Report - DD2413 - 2022-09-23

Respondents: 1
Answer Count: 1
Answer Frequency: 100.00%

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):

Iolanda Leite, iolanda@kth.se

DESCRIPTION OF THE COURSE EVALUATION PROCESS
Describe the course evaluation process. Describe how all students have been given the possibility to give their opinions on the course. Describe how aspects regarding gender, and disabled students are investigated.

This course is assessed through two Labs and a group project. The grading criteria for the different evaluation components were made available to students. We tried to use inclusive language and examples throughout the course, which was actually mentioned as a positive aspect by one student in the course survey.

DESCRIPTION OF MEETINGS WITH STUDENTS
Describe which meetings that has been arranged with students during the course and after its completion. (The outcomes of these meetings should be reported under 7, below.)

Students interacted with the teaching team in the lectures (where quite often more than one teacher was present), tutorials and lab sessions. During the project work, each group was assigned a mentor from the teaching team to guide them through the process. In the final project presentation session, all members of the teaching team were present and provided feedback to the different groups.

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

This was the first time the course was offered. The course consisted in 7 lectures with topics ranging from how to conduct Human-Robot Interaction research to the automatic perception of human social signals, robot learning and the generation of verbal and nonverbal behavior. There were two hands-on tutorials to deepen some of the concepts from the lectures: one on using the R language for experimental data analysis, and another tutorial for students to receive a quick overview of the APIs of the different social robots available for the project.

The project topic was selected by students with help from the teaching team. For feedback on the project work, there was a project pitch presentation session early on, and additional feedback as needed by the member of the teaching staff assigned to mentor that group. The project evaluation criteria were made available to students. Students had the option to focus on a more technical project or a project more focused on the evaluation of human-robot interactions, and the grading criteria was adjusted to make sure both types of projects were graded fairly.

For 2022 we are changing the grading to better reflect the actual evaluation components. The final grade of the course is in the A-F scale, given by 20% * LAB1 (which was P/F scale in 2021), 20% * LAB2, and 60% * PRO1. Therefore, we changed the LAB1 component to be on the A-F scale and transferred 1.5 credits of LAB2 to the PRO1 component, to make the grade clearer. The current examination components are as follows:
- LAB A - Laboratory work, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB B - Laboratory work, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- PRO A - Project work, 4.5 credits, grading scale: A, B, C, D, E, FX, F

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

Students reported that the workload was appropriate throughout the course. The only issue was the fact that the project work continued over the Christmas break due to the way P2 is planned. The project activities began at the end of November and the presentations were in mid-January, but still because of other course duties, some students ended up using the holiday break to work on the projects.

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?

The students did really well! We don't have another course round to compare yet, but we believe the results were quite positive not just in terms of the final grades but also from the course survey, where some students reported that they learned more in this course about experimental design/evaluations than they did during their bachelor thesis work:

"I felt like this course fit super well where I read it. Learning about statistics and getting another chance at writing a scientific paper was great for the coming master thesis. I feel like I learned more things about user tests and scientific writing than I did in my bachelor thesis, where I also did user testing"

STUDENTS´ANSWERS TO OPEN QUESTIONS
What does students say in response to the open questions?

Students valued the fact they were able to work with actual social robots, the lectures were quite interactive (with enough time for discussions), the practical knowledge about how to design user experiments and improve scientific writing, the inclusive language, the motivation of the teaching staff, and the balanced workload across the course, and the fact that they had the freedom to chose the topic of their project. Regarding aspects of improvement, students wished to have more content in the course about statistics and to make sure that all the course information will be given in a timely manner. Since this was the first year the course was being delivered and some of the material was still being developed, we expect to do a better job next round on this matter.

SUMMARY OF STUDENTS' OPINIONS
Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

We only had 8 responses in the course evaluation survey, but they were all extremely positive overall.

OVERALL IMPRESSION

Summarize the teachers' overall impressions of the course offering in relation to students' results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

Especially for being the first time that the course was offered, we considered the course to be quite successful. The students were quite engaged, which was visible by their participation in the lectures and tutorials, the quality of the course projects and the final grades. There are definitely minor aspects that need to be improved in the next round, but our overall impression was that this was a course that students really enjoyed.

ANALYSIS

Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be? Are there significant difference in experience between:
- students identifying as female and male?
- international and national students?
- students with or without disabilities?

We didn't have enough data in the survey to make any claims about differences regarding student gender, nationality or disability. We do however know that the academic backrgound of the students was quite varied. While most students came from the Masters in Systems, Control and Robotics, a fair amount of students were from the programs on Media and Interaction Design. This is challenging because we need to ensure the right balance between technical and user-centered lectures (some might be too difficult to part of the class and easier for the other group, and vice versa). Similarly, we tried to make sure the grading criteria accounted for the different types of contributions in human-robot interaction (more technical and systems-oriented, more human-centered, etc.)

PRIORITIZED COURSE DEVELOPMENT

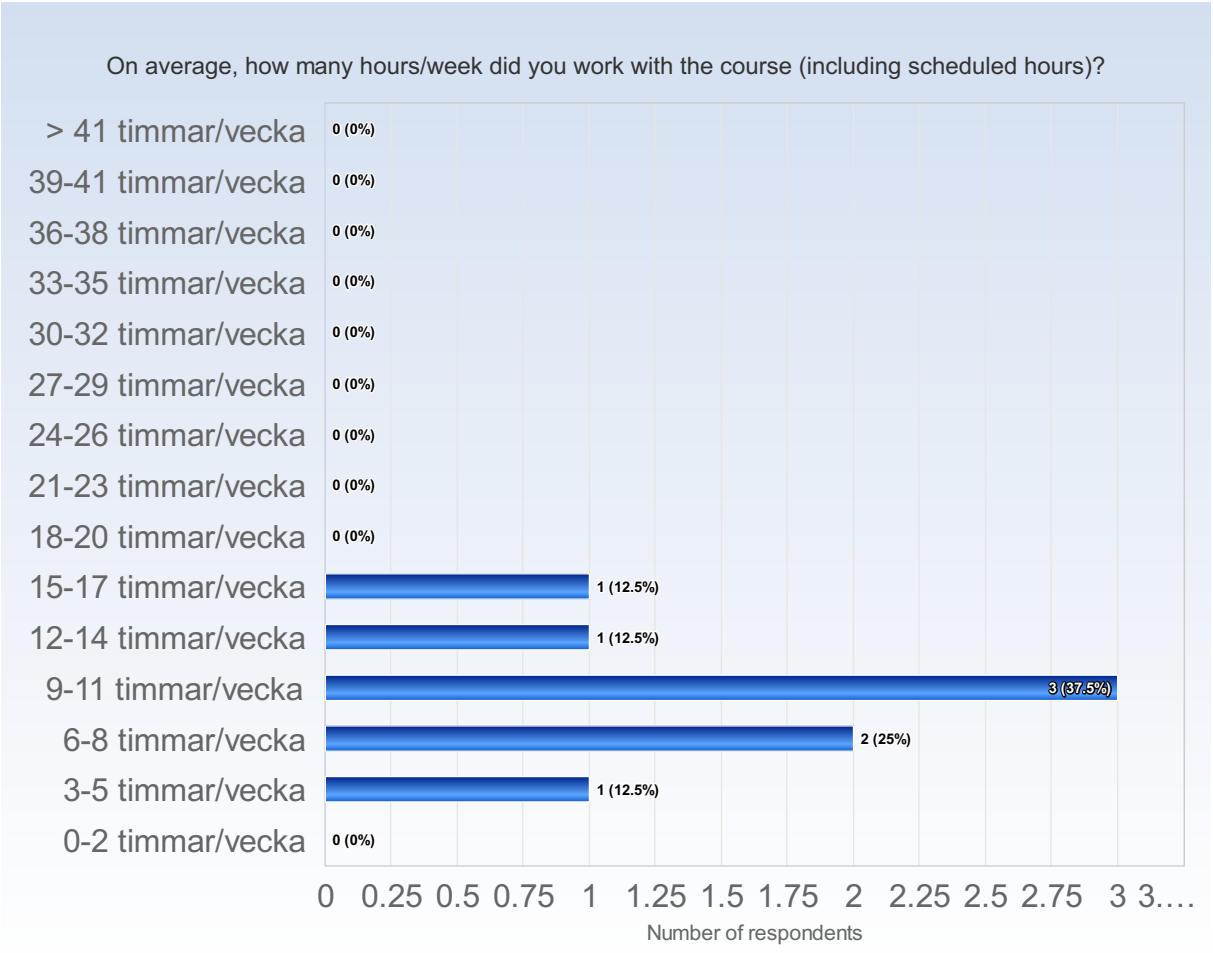
What aspects of the course should be developed primaily? How can these aspects be developed in short and long term?

In the short term, we expect to make sure students have the necessary information they need to start working on the project as soon as the course begins. We tried to do that by squeezing the lectures into the beginning of the course but will try other strategies such as showing examples of projects from the previous round in the first lectures, making the project grading criteria available as soon as the course begins, and setting the date for the project pitch presentations a little earlier than in the previous round.
A long-term plan is to ensure that students have access to more off-the-shelf perception and decision-making modules, or Wizard of Oz interfaces, in the social robots available in the course (Furhat, NAO, Cozmo, ...) so that they can work on even more interesting Human-Robot Interaction systems.

