



## Report - SK2772 (HT19) – 2020-01-18

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Respondents: 1

Answer Count: 1

Answer Frequency: 100.00 %

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Please note that there is only one respondent to this form: the person that performs the course analysis.

Course analysis carried out by (name, e-mail):

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Muhammet Toprak ([toprak@kth.se](mailto:toprak@kth.se))

### COURSE DESIGN

Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

The course is offered for the second time. A project presentation was introduced to engage students more actively in the course.

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### THE STUDENT'S WORKLOAD

Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If there is a significant deviation from the expected, what can be the reason?

Not too heavy, not too light. Depending on their background students have felt different workload in the course.

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### THE STUDENTS' RESULTS

How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?

Out of 28 students 4 students failed the course at the first attempt. The percentage of succeeding students are higher than last year.

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### OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT

What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?

Students' response are very positive in the polar diagram. There is no significant difference between the responses of male and female students, or Swedish vs. international students. They find the course and the info given in the classroom meaningful and comprehensible.

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(6 out of 28 students responded the questionnaire and their response are used to answer the following part in details)



#### **ANALYSIS OF THE LEARNING ENVIRONMENT**

**Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?**

The time students have spent on the course should be increased. Students are content about the teaching environment based on their responses given to specific questions. (6 out of 28 have answered the questionnaire, which is less than 50%. Statistics below is based on this population and the outcome may not reflect the whole)

All of the respondents feel that they worked with interesting issues and that the course was challenging in a stimulating way (Q1, Q4); All respondents feel the ILOs helped them to improve their learning (Q7); All respondents think that the course was designed to support their learning (Q8); All respondents understood the course content (Q9) and they were able to learn from concrete examples (Q10); All respondents feel that understanding the key concepts had higher priority (Q11); All respondents think that the course activities helped them to achieve ILOs effectively (Q12); Majority of the respondents feel that their background was sufficient to follow the course (Q17); they were able to learn in a way that suited them (Q19). Besides all identify that the support was available whenever they needed (Q22).

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#### **ANSWERS TO OPEN QUESTIONS**

**What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?**

The open questions and some of the answers are given below:

- Do your work everyday, Just go through lectures before going to class once you'll understand better and have a look on the things once after your class.
  - To manage their time to dedicate a little bit of time to reflect on every lecture and how the contents can be used for their purposes
  - Work consistently.
- 

#### **PRIORITY COURSE DEVELOPMENT**

**What aspects of the course should primarily be developed? How could these aspects be developed in the short or long term?**

Lab demos or further worksheets with more stimulating questions can be included as students seem to ask more those kinds of activities to engage more.

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#### **OTHER INFORMATION**

**Is there anything else you would like to add?**

No.

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## SK2772 - 2019-10-18

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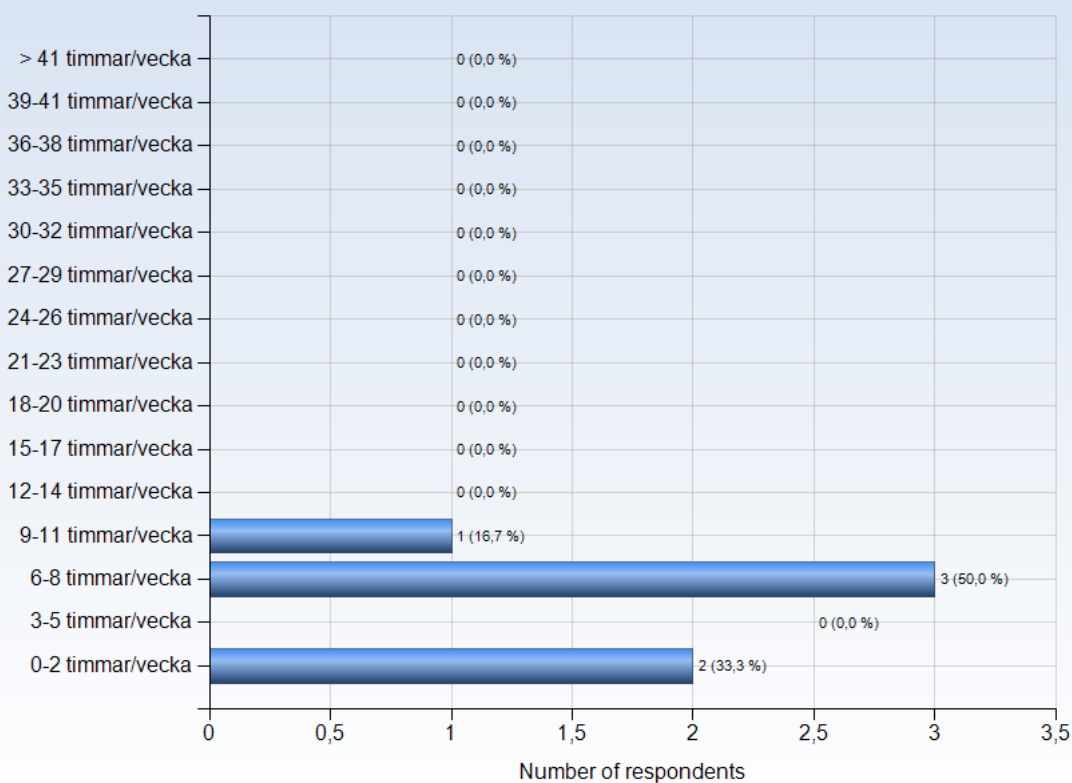
Antal respondenter: 28  
Antal svar: 6  
Svarsfrekvens: 21,43 %

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## ESTIMATED WORKLOAD

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



### Comments

Comments (I worked: 0-2 timmar/vecka)

As an Introductory course the quantity of the course was appropriate.

Comments (I worked: 6-8 timmar/vecka)

In terms of workload the course could be easily followed by reflecting on the material for 1 hour after every lecture.

Even when this is done in later courses, basic chemistry experiments could be performed (via student lab where the students perform the experiments or via the teacher showing the experiment to the whole class).

Comments (I worked: 9-11 timmar/vecka)

The work load was decent, but I probably had to put in an hour or two more than most students because my chemistry was weak.



