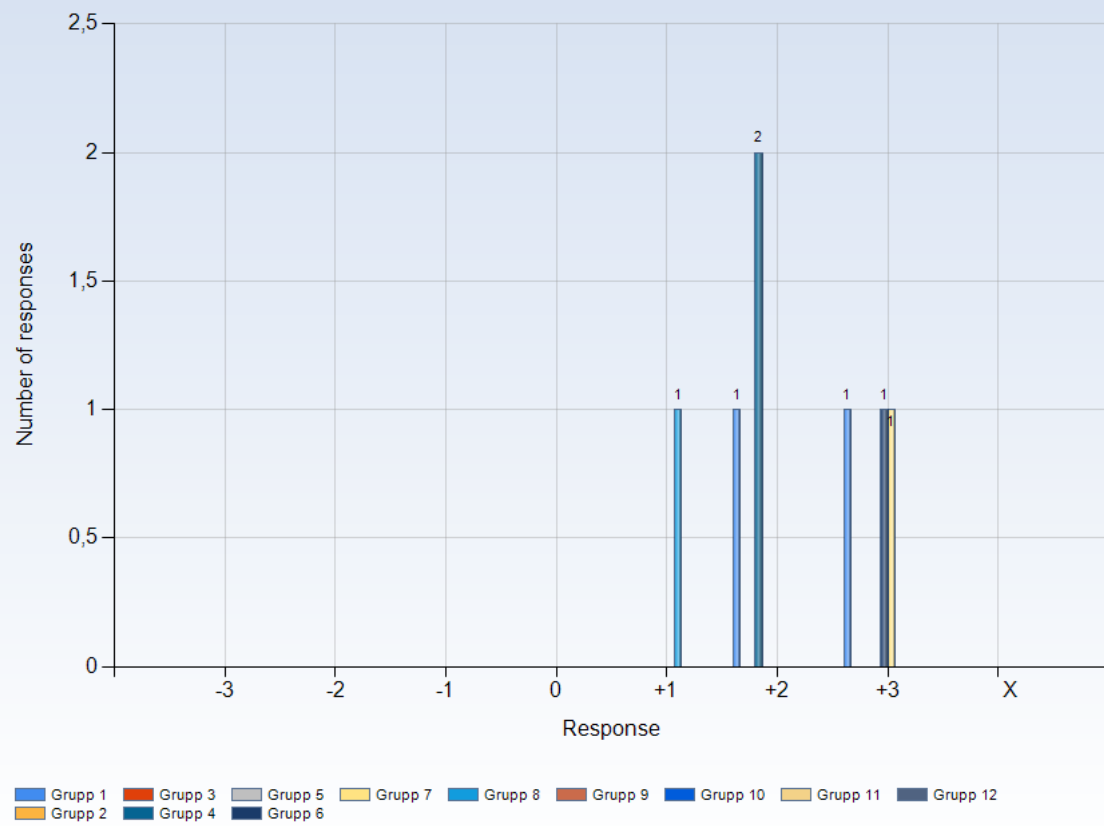
Comments

6. The atmosphere on the course was open and inclusive
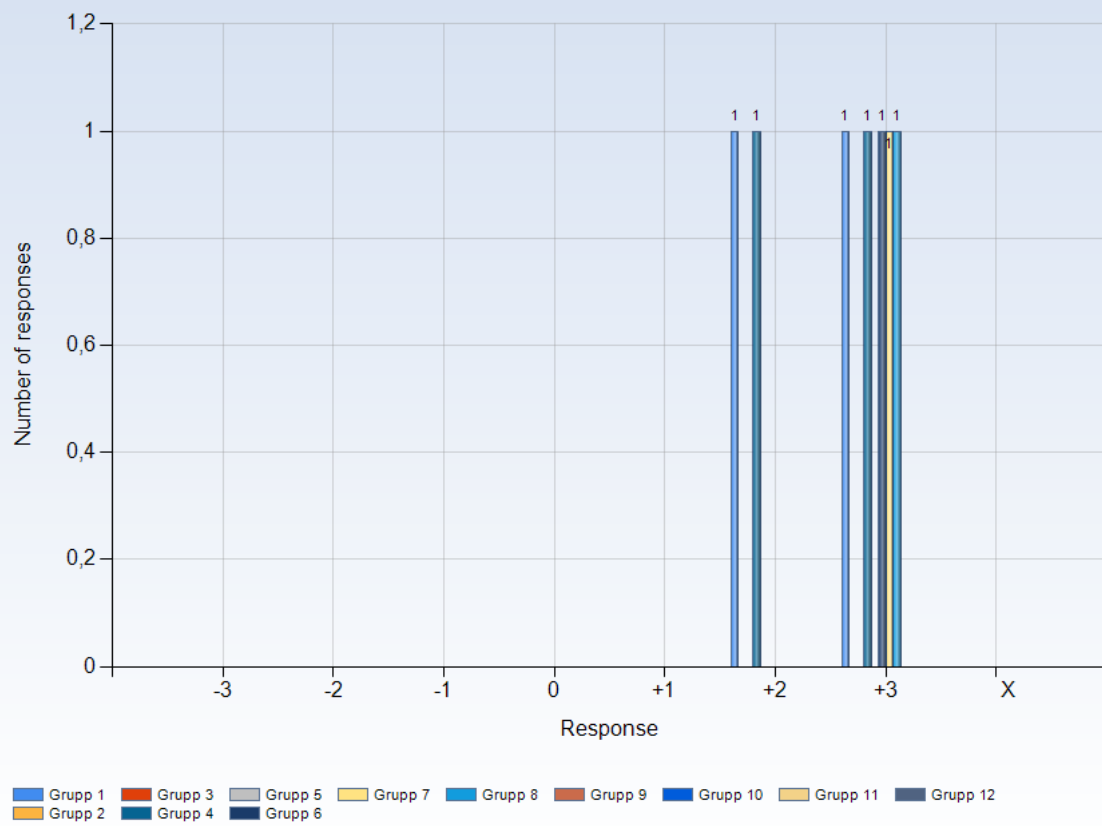
Comments

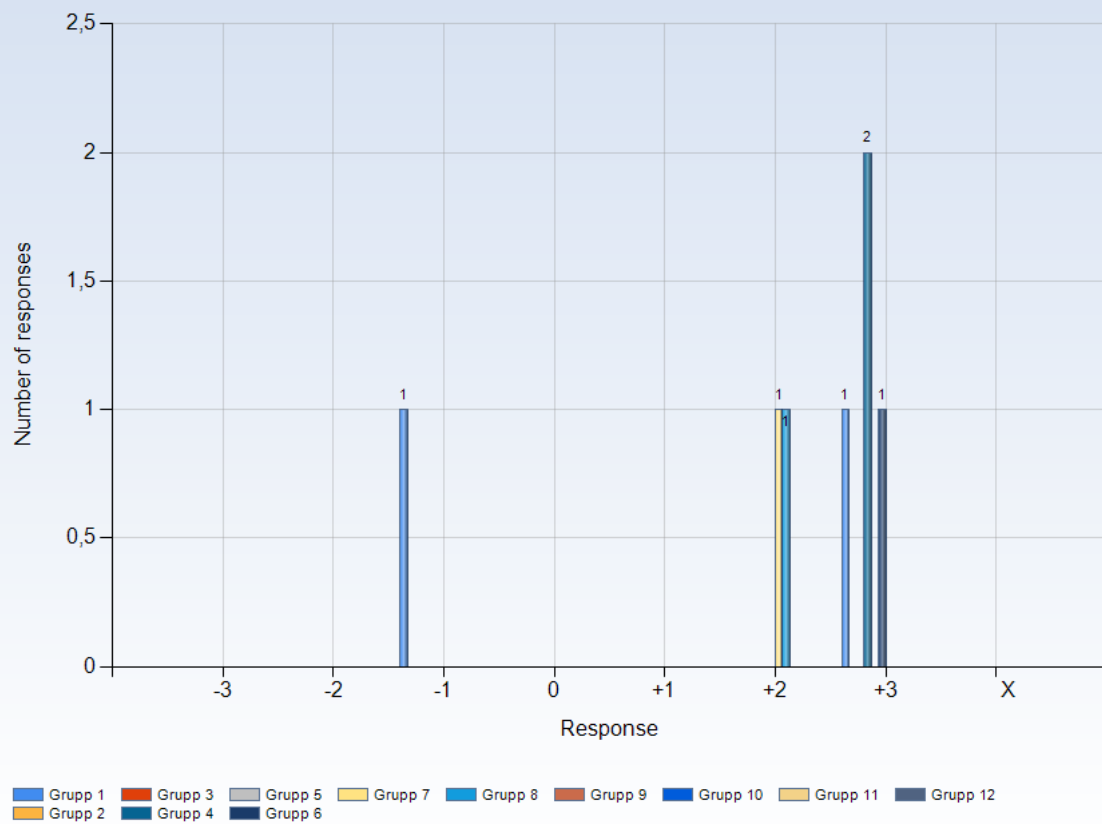## 7. The intended learning