DD2413 - 2022-01-13

Antal respondenter: 17
Antal svar: 8
Svarsfrekvens: 47,06 %

ESTIMATED WORKLOAD



Comments

Comments (I worked: 6-8 timmar/vecka)
Went to the two 2 hour lectures each week and then did some more work. But it wasn't very time consuming.
The course is very interesting because it does not require lots of background knowledge. The workload is spread all over the period so it is very nice. Thanks for your kindness, your determination and your knowledges ! :)

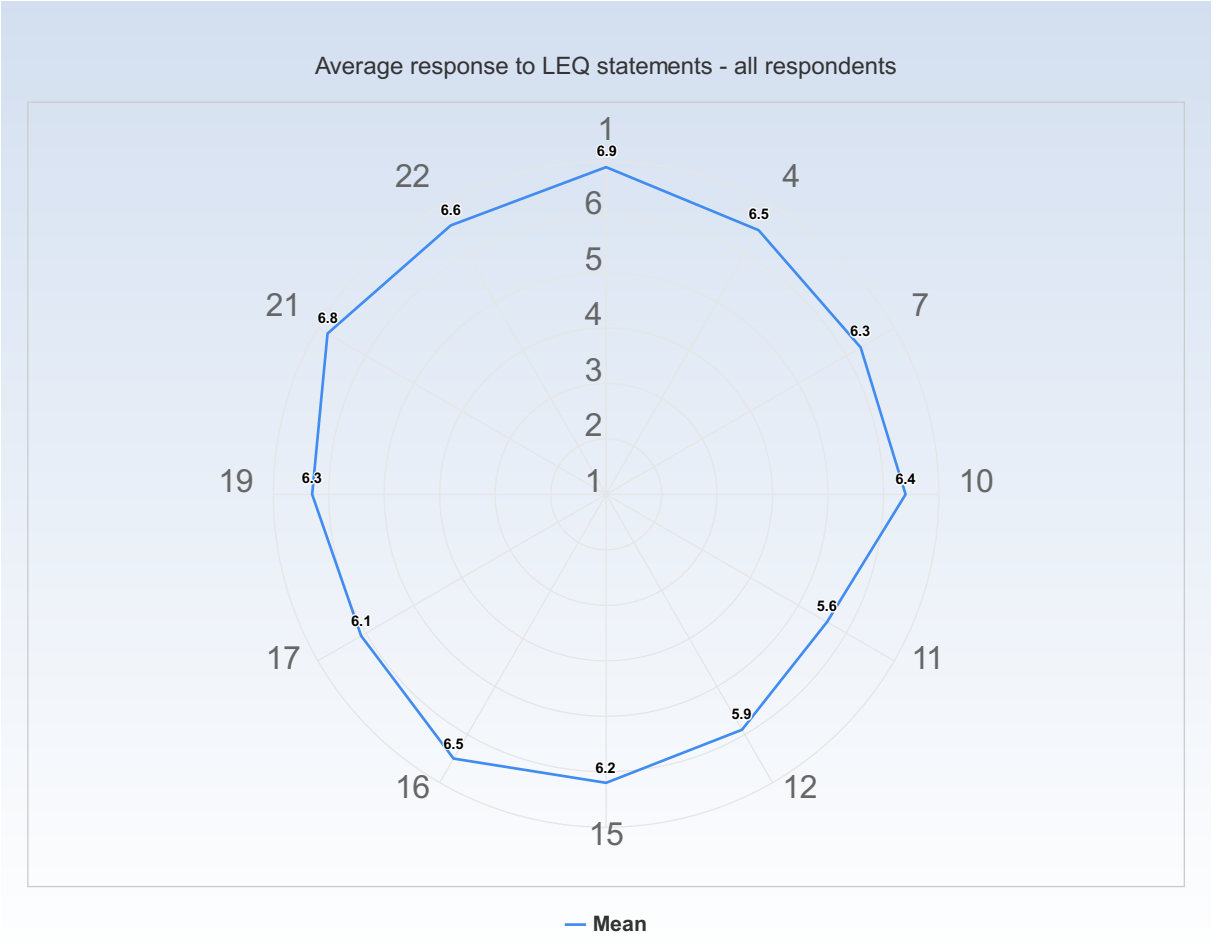
Comments (I worked: 9-11 timmar/vecka)
Super nice, the teachers are super receptive!
Perfect amount of work. Also since its mostly group work and people in this course as I got the feeling, are from different chapters and have different schedules its good to have much time to be able to match eachother.

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.



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

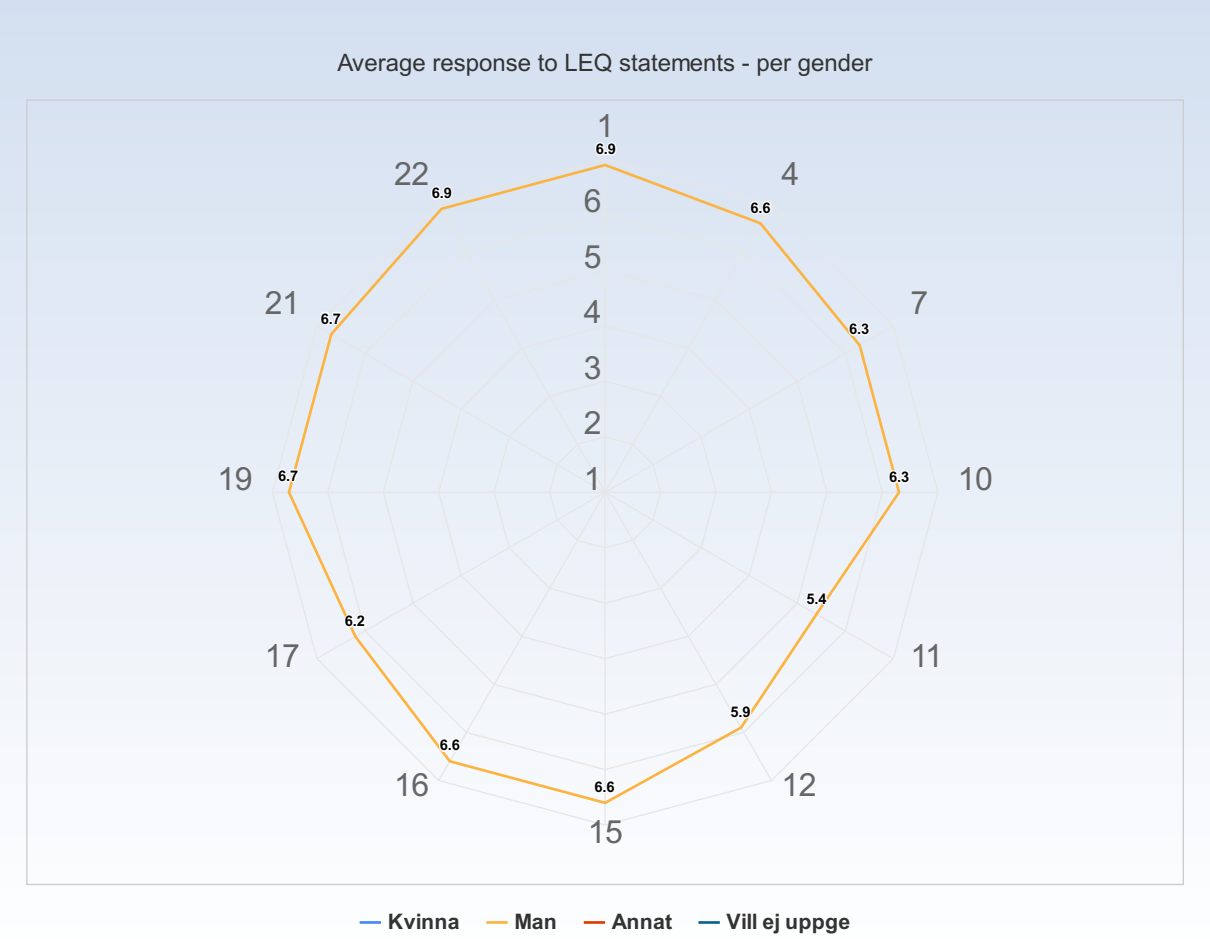
Bain, K. (2004). *What the Best College Teachers Do*, Chapter 5, pp. 98-134. Cambridge: Harvard University Press.

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.