## LEARNING EXPERIENCE

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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:

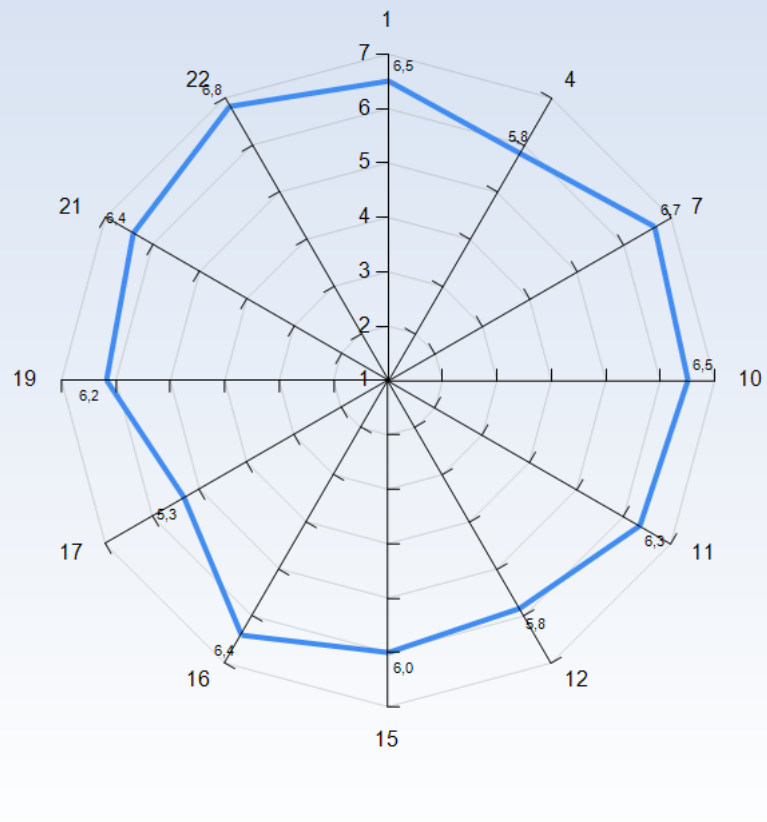
1 = No, I strongly disagree with the statement

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.

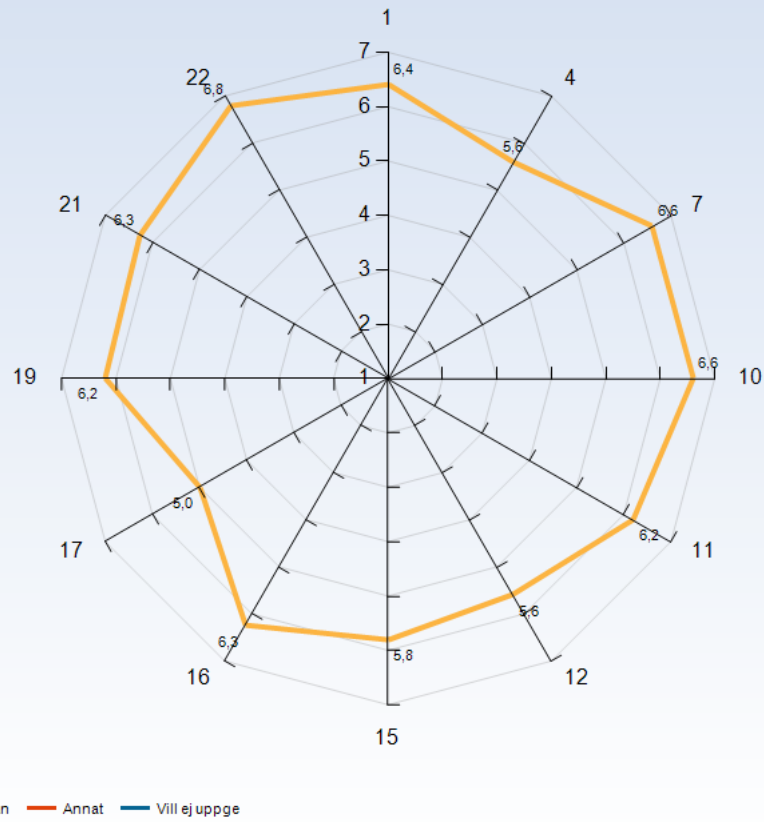
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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

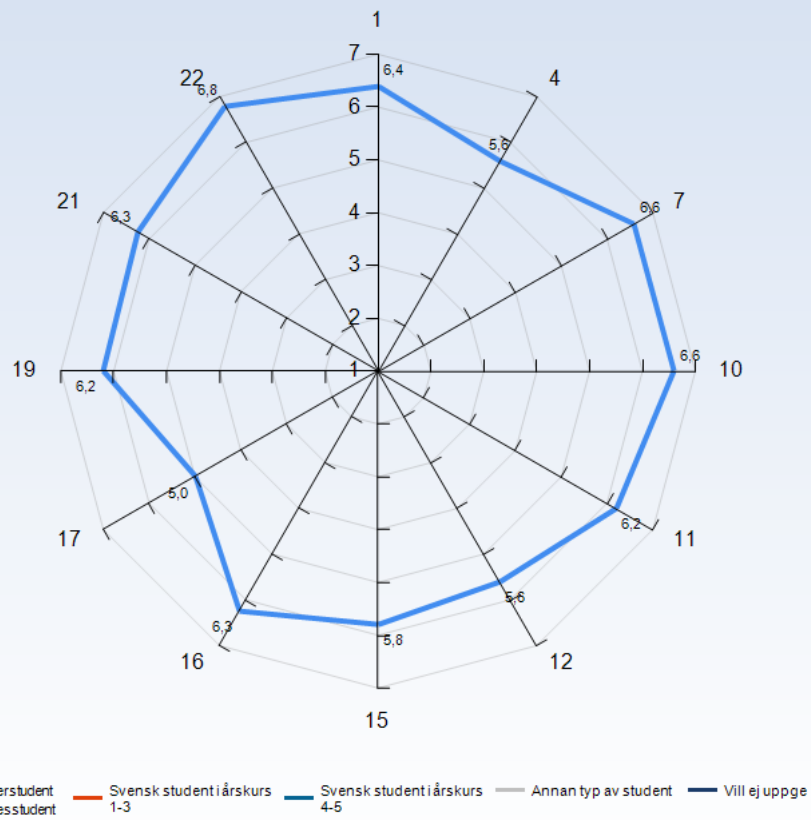


#### Comments

Comments (I am: Man)

No comments

### Average response to LEQ statements - per type of student



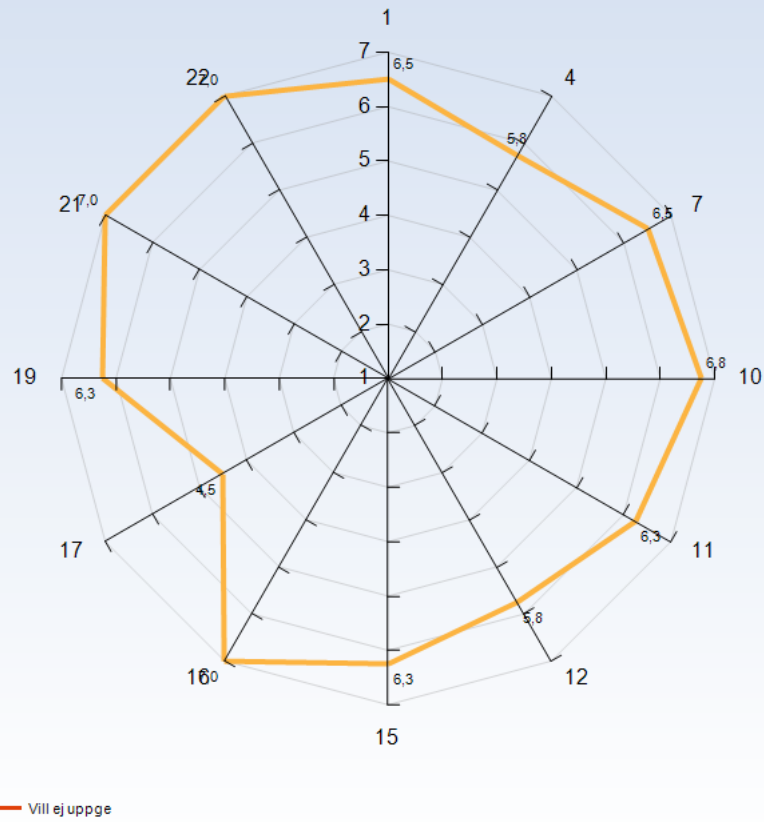
### Comments

Comments (I am: Internationell masterstudent)

