DH2323 VT22 Course Analysis
Computer Graphics and Interaction 6,0hp
84 students (received credits), 7 respondents

DH2323 focusses on intermediate level computer graphics and interaction programming using C++ and libraries and game technologies, such as OpenGL and the Unity game engine.
Students must pass labs (P/F: 3,0hp) and their final grade is then determined through their performance on a project (A-F, 3,0hp).

Summary of course changes
New TA team added to the course.
Small, but possibly significant, tweaks made to when pre-recorded lectures are made available on Canvas.

Overview

Aspect	Feedback and action
The lectures are very informative and concise. The course is flexible and relies on the student pursuing their interests	Thank you for your many comments in relation to the freedom given you in this course to pursue your self-defined interests in the area of computer graphics and interaction!
Unclear in what was expected in the report.	Currently we provide information about this on the submission system and in the Q&A sessions, and also through the preliminary lab feedback, but we will also include a report template from the next course round.
More interactive practise.	The two main sessions with interactive component are the Unity tutorial session and the project brainstorming session. We will see if we can increase the interactivity in some way, but it is important to attend them. The Q&A sessions allow for interactions, but it requires the students to be active in raising questions. In the next course round, we may introduce more interaction using the Zoom voting capabilities.
Re-record the lectures as their quality is so-so. Get better microphone and equipment	The microphone has now been updated. However, when using the old equipment, most people rated the audio quality highly in the Zoom vote at the beginning of each lecture, so it is difficult to know if this issue only related to a few individuals.
I had no experience with CGs before, and I found it quite difficult to choose a topic for the final project	This is the main purpose of the lectures, the labs (which can be extended), and especially the large number of available previous project examples. In the case that you are unsure, Lab Track 1 contains very specific examples of how to extend the labs into a pass-level project.
It is good to have taken DH2320/DD2258 before taking this course	Some of the feedback from students who already took DH2320 seems to contrast with that of last year – but it makes sense to us that having taken DH2320 would make this course interesting and

	only increase the depth and possibilities of interesting work you can achieve through the project.
Some casual presentations would be fun to see.	This is a very good idea that we will take into account. It would be great, for example, if one student might like to give an overview of their project ideas and work during each Q&A session. We will investigate this possibility for next year.
I love the flipped classroom style of learning.	We are very happy to hear that it worked well for you. Even though relatively small modifications were made to the flipped classroom approach in the course, it seems to have been better received this year than last year.
Fantastic lab assistants	We are happy that updates to the TA team have been well received.
C++ is difficult, not used to how libraries work	This is typical problem in the course that relates to some of the lab tracks. The animation lab in SDL has been particularly troublesome. For this reason, we suggest that students who do not have a lot of experience should take the Unity lab track instead, in which they should have fewer issues. We are also in the process of phasing out the old animation lab track and it will not appear in the next course round.

Details

This year, there appeared to be minor changes in all LEQ scores. The largest change was 7: "clear intended learning outcomes". Since the change is still relatively small (5.8 and 5.3) and we delivered the exact same content in terms of explaining how the course links to the learning goals, we do not put much weight on this result, but will continue to monitor with respect to next year's cohort. See also comments below in relation to the number of LEQ participants.

The most significant increase in score this year was 22: "I was able to get support if I needed it". While we had the same number of lab help sessions as last year, the TA team was upgraded and it seems this change worked very well. The guest lecture from a senior games programmer from industry was again very well received.

In relation to the freedom afforded to students on the course, it seems important to highlight this comment:

"As a bachelor's student I noticed that I've never had this much responsibility on me personally on how much to get out of the course."

While it is difficult to tell if this comment is positive or negative, as there is no scoring associated with it, we overwhelmingly interpret it as being positive as it is a key pedagogical principle in the course. This course is a new experience for many students due to the responsibility put on them to drive their own learning and seek support we make available. We will facilitate that as far as deep as the students want to go via the project: to the level, if the student is interested, of personal supervision in their project work – a level that is usually afforded to Master students. We again highlight how important we view

this course for developing skills necessary to ease the transition to Master-level work, especially to high-quality, research-driven Master theses.

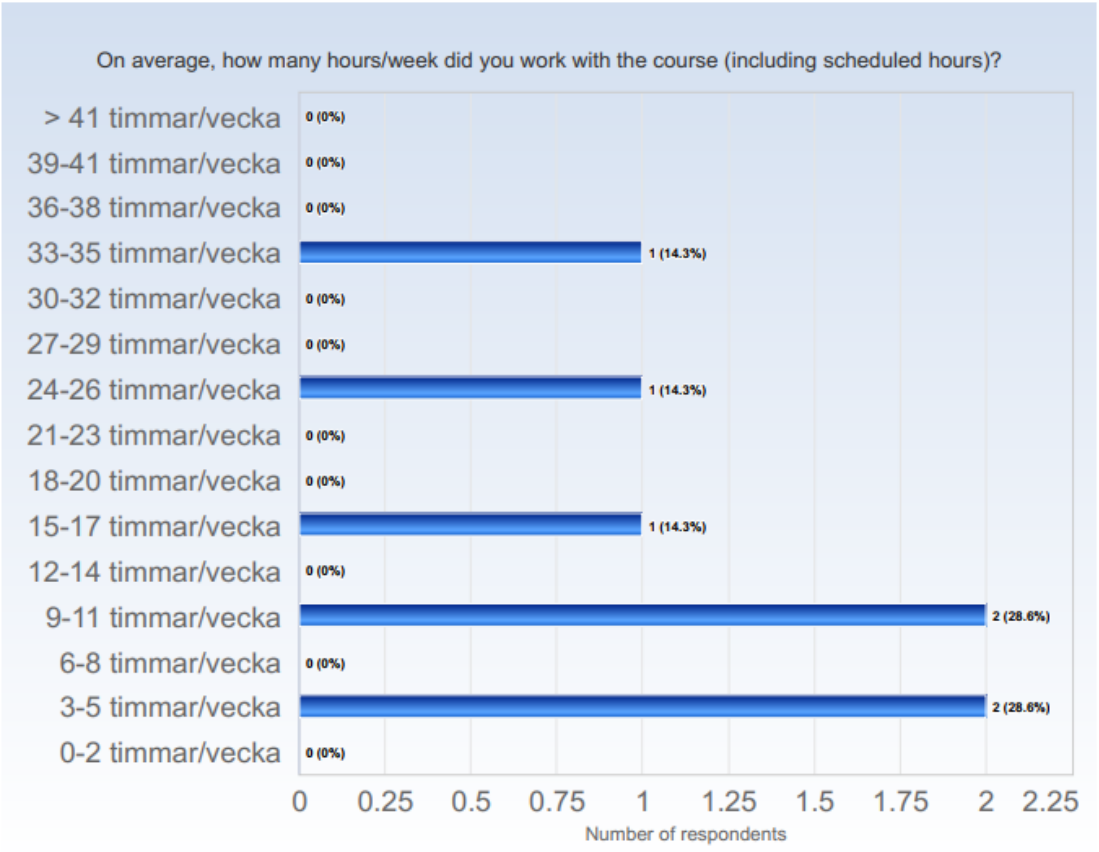
Finally, this year especially, there have been a small number of evaluation respondents. We will attempt to ensure next year that more students answer the course survey by additionally reminding students to complete it in Canvas when they are submitting their coursework there. While this does have the disadvantage that it may not be possible to provide substantial LEQ feedback in terms of fairness of grading, it has worked well in other courses to have a large enough sample size to properly determine class sentiments. We would also note in terms of fairness of grading that we receive very few requests, if any, per course round to re-evaluate the grades on lab or project work. The project specification also asks students what level of achievement they are aiming for which helps us to provide suitable feedback on the scope and depth required for their projects.

