



## **BB2015 - 2020-05-30**

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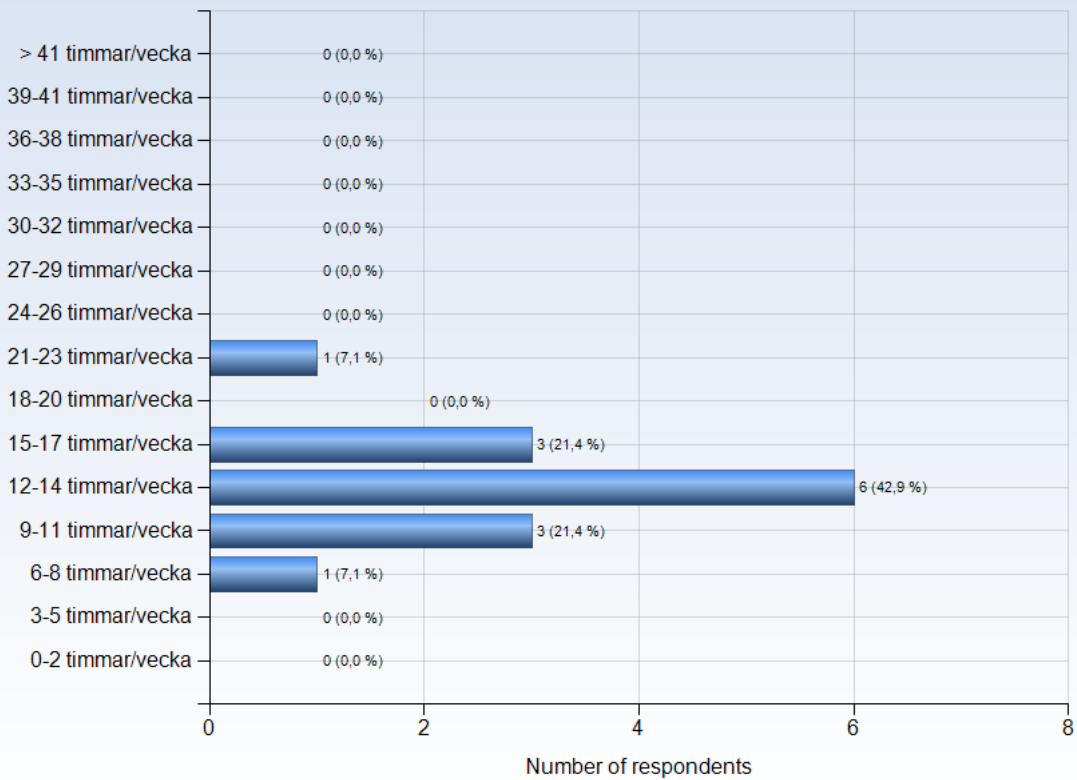
Antal respondenter: 24  
Antal svar: 14  
Svarsfrekvens: 58,33 %

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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: 6-8 timmar/vecka)

I felt the course was well-balanced in the workload and amount of time required to spend each week. I would probably have spent more time during the course if it wasn't for quarantine, which made it easier to procrastinate instead of doing the work.

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

I think the workload was appropriate.

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

It differed of course, some weeks I spent more time e.g when writing the literature report and preparing for the presentation while other weeks I didn't do much other than listen to the lectures.

I would say that I put about 4h on each lecture - 2h during teaching and 2h after to go through and repeat. Of course, I also put some hours on the report and presentation but I don't remember how much. Also, it is important to keep in mind that these numbers include studies during holidays such as easter when there was no scheduled hours.

The workload depended on at what point in the course you were, before the literature report it was more and after it was less. The workload in general was moderate.



## 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:

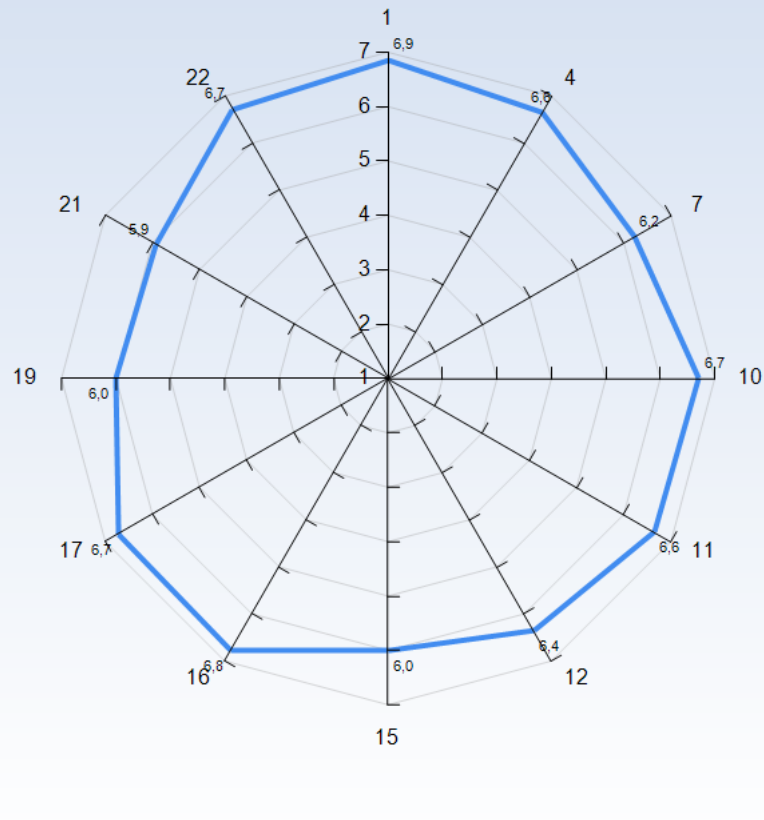
1 = No, I strongly disagree with the statement

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.

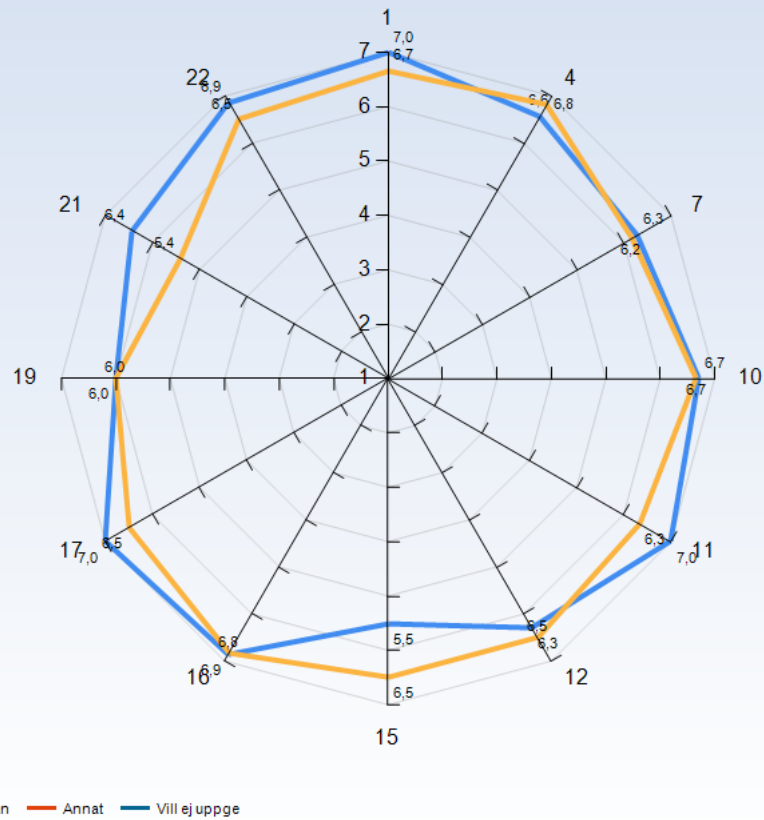
Elmgren, M. & Henriksson, A-S. (2014). *Academic Teaching*, Chapter 3, pp. 57-72. Lund: Studentlitteratur.