outcomes helped me to understand what I was expected to achieve
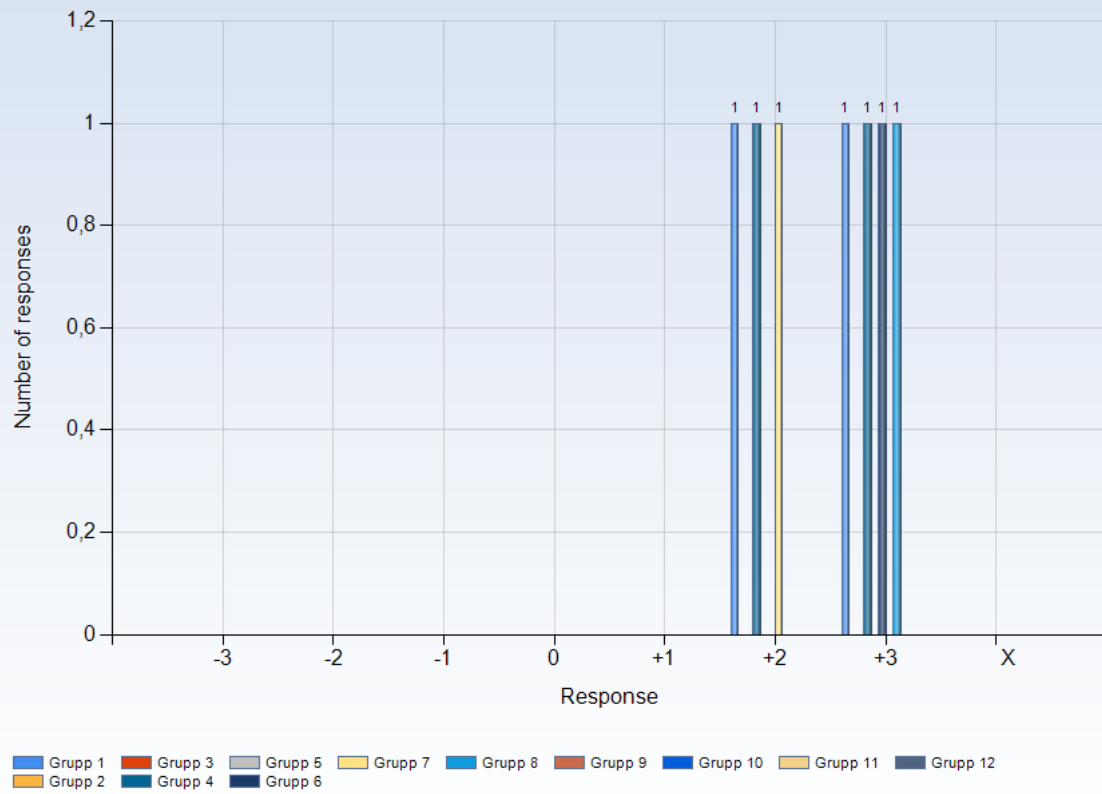
Comments

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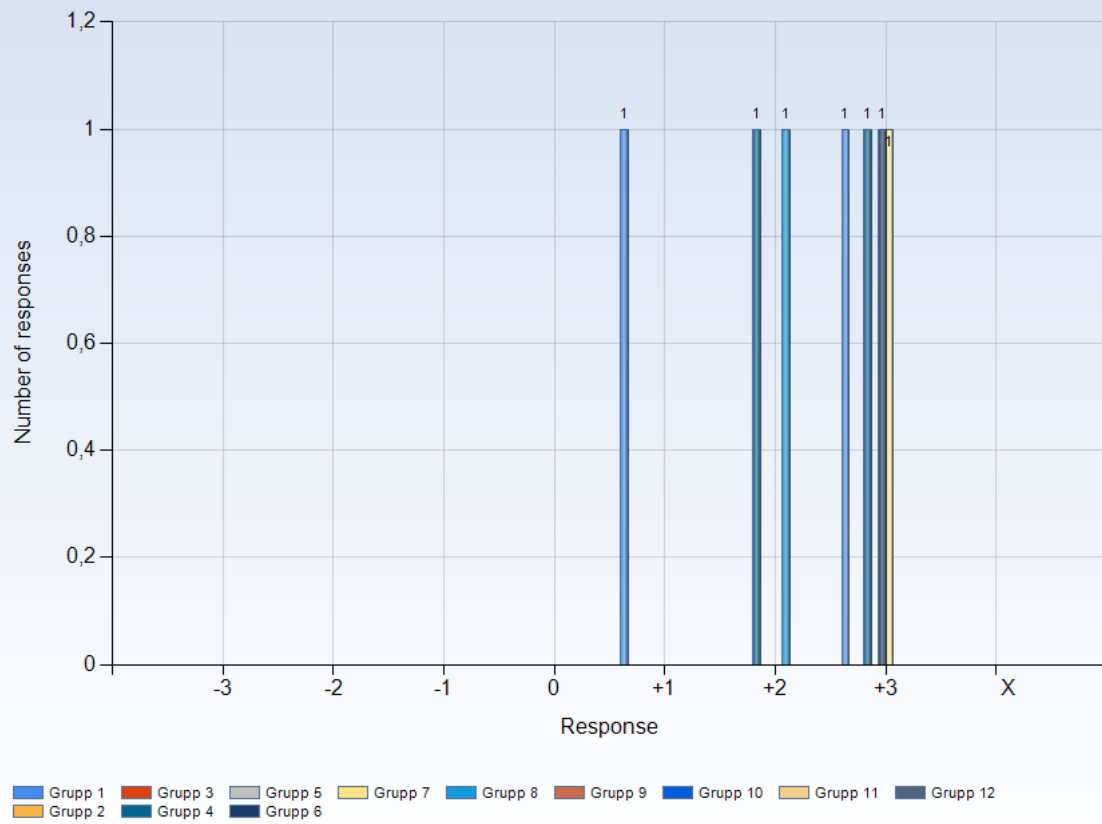
Comments