LEQ Course evaluation data follows:

DH2323 - 2022-05-30

Antal respondenter: 114
Antal svar: 7
Svarsfrekvens: 6,14 %

ESTIMATED WORKLOAD



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

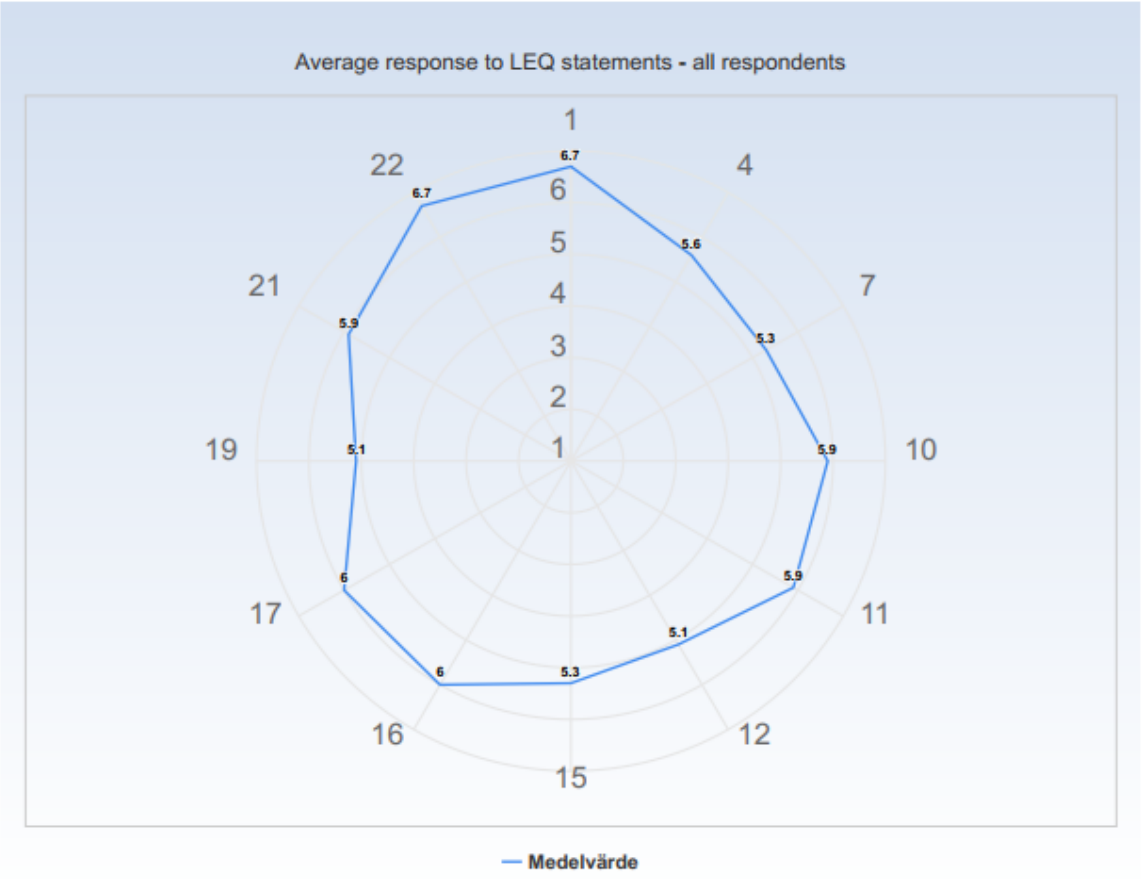
n) We are able to collaborate with other learners struggling with the same problems

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.

