Self-evaluation of the BIO325 ocean-going survey by Tom Langbehn

General remarks

The overall student satisfaction with the module has remained high in the years 2019-2022. For more details, see the visualization of the annual questionnaires in the supplementary. The aim of the questionnaire has been to collect informal student feedback specific to the ocean-going survey module on a voluntary basis.

Reflections on 2021

Low infection rates and new national covid-19 regulations made it again possible to take all students on both legs of the cruise. Other than that, the module was run with minimal changes from 2020: The students jointly planned the sampling, collected and analyzed the data, and created figures for their reports as groups, but wrote individual term papers. Because all students were able to participate in both legs of the cruise, the knowledge transfer that we implemented in 2020 to ensure that all students received the same learning outcomes regardless of which part of the cruise they participated in was no longer necessary in 2021. Also, the mini-oral exams during the cruise were dropped to give the students more time onboard to work on their assignments.

Does the course description reflect what is taught?

The student feedback suggests though; 10 out of 10 respondents the question does the "*Module title, module description, and learning outcomes reflect the module content*" with agree or strongly agree. This feedback matches what students said about the course in conversations during the course.

Were there things that did not work well this semester, how can this be improved?

Some students wished for more "hands-on" work with the acoustics on board, others commented that "*deciding the term-paper topic felt a bit rushed from the beginning, and I wish we had gotten a bit more information about before we had to decide*". This raises the questions how could we make students think about the ecological system and potential research questions before they start BIO325?

Another challenge is the level of proficiency when it comes to coding and data analysis. Some advanced R users asked to get the cruise data earlier because the introductory tutorials were too basic and not new to them, while other students have explicitly asked for more time to learn R. Ideally, all students would have received training in data wrangling before starting to work with the BIO325 data.

Other proposed measures or other factors of importance to the quality of the course

Providing feedback on the term papers is very tedious. The peer-review was a right step into the right direction. However, students were generally not critically enough and usually provided more "feel good comments" than constructive criticism, which did not help much to improve the reports or decrease the workload for the teachers. Clearly, this is a skillset that needs more practice and should be high on the agenda for BIO300A.

Additional comments

I noticed that the individual term papers created more tension in the groups than in 2020 (where the North Sea student wrote group reports). There was sometimes some hesitation to share

figures or code with the other group members. I had the feeling this was rooted in the competition for grades and the attempt to get ahead of the others to get a better grade.

We have continuously development the datalabs to include more specific tutorials, and to achieve a better alignment with what is taught in BIO300B. Most students were very positive about the datalab and the help they have gotten. In 2021, we trialed the use of differently colored post-it's during the data labs for real-time feedback if we were going to fast or slow. Each student received a red, a yellow, and a green post-it at the start of each datalab. Depending on how well they were able to keep up with the tutorial they were asked to display a green post-it on the back of their laptop screen if they were able to follow without difficulties, a yellow one when they were following but needed a little more time, and a red one when they were falling behind and were not able to keep up. We then used this feedback to adjust the speed of teaching and to direct teaching-assistants to those students that needed more help. At the end of the datalabs, students were asked to provide written feedback or wishes for the next data lab on the post-its. As a teacher, I have found this real-time feedback helpful.

The fish identification and competence demonstrations onboard worked extremely well. I had a master student join the Polar Night Cruise half a year later and she had excellent retention of the different gadoids which are tricky to ID when young.

Throughout the course, it became obvious that the semester workload from several parallel courses was high. During several occasion, students left the datalabs early or worked on the side on task from other courses (i.e., "*Sorry, but we have to finish this poster for BIO300A, the deadline is at lunch today*"). When asked, students noted that they feel they don't have the time to really focus on any of the task at hand because they are constantly behind. Meaning, that the quality of all assignments suffered. For next year, we should assess if better alignment of BIO300b, BIO300a and BIO325 could reduce the overall workload.

Changes in 2022

Module 3 - Marine Ecological Field Methods as part of BIO325 is designed as a practical module around a 2-week research cruise that provides the students with the opportunity for hands-on learning to gain relevant practical skills. As part of the portfolio assessment students plan, conduct and write up their own research project in small groups. This group work practices various skills, including data analysis and scientific writing, which are also taught specifically in BIO300a and BIO300b. The challenge has been that since these courses run in parallel, students often had not developed the necessary skills yet at the time when they were needed in BIO325. Therefore, we introduced dedicated datalabs in 2020 that provided additional training in data wrangling and analysis in R. In BIO325, we also provided the students with extensive feedback on a draft version of their reports, including feedback on scientific writing, while they also had to deliver a second independent report for BIO300a.

In preparation for BIO325 2022, we had several planning meetings with the teachers from all three courses (BIO325, BIO300a and BIO300b) to discuss how the courses could be better aligned to enhance student learning while decreasing the overall semester workload (based on student feedback and own observations from 2021). During these meetings and the subsequent email exchange the following changes were agreed on:

- Students should learn the necessary data wrangling skills to successfully complete BIO325 in BIO300b. BIO325 would then give them the opportunity to apply the learned skills from BIO300b to their own data. Teachers (incl teaching assistants) from BIO325 and BIO300b discussed and agreed on best coding practices and identified a list of functions and data wrangling techniques as common learning outcomes for both courses. In 2022, data wrangling was only taught as part of BIO300b, while the datalabs in BIO325 were reserved for tutorials dedicated to analysis specifically tailored for the

student projects in BIO325 (e.g., multivariate analysis in community ecology or Von Bertalanffy growth models).

- In 2022, students that were enrolled in both BIO325 and BIO300a were allowed to hand-in the same final report for both courses. Length and specific requirements to satisfy the learning outcomes of both BIO325 and BIO300a were agreed on among teachers from both courses. Stylistic elements and general structure were evaluated in BIO300a, while the scientific content was evaluated as part of BIO325. Student from the same BIO325 groups were allowed to have identical material and method and result sections, as well as figures, but had to write individual introductions and discussions for their reports. The intention was to foster and teach collaborative work, where the students would be able to jointly develop and conduct the analysis. The intention was to decrease the overall workload (students had to write one, instead of two separate reports) and hence give the students more time to improve the quality of their assignments.

- Additional changes specific to the ocean-going part of the cruise in BIO325 were that in 2022 for the first time we had three parallel "learning stations" on board:

  (i) Fish identification and standard techniques for fisheries surveys (i.e., aging, sexing, and determining maturation stages) were taught in the fish lab, supervised by Frank Midtøy and Heikki Savolainen.

  (ii) Luis Martell and Joan J. Soto-Angel from University Museum of Bergen joined the cruise and helped with teaching and sampling of gelatinous zooplankton in the zooplankton lab.

  (iii) Thomas de Lange Wenneck from IMR taught practical and theoretical aspects of fisheries acoustics in the instrument room.

  At any given time, half of the students were in the fish lab, while the other half was split between fisheries acoustic and zooplankton. Students rotated in between learning stations after lunch and dinner so that every student got to spend the same amount of time with the different tasks.

  In discussions with Thomas de Lange Wenneck and based on his experience teaching the fisheries acoustics part on board during the previous years, we decided to make some adjustments to this learning station. We decided that fisheries acoustics was not an ideal topic for student group work, as specialized software and close supervision was needed for the students to succeed. In the past, students that worked on group projects dedicated to acoustics were often left with a feeling of failure and dissatisfaction because with the limited data collected during our survey, they were unable to answer their research question or draw tangible conclusions. This was frustrating and little motivating for the students. Hence, we dropped acoustics as one potential topic for the group work in 2022. Also, student feedback from the previous years indicated that although we already tried to make the acoustics part as little theoretical, but as applied a possible, there was too little possibility for the students to work with the data themselves, whereas they spend a lot of time looking over someone's shoulder using the software. As a result, students didn't take the acoustic training as serious as for example the fish id part and were often distracted. This was little rewarding both for the students and the teacher. Therefore, this year we decided to make the acoustics training also part of the competence demonstrations, signaling to the students that this part was equally important as for example learning to identify the most common fish species. Additionally, Thomas structured the training around a real data set used by the IMR for internal training purposes and observer

cross-calibration. At the start, students were given some theoretical background and introduction to the software but then tasked to analyses and interpret the dataset largely independent as if they were the observers onboard. At the end of the cruise, we compared the result from the students to the results of the trained observers. I think it left the students with a lasting impression and feeling of accomplishment that their results were within the error margins of the trained observers.

Reflections on 2022 and recommendations for 2023

- Student feedback collected via the ocean-going survey questionnaire shows an overall high satisfaction with the module; all respondents in 2022 agreed or strongly agreed with the statements "*I am generally happy with the module*" and "*Module title, module description, and learning outcomes reflect the module content*". This was also reflected in some of the free text answers: "*I just wanted to say that I think this one of the nicest courses I had so far*", "*I feel I have grown a lot this semester and have been inspired – a lot*", *"This module, during the cruise, I learned more and faster than in any other module*", "*It is a privilege to be able to study like this"* or "*The field course was excellent"*.

- The feedback also showed that most students found the module rewarding but challenging, because expectations were high, and some felt that they were not sufficiently prepared for the tasks.

  For example, one student wrote: "*Learning how to set up a research question and how to plan for addressing this question with little knowledge on how to do field studies, is very hard and took a lot of time.*"

  Another commented: "*The BIO300B course works under the assumption that some people have never coded before so that's the baseline we are working with. After about four lectures in R (where we only get an introduction to standard methods and not something like multivariate statistics [as part of BIO300A]) we went on our cruise [in BIO325] and afterwards the people were expected to be able to be able to do a whole analysis of their data. I was lucky enough to have done a lot of programming in my Bachelors which was not the case for any of my group members which had never programmed before."*

  This is recurrent feedback from the past years and reflects the vastly different experiences from the different B.Sc. degrees and raises the question if the previous knowledge required for this course should be revised and communicated better as a course requirement.

- The student feedback also showed that the workload was perceived differently: 50% of the respondents agreed or strongly agree with that "the workload was ok", 12% were neutral, and 38% disagreed.