9. I understood what the teachers were talking about

Comments

Comments (I belonged to: Grupp 1)

Sometimes I was falling behind and couldn't follow the professor

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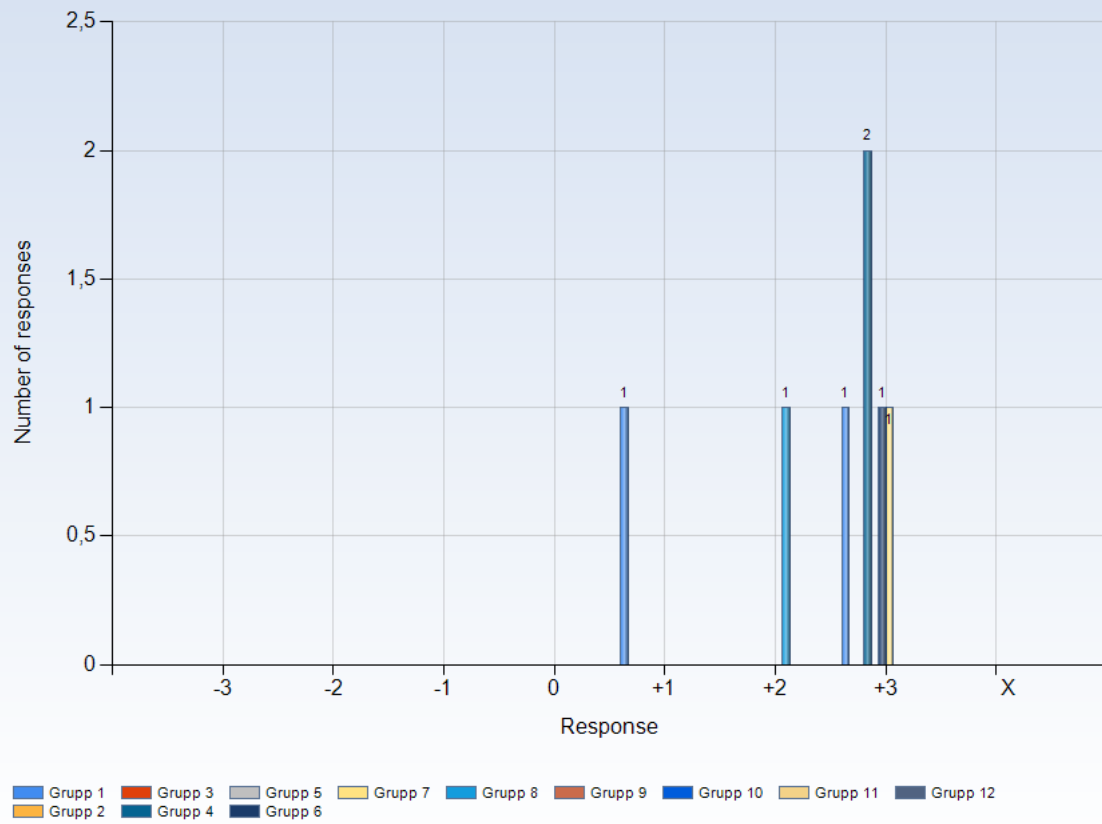
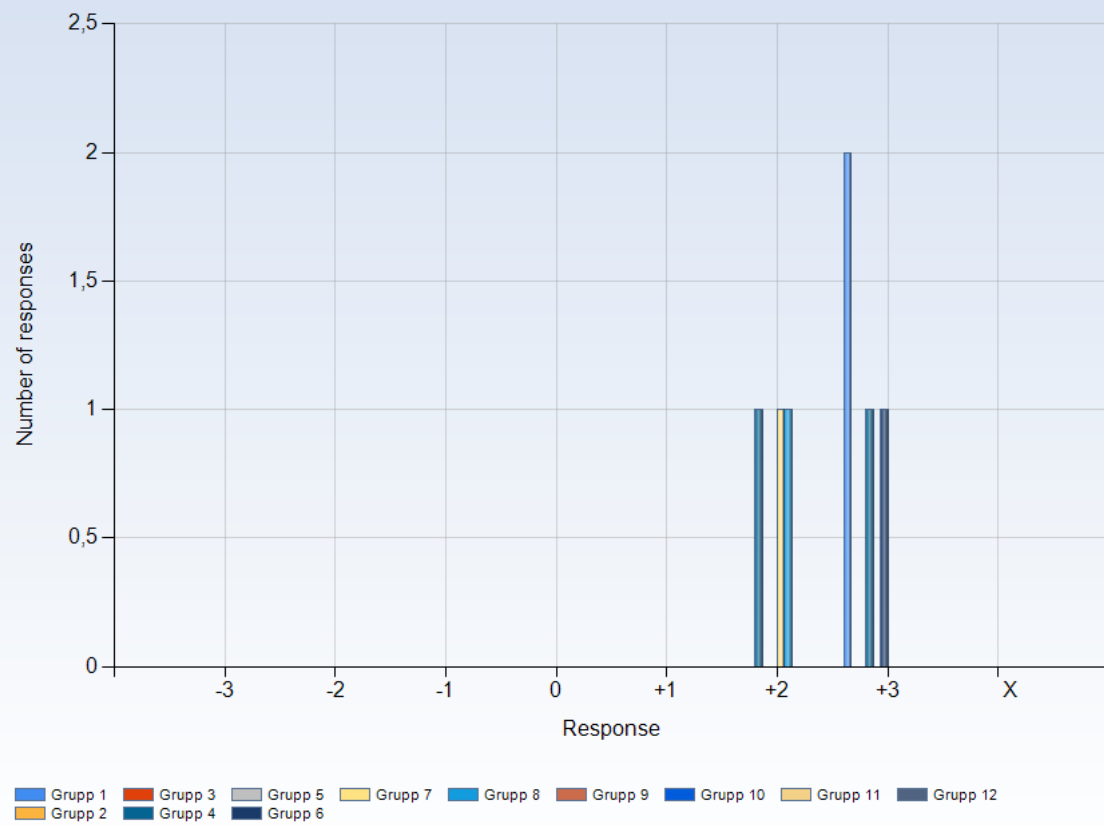Comments