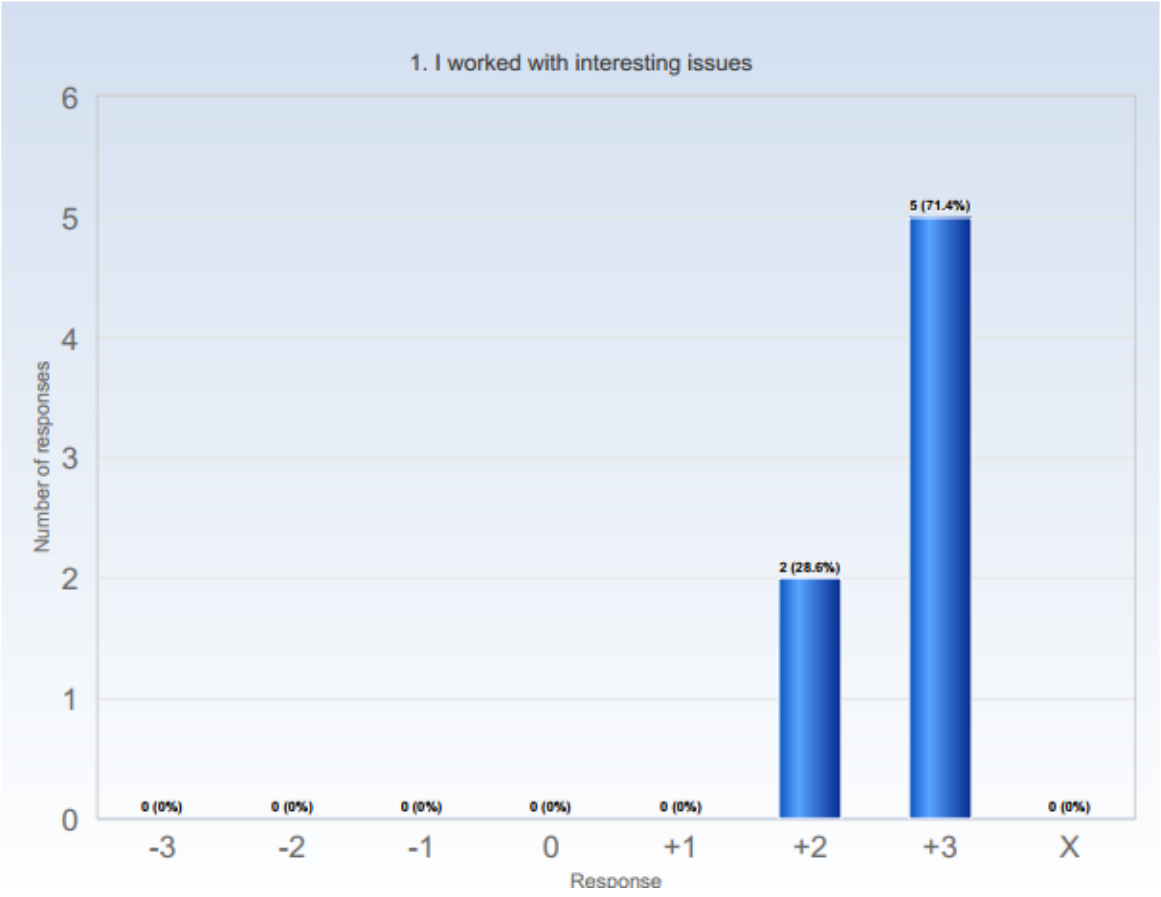


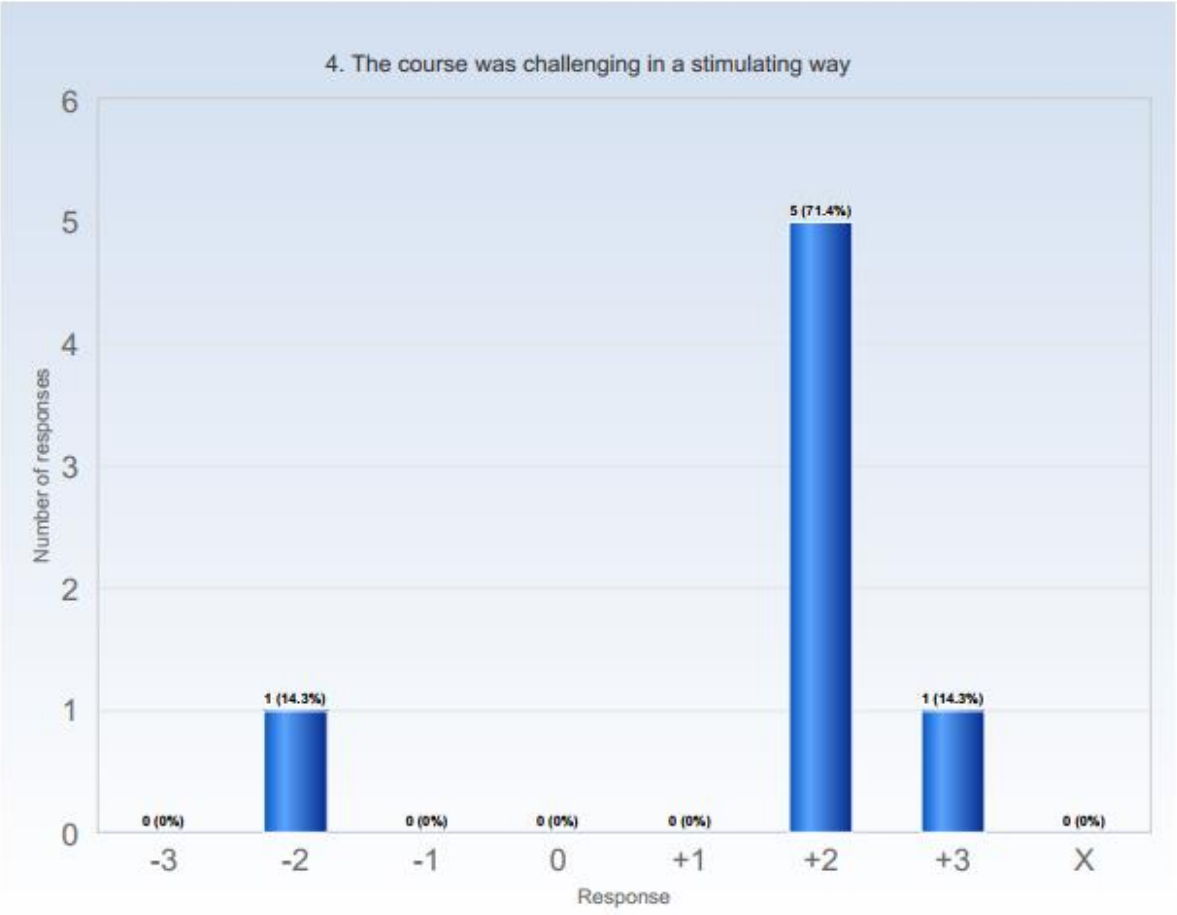
RESPONSE DATA

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

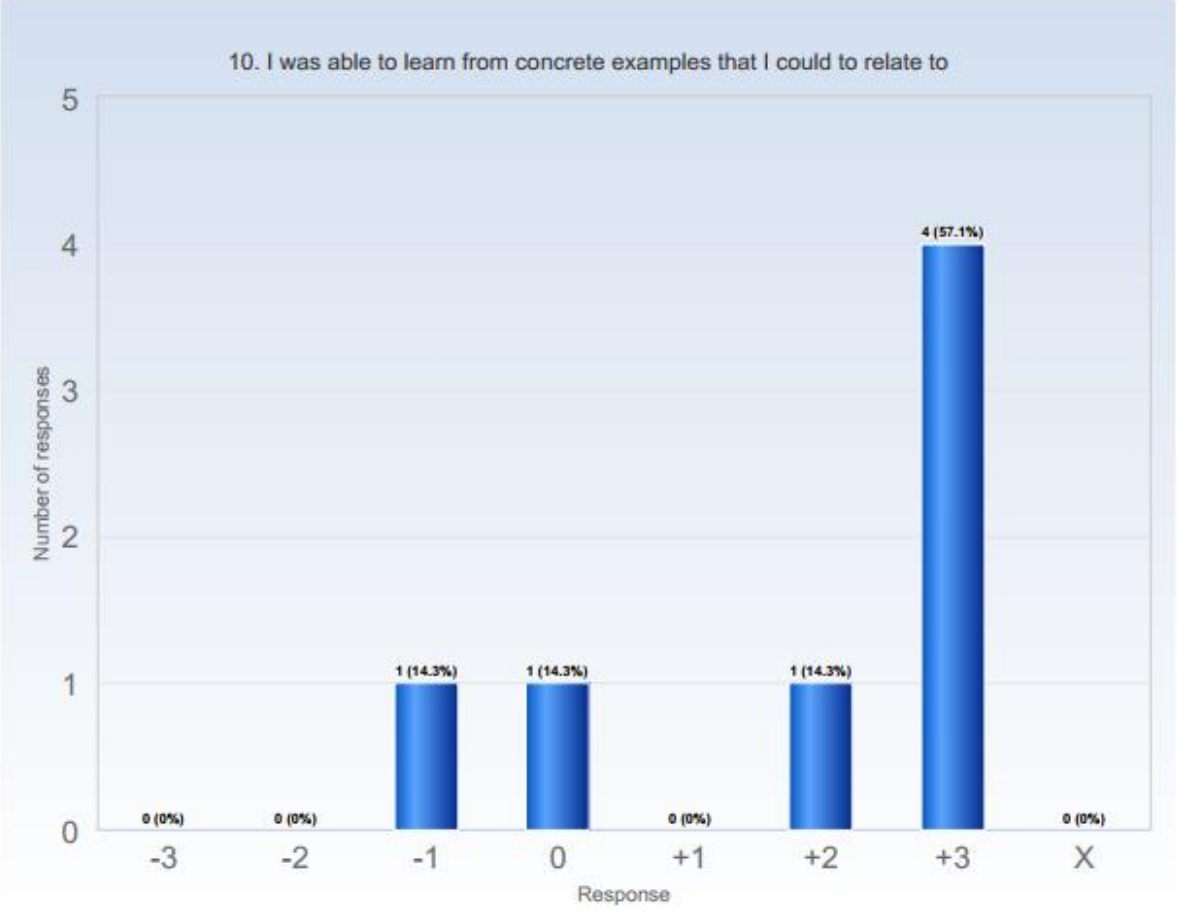
