



Sustainable technologies for low- and medium income countries TN0354, 10210.2223

7.5 Hp

Pace of study = 25%

Education cycle = Advanced

Course leader = Jennifer Mcconville, Priscila de Morais Lima

Evaluation report

Evaluation period: 2023-01-08 - 2023-01-29

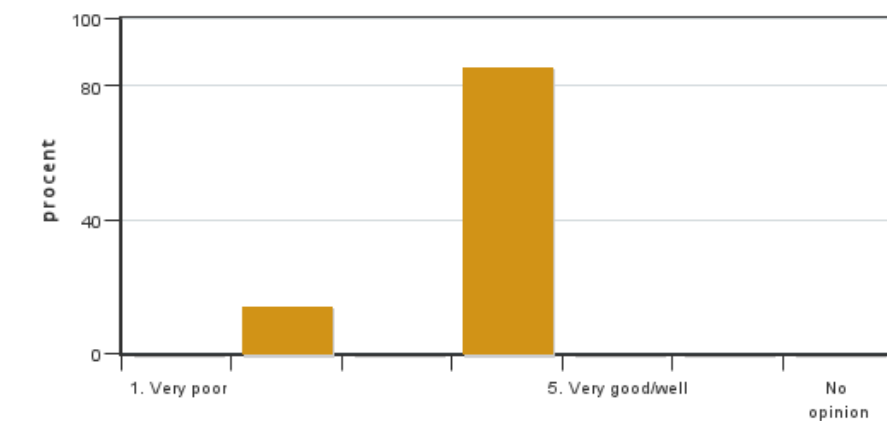
Answers 7

Number of students 11

Answer frequency 63 %

Mandatory standard questions

1. My overall impression of the course is:

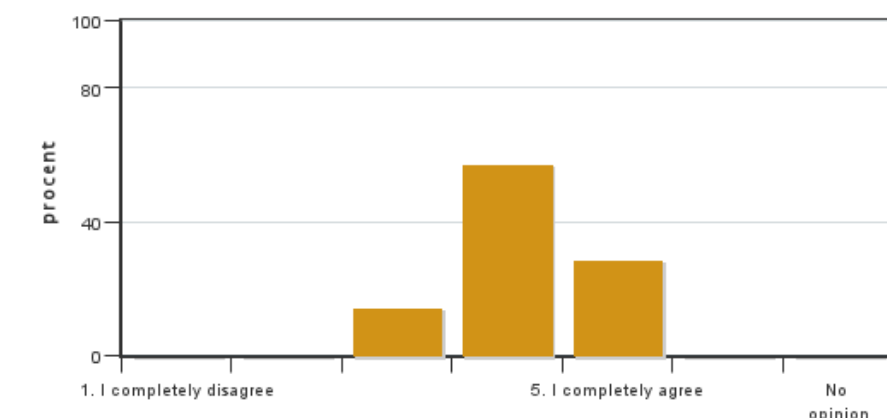


Answers: 7
Medel: 3,7
Median: 4

1: 0
2: 1
3: 0
4: 6
5: 0

No opinion: 0

2. I found the course content to have clear links to the learning objectives of the course.

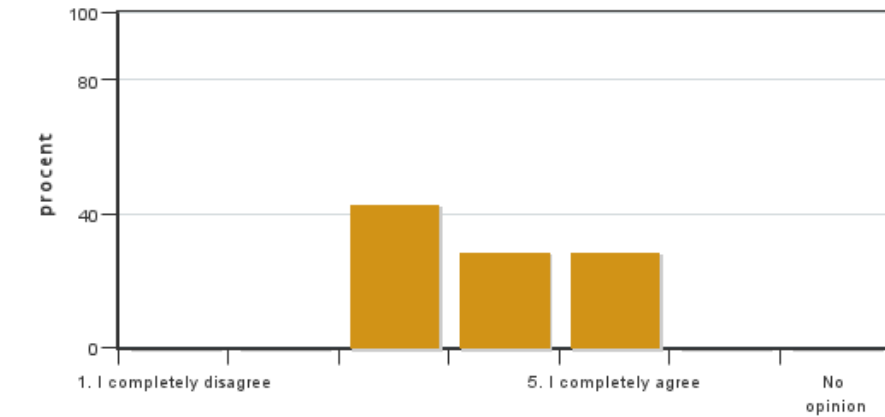


Answers: 7
Medel: 4,1
Median: 4

1: 0
2: 0
3: 1
4: 4
5: 2

No opinion: 0

3. My prior knowledge was sufficient for me to benefit from the course.

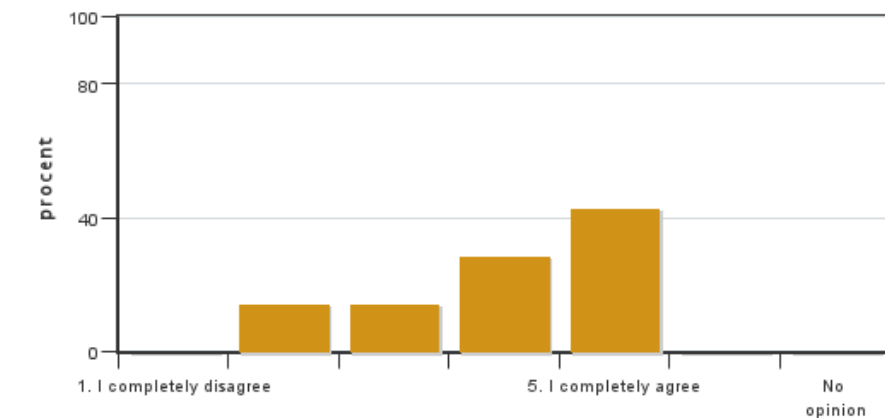


Answers: 7
 Medel: 3,9
 Median: 4

1: 0
 2: 0
 3: 3
 4: 2
 5: 2

No opinion: 0