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.



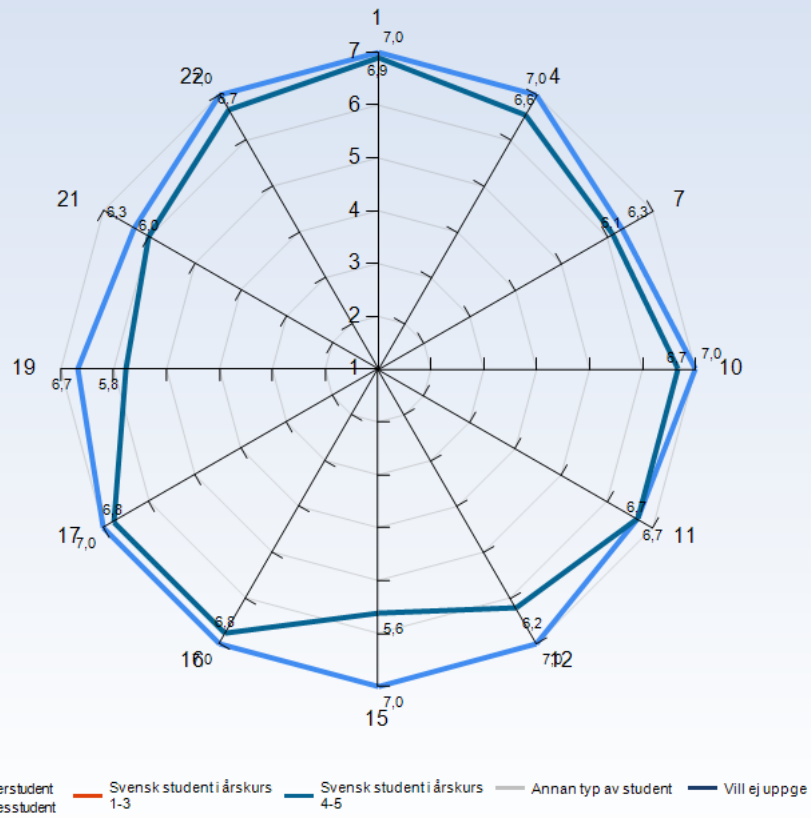
### Average response to LEQ statements - per gender



### Comments

Comments (I am: Vill ej uppge)  
 Every student is equally valued.

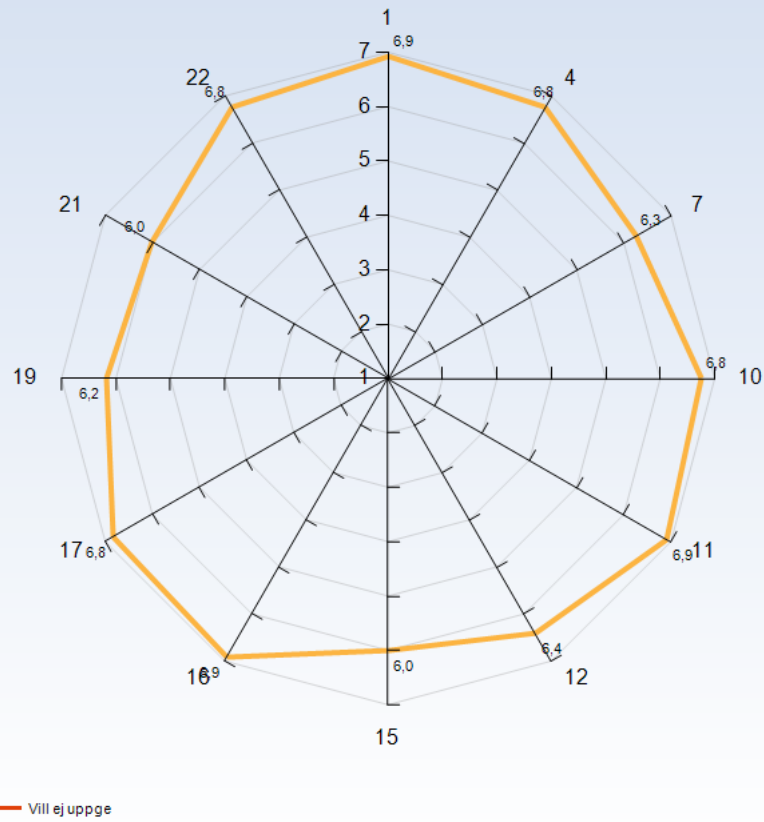
### Average response to LEQ statements - per type of student



#### Comments

Comments (I am: Vill ej uppge)  
 Every student is equally valued.

### 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: 6-8 timmar/vecka)

I enjoyed the literature assignment a lot as a concept. It gave the possibility to learn about many aspects of the course more practically, which is how I often learn the best.

It was also nice how lectures were connected for the most part.

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

The course contained a lot of different subjects related to environmental toxicology and not only medical one for example.

Every lecture was on a very interesting topic, and it was good to have experts talk about their own field. In addition, the course was very well structured and organized so that the learning outcomes naturally developed throughout the course. I also very much liked how we had a summary lecture at the end, making it easier to know an overall view on the most important parts.

The literature task and the lectures.

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

The course widely covered different topics

I liked the literature presentations and the oral exam. The report enabled one to really specialize in one area of interest which I really liked and it was also interesting to listen to other people's findings. I was first sceptical to the oral exam because I haven't had one previously, but I felt like while I was doing the exam I also learned more so it felt so much more beneficial than a regular 4 hour writing exam.

Learn about new things that have not been included in previous courses during my education.

I think the subjects in the course were very interesting, and Anna led the course fantastically well! Despite Corona, we had information about our tasks and things worked smoothly. I think it was great to get to dive into a specific subject on your own as well in the literature study.

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

Great topics, and overall good lecturers!

The course covers very relevant issues in a critical way. I also really liked that the course valued "critical thinking" from the students.

There were different related topics coming nearly every week, the orders of which were scheduled in the degree of correlation, and this helps a lot when systemizing the knowledge we have learnt. The interesting field topics and the attractive ways of lecturing aroused my interest. I felt like I was studying not only for the exam but for getting the professional knowledge itself, which is the best part of the course.

What was the best aspect of the course? (I worked: 21-23 timmar/vecka)

Riktigt bra kurs! Otroligt intressant och lärorik, jag gillade verkligen att människor från så många olika områden och universitet deltog och undervisade. Man fick väldigt snabbt svar på mejl och kunde alltid fråga frågor. Projektet var bra utformat och gav ett djup till kursen.