11. Understanding of key concepts had high priority
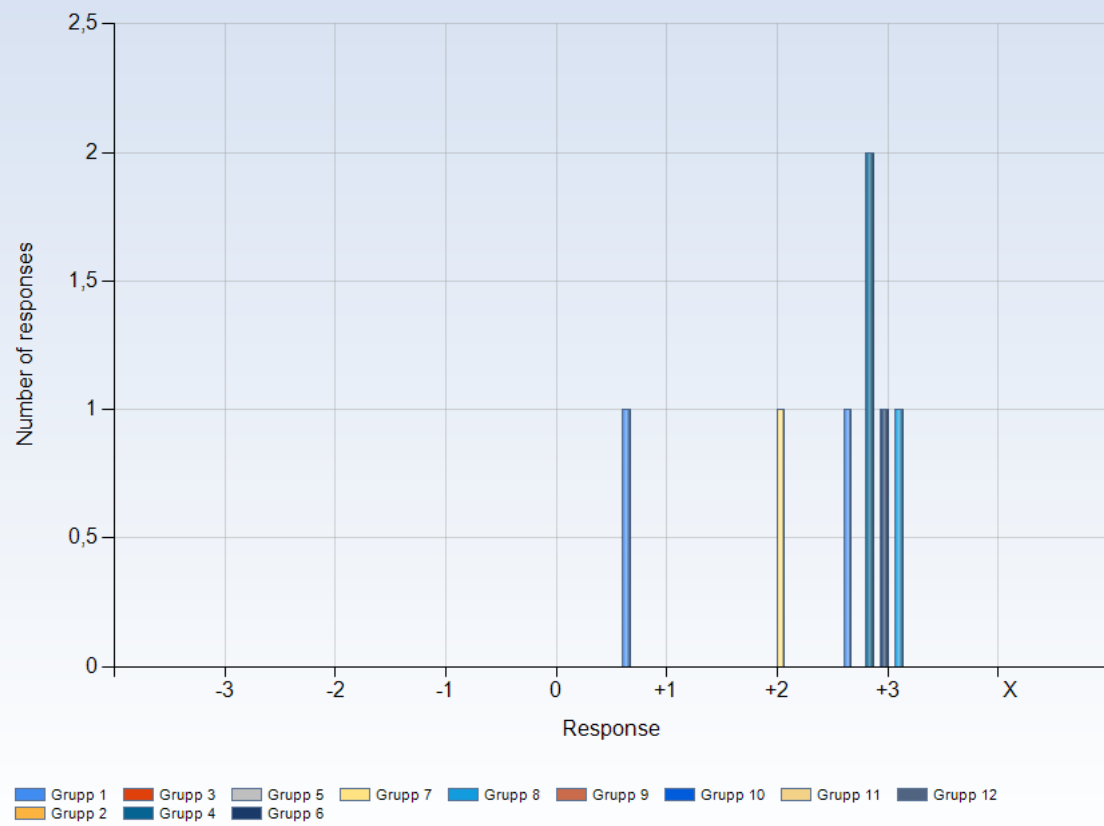
Comments

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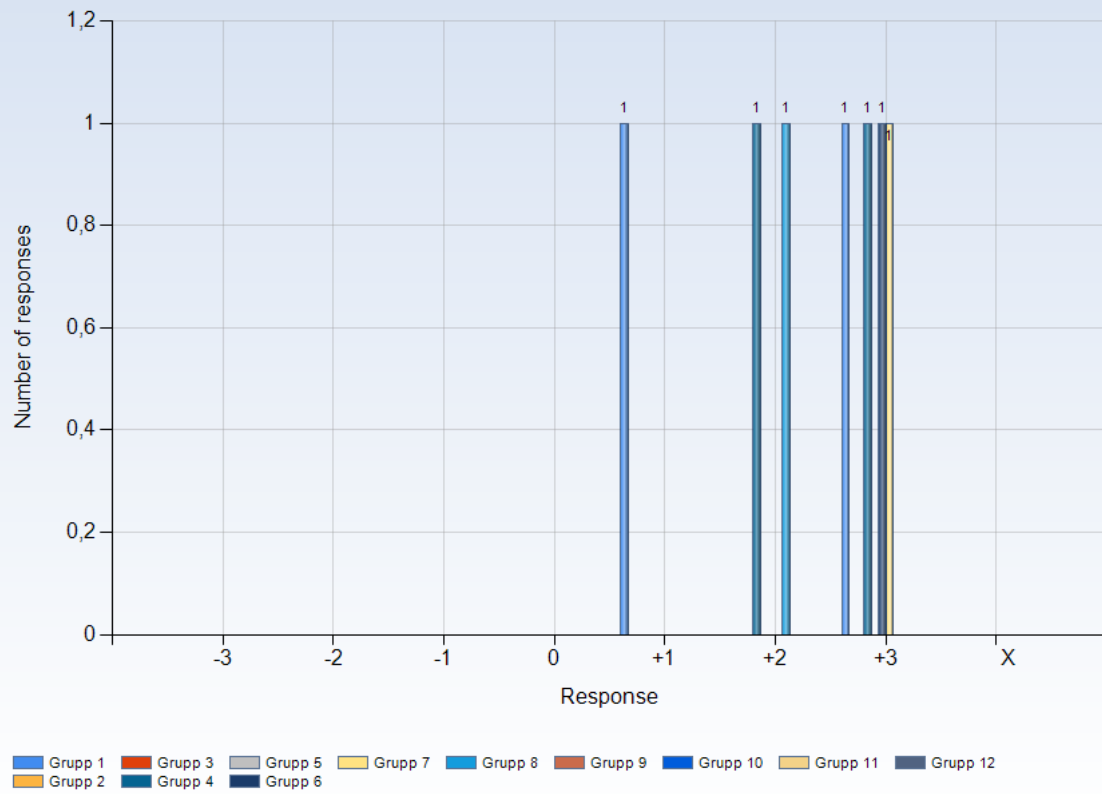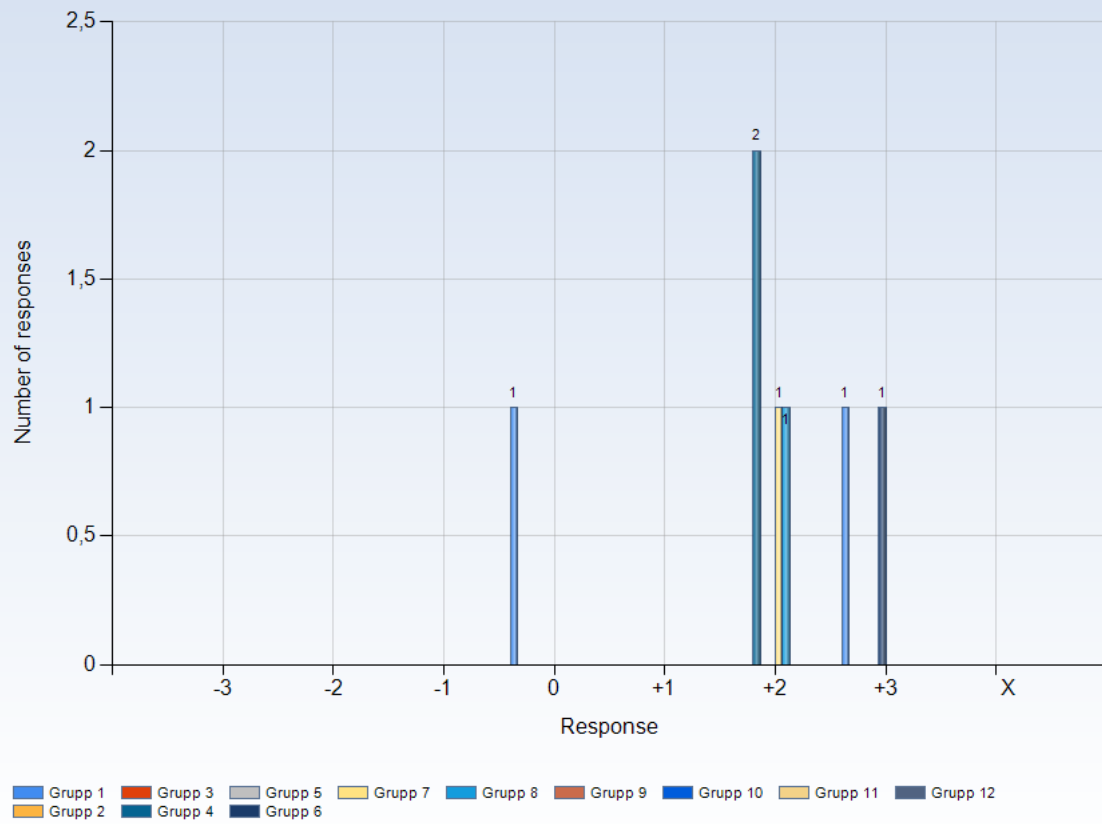