4. The information about the course was easily accessible.

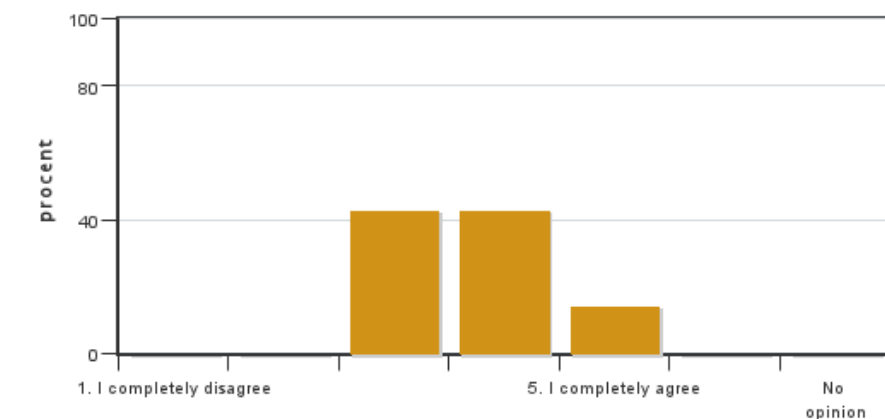


Answers: 7
 Medel: 4,0
 Median: 4

1: 0
 2: 1
 3: 1
 4: 2
 5: 3

No opinion: 0

5. The various course components (lectures, course literature, exercises etc.) have supported my learning.

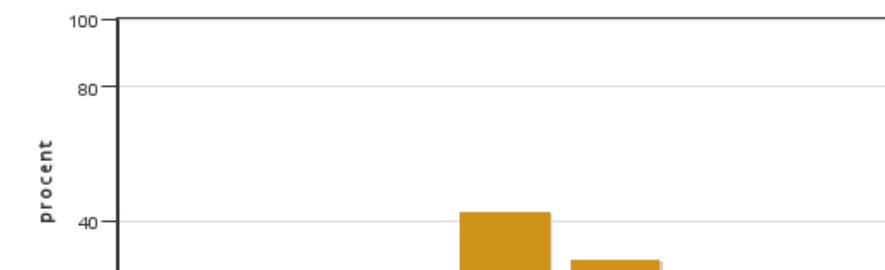


Answers: 7
 Medel: 3,7
 Median: 4

1: 0
 2: 0
 3: 3
 4: 3
 5: 1

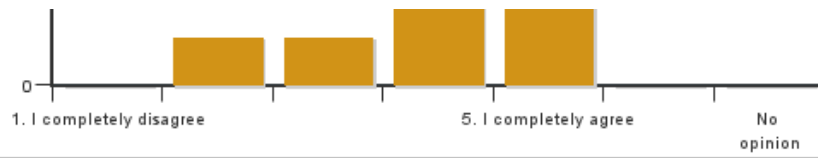
No opinion: 0

6. The social learning environment has been inclusive, respecting differences of opinion.



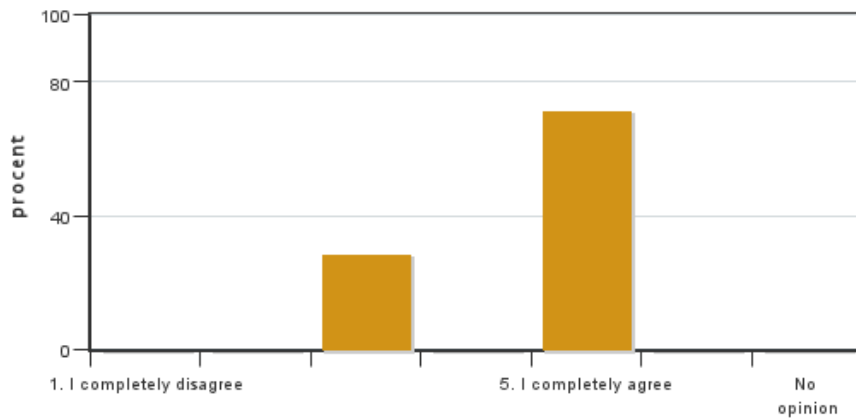
Answers: 7
 Medel: 3,9
 Median: 4

1: 0
 2: 1
 3: 1
 4: 3
 5: 2



No opinion: 0

7. The physical learning environment (facilities, equipment etc.) has been satisfactory.



Answers: 7

Medel: 4,4

Median: 5

1: 0

2: 0

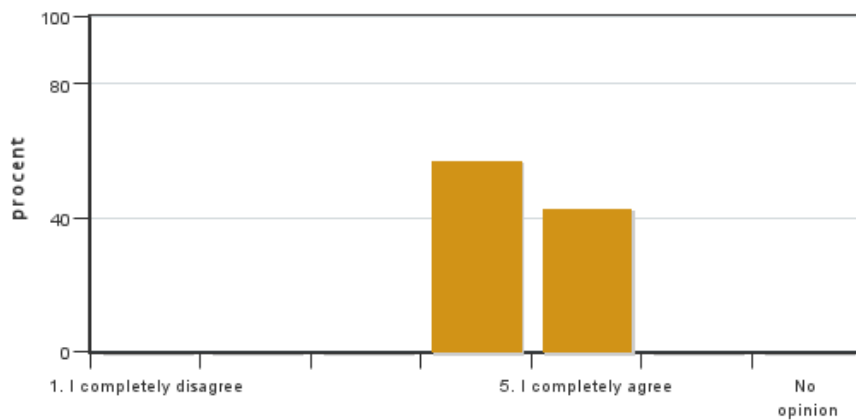
3: 2

4: 0

5: 5

No opinion: 0

8. The examination(s) provided opportunity to demonstrate what I had learnt during the course (see the learning objectives).



