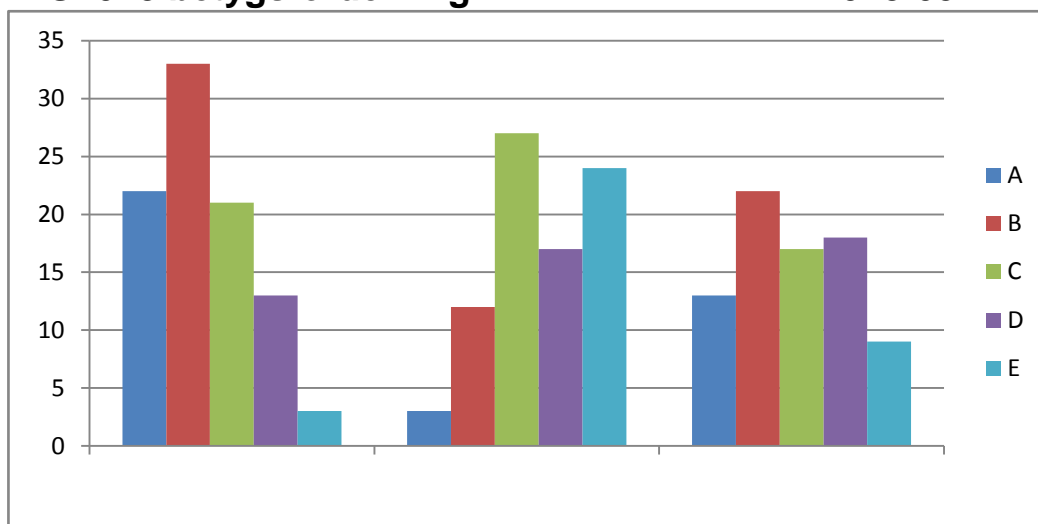


## MG2028 betygsfördelning

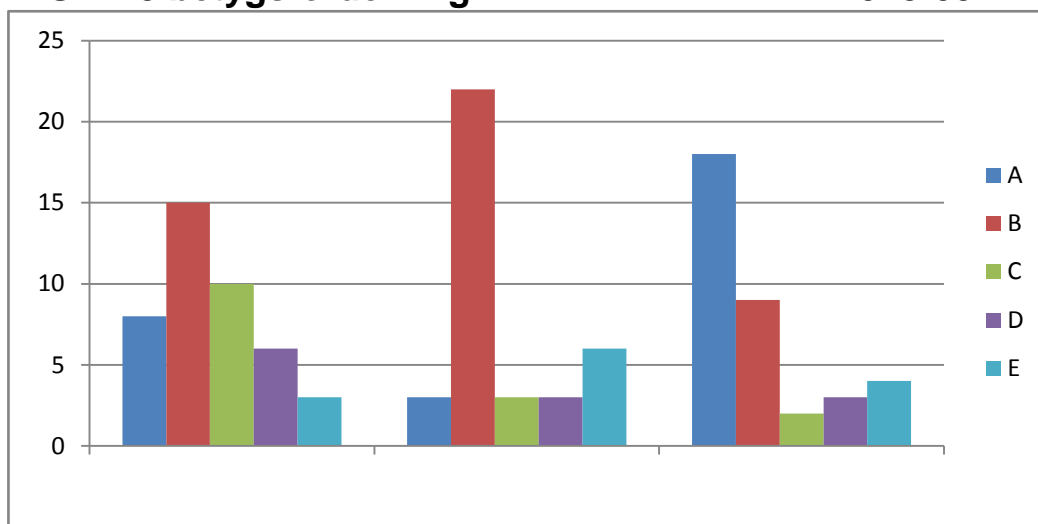
2018-03-21



		REG	LAB1	LAB2	LABA	INL1	INL2	Slutbetyg	
Antal stud		100			97	92	83	79	
	A					22	3	13	16,5%
	B					33	12	22	27,8%
	C					21	27	17	21,5%
	D					13	17	18	22,8%
	E					3	24	9	11,4%
	P				97				
Poäng					145,5	138	249	532,5	
Prestation					97,0%	92,0%	83,0%		<b>88,8%</b>
Examination								<b>79,0%</b>	

## MG2128 betygsfördelning

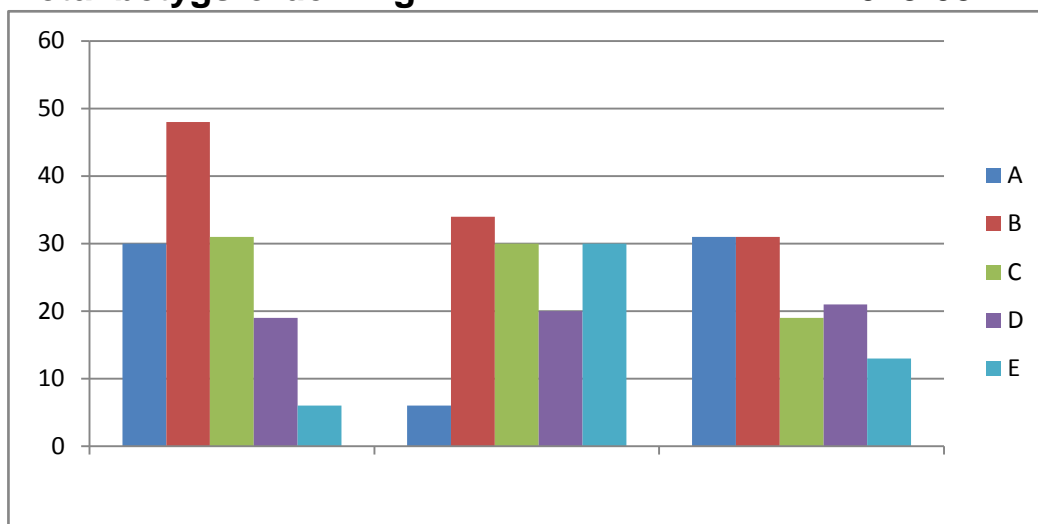
2018-03-21



	REG	LAB1	LAB2	LABA	INL1	INL2	Slutbetyg	
Antal stud	43	40	41		42	37	36	
A					8	3	18	50,0%
B					15	22	9	25,0%
C					10	3	2	5,6%
D					6	3	3	8,3%
E					3	6	4	11,1%
P		40	41					
Poäng		60	61,5		63	111	295,5	
Prestationsgrad		93,0%	95,3%		97,7%	86,0%		<b>91,6%</b>
Examinationsgrad							<b>83,7%</b>	

## Total betygsfördelning

2018-03-21



		REG	LAB1	LAB2	LABA	INL1	INL2	Slutbetyg	
Antal stud		143	40	41	97	134	120	115	
	A					30	6	31	27,0%
	B					48	34	31	27,0%
	C					31	30	19	16,5%
	D					19	20	21	18,3%
	E					6	30	13	11,3%
	P								
Poäng			60	61,5	145,5	201	360	828	
Prestationsgrad						93,7%	83,9%		<b>89,8%</b>
Examinationsgrad								<b>80,4%</b>	



## **MG2028 - 2017-12-12**

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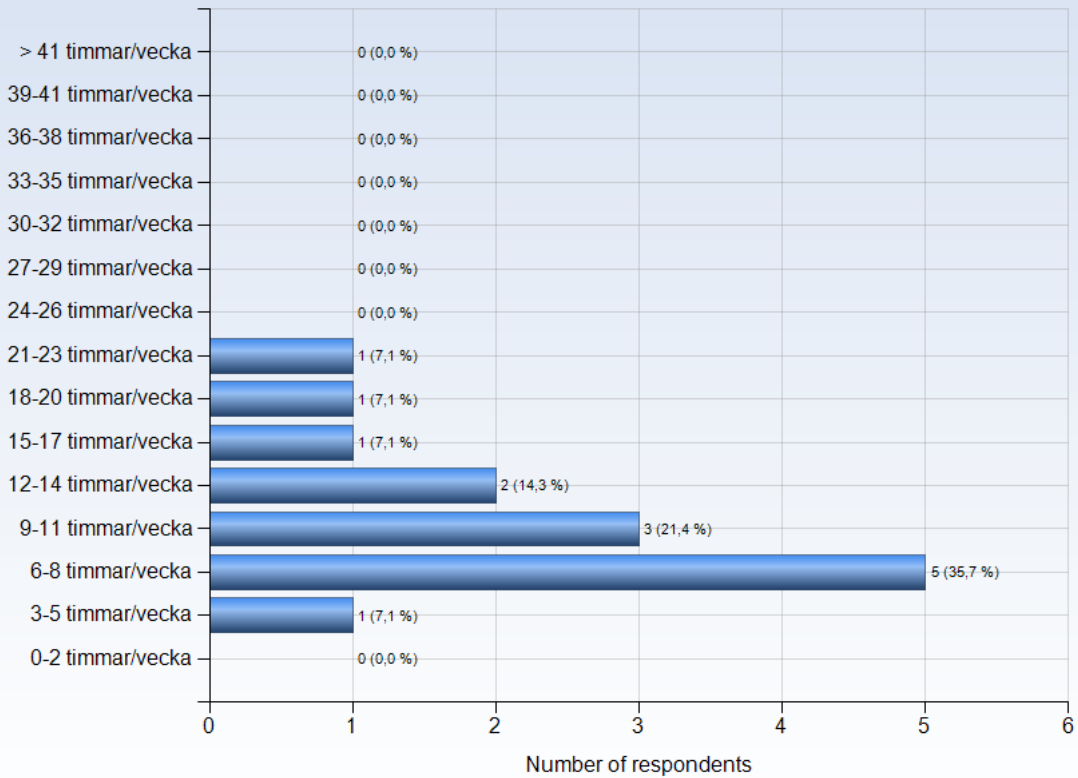
Antal respondenter: 97  
Antal svar: 14  
Svarsfrekvens: 14,43 %

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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: 9-11 timmar/vecka)

Ojämn arbetsbörda med många långa sena dagar inför inlämningarna



## 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:

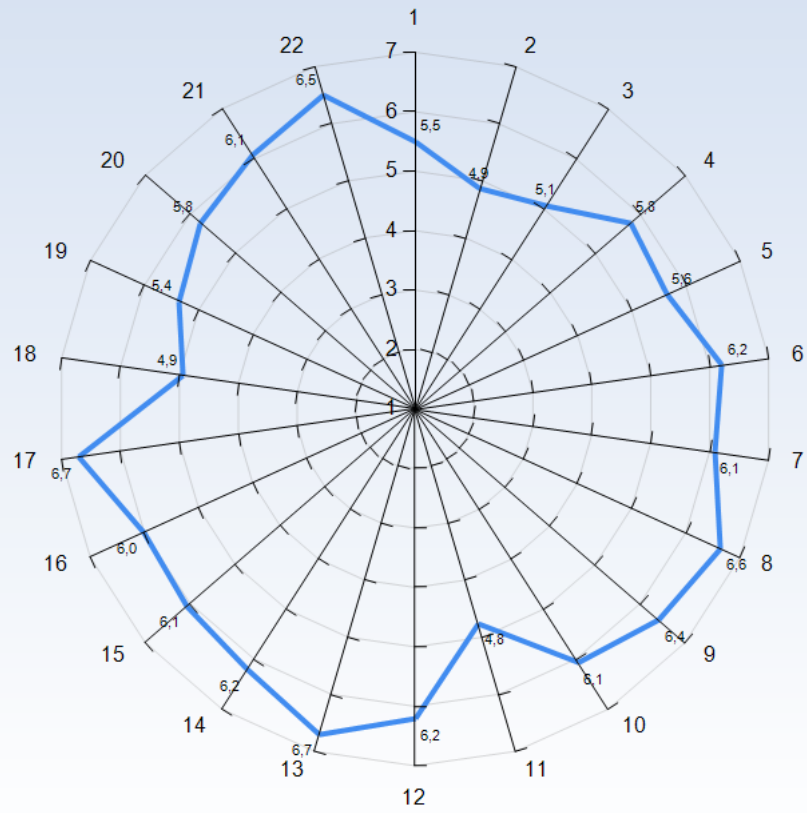
1 = No, I strongly disagree with the statement

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 v3.1.3**

### **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. I understood how the course was organized and what I was expected to do (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 choices*

- 19. I was able to learn in a way that suited me (m)
- 20. I had opportunities to choose what to do (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, intriguing or important
- b) We can speculate, try out 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 yet supportive environment
- d) We feel that we are part of a community and believe that other people have faith 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 sufficient background knowledge to manage the present learning situation
- g) We can learn inductively by moving from specific examples and experiences to general principles, rather than the other way around
- h) We are challenged to develop a proper understanding of key concepts and successively create a coherent whole of the content
- i) We believe that the work we are expected to do will help us to reach the intended learning outcomes
- j) We can try, fail, and receive feedback in advance of and separate from any summative judgment of our efforts
- k) We believe that our work will be considered fairly and honestly
- l) We have sufficient time to learn and devote the time necessary to do so



m) We believe that we are in control of our own learning, not manipulated

n) We can work collaboratively 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.

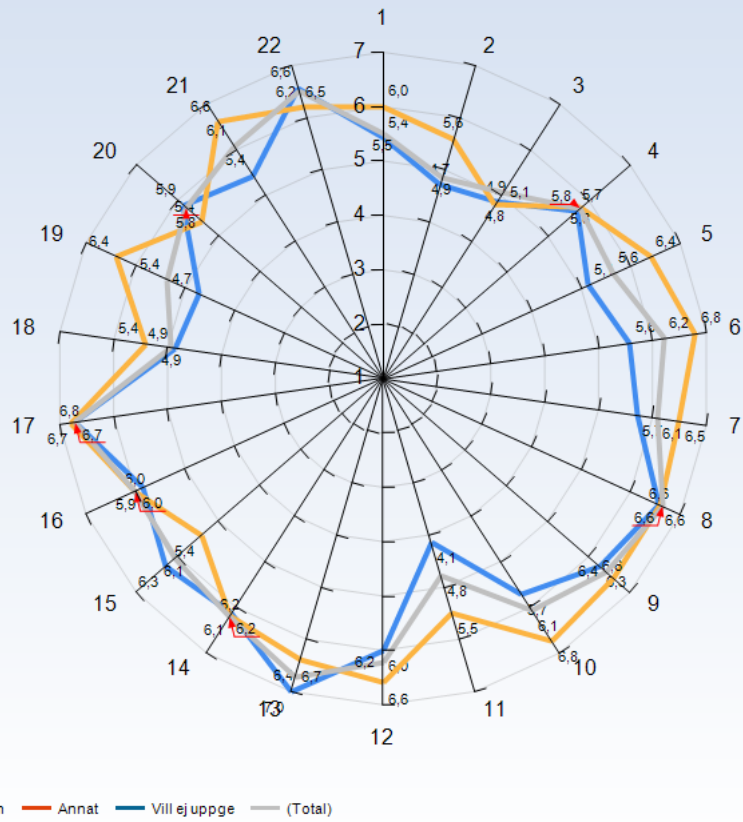
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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.

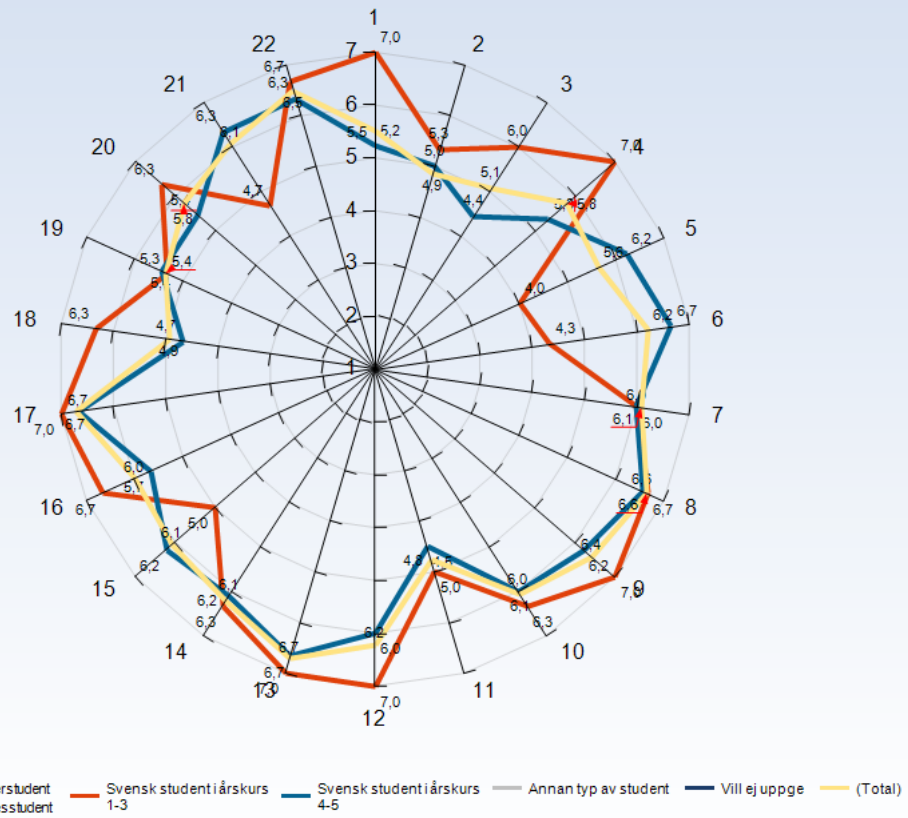
Ramsden, P. (2003). *Learning to Teach in Higher Education*, Chapter 6, pp. 84-105. New York: RoutledgeFalmer.

### Average response to LEQ statements - per gender



Comments

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



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: 3-5 timmar/vecka)

Very clear instructions, on course set up as well as exercises

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

The labs - very hands on and informative

To do all the different exercises, they helped a lot when you did the assignments.

Att få prova programvaror för hela utvecklingscykeln och inte bara cad.

Praktiskt lärande och exempel som är lätt att relatera till.

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

Labbarna lärde mig mycket, även föreläsningarna var bra. Kul med andra program än CAD.

Bra och mycket hjälp, inkluderande.

clear structure of the course

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

It was interesting to learn about different IT-tools which could be useful later. The exercises are really good, you learn a lot.

### What would you suggest to improve?

What would you suggest to improve? (I worked: 3-5 timmar/vecka)

More creative exercises (especially for higher grades)

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

The guest lecture summary should be removed- you have already related the subject to the course through it's connected lab

The instructions for each exercise needs to be updated.

Skulle väldigt gärna få skickas med en syntaxguide för tactions programspråk.

Begränsningar till datorprogram kan försvårar arbete under kursens gång.

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

Lite mer klara uppgifter av de frivilliga. Tex produktdata samt teknisk rapport var svåra att förstå vad som förväntas. Svårt att veta om man gjort det så bra som det förväntas av en.

Arbetsbördan för inlämningsuppgifterna. Alldeles för lite kunskaper för att klara av att göra uppgifterna. Även att de var tvungna att göras i en bestämd datorsal och krävde hjälp från lärare för att ta sig framåt

Easier exercises for higher grades, or exercises that are more similar to the obligatory labs.

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

It was a bit annoying that the only computers that you could work with the IT-programs were in the M-building and besides, sometimes there were lectures or exercises there so if you had scheduled to work on a day and it was full in any of those computer rooms, you could not go in there. As we had project-works in other courses, it meant that you had said you were unavailable at that time. I would suggest that the students get a schedule for when there are lectures in the computer-rooms as it would help immensely with planning your time.

What would you suggest to improve? (I worked: 18-20 timmar/vecka)

Väldigt hög arbetsbörda om man vill nå de högre betygen. Tycker inte riktigt det motsvarar 6hp. Har även lite svårt att se varför denna kurs är obligatorisk för i:are, tycker att den bör vara villkorligt valfri. Tycker även att en del inlämningsdatum låg väldigt olycklig, det skulle kunna lösas genom att ge ut uppgifterna tidigare.



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

What advice would you like to give to future participants? (I worked: 3-5 timmar/vecka)

Start extra assignments early

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

Go all in

No advice other than to participate.

Börja i tid och blir inte skrämmd av de uppgifterna, de är roligare än vad man kan tror. Man lär sig mycket av att göra de trots att de kan ta lite tid och det kan finns frustrationer på vägen till målet.

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

Det är en lärorik kurs :)

Don't expect to do all extra exercise for a higher grade.

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

Pay attention in the exercises, you will learn a lot!

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

Var beredd på att lägga ner väldigt mycket tid.

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

Is there anything else you would like to add? (I worked: 3-5 timmar/vecka)

Lasse and Per always available to help. However not the most creative exercises and very little freedom of choice. Guest lectures from outside KTH were great (especially 1st and 2nd) the other less interesting. Regular lectures not very interesting or useful.