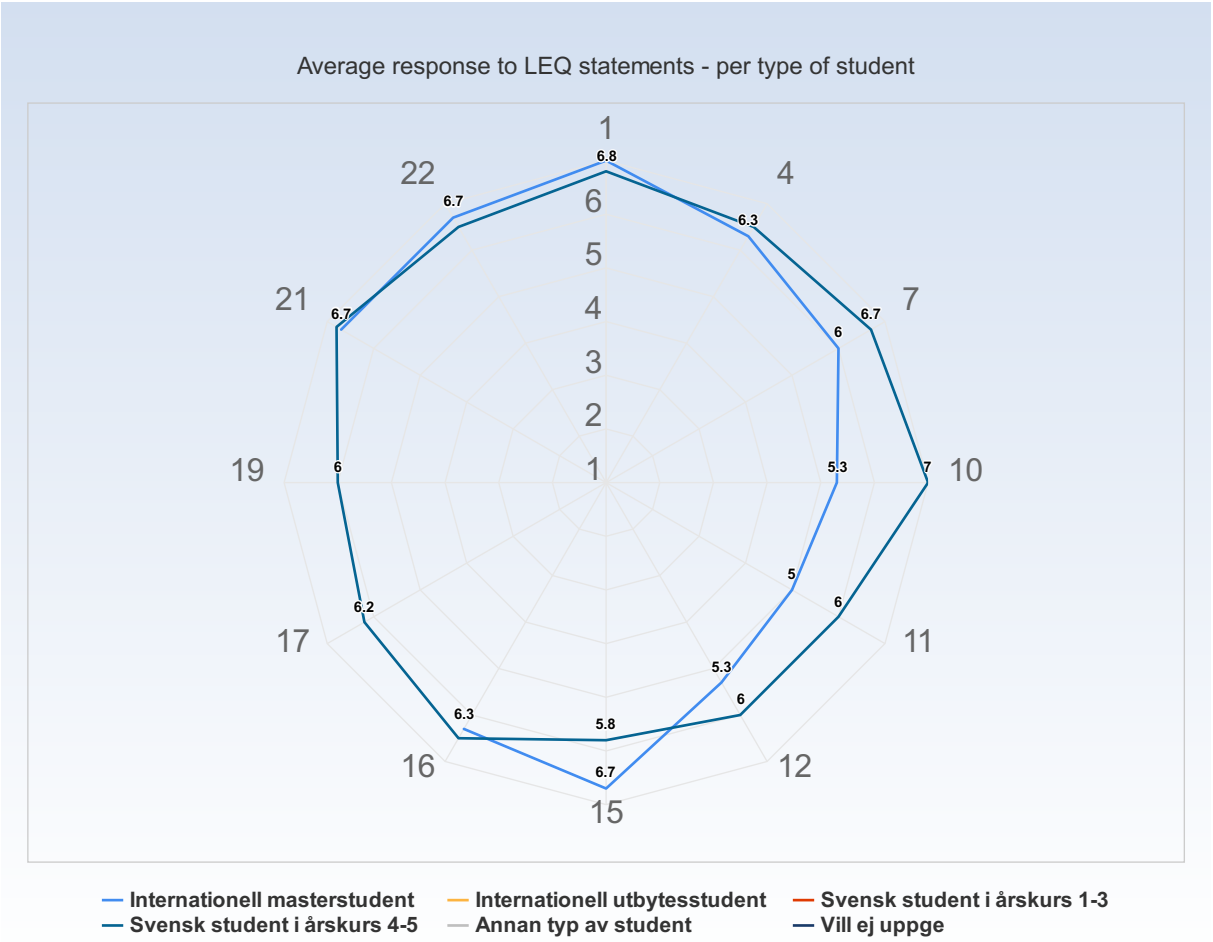
Kember, K. & McNaught, C. (2007). *Enhancing University Teaching: Lessons from Research into Award-Winning Teachers*, Chapter 5, pp. 31-40. Abingdon: Routledge.

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



Comments

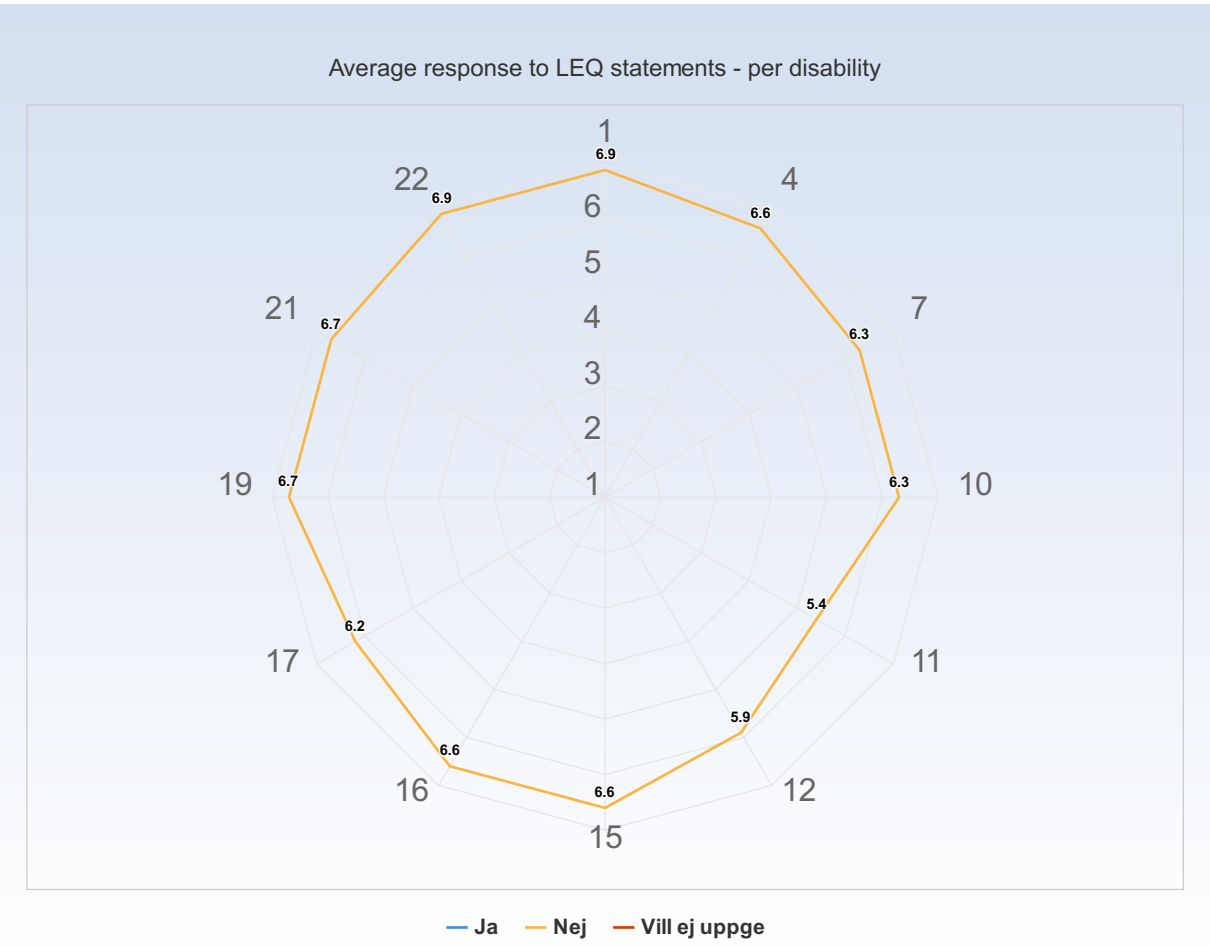
Comments (I am: Annat)
Loved all the inclusive language. When Illaria said that some paper she had written about gender and robots used the colurs of the non-binary flag for the plots I thought that was super fun.



Comments

Comments (I am: Svensk student i årskurs 4-5)

I felt like this course fit super well where I read it. Learning about statistics and getting another chance at writing a scientific paper was great for the comming master thesis. I feel like I learned more things about user tests and scientific writing than I did in my bachelor thesis, where I also did user testing.



Comments

Comments (My response was: Ja)
Burn out.

GENERAL QUESTIONS

What was the best aspect of the course?

What was the best aspect of the course? (I worked: 3-5 timmar/vecka)
The work with the robots. The extremly high motivation of the teaching staff.

What was the best aspect of the course? (I worked: 6-8 timmar/vecka)
Working with robots was very fun! Most of the teachers in the course were very helpful and good. I really liked Katie and Ilarias lectures, they were very engaging. There was not a big work load which was super nice. You got to learn new and cool things without being stressed.
The open project that all us to be fully free on what we wanted to do.

What was the best aspect of the course? (I worked: 9-11 timmar/vecka)
It was interesting to work with the physical robots and conductinh tests.
It was very interesting, very hands on as well. Got to choose which path to take and was able to go as deep as one wanted as well.

What was the best aspect of the course? (I worked: 12-14 timmar/vecka)
Very good and engaged teachers, interesting and interactive lectures with good discussions. I love that we were able to be creative when doing the labs and the project.

What was the best aspect of the course? (I worked: 15-17 timmar/vecka)
Lectures organized in such a way that there was time for discussions. Labs and final project gave students the chance to apply taught concepts practically.

What would you suggest to improve?

What would you suggest to improve? (I worked: 6-8 timmar/vecka)
As someone who is pretty unfamiliar with statistics I found Lab 2 difficult. I tried to ask questions about what was needed for it and how to do it but was only given confusing answers. It would have been nice to get more information about t-tests and what a descriptive/inferential statistics is etc. and get more time and help to work with it. I have taken the statistics course but I can't remember that things like this was part of it. I would say that the course is not ideal in P2 because of the winter break. It made it difficult to work continously on the project and find participants for the user study.
The period is not appropriate, or not optimal for working fully on the project. The Christmas break is, on my opinion, not very practical.

What would you suggest to improve? (I worked: 9-11 timmar/vecka)
Having a free choice between python or R on the data analysis would have been nice.
In the beginning, information came quite close to every moment in the course, causing uncertainties and not too much time to prepare. So one thing would be to be more clear about stuff like that. There were for example 3 slots reserved for labs etc in the schedule but only one were the correct one which was not clear.

What would you suggest to improve? (I worked: 12-14 timmar/vecka)
Give out information about grading scheme for the project earlier.

What would you suggest to improve? (I worked: 15-17 timmar/vecka)
Most importantly the communication with the students. My colleagues and me often were lost when it came to what is expected and how hand-ins are assessed.

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)
Take this course! It's chill and fun! Make sure to decide most things about the project before the winter break so that you are ready to continue after the break.
Follow the courses carefully because they are teached at the beginning of the period. Then, focus on the project and don't be afraid of do what you want !

What advice would you like to give to future participants? (I worked: 9-11 timmar/vecka)
Try to think about interesting project ideas straight away, since it's a big portion of the course.
Start in time with brainstorming what project one wants to do. This way you will have a better experience conducting the experiment. If as much is as clear as possible already from the start. Experiments take time, dont do everything during exam periods.