### What would you suggest to improve?

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

One thing that could be improved is that the lecturers often repeated a lot of information that someone else had already talked about, or that they assumed someone else had brought it up and thus didn't have to themselves. This is often a problem when there are many different lectures and just as many lecturers and there would be nice if the communication between lecturers on who presents what material would improve.

Another thing, which might be difficult to adjust into something better was that I, who am more interested in the environmental aspects (plants, water etc.), in the beginning felt it was more targeted towards medicine and humans in a way that didn't quite interest me. And so it was difficult to get motivated since all the more environmental aspects came at the end. Which was also a shame, since it then also was more difficult to know what could be appropriate for those kinds of subjects in the literature assignment. The majority of the presentations had already been done when the course got to the part about more classic "environmental" subjects. So, it could be nice to maybe get a bit more taste of that earlier on in the course, although I also understand that the current flow of the course works quite well in presenting the material in a more linear way.

Lastly, it would be nice if there was a list of subjects, like maybe what people had previously worked on in the literature assignment, since it really is quite difficult to choose something, especially when what you're interested in is placed so late in the course, so then even if you wanted to present earlier on you would be "forced" to do it later as you might want to have the lectures in the subjects that interest you before settling on a specific subject.

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

I think the course was great, can't think of anything that should be improved.

Some sort of workshop or study questions that prepares you for the exam.

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

Since there were a lot of guest lectures it was in the beginning very hard to know what was necessary knowledge and what was too detailed. Some lecturers had very complicated slides/pictures I feel like (for someone who has no background in that what so ever). So I was a bit stressed in the beginning but the last lecture (summary lecture) where you went through what we needed to know from each lecture it got a bit clearer. But I would advise to perhaps recommend the guest lecturers what to include and what to not include.

It might be good to either have a midterm exam or a few exercise sessions so that the students get an idea of how the questions could look on the exam.

It's hard to say because of corona and things will be different when things are back to normal, but I think some kind of seminar when you discuss and learn more about the different subjects in some way.

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

Sometimes the handouts were very detailed, more than needed, which could be adjusted for future courses.

Some lectures were a bit too detailed on things that were not as relevant to the course (for example I think that the female reproductive tract lecture could have been simplified a bit)

The critical chemicals involved in toxicology are multifarious. Meanwhile the mechanisms behind each chemical can be very different. It would be nice and clearer if we could know exactly which chemicals are, to say, "more important" or "more focused" to know deeper, at least for this course or for the toxicology field study for now.

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

Detta var en väldigt speciell kursomgång tack vara att allt blev på distans, detta sköttes väldigt bra. Det ända jag kommer på som skulle kunna förbättras vore om alla föreläsningar kunde bli inspelade, detta förstår jag kanske inte går av flera anledningar men det vore förstås att föredra.

Vissa av föreläsningpresentationerna sa inte så mycket om man bara hade presentationerna (om man hade missat föreläsningen) jag tänker på föreläsningen om vitamin B1, denna presentation gav inte mycket information tyvärr... Förklaringar alternative mer utförliga presentationer vore att föredra om de publiceras på canvas, detta skulle hjälpa pluggandet avsevärt



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

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

Discuss the lectures and its content with your peers. Even if it's a lot about knowing facts, discussing the concepts and having an understanding of how it's all connected and how things could affect each other will help a lot.

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

See the big picture of each lecture, then gradually learn the details that are connected to them. Makes it easier to understand what you are supposed to take away from the lectures.

Start with the literature assignment as early as possible. You will most likely pick a subject that you think is interesting and then it's nice to have a lot of time to explore the subject and write a good report.

Take time your to study the lecture material during the course. Don't wait until the examination week.

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

Understand the main idea is the most important

Listen attentively to the lectures, ask questions and summarize the lectures. Choose a topic you really like for the literature presentation.

Make sure that you study during the course because otherwise there will be a lot of information and concepts to grasp during the exam period.

Choose your subject for the literature study as soon as possible so you can dive into your subject properly.

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

Use the lectures to ask questions, and listen to people with interesting backgrounds

Start with the literature assignment early :)

Have an open and curious mind to learn more about the chemicals in everyday life. Don't hesitate to ask questions especially when the teacher crew are wonderful!

What advice would you like to give to future participants? (I worked: 21-23 timmar/vecka)

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

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

Overall, this is a very interesting and well thought-out course and I very much enjoyed it. I think some things were affected more or less by the Covid-19 outbreak since some lecturers were more or less comfortable with Zoom, but all-in-all, except for the things I wrote about before, it was a really good course.

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

Great course

Thank you for a great course! It's the type of course where I will remember the information easily as it was so interesting.

Is there anything else you would like to add? (I worked: 12-14 timmar/vecka)

I really enjoyed the course!

I really enjoyed the course, nothing really to add

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

Great course with good content and many interesting lectures

Very nice course! I think that it was very helpful to have recorded lectures so that you could go back and listen to it again if you did not understand it the first time.

It is great to have many topics since so broad and life-related toxicology is; for the exam preparation it was a bit dazzling though. However, there was one final lecture to conclude everything (L16), which to a great extent solved this problem, so for me everything's nice.

Is there anything else you would like to add? (I worked: 21-23 timmar/vecka)

Jag läser mastern Environmental Engineering and Sustainable Infrastructure, jag hade därmed inga tidigare kunskaper i cellbiologi. Trots det, hade jag inte så svårt att följa kursen och jag fann den otroligt intressant och givande. Det ända som var svårt var de väldigt ämnesspecifika frågorna på tentamen som jag personligen hade svårt för men som jag antar att studenter med mer kunskap inom biokemi inte skulle ha några problem att svara på. Jag önskar att en liknande kurs kunde ingå i min master. Det går absolut för andra studenter, utanför kemi, att läsa denna kurs.