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

No

## SPECIFIC QUESTIONS

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## RESPONSE DATA

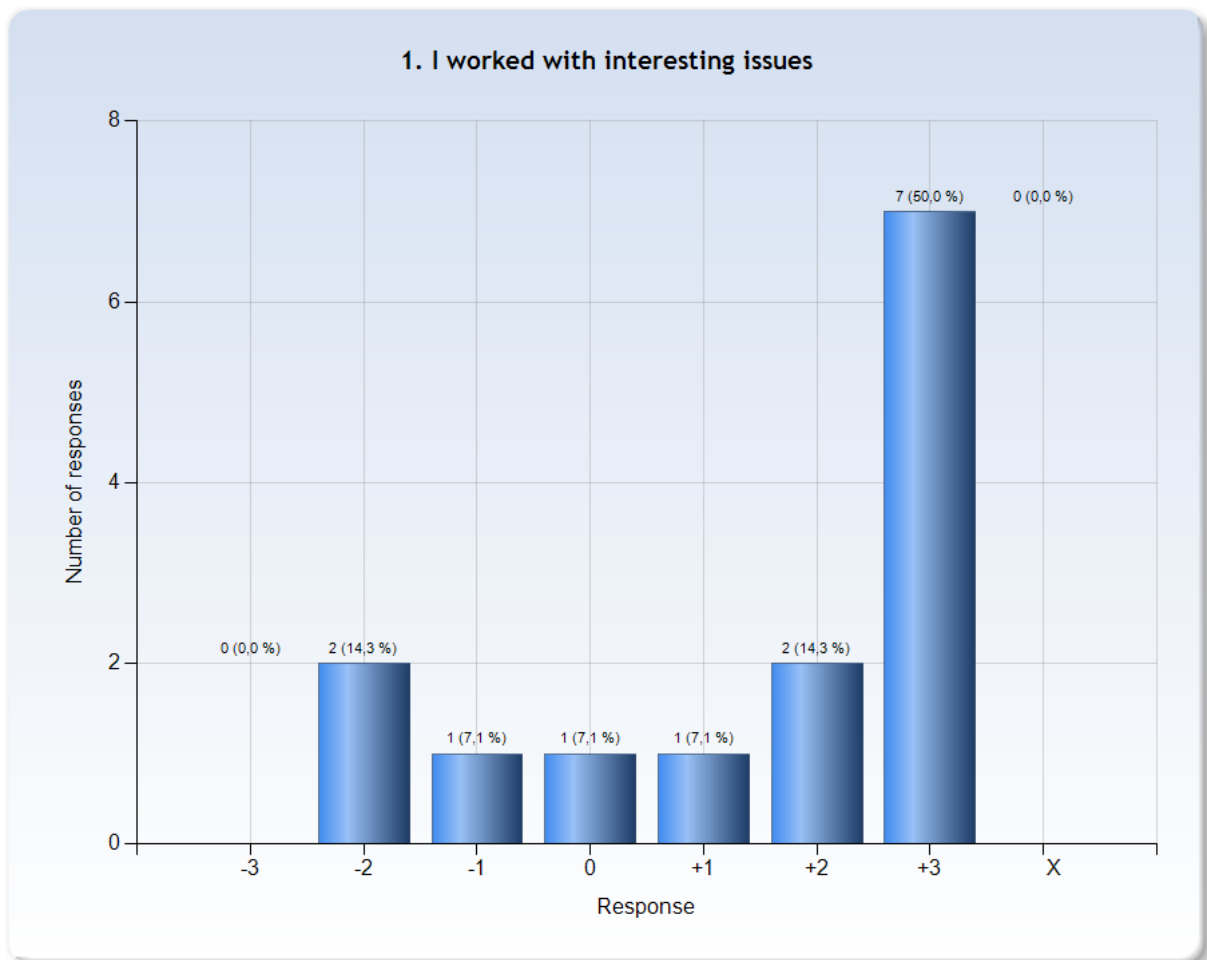
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-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







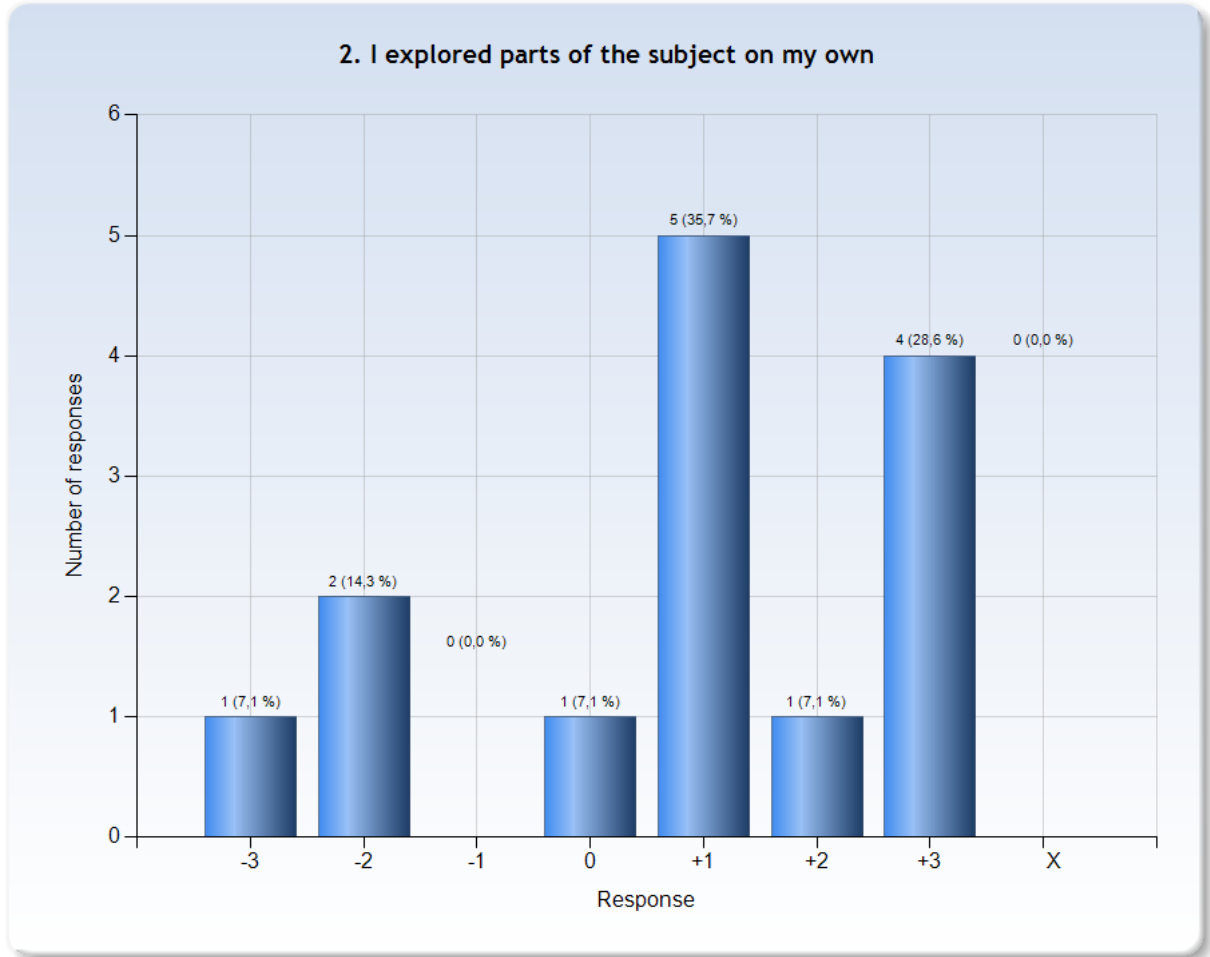
### Comments

Comments (My response was: 0)

Interesting issues but not always the most interesting labs or lectures.

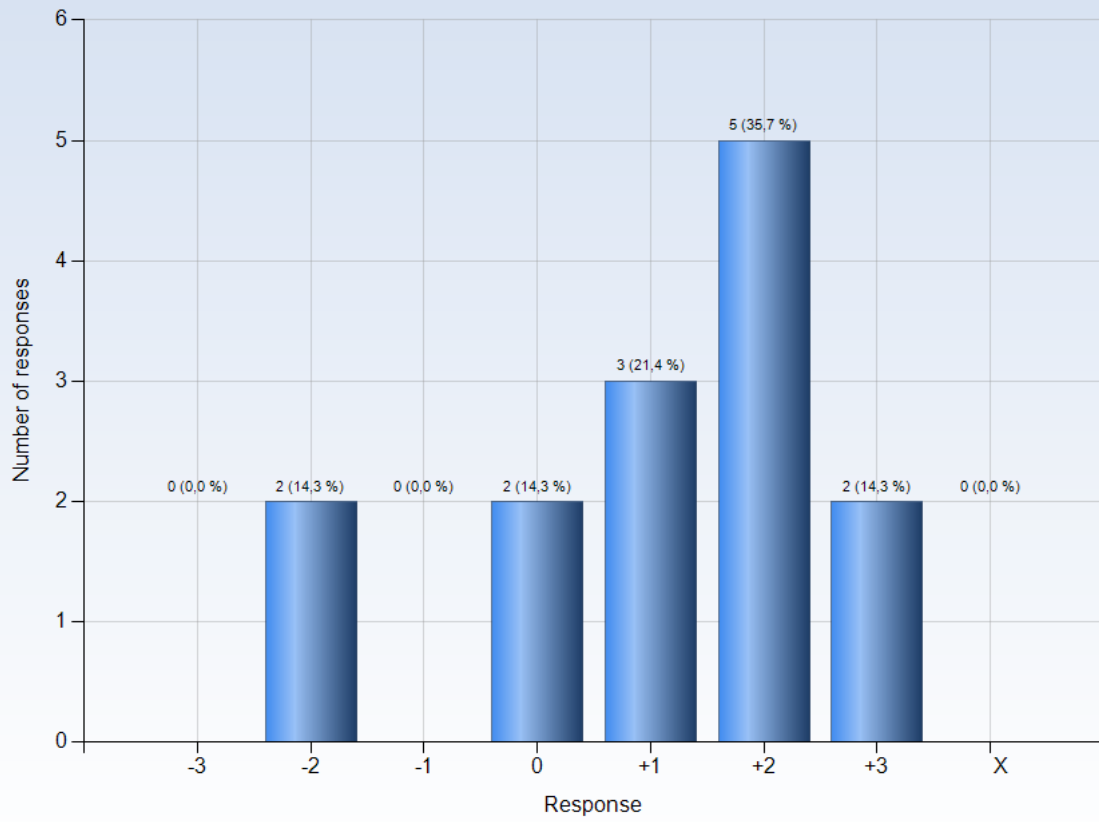
Comments (My response was: +3)

All topics were very interesting and educational- i hope more courses could catch my interest like this!



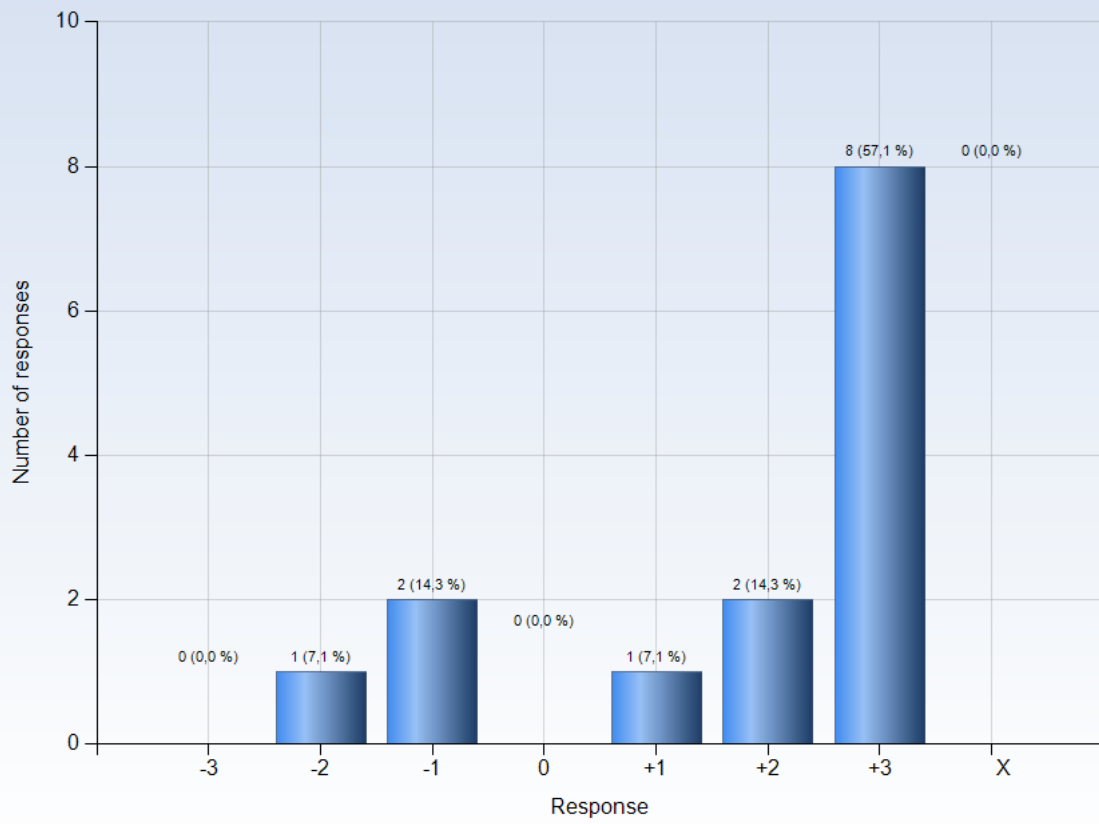
### Comments

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



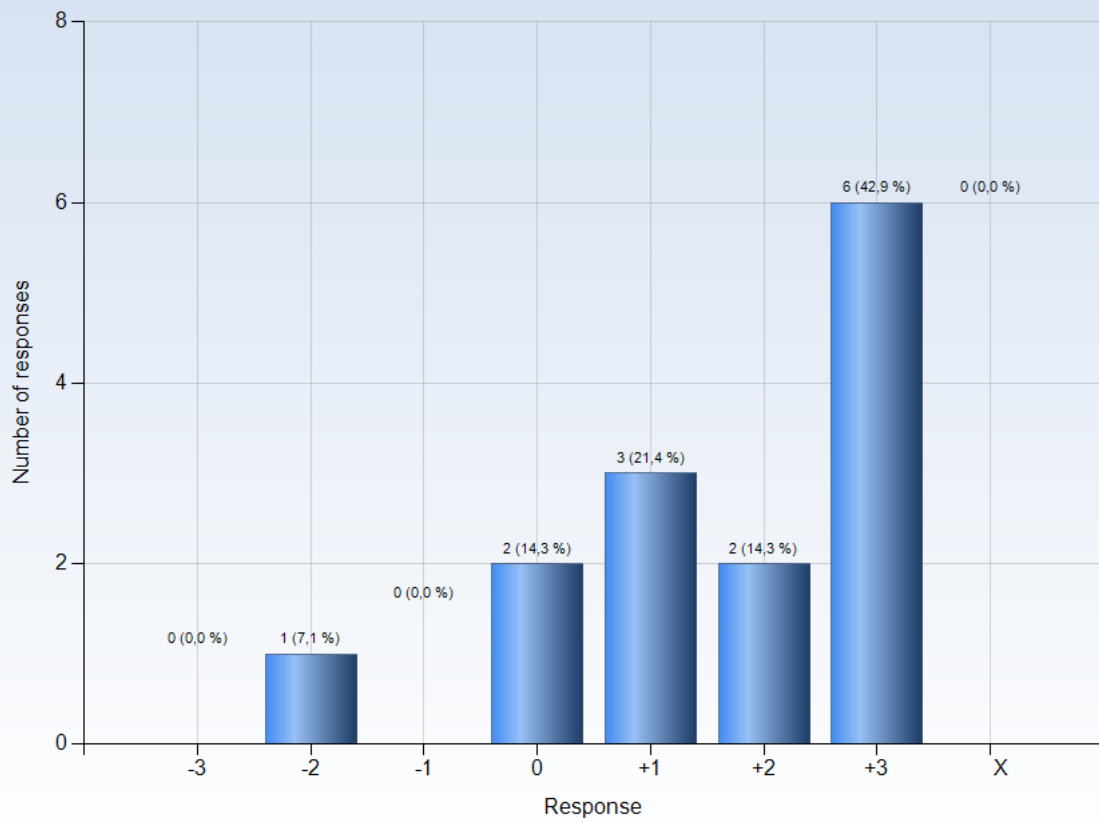
Comments

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



Comments

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

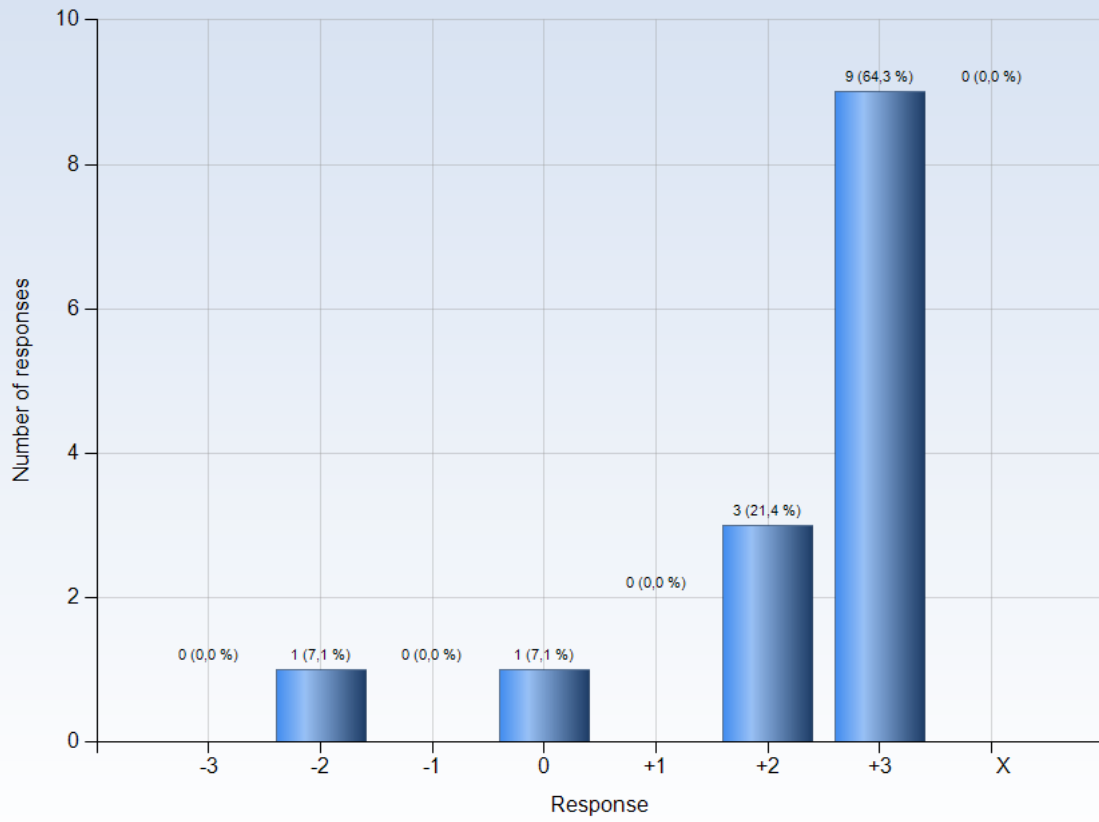


#### Comments

Comments (My response was: +2)

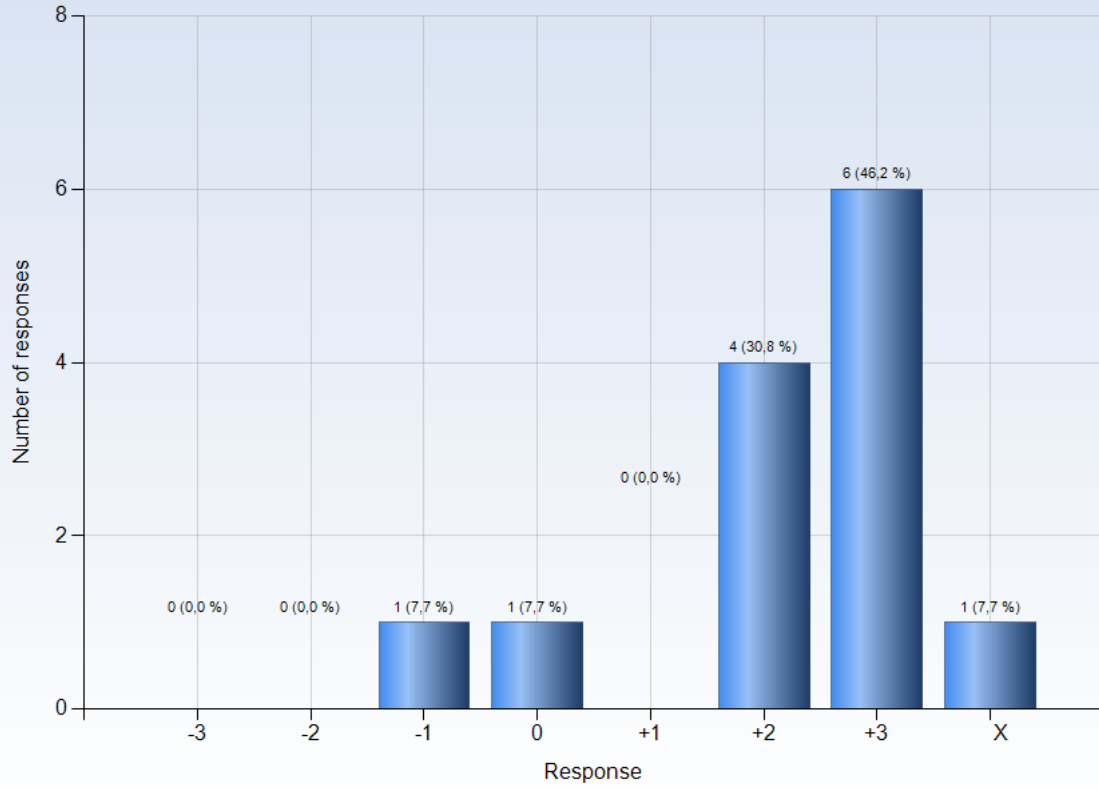
Especially during evenings in the M computer room, Lasse and Per almost always available.