-3 = No, I strongly disagree with the statement
0 = I am neutral to the statement
+3 = Yes, I strongly agree with the statement

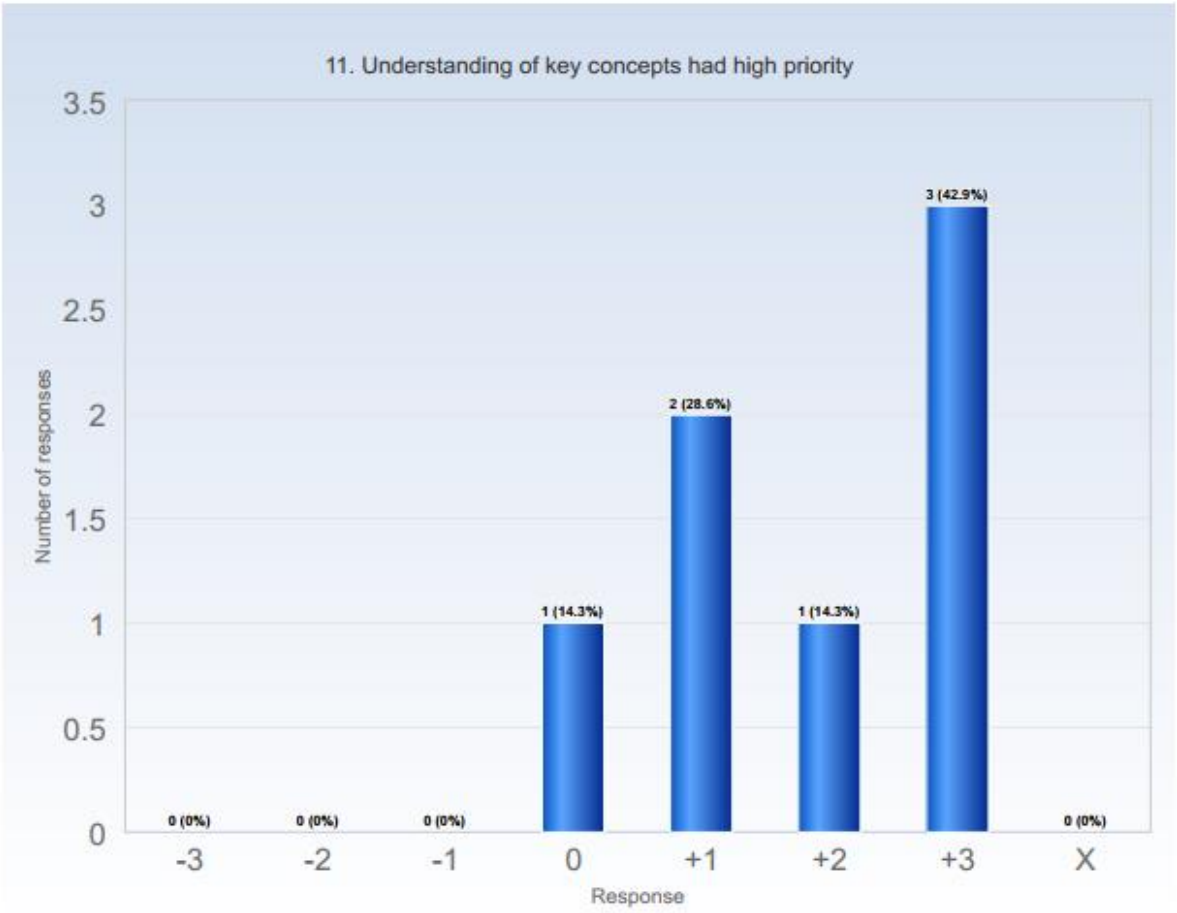
X = I decline to take a position on the statement