## SPECIFIC QUESTIONS

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## RESPONSE DATA

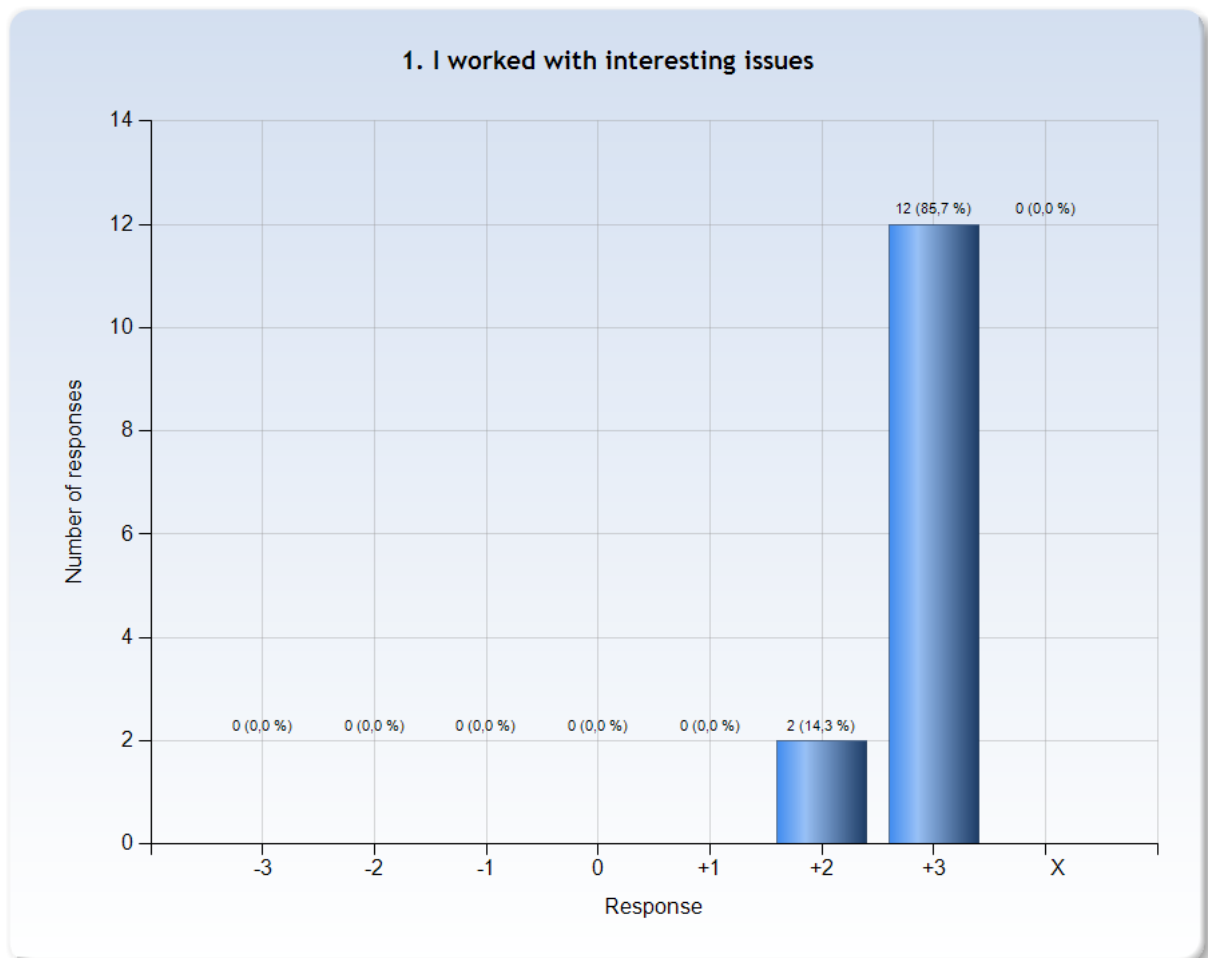
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-3 = No, I strongly disagree with the statement

0 = I am neutral to the statement

+3 = Yes, I strongly agree with the statement

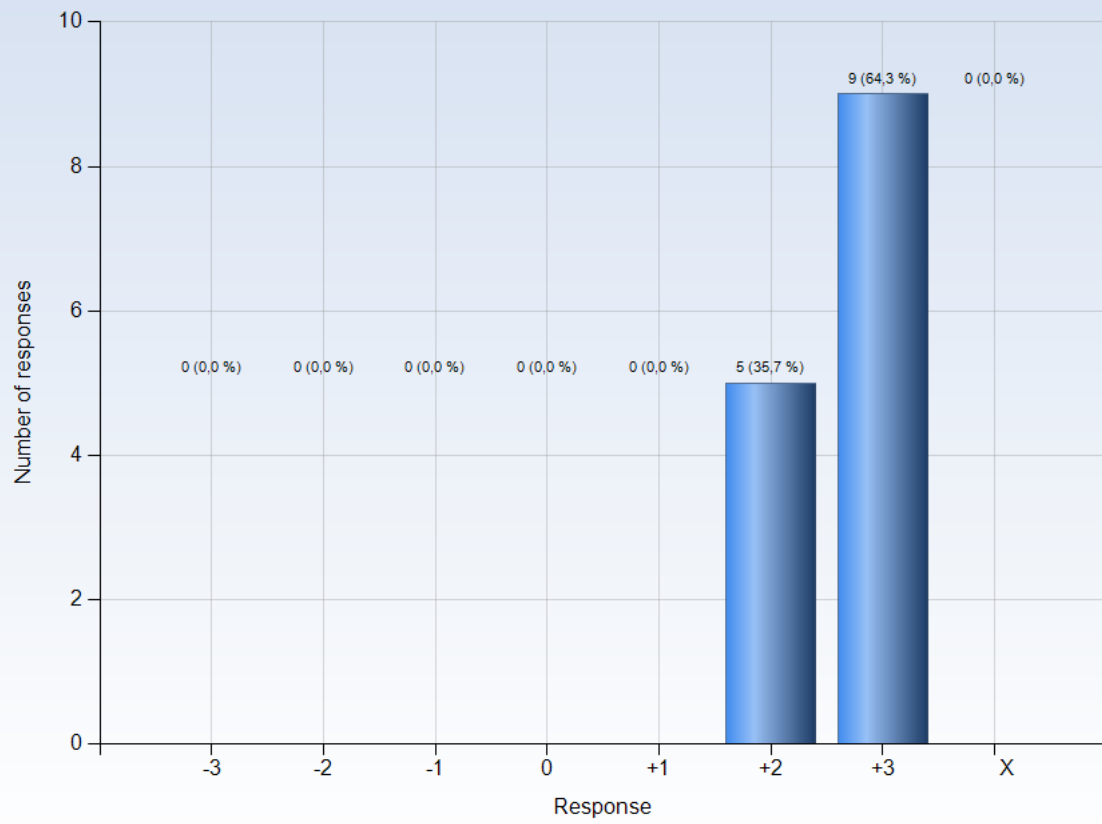
X = I decline to take a position on the statement