  One student commented: "*The workload was good, we had more dead time than the first week which was a nice surprise. Personally, I would have liked a little bit more work, but I know this is controlled by more factors than our will."* while another student wrote: "*in regard to the workload, I have to say it is an absolutely time-consuming module (not that much in regard to lectures but more regarding how many hours we spend outside of the lectures on it and I know that nearly every group spent an insane amount of hours doing stuff for this module). I do not think that the workload of this module should be reduced (since it is the most important one in my opinion). I'd rather suggest that the other modules should be weighted less."*

The same concern was expressed by a third student: *"the modules are worth the same but have very different work requirements".*

With this feedback in mind, I suggest discussing and reevaluating the workload and weight of the different modules in BIO325. One student also suggested to have the exam of module 1 before the cruise, so that one module is completed before the next module starts.

- The student feedback collected via the ocean-going survey questionnaire undoubtedly shows that we failed in clearly communicating to the students how BIO300a, BIO300b and BIO325 were integrated. Although we provided detailed and written instructions on mitt.uib and during the introductory meeting the start of the course, students were confused about the requirements for the different courses. In parts, this was owed to misunderstandings between the teachers of the different courses, but certainly also because students did not read carefully enough the provided instructions at the beginning of the course. For next year, we should at least make sure that all teachers are on the same page.

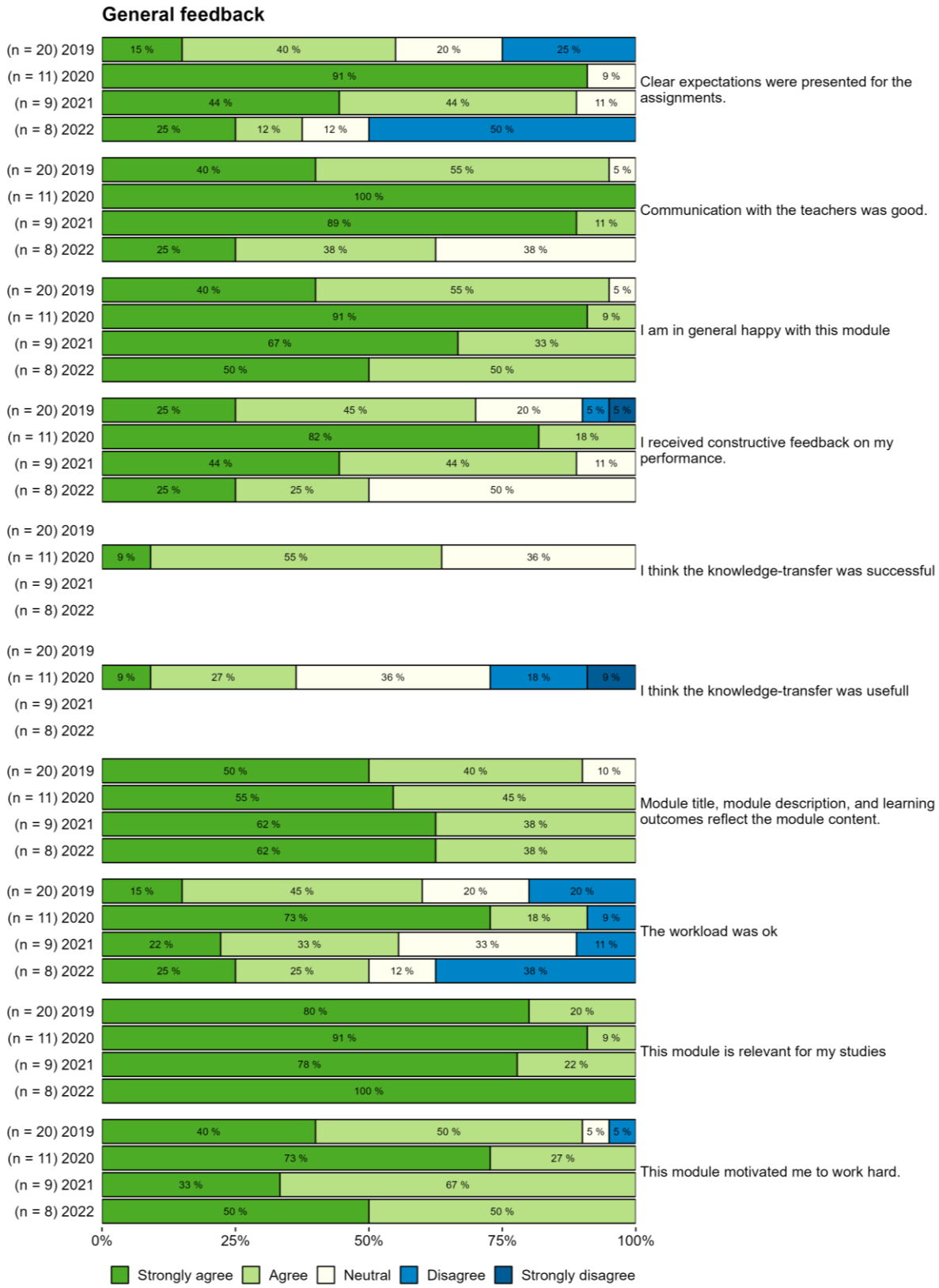
- As a requirement from BIO300a, also the BIO325 reports were given a more stringent word and figure limits than in previous years. For example, abstracts were limited to 100 words and a maximum of two figures was allowed. In retrospect, I think these requirements did not help to improve the scientific quality of the reports. When evaluating the BIO325 reports for the North Sea groups, I noticed that these limits often resulted in incomplete explanations or opaque method descriptions that for example would have benefited from another clarifying figure or flow chart. Therefore, I think it would be beneficial for the learning goals of BIO325 to soften these stringent requirements and allow the students some more flexibility.

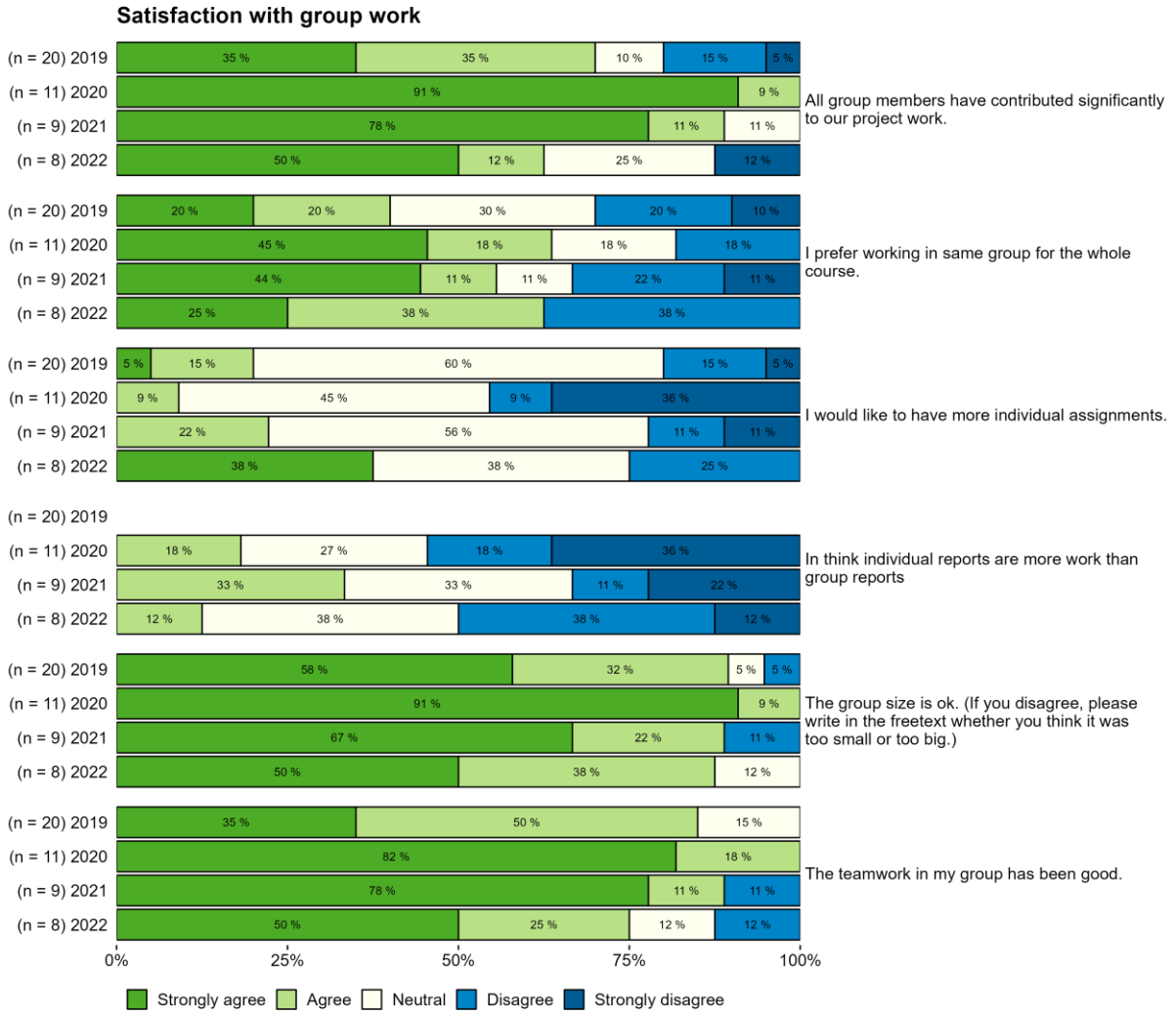
- Rotating student groups between three learning stations on board during the ocean-going part of the cruise has worked extremely well, students spend less time idle, the fish lab was not overcrowded, and the students got the chance to be involved in even more research while learning about the work of taxonomists and potential master thesis topics at the museum. Cabin space on board permitting, I would highly recommend continuing this collaboration with the museum also in the next years. Also, the revised acoustic training and its integration into the competence demonstration seemed to have worked well. Five teachers, plus cruise leader, spread across 3 different learning stations has been ideal.