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

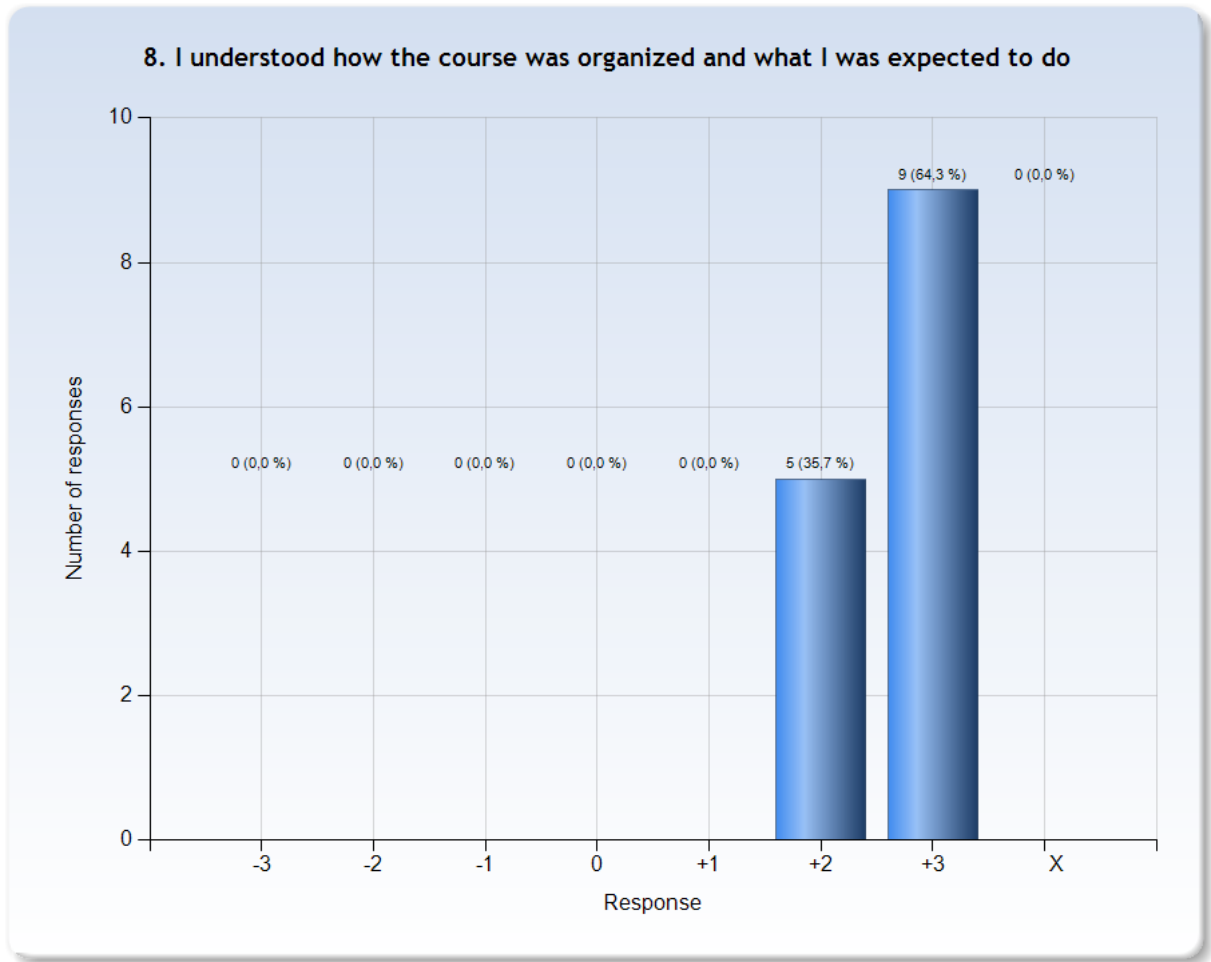


Comments

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



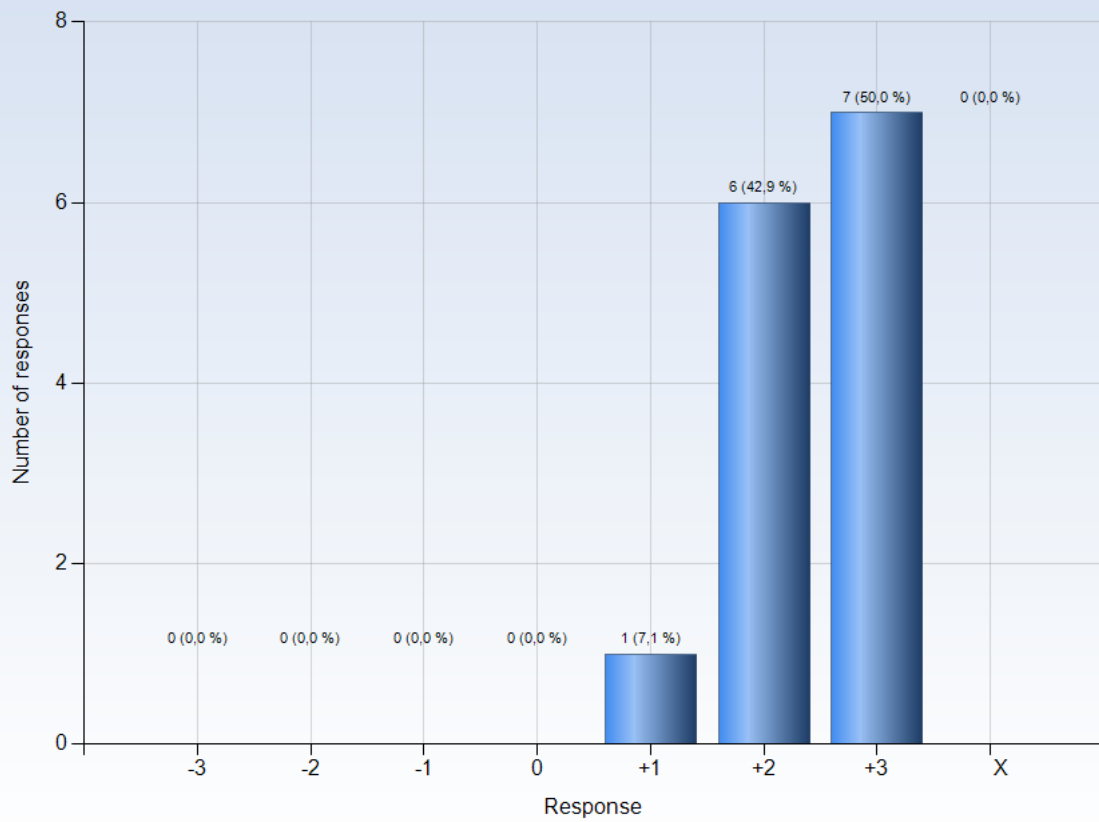
Comments



#### Comments

Comments (My response was: +3)  
Supertydligt vilket uppskattas

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



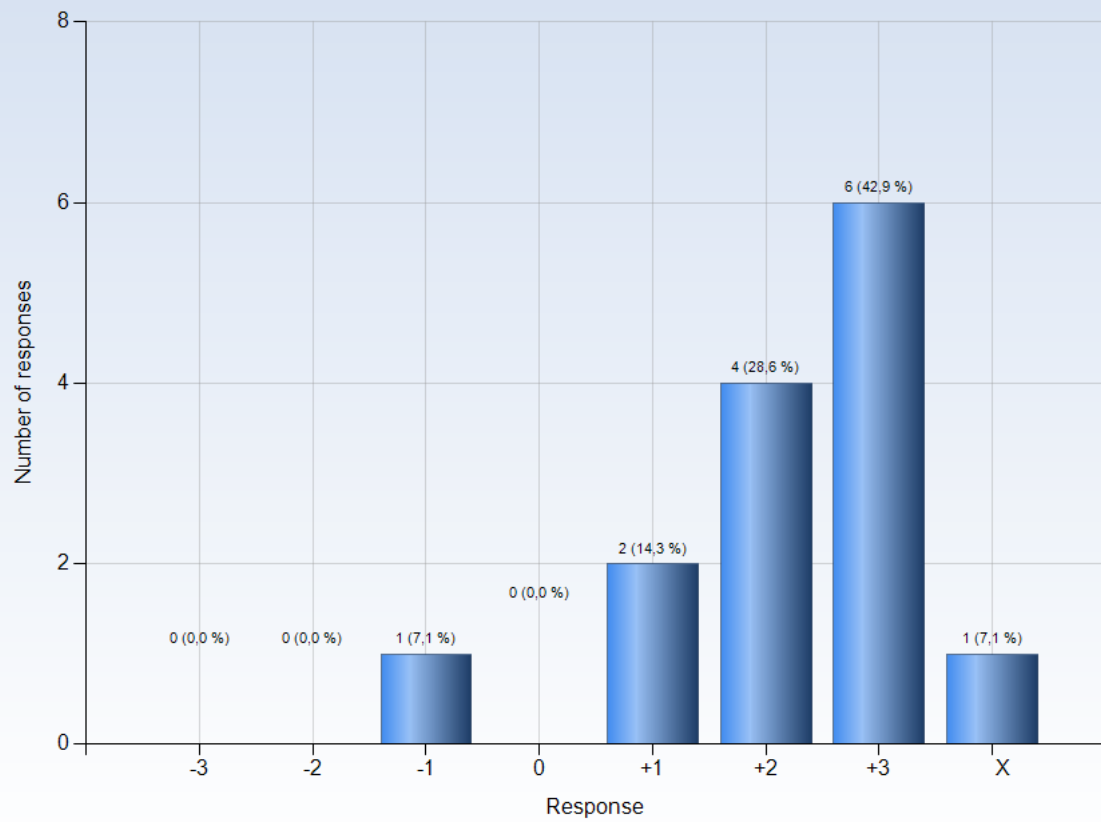
#### Comments

Comments (My response was: +1)

Några gästföreläsningar var lite oklara, den sista exempelvis



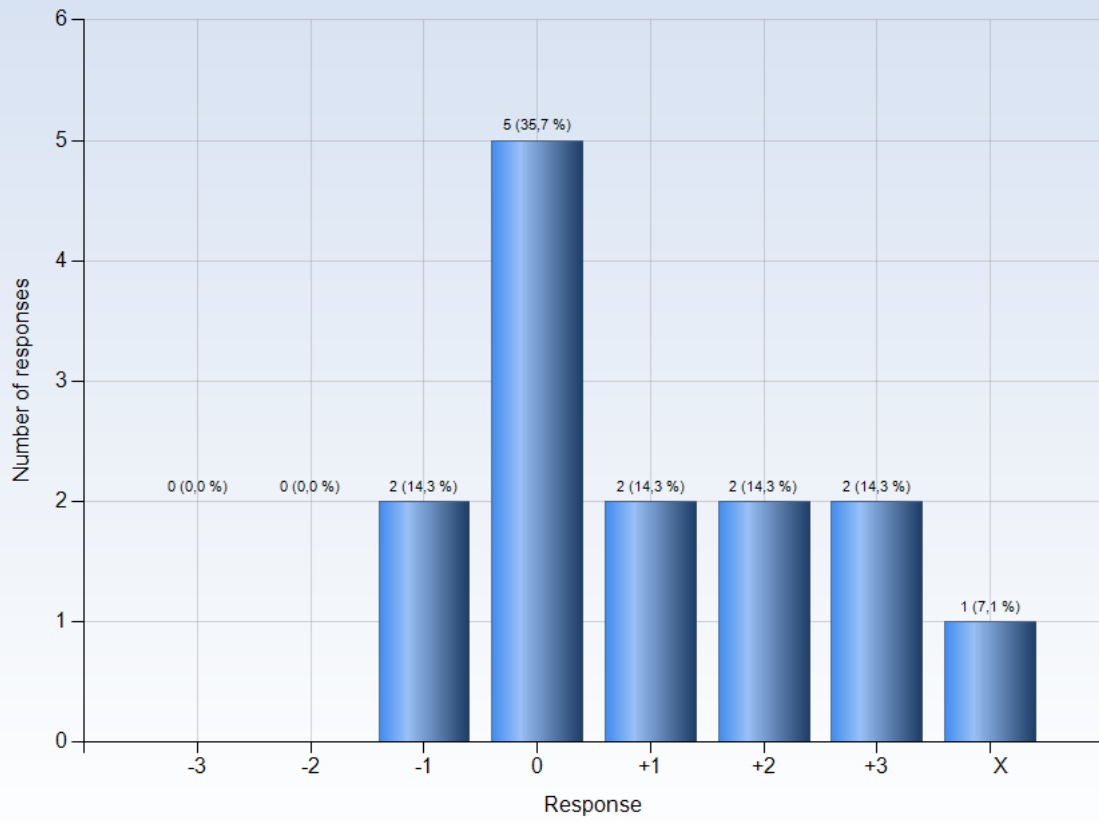
10. I was able to learn from concrete examples that I could relate to



Comments

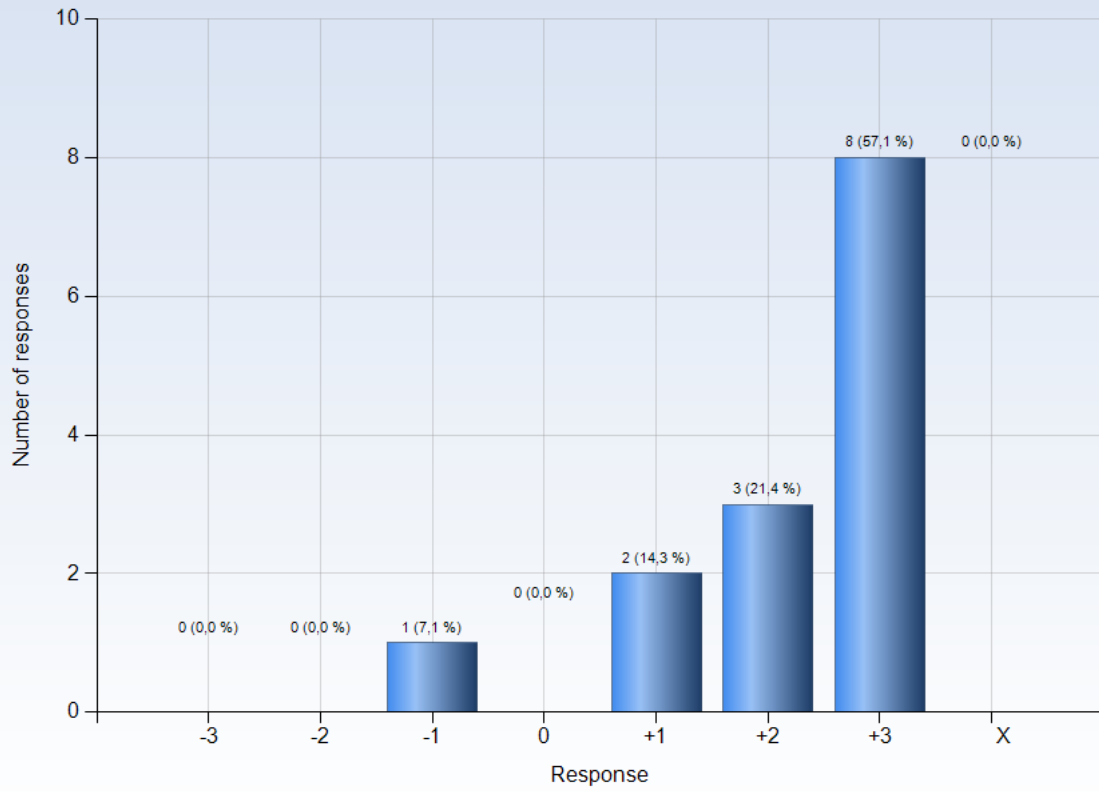
Comments (My response was: +3)  
Ex gästföreläsare