Comments

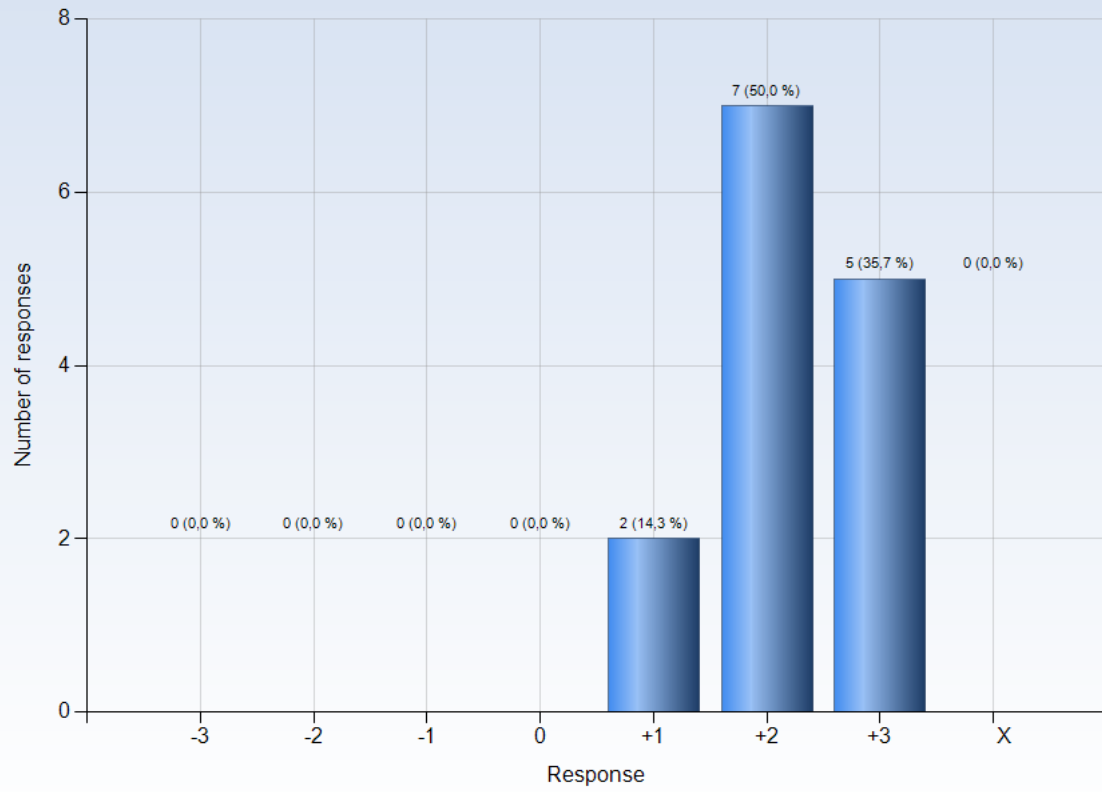


#### 4. The course was challenging in a stimulating way



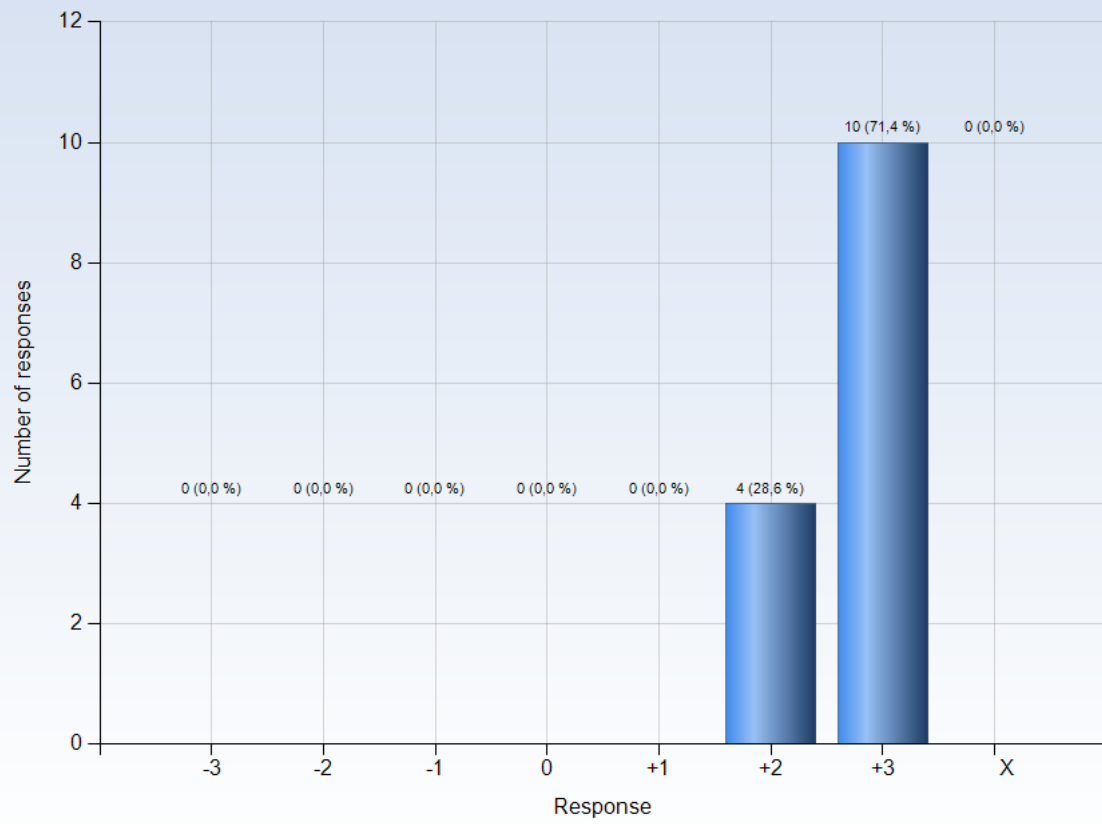
Comments

### 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

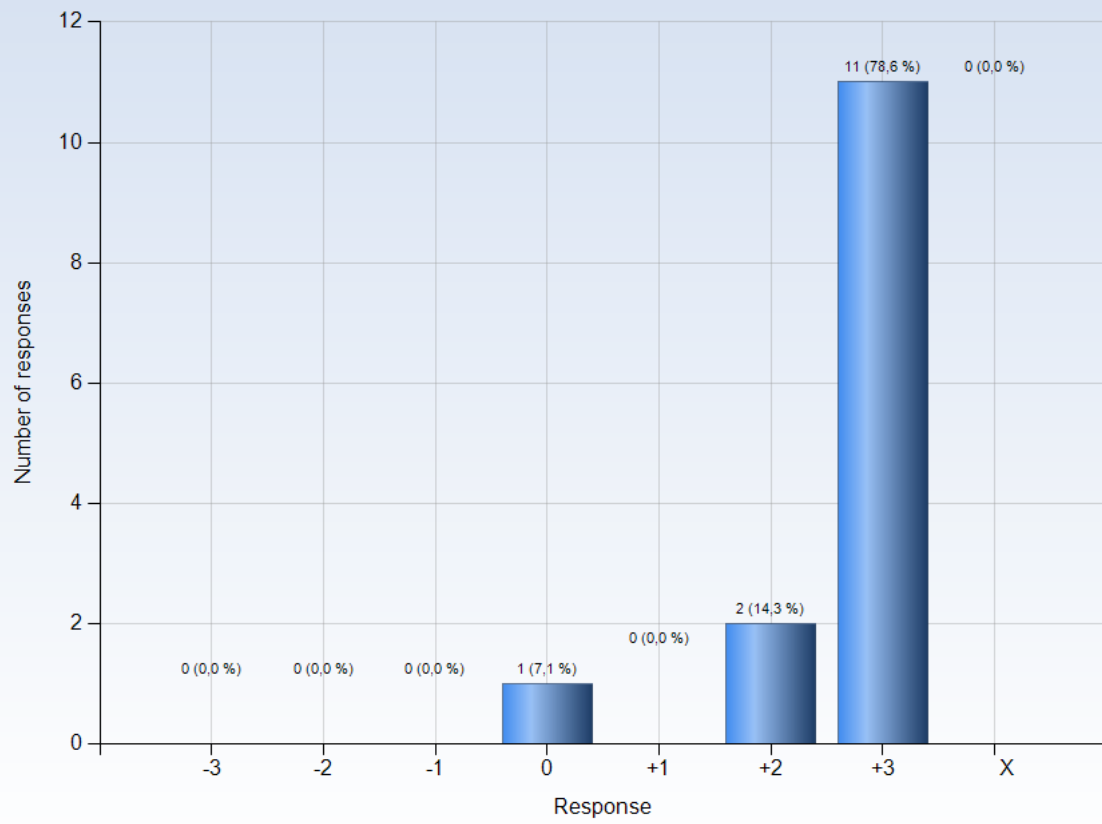


Comments

Comments (My response was: +3)