Answers: 7

Medel: 4,4

Median: 4

1: 0

2: 0

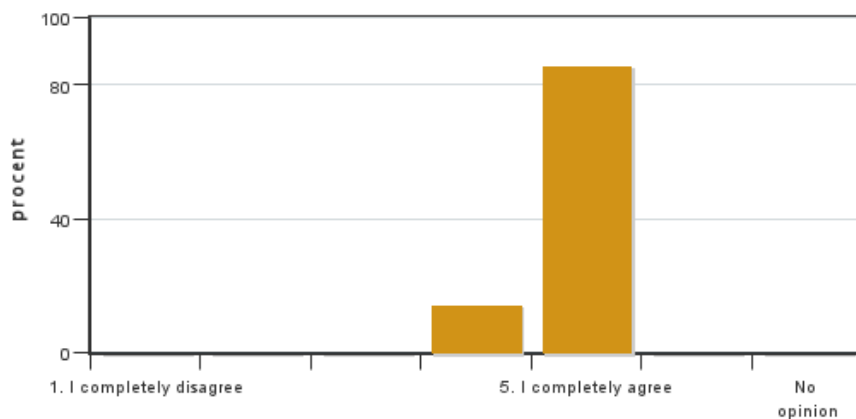
3: 0

4: 4

5: 3

No opinion: 0

9. The course covered the sustainable development aspect (environmental, social and/or financial sustainability).



Answers: 7

Medel: 4,9

Median: 5

1: 0

2: 0

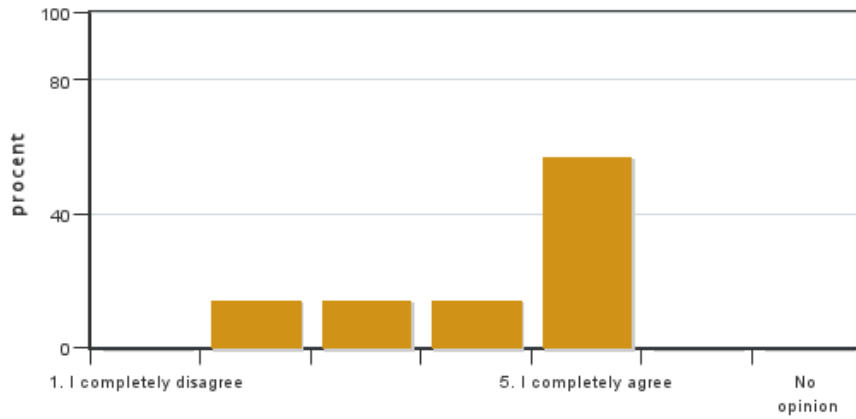
3: 0

4: 1

5: 6

No opinion: 0

10. I believe the course has included a gender and equality aspect, regarding content as well as teaching practices (e.g. perspective on the subject, reading list, allocation of speaking time and the use of master suppression techniques).