My background is Metallurgy and Materials Processing, i had studied Chemistry in my high school and after that i didn't study chemistry at all. It a bit difficult to get familiar with things especially when you are back to academics after 5 years of your bachelors

No comments

### Average response to LEQ statements - per disability



Comments



## GENERAL QUESTIONS

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### What was the best aspect of the course?

What was the best aspect of the course? (I worked: 0-2 timmar/vecka)

It was a chance to sharpen my rusty knowledge on chemistry. I like the fact that the professor always refers to some real life examples/cases when he tries to explain various concepts/principles.

What was the best aspect of the course? (I worked: 6-8 timmar/vecka)

Progresses with the learning outcomes in mind.

We had a presentation to do in this course which is a good thing for learning and presenting your work. This make you able to do work on your own and help you to face the pressure when you have to meet the deadline. Also helps to improve your communication.

Learning the course topics by given examples and applying them to a Research level presentation.

What was the best aspect of the course? (I worked: 9-11 timmar/vecka)

The lecturer genuinely tried to convey his knowledge. The course was given in a clear and concise manner with a clear outline put forth. Relevant applications and examples were given in class.

### What would you suggest to improve?

What would you suggest to improve? (I worked: 0-2 timmar/vecka)

I would suggest that one or two exercise/tutorial lessons can be added where the theoretical part will meet some practical problems.

What would you suggest to improve? (I worked: 6-8 timmar/vecka)

Some of the course files uploaded in the canvas could't be downloaded and there is a case where the file got trimmed from 50 pages to 29. Even though the Professor uploaded a counter file, it only contained a single page. So, it would be good to if the files could be downloaded and read offline as it takes a lot of time to open the files by logging into canvas. The other course files were up to mark and are perfect to download.

I am not sure about this but because i was having different background i have been through difficulties to follow the course. For me course outline was i it lengthy i wish i could had more time to learn thing in more better way.

What would you suggest to improve? (I worked: 9-11 timmar/vecka)

Add more worksheets/ questions. Make sure people stick to their time in the presentations.

### What advice would you like to give to future participants?

What advice would you like to give to future participants? (I worked: 0-2 timmar/vecka)

Enjoy chemistry! The course can be attended easily by people who don't have a solid background on chemistry.

What advice would you like to give to future participants? (I worked: 6-8 timmar/vecka)

I come from a Mechanical background and before the start date of the year, I was very troubled about this course and its contents and how do I get along with it. But, the course mostly contains general chemistry at university level. This a basic course which can be considered as a foundation course for the upcoming courses in the Nanotechnology program. So no need to worried about the course even if you don't have a chemistry background.

Do your work everyday, Just go through lectures before going to class once you'll understand better and have a look on the things once after your class.

To manage their time to dedicate a little bit of time to reflect on every lecture and how the contents can be used for their purposes

What advice would you like to give to future participants? (I worked: 9-11 timmar/vecka)

Work consistently.

### Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 6-8 timmar/vecka)

This year students had to do a presentation on a selected topic. Literature review pretty much is what was needed for the presentation. But, I would like to suggest a method. Having the students attend a lab session where they can have a visual experience of chemistry experiments done by the professor/Ph.D or higher Master students. Provide a grade by asking to do a presentation on one of the experiments or write a report on an experiment. Experiments are more interesting and fun to work than literature review.

Everything was fine with course, I thank KTH for the opportunity to learn.

The teacher was really good at explaining the topics and very engaging

Is there anything else you would like to add? (I worked: 9-11 timmar/vecka)

No.



## SPECIFIC QUESTIONS

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## RESPONSE DATA

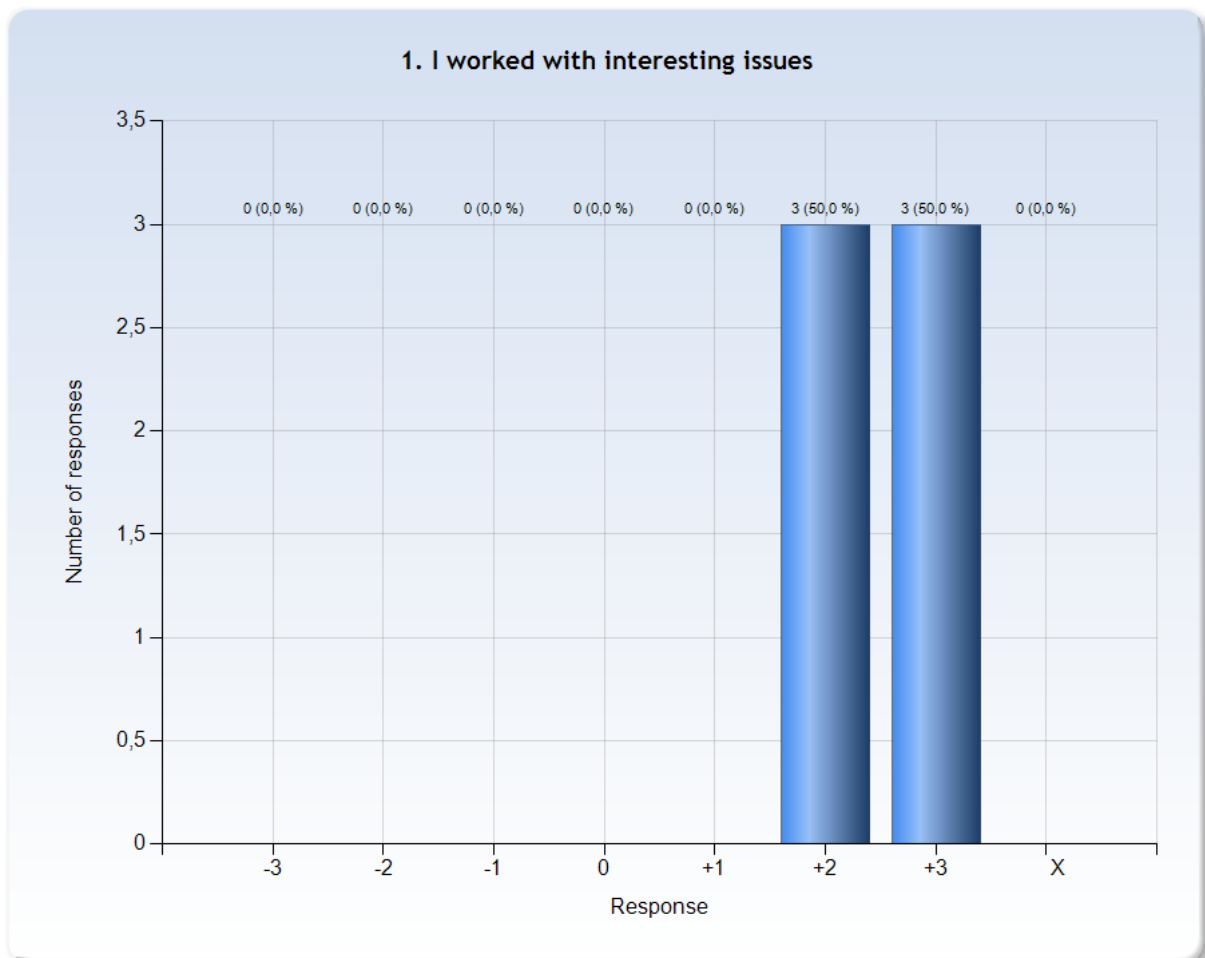
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-3 = No, I strongly disagree with the statement