What advice would you like to give to future participants? (I worked: 12-14 timmar/vecka)
Attend the lectures and socialize with the group.

What advice would you like to give to future participants? (I worked: 15-17 timmar/vecka)
Plan enough time for user experiments (if they are part of your final project)

Is there anything else you would like to add?

Is there anything else you would like to add? (I worked: 6-8 timmar/vecka)
One of the best courses I have taken at KTH.

Is there anything else you would like to add? (I worked: 9-11 timmar/vecka)
Really, really liked this course. And even though the field of social robots is very interesting it was mostly due to the fact that you teachers were so good and passionate, so thank you for a great experience.

Is there anything else you would like to add? (I worked: 12-14 timmar/vecka)
Thanks for an amazing course!

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

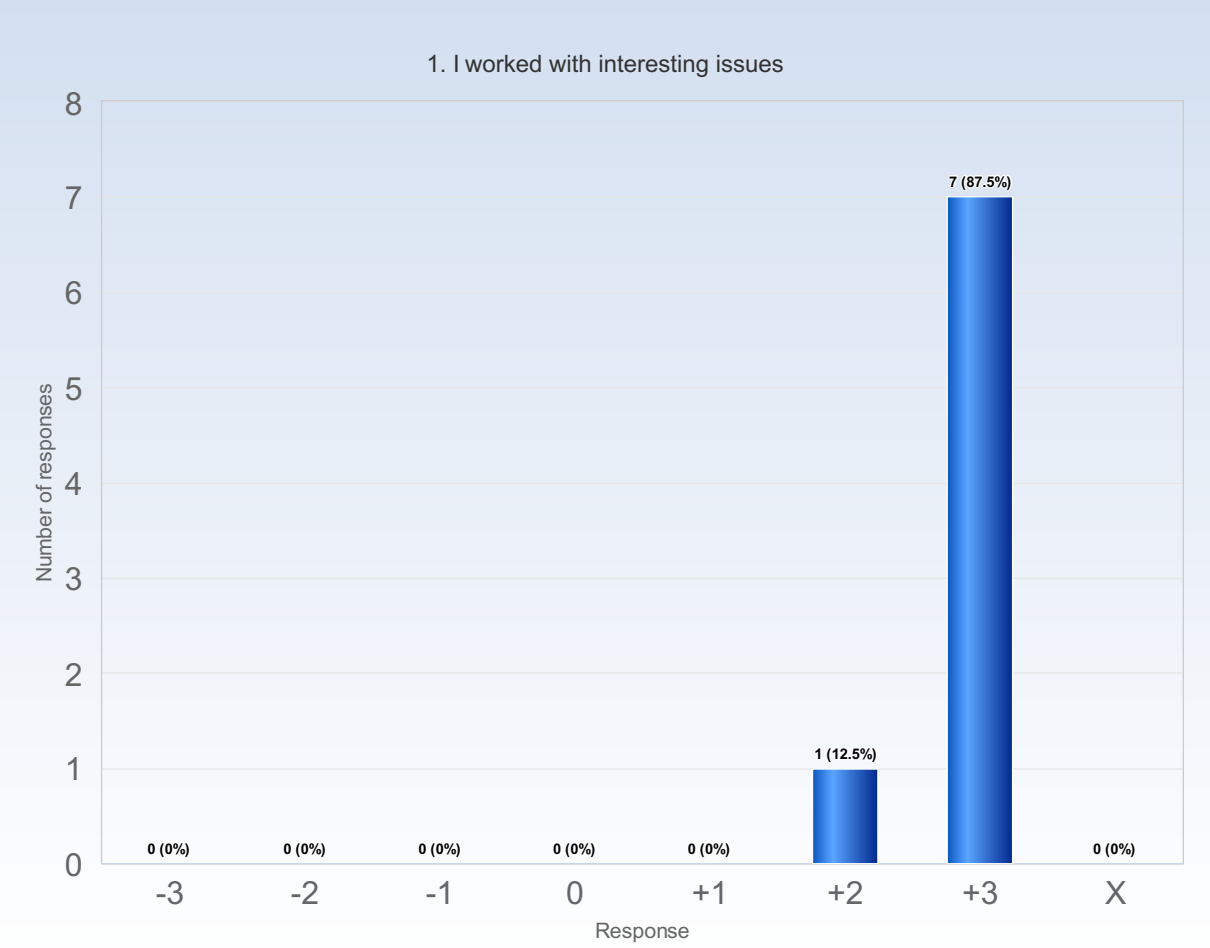
SPECIFIC QUESTIONS

RESPONSE DATA

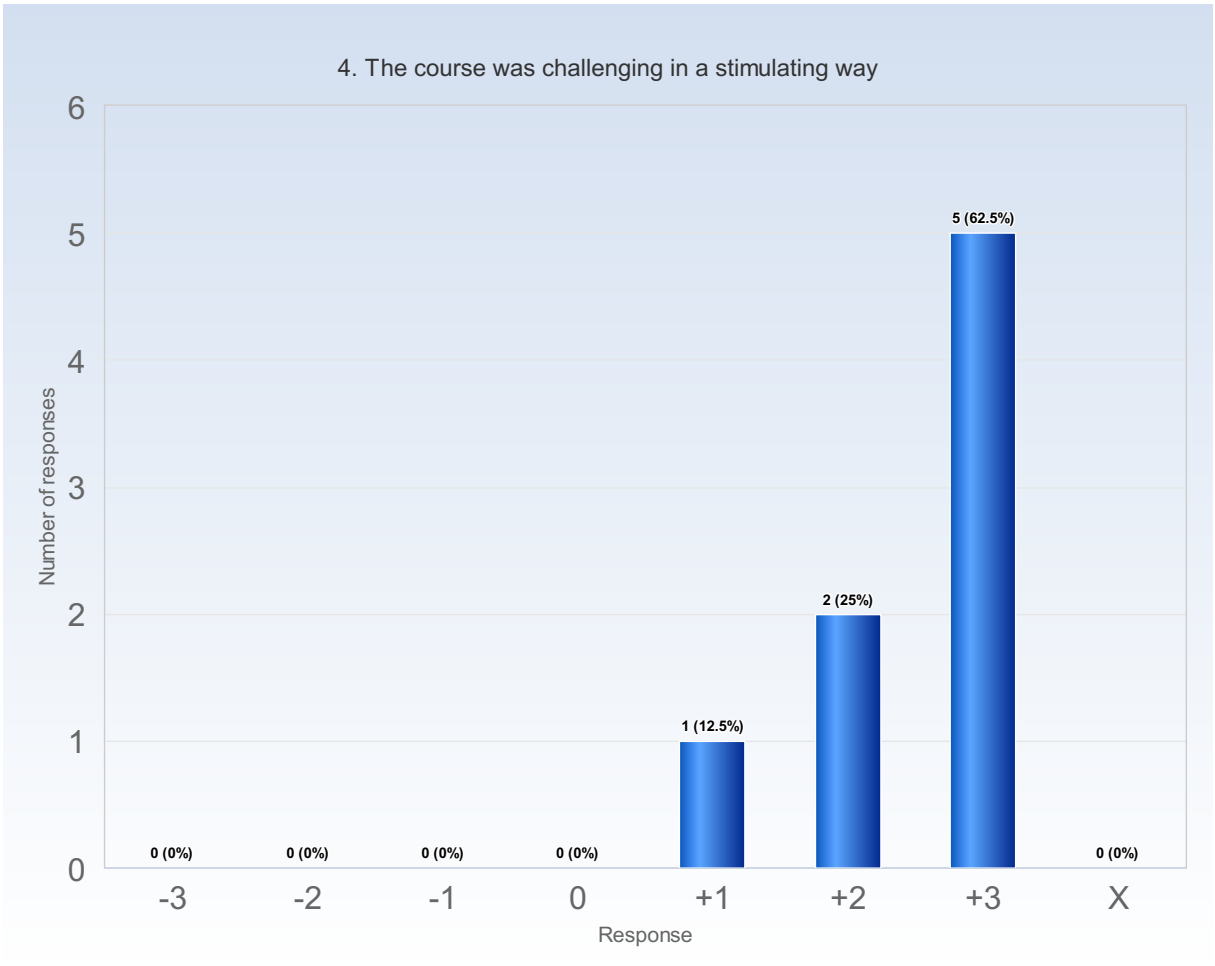
The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