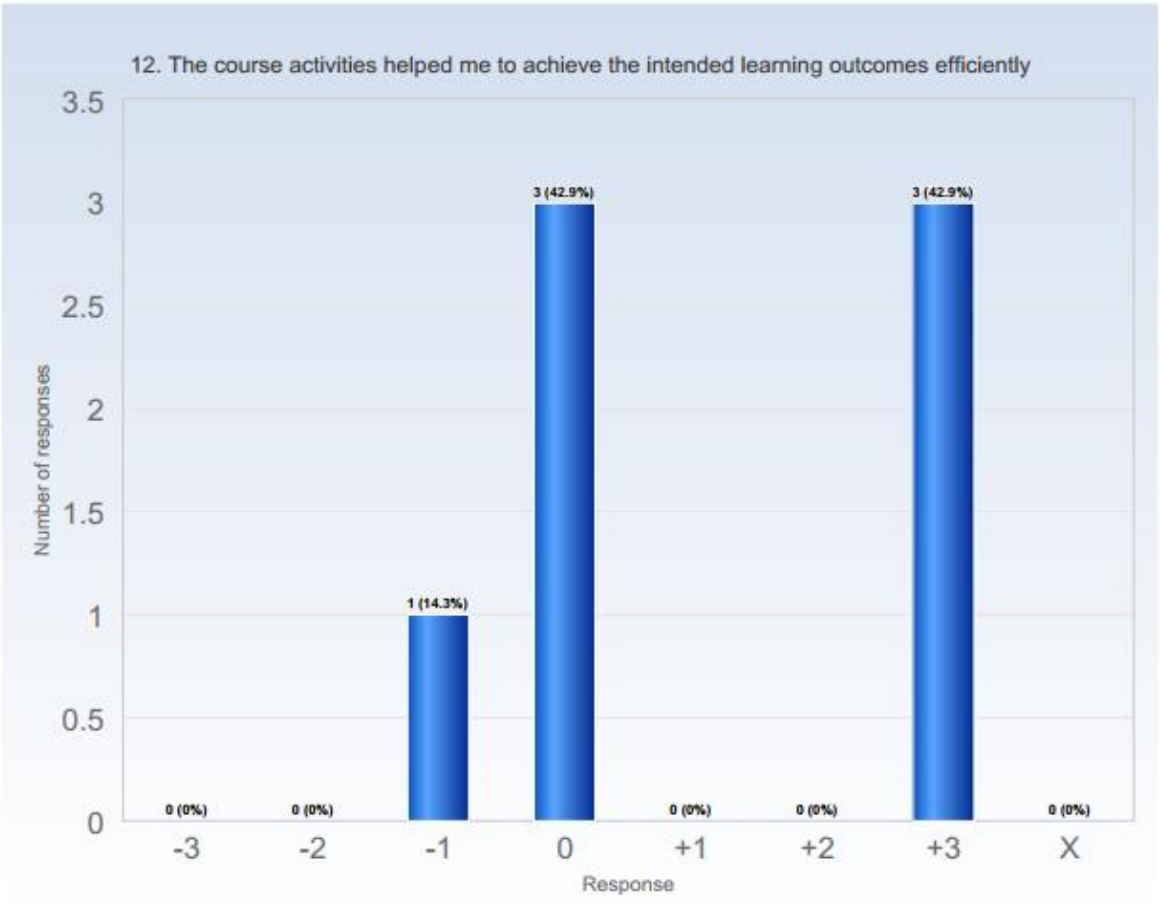



4. The course was challenging in a stimulating way
Number of responses
6
5
4
3
2
1
0
0 (0%)
1 (14.3%)
0 (0%)
0 (0%)
0 (0%)
5 (71.4%)
1 (14.3%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