0 = I am neutral to the statement

+3 = Yes, I strongly agree with the statement

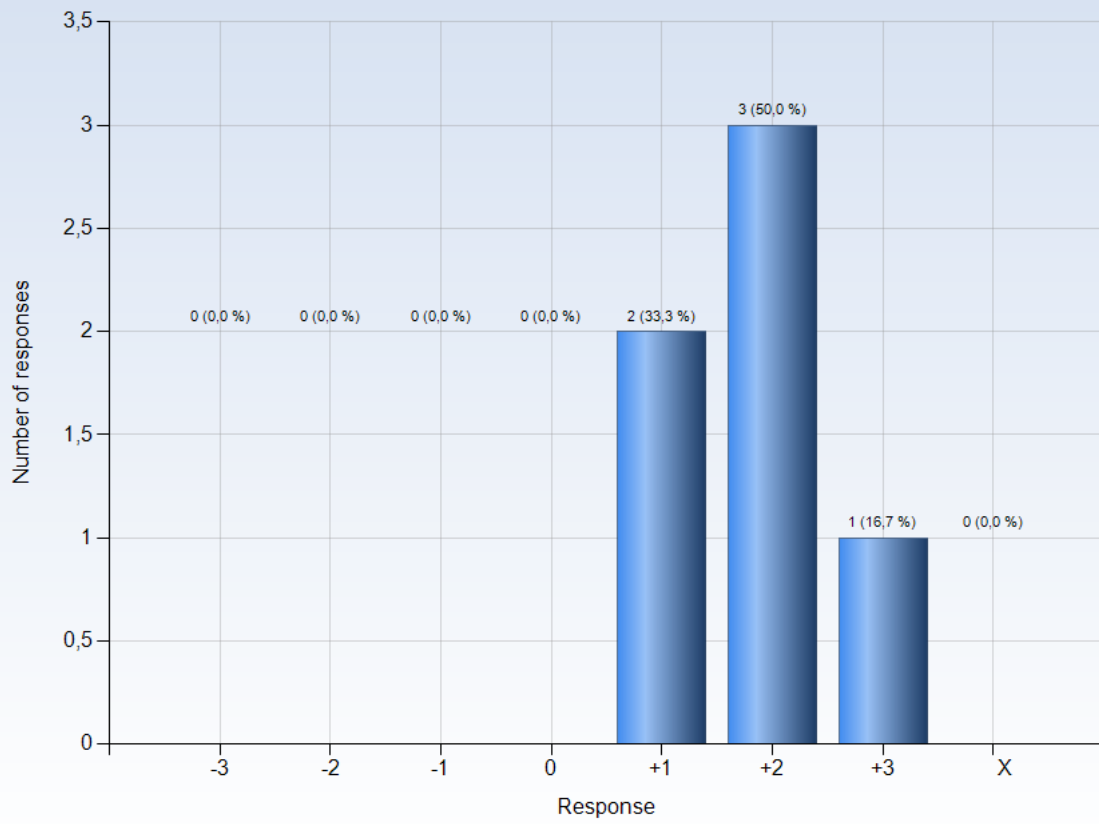
X = I decline to take a position on the statement