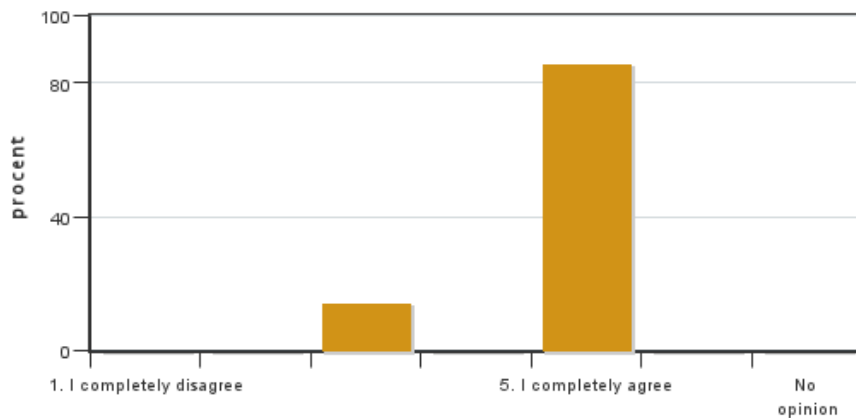


Answers: 7
 Medel: 4,1
 Median: 5

1: 0
 2: 1
 3: 1
 4: 1
 5: 4

No opinion: 0

11. The course covered international perspectives.

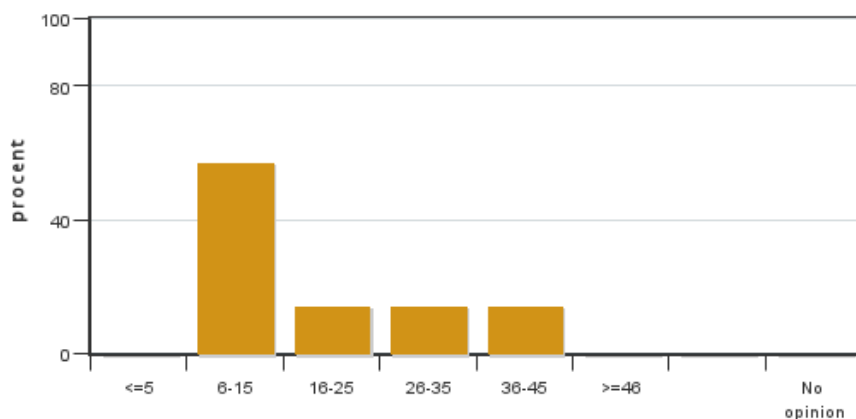


Answers: 7
 Medel: 4,7
 Median: 5

1: 0
 2: 0
 3: 1
 4: 0
 5: 6

No opinion: 0

12. On average, I have spent ... hours/week on the course (including timetabled hours).

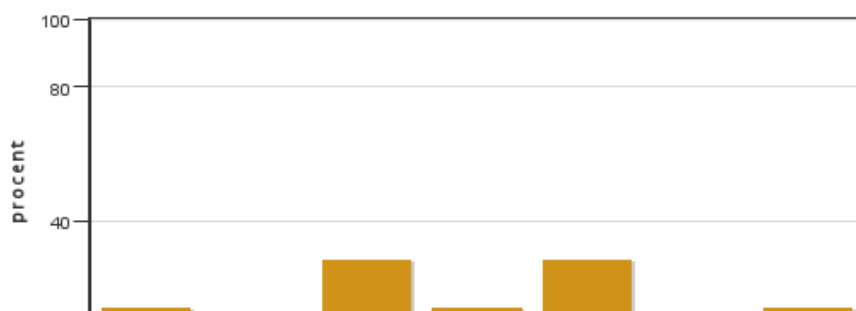


Answers: 7
 Medel: 18,6
 Median: 6-15

≤5: 0
 6-15: 4
 16-25: 1
 26-35: 1
 36-45: 1
 ≥46: 0

No opinion: 0

13. If relevant, what is your overall experience of participating in all or part of your course online?



Answers: 7
 Medel: 3,5
 Median: 3

1: 1
 2: 0
 3: 2
 4: 1
 5: 2

No opinion: 1

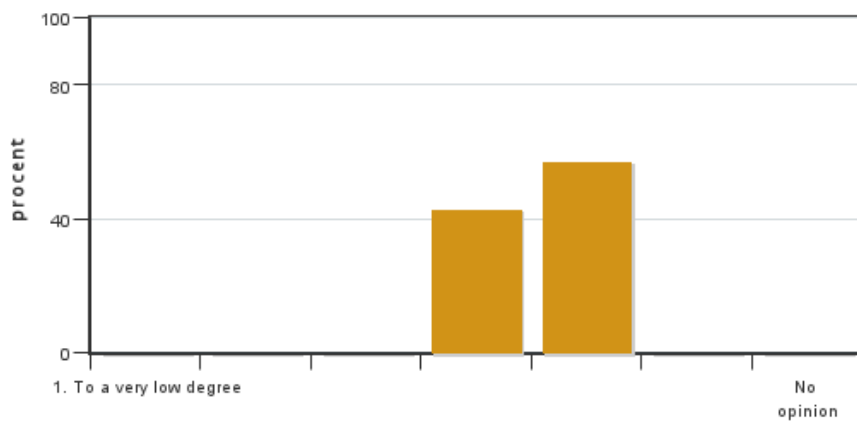


14. If relevant, please share what worked well when participating in teaching on distance

15. If relevant, please share what worked less well when participating in teaching on distance

Additional own questions

16. How relevant did you feel "Introduction to sustainable development in low- and medium income countries" module was? (please provide specific comments)

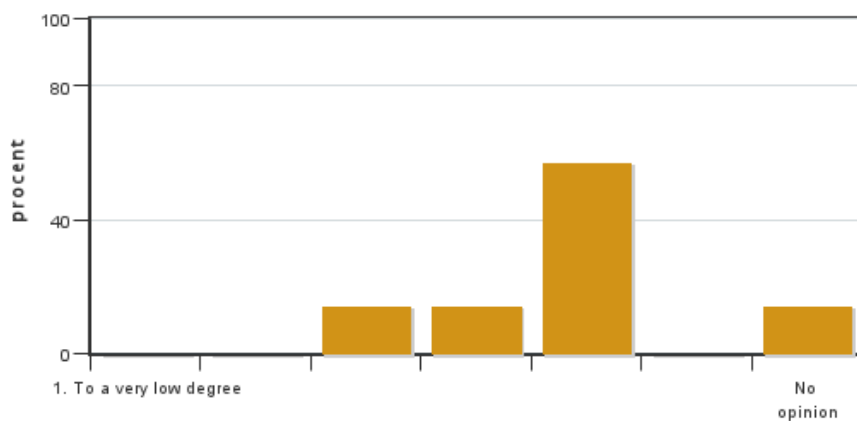


Answers: 7
 Medel: 4,6
 Median: 5

1: 0
 2: 0
 3: 0
 4: 3
 5: 4

No opinion: 0

17. How relevant did you feel "Sustainable resource management: water, nutrients and waste" module was? (please provide specific comments)