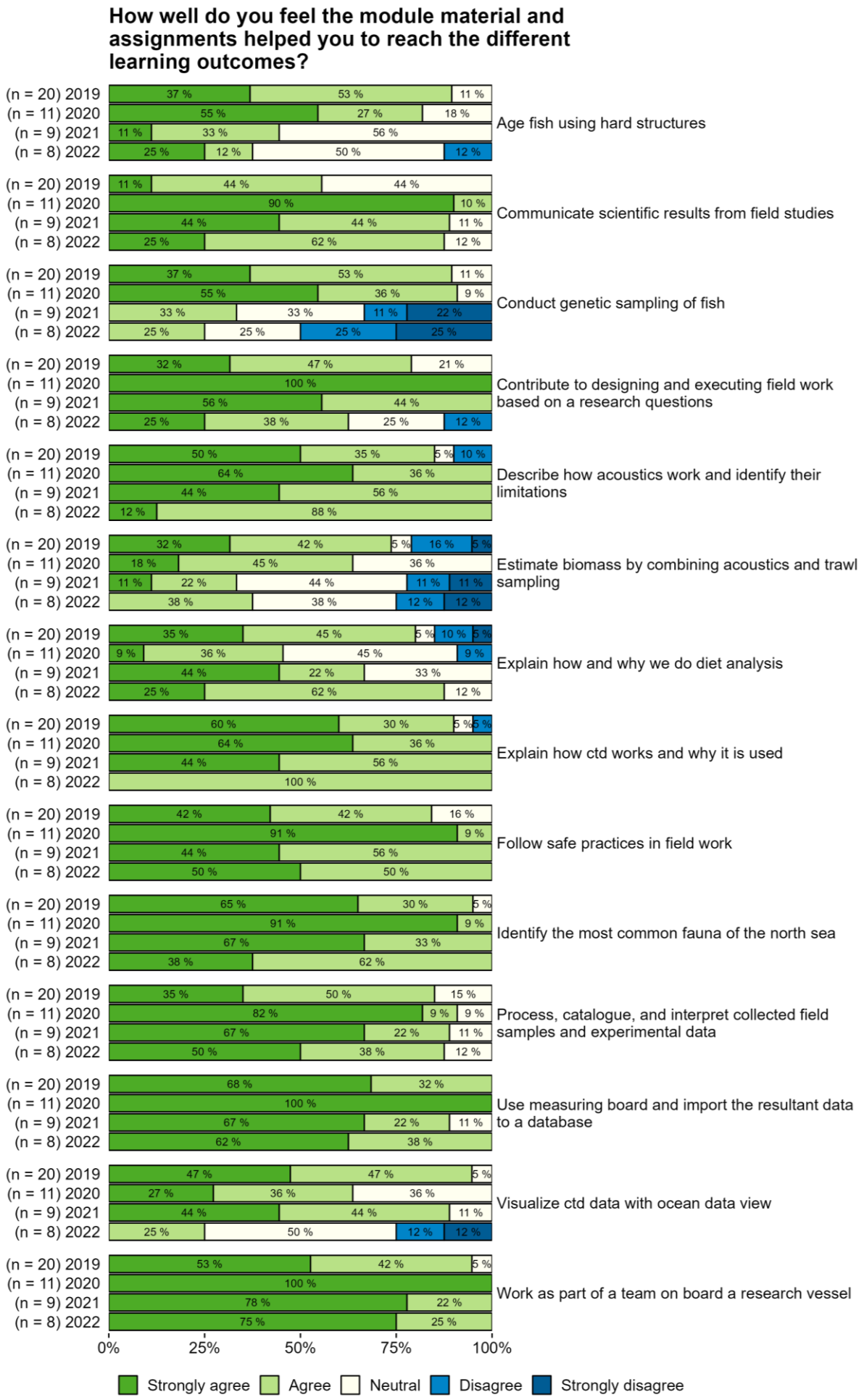
Supplementary

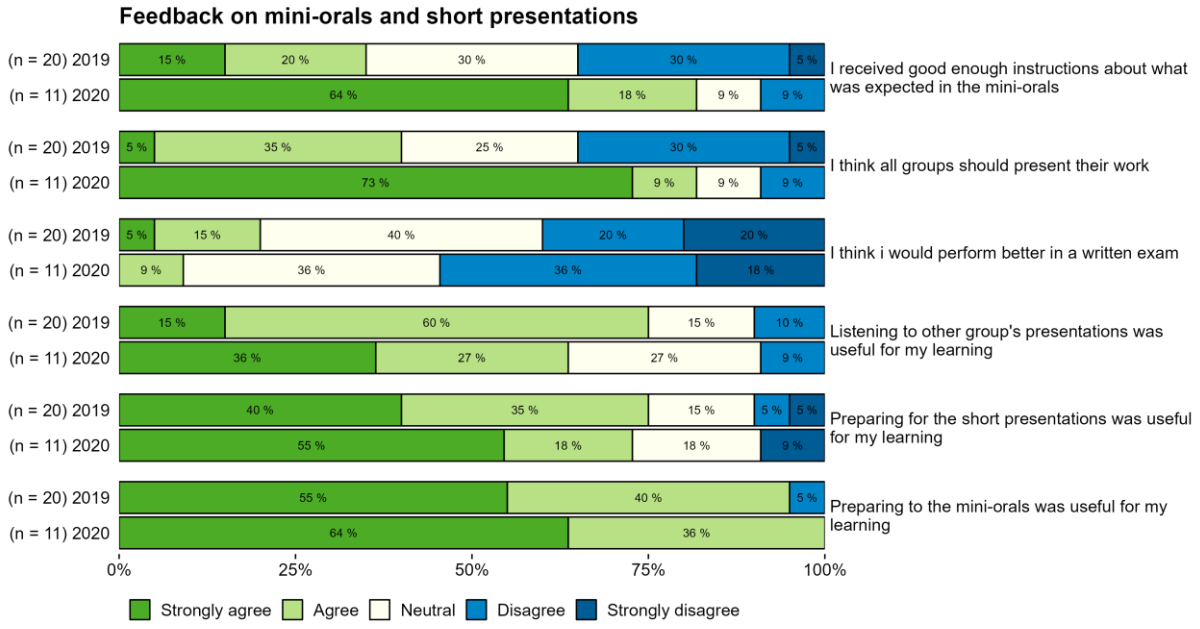
S1: Summarized student feedback from ocean-going survey module questionnaire for the years 2019-2020

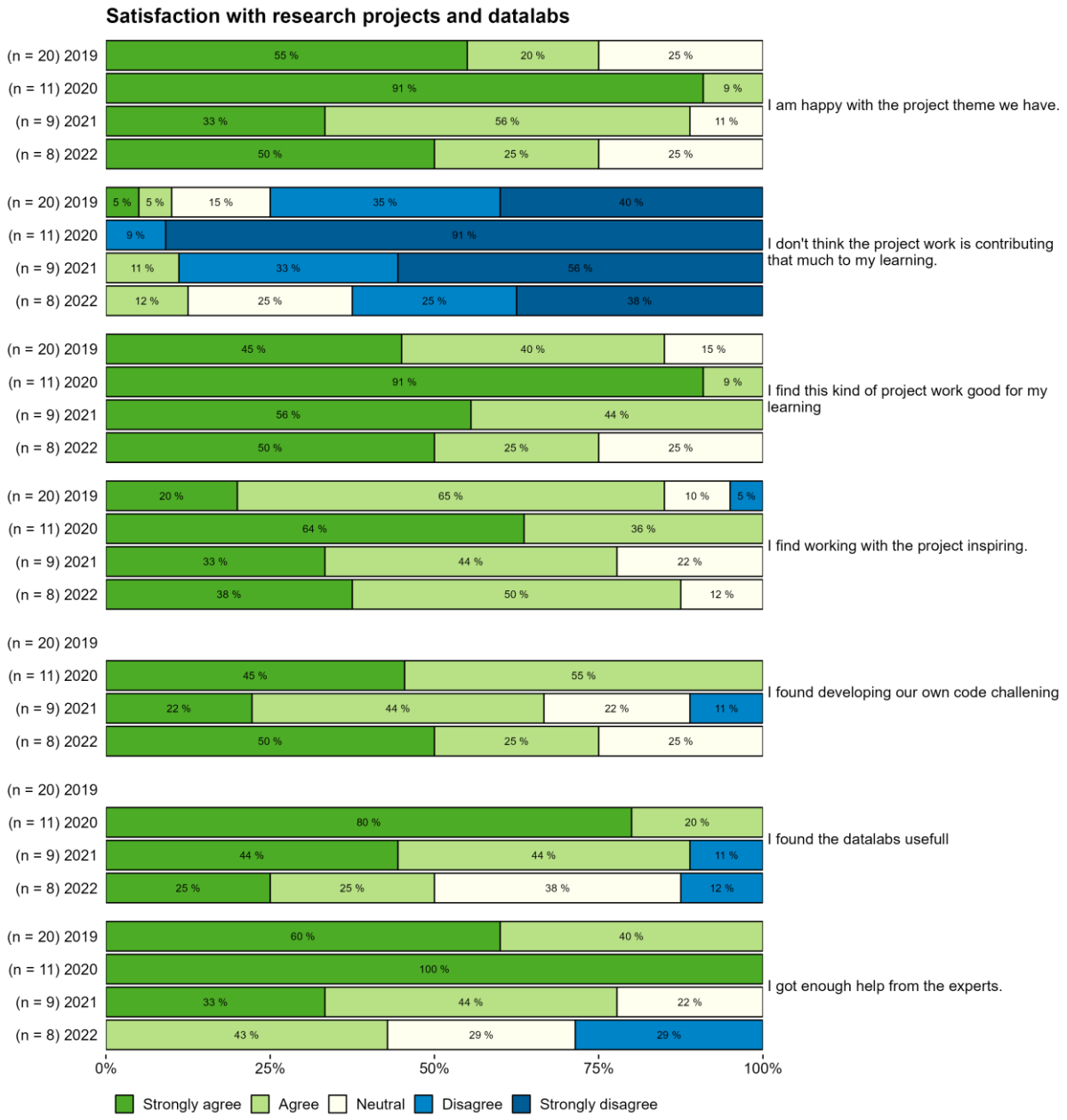
S2: All entries for the ocean-going survey module questionnaire 2022