Comments

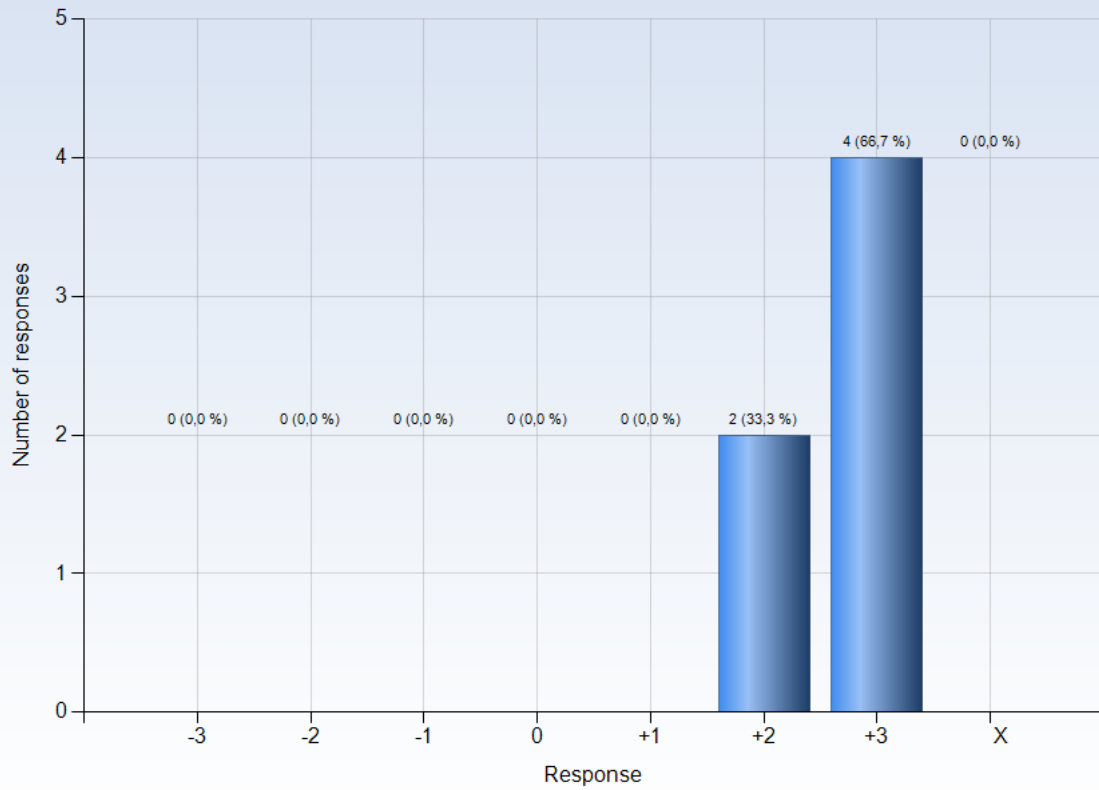


#### 4. The course was challenging in a stimulating way



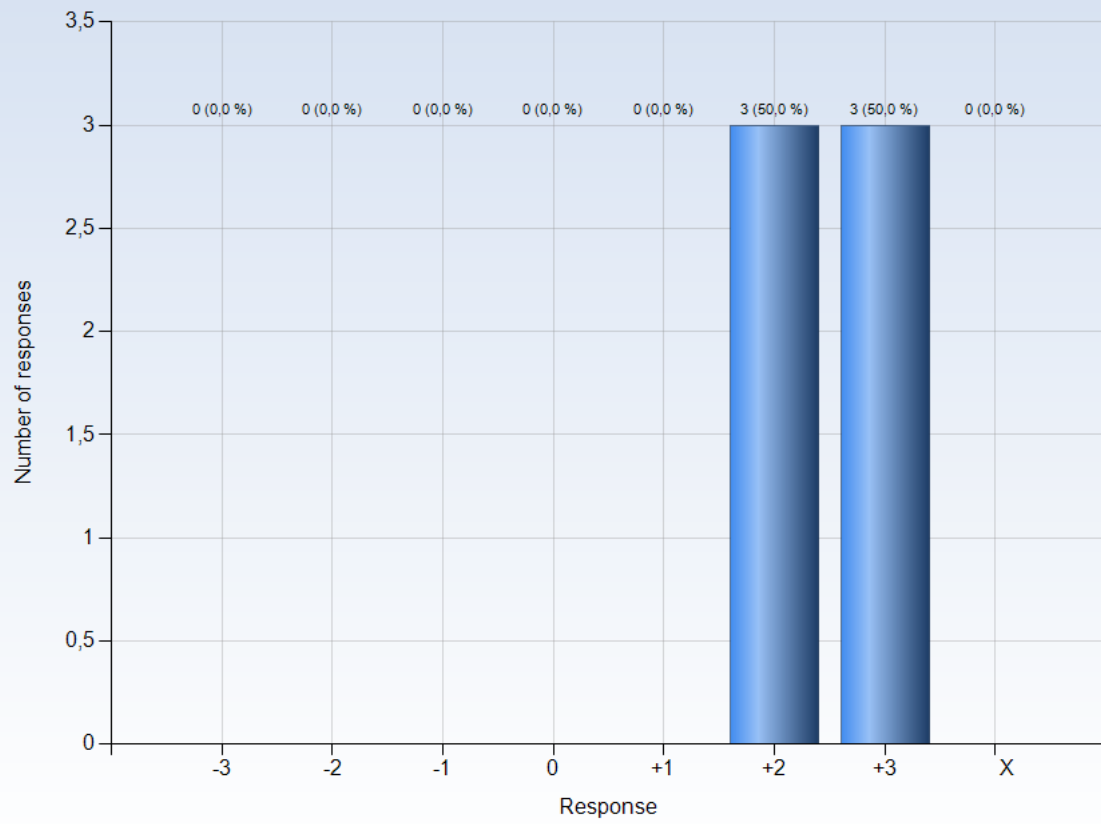
Comments

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



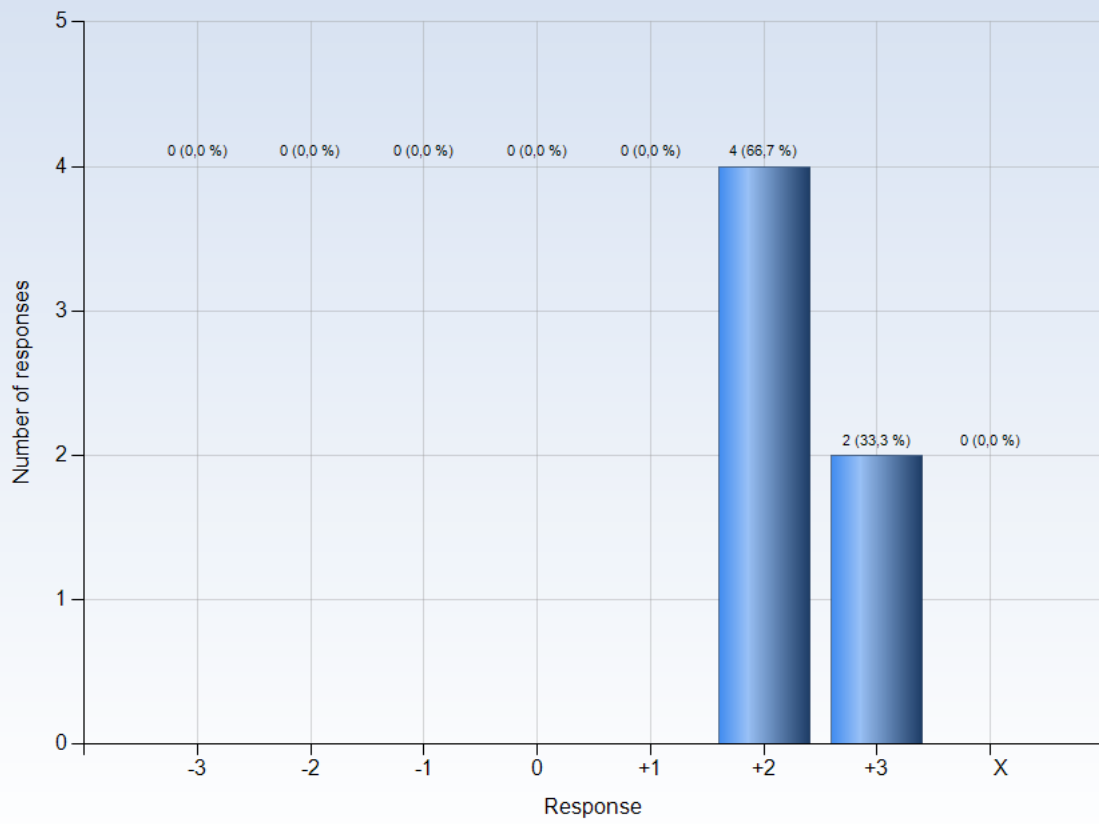
Comments