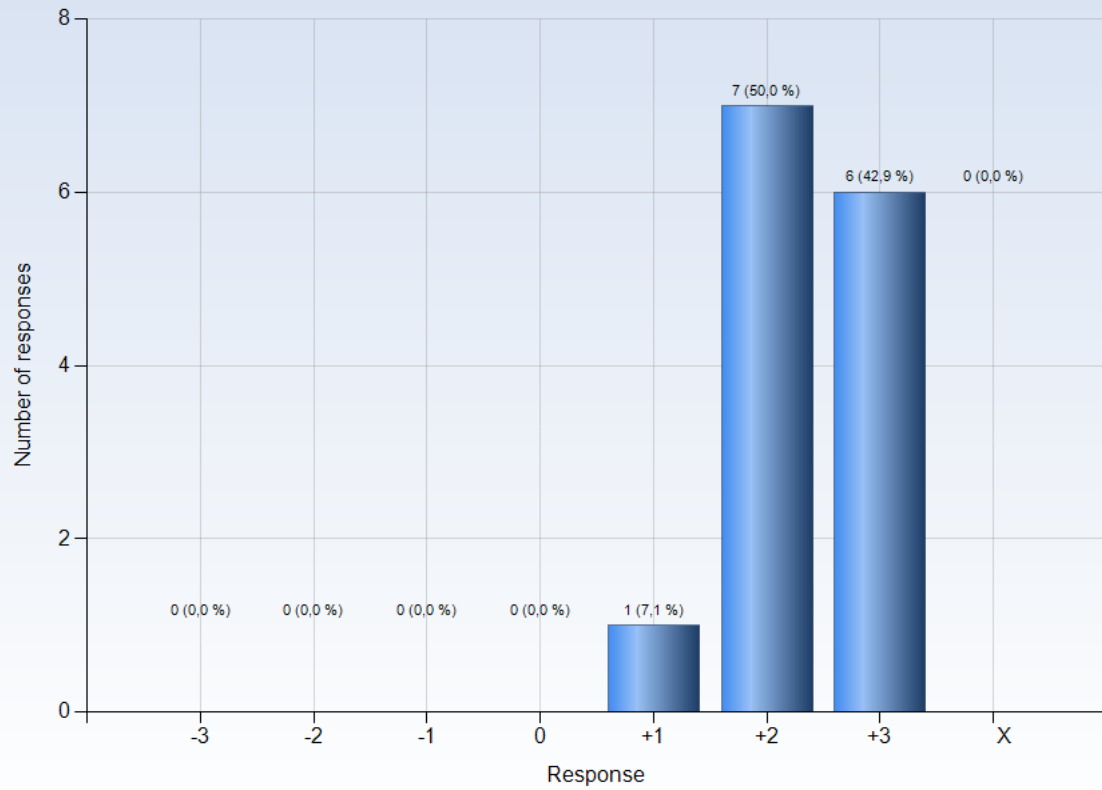
Through the literature task yes.

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



Comments

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



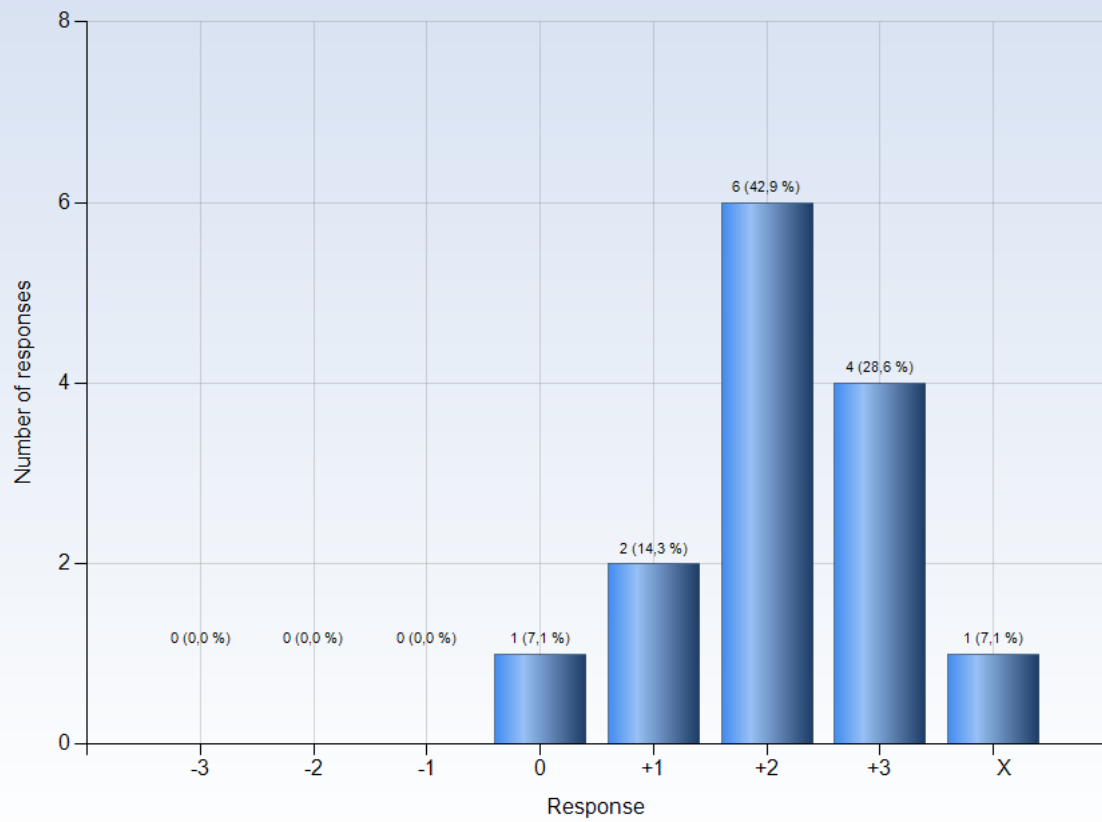
### Comments

Comments (My response was: +2)

Some sort of task that treats the lecture material would make it easier to learn.

The literature report was helpful, but we could have had some questions or tasks to do additionally. Maybe some seminars on interesting issues.