Comments

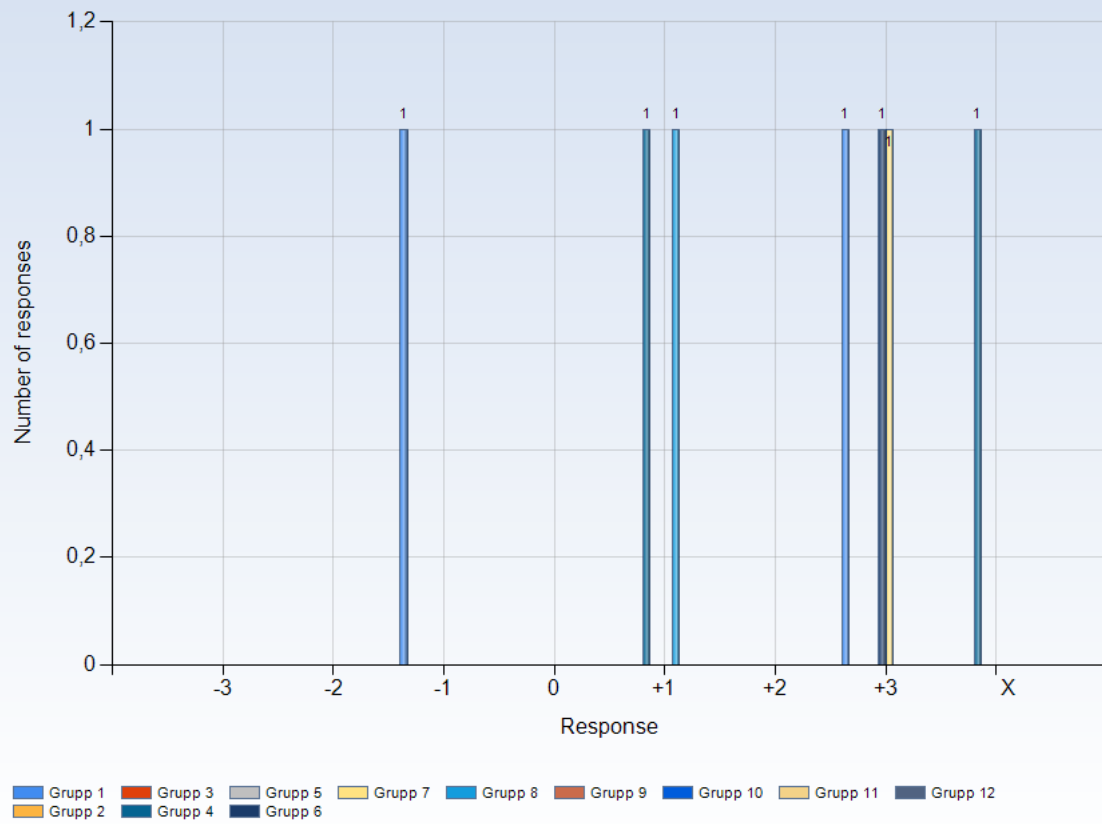## 13. I understood what I was expected to learn in order to obtain a certain grade

Comments

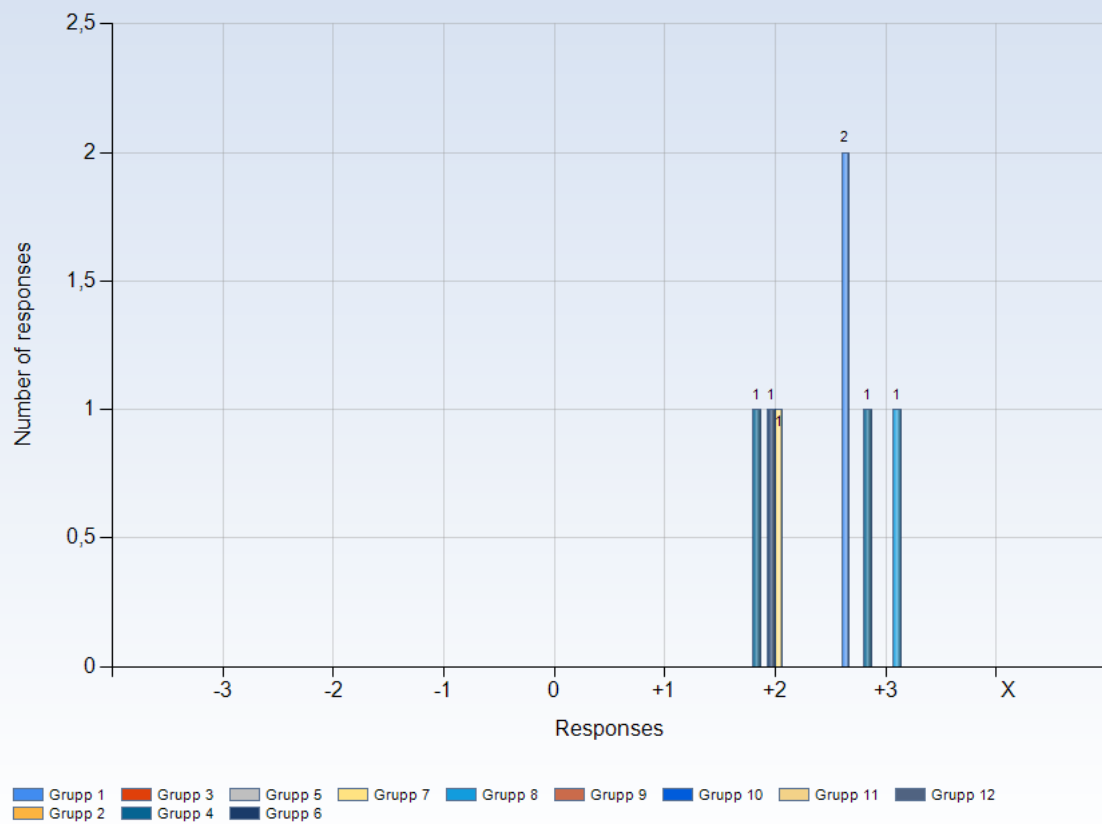## 14. I received regular feedback that helped me to see my progress