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



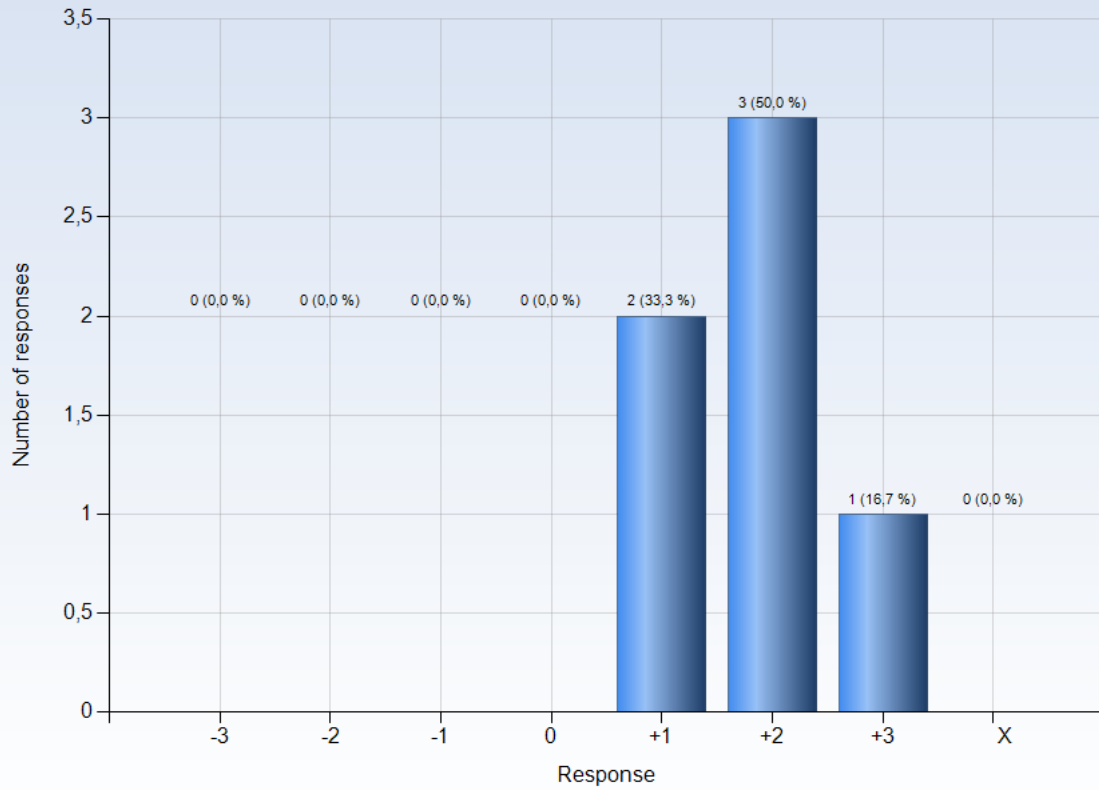
Comments

### 11. Understanding of key concepts had high priority



Comments

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

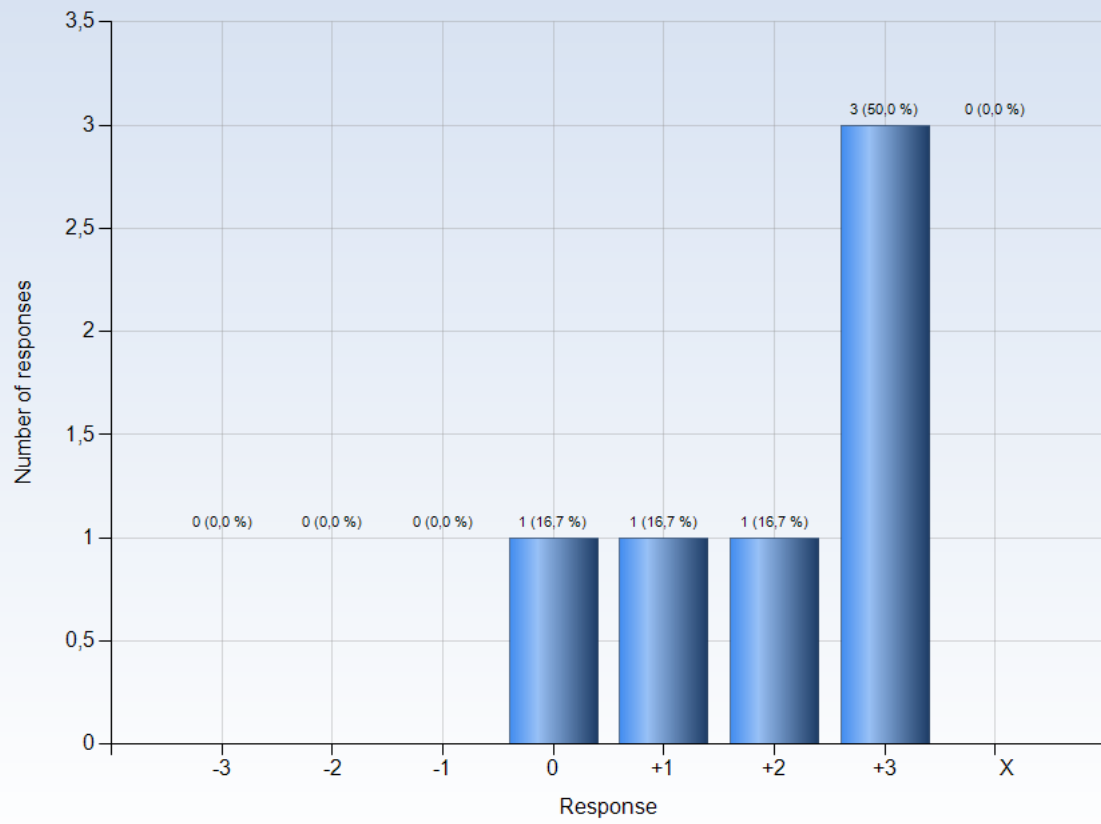


### Comments

Comments (My response was: +2)