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



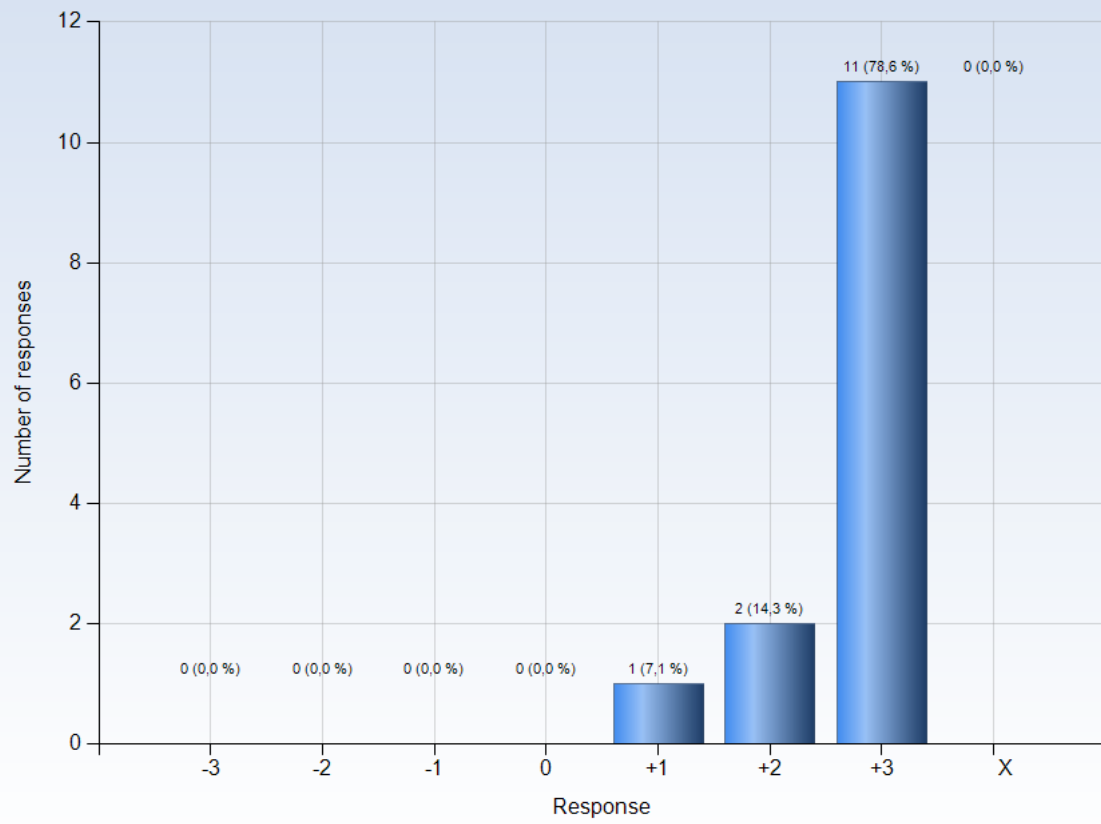
Comments

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



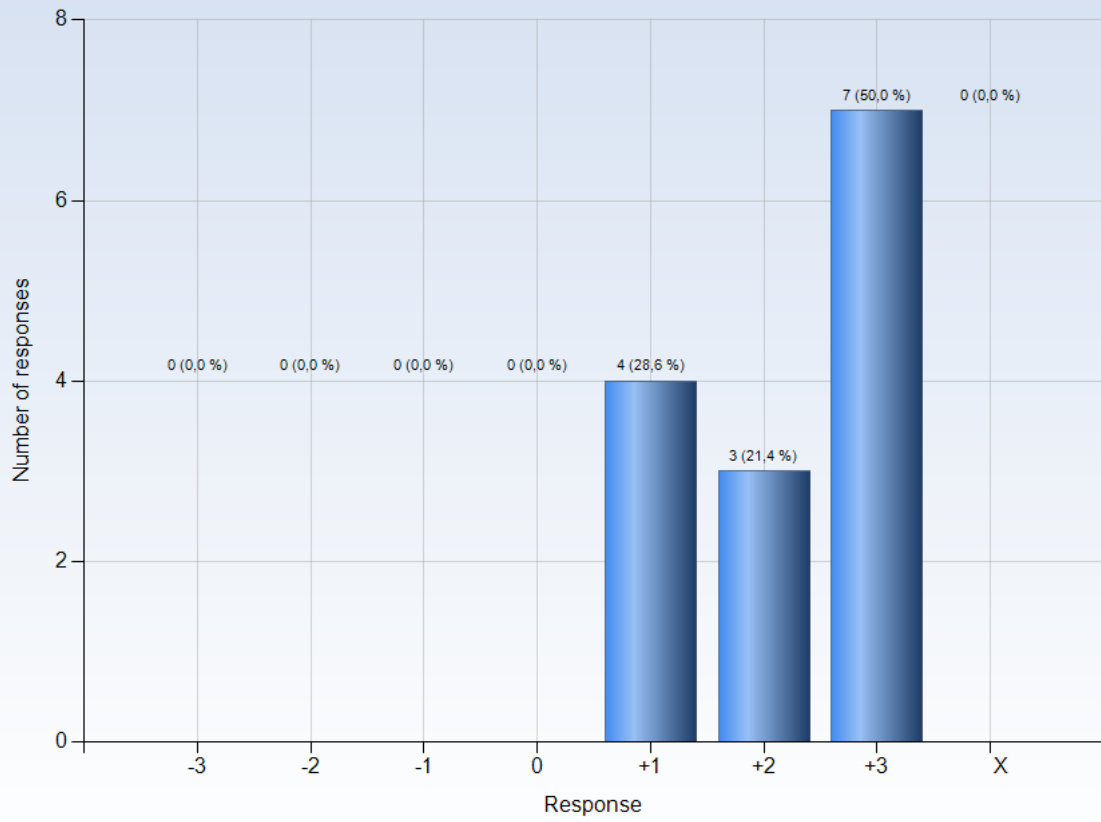
Comments

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



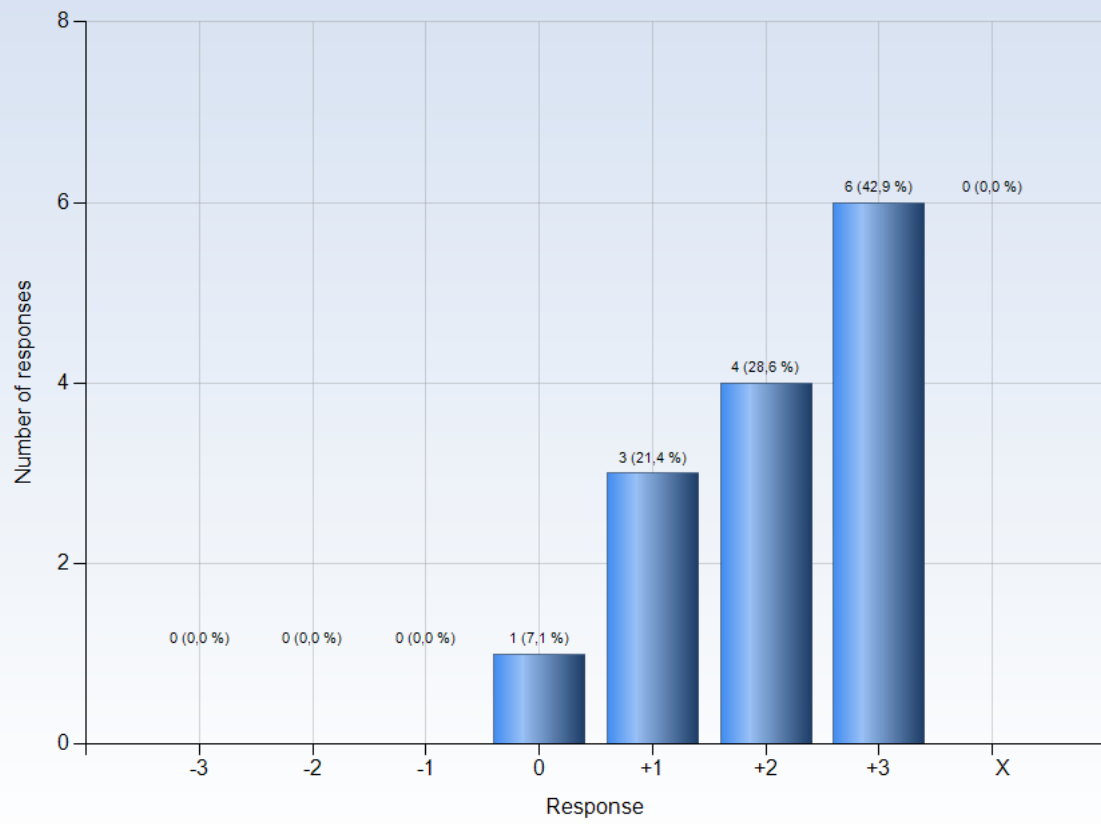
Comments

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



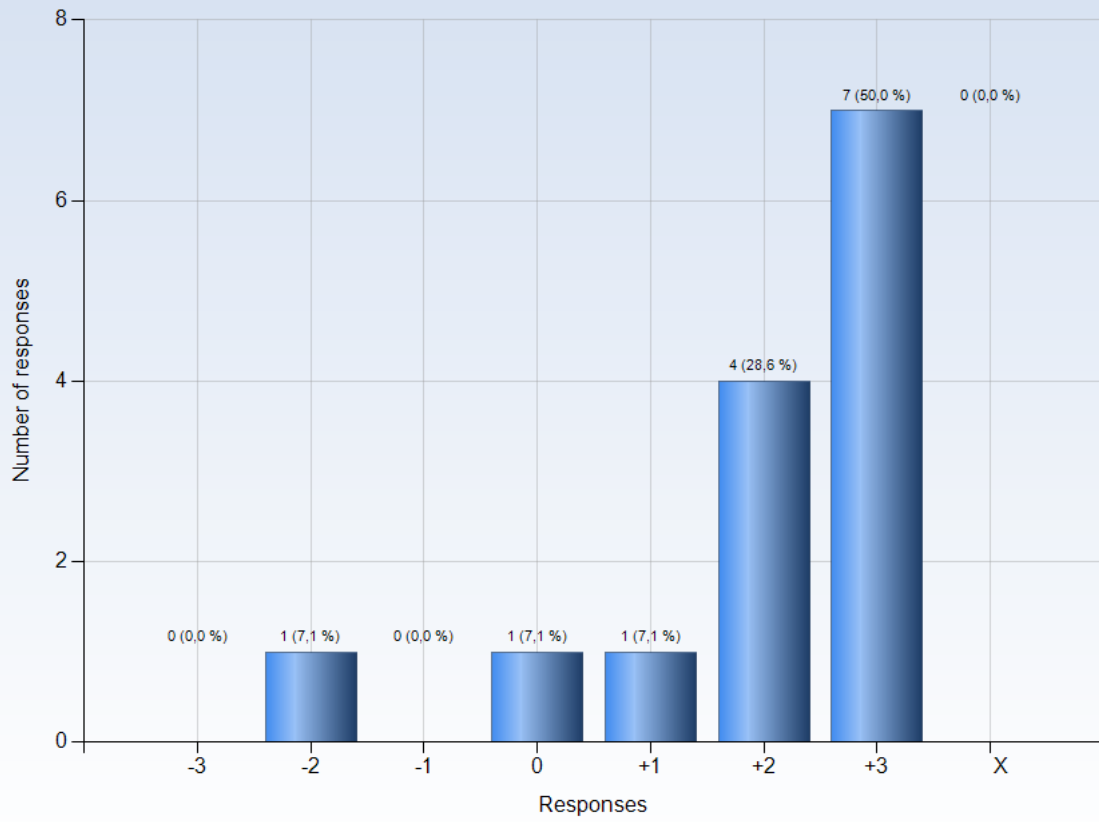
Comments

### 15. I could practice and receive feedback without being graded



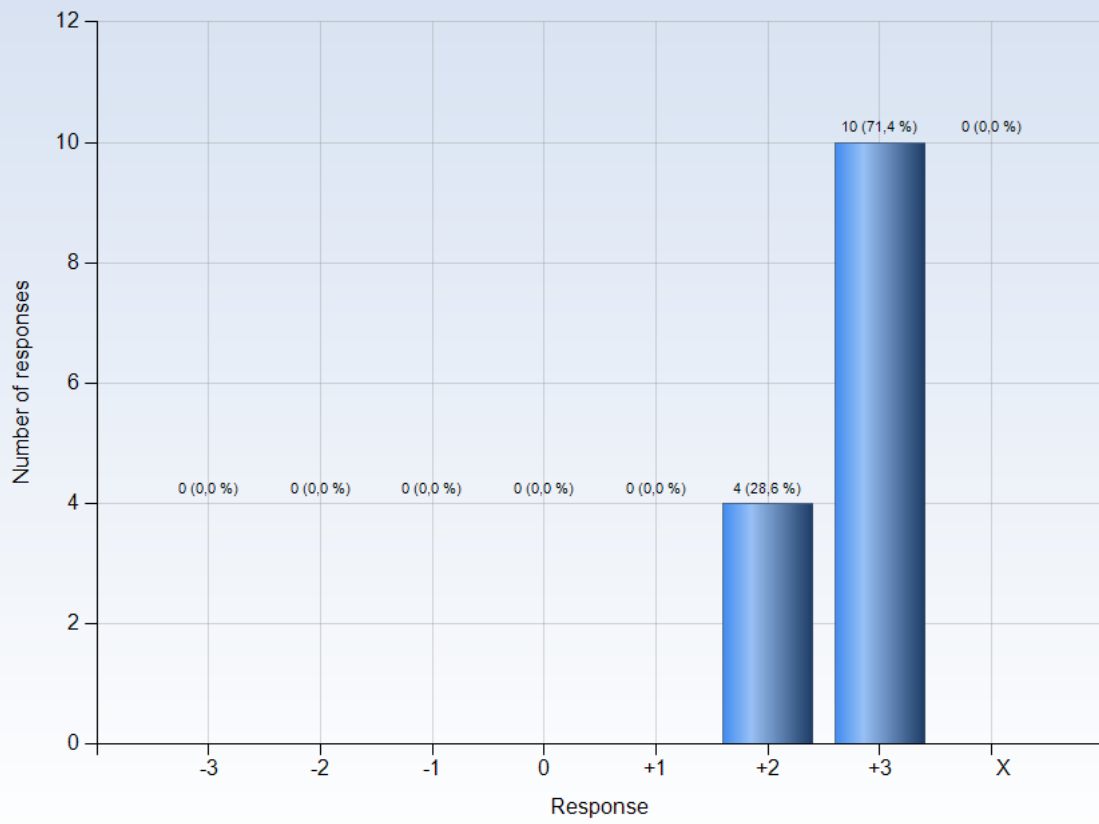
Comments

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



Comments

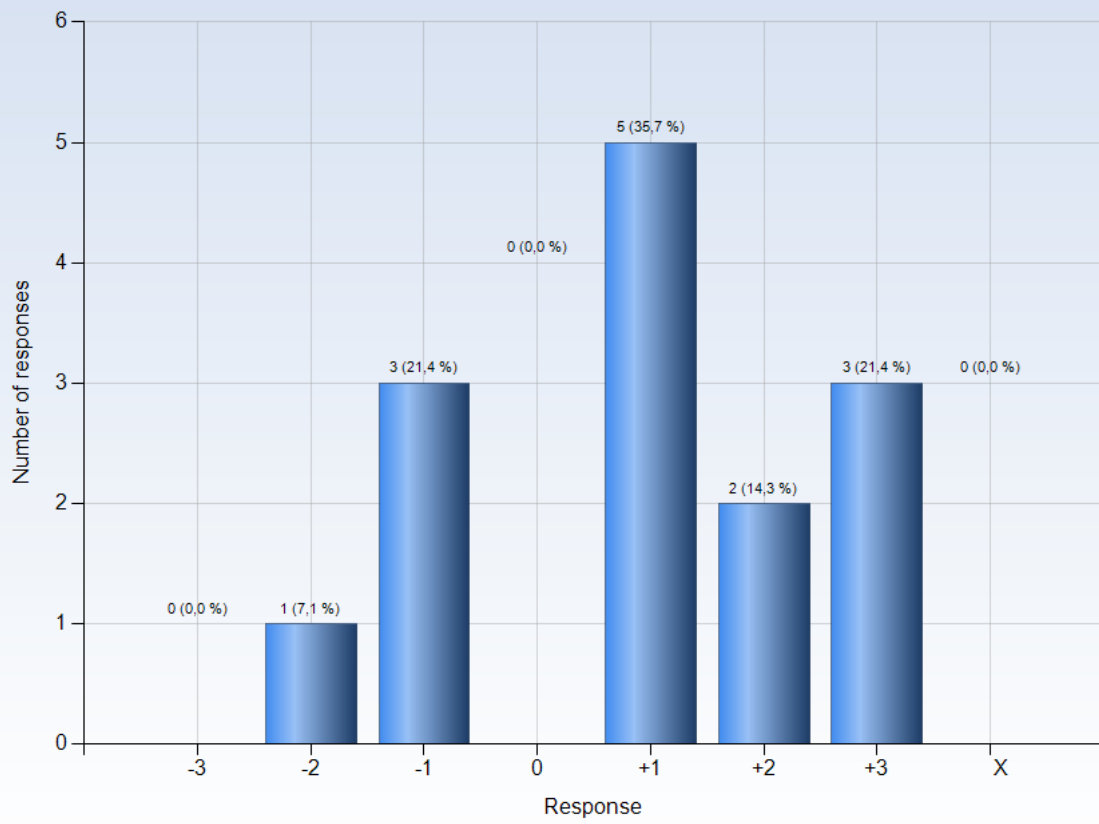
### 17. My background knowledge was sufficient to follow the course