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



#### Comments

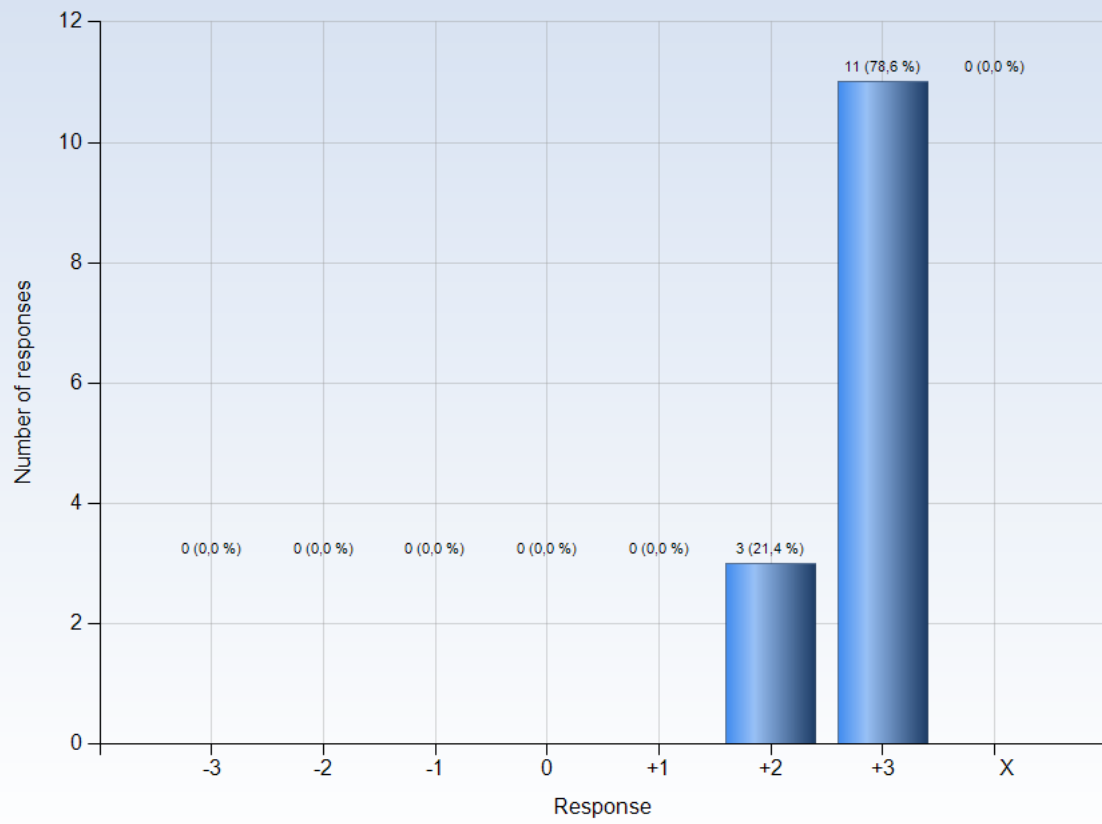
Comments (My response was: +2)

Only in the literature task.

Comments (My response was: X )

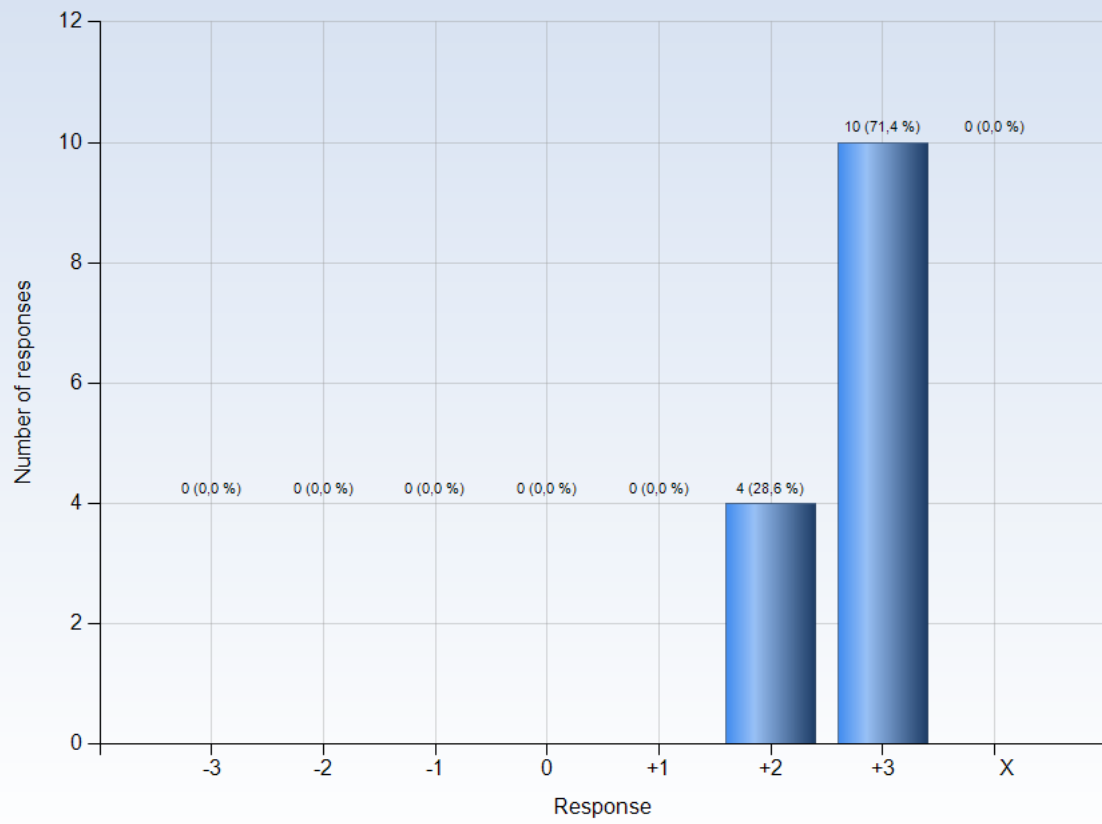
I didn't try, so can't comment on the matter.

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



Comments

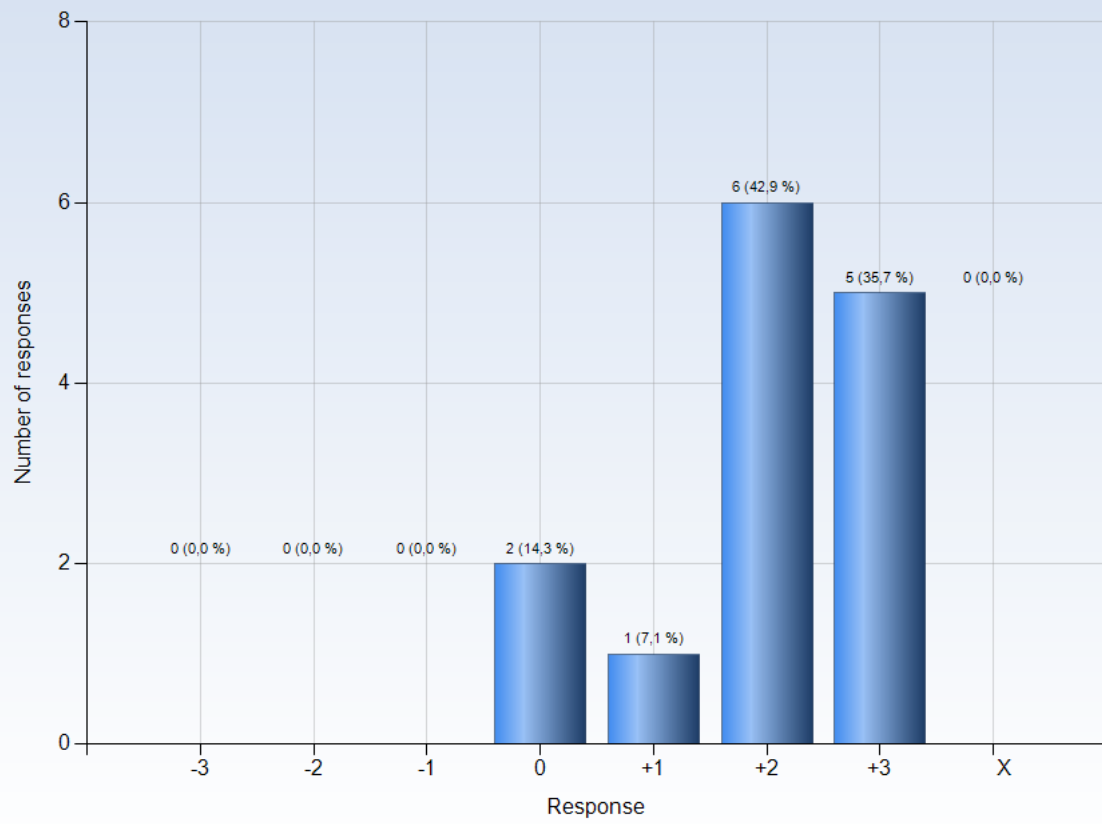
### 17. My background knowledge was sufficient to follow the course