Comments

15. I could practice and receive feedback without being graded

Comments

16. The assessment on the course was fair and honest

Number of responses / Responses

Grupp 1, Grupp 2, Grupp 3, Grupp 4, Grupp 5, Grupp 6, Grupp 7, Grupp 8, Grupp 9, Grupp 10, Grupp 11, Grupp 12
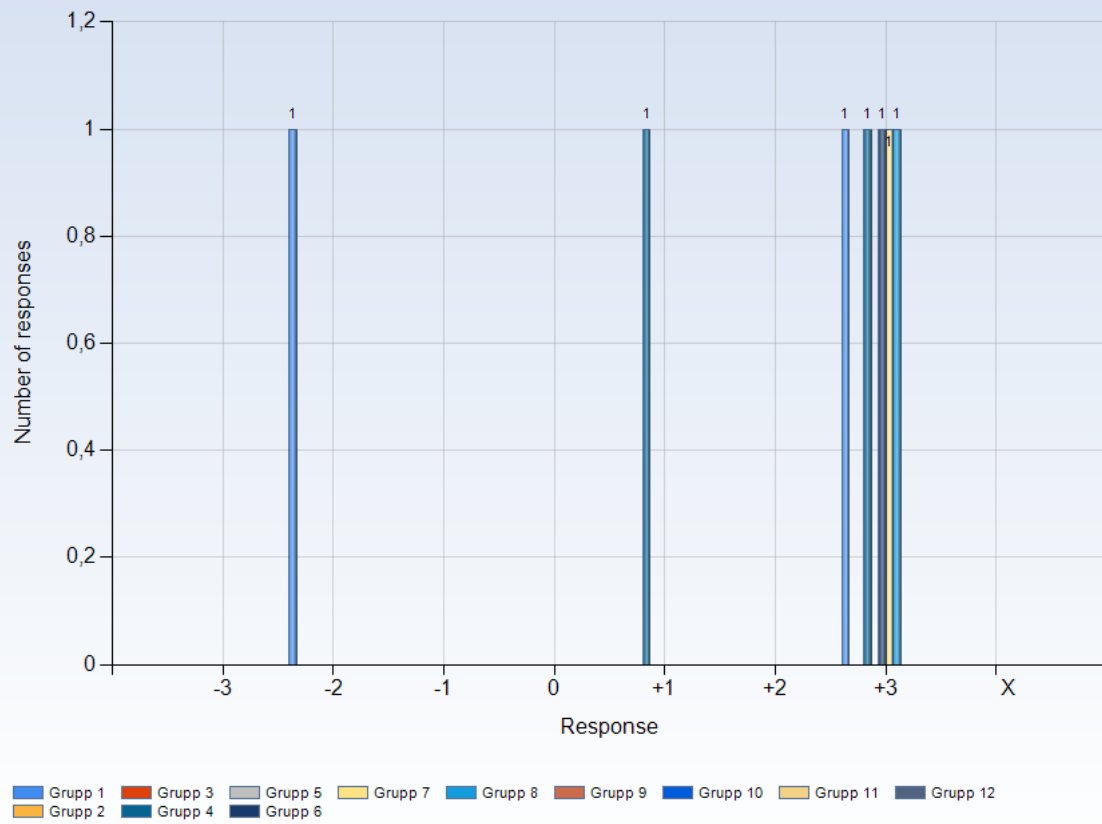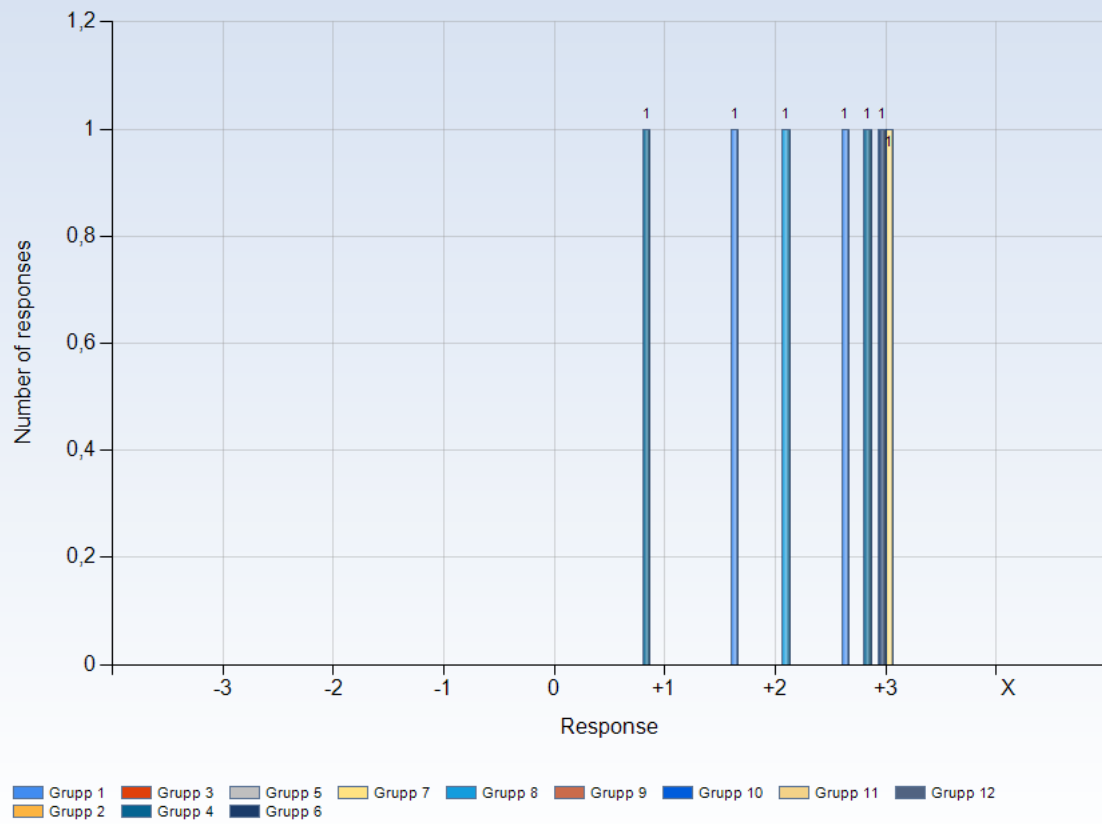
Comments