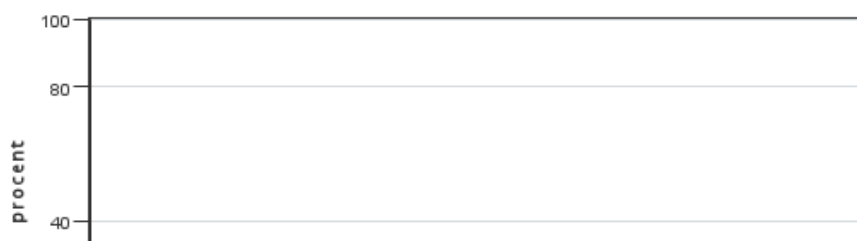


Answers: 7
 Medel: 4,5
 Median: 5

1: 0
 2: 0
 3: 1
 4: 1
 5: 4

No opinion: 1

18. How relevant did you feel "Small-scale renewable energy technologies" module was? (please provide specific comments)



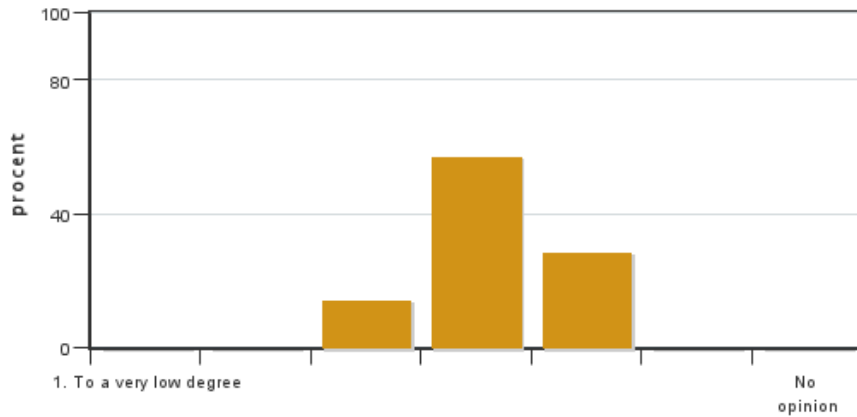
Answers: 7
 Medel: 3,5
 Median: 4

1: 1
 2: 1
 3: 0
 4: 2



5: 2
No opinion: 1

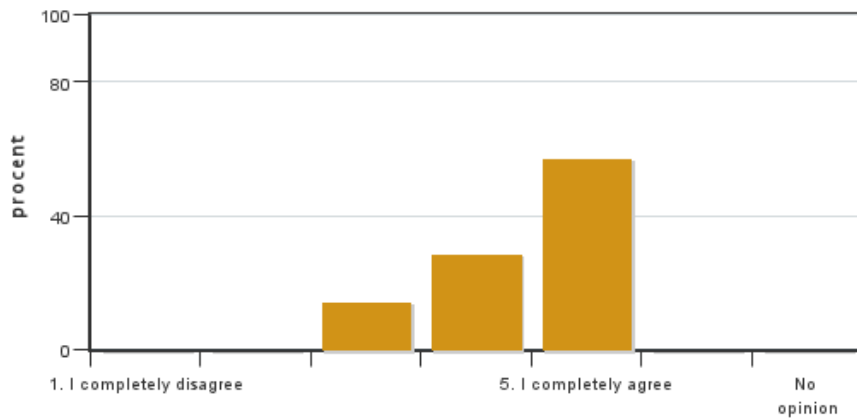
19. How relevant did you feel "Small-scale transport technologies, logistics and value chain management" module was? (please provide specific comments)



Answers: 7
Medel: 4,1
Median: 4

1: 0
2: 0
3: 1
4: 4
5: 2
No opinion: 0

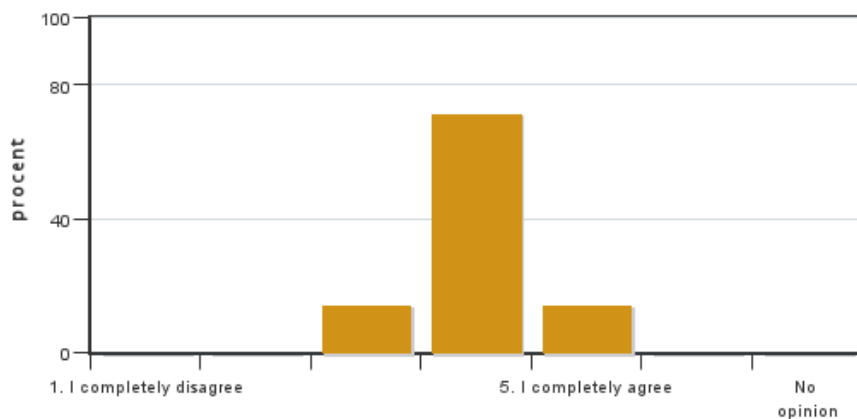
20. I was able to explore the subject by trying out ideas on my own.



Answers: 7
Medel: 4,4
Median: 5

1: 0
2: 0
3: 1
4: 2
5: 4
No opinion: 0

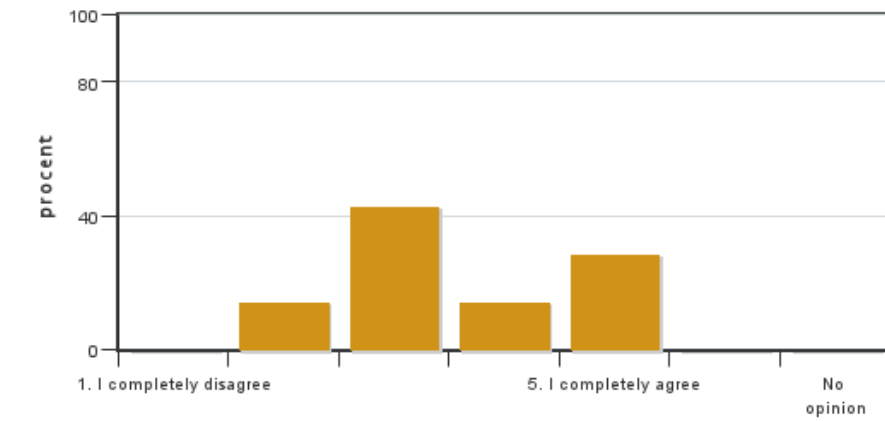
21. The course was challenging in a stimulating way.