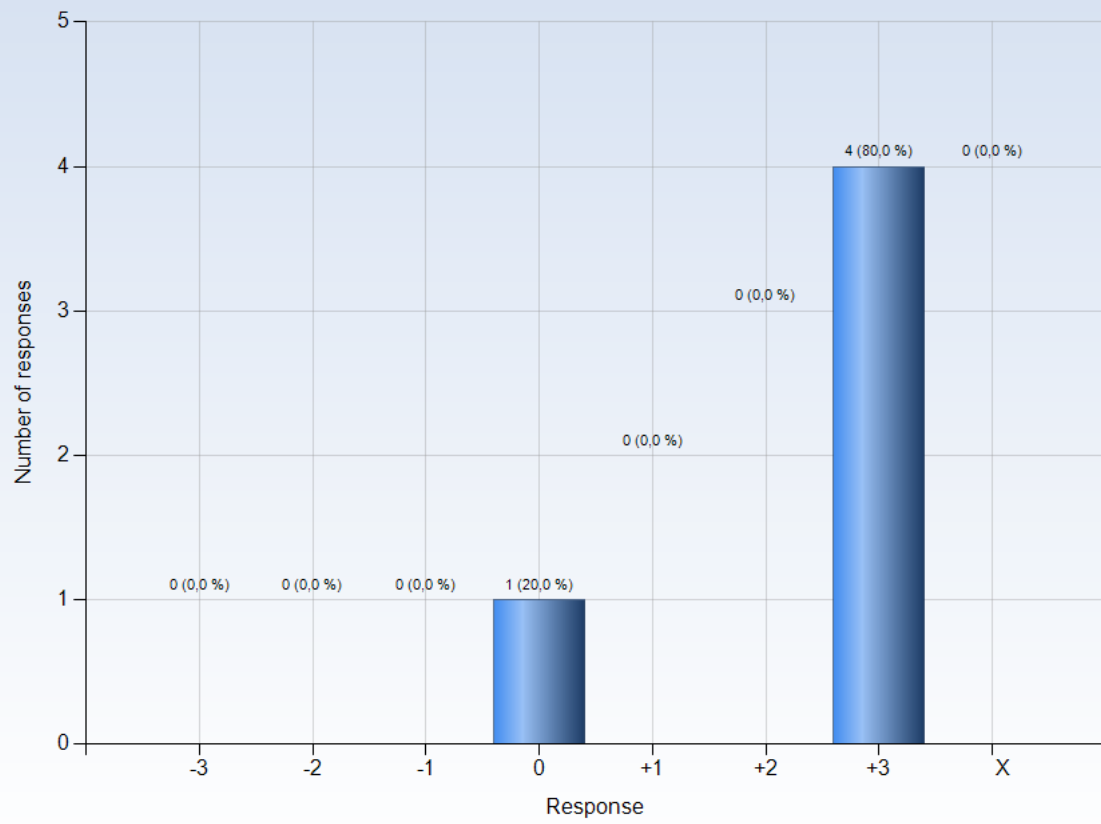
Would have liked maybe a take home worksheet with stimulating questions.

### 15. I was able to practice and receive feedback without being graded



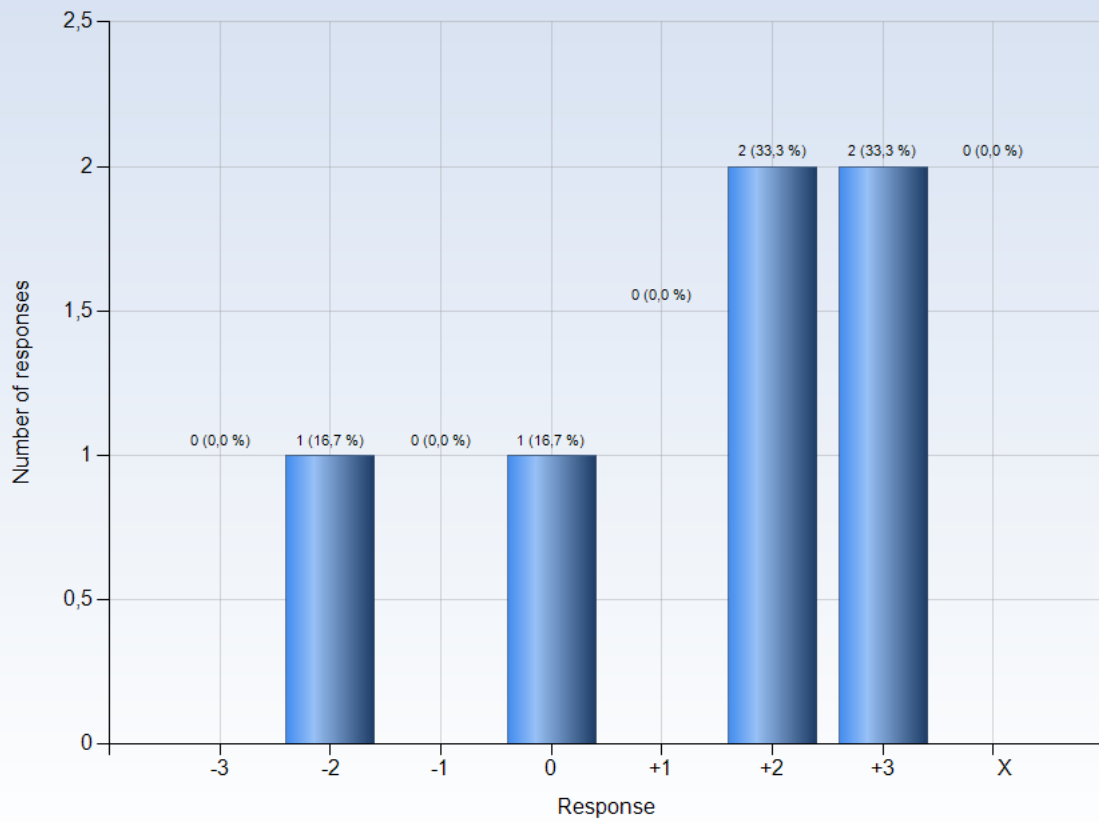
Comments

### 16. The assessment on the course was fair and honest



Comments

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



#### Comments

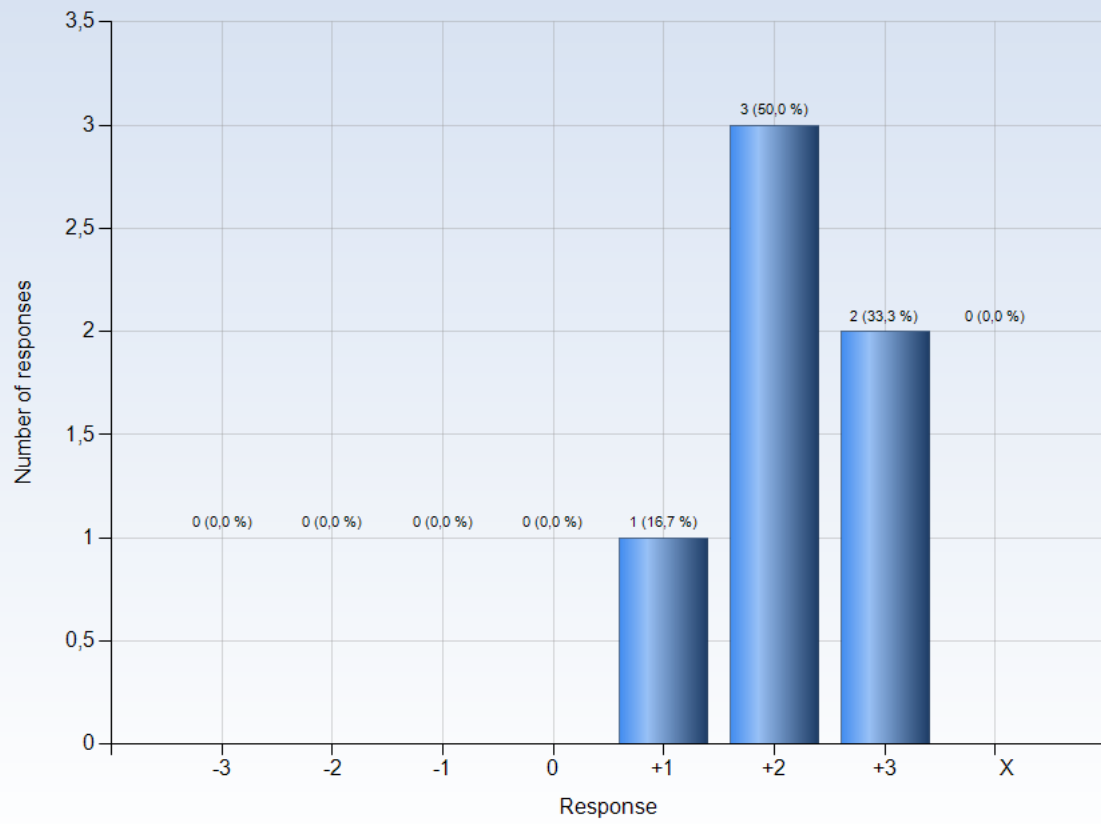
Comments (My response was: -2)