Comments

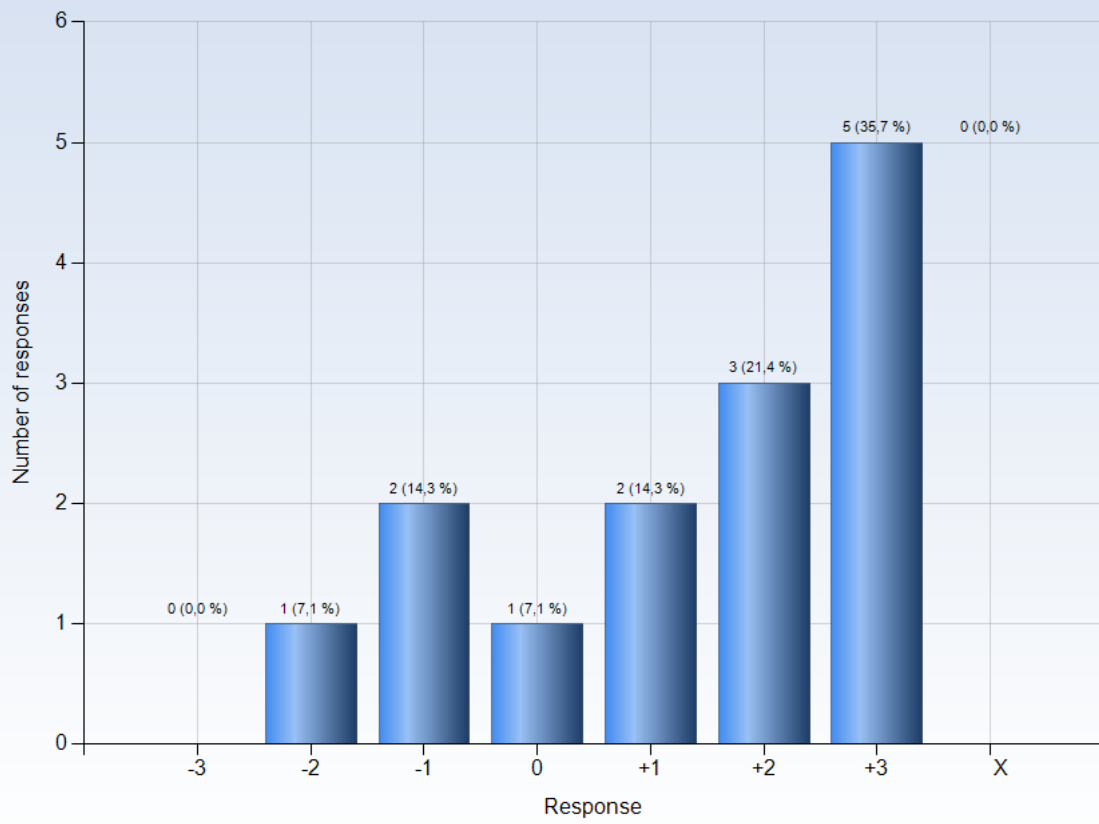


### 18. I regularly spent time to reflect on what I learned



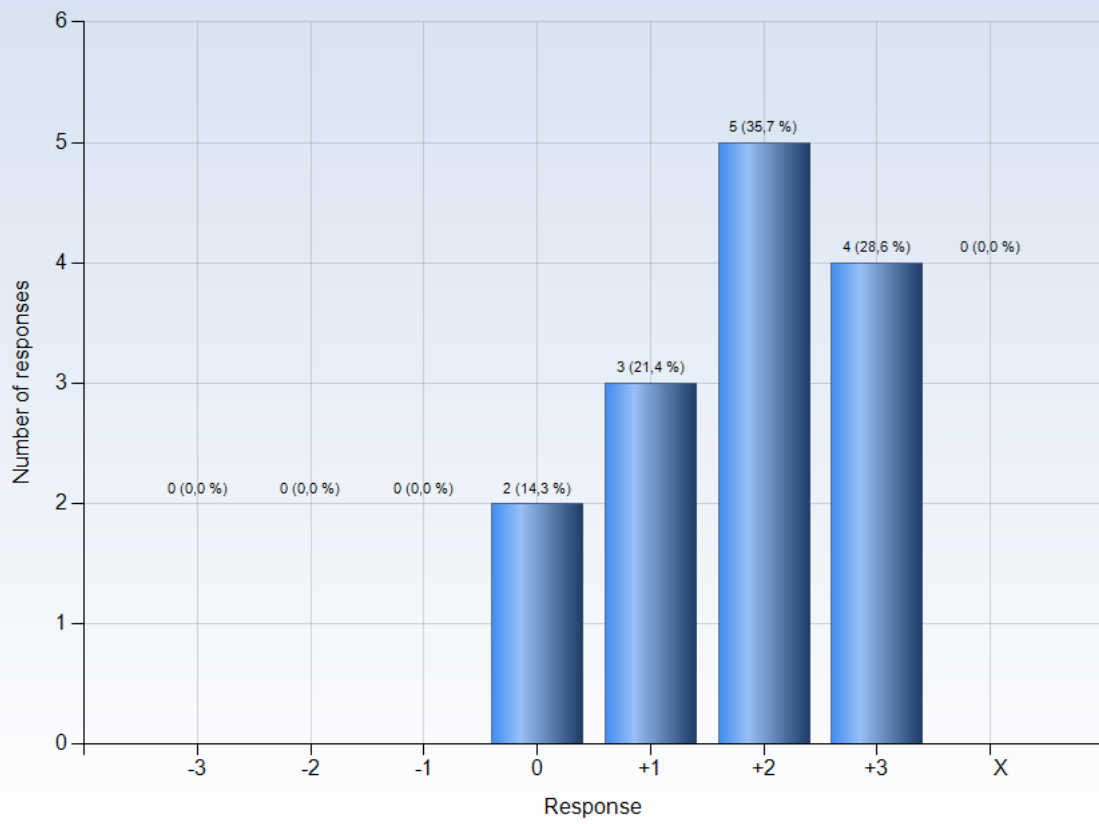
Comments

### 19. I was able to learn in a way that suited me



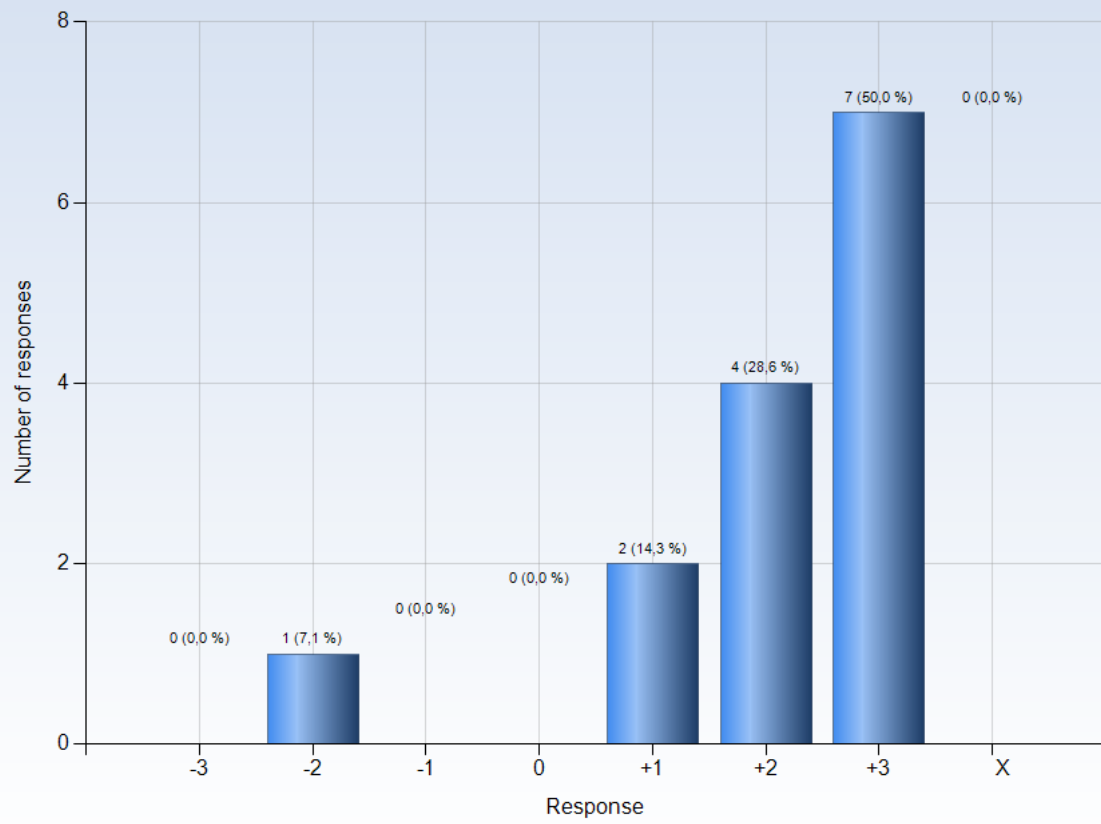
Comments

### 20. I had opportunities to choose what to do



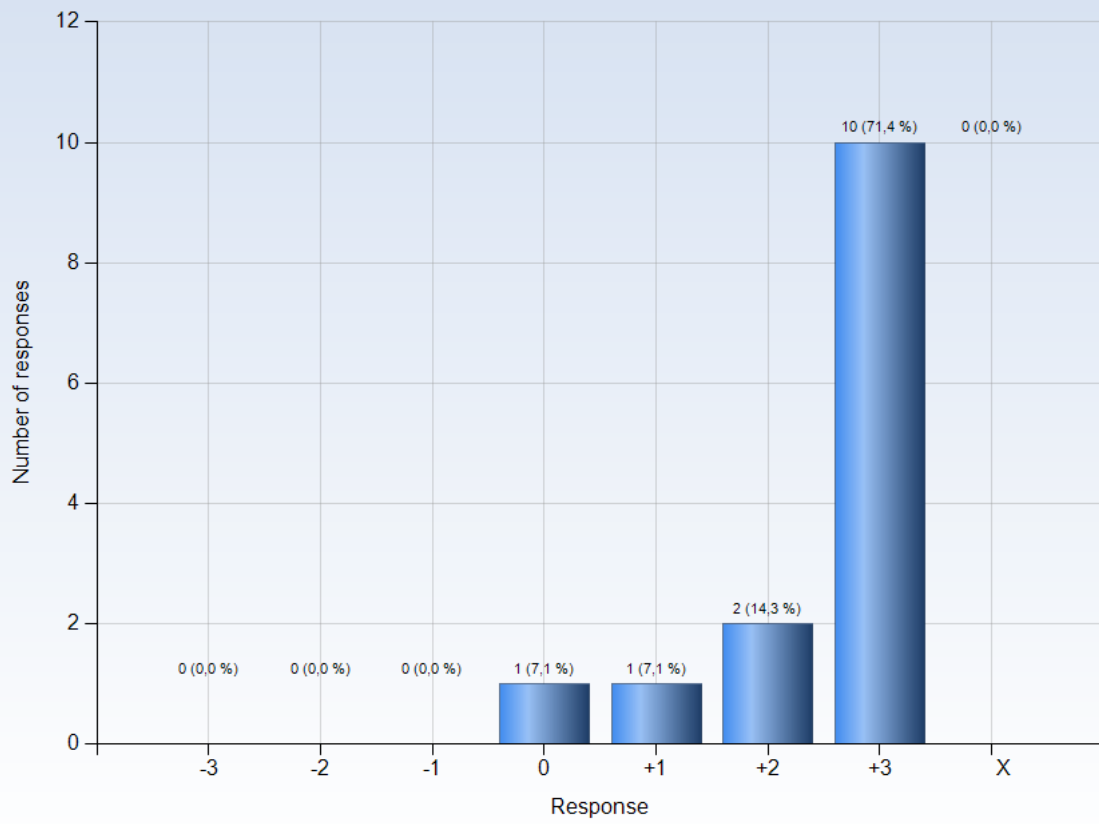
Comments

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



## MG2128 - 2017-12-12

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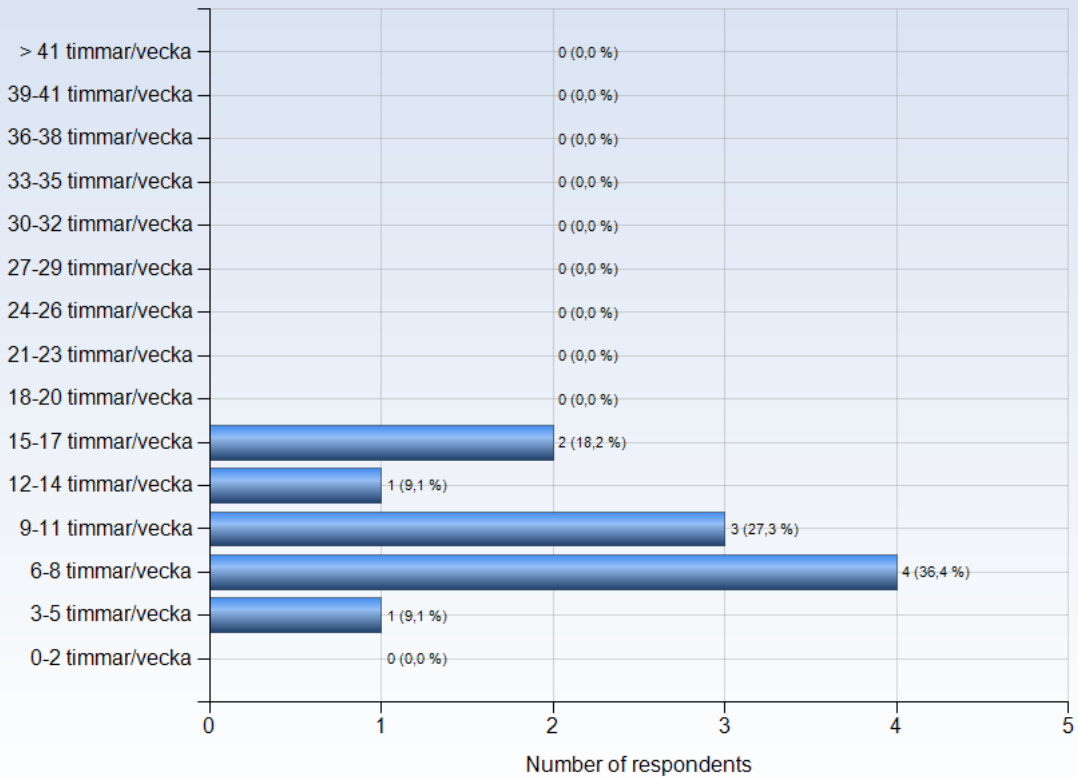
Antal respondenter: 45  
Antal svar: 13  
Svarsfrekvens: 28,89 %

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## ESTIMATED WORKLOAD

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



Comments



## 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

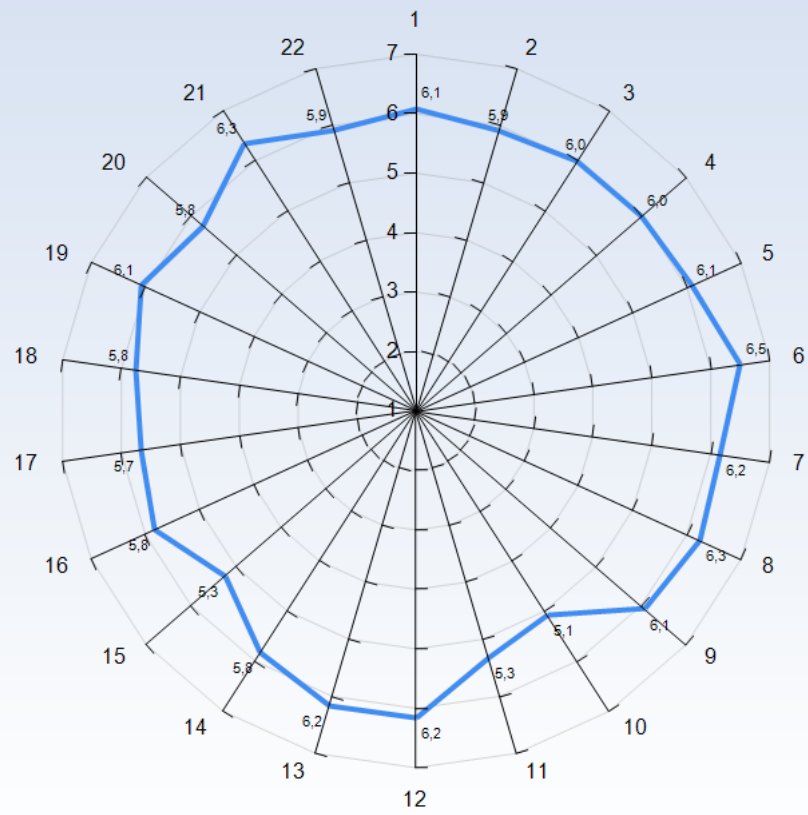
4 = I am neutral to the statement

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**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 v3.1.3**

### **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*

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#### *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. I understood how the course was organized and what I was expected to do (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 choices*

- 19. I was able to learn in a way that suited me (m)
- 20. I had opportunities to choose what to do (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, intriguing or important
- b) We can speculate, try out 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 yet supportive environment
- d) We feel that we are part of a community and believe that other people have faith 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 sufficient background knowledge to manage the present learning situation
- g) We can learn inductively by moving from specific examples and experiences to general principles, rather than the other way around
- h) We are challenged to develop a proper understanding of key concepts and successively create a coherent whole of the content
- i) We believe that the work we are expected to do will help us to reach the intended learning outcomes
- j) We can try, fail, and receive feedback in advance of and separate from any summative judgment of our efforts
- k) We believe that our work will be considered fairly and honestly
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m) We believe that we are in control of our own learning, not manipulated

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## Literature

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

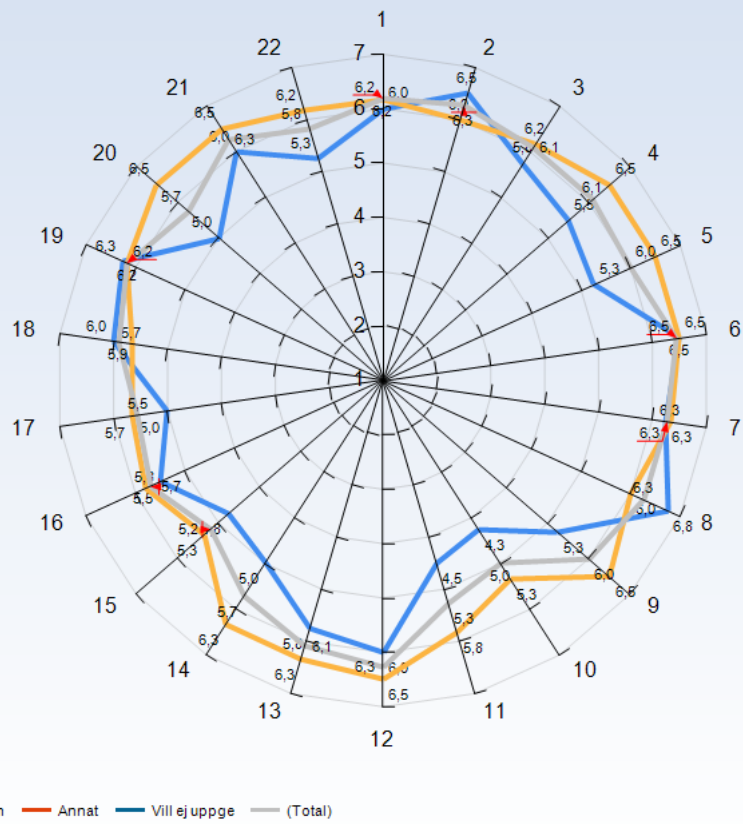
Biggs J. & Tang, C. (2011). *Teaching for Quality Learning at University*, Chapter 6, pp. 95-110. Maidenhead: McGraw Hill.

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

### Average response to LEQ statements - per gender

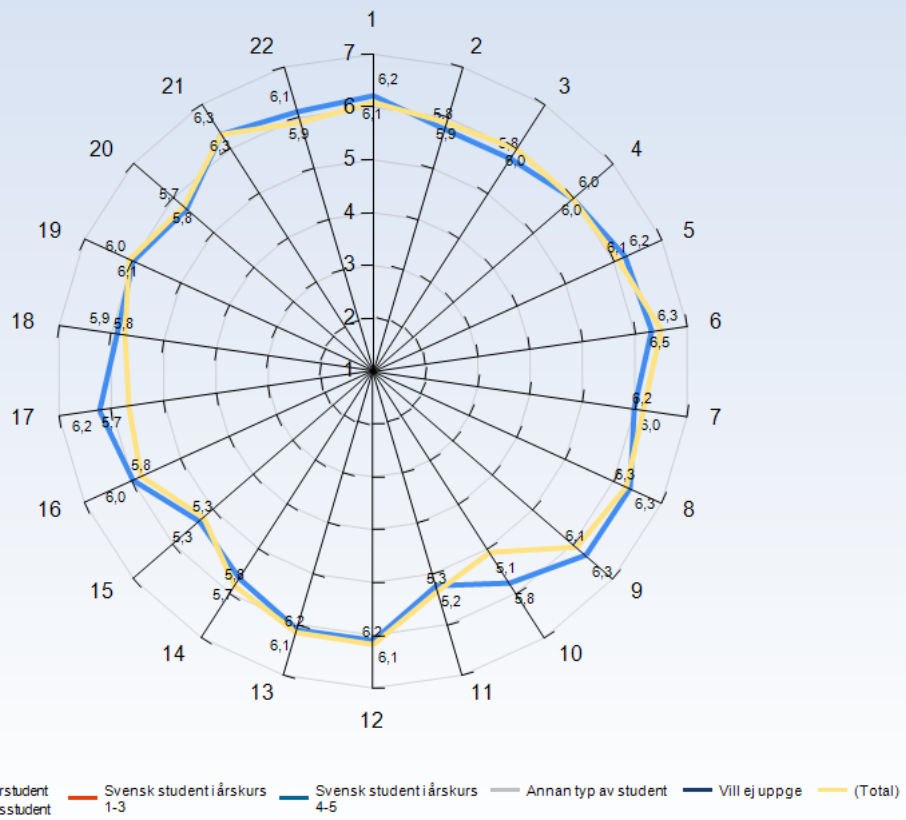


### Comments

Comments (I am: Man)

-

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



### Comments

Comments (I am: Internationell masterstudent)

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## 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)

Lärorikt och kul innehåll. Bra med labbar som examination. Även bra med betygshöjande labbar. exercise and fast learning of a CAD software.

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

The CAD part definitely.

To be able to work by oneself on volunteer assignments!

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

Teacher

### What would you suggest to improve?

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

Ibland förväntas kunskaper som inte lärts ut under kursen. Då de inte är förkunskaper som krävs för att läsa kursen blir det konstigt när något blir orimligt svårt, tex första läxan var väldigt svår om man inte lärt sig läsa skisser mer än man gjort i denna kurs.

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

Guest lectures! Topics were too general for a master class. Especially the one about metrology spent too much time on explaining tolerances. I would ask you too spent more time on finding high quality and interesting guest lectures

Maybe it would have been more interesting to focus on two or three tools for industrial processes instead of one per week in P2.

I would add one lecture to talk about the volunteer assignment.

### 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)

Labbarna behövs oftast inte lägga mer tid på än schemalagd tid.

Nothing special

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

Enjoy the course!

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

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

Teknisk rapport kräver också förkunskaper som alla kanske inte har.

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

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## SPECIFIC QUESTIONS

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## RESPONSE DATA

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

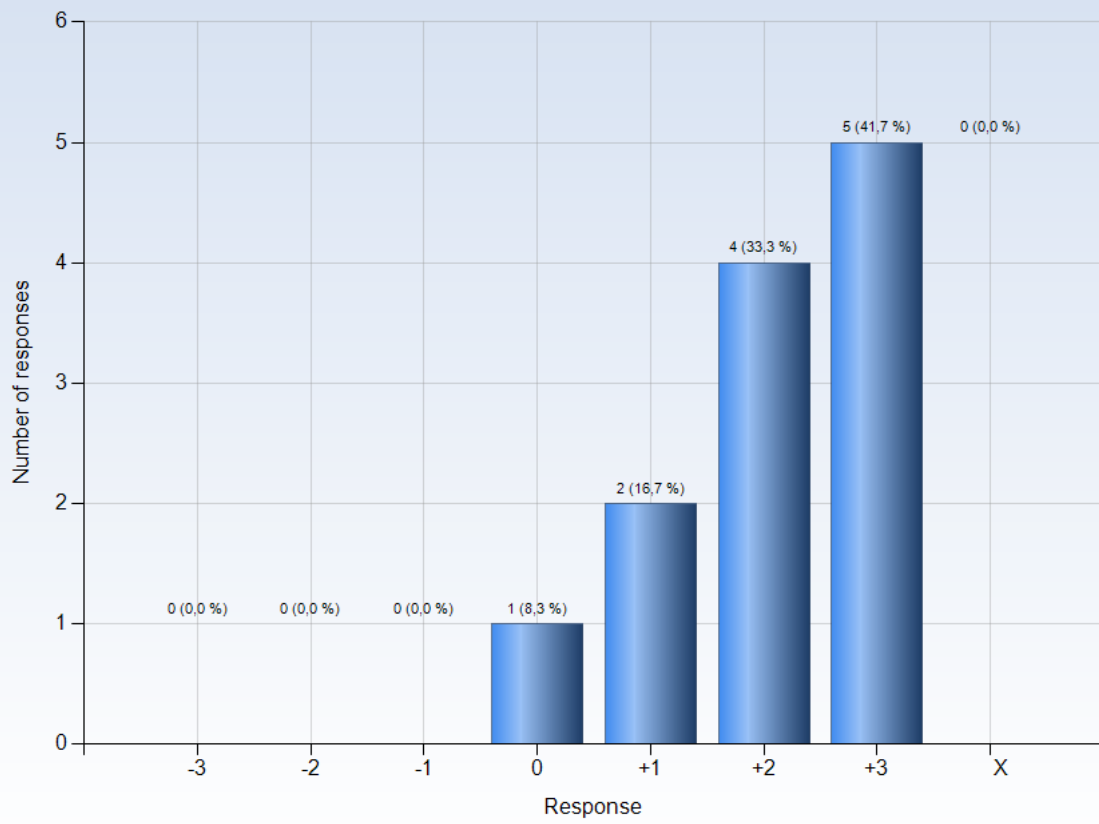
-3 = No, I strongly disagree with the statement