Answers: 7
Medel: 4,0
Median: 4

1: 0
2: 0
3: 1
4: 5
5: 1
No opinion: 0

22. I found it important to prepare before lectures by reviewing course literature.

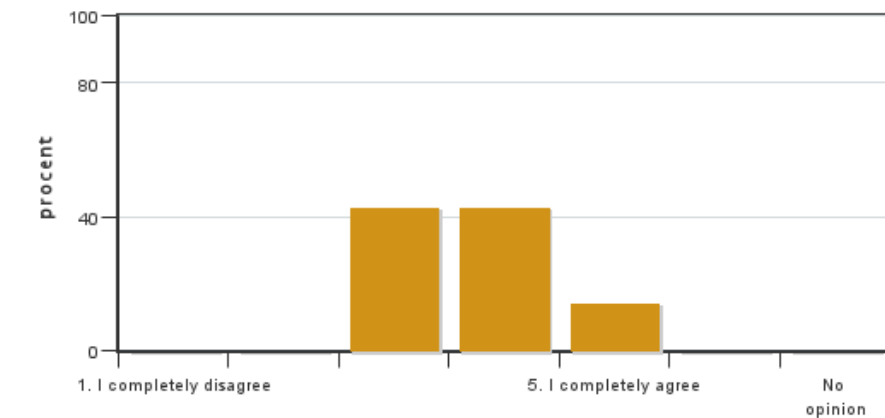


Answers: 7
 Medel: 3,6
 Median: 3

1: 0
 2: 1
 3: 3
 4: 1
 5: 2

No opinion: 0

23. I understood what the teachers were talking about. (please provide specific comments)

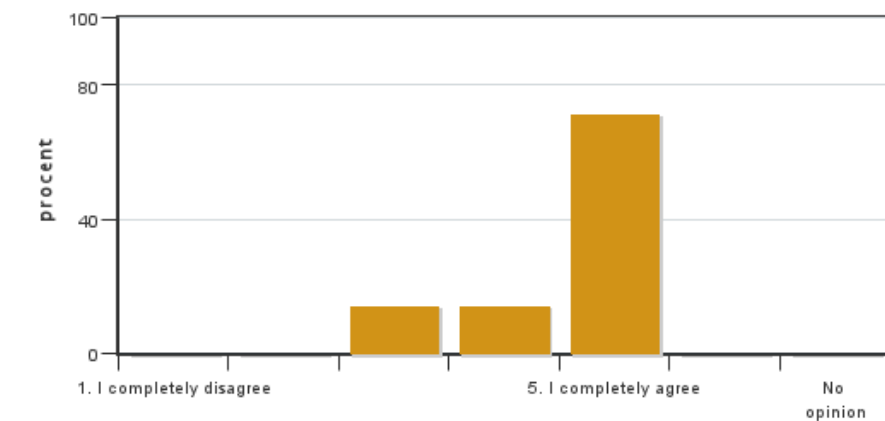


Answers: 7
 Medel: 3,7
 Median: 4

1: 0
 2: 0
 3: 3
 4: 3
 5: 1

No opinion: 0

24. Teachers provided concrete examples that I could relate to and learn from. (please provide specific comments)

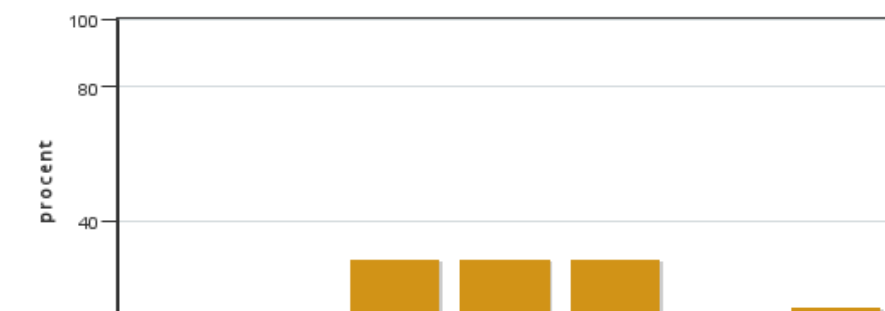


Answers: 7
 Medel: 4,6
 Median: 5

1: 0
 2: 0
 3: 1
 4: 1
 5: 5

No opinion: 0

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



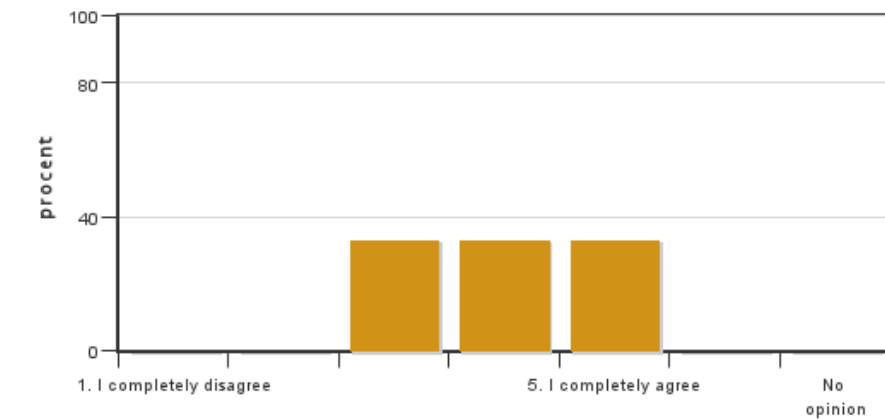
Answers: 7
 Medel: 4,0
 Median: 4

1: 0
 2: 0
 3: 2
 4: 2
 5: 2

No opinion: 1



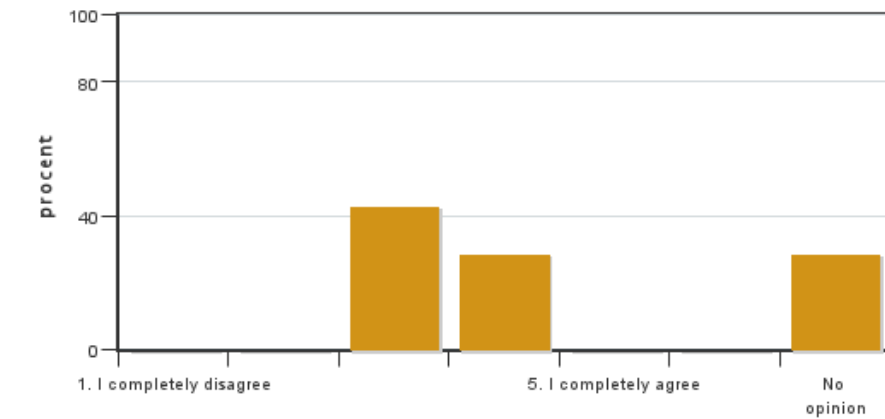
26. I received regular feedback that helped me to see my progress. (please provide specific comments)



Answers: 6
Medel: 4,0
Median: 4

1: 0
2: 0
3: 2
4: 2
5: 2
No opinion: 0

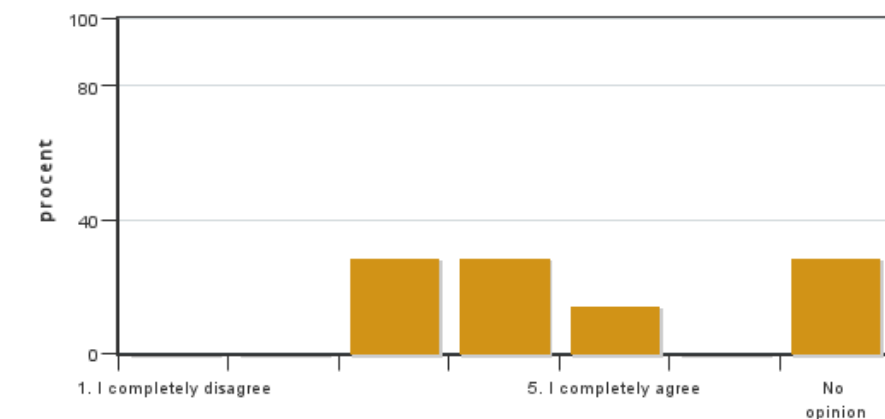
27. I regularly spent time to reflect on what I learned.