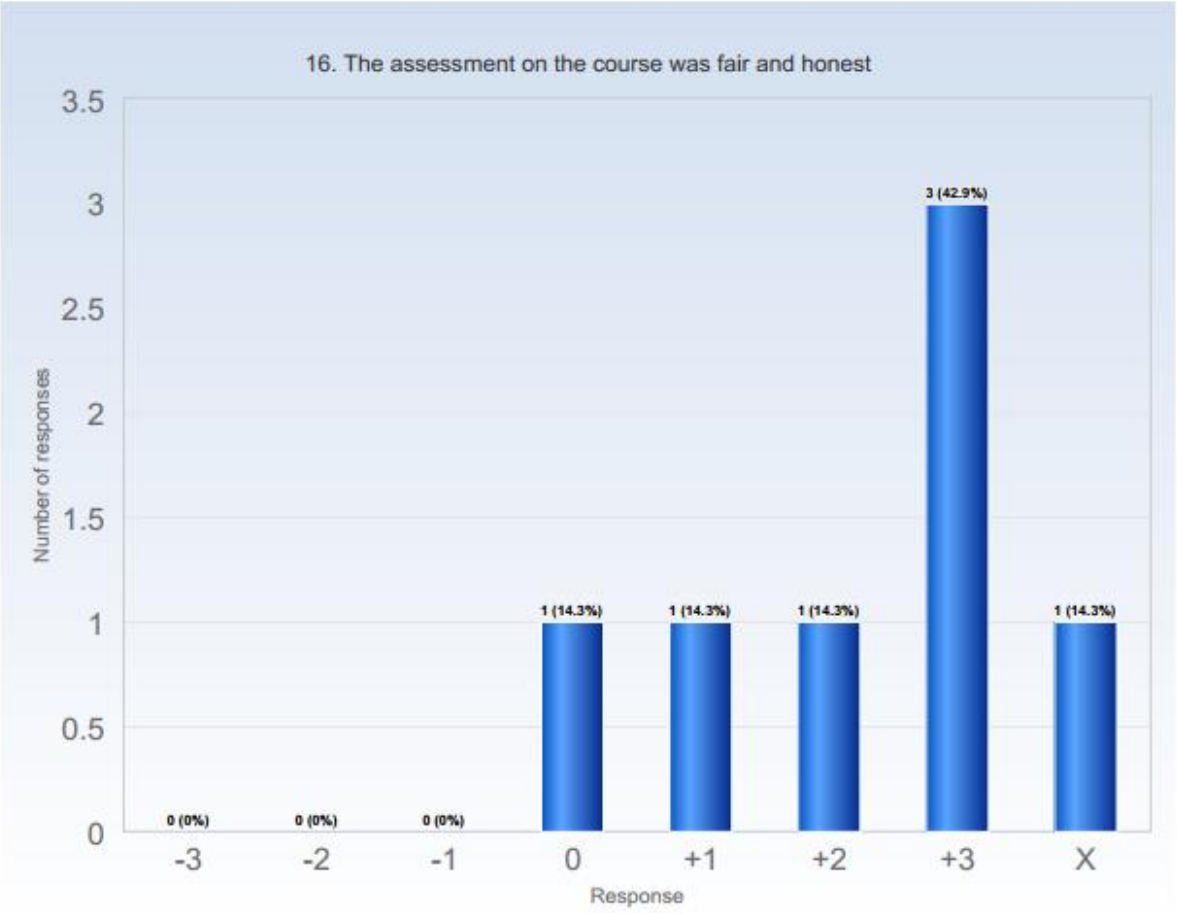

7. The intended learning outcomes helped me to understand what I was expected to achieve
Number of responses
2.25
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0
0 (0%)
1 (14.3%)
0 (0%)
1 (14.3%)
1 (14.3%)
2 (28.6%)
2 (28.6%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

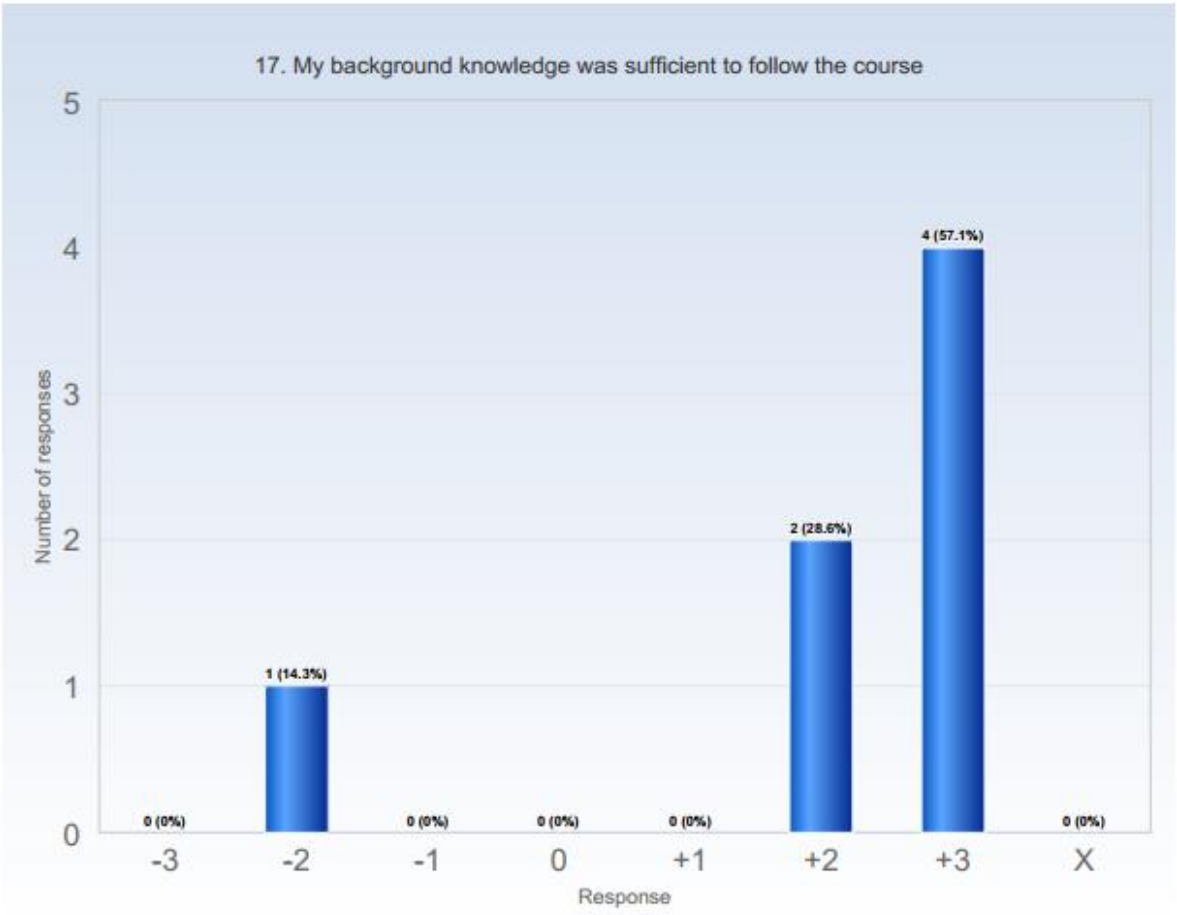

10. I was able to learn from concrete examples that I could to relate to
Number of responses
5
4
3
2
1
0
0 (0%)
0 (0%)
1 (14.3%)
1 (14.3%)
0 (0%)
1 (14.3%)
4 (57.1%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