0 = I am neutral to the statement

+3 = Yes, I strongly agree with the statement

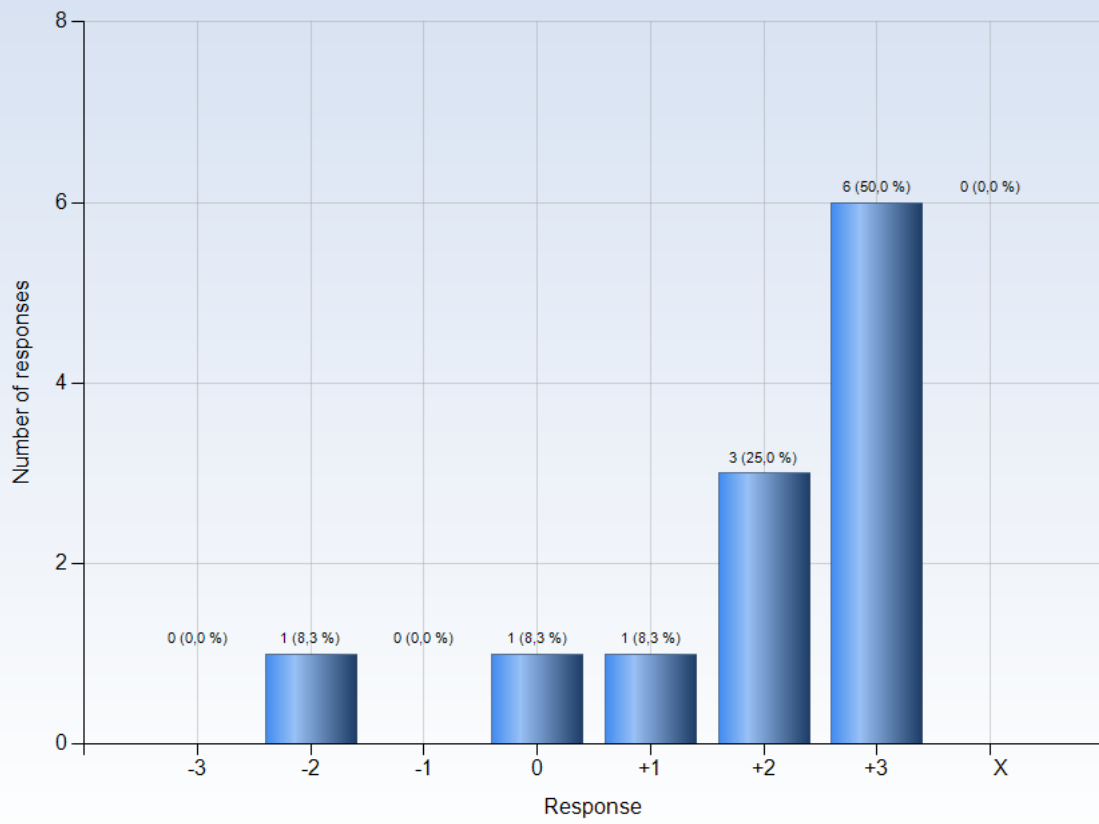
X = I decline to take a position on the statement