Comments

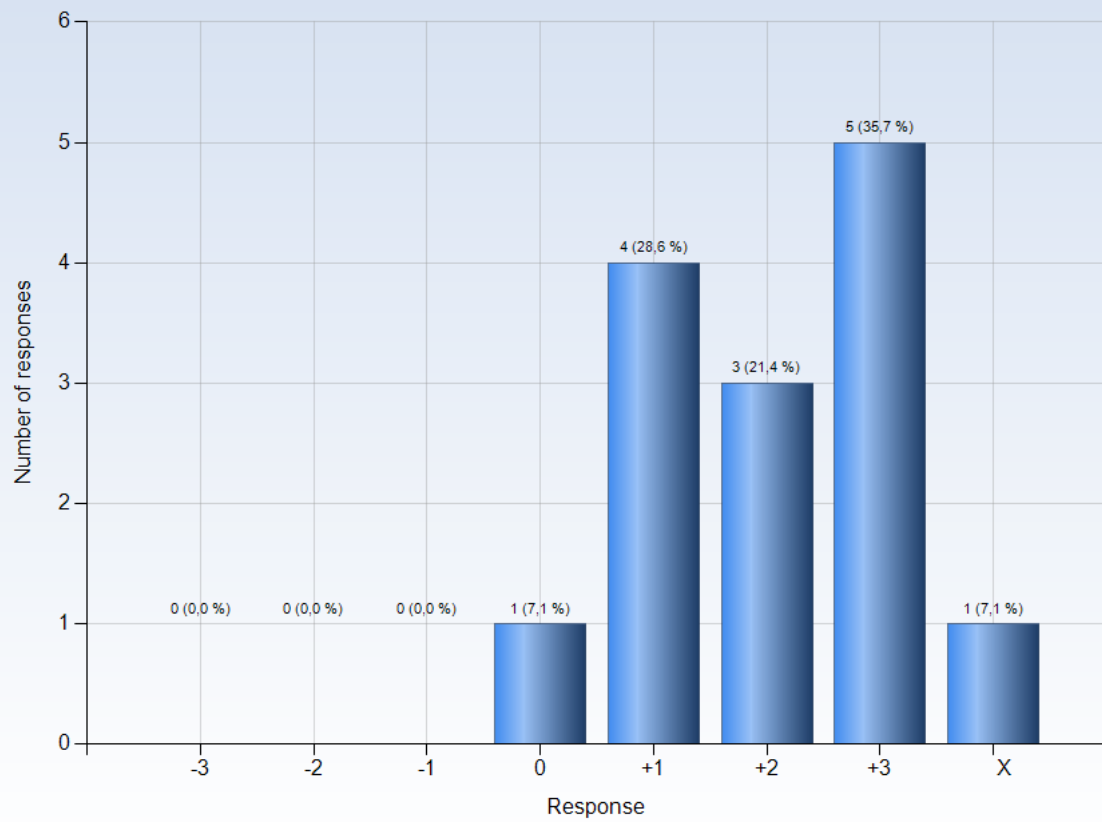


### 19. The course activities enabled me to learn in different ways



Comments

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

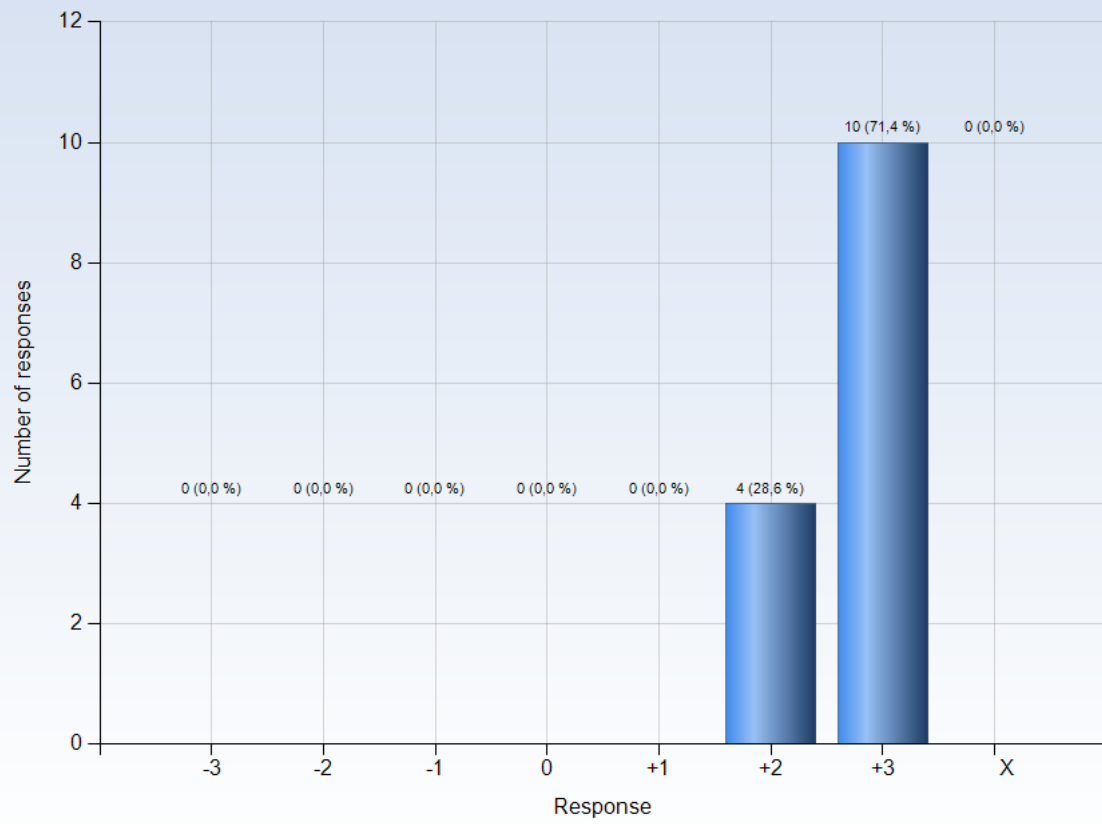


#### Comments

Comments (My response was: +3)

Via zoom

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



Comments