-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



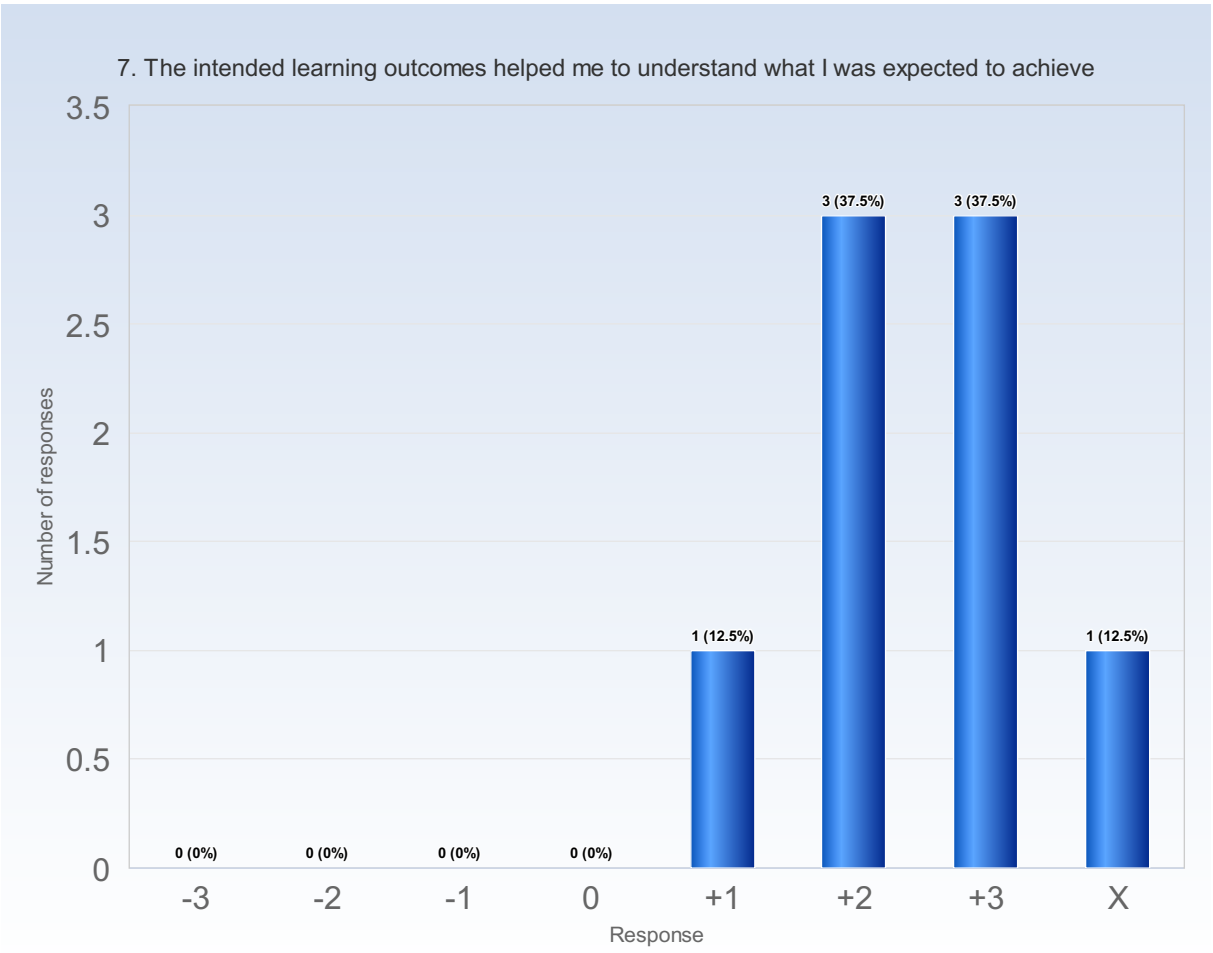
Comments



Comments

Comments (My response was: +2)

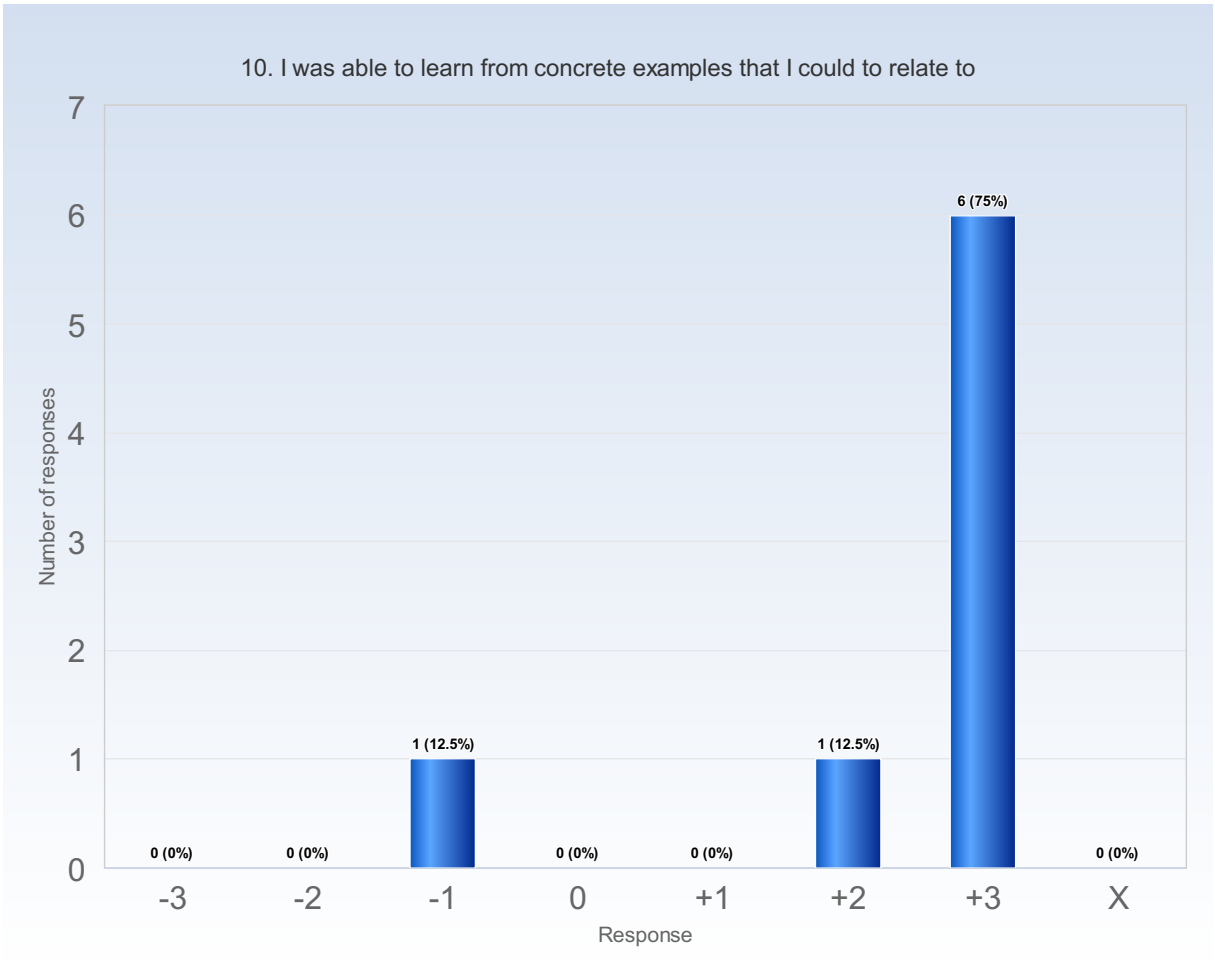
Wish there was more robot programming.



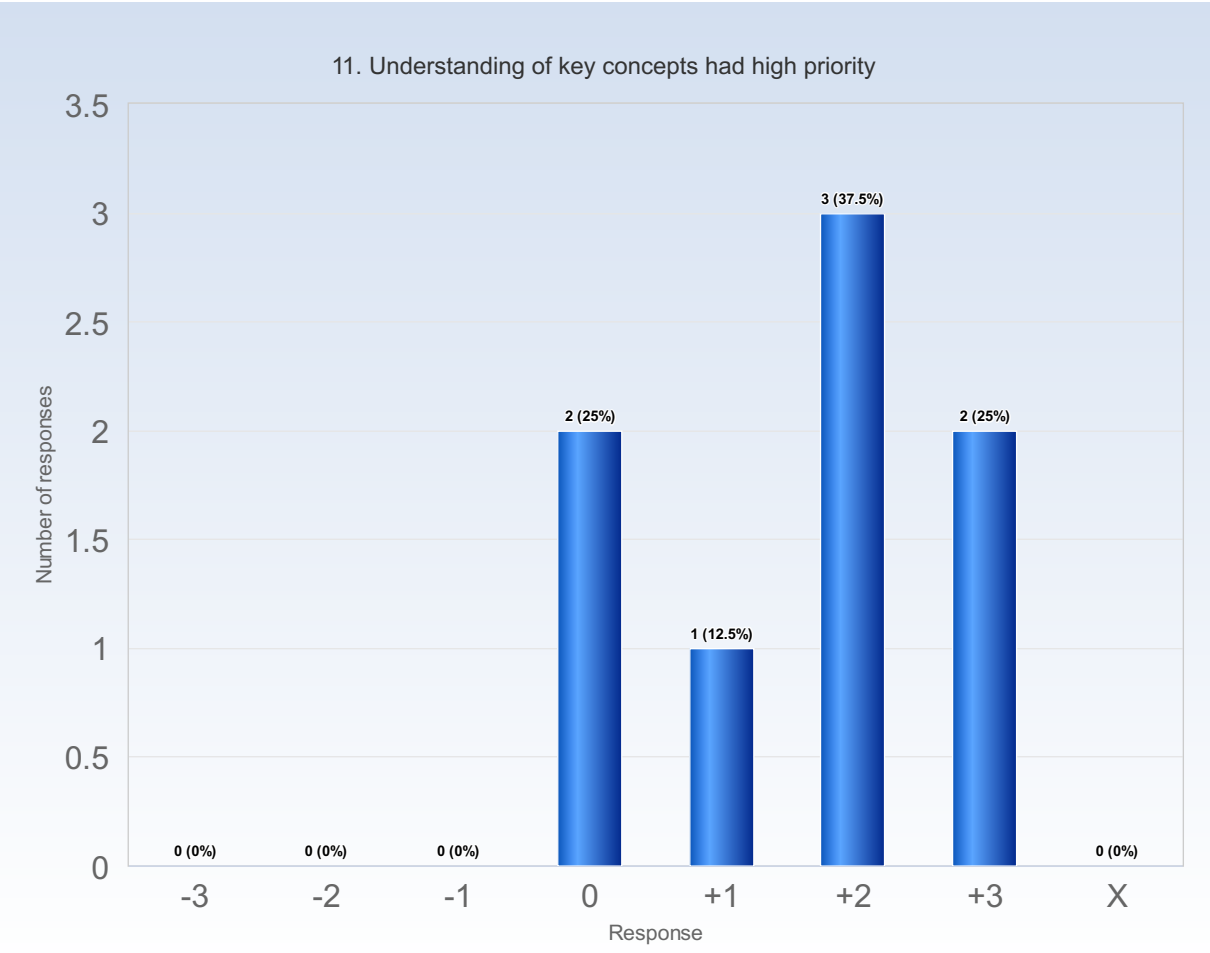
Comments

Comments (My response was: X)