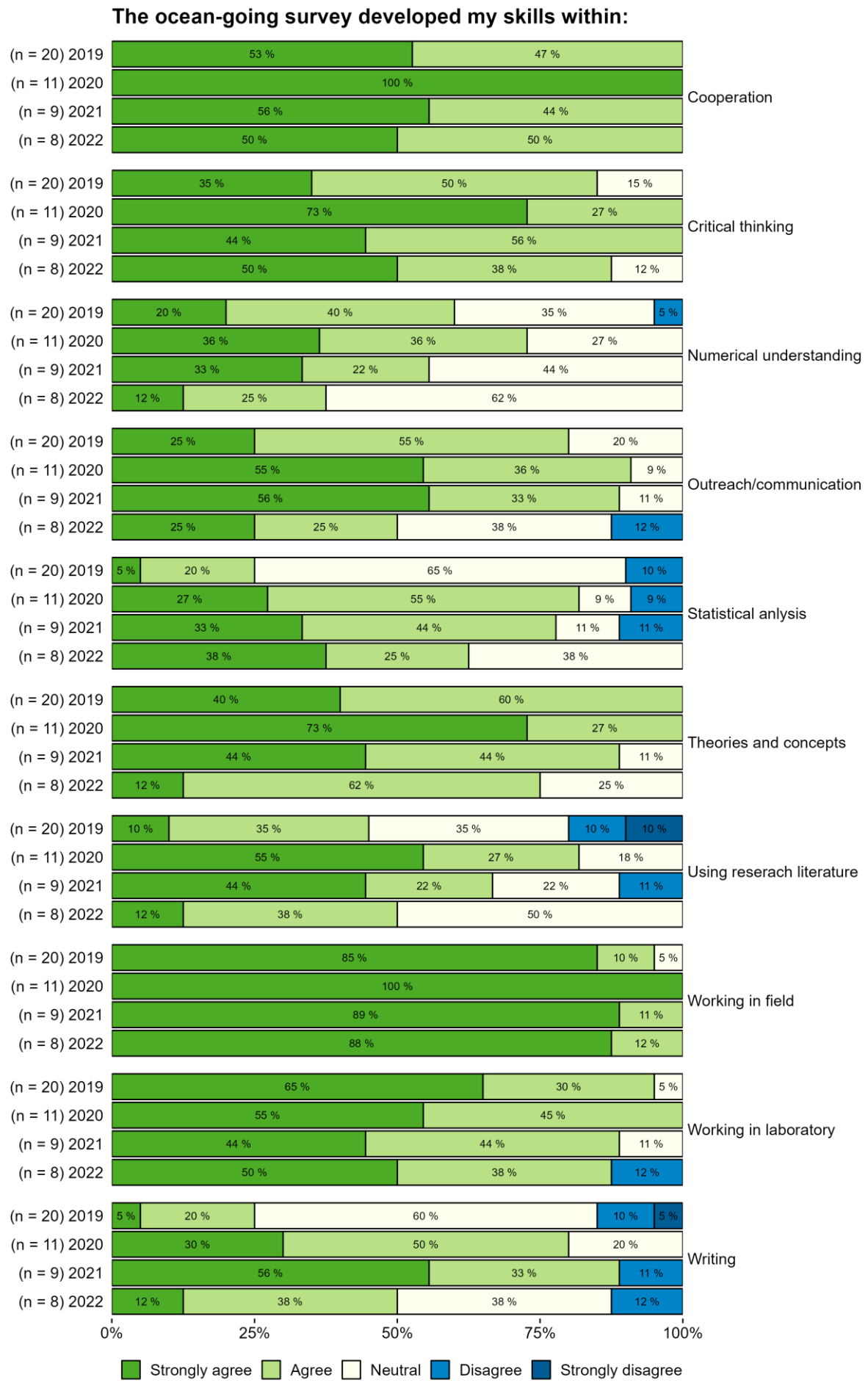

General feedback
(n = 20) 2019
(n = 11) 2020
(n = 9) 2021
(n = 8) 2022
15 %
40 %
20 %
25 %
91 %
9 %
44 %
44 %
11 %
25 %
12 %
12 %
50 %
Clear expectations were presented for the assignments.
40 %
55 %
5 %
100 %
89 %
11 %
25 %
38 %
38 %
Communication with the teachers was good.
91 %
9 %
67 %
33 %
50 %
50 %
I am in general happy with this module
45 %
20 %
5 %
82 %
18 %
I received constructive feedback on my performance.
9 %
55 %
36 %
I think the knowledge-transfer was successful
27 %
I think the knowledge-transfer was usefull
50 %
40 %
10 %
55 %
45 %
62 %
Module title, module description, and learning outcomes reflect the module content.
73 %
The workload was ok
80 %
This module is relevant for my studies
This module motivated me to work hard.
0%
25%
50%
75%
100%
Strongly agree
Agree
Neutral
Disagree
Strongly disagree


Satisfaction with group work
(n = 20) 2019
(n = 11) 2020
(n = 9) 2021
(n = 8) 2022
35 %
35 %
10 %
15 %
5 %
91 %
9 %
78 %
11 %
11 %
50 %
12 %
25 %
12 %
All group members have contributed significantly to our project work.
20 %
20 %
30 %
20 %
10 %
45 %
18 %
18 %
18 %
44 %
11 %
11 %
22 %
11 %
25 %
38 %
38 %
I prefer working in same group for the whole course.
5 %
15 %
60 %
15 %
5 %
9 %
45 %
9 %
36 %
22 %
56 %
11 %
11 %
38 %
38 %
25 %
I would like to have more individual assignments.
18 %
27 %
18 %
36 %
33 %
33 %
11 %
22 %
12 %
38 %
38 %
12 %
In think individual reports are more work than group reports
58 %
32 %
5 %
5 %
91 %
9 %
67 %
22 %
11 %
50 %
38 %
12 %
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)
35 %
50 %
15 %
82 %
18 %
78 %
11 %
11 %
50 %
25 %
12 %
12 %
The teamwork in my group has been good.
0%
25%
50%
75%
100%
Strongly agree
Agree
Neutral
Disagree
Strongly disagree


How well do you feel the module material and assignments helped you to reach the different learning outcomes?
(n = 20) 2019
(n = 11) 2020
(n = 9) 2021
(n = 8) 2022
37 %
53 %
11 %
55 %
27 %
18 %
11 %
33 %
56 %
25 %
12 %
50 %
12 %
Age fish using hard structures
11 %
44 %
44 %
90 %
10 %
44 %
44 %
11 %
25 %
62 %
12 %
Communicate scientific results from field studies
37 %
53 %
11 %
55 %
36 %
9 %
33 %
33 %
11 %
22 %
25 %
25 %
25 %
25 %
Conduct genetic sampling of fish
32 %
47 %
21 %
100 %
56 %
44 %
25 %
38 %
25 %
12 %
Contribute to designing and executing field work based on a research questions
50 %
35 %
5 %
10 %
64 %
36 %
44 %
56 %
12 %
88 %
Describe how acoustics work and identify their limitations
32 %
42 %
5 %
16 %
5 %
18 %
45 %
36 %
11 %
22 %
44 %
11 %
11 %
38 %
38 %
12 %
12 %
Estimate biomass by combining acoustics and trawl sampling
35 %
45 %
5 %
10 %
5 %
9 %
36 %
45 %
9 %
44 %
22 %
33 %
25 %
62 %
12 %
Explain how and why we do diet analysis
60 %
30 %
5 %
5 %
64 %
36 %
44 %
56 %
100 %
Explain how ctd works and why it is used
42 %
42 %
16 %
91 %
9 %
44 %
56 %
50 %
50 %
Follow safe practices in field work
65 %
30 %
5 %
91 %
9 %
67 %
33 %
38 %
62 %
Identify the most common fauna of the north sea
35 %
50 %
15 %
82 %
9 %
9 %
67 %
22 %
11 %
50 %
38 %
12 %
Process, catalogue, and interpret collected field samples and experimental data
68 %
32 %
100 %
67 %
22 %
11 %
62 %
38 %
Use measuring board and import the resultant data to a database
47 %
47 %
5 %
27 %
36 %
36 %
44 %
44 %
11 %
25 %
50 %
12 %
12 %
Visualize ctd data with ocean data view
53 %
42 %
5 %
100 %
78 %
22 %
75 %
25 %
Work as part of a team on board a research vessel
0%
25%
50%
75%
100%
Strongly agree
Agree
Neutral
Disagree
Strongly disagree


Feedback on mini-orals and short presentations
(n = 20) 2019
(n = 11) 2020
15 %
20 %
30 %
30 %
5 %
64 %
18 %
9 %
9 %
I received good enough instructions about what was expected in the mini-orals
5 %
35 %
25 %
30 %
5 %
73 %
9 %
9 %
9 %
I think all groups should present their work
5 %
15 %
40 %
20 %
20 %
9 %
36 %
36 %
18 %
I think i would perform better in a written exam
15 %
60 %
15 %
10 %
36 %
27 %
27 %
9 %
Listening to other group's presentations was useful for my learning
40 %
35 %
15 %
5 %
5 %
55 %
18 %
18 %
9 %
Preparing for the short presentations was useful for my learning
55 %
40 %
5 %
64 %
36 %
Preparing to the mini-orals was useful for my learning
0%
25%
50%
75%
100%
Strongly agree
Agree
Neutral
Disagree
Strongly disagree


Satisfaction with research projects and datalabs
(n = 20) 2019
(n = 11) 2020
(n = 9) 2021
(n = 8) 2022
55 %
20 %
25 %
91 %
9 %
33 %
56 %
11 %
50 %
25 %
25 %
I am happy with the project theme we have.
5 %
5 %
15 %
35 %
40 %
9 %
91 %
11 %
33 %
56 %
12 %
25 %
25 %
38 %
I don't think the project work is contributing that much to my learning.
45 %
40 %
15 %
91 %
9 %
56 %
44 %
50 %
25 %
25 %
I find this kind of project work good for my learning
20 %
65 %
10 %
5 %
64 %
36 %
33 %
44 %
22 %
38 %
50 %
12 %
I find working with the project inspiring.
45 %
55 %
22 %
44 %
22 %
11 %
50 %
25 %
25 %
I found developing our own code challening
80 %
20 %
44 %
44 %
11 %
25 %
25 %
38 %
12 %
I found the datalabs usefull
60 %
40 %
100 %
33 %
44 %
22 %
43 %
29 %
29 %
I got enough help from the experts.
0%
25%
50%
75%
100%
Strongly agree
Agree
Neutral
Disagree
Strongly disagree