### 1. I worked with interesting issues



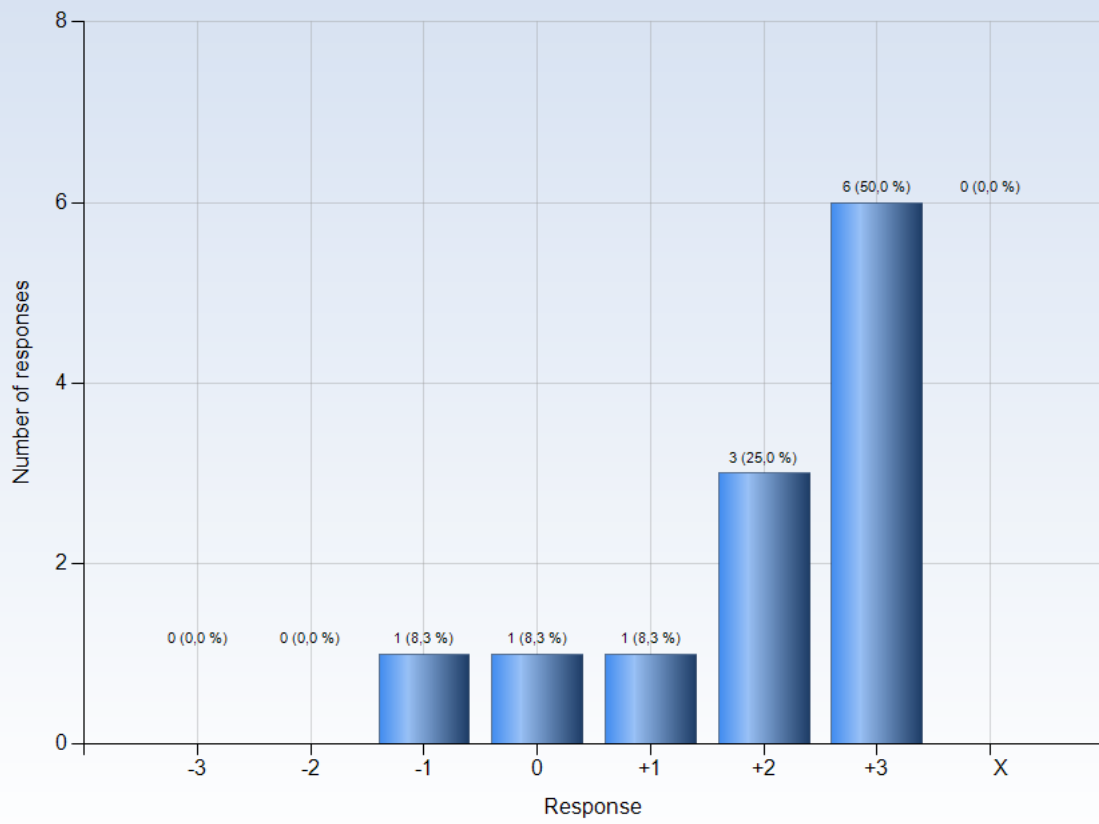
Comments

## 2. I explored parts of the subject on my own



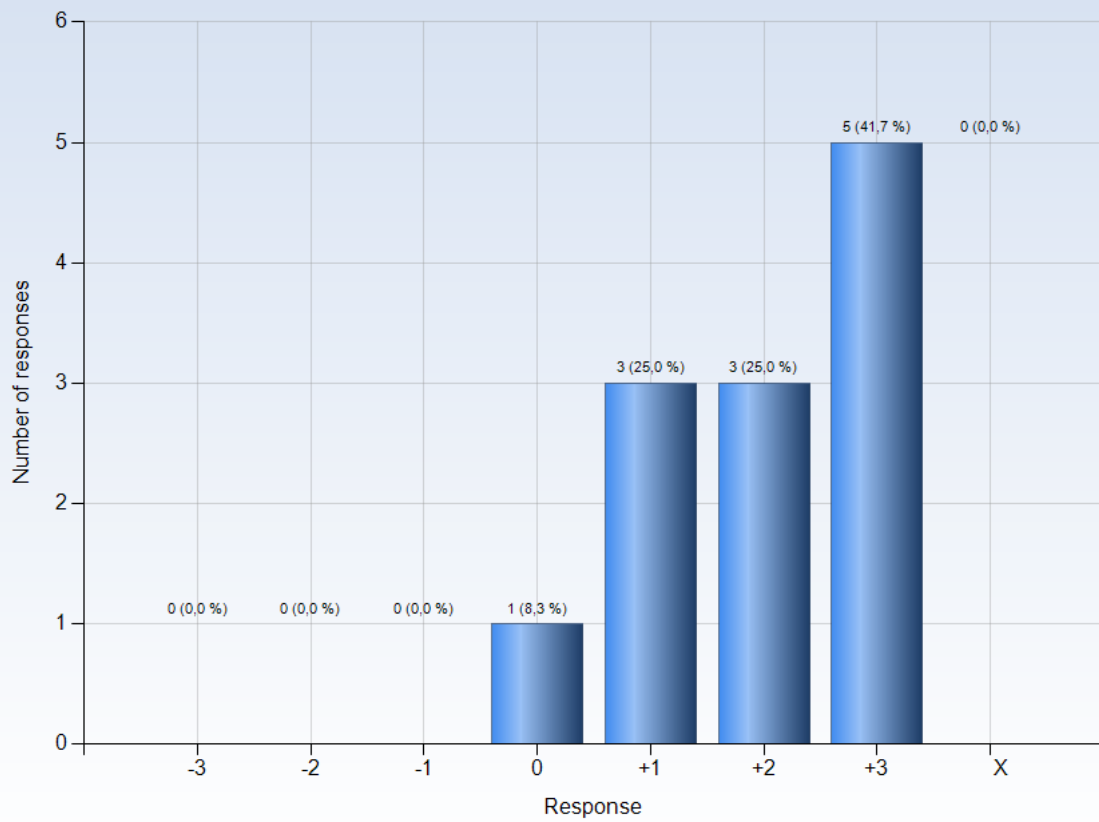
Comments

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



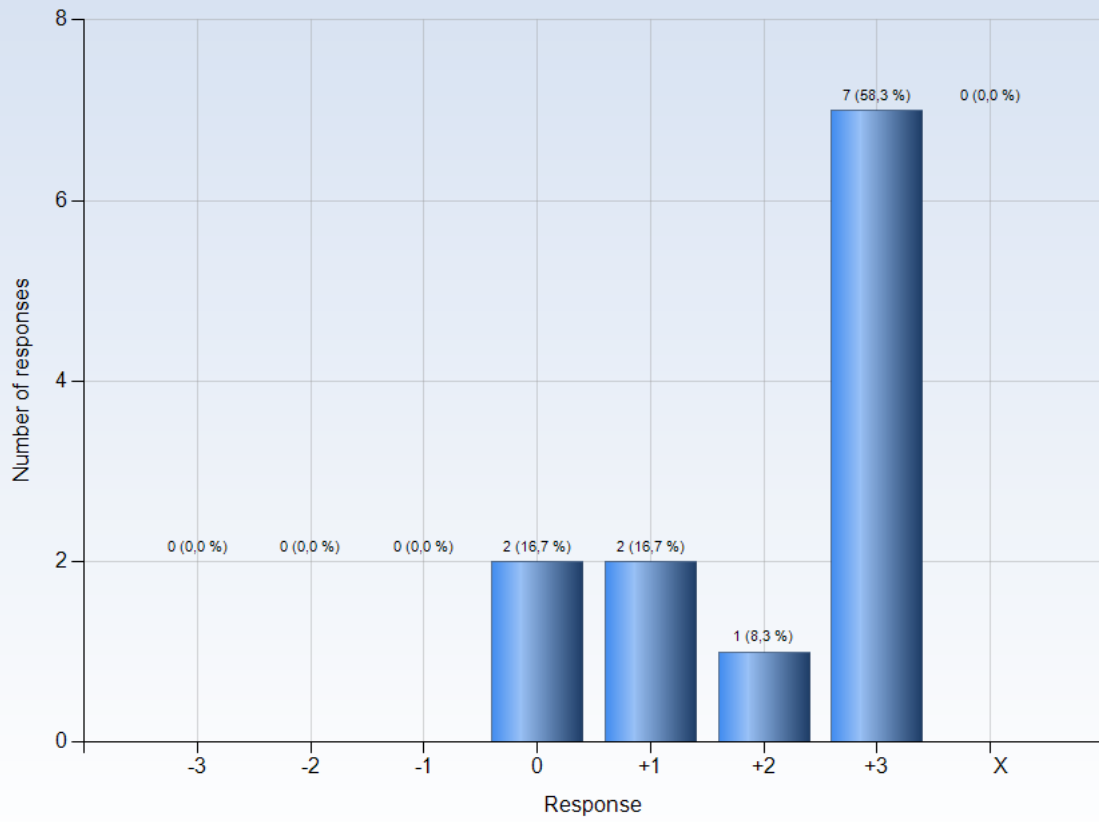
Comments

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



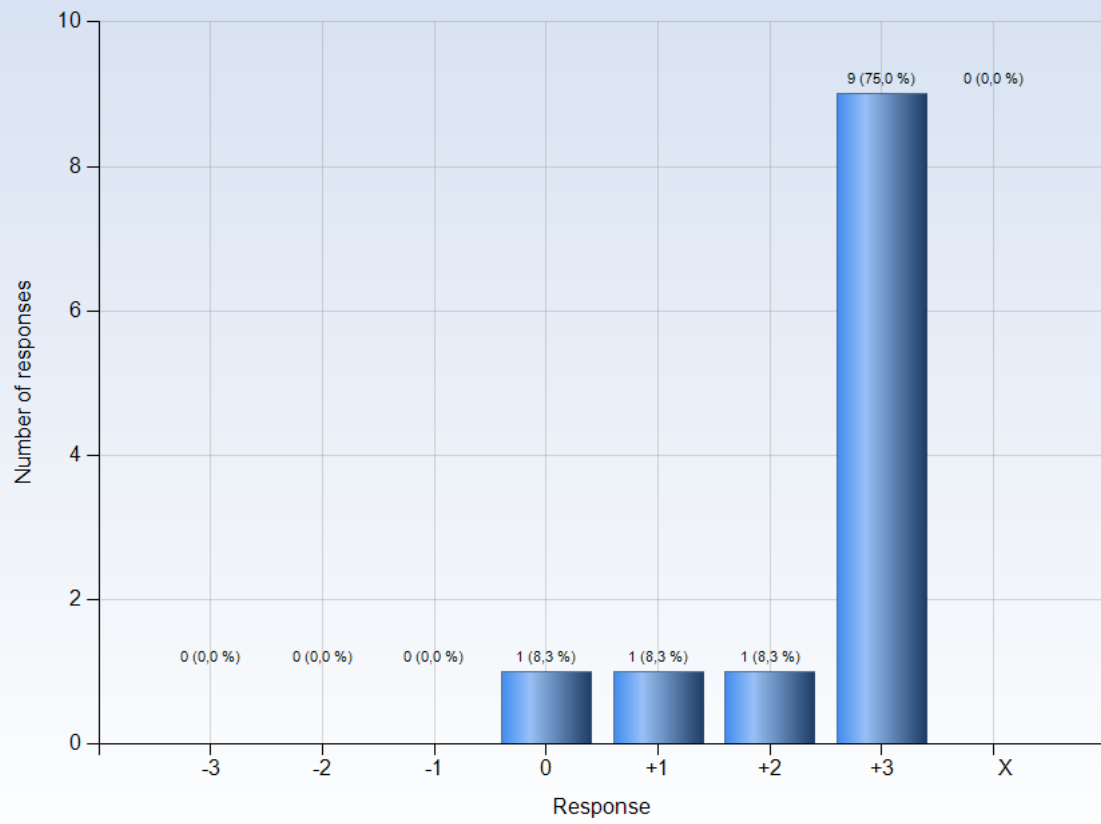
Comments

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



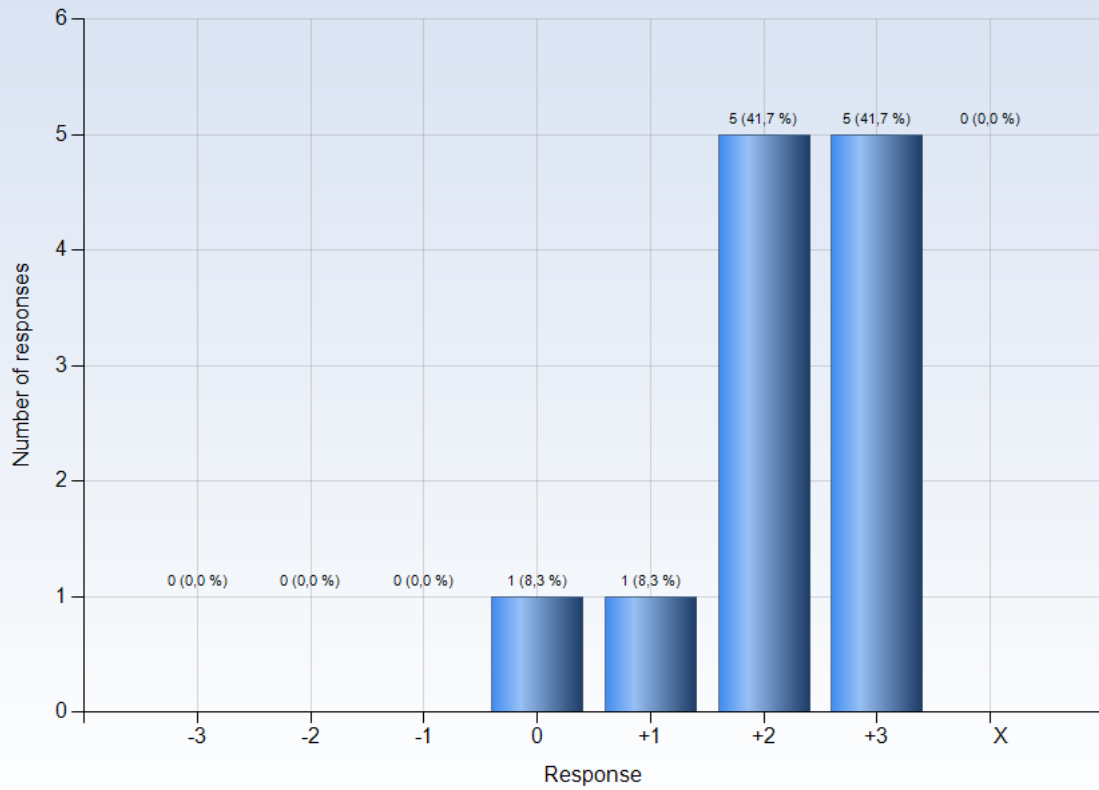
Comments

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



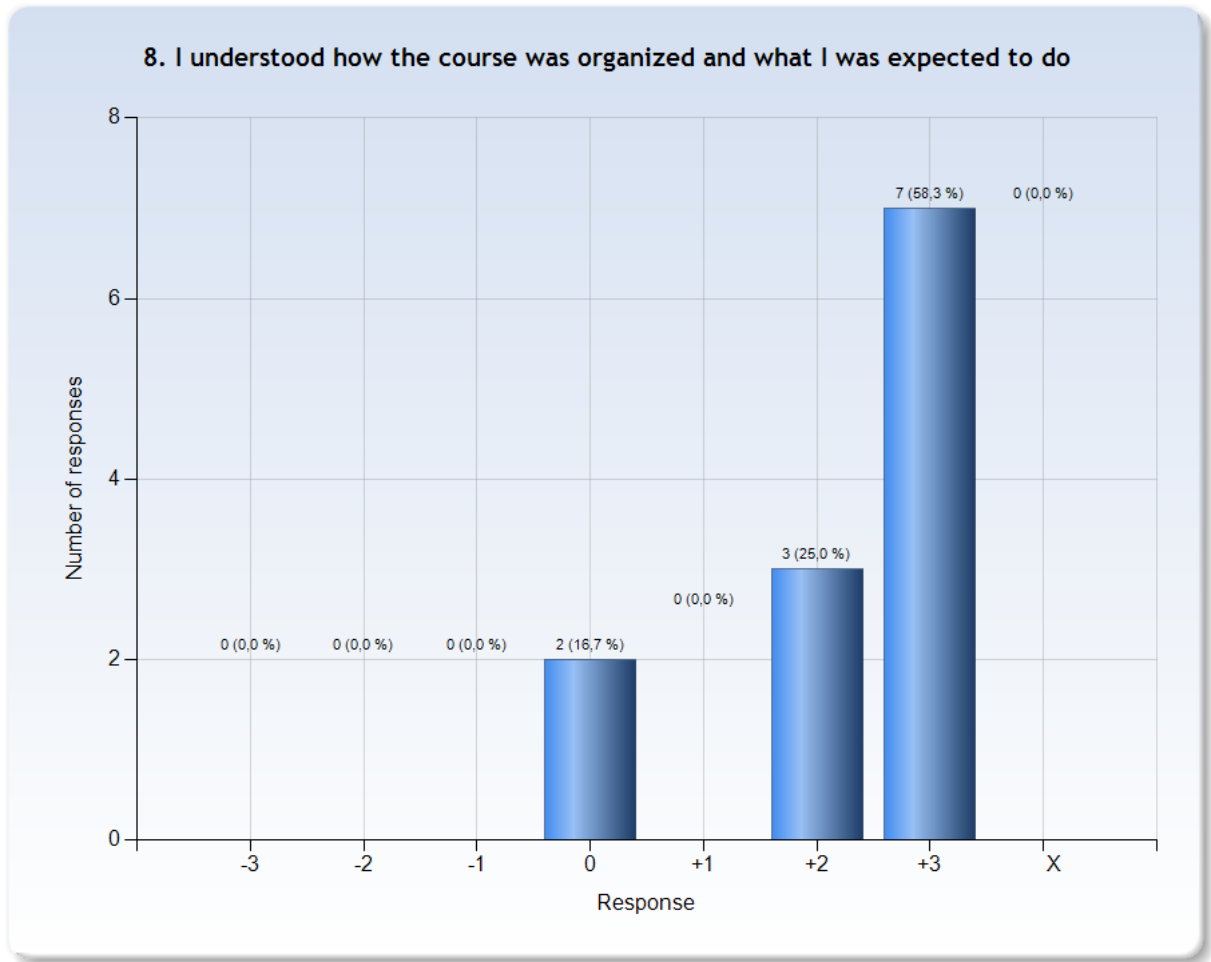
Comments

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



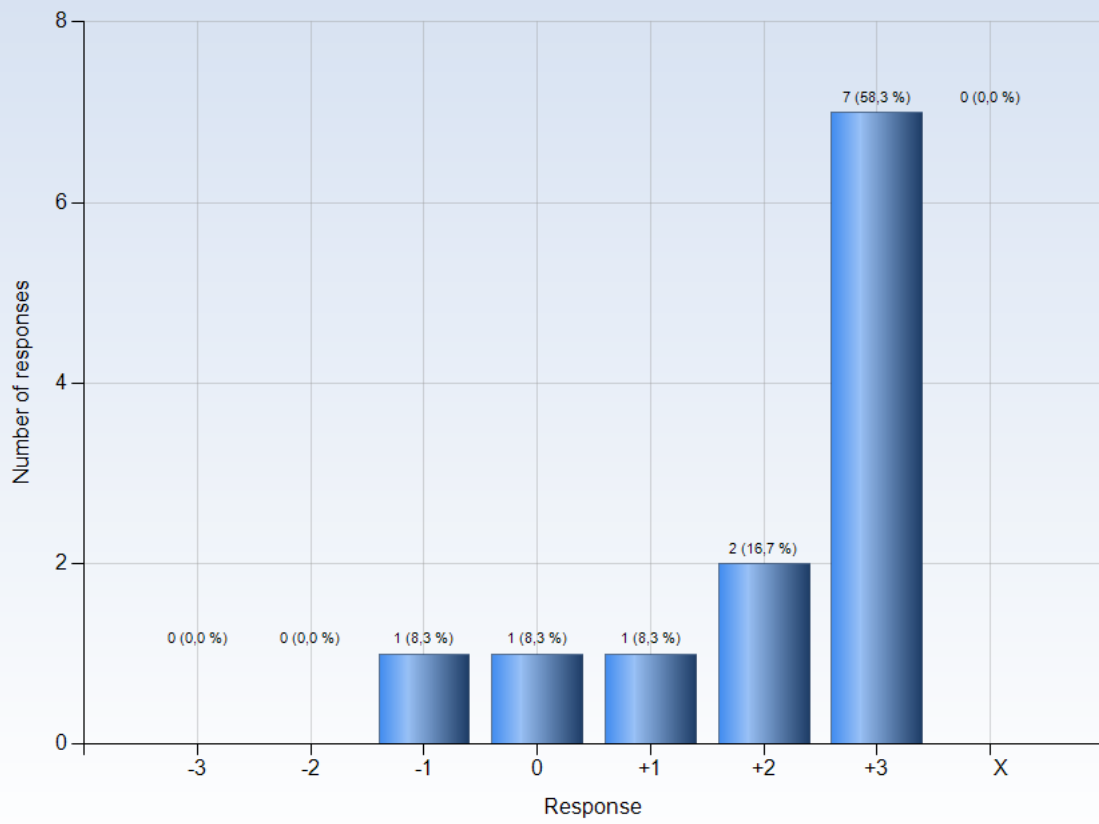
Comments





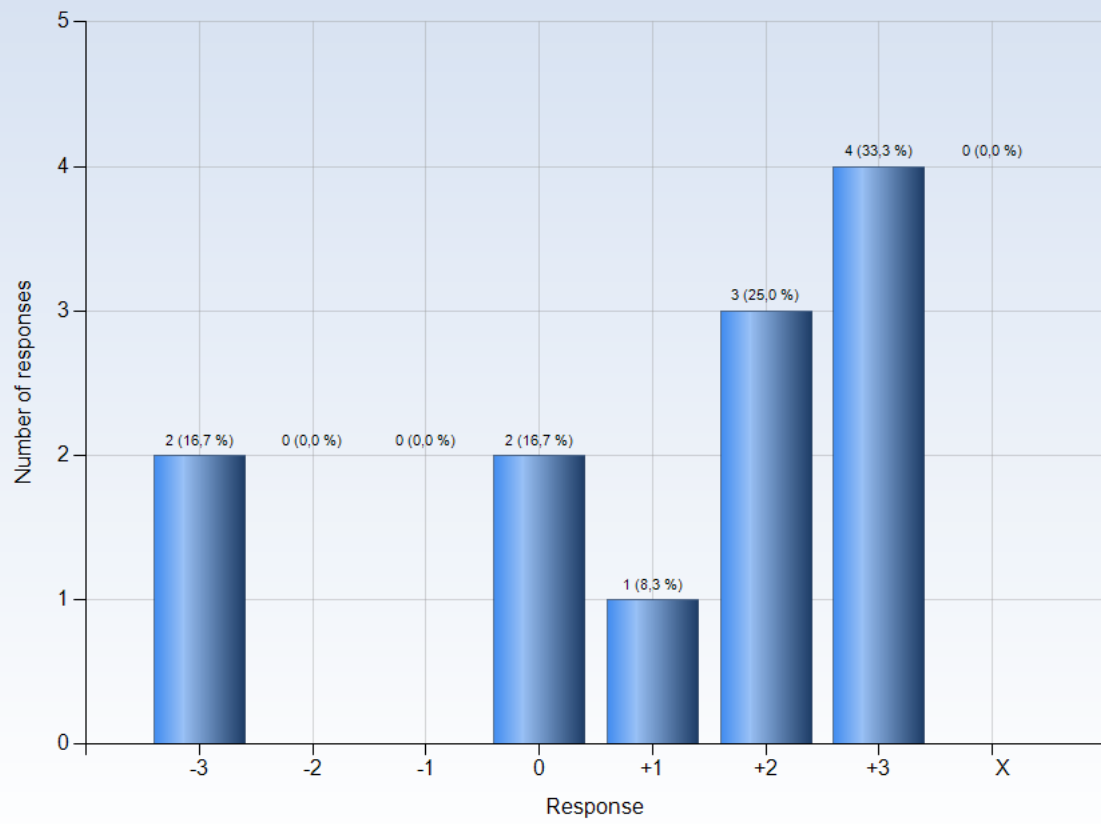
**Comments**

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



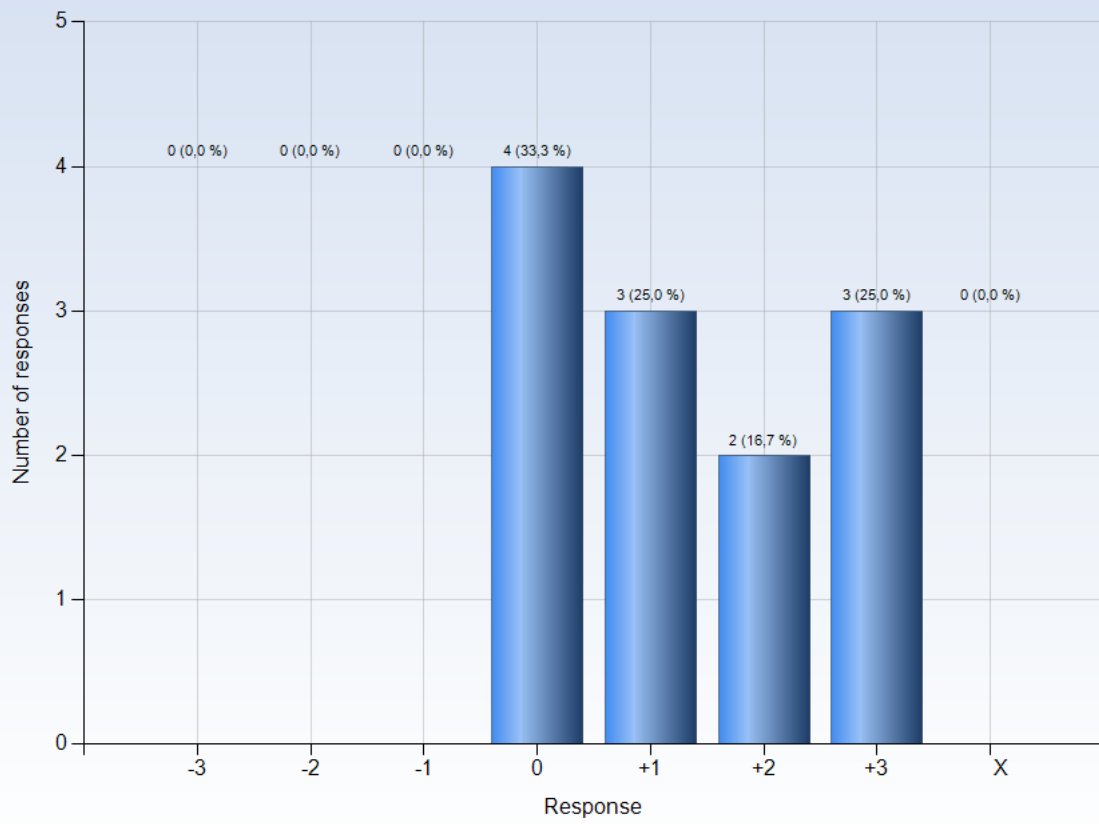
Comments

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



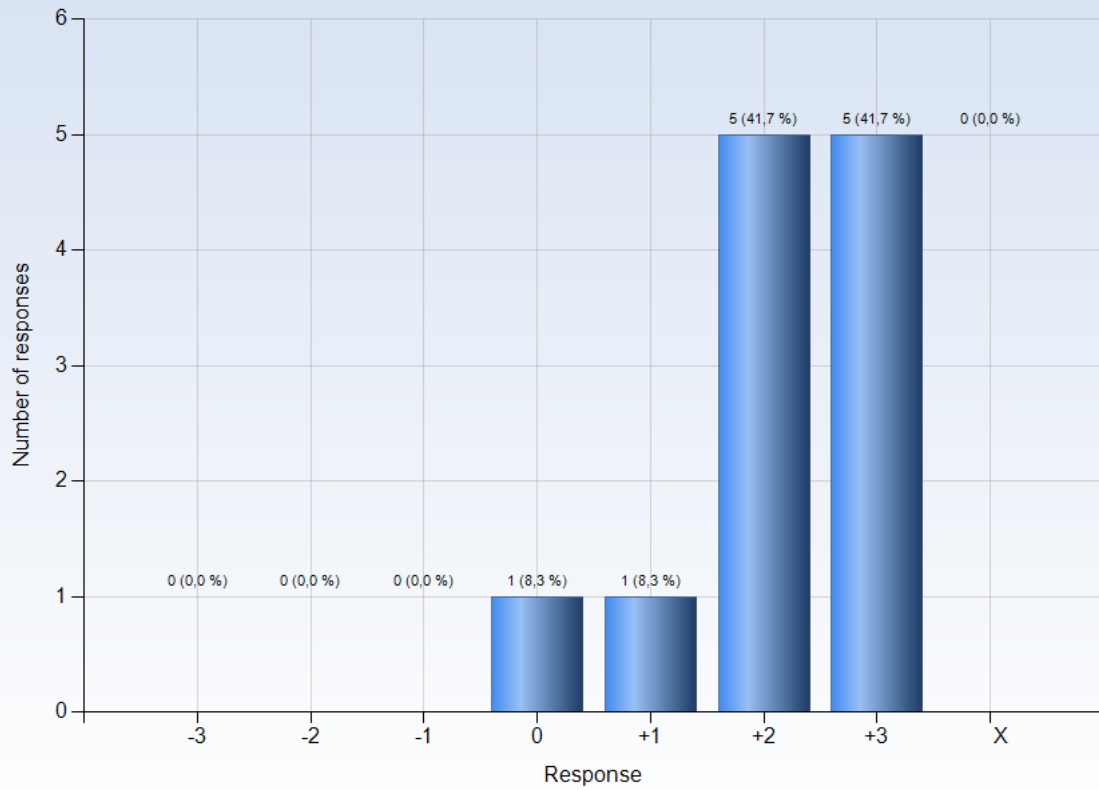
Comments

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



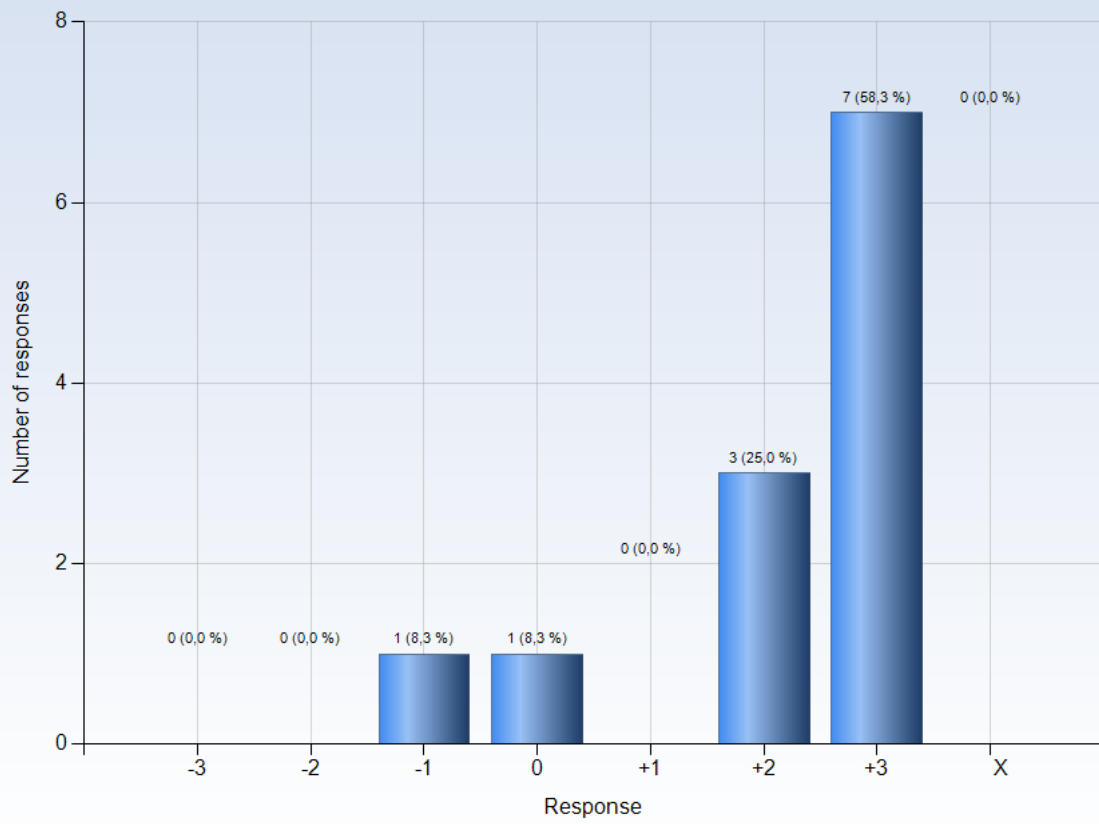
Comments

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



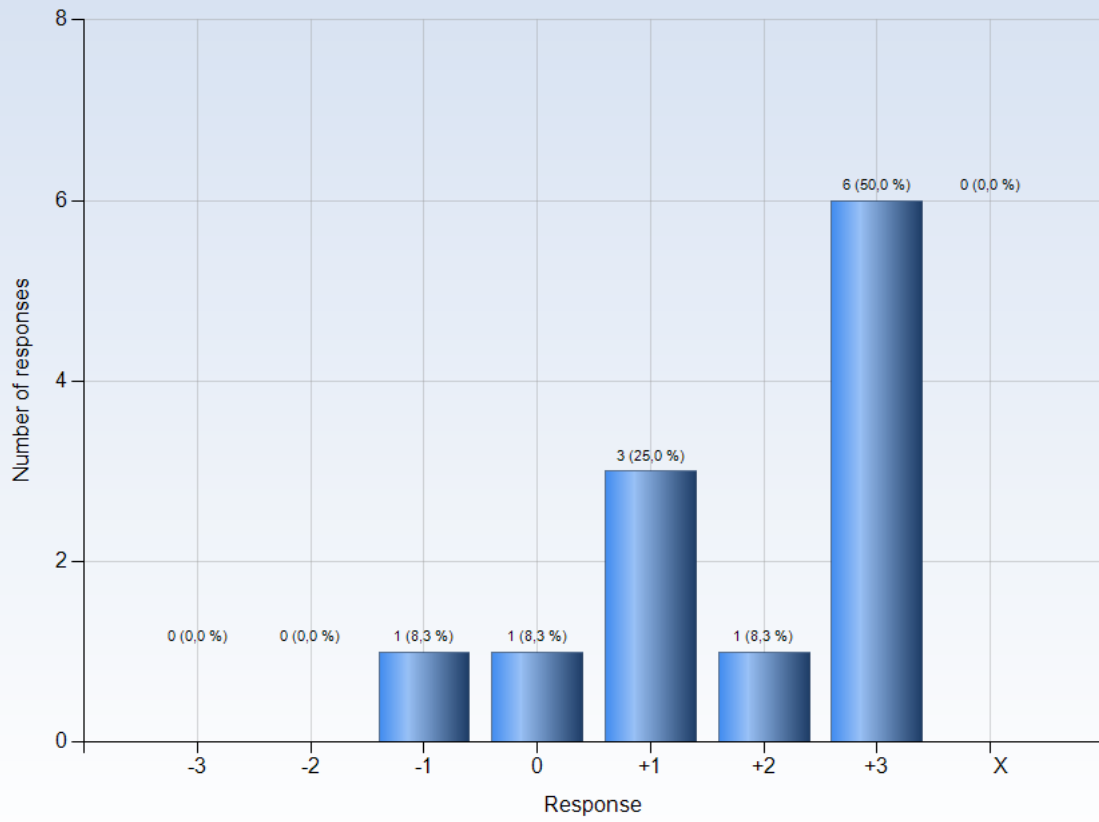
Comments

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



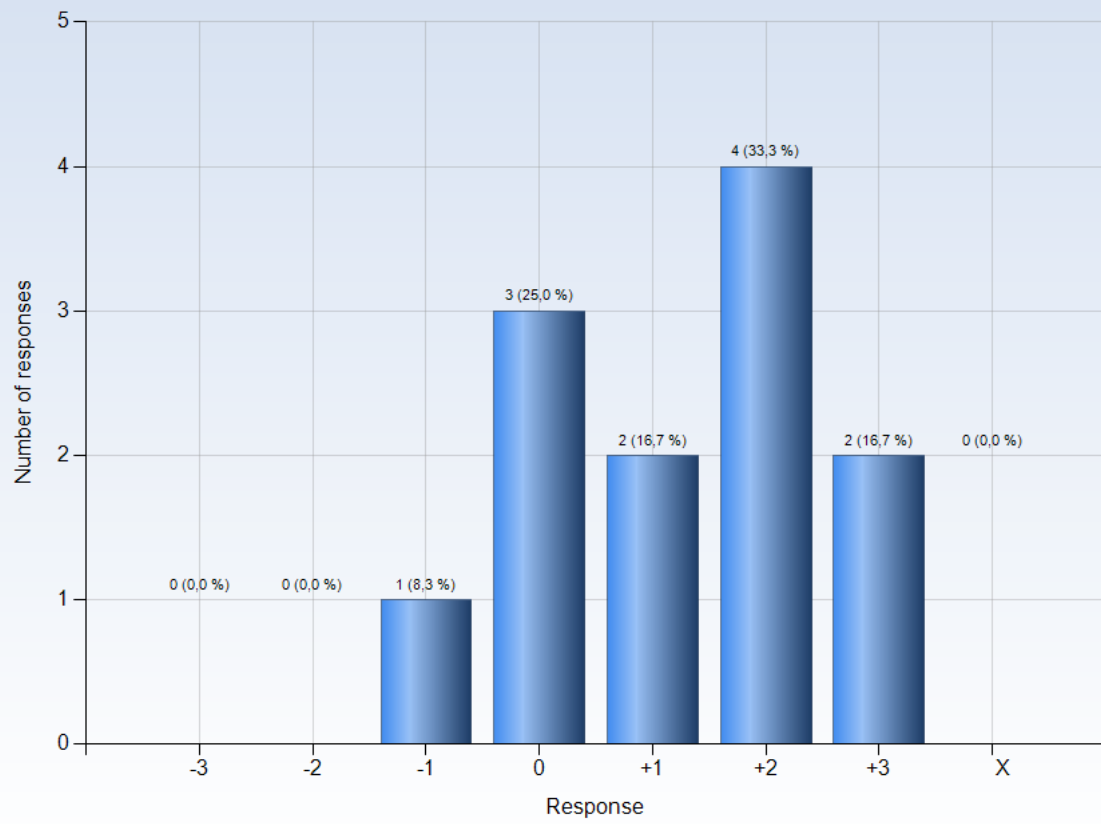
Comments

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



Comments

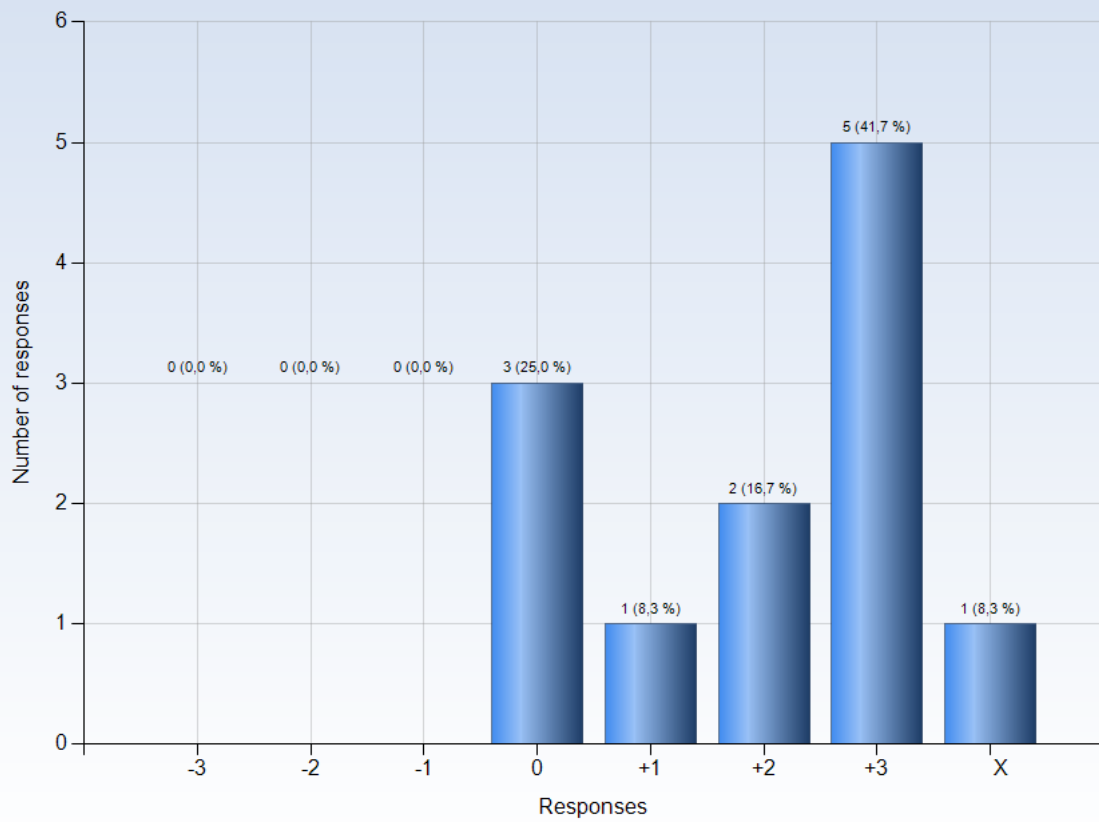
### 15. I could practice and receive feedback without being graded