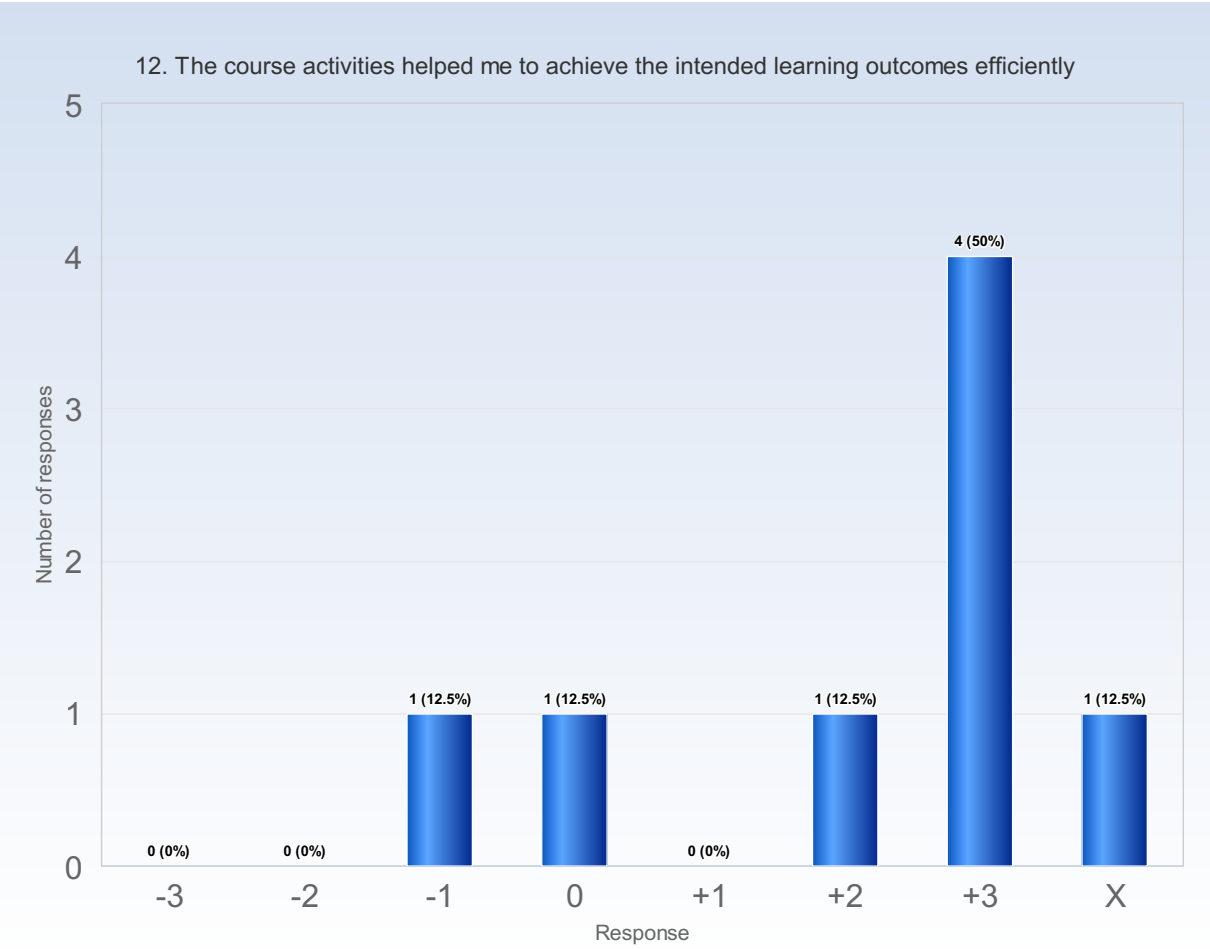
I do not read the ILO's


10. I was able to learn from concrete examples that I could to relate to
Number of responses
0
1
2
3
4
5
6
7
0 (0%)
0 (0%)
1 (12.5%)
0 (0%)
0 (0%)
1 (12.5%)
6 (75%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

Comments


11. Understanding of key concepts had high priority
3.5
3
2.5
2
1.5
1
0.5
0
Number of responses
0 (0%)
0 (0%)
0 (0%)
2 (25%)
1 (12.5%)
3 (37.5%)
2 (25%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

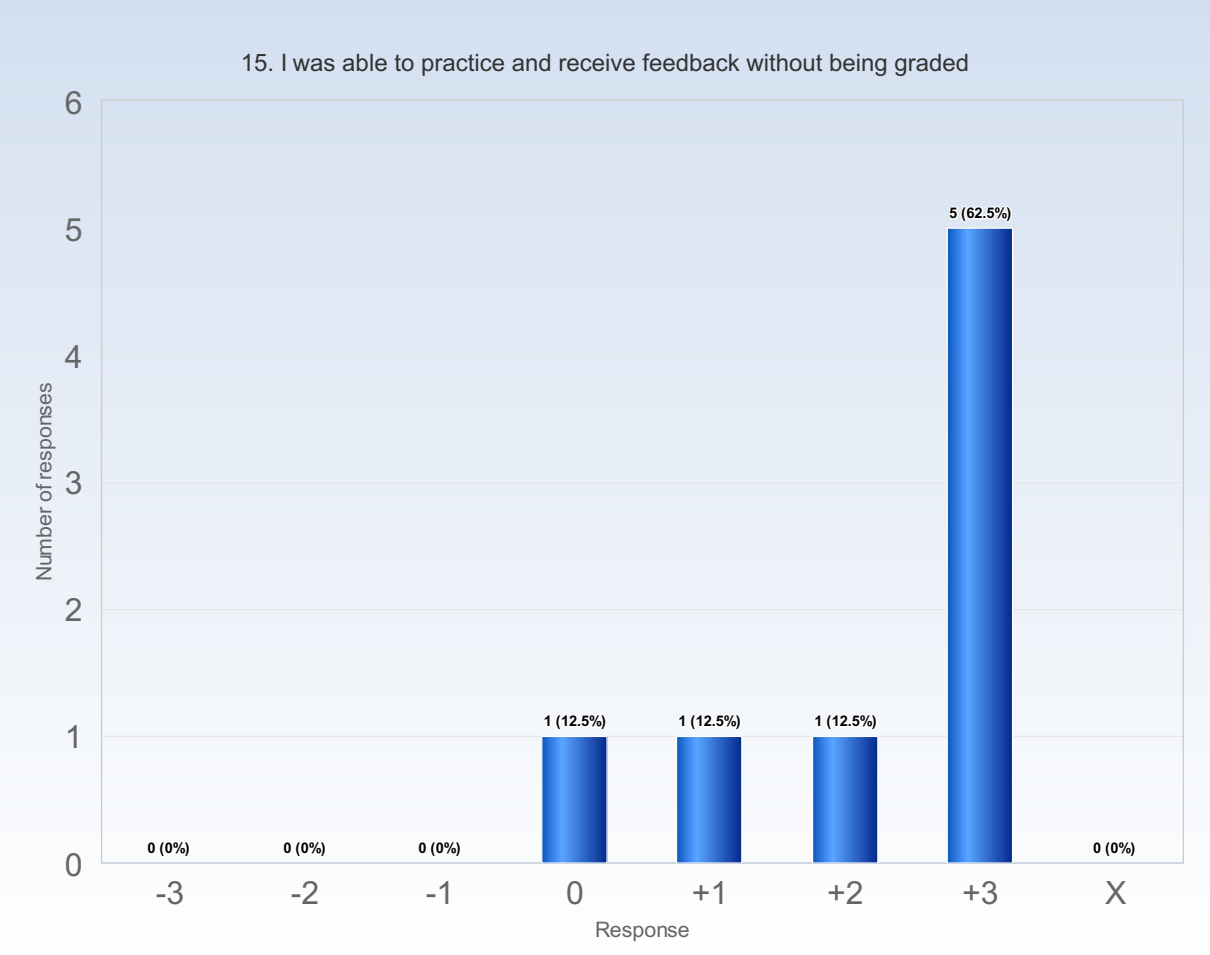
Comments



Comments

Comments (My response was: X)