The ocean-going survey developed my skills within:
(n = 20) 2019
(n = 11) 2020
(n = 9) 2021
(n = 8) 2022
53 %
47 %
100 %
56 %
44 %
50 %
50 %
Cooperation
35 %
50 %
15 %
73 %
27 %
44 %
56 %
50 %
38 %
12 %
Critical thinking
20 %
40 %
35 %
5 %
36 %
36 %
27 %
33 %
22 %
44 %
12 %
25 %
62 %
Numerical understanding
25 %
55 %
20 %
55 %
36 %
9 %
56 %
33 %
11 %
25 %
25 %
38 %
12 %
Outreach/communication
5 %
20 %
65 %
10 %
27 %
55 %
9 %
9 %
33 %
44 %
11 %
11 %
38 %
25 %
38 %
Statistical anlysis
40 %
60 %
73 %
27 %
44 %
44 %
11 %
12 %
62 %
25 %
Theories and concepts
10 %
35 %
35 %
10 %
10 %
55 %
27 %
18 %
44 %
22 %
22 %
11 %
12 %
38 %
50 %
Using reserach literature
85 %
10 %
5 %
100 %
89 %
11 %
88 %
12 %
Working in field
65 %
30 %
5 %
55 %
45 %
44 %
44 %
11 %
50 %
38 %
12 %
Working in laboratory
5 %
20 %
60 %
10 %
5 %
30 %
50 %
20 %
56 %
33 %
11 %
12 %
38 %
38 %
12 %
Writing
0%
25%
50%
75%
100%
Strongly agree
Agree
Neutral
Disagree
Strongly disagree

BIO325 Ocean-going survey feedback 2021 #2

Which study program are you in?	- Master’s Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Neutral
I am in general happy with this module	Agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Neutral
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Neutral
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Strongly agree
Numerical understanding	Strongly agree
Statistical anlysis	Strongly agree
Writing	Strongly agree
Outreach/communication	Strongly agree
Critical thinking	Agree
Cooperation	Agree
Using reserach literature	Disagree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Survey and writing term paper after - this is relevant for our master's thesis.

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Datalabs: The first datalabs were not relevant for our research and our dataset. I would like to have our own data a little earlier in the process as this was the hard part. I didn't need what we learned the first datalabs and feel like this was a little waste of time.

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Strongly agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Agree

process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Agree
conduct genetic sampling of fish	Strongly disagree
visualize CTD data with Ocean Data View	Strongly agree
estimate biomass by combining acoustics and trawl sampling	Strongly disagree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Strongly agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Disagree
I find working with the project inspiring.	Neutral
I found the datalabs usefull	Disagree
I found developing our own code challening	Agree
Comments (structure of the datalabs etc.): I think our project (Deep sea communities and comparing methods) was a little too big - focusing on communities and methods was a little too much.	
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Disagree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Neutral

BIO325 Ocean-going survey feedback 2021 #3

Which study program are you in?	- Master's Programme in Biology (Fisheries biology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Agree
I am in general happy with this module	Strongly agree
Comments: It is a lot, but all of it is interesting and feels relevant	
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Strongly agree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Strongly agree
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Strongly agree
Numerical understanding	Strongly agree
Statistical anlysis	Strongly agree
Writing	Strongly agree
Outreach/communication	Strongly agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Neutral
What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...) The cruice was the absolute highlight! Very interesting, and fun to be able to do actual research in the field! It was helpful for understanding the data we worked with afterwards. A vary good way to learn about and understand various kinds of methods and equipments. Very efficient in learning species. The term paper is also actually very good. I have learnt a lot about using R for processing the data (more efficiently than in previous statistic courses), and the datalabs have been really helpful. Also fun to work with data that we collected.	
What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...) The acoustics part of the ocean going part of the cruice was not very efficient. Not very much of the available time was spent actually learning, so it felt a bit wasteful. Wat we learned was interesting, but it was a lot of time just waiting.	

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Strongly agree
describe how acoustics work and identify their limitations	Strongly agree
explain how and why we do diet analysis	Strongly agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Strongly agree
conduct genetic sampling of fish	Agree
visualize CTD data with Ocean Data View	Strongly agree
estimate biomass by combining acoustics and trawl sampling	Agree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Strongly agree

Comments:
genetic sampling: we only cut out a cube of fish meat, and have not heard more about it, or used the data.

Estimating biomass: Could not do it now by my self, but made sense then.

Were some of the learning outcomes particulary easy or particularly difficult to reach? If yes, why?
Learning all the species was a lot of work.

What could be improved in order to help the students to better reach the learning outcomes?
Use the acoustics time of the ocean part better.

The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Strongly agree
I got enough help from the "experts".	Strongly agree
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Strongly agree
I found the datalabs usefull	Strongly agree
I found developing our own code challening	Agree
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small	

or too big.)	Strongly agree
I prefer working in same group for the whole course.	Strongly agree
I would like to have more individual assignments.	Disagree
In think individual reports are more work than group reports	Neutral

Comments on the competence demonstrations on board (i.e. the name tags):
Stamps and marks on a tiny laminated thing is actually motivating.
Was good to know what I was supposed to learn.

This is the last box, where you can write anything you still want to add about your thoughts and experiences regarding the ocean-going survey module. If you want to add general feedback for the entire BIO325 course, please mark it as such:
This module has been really good!
It has been nice to spend so much time with fellow students. I have learned a lot, and it has been fun doing it. The module has been good for getting a clue of what a real scientist do in the field, and I appreciate that we were able to get to know you "experts" and ask questions.

BIO325 Ocean-going survey feedback 2021 #4

Which study program are you in?	- Marine biology
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Neutral
I am in general happy with this module	Strongly agree

Comments:
I feel like this is probably one of the most, if not the most, relevant module for my master thesis. I feel like the workload is a bit much, but it may just be that I am not used to it. It may also be that it seemed a bit much with 300A and B also having assignments at the same time.

Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Strongly agree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Strongly agree
Communication with the teachers was good.	Strongly agree

Comments:
The constructive feedback I got was fair and seemed constructive rather than just criticism. The communication with the teachers, for my part mostly Tom, was extraordinary. I got really fast replies on e-mail and he seemed always happy to help. Even though I wasn't a lot in touch with other teachers, they also felt helpful and nice.

Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Agree
Statistical anlysis	Agree
Writing	Strongly agree
Outreach/communication	Strongly agree
Critical thinking	Agree
Cooperation	Strongly agree
Using reserach literature	Strongly agree

Comments:
Every aspect is good, however, I knew more about some things before this module, which is why some skills were not developed as much.

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
The module is really good. It makes you feel that you know what to expect as an employee in marine/fishery-related jobs.

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Cant think of anything.

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Strongly agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Neutral
conduct genetic sampling of fish	Neutral
visualize CTD data with Ocean Data View	Agree
estimate biomass by combining acoustics and trawl sampling	Agree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Strongly agree

Comments:
I didn't age fish using hard structures, so I only know how to do it in theory. Genetic sampling was not a part of the cruise I think, but apparently, it's just to cut off a piece of the flesh and store it in a solution. Would have been nice to just do once, or see it been done though.

Were some of the learning outcomes particulary easy or particularly difficult to reach? If yes, why?
No

What could be improved in order to help the students to better reach the learning outcomes?
Nothing comes to mind.

The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Strongly agree
I got enough help from the "experts".	Strongly agree
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Strongly agree
I found the datalabs usefull	Strongly agree
I found developing our own code challening	Neutral

Comments (structure of the datalabs etc.):
The datalabs went a bit slow, because of the technical issues with peoples computers/MACs. Which in turn made us not get through the

entire datalab. However, I think we managed to work our way thorugh it on our own later.	
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Strongly agree
I would like to have more individual assignments.	Strongly disagree
In think individual reports are more work than group reports	Disagree
Comments about working in groups (what worked/what could have been done differently): Was ok. Individual assignments would be easier, but I fear they would have resulted in worse answers since you don't discuss as much with anyone.	
Comments on the competence demonstrations on board (i.e. the name tags): It's good to have competence demonstrations. I feel like many students feared not to pass the different competence demonstrations, so you could maybe make it a bit less serious. I think everyone is interested in all the subjects even if you have a pass/fail for every subject.	

BIO325 Ocean-going survey feedback 2021 #5

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Agree
The workload was ok	Agree
I am in general happy with this module	Strongly agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Agree
Clear expectations were presented for the assignments.	Agree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Strongly agree
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Neutral
Writing	Agree
Outreach/communication	Agree
Critical thinking	Agree
Cooperation	Agree
Using reserach literature	Agree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Teaching method (the research cruise)

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Perhaps some more time to learn R?

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Strongly agree
process, catalogue, and interpret collected field	

samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Neutral
conduct genetic sampling of fish	Neutral
visualize CTD data with Ocean Data View	Agree
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Agree
I found the datalabs usefull	Agree
I found developing our own code challening	Strongly agree
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Agree
I prefer working in same group for the whole course.	Agree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Agree

BIO325 Ocean-going survey feedback 2021 #6

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Strongly agree
I am in general happy with this module	Strongly agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Strongly agree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Agree
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Disagree
Writing	Disagree
Outreach/communication	Agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Neutral

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Working on your own project over a longer period of time was good. Planning, executing and analyzing was a valuable experience.

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Drop the 6 hour shifts in the fjords.

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Strongly agree
explain how and why we do diet analysis	Neutral
process, catalogue, and interpret collected field	

samples and experimental data	Neutral
use measuring board and import the resultant data to a database	Agree
age fish using hard structures	Agree
conduct genetic sampling of fish	Agree
visualize CTD data with Ocean Data View	Agree
estimate biomass by combining acoustics and trawl sampling	Disagree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Strongly agree
I don't think the project work is contributing that much to my learning.	Disagree
I find working with the project inspiring.	Neutral
I found the datalabs usefull	Agree
I found developing our own code challening	Strongly agree
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Neutral
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Strongly disagree

Comments about working in groups (what worked/what could have been done differently):
Two person groups are the right size.