Comments (I belonged to: Grupp 6)

In evaluating the homeworks I would have made distinction between one team component evaluation and the other one more often. This happened just once, for the second homework. In this way who has worked less has negatively impacted whom instead has worked more in some other homework evaluations.

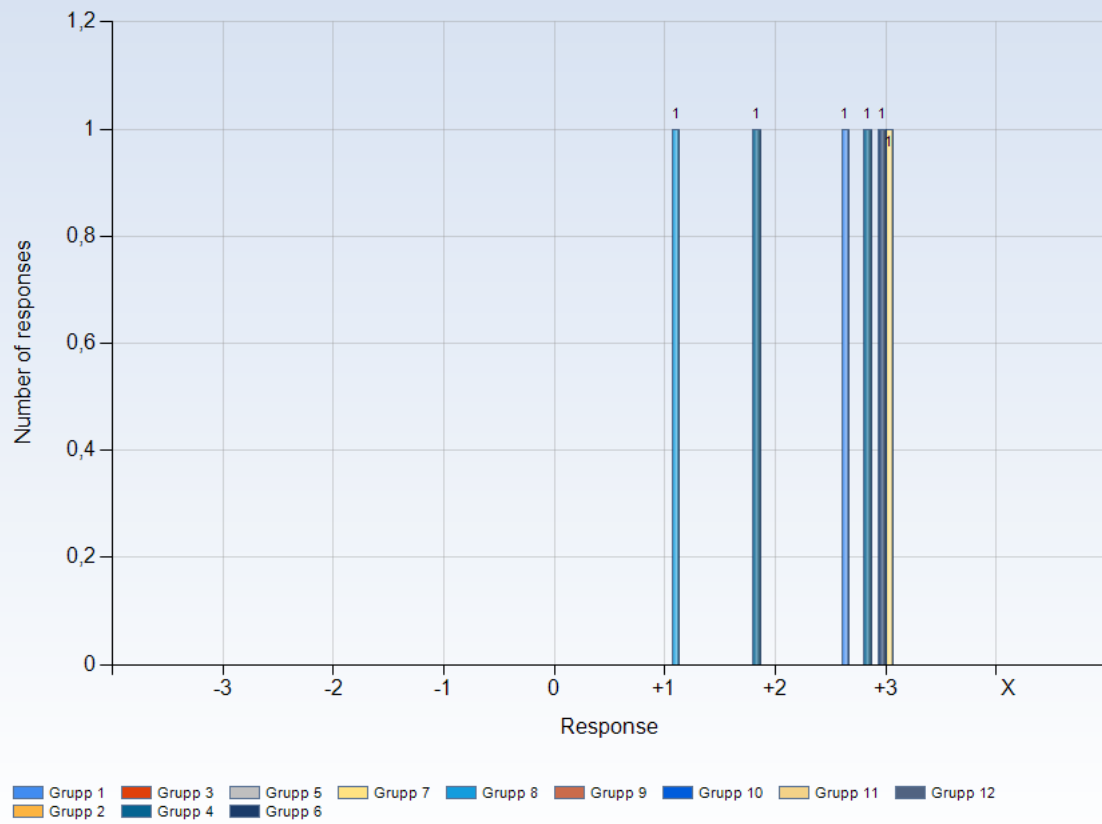## 17. My background knowledge was sufficient to follow the course

Number of responses (y-axis): 0, 0,2, 0,4, 0,6, 0,8, 1, 1,2

Response (x-axis): -3, -2, -1, 0, +1, +2, +3, X

Grupp 1   Grupp 3   Grupp 5   Grupp 7   Grupp 8   Grupp 9   Grupp 10   Grupp 11   Grupp 12
Grupp 2   Grupp 4   Grupp 6

Comments

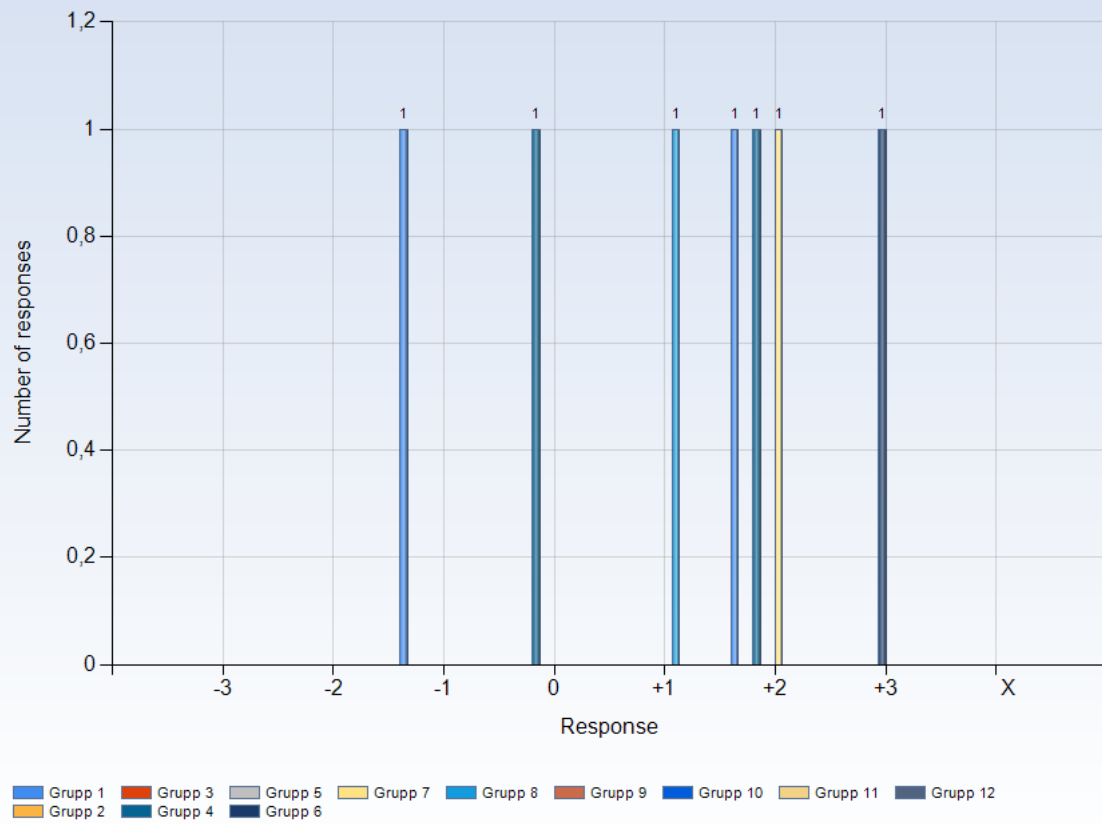**18. I regularly spent time to reflect on what I learned**