Answers: 7
Medel: 3,4
Median: 3

1: 0
2: 0
3: 3
4: 2
5: 0
No opinion: 2

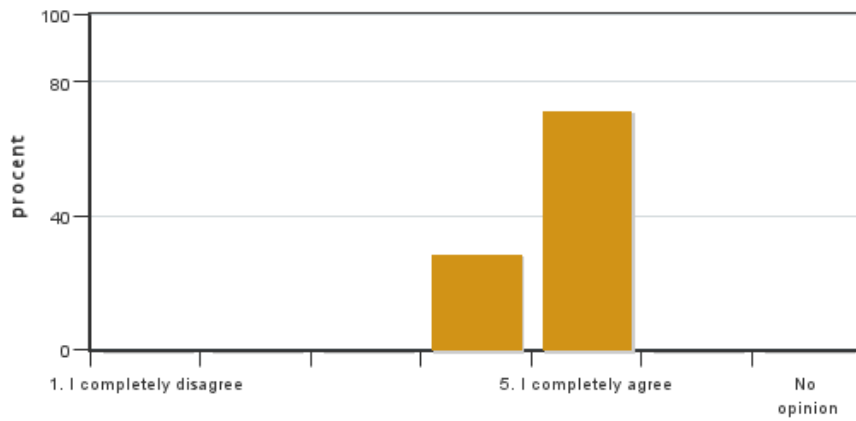
28. I was able to learn in a way that suited me. (please provide specific comments)



Answers: 7
Medel: 3,8
Median: 4

1: 0
2: 0
3: 2
4: 2
5: 1
No opinion: 2

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

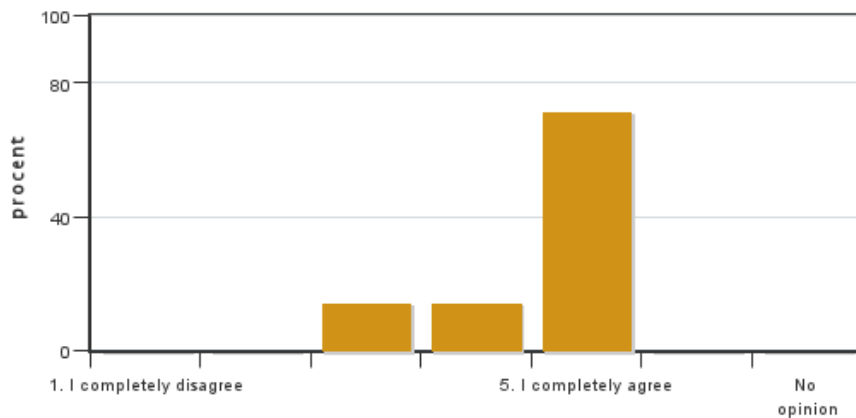


Answers: 7
 Medel: 4,7
 Median: 5

1: 0
 2: 0
 3: 0
 4: 2
 5: 5

No opinion: 0

30. I was able to get support if I needed it.



Answers: 7
 Medel: 4,6
 Median: 5

1: 0
 2: 0
 3: 1
 4: 1
 5: 5

No opinion: 0

31. What was the best aspect of the course?

31. What would you suggest to improve?

31. What advice would you like to give to future participants?

Course leaders comments

Overall the students were generally pleased with the course. They appreciated the diversity of the different subjects covered and felt that the project work was good for applying what they had learned. In particular the following aspects were appreciated:

- Introduction to sustainable development
- Sustainable resource management: water, nutrients and waste
- Concrete examples
- Collaborating with others in the project.