Comments on the competence demonstrations on board (i.e. the name tags):
Good idea.

BIO325 Ocean-going survey feedback 2021 #7

Which study program are you in?	- Master’s Programme in Biology (Fisheries biology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Agree
The workload was ok	Disagree
I am in general happy with this module	Agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Agree
Clear expectations were presented for the assignments.	Agree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Agree
Communication with the teachers was good.	Agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Neutral
Working in field	Agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Agree
Writing	Agree
Outreach/communication	Agree
Critical thinking	Agree
Cooperation	Agree
Using reserach literature	Agree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Practical work

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Neutral
process, catalogue, and interpret collected field samples and experimental data	Agree
use measuring board and import the resultant	

data to a database	Agree
age fish using hard structures	Neutral
conduct genetic sampling of fish	Agree
visualize CTD data with Ocean Data View	Neutral
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Agree
I am happy with the project theme we have.	Neutral
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Agree
I find working with the project inspiring.	Agree
I found the datalabs usefull	Agree
I found developing our own code challening	Agree
About working in the project groups	
The teamwork in my group has been good.	Disagree
All group members have contributed significantly to our project work.	Neutral
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Disagree
I prefer working in same group for the whole course.	Strongly disagree
I would like to have more individual assignments.	Agree
In think individual reports are more work than group reports	Agree
Comments about working in groups (what worked/what could have been done differently): To big with the group work the whole half year with one paper.	

BIO325 Ocean-going survey feedback 2021 #8

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Neutral
I am in general happy with this module	Agree

Comments:
The workload is much but very relevant. There are lot of books to read especially for the fisheries management part of the course.

I think the fisheries management part (with the oral exam) is too large and the fact that you are not sure where you exam question might be coming from makes it overwhelming to read and digest within a short period of time.

Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Agree
Clear expectations were presented for the assignments.	Agree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Agree
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Strongly agree
Numerical understanding	Agree
Statistical anlysis	Agree
Writing	Strongly agree
Outreach/communication	Strongly agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Strongly agree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
The teaching methods of some of the lecturers are very ok (jeppe, tom, frank, the datalabs...)
discussions very ok
practical work excellent
assignments though tedious but ok
exams ok
projects fine but was kind of confusing, i thing students need more assistance in terms of interpreting data
feedback fairly ok

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)

Lectures
exam

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Neutral
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Neutral
conduct genetic sampling of fish	Disagree
visualize CTD data with Ocean Data View	Agree
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Agree

Were some of the learning outcomes particulary easy or particularly difficult to reach? If yes, why?
not easy but not difficult either

What could be improved in order to help the students to better reach the learning outcomes?
detailed lectures on interpretation of data, data analysis

The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Disagree
I find working with the project inspiring.	Agree
I found the datalabs usefull	Agree
I found developing our own code challening	Agree

Comments (structure of the datalabs etc.):
at times i find it difficult developing y own code, light attenuation for instant i am ye to understand how to calculate K and i find it difficult to interpret my data in my own way using my code.

About working in the project groups	
The teamwork in my group has been good.	Agree
All group members have contributed significantly to our project work.	Agree

The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Disagree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Neutral

Comments on the competence demonstrations on board (i.e. the name tags):
good

This is the last box, where you can write anything you still want to add about your thoughts and experiences regarding the ocean-going survey module. If you want to add general feedback for the entire BIO325 course, please mark it as such:
i think communication should be made more in English especially for non-Norwegian speaking student as most of the conversations in the lab where done in Norwegian which makes it difficult at times to follow-up on what to be done or the knowledge being passed.

BIO325 Ocean-going survey feedback 2021 #9

Which study program are you in?	- Master's Programme in Biology (Fisheries biology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Agree
I am in general happy with this module	Strongly agree

Comments:
I loved that we got to take part in every aspect of the cruise, from planning the data collection and the data collection itself. That was very educational.

Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Strongly agree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Strongly agree
Communication with the teachers was good.	Strongly agree

Comments:
We got a lot of help during this module, which was very helpful

Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Strongly agree
Numerical understanding	Strongly agree
Statistical anlysis	Strongly agree
Writing	Strongly agree
Outreach/communication	Strongly agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Strongly agree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
I did not only like doing practical stuff on the survey, but I liked that we had the data labs afterwards where we got so much help with working with our data. I have never been a huge fan of assignments in the form of a paper which count towards the grade because my writing could use some work, but since we got both feedback and peer review, it was not too bad!

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
The only thing I probably would suggest is changing a bit on the structure of the acoustics lectures on the cruise. It was really interesting, but I would love more hands-on experience looking at acoustics and the use of it in surveys. I assume that it is difficult to do

in practice, but it is the only thing I have a comment about...	
How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Strongly agree
describe how acoustics work and identify their limitations	Strongly agree
explain how and why we do diet analysis	Strongly agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Agree
conduct genetic sampling of fish	Strongly disagree
visualize CTD data with Ocean Data View	Strongly agree
estimate biomass by combining acoustics and trawl sampling	Strongly agree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Strongly agree
Comments: genetic sampling was not performed, thats why I didnt reach that learning outcome. As for aging fish and some of the other learning outcomes that was very specific to the assignments: the people who didnt have that as an assignment might not have learned it as well as they could. I realize that aging fish using otoliths are hard to walk every student through on such a short period, but it would be nice if the students doing some of the practical work on the boat was changed a little more often, so it was not the same students doing the same thing every time we were in the fish lab.	
Were some of the learning outcomes particulary easy or particularly difficult to reach? If yes, why? Using the measuring board etc was learning outcomes that was easy to achieve, and things like visualizing CTD data in Ocean Data View took a bit more practice. But that was expected.	
What could be improved in order to help the students to better reach the learning outcomes? I have no other suggestion than practice, practice and more practice	
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Strongly agree
I got enough help from the "experts".	Neutral
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Strongly agree
I found the datalabs usefull	Strongly agree
I found developing our own code challening	Disagree
About working in the project groups	

The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Agree
I prefer working in same group for the whole course.	Strongly agree
I would like to have more individual assignments.	Agree
In think individual reports are more work than group reports	Strongly disagree

Comments about working in groups (what worked/what could have been done differently):
I think the groups were a little bit too small, its easy working in pairs, but I would love to work in groups of three.

Comments on the competence demonstrations on board (i.e. the name tags):
I loved them, it made learning fun

BIO325 Ocean-going survey feedback 2021 #10

Which study program are you in?	- Master’s Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Strongly agree
I am in general happy with this module	Strongly agree
Please choose how much you agree/disagree with the following statement:	
Clear expectations were presented for the assignments.	Agree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Agree
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Neutral
Numerical understanding	Neutral
Statistical anlysis	Agree
Writing	Agree
Outreach/communication	Neutral
Critical thinking	Agree
Cooperation	Agree
Using reserach literature	Strongly agree
Comments: I assume here that we include the term-paper part into this? :)	
What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...) - Hand-on experience was very good and fun! It's a good way of learning. - Statistical letures was very helpful to get a better understanding of R	
What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...) - Deciding the term-paper topic felt a bit rushed from the beginning, and I wish we had gotten a bit more information about before we had to decide. That relates to the whole module 3, and I know it's not your responsibility.	
How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Strongly agree
describe how acoustics work and identify their limitations	Strongly agree

explain how and why we do diet analysis	Agree
process, catalogue, and interpret collected field samples and experimental data	Agree
use measuring board and import the resultant data to a database	Neutral
age fish using hard structures	Neutral
conduct genetic sampling of fish	Neutral
visualize CTD data with Ocean Data View	Strongly agree
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Neutral
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Neutral
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Agree
I found the datalabs usefull	Strongly agree
I found developing our own code challening	Neutral
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Strongly agree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Agree

This is the last box, where you can write anything you still want to add about your thoughts and experiences regarding the ocean-going survey module. If you want to add general feedback for the entire BIO325 course, please mark it as such:
General feedback for term-paper: It was a bit unclear how much help we could ask for (not from you, but the "experts"). I've understood that some groups had a lot of communcation with their supervisors, got they read through the papers before the final hand-in and so on. I know some of the groups got page-long feedbacks from their supervisors, and that's very helpful for them:)

For my bit (and other groups), the supervisor was not very present. We contacted him a couple of times, but he did not contribute after we had decided on the topic and research-question. We could have reached out more, but we did not know that was possible. Maybe an improvement could be to clarify the role of the supervisor, so we're at the same page. It's also quite different how much the supervisors seemed to engage.. guess that's just how things are. This is something we have discussed among each other.

General feedback bio325:

However, I'd like if the modules were more separated. Module 2 and 4 got mixed up, and we had lectures in each modules mixed up. I think the idea behind modules is that you focus on one thing at the same time, and therefore, it was a bit confusing to mix 2 and 4. Better to have all of 2 and then all of 4. Would also make more sense to save the fisheries-part until before the exam:)

Otherwise, all in all, very very nice course :)

BIO325 Ocean-going survey feedback 2022 #1

Which study program are you in?	- Master's Programme in Biology (Fisheries biology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Agree
I am in general happy with this module	Strongly agree

Comments on the section above:
In this module, during the cruise, I learned more and faster than in any other module. I think the practical part of it was not just beneficial but also crucial to our learning. The workload was good, we had more dead time than the first week which was a nice surprise. Personally I would have liked a little bit more work but I know this is controlled by more factors than our will.

Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Disagree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Neutral
Communication with the teachers was good.	Neutral

Comments on the section above:
There was a lot of confusion when it came to assignment. We were getting different information from Pete and the teachers from this course. When asked for clarification we were met with attitude from some teachers.

As for the feedback. This is related more to the Fjord part and it is strongly correlated with group work. Lack of communication and the vast difference in performance has led to some of us using more time on group parts and having little to no time to work on individual parts of the assignment. Not having the time to work on individual parts has led to having to hand in poor and unfinished work for feedback.

Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Neutral
Writing	Agree
Outreach/communication	Disagree
Critical thinking	Agree
Cooperation	Strongly agree
Using reserach literature	Neutral

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
The teaching methods were good. BIO300B did not seem to prepare community ecology groups that great for the assignment. SO

maybe some more lectures on statistical analyses could be beneficial.

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)	
I think handing in just one draft for feedback from teachers was not enough. The period between getting the feedback and having to hand in the final version is long (does not have to be a bad thing), which gave it great room for incorporating changes to our texts that we have no comments on.	
How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Strongly agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Agree
age fish using hard structures	Disagree
conduct genetic sampling of fish	Agree
visualize CTD data with Ocean Data View	Strongly disagree
estimate biomass by combining acoustics and trawl sampling	Agree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Neutral
communicate scientific results from field studies	Agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Neutral
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Strongly agree
I found the datalabs usefull	Agree
I found developing our own code challening	Strongly agree
About working in the project groups	
The teamwork in my group has been good.	Disagree
All group members have contributed significantly to our project work.	Strongly disagree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Agree

I prefer working in same group for the whole course.	Agree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Disagree

Comments about working in groups (what worked/what could have been done differently):
It did not work. Competence levels are so different. A lot of time was spent having to pick up tasks that other people were unable to do. Even when we tried to divide tasks evenly couple of us had to spend more of our time correcting other's parts. Over and over again.

I usually think working with one group through the semester is better than changing groups, but after working in this group, I never again want to do group work.

Comments on the competence demonstrations on board (i.e. the name tags):
No complaints.

BIO325 Ocean-going survey feedback 2022 #2

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Disagree
I am in general happy with this module	Agree
Comments on the section above: This module is definetly a highly relevant in its topics	
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Agree
Clear expectations were presented for the assignments.	Disagree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Neutral
Communication with the teachers was good.	Neutral
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Neutral
Writing	Neutral
Outreach/communication	Agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Neutral
How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree

age fish using hard structures	Neutral
conduct genetic sampling of fish	Disagree
visualize CTD data with Ocean Data View	Neutral
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Neutral
I am happy with the project theme we have.	Neutral
I got enough help from the "experts".	Disagree
I don't think the project work is contributing that much to my learning.	Neutral
I find working with the project inspiring.	Agree
I found the datalabs usefull	Neutral
I found developing our own code challening	Agree

Comments (structure of the datalabs etc.):
I assumed the questions above also go for the North Sea groups...

About working in the project groups	
The teamwork in my group has been good.	Agree
All group members have contributed significantly to our project work.	Neutral
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Agree
I prefer working in same group for the whole course.	Disagree
I would like to have more individual assignments.	Strongly agree
In think individual reports are more work than group reports	Disagree

BIO325 Ocean-going survey feedback 2022 #3

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Neutral
I am in general happy with this module	Strongly agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Strongly agree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Strongly agree
Communication with the teachers was good.	Strongly agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Strongly agree
Numerical understanding	Strongly agree
Statistical anlysis	Strongly agree
Writing	Strongly agree
Outreach/communication	Strongly agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Strongly agree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
It was nice to do practical work and learn new skills that could be relevant for a job.

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant	

data to a database	Strongly agree
age fish using hard structures	Strongly agree
conduct genetic sampling of fish	Strongly disagree
visualize CTD data with Ocean Data View	Neutral
estimate biomass by combining acoustics and trawl sampling	Agree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Strongly agree
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Strongly agree
I don't think the project work is contributing that much to my learning.	Strongly disagree
I find working with the project inspiring.	Strongly agree
I found the datalabs usefull	Disagree
I found developing our own code challening	Agree
About working in the project groups	
The teamwork in my group has been good.	Agree
All group members have contributed significantly to our project work.	Agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Agree
I prefer working in same group for the whole course.	Disagree
I would like to have more individual assignments.	Strongly agree
In think individual reports are more work than group reports	Disagree

BIO325 Ocean-going survey feedback 2022 #4

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Strongly agree
I am in general happy with this module	Strongly agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Agree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Agree
Communication with the teachers was good.	Agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Disagree
Working in field	Agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Neutral
Writing	Disagree
Outreach/communication	Neutral
Critical thinking	Neutral
Cooperation	Agree
Using reserach literature	Neutral
How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Agree
process, catalogue, and interpret collected field samples and experimental data	Agree
use measuring board and import the resultant data to a database	Agree
age fish using hard structures	Neutral

conduct genetic sampling of fish	Disagree
visualize CTD data with Ocean Data View	Agree
estimate biomass by combining acoustics and trawl sampling	Agree
Work as part of a team on board a research vessel	Agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Neutral
communicate scientific results from field studies	Neutral
What could be improved in order to help the students to better reach the learning outcomes? Better explainations of what are expected from the papers at each submission and how they are integrated with the BIO300A.	
The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Agree
I am happy with the project theme we have.	Strongly agree
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Disagree
I find working with the project inspiring.	Agree
I found the datalabs usefull	Neutral
I found developing our own code challening	Neutral
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Agree
I would like to have more individual assignments.	Disagree
In think individual reports are more work than group reports	Neutral

BIO325 Ocean-going survey feedback 2022 #6

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Disagree
I am in general happy with this module	Agree

Comments on the section above:
The module itself is great and highly relevant for our studies. I also like its practical focus which often gets overlooked in other courses; this includes things like making a research plan, learning how the sampling processes on board work, and how to evaluate our data. The cruise itself is of course a total highlight. But in regard to the workload I have to say it is an ablsolutely time-consuming module (not that much in regard to lectures but more regarding how many hours we spend outside of the lectures on it and I know that nearly every group spent an insane amount of hours doing stuff for this module). I do not think that the workload of this module should be reduced (since it is the most important one in my opinion). I'd rather suggest that the other modules should be weighted less (not 100 credits each) because everyone had less time to focus on them since Module 3 required that much work. I think the people would prefer it to have the module they put the most effort in to be weighed more in their final grade for the course.

Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Agree
Clear expectations were presented for the assignments.	Disagree
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Neutral
Communication with the teachers was good.	Neutral

Comments on the section above:
It would have been great if the expectations for each assignment were more clear and written down. Often times each course leader said something different from the other and we were often unsure how we would be evaluated in the end or what the criteria for an assignment were. This also includes the miscommunication with the BIO300A course. In my opinion it also does not make sense to only give 0, 5, or 10 points for the last presentation instead of using the whole range from 1-10 points. Although you all responded to emails in time, it would have been a lot easier if you were there in person - especially regarding the programming. Also, all the TAs were incredibly helpful.

Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Neutral
Statistical anlysis	Agree
Writing	Neutral
Outreach/communication	Neutral
Critical thinking	Strongly agree
Cooperation	Agree
Using reserach literature	Agree

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
I think that the practical part of this course is incredibly important and you learn a lot on the cruise - probably more than the most realize. I think the assessment methods for this module are the right choice and that the book covers everything nicely.

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
The timing with the other courses and modules was really unfortunate and at times incredibly stressful: After the cruise we had one-and-a-half weeks to do the data evaluation from scratch and write our first draft so that we could at least submit something for BIO300A (where this draft was required). We had so many unfortunate exam dates from the other modules in the middle of this course.

How well do you feel the module material and assignments helped you to reach the different learning outcomes?

identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Agree
process, catalogue, and interpret collected field samples and experimental data	Agree
use measuring board and import the resultant data to a database	Agree
age fish using hard structures	Neutral
conduct genetic sampling of fish	Neutral
visualize CTD data with Ocean Data View	Disagree
estimate biomass by combining acoustics and trawl sampling	Disagree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Agree

Comments on the section above:
A lot of people were also frustrated with making a research plan in the beginning because - apart from the fact that everyone was pretty clueless in the beginning - we were told to plan something only to find out after asking a lot of questions that everything is already set. I makes of course sense not to let students plan a cruise but at least be more transparent with it and have more of a 'look we are doing this and will be getting that data and you are free to search for a topic that interests you and where you can use this data'-approach.

The small research projects (group work) on life-history, distribution and light

I find this kind of project work good for my learning	Neutral
I am happy with the project theme we have.	Neutral
I got enough help from the "experts".	Disagree
I don't think the project work is contributing that much to my learning.	Agree
I find working with the project inspiring.	Agree
I found the datalabs usefull	Agree
I found developing our own code challening	Strongly agree

Comments (structure of the datalabs etc.):
The TAs helped a lot during the data labs but I would have wished for more help in total especially with the programming. The project itself is inspiring and it is interesting to see what results we get from the data that we have collected ourselves. It would be helpful if you

were there in person to help with the code.

About working in the project groups	
The teamwork in my group has been good.	Neutral
All group members have contributed significantly to our project work.	Neutral
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Neutral
I prefer working in same group for the whole course.	Disagree
I would like to have more individual assignments.	Strongly agree
In think individual reports are more work than group reports	Strongly disagree

Comments about working in groups (what worked/what could have been done differently):
The biggest problem with this module: The BIO300B course works under the assumption that some people have never coded before so thats the baseline we are working with. After about four lectures in R (where we only get an introduction to standard methods and not something like multivariate statistics) we went on our cruise and afterwards the people were expected to be able to be able to do a whole analysis of their data. I was lucky enough to have done a lot of programming in my Bachelors which was not the case for any of my group members which had never programmed before. With the upcoming deadlines this pretty much determined the distribution of the groupwork. I still found writing the code incredibly challenging. This work distribution was not only incredibly stressful for me but also unfair for the rest of my group because I feel like they never stood a chance with this kind of expectations in programming. The problem is also that group work stands and falls with its members and there is only so much that a person can compensate for. A lot of times it would have been easier for me to do an individual report. Working in a group is an important part of being a scientist but I also think that working for about 5 months in the same group is a lot.
I also think that the learning outcomes for each group differ a lot: Some are able to do otolith readings now or had all kinds of labwork while others had to learn all kinds of statistics. In my opinion it would make sense to teach us the standard methods first before everyting else.