Everything was Ok with the course the main problem i faced is i was from different background following this course was really challenging for me

Comments (My response was: 0)

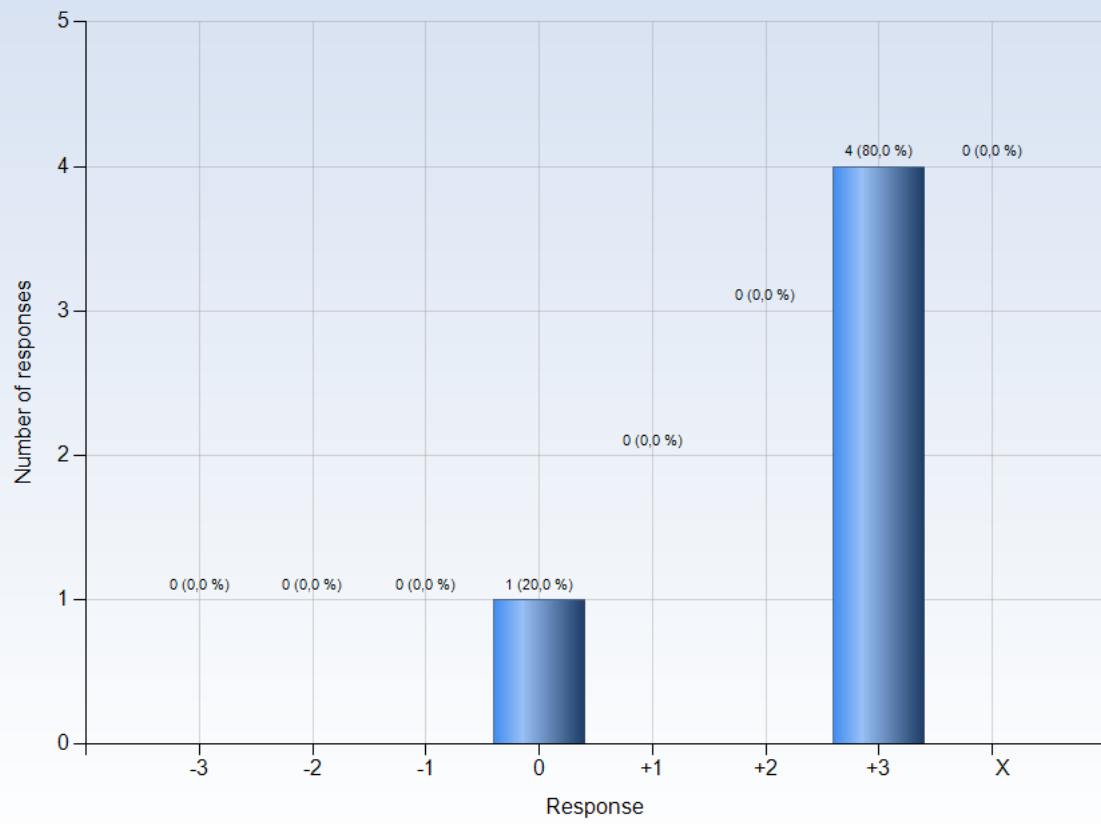


### 19. The course activities enabled me to learn in different ways



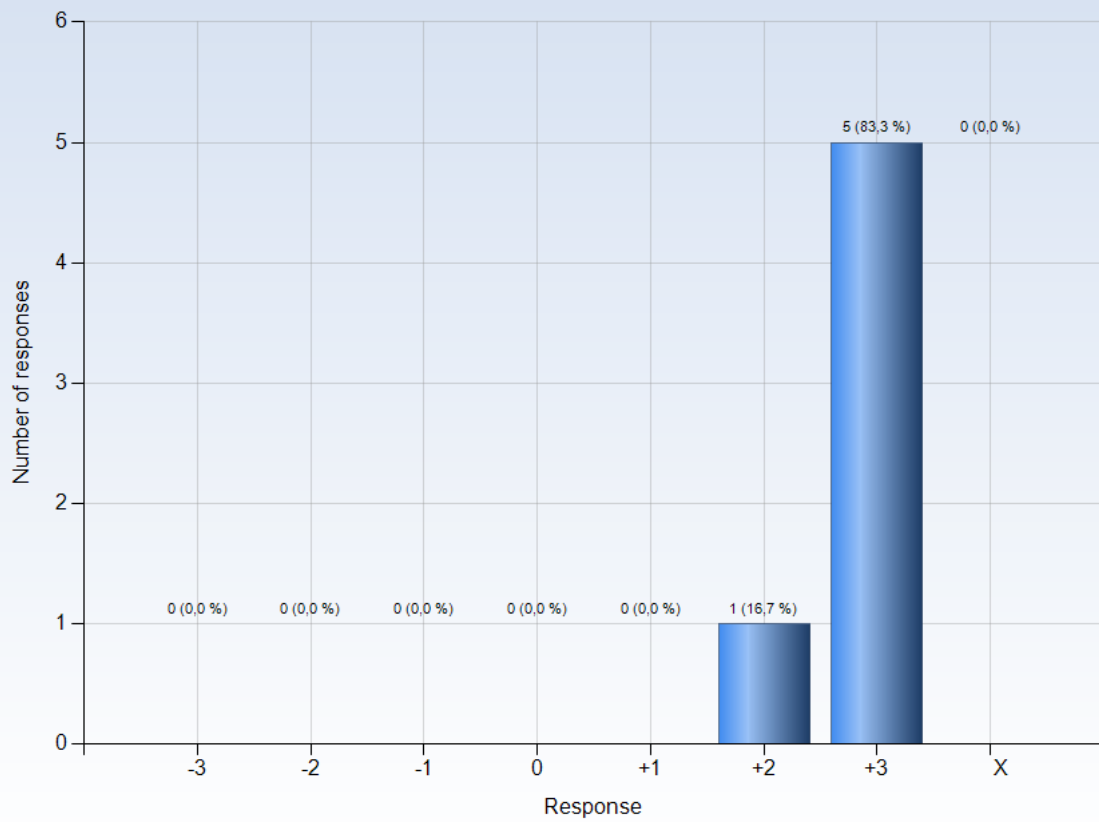
Comments

### 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

Comments (My response was: +3)

The lecturer was very helpful and always explained thoroughly when asked a question.