Comments

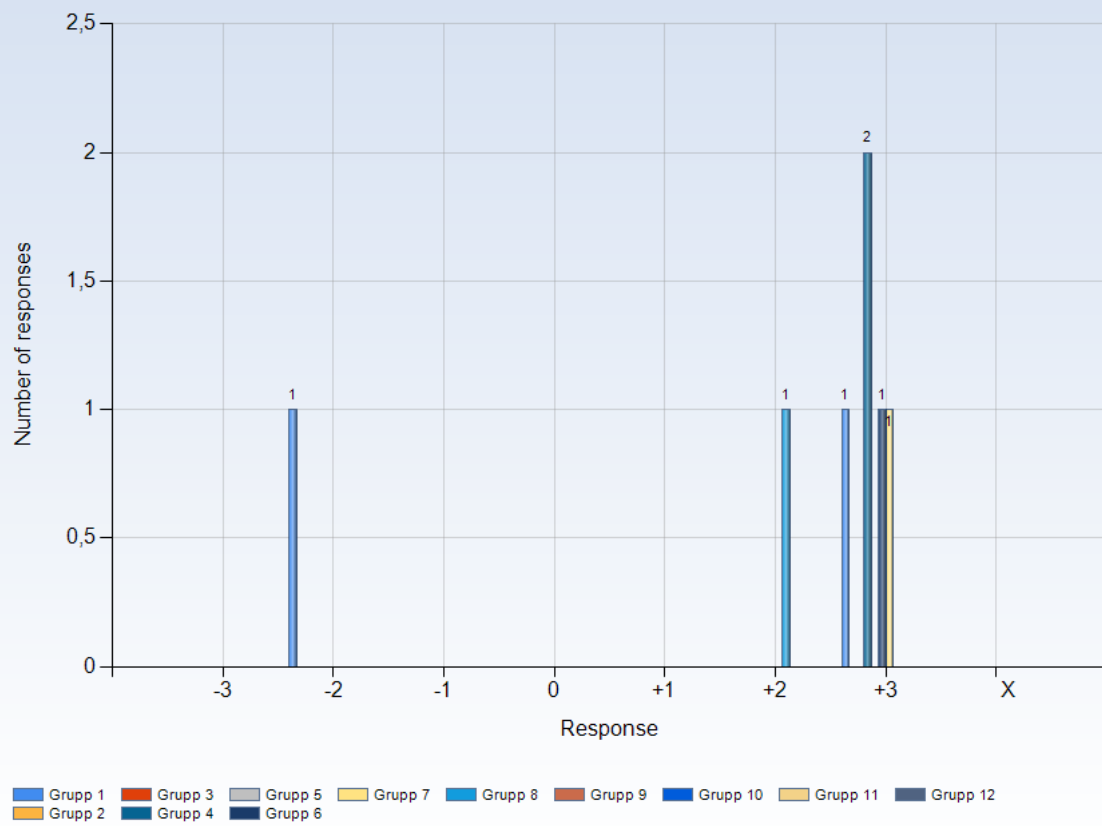# 19. The course activities enabled me to learn in different ways

Comments

20. I had opportunities to influence the course activities

Number of responses vs Response

Legend: Grupp 1, Grupp 2, Grupp 3, Grupp 4, Grupp 5, Grupp 6, Grupp 7, Grupp 8, Grupp 9, Grupp 10, Grupp 11, Grupp 12
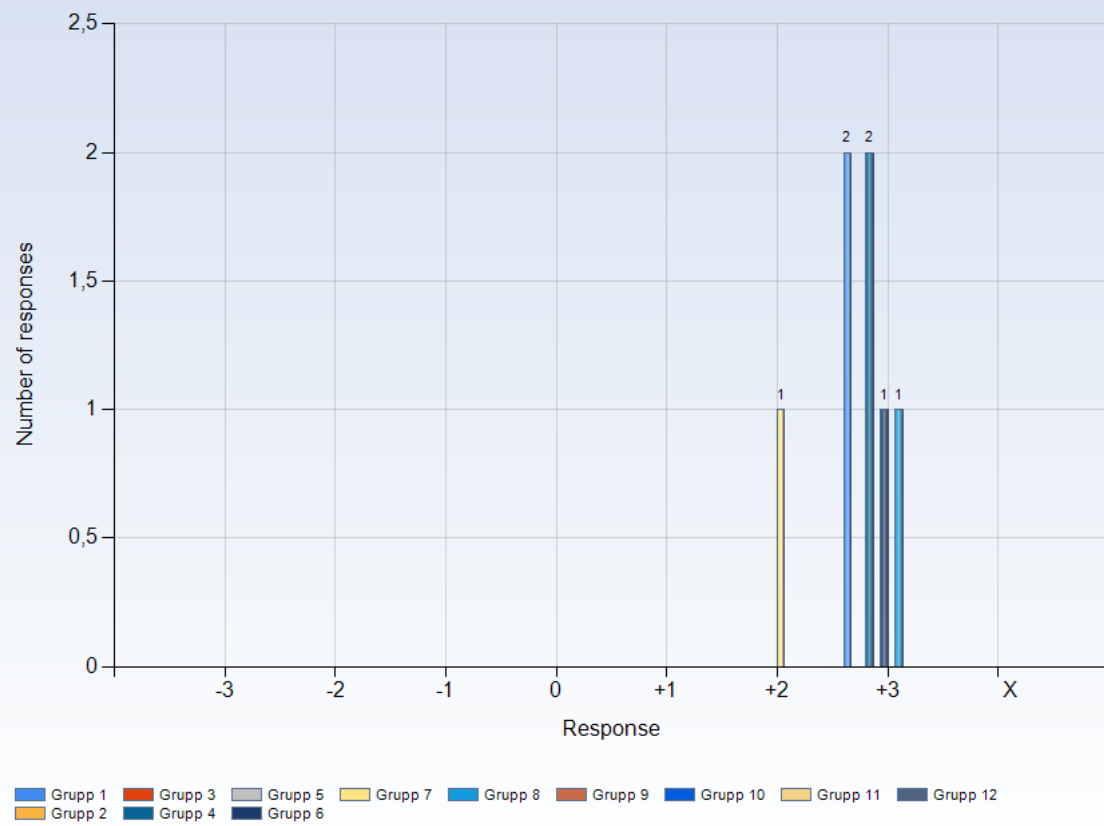
Comments

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

Comments

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

Comments