This is the last box, where you can write anything you still want to add about your thoughts and experiences regarding the ocean-going survey module. If you want to add general feedback for the entire BIO325 course, please mark it as such:
I am a bit worried that the whole comment section might come off as to negative so I just wanted to say that I think this one of the nicest courses I had so far - even though I think there is room for improvement and I worked an insane amount of hours for it. I am not sure if you are aware of how much time each student spends on this course because although the amount of lectures is quite okay the amount of overtime everyone is doing since the beginning is incredibly high. It is a priviledge to be able to study like this. Everybody wants to genuelly do well so I hope you see our feedback in this kind of context. I still want to stress this point that I think that not every module of BIO325 should be weighted the same. I also don't think that the integration of BIO325 and BIO300A worked that well. Not only did the courses clash in their timing and deadlines but also the many restrictions (figures, word count, etc.) in the BIO300A course make sense for that specific course but not for BIO325.

BIO325 Ocean-going survey feedback 2022 #5

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Strongly agree
I am in general happy with this module	Strongly agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Strongly agree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Neutral
Communication with the teachers was good.	Agree
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Neutral
Numerical understanding	Agree
Statistical anlysis	Agree
Writing	Neutral
Outreach/communication	Neutral
Critical thinking	Agree
Cooperation	Agree
Using reserach literature	Neutral

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
Research cruise!

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Agree
process, catalogue, and interpret collected field samples and experimental data	Agree
use measuring board and import the resultant	

data to a database	Strongly agree
age fish using hard structures	Agree
conduct genetic sampling of fish	Neutral
visualize CTD data with Ocean Data View	Neutral
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Disagree
communicate scientific results from field studies	Agree

Comments on the section above:
Our group didnt really have much say to which trawling technique was used (we wanted more echolayer hauls).

The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Agree
I am happy with the project theme we have.	Agree
I got enough help from the "experts".	Neutral
I don't think the project work is contributing that much to my learning.	Neutral
I find working with the project inspiring.	Neutral
I found the datalabs usefull	Neutral
I found developing our own code challening	Neutral
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Strongly agree
I would like to have more individual assignments.	Disagree
In think individual reports are more work than group reports	Neutral

BIO325 Ocean-going survey feedback 2022 #7

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Agree
I am in general happy with this module	Agree
Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Agree
Clear expectations were presented for the assignments.	Disagree
This module motivated me to work hard.	Strongly agree
I received constructive feedback on my performance.	Agree
Communication with the teachers was good.	Strongly agree
Comments on the section above: There were mixed messages concerning what is expected in the bio300a course and this module.	
Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Agree
Working in field	Strongly agree
Theories and concepts	Agree
Numerical understanding	Agree
Statistical anlysis	Strongly agree
Writing	Agree
Outreach/communication	Strongly agree
Critical thinking	Strongly agree
Cooperation	Strongly agree
Using reserach literature	Agree
What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...) The field course was excellent. Using R to do statistical analysis on our own data was good. More time with R could help getting the coding done quicklier, leaving more time for writing.	
What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...) Expectations could be clearer.	
How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Agree

describe how acoustics work and identify their limitations	Agree
explain how and why we do diet analysis	Neutral
process, catalogue, and interpret collected field samples and experimental data	Neutral
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Neutral
conduct genetic sampling of fish	Strongly disagree
visualize CTD data with Ocean Data View	Agree
estimate biomass by combining acoustics and trawl sampling	Strongly disagree
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Agree
contribute to designing and executing field work based on a research questions	Strongly agree
communicate scientific results from field studies	Agree

Were some of the learning outcomes particulary easy or particularly difficult to reach? If yes, why?
Learning how to set up a research question and how to plan for addressing this question with little knowledge on how to do field studies, is very hard and took a lot of time. This was unexpected, and brought some confusion and communication issues to our group. A deeper walkthrough on how to plan and how much time is expected to make a good plan would be nice in the future i think.
A good plan is essential when onboard, and helps know when and what to look for.

The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Strongly agree
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Disagree
I find working with the project inspiring.	Strongly agree
I found the datalabs usefull	Strongly agree
I found developing our own code challening	Strongly agree
About working in the project groups	
The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Agree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Agree

Comments on the competence demonstrations on board (i.e. the name tags):
They were fun.

This is the last box, where you can write anything you still want to add about your thoughts and experiences regarding the ocean-going survey module. If you want to add general feedback for the entire BIO325 course, please mark it as such:
I feel i have grown a lot this semester and have been inspired. Alot. Thank you.

General feedback: for some it is hard to find what one wants to work with in the future. You experts are probably still learning what you like and disslike. Maybe you could be more open on this. What is expected of you and what you expect of your workplace might not always be the same. What happens then? How do you solve this? What can you expect when working as a scientist or with science? Have you switched fields? Why? How?

Again. Ive been inspired. Thank you.

BIO325 Ocean-going survey feedback 2022 #8

Which study program are you in?	- Master's Programme in Biology (Marine ecology)
Please choose how much you agree/disagree with the following statement:	
This module is relevant for my studies	Strongly agree
The workload was ok	Disagree
I am in general happy with this module	Agree

Comments on the section above:
The workload on this module was very important and useful, but was so much higher than the other modules. It took up so much of the time in the full course that the other modules often got more neglected which was not good.

Please choose how much you agree/disagree with the following statement:	
Module title, module description, and learning outcomes reflect the module content.	Strongly agree
Clear expectations were presented for the assignments.	Neutral
This module motivated me to work hard.	Agree
I received constructive feedback on my performance.	Strongly agree
Communication with the teachers was good.	Agree

Comments on the section above:
Communication was good after the cruise. Then we got quick answer and were able to meet and they were very helpful. But before the cruise we had no clear picture of what was happening. And a lot of miscommunication on email was happening, because the guidance teacher did not want to do a zoom meeting. This would have been helpful considering we had a lot to plan. And it appeared that the teachers had a predetermined idea of the research, even though they said it was up to us. To have said this upfront would have been better so we did not have to do unnecessary work when it was clear that the teachers wanted us to do specific research. We were okay with doing it but it would have been better to be upfront on this.

Please choose how much you agree/disagree with the following statement: "The ocean-going survey developed my skills within:"	
Working in laboratory	Strongly agree
Working in field	Strongly agree
Theories and concepts	Neutral
Numerical understanding	Neutral
Statistical anlysis	Strongly agree
Writing	Agree
Outreach/communication	Agree
Critical thinking	Agree
Cooperation	Agree
Using reserach literature	Agree

Comments on the section above:
The ocean-going survey was good. It further developed our skills in laboratory, field, and statistics and r. But for research literature group work and stuff it was of course a skill already practiced in our bachelors, but maybe bettered some.

What was good with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)

The field work was good, that's where we learned practical skills.
The feedback on our midway paper was very good and helpful.

What could be improved with this module? (Keywords: course materials, teaching methods, lectures, projects, discussions, practical work, assignments, exams, feedback...)
There were some confusion on the different projects before the cruise. So some more information and better communication should be made.
We had a nice lecture on what to expect on the cruise. But we did not need to have basically the same lecture 3 times.

When we asked we got help for the r stuff, so that was good. But since there were so much coding to do, it could be beneficial to have a couple more labs for it.

How well do you feel the module material and assignments helped you to reach the different learning outcomes?	
identify the most common fauna of the North Sea	Strongly agree
explain how CTD works and why it is used	Agree
describe how acoustics work and identify their limitations	Strongly agree
explain how and why we do diet analysis	Strongly agree
process, catalogue, and interpret collected field samples and experimental data	Strongly agree
use measuring board and import the resultant data to a database	Strongly agree
age fish using hard structures	Strongly agree
conduct genetic sampling of fish	Agree
visualize CTD data with Ocean Data View	Neutral
estimate biomass by combining acoustics and trawl sampling	Neutral
Work as part of a team on board a research vessel	Strongly agree
follow safe practices in field work	Strongly agree
contribute to designing and executing field work based on a research questions	Agree
communicate scientific results from field studies	Strongly agree

Comments on the section above:
Some of these depend on the group and the research questions. So we will have some difference in learning outcome.
We learned a lot on the cruise, and I feel like we got a good grasp at these methods overall.

Were some of the learning outcomes particulary easy or particularly difficult to reach? If yes, why?
The estimate biomass by combining acoustics and trawl sampling is one of the more theoretical methods, and something we didn't really look into.

What could be improved in order to help the students to better reach the learning outcomes?
On the cruise the teaching was good. There could maybe be some more help to how to use the information back home. As some of these methods were not relevant for all. So maybe have a lecture on certain things.

The small research projects (group work) on life-history, distribution and light	
I find this kind of project work good for my learning	Strongly agree
I am happy with the project theme we have.	Strongly agree
I got enough help from the "experts".	Agree
I don't think the project work is contributing that much to my learning.	Strongly disagree

I find working with the project inspiring.	Agree
I found the datalabs usefull	Strongly agree
I found developing our own code challening	Strongly agree

Comments (structure of the datalabs etc.):
It is a very challenging and a lot of work this module. so just in general have more help with coding and better communication as mentioned before the cruise. But the project was cool and absolutely useful for learning.

About working in the project groups

The teamwork in my group has been good.	Strongly agree
All group members have contributed significantly to our project work.	Strongly agree
The group size is ok. (If you disagree, please write in the freetext whether you think it was too small or too big.)	Strongly agree
I prefer working in same group for the whole course.	Strongly agree
I would like to have more individual assignments.	Neutral
In think individual reports are more work than group reports	Neutral

Comments about working in groups (what worked/what could have been done differently):
Should have more communication with academic writing as there was a lot of unnecessary confusion. My group was good, we worked well together. Of course there was some who did most of the code and some who wrote most, so there was some difference in learning there.
Since this is a lot, it was good to only have one group. To have more groups would be very confusing.

Comments on the competence demonstrations on board (i.e. the name tags):
It was good. Should maybe try to present the fauna test as less scary, get a more comfortable atmosphere around it.

This is the last box, where you can write anything you still want to add about your thoughts and experiences regarding the ocean-going survey module. If you want to add general feedback for the entire BIO325 course, please mark it as such:
In general a very good and interesting module. But it is overshadowing of the other modules, with all the work required for this module.

For the entire course: the modules are worth the same but have very different work requirements. One thing that would better the course is to change the time of the exams. It does not make sense to have the module 1 exam straight after the cruise, have it beforehand.