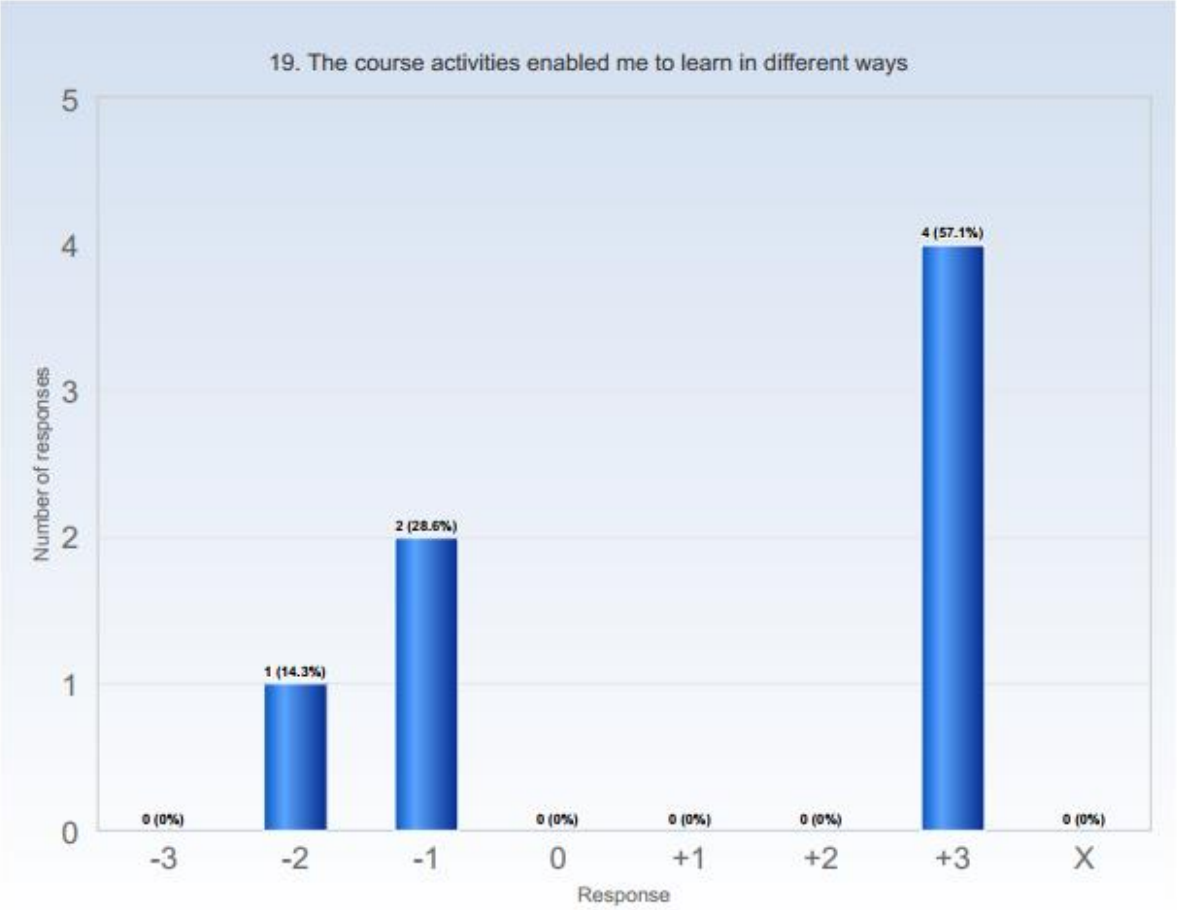

11. Understanding of key concepts had high priority
Number of responses
3.5
3
2.5
2
1.5
1
0.5
0
0 (0%)
0 (0%)
0 (0%)
1 (14.3%)
2 (28.6%)
1 (14.3%)
3 (42.9%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