Comments



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

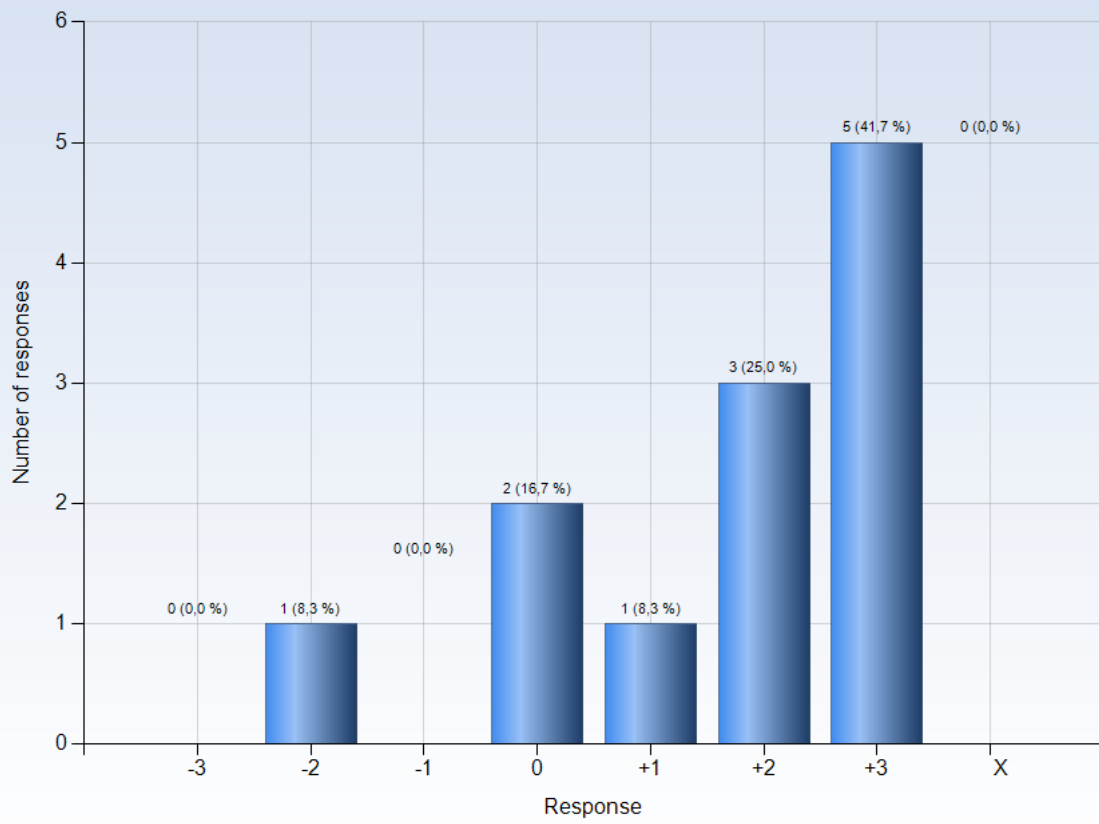


#### Comments

Comments (My response was: X )

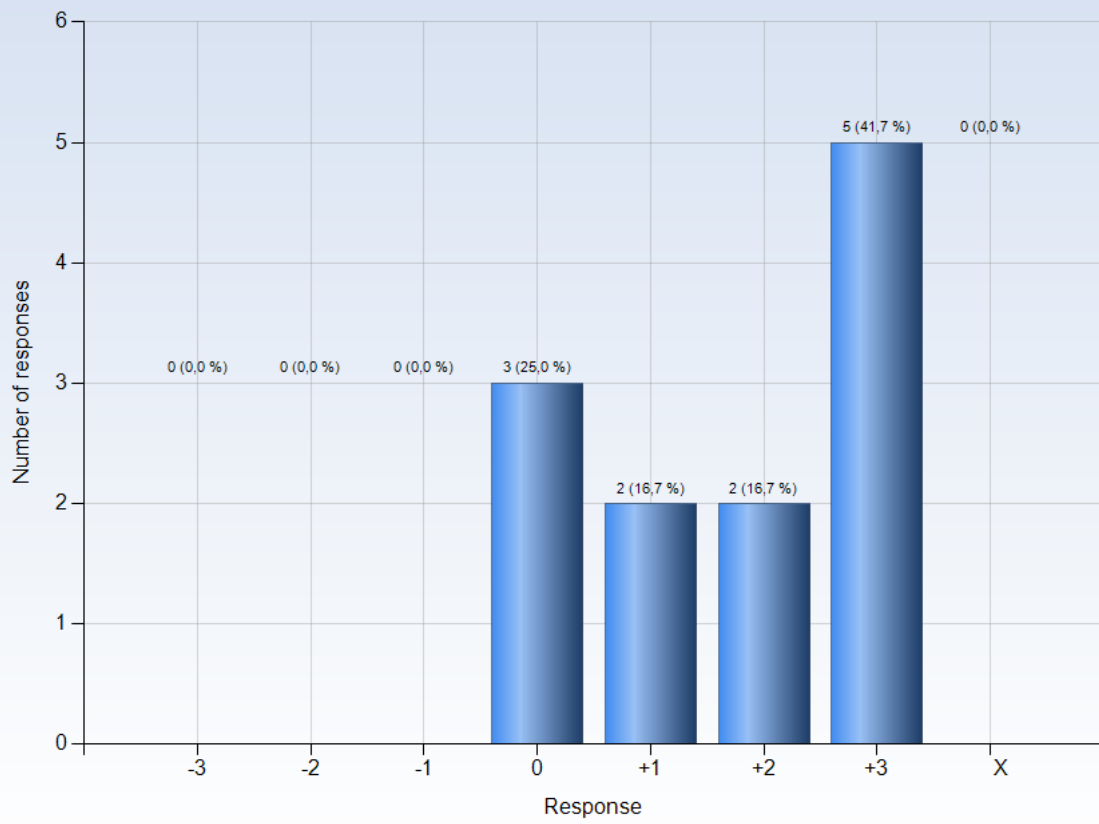
I don't have the grade yet

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



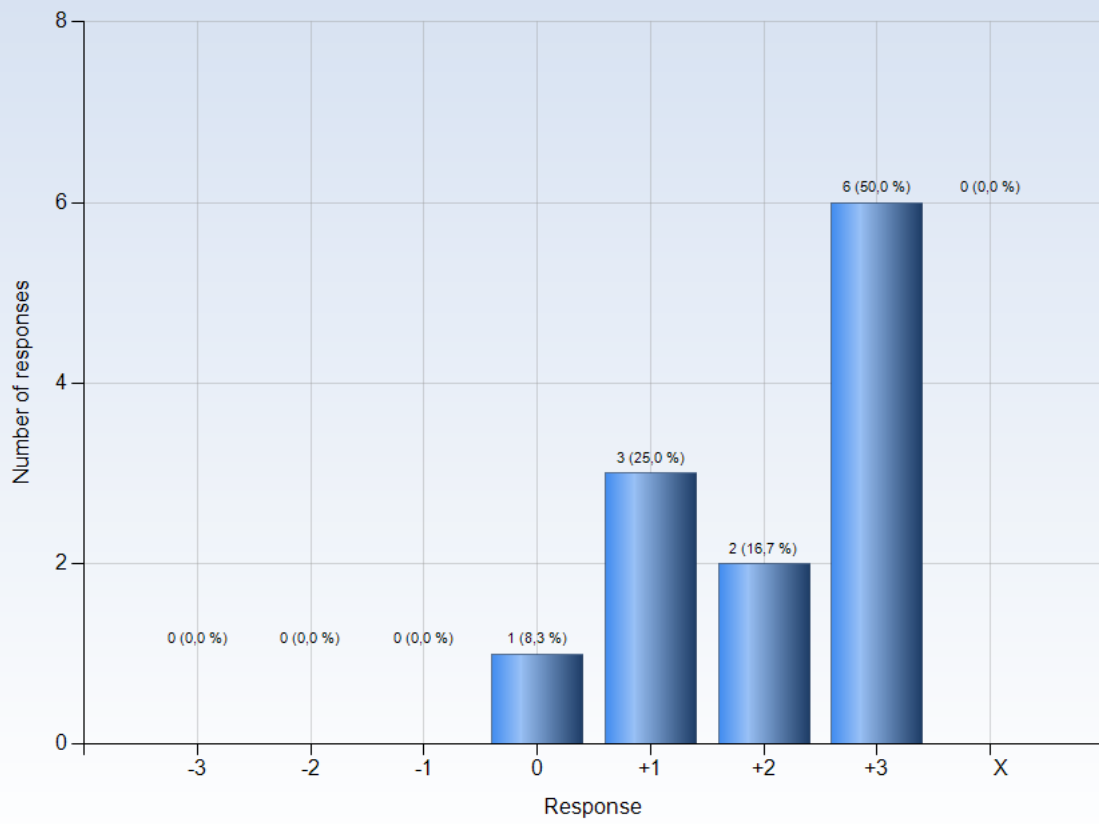
Comments

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



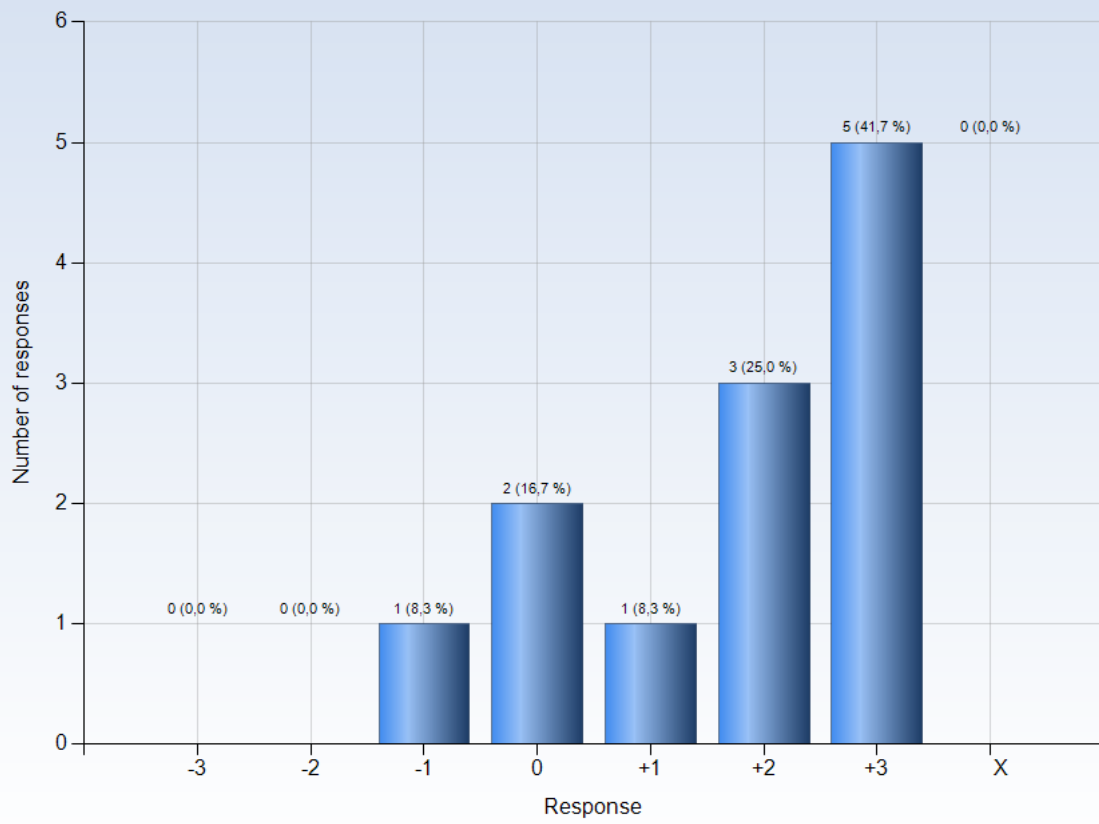
Comments

### 19. I was able to learn in a way that suited me



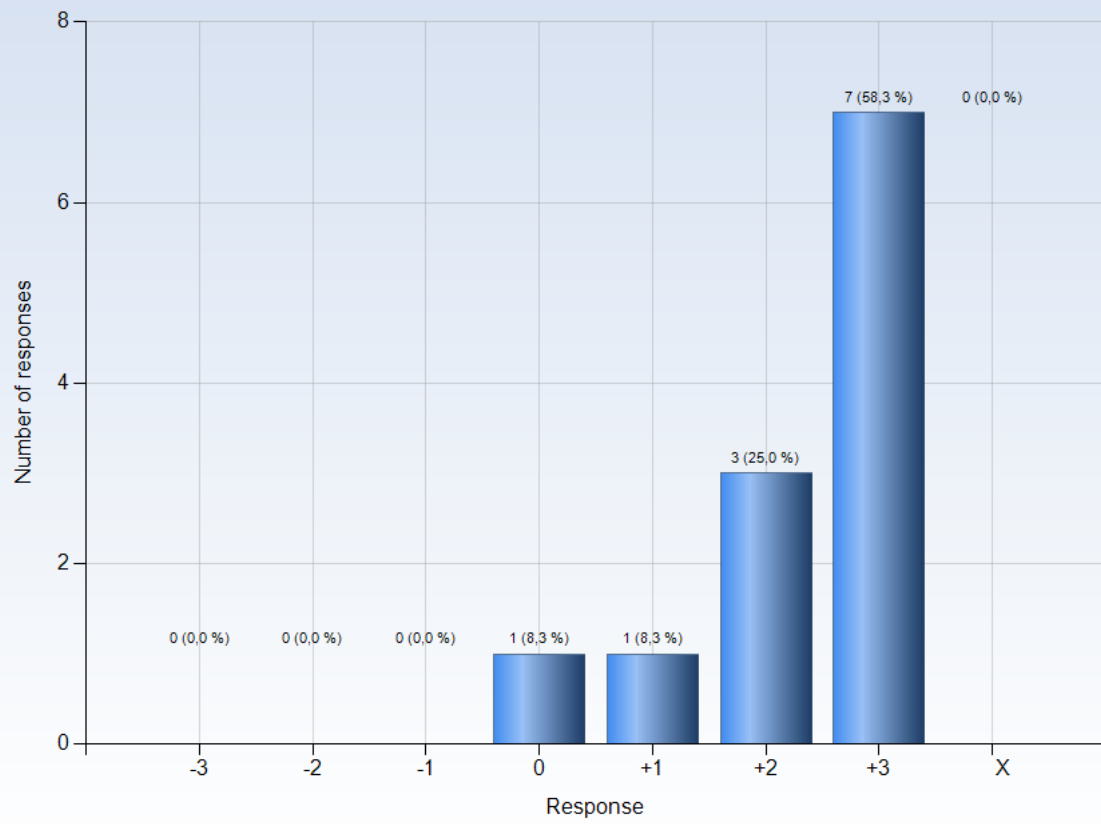
Comments

### 20. I had opportunities to choose what to do



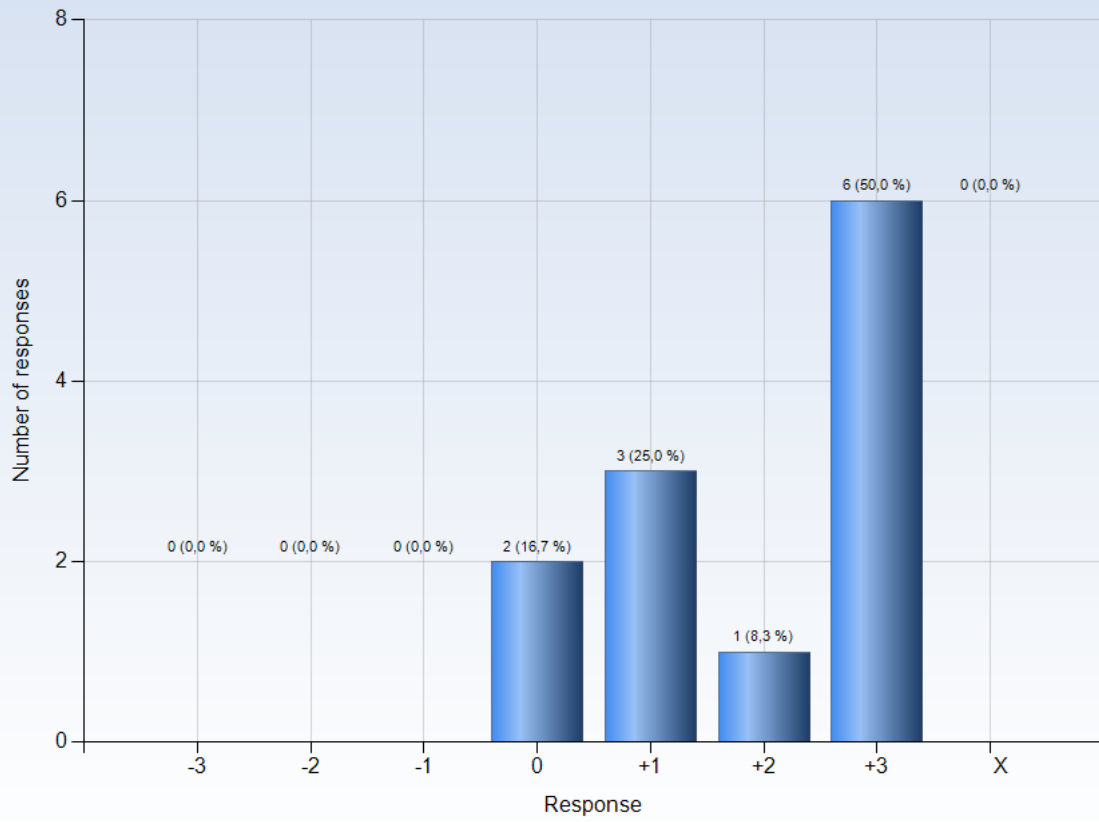
Comments

### 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