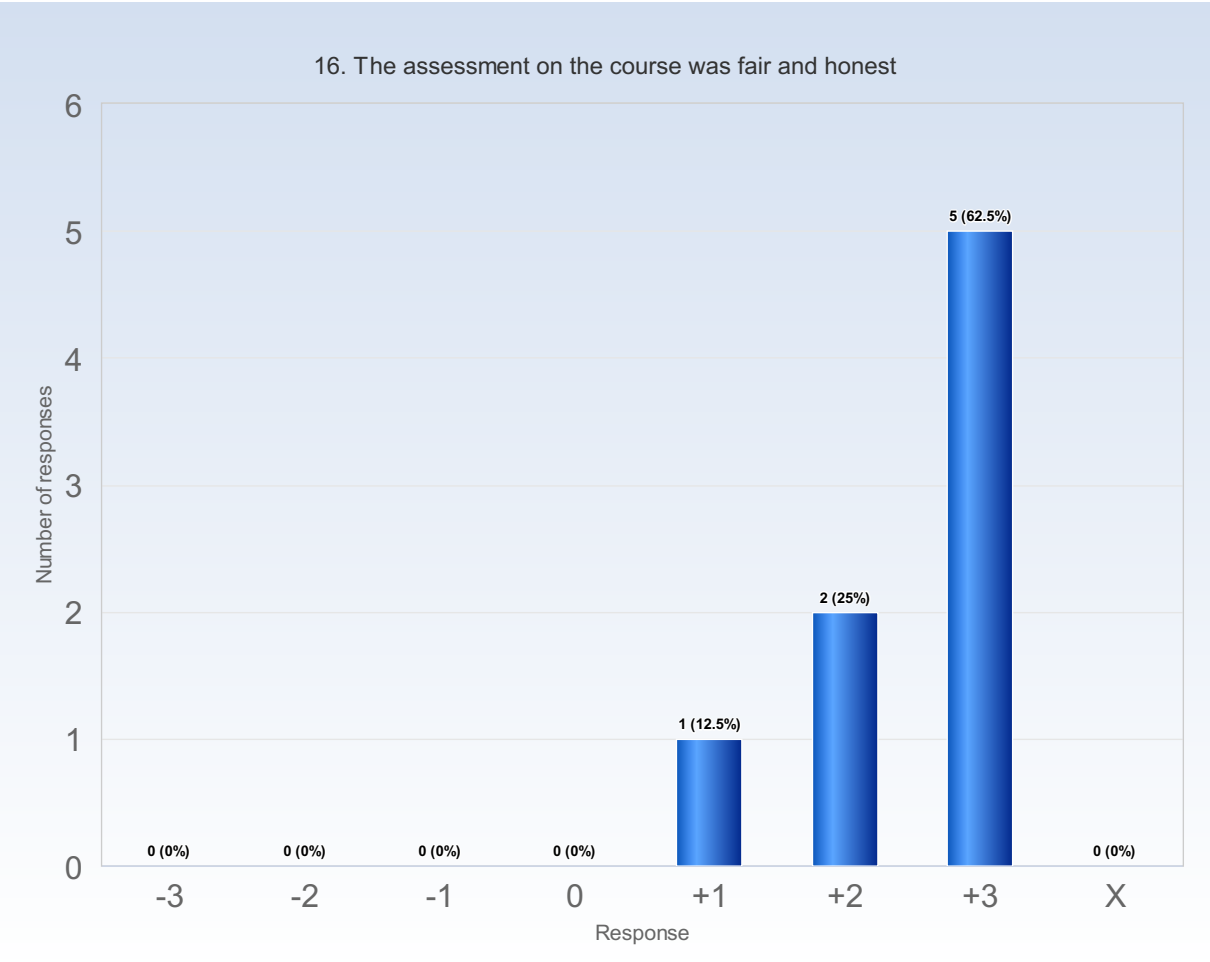
I do not read the ILO's



Comments

Comments (My response was: 0)
There weren't that many lab sessions for practice/work on the labs.

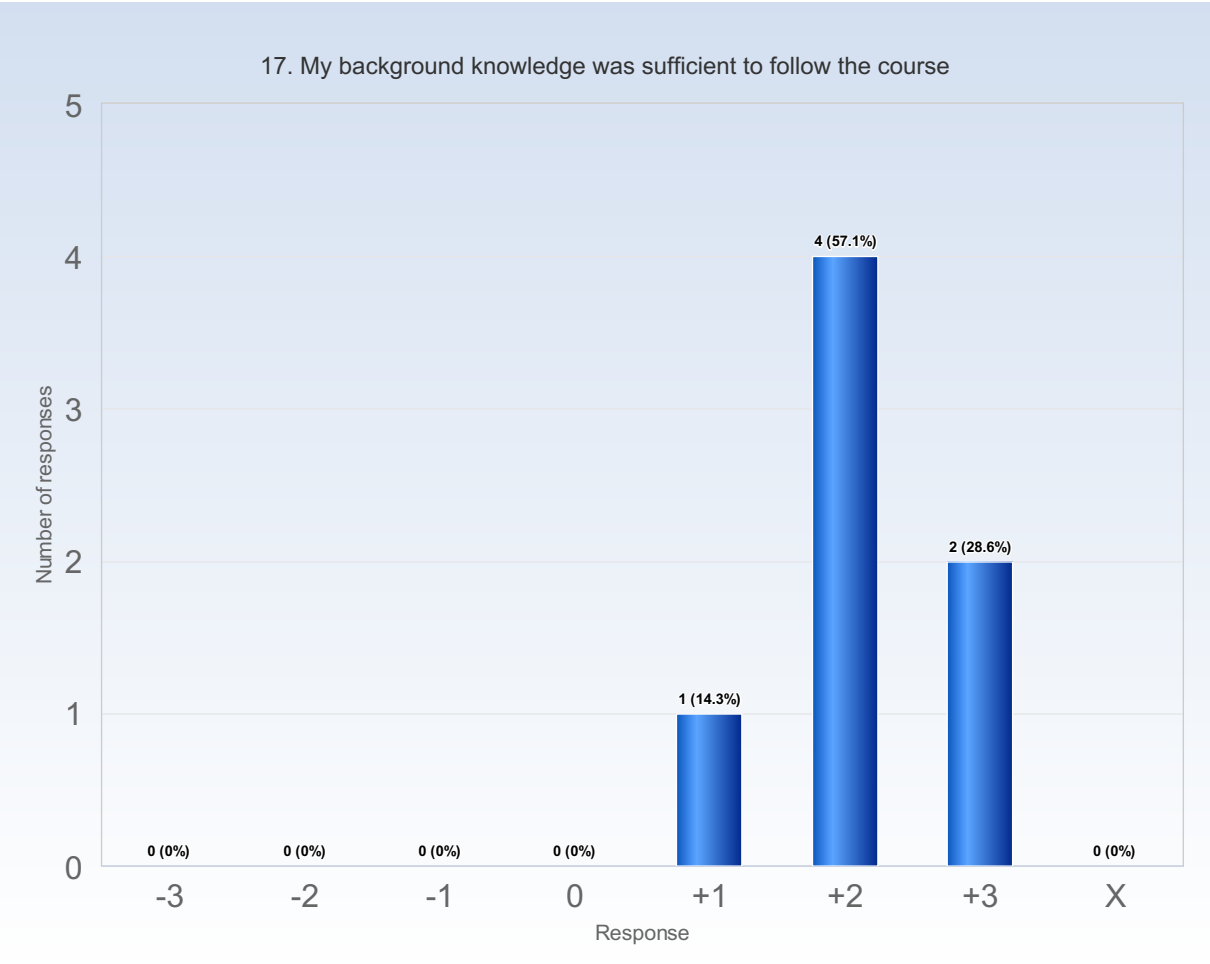
Comments (My response was: +1)
Not really a grinding course but help was there if needed.



Comments

Comments (My response was: +1)

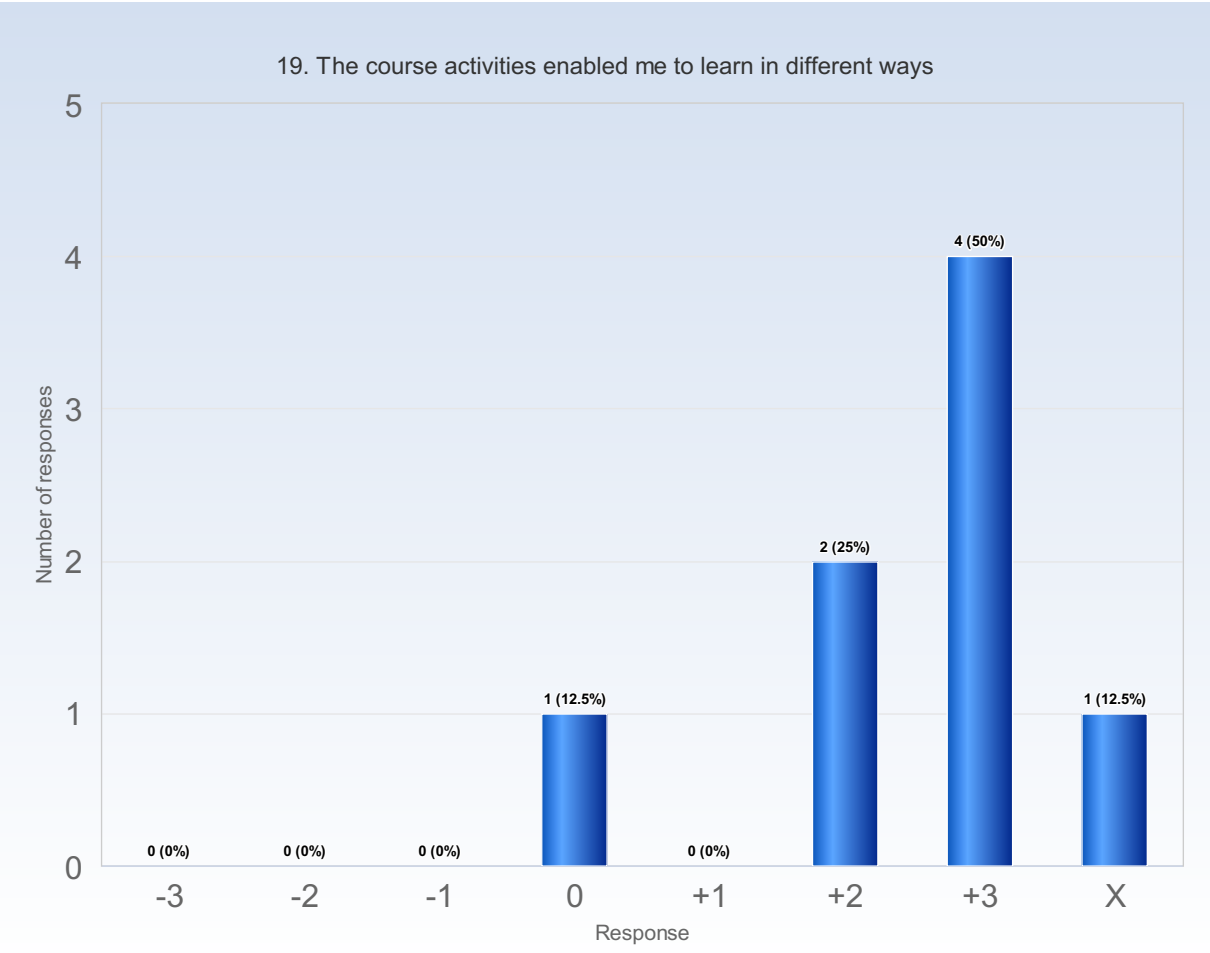
The communication regarding the assessment could be improved. In particular, a clearer grading scheme that is published much earlier.



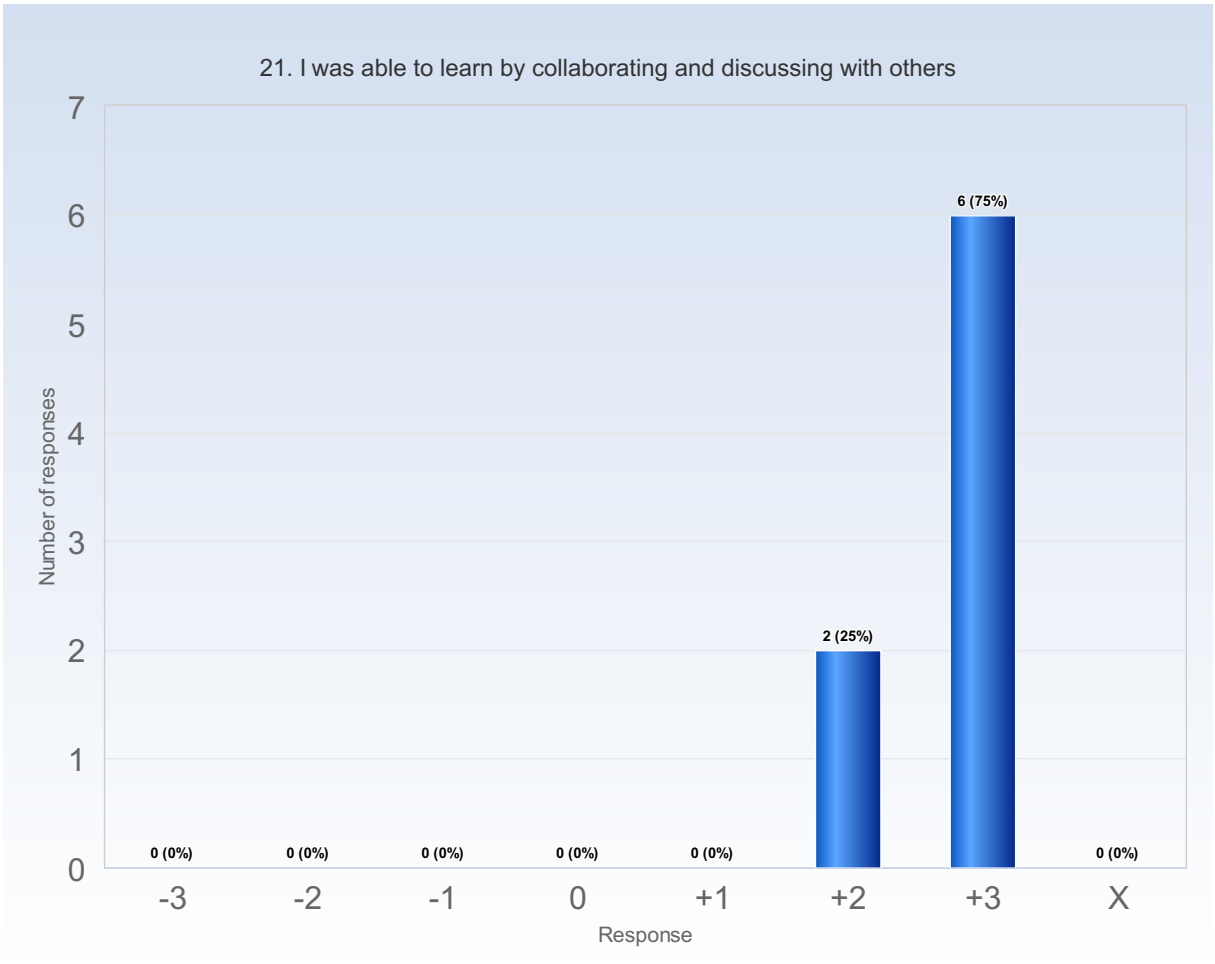
Comments

Comments (My response was: +2)

Was scared at first since I had absolute zero experience with robots before this course but it turned out great.

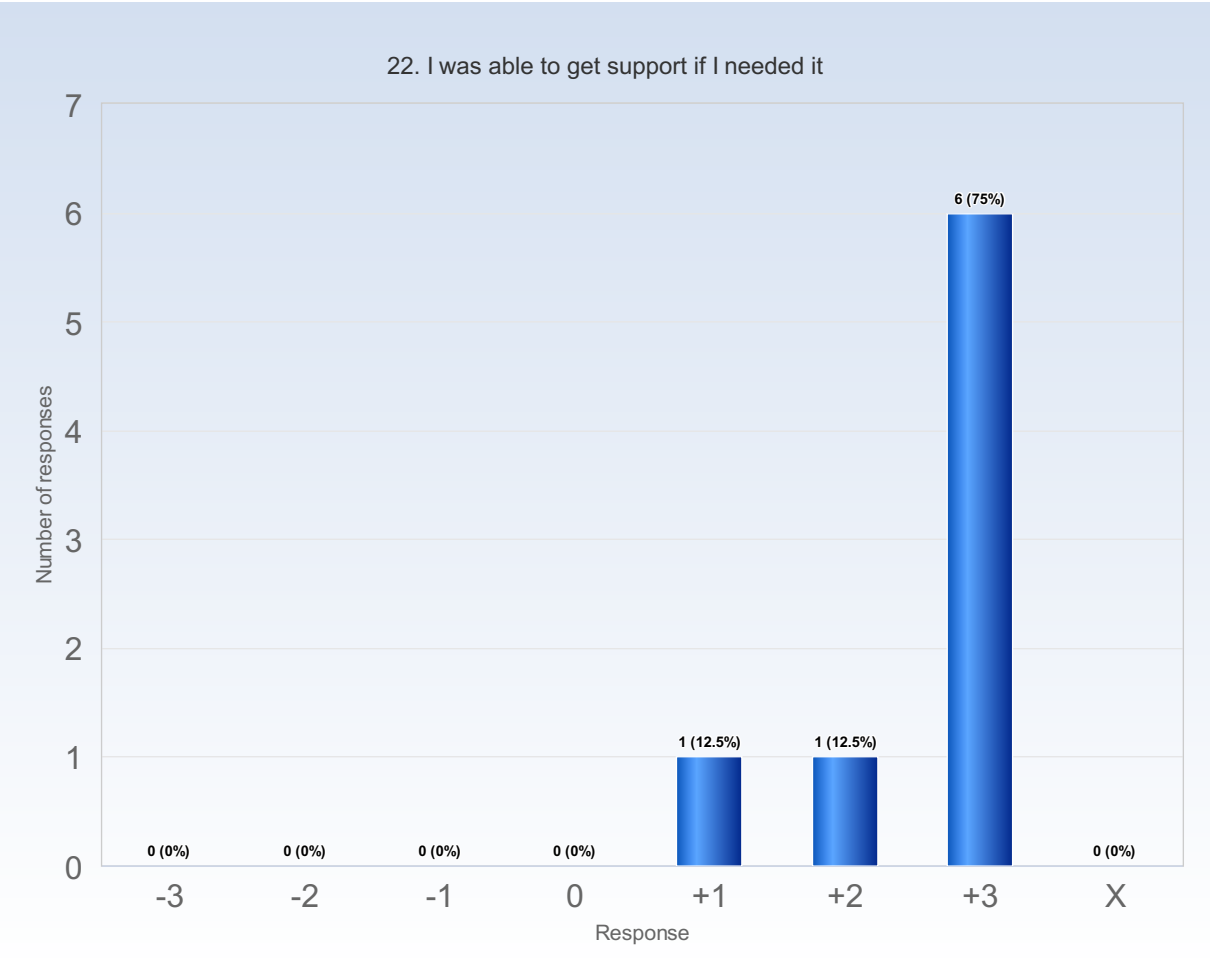

19. The course activities enabled me to learn in different ways
Number of responses
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
1 (12.5%)
0 (0%)
2 (25%)
4 (50%)
1 (12.5%)
-3
-2
-1
0
+1
+2
+3
X
Response

Comments



Comments

Comments (My response was: +3)
Very good ecture group discussions and small assignments.



Comments

Comments (My response was: +1)
Could have been some more lab hours I suppose.