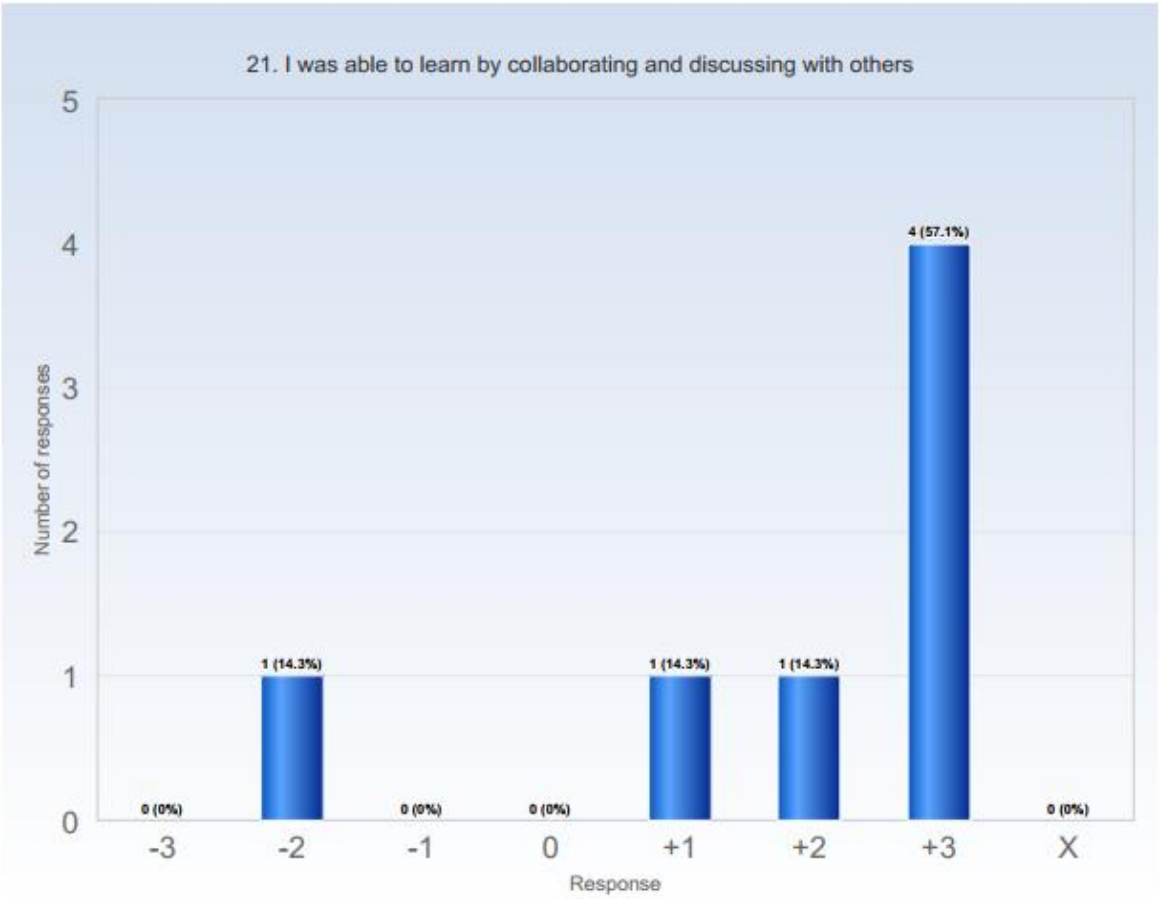

12. The course activities helped me to achieve the intended learning outcomes efficiently
Number of responses
3.5
3
2.5
2
1.5
1
0.5
0
0 (0%)
0 (0%)
1 (14.3%)
3 (42.9%)
0 (0%)
0 (0%)
3 (42.9%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

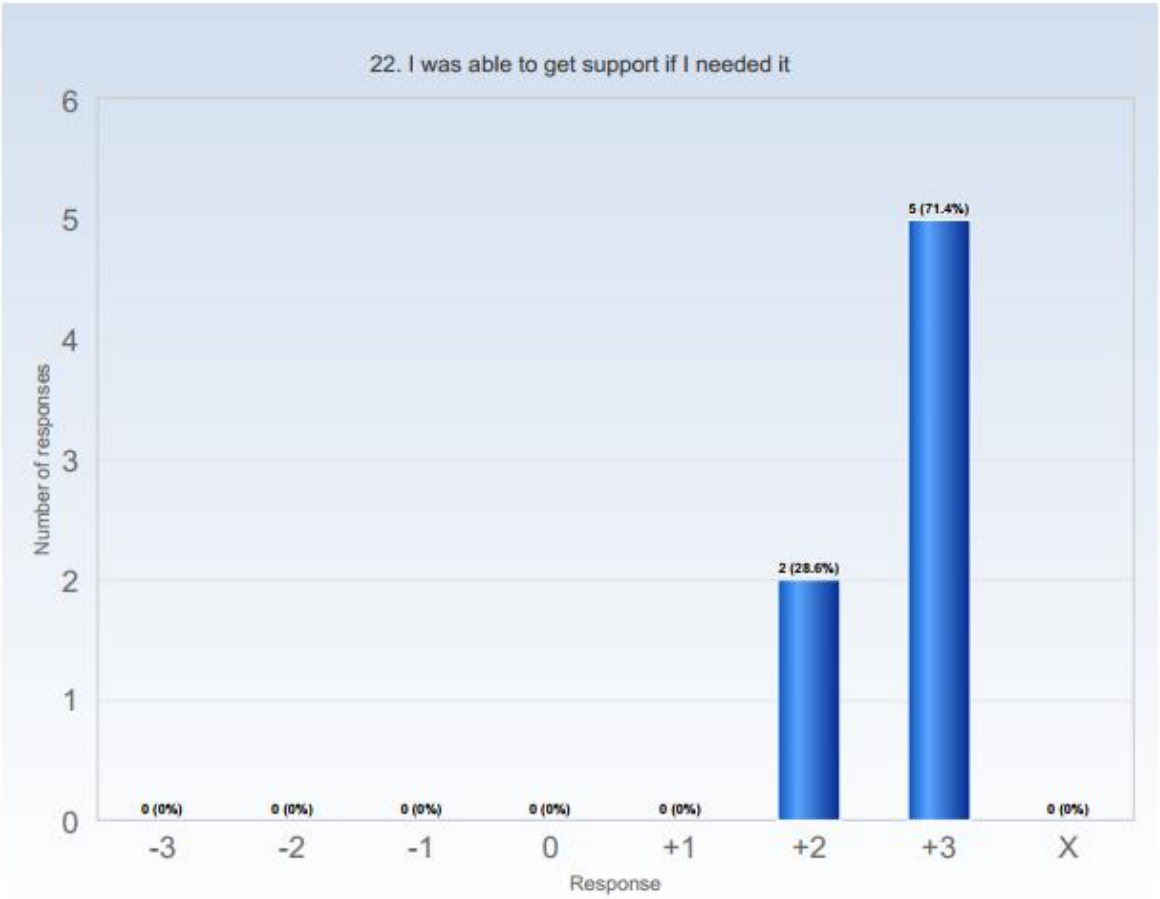

15. I was able to practice and receive feedback without being graded
Number of responses
3.5
3
2.5
2
1.5
1
0.5
0
0 (0%)
1 (14.3%)
0 (0%)
1 (14.3%)
1 (14.3%)
0 (0%)
3 (42.9%)
1 (14.3%)
-3
-2
-1
0
+1
+2
+3
X
Response


16. The assessment on the course was fair and honest
3.5
3
2.5
2
1.5
1
0.5
0
Number of responses
0 (0%)
0 (0%)
0 (0%)
1 (14.3%)
1 (14.3%)
1 (14.3%)
3 (42.9%)
1 (14.3%)
-3
-2
-1
0
+1
+2
+3
X
Response


17. My background knowledge was sufficient to follow the course
Number of responses
5
4
3
2
1
0
0 (0%)
1 (14.3%)
0 (0%)
0 (0%)
0 (0%)
2 (28.6%)
4 (57.1%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response


19. The course activities enabled me to learn in different ways
Number of responses
5
4
3
2
1
0
0 (0%)
1 (14.3%)
2 (28.6%)
0 (0%)
0 (0%)
0 (0%)
4 (57.1%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response


21. I was able to learn by collaborating and discussing with others
Number of responses
5
4
3
2
1
0
0 (0%)
1 (14.3%)
0 (0%)
0 (0%)
1 (14.3%)
1 (14.3%)
4 (57.1%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response


22. I was able to get support if I needed it
Number of responses
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
0 (0%)
0 (0%)
2 (28.6%)
5 (71.4%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response