According to our understanding of the course evaluation, these are the main points for improvement lifted by the students:

- Better communication between the teachers;
- Lectures need to start on time;
- Quality of online lectures, especially the ones from outside Europe;
- Preparation for seminars/flipped classroom;
- Lack of feedback;
- Too much focus on Ethiopia/Africa;
- Too much theory, the course is too dense.

We hereby acknowledge your concerns and we are already working into improving several aspects for the next time we run the course.

We will make sure that the communication works better between teachers and students; and that all the meetings are on time.

The online lectures are supposed to be very sporadic due mostly to unexpected situations. We understand the concern with online lectures and we agree that it can be hard, but we see that it adds value to the course when we can't have some teachers on site but they are still able to deliver online. The ultimate goal is to have everything on site at all times.

In regards to the preparations, the goal is always to have them posted two weeks beforehand being the latest one week. However, it did not work like that this time due to some difficulties with teachers, but we will continue to work on the communication so all the teachers are aware. We have also realized that the course is not really in the flipped classroom style, so we will work on either making it a proper flipped classroom for the next semester or clarifying which sessions are traditional lectures and which require student preparation for discuss.

We are already working on creating a greater variety of places to be covered and designing the course in a better way, with more discussions, more practical examples and less theory. Also, we will make sure that all practical examples and exercises receive feedback so that students can learn and reflect during the course.

Student representatives comments

The course was based on lectures and exercises whereas the examination was completed through the planning, writing and presentation of a project. In the current evaluation, 7 out of 11 students participated covering a 63%. It is noted that all the scores represent the mean values.

The general impression of the course was graded with 3.7/5. Students enjoyed the lectures which introduced different challenges of low- and medium- income countries and practices that need to be followed. Nice guest lectures were also included from researchers from Africa. However, better communication between the teachers and a possible excursion is recommended according to students. The course had clear links with the learning objectives of the course (4.1/5). The background of the students was relatively sufficient in order to understand and attend the course. Even if some concepts were new and may be difficult for understanding as the students background was different, through the seminars and discussion in the class any problems may be answered.

Regarding the information provided for the course, the score is high (4/5) Specifically, it is noted that there is a good CANVAS page but sources/references which are provided for seminar's or exercise's completion is needed to be offered earlier as there is no time for preparation. The same should be applied with deadlines and dates for classes.

Furthermore, the various course components (lectures, course literature, exercises etc.) have supported student's learning at 3.7/5. Some students fully use and understand all the components of the course whereas others consider that the components differ regarding their applicability.

Except from that, the physical learning environment (facilities, equipment etc.) has been satisfactory at 4.4/5.

Regarding the examination, it provided the opportunity to demonstrate what students learned during the course as the project for Ethiopia was very interesting through the different stages needed for its completion. However, according to students, different places would be interesting to study year by year.

Moreover, the course covered mostly (4.9/5) the sustainable development aspect (environmental, social and/or financial sustainability) but also the gender and equality aspect, regarding content as well as teaching practices (4.1/5) as teachers involved were men and women from different places around the globe.

The course covered significantly international perspectives (4.7/5) but more topics and cases studies from Asia and Latin America are suggested to be included.

Regarding the online courses, the overall experience of the course was graded with 3.5/5. Specifically, there was a miscommunication between the teachers and students where teachers were late or online (bad internet connection).

Regarding the different topics of the course:

The "Introduction to sustainable development in low- and medium income countries" module was 4.6/5 relevant with student's background with nice guest lectures and very good content. The "Sustainable resource management: water, nutrients and waste" module was 4.5/5 relevant with student's background. The "Small-scale renewable energy technologies" module was 3.5/5 relevant with student's background, but too much focus on the technical aspects of the technologies was provided without enough focus on implementation and related challenges according to students. The "Small-scale transport technologies, logistics and value chain management" module was 4.1/5 relevant with very good presentations from the corresponding teacher, but too much focus on discussing issues without enough focus on possible solutions. Furthermore, sustainability of transportation methods should have been

addressed more in this module.

Students had the ability to explore the subject by trying out ideas on their own (4.4/5) but also the course was challenging in a stimulating way (4/5). Regarding student's understanding, they understood mostly what the teachers were talking about (3.7/5). This improved by teacher's concrete examples that students could relate to and learn from (4.6/5). Regarding the feedback of the different exercises and projects, it helped the students to their progress (4/5). However, more feedbacks could be provided as students did not receive in all the exercises.

Students were able to learn by collaborating and discussing with others (4.7/5) as the background was different (environmental science, engineering, biology etc) and they took any support (from the teachers) if it was needed (4.6/5)

Finally, suggestions for course's improvement are:

- More information on the projects background and earlier discussion between the groups.
- Maybe more lab works, something more practical and tangible (only one happened).
- Shorter courses (4 hours every Wednesday).
- Better communication with the teachers.

Advice for future students is:

- Really interesting course, you get to pursue your own interest.
- Sometimes some papers provided before the seminars were unnecessary, but in several situations after the discussion in the class was helpful and understandable.
- Be active in the classroom.
- The course density allows to take other courses parallel.

Kontakta support: support@slu.se